



ARES COMMUNICATOR

Information for Scott County Amateurs



July, 2008

Accurate, Reliable Emergency Communications

Volume 8, Number 7

Amateurs Solve Parking Lot Mystery

When a viewer e-mailed about a bizarre security problem in a local shopping center parking lot, it peaked some interest at the local TV station NBC 10. Many people lock and unlock a car by remote and don't even give it a second thought, unless it doesn't work.

"Nothing, nothing, nothing, lock it, nothing," one person said. It only happens in a specific location. "It doesn't work. I'm pressing," another person said. The mystery problem repeatedly occurs outside the Kohl's Store in Royersford, PA. "Weird mystery," one person said. "I could not believe this," another person said.

Kohl's managers said they had no idea either. "It must be the power plant or something," one person suggested. But nearby Limerick Power Plant officials insist it's not them. Some people thought maybe it was cell phone tower interference but there aren't any cell towers in the area. It's been a problem for more than a year. Some shoppers don't realize you might have to lock your car manually. If not, then the cars are unlocked and unsafe. One woman reported her laptop was stolen from her car after she thought she locked it. Police said they couldn't figure it out either. So who do you call? They're not Ghostbusters. They are radio signal busters.

"I'm an engineer," Reginald Leister said. "Somewhere in this parking lot there is a big source of radiation, some kind of signal," Bob Rex said. Leister and Rex are members of the Pottstown Area Radio Club.

"I built a little antenna," Rex said. "I made it out of copper tubing." "This device is called a spectrum analyzer," Leister said. "There are actually two signals there," Leister said. "It looks like it's coming from the building." The signals point to the Kohl's. Kohl's said they would look into the issue.

Parking Lot Mystery *cont'd on page 2*

The ARES COMMUNICATOR is published for the benefit of Amateur Radio Operators in Scott County and other interested individuals.
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"We Do That" With Amateur Radio

The third ARRL Public Relations campaign — "We Do That - with Amateur Radio" — celebrates the technology side of ham radio. According to ARRL Media and Public Relations Manager Allen Pitts, W1AGP, Amateur Radio means many things to many people. "What is it about Amateur Radio that arouses the interest of people?" Pitts asked. "You have the fun, friendship and hobby side. We showcased this side in 2006 with our 'Hello' campaign. You have the emergency service side. We brought this valuable part of Amateur Radio to the public's eye in 2007 with 'Emergency Radio — Getting the Message through for Your Family and Community'. And now you have the technology and creative side. In 2008, we are capitalizing on this third prong, getting word out to the public that there is tons of stuff you can do with Amateur Radio."

Unveiled at the 2008 Dayton Hamvention this past May, this new coordinated public relations effort shows the world the technological activities and creative imaginations that Amateur Radio's people love. Like the previous public relations campaigns, Pitts said, this is a campaign with several interlocking parts. You can view the program at <http://www.hello-radio.org/wedothat/>.

BREAK - OVER

ARES Activities

**Weekly Net Monday 7 PM 146.535 mhz (s)
 Breakfast Saturday, July 12th**

SELECTED TRAFFIC NETS			
Designator	Freq.	Local Times	
MN Phone	3.860Mhz	Noon, 5:30pm	Daily
MN CW	3.605Mhz	6:30pm, 9:50pm	Daily
ARES			
Scott ARES	146.535 S	7:00pm	Monday
Carver ARES	147.165+	8:30pm	Sunday
Bloomington	147.090+	9:00pm	Sunday
Neighboring Nets			
North Dakota	3.937Mhz	6:30pm	Daily
South Dakota	3.870Mhz	6:00pm	Daily
Wisconsin	3.985Mhz	5:30pm	Daily

Parking Lot Mystery - cont'd from page 1

The Federal Communications Commission licenses radio signals, and the radio operators said the fact that some signal is interfering with remote lock signals isn't good. "The FCC rules are pretty clear on this," Leister said. "It's probably something broken that's doing this," Rex said.

Rex and Leister said they think the problem is in the anti-shoplifting gates, sensors designed to alarm store security if someone steals something. However, three days later the car locks worked.

"Now it's working," one person said. "It works now, thank you," another person said. Kohl's will only say they're working on it. The FCC said it does sound like something was malfunctioning and it's had similar bizarre cases recently in New York City and Tampa.

BREAK - OVER



Field Day '08 Preview

More pictures in next month's newsletter



The ARES Field Day HF SSB station manned by Bob, W0NFE and Bob, KB0FH. These two modern day Marconis comb the ether for another contact.

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July Events 2008

- 4 Independence Day,
Stephen Foster born 1826
- 6 George W. Bush born 1946
- 12 IARU HF World Championship
- 16 Orville Redenbacher born 1907
- 19 - 20 NA QSO Party—RTTY
- 21 National Hot Dog Day
- 27 Korean War Armistice Day
- 30 Father-In-Law Day

Digital Voice

by: Jerry Boyd, N7WR
WorldRadio April, 2008

One can argue whether the current movement within Amateur Radio towards digital voice is a good thing or not. Certainly there are both upsides and downsides to the movement, and each side has its individual advocates. One thing is certain, however, and that is that if too many digital voice and data protocols proliferate there will come a time when Amateur Radio, particularly the Emcomm component of Amateur Radio, may lose the "interoperability" which has led to its success since the inception of the service.

I have my own views whether use of digital is necessary and/or desirable. I held a view on the subject when my current profession, public safety communications, faced this issue some years back. Regardless of one's perspective there is little doubt that a move in the digital direction is inevitable. That being the case, now rather than later is the time the service must face the issue of settling on one and only one accepted digital voice protocol for Emcomm or forever lose the universal ability to communicate.

When the Federal Communications Commission, (prompted by what some perceive as an over-zealous and naive Congress) mandated digital voice for public safety that communications service faced an identical challenge. If public safety agencies were forced to adopt digital, and if the protocol was not a singular one, the net effect would be different public safety agencies using different protocols not being able to communicate with each other.

APCO (Association of Public Safety Communications Officers) saw the forced adoption of digital coming and took on the almost overwhelming challenge of developing (through "Project 25") a single digital protocol that all public safety agencies would buy into. Once there was concurrence, "P-25" became the accepted public safety digital standard and the manufacturers adopted it to produce their own brands of digital radios but based upon the P-25 platform and only the P-25 platform. As a result, the P-25 radios used by my agency can talk to the P-25 radios used by agencies in adjacent counties - indeed in adjacent states if the need arises.

At the moment, digitizing voice, data, and network control in Amateur Radio is still in relative infancy. Yet, as WA6ITF pointed out, we already have multiple digital protocols being utilized and, thus, the problem is upon us. While it is not my purpose to advocate on behalf of one specific digital protocol it is my purpose to say that the industry and Amateur Radio "leadership" needs to adopt one protocol as the standard. And, my purpose is to generate further discussion of this important subject and, hopefully, some action directed at resolving a significant problem. If that

does not occur the various digital radios, using different protocols, brought to the next Katrina will be unable to communicate with each other and will, therefore, be useless.

The ideal digital protocol is one which is "open source." That is, the coding used must be both free and available. Second, the "vocoder" needed to utilize the protocol needs to be the same, low cost, and used by every manufacturer. At the moment "D-STAR" (Digital Smart Technologies for Amateur Radio), developed by the Japanese Amateur Radio League and at least initially marketed very actively by ICOM (and its partner Kenwood), appears to be in most widespread use. While the vocoder matter is still at issue the protocol itself does seem to be open source. By default, due to level of use, D-STAR may be the protocol of choice for digital voice, limited data, and network control.

Another consideration however, at least for the foreseeable future, is the need for all digital radios (including repeaters) in the Amateur Radio service to be "backward compatible." That simply means that they are capable of operating (depending on how the software is programmed) as analog radios as well as digital. In public safety radio many of us are purchasing new repeaters which ultimately will be operated digitally (P-25). We are willing and able to spend the money (sometimes aided by Department of Homeland Security grants) to develop a digitally capable backbone system. However, until the cost of digital mobile and handheld radios comes down (or other funding sources are identified) we still need to use analog radios on a digitally capable system. Thus, we run those digitally capable repeaters in an analog mode. They are able to do that ("backwards compatible"). I suggest Amateur Radio repeater systems and digital radios have that capability as well. There is some question, if D-Star becomes the model, if that is possible. With transceivers it is, but there is some question about D-Star repeaters. It seems they are digital only. With P-25 backwards compatibility is possible and therefore I suggest that protocol ought to be considered by the amateur fraternity. Since it will be a long time, for a long list of reasons, before the majority of today's amateurs will equip themselves with digital radios the ability to be backwards compatible seems important. It may be that the protocol of choice ought to be the tested, widely used, and proven P-25.

If one accepts the premise that settling on one and only one digital protocol for voice transmissions in the Amateur Radio service is important, the question then becomes one of who should take the leadership role in making that

ARES Toolbox

Narrow Band Emergency Messaging System NBEMS

The Narrow Band Emergency Messaging System, NBEMS, is a combination of programs that work together to enable rapid accurate communications using easily configured equipment. The NBEMS bring together the convenience of the soundcard modes and the accuracy of self-correcting communications. The interface to the signal producing program is as simple as an email program familiar to most computer users.

Let's take a look at the NBEMS pieces one at a time. The signal transmitting and receiving part of the system is called VBdigi. This module contains the program that allows you to communicate in up to six different sound card modes. The options include four speeds of PSK mode signals along with MFSP and traditional radio



VBdigi

teletype. The VBdigi screen contains four sections. Starting from the top the first section contains information about the station you are "connected" with. The second window shows the incoming received text. The third section shows the text waiting to be transmitted in the text buffer. The fourth window on the bottom shows the spectrum waterfall that displays active stations and also provides the option to choose the signal mode.

VBdigi can be used as a stand-alone soundcard mode communications engine. Used in this mode, VBdigi is functional but lacks some of the refinements found in programs designed specifically for real time keyboard to keyboard communications.



Flarq

The next piece in the NBEMS is named Flarq. This module manages the self-correcting feature of the station-to-station communications. Flarq will send four types of files; Email, text, image, or binary.

Selecting a file type will display a list of files in the folders waiting to be sent. The Flarq screen shows the callsign of the station to which you want to connect and the status of the connection. This screen also shows the beacon message which alerts stations monitoring the frequency that you are holding a message for them. The next window shows the file being transmitted. The center of the screen is a status line which displays the title of the file being

transmitted. The bottom of the screen is a 'Plain Talk' area that allows real time keyboard to keyboard communications with the station in the connection. This could be used to transmit additional instructions regarding the file being transmitted.

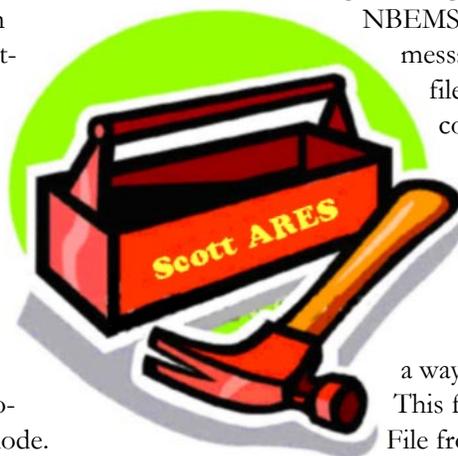


Outlook
Express

Most computer users are familiar with common email programs. Generating a message to send with NBEMS is as simple as writing an email message. The message is saved as an email message in a folder in the Flarq directory. When Flarq is installed it resides in the NBEMS folder. Contained within this folder are additional folders for text and email messages. Outgoing email messages are saved in NBEMS/MAIL/ARQout. Similarly, incoming messages Flarq email messages are saved in the file NBEMS/MAIL/ARQin. If your PC is connected to the served agency email system, traffic can be handled quickly and accurately. Other messages and data to be sent to another station can be saved as a plain text file in a wordprocessor or notepad in the folder NBEMS/ARQsend. Be sure to title the message in a way that the receiving station is identified. This file is listed when you select SEND Text File from the Flarq menu. Highlight the file you want to send to the connected station and you are on your way.

That's the basics to operate the NBEMS programs. Now all that remains is to get on the air during the weekly training net and practice sending and receiving files until the process becomes second nature. Watch for the BEACON TEXT on the waterfall for your tactical callsign!

BREAK - OVER



Soundcard Software Sites

PSK31 - Digipan <http://www.digipan.net/>
NBEMS <http://www.w1hkj.com/NBEMS/>
MMSSTV - Slow Scan
<http://mmhamsoft.amateur-radio.ca/mmsstv/>
MMTTY - Radio Teletype
<http://mmhamsoft.amateur-radio.ca/mmtty/>
MT63 <http://xoomer.alice.it/aporcino/MT63/index.htm>

The Magic Band

A summer of E-skip

Tired of the lousy conditions on the HF bands? Come join the crowd on the "Magic Band." Each summer regardless of where the sunspot cycle is, sporadic E — or E-skip — blooms on 6 meters and sometimes even on the bands above that. What often appears to be a dead band jumps to life with signals — some relatively close, only hundreds of miles away — but some representing world-wide DX on 6 meters.

Sporadic E peaks around the summer solstice, on or around June 21, with a minor peak around the winter solstice, on or around December 21.

Each summer season has unique characteristics that are not predictable, but make the band so fascinating to follow. This year, the emphasis has been on paths to the west and northwest, extending much further east and south than normal. According to VHF expert and conductor of QST's "World Above 50 MHz" column Gene Zimmerman, W3ZZ, there have been several strong openings from Hawaii to the mainland that have included many areas other than the West Coast. Stations in the Mid-Atlantic, the Southeast and the Midwest have had good shots at KH6 in both May and June.

Zimmerman said that summer has brought a nice surprise: "The highlight of this season has been repeated openings to Japan that have mostly bypassed the West Coast and settled in the Southwest, the Southeast (especially Florida) and the Midwest; Japanese stations have even been heard, but not worked, on the East Coast. The latter is a very rare occurrence indeed."

Calling conditions to the Caribbean "outstanding," Zimmerman said that stations in that part of the world have been working the US and Canada, as well as many stations in Europe. "Inside the US, stations up to 1500 miles away have been easy to get, and there have been lots of openings where the West Coast and the Pacific Northwest worked the East Coast and the Southeast."

Zimmerman said that conditions are likely to continue to be very good until the middle of July when the E-skip traditionally begins to wind down. "Most areas of the country have not had good conditions to Europe, so that may still be something to look forward to," he said. "If you have an HF/VHF radio that covers 6 meters, put up a dipole or try your 80 meter antenna — it should work on 6 meters as well — and have some fun. You never know what you may work next."



Freedom Isn't Free

By: A. Nony Moose

I watched the flag Pass by one day,
It fluttered in the breeze.
A young Marine Saluted it,
And then he stood at ease.

I looked at Him in uniform
So young, so tall, so proud,
With hair cut square and eyes alert
He'd stand out in any crowd.

I thought how many men like him
Had fallen through the years.
How many died on foreign soil
How many mothers' tears?

How many pilots' planes shot down?
How many died at sea
How many foxholes were soldiers' graves?
No, freedom isn't free.

I heard the sound of Taps one night,
When everything was still,
I listened to the bugler play
And felt a sudden chill.

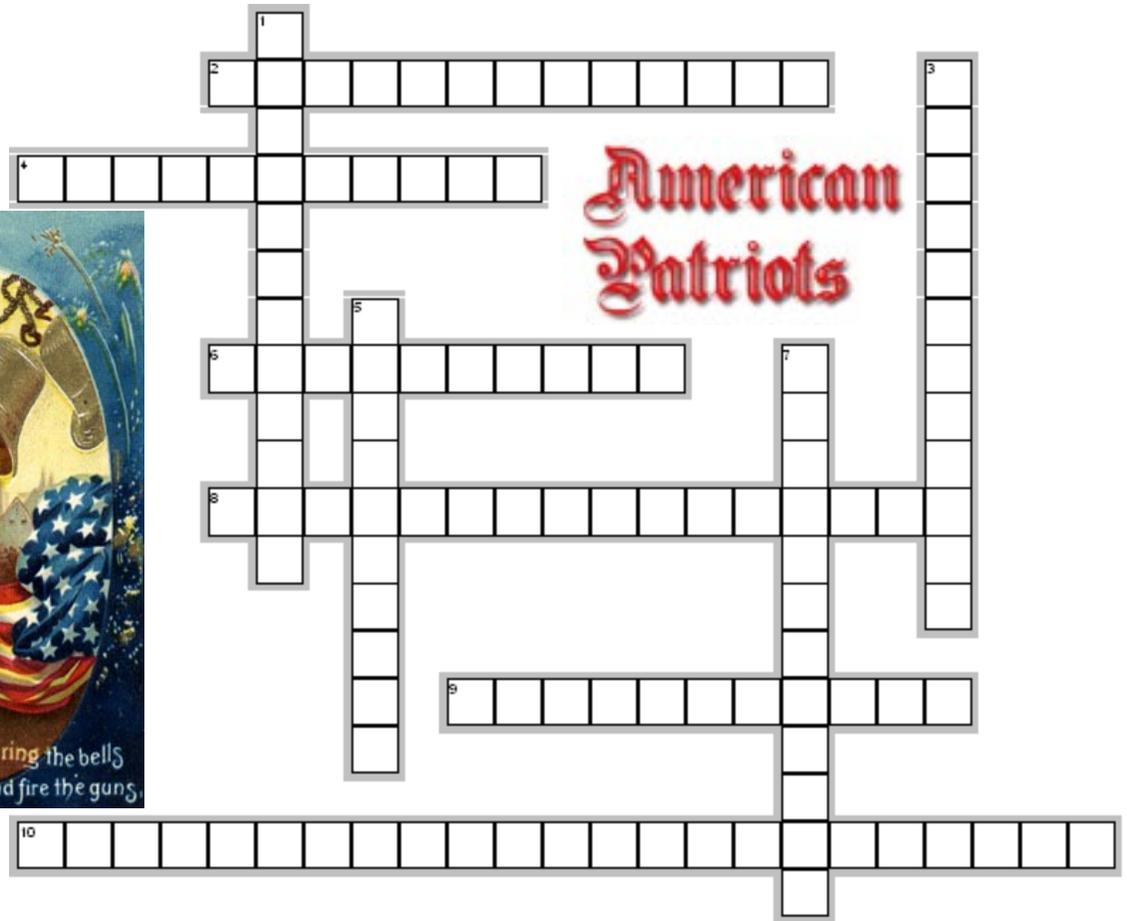
I wondered just how many times
That Taps had meant "Amen,"
When a flag had draped a coffin.
Of a brother or a friend.

I thought of all the children,
Of the mothers and the wives,
Of fathers, sons and husbands
With interrupted lives.

I thought about a graveyard
At the bottom of the sea
Of unmarked graves in Arlington.
No, freedom isn't free.



American Patriots



Across

2. American Revolutionary War naval hero, often called the "Father of the American Navy," was born in Kirkbean, Kirkcudbright county, Scotland, on July 6, 1747.
4. Born in Boston on Sept. 17th, 1722, and died on Oct. 2nd, 1803. He was a major leader in the American Revolution. The son of a wealthy brewer, he inherited one-third of the family property but lost most of it through poor management
6. He was leader of the Green Mountain Boys, and champion of statehood for Vermont.
8. Leader of the continental army and regarded as "Father of our country".
9. Anglo-American revolutionary writer called for American independence in his 1776 pamphlet "Common Sense", which was widely distributed and had a profound influence on public opinion in America.
10. A slave, began his service with General Lafayette during 1781. He enlisted and served so effectively that after the war the general was to state that his spying activities were "industriously collected and more faithfully delivered." He had carried out important commissions so effectively that the general recommended him as worthy of "every reward his situation could admit of."

Down

1. Revolutionary War heroine whose husband, fought at the Battle of Monmouth on June 28, 1778. She had accompanied him onto the battlefield, carried water in a pitcher to her husband and others, earning her famous nickname. With the temperature close to 100 degrees, she brought water to her husband's battery. When her husband collapsed, wounded or overcome by the heat, she took his place in the gun crew, and continued firing his cannon.
3. A member of the Congress, He was an outspoken advocate of strong measures of resistance. At a meeting of the Virginia assembly in Richmond on Mar. 23, 1775, he called on the colonists to arm themselves, with the words: "... as for me, give me liberty, or give me death!"
5. American patriot and silversmith, became a legendary hero at the start of the American Revolution, when he rode from Charlestown to Lexington, Mass., on the night of Apr. 18, 1775, to warn the countryside of approaching British troops.
7. She was the wife of the second president of the United States, and the mother of the sixth president. She was considered her husband's equal in intelligence, drive, and diplomacy, she was active in his career, advocated equal education for women, and spoke out frequently against slavery.



MINNESOTA ICONS

Crossword Solution

Across

1. POPPINFRESH—The Pillsbury Doughboy with a trademark giggle debuted in 1965.
3. GREENGIANT—The large green ogre, born in 1921, that now stands guard over LeSueur.
5. GOLDYGOPHER—The U of M mascot adopted after an 1857 political cartoon satirizing Gov't investment in building railroads.
9. RUNESTONE—Artifact discovered in 1898 near Alexandria. Some say it proves Nordic explorers arrived in Minnesota in 1362.
11. REDWING—This pottery was once a part of Minnesotans' everyday lives and was the nation's largest pottery manufacturer.
12. HAMMSBEAR—This gangly, goofy looking animal and his pals starred in beverage commercials from 1953 to 1969.
14. PAULBUNYAN—Legendary lumberjack memorialized in Bemidji and Brainerd.
16. LAKEITASCA—Minnesota's first state park, founded in 1891, includes the headwaters of the Mississippi River.
17. BETTYCROCKER—The trusted spokeswoman for General Mills since 1921.
18. INDIANMAIDEN—This butter business trademark took hold because Minnesota is the legendary land of Hiawatha.
19. SPLITROCK—This lighthouse was authorized after a 1905 great lakes storm battered 29 ships along Lake Superior's shoreline.

Down

1. PRONTOPUP—The Meal-in-a-bun introduced at the State Fair in 1947.
2. SPAM—Famous luncheon meat introduced by Hormel in 1937.
4. MINNEHAHAFALLS—A major tourist attraction in 1800's popularized by the Henry Wadsworth Longfellow poem "The Song of Hiawatha" published in 1855.
6. PRINCESSKAY—Following coronation, this American Dairy Assn. spokesperson is sculpted in butter at the fair.
7. BABE—Large Ox that accompanied the legendary lumberjack across northern Minnesota.
8. LOON—The state legislature, in 1961, adopted this as the official state bird.

10. WEATHERBALL—This 12 foot tall indicator sat atop the NW National Bank building from 1949. "When RED, warmer weather ahead."
13. QUADRIGA—Statue representing agriculture and industry, in addition to earth, fire, water and wind, seen in St. Paul.
15. LUTEFISK—Norwegian delicacy consisting of cod that has been dried, soaked in lye, and boiled.

BREAK - OVER



Digital Voice *cont'd from pg.3*

happen. Amateur Radio does not have an "APCO" to which the majority of licensees belong. Though it counts as members less than 25% of licensees in the United States, the American Radio Relay League is really the only entity that is in a position to exercise leadership in this regard. ARRL Executive VP Dave Sumner, KIZZ, sort of set the stage in an editorial he wrote in the October, 2007 issue of QST. It will be a difficult task, requiring a great deal of both diplomacy and decisiveness, but the need to get manufacturers to the table and reach an agreement is pressing. I hope that, at the very least for the good of Emcomm, the League and manufacturers can reach an agreement which will facilitate the future of Amateur Radio emergency communications.

BREAK - OVER



ARES Breakfast

Saturday July 12th
7:30AM
Perkins Restaurant
Savage, MN

NECOS Schedule - July 2008

7 Jul	KC0YHH Tony
14 Jul	N0PI Dan
21 Jul	W0NFE Bob
28 Jul	KB0FH Bob
4 Aug	KC0YHH Tony
11 Aug	N0PI Dan