



ARES COMMUNICATOR

Information for Scott County Amateurs



October, 2014

Accurate, Reliable Emergency Communications for our Community Volume 14, Number 10

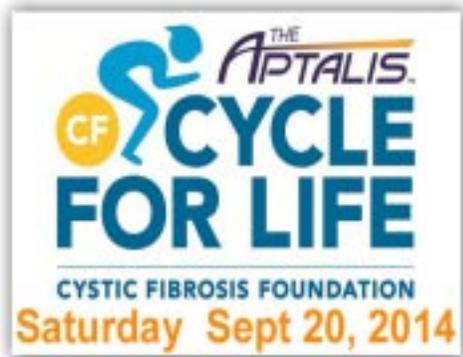
Cycle for Life Event

Job Well Done!

Scott ARES provided communications support for the annual Cycle for Life fundraising event benefiting the Cystic Fibrosis Foundation of Minnesota on Saturday Sept. 20th

The cycling event will take place over two routes across southern Scott County. There was a long course of 65 miles that

took riders on a route from Elko to New Prague across southern Scott county, crossed the river at Jordan, and continued north to Chaska before turning East to return to the starting line at the Bracketts Crossing Golf Club.



The shorter lap of 25 miles followed the same route to Elko then headed west for a couple of miles before heading north and then turning east to end at Bracketts Crossing.

The leg of the course westward from Elko provided a test for many riders as they rode into a 6 mph to 10 mph headwind for this longest segment of the long route.

The fundraiser provided a day of cycling for approximately 150 riders and raised slightly over \$70,000 for the Cystic Fibrosis Foundation.

Scott ARES organized communications using a directed net linking five on-course rest stops and two SAG wagons with the Net Control Station (NECOS) at the Bracketts Crossing club house.

This event provided the opportunity for ARES member to put

Cycle for Life *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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Reader submissions encouraged!

Coasties on the Air!

U.S. Coastguard Auxiliary turns 75

A special event station will take to the air on Saturday October 18th in Minnesota to commemorate the 75th birthday of the U.S. Coast Guard Auxiliary. Don, KC0JWQ and Harold, KB0ROB, will operate using the special call sign N0B (November Zero Bravo). Operation will generally take place in the general phone portions of the bands. QSL directly to KC0JWQ for a nice card.

When the Coast Guard "Reserve" was authorized by act of Congress on June 23, 1939, the Coast Guard was given a legislative mandate to use civilians to promote safety on and over the high seas and the nation's navigable waters.



Two years later, on Feb. 19, Congress amended the 1939 act with passage of the Auxiliary and Reserve Act of 1941. Passage of this act designated the Reserve as a military branch of the active service, while the civilian section, formerly referred to as the Coast Guard Reserve, became the Auxiliary under title 14,

Coasties *cont'd on page 4*

ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)

Breakfast Saturday, November 8th

Digital Monday, November 10th

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

Cycle for Life - cont'd from page 1

their emergency communications skills to good use supporting a worthwhile event in our community.

The event manager for the Cyclic Fibrosis foundation expressed their tanks to the Scott ARES members for their contribution to making the Cycle for Life a safe and enjoyable event for the participants.

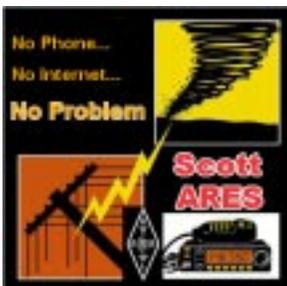


Charlie 1 was the first rest stop on the course was a busy place as riders compare notes and grab some water. Charlie 1 was manned by Nick, W0KLV. (W0KLV photo)



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Rest stop Lima 2 was located near New Prague on the southwest corner of the route. This spread welcomed riders after their long battle with strong headwinds. (WA0DGW photo)



John, WA0DGW used a GoVertical approach to get a good signal from the farthest point on the route to the NECOS. Crossbanding with an HT to the Dualband Xcvr in the vehicle and the elevated antenna did the trick. (WA0DGW photo)

Cycle for Life - cont'd from page 2



Lima 5 was that last rest stop on the long route and was a welcome sight for riders as they closed in on the finish. This site near the Scott County Highway building was manned by Nick W0KLV. (W0KLV photo)

Thank You!

Our Wonderful Communications Team,
What would we do without you? I hope you know how very appreciative we are for all of your ongoing help with our Cycle for Life Event last weekend. Every single person on your team was a delight to work with. Although the event went a little longer than we had all anticipated, I hope you all left feeling proud of the work you did for the CF community. This event is all about safety and you are absolutely crucial to ensuring its success. The event raised over \$70,000 which almost doubled what we raised last year. I wish you all a wonderful rest of your year and we would be honored to work with you again next year!

Many Thanks,
~Stephanie
Cystic Fibrosis Foundation

Thanks to Scott ARES volunteers: Tony KC0YHH, Nick W0KLV, Matt KC0VRV, George K0GCP, Chad KD0UWZ, Bob KB0FH, John WA0DGW. Their hard work resulted in a successful event for all!

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. What does MUF stand for?
 - A. The Minimum Usable Frequency for communications between two points
 - B. The Maximum Usable Frequency for communications between two points
 - C. The Minimum Usable Frequency during a 24 hour period
 - D. The Maximum Usable Frequency during a 24 hour period
2. What is the approximate maximum distance along the Earth's surface that is normally covered in one hop using the F2 region?
 - A. 180 miles
 - B. 1,200 miles
 - C. 2,500 miles
 - D. 12,000 miles
3. Where on the Earth do ionospheric layers reach their maximum height?
 - A. Where the Sun is overhead
 - B. Where the Sun is on the opposite side of the Earth
 - C. Where the Sun is rising
 - D. Where the Sun has just set

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

Daylight Savings Time

"Fall Behind" one hour
Sunday November 2nd



September General Pool Answers

1. How long does it take charged particles from coronal mass ejections to affect radio-wave propagation on the Earth?
 - D. 20 to 40 hours
2. What usually happens to radio waves with frequencies below the Lowest Usable Frequency (LUF)?
 - C. They are completely absorbed by the ionosphere
3. Which of the following ionospheric layers is closest to the surface of the Earth?
 - A. The D layer

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.

Which of the following statements is FALSE?

- A. NIMS is based on best practices collected from all levels of responders.
- B. NIMS integrates best practices into a comprehensive, standardized framework.
- C. NIMS is applicable across the full spectrum of potential incidents, regardless of cause, size, location, or complexity.
- D. NIMS specifies how resources will be allocated among jurisdictions.

Check next month's ARES Communicator for the solution

September NIMS Knowledge Solution

This structure is the physical location at which the coordination of information and resources to support incident management (on-scene operations) activities normally takes place.

- B. Emergency Operations Center

BREAK - OVER



NBEMS Current Versions

The current version of the Fldigi manual is available at NBEMS Info page at www.scottares.org. Look under the 'Help Sheets' heading.

Be sure to check to make sure you have the current software on your thumb drive.

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 and <http://www.scottares.org/NBEMS.htm>

Here are the most recent releases as of June 12, 2014.

Software	Version
Fldigi	3.22.00
Flwrap	1.3.4
Flmsg	2.0.5
Flamp	2.1.02

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.



Coasites - cont'd from page 1

chapter 23 of the USC.

When we entered World War II, 50,000 Auxiliary members joined the war effort as military teams. Many of their private vessels were placed into service in an effort to protect the U.S.

The mission of the U.S. Coast Guard Auxiliary is:

- * To promote and improve Recreational Boating Safety
- * To provide trained crews and facilities to augment the Coast Guard and enhance safety and security of our ports, waterways, and coastal regions
- * To support Coast Guard operational, administrative, and logistical Requirements.

Vessel safety is an important part of the Coastie's mission on Minnesota's 10,000 lakes and rivers. The U.S. Coast Guard Auxiliary have certified vessel examiners who will perform a free Vessel Safety Check ("VSC") at your boat, at a time of mutual convenience. This safety check is for personal pleasure craft only and is provided at no charge, and no consequences if you don't pass. The goal is simply to help make boating as safe as possible for you, your family and your friends, through education.

What Type of Items Are Checked?

- Life Jackets
- Registration and numbering
- Navigation lights
- Ventilation
- Fire extinguishers
- Distress signals (flares, horn, etc.)
- Battery cover and connections

All of these items are currently required by state and federal laws and, if missing or non-operating, can result in a citation if your vessel is inspected by the Coast Guard.

Get on the air on the 18th and keep these two Coasties busy making QSOs!

BREAK - OVER

Election Day



Tue. Nov 4th

Taking the Lock Out Of Cryptolocker

CryptoLocker first surfaced in September 2013, with P2P ZeuS (aka Gameover ZeuS) malware quickly emerging as the main distribution method. The ransomware encrypting important files such as images and documents on compromised Windows machines before demanding that victim pay up to \$500 in BitCoins within 72 hours for the private keys necessary to unlock files.

About 545,000 computers worldwide, around half in the US, have been infected with CryptoLocker between September 2013 and May 2014. Victims have been bilked of \$27m (£16m) as a result of the malware, according to FBI estimates from June. In the end, 1.3 per cent of victims paid a CryptoLocker ransom, therefore, a large amount of victims likely permanently lost files due to this attack, according to Fox-IT.

Ransomware is a particularly nasty piece of malware that takes infected machines hostage. CryptoLocker was successful at garnering multi-millions in ransom payments the first two months of CryptoLocker's distri-

bution, according to a recent blog by FireEye regarding the takeover of CryptoLocker infrastructure – Operation Tovar.

Operation Tovar helped tear down the infrastructure used by attackers, but there are still many instances where users are still being infected with ransomware. After the success of Operation Tovar, there were few resources available to help decrypt files that were still encrypted with the attacker's private key.

CryptoLocker was successful because it encrypts the files of computers it infected and then demanded a ransom for a private key to decrypt those files. The harsh reality of a situation like this is, not many people back up their data. In some cases, the

backups would be encrypted if mounted to an infected machine. As a result, many of the victims felt helpless at this point, and paid the ransom – typically around \$300. FireEye and Fox-IT have partnered to provide free keys designed to unlock systems infected by CryptoLocker.

FireEye and Fox IT have created a webpage, <https://www.decryptcryptolocker.com>, where a user can upload an encrypted CryptoLocker file. Based on this upload, the user will be provided with the option to download a private key that should decrypt their affected files. The site also provides instructions on how to apply this key to the files encrypted by CryptoLocker to decrypt those files.

To use the site, simply upload an encrypted file without any

confidential information. (Please keep in mind, we will not permanently store, view, or modify your file in any fashion.) Enter your email address, to ensure the private key associated with the file is sent to the correct individual. Ensure you enter the correct number or phrase in the Captcha entry field.

Not all CryptoLocker variants are created equal. There are several copycats and hybrid versions of Cryptolocker that exist, ranging from programs like CryptoDefense, PowerLocker, TorLocker and CryptorBit, to variants that are not necessarily named but have modified functionality, such as using Yahoo Messenger as a propagation technique.

Operation Tovar made a clear impact on the distribution of and infection of machines by CryptoLocker. However, to help prevent a threat like this from affecting you and your data, ensure you backup your data. Ideally, this would be done in at least two locations: One would be on premises (such as an external hard drive), and the other would be off premises (such as cloud storage).

BREAK - OVER



Ham Radio Saves the Day

2M to the Rescue

ARRL Letter Oct 2014

According to a Radio Amateurs of Canada (RAC) report, Amateur Radio bridged the gap recently for members of a search-and-rescue team attempting to locate a missing teenager in Canada's Yukon Territory. SAR (Search and Rescue) team member Terry Hauff, VY1MAP, was unable to contact the team's headquarters in Whitehorse during the September 21 activation. He was out of cell phone range, and the satellite phone the team had was not working. VY1MAP was, however, able to reach a 2 meter repeater from his mobile station.

Hauff reached out to Ray Fugard, VY1RF, and Ron McFadyen, VY1RM, on the 146.88 MHz repeater in Whitehorse, and they were able to relay a report on the search status from the SAR command center some 35 km north of Whitehorse at Lake Laberge. The missing teen was eventually located unharmed. According to the RAC report, this marked the second time in as many months that Amateur Radio and Yukon Amateur Radio Association members and repeater infrastructure had proved invaluable in an emergency.

Vincent Charron, VE3XU, RAC's Director of Communications, commented, "Whether it's a natural disaster, major weather event, planned community event, or a missing person search, we at RAC receive numerous reports of Amateur Radio interventions when traditional communication systems fail. Ham radio is most certainly still relevant and provides a crucial communications back-up option, often in challenging/dire situations."

BREAK - OVER

HR 4969 Sponsorship Grows

ARRL Letter Sep2014

An intense effort during the few days in September that Congress was in session has resulted in 47 co-sponsors for the Amateur Radio Parity Act of 2014 (H.R. 4969). Another half-dozen or so US House Members have indicated that they will sign on when Congress returns, something they can do only while Congress is in session. Congress went into recess on September 19. ARRL President Kay Craigie, N3KN, ARRL Hudson Division Director Mike Lisenco, N2YBB, Central Division Director Dick Isely, W9GIG, and ARRL General Counsel Chris Imlay, W3KD, visited dozens of congressional offices this month. Elsewhere, other ARRL elected and appointed officials and members from across the US met with members of Congress and with their staffers, wrote letters, and made phone calls to urge co-sponsorship.

“This all-member effort is how we went from 17 co-sponsors on August 1 to 47 co-sponsors on September 18,” President Craigie said this week. When Congress reconvenes in November, League representatives plan to follow up with US House members who did not have time to make their co-sponsorship official before Congress left town.

The Amateur Radio Parity Act of 2014, introduced in the US House of Representatives with bipartisan support in late June, calls on the FCC to apply the “reasonable accommodation” three-part test of the PRB-1 federal pre-emption policy to private land-use restrictions regarding antennas. The limited PRB-1 pre-emption currently applies only to state and municipal land-use ordinances. The FCC has indicated its reluctance to provide the same legal protections from private land-use agreements — often called covenants, conditions, and restrictions or CC&Rs — without direction from Congress.

President Craigie stressed this week that H.R. 4969 is still very much alive, and she urged League members to keep working to convince their representatives to co-sponsor the bill. “These efforts will not be in vain, whether or not the legislator eventually decides to sign onto the bill,” she said. “Realistically, we won’t get support for H.R. 4969 from every member of Congress who is contacted by amateurs,” she said. At the same time, members of Congress who were contacted now know that Amateur Radio exists in their districts and that hams have interests that deserve notice.

“A lot of politics is based on relationships. Contacts made with members of Congress about H.R. 4969 contribute to establishing relationships that can be maintained and enhanced in the future,” President Craigie said. “Does your Congressman

cont'd col. 2

know how Amateur Radio makes your district a safer place to live if disasters occur? Does your Congressman know how radio amateurs in your district introduce young people to hands-on wireless communication, laying the foundation for careers? What we certainly can do is to build relationships that will serve our interests — and the public interest — if not right now, then in the future.”

President Craigie encouraged League members whose representatives have become co-sponsors to thank their lawmakers, on the phone or in writing. “It’s good manners and a good relationship-building strategy,” she pointed out. “Members can also seek out opportunities during the current congressional recess to make a case for the bill at their representatives’ district offices and at events. In short: Keep on!”

BREAK - OVER

Drone Across The Country

Triton UAV completes first cross-country flight

Like a 14-ton bird leaving its nest, Northrop Grumman’s jet-propelled MQ-4C Triton Unmanned Aircraft System (UAS) has completed its first cross-country ferry flight as part of operational tests before entering service with the US Navy.

The September 11-hour 3,290 nautical mile (3,786 mi, 6,093 km) flight from Northrop Grumman’s Palmdale, California, facility to Patuxent was controlled by a joint team in both locations. Its flight path took it along the southern US border, the Gulf of Mexico, across Florida, up the Atlantic Coast to Chesapeake Bay by way of an approved instrument route. During the flight, the Triton kept to an altitude of 50,000 ft (15,240 m)



The MQ-4C Triton will undergo a further three years of tests (US Navy photo)

to avoid civilian air traffic.

Built by Northrop Grumman, the Triton is powered by a Rolls-Royce AE 3007H turbofan engine and is designed to fly

Drone *cont'd on page 7*

Public Service Events



Grab that HT and have some fun!

(Editor's Note: Contact the individual listed with each event for more info or to volunteer.)

December 6th, Saturday - Arlington-Arlidazzle Parade -
Need 20+ Operators for 5K Run at 9 AM, Closing & Maintaining safety on Main street from 11 am til 7 pm & Parade at 5:30 PM. Operations will be on Green Isle UHF Repeater. Volunteer contact info: KC0QNA@yahoo.com or cell phone 612-578-7561.

BREAK - OVER



United States Citizenship!

Have you ever thought about your United States citizenship? Probably not since that Civics course a long time ago! Foreigners who want to become a United States Citizen must pass a short exam that covers some key concepts important to America. Test your knowledge on the citizenship test.

Check next month for the answer to this month's question.

The Federalist Papers supported the passage of the U.S. Constitution. Name **one** of the writers.

- A John Adams
- B George Washington
- C James Madison
- D Thomas Jefferson
- E Benjamin Franklin

September Citizenship Exam Answer

How many amendments does the Constitution have?

D twenty-seven (27)

Drone *cont'd from col. 6*

surveillance missions of up to 24 hours at altitudes of over 10 miles for a coverage of one million square nautical miles. When in service, it will carry an advanced suite of sensors that can automatically classify different types of ships.

So far, the Triton has completed 15 test flights to show its ability to operate safely. The Navy says that within weeks, Triton is scheduled to carry out a new series of tests on envelope expansion, sensor, communications and interoperability testing with more to follow over the next three years. By the time Triton is deemed operational in 2017, the three Triton test vehicles will have chalked up 2,000 hours in the air.

"Today we brought Triton home to the center of research, development, test and evaluation for naval aviation," says Rear Admiral Mat Winter, who oversees the Program Executive Office for Unmanned Aviation and Strike Weapons (PEO (U&W)) at NAVAIR. "The testing performed here over the next few years is critical to delivering a capability that will provide our warfighter an unparalleled awareness of the maritime environment in locations across the globe."

The video discusses the cross-country Triton flight: <http://www.youtube.com/watch?v=1Y5Y48c3PsQ>

BREAK - OVER



ARES Breakfast
Saturday November 8th
7:30AM
Perkins Restaurant
Savage, MN

NECOS Schedule October 2014

The first Monday or the month the net is held on the WB0RMK repeater, Carver. You will find WB0RMK here: 147.165/765 PL 107.2

- | | |
|--------|-------------|
| Oct 13 | N0BHC Bob |
| Oct 20 | KD0UWZ Chad |
| Oct 27 | KC0YHH Tony |
| Nov 3 | KB0FH Bob |
| Nov 10 | WA0DGW John |
| Nov 17 | KD0UWZ Chad |
| Nov 24 | KC0YHH Tony |
| Dec 1 | KB0FH Bob |