



ARES COMMUNICATOR

Information for Scott County Amateurs



November, 2015

Accurate, Reliable Emergency Communications for our Community Volume 15, Number 11

Sweeps Training!

ARRL

- Would you like access to a real-time training exercise where you can work on important skills such as:
- Real-world training in passing messages quickly and efficiently
 - Learning how to effectively communicate with specific parts of the country
 - Develop listening skills under dense band conditions
 - Receive a report card on your efficiency rate

If so, then ARRL Sweepstakes is for you. The third weekend in November, SSB Sweepstakes is based on old traffic-handling procedures going back decades. There are six items of data that must be passed with each QSO. You have 24 hours out of a 30-hour period to send and receive as many messages as you can. A bonus activity is to attempt traffic with all 83 ARRL/Sections the time This Sweep-runs from Saturday, 21 through Monday, 23 (Saturday afternoon through Sunday night in most of the US).

ARRL Sweepstakes is an excellent activity for your ARES group or club: real-world training, in a fun environment. If your group is large, split into smaller teams and go head-to-head against each other and see which team can do the best. Discuss your experiences over

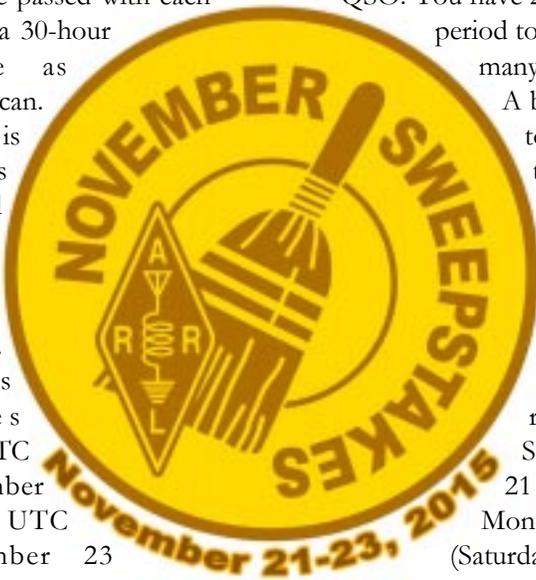
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pizza and a cold one at your favorite restaurant after the event is over. Best of all, if you submit your log, you will get access to a report showing how accurately you sent and received your messages, which can lead to improved on-air technique and efficiency.

An ARRL Sweepstakes "how-to" guide is available for free download at www.arrl.org/sweepstakes

We can all use more on-air training; why not have fun at the same time?

BREAK - OVER



ARES Activities

- Weekly Net Monday 7 PM 146.535 mhz (s)**
- Breakfast Saturday, November 14th**
- Digital Monday, November 16th**

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

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!

Fibonacci Day

November 23rd

Fibonacci Day is an annual holiday that honors one of the most influential mathematicians of the Middle Ages - Leonardo Bonacci.

Also known as Leonardo of Pisa, he is popularly known as Leonardo Fibonacci. Fibonacci is a contraction of filo Bonacci, meaning the son of Bonaccio.

November 23 is celebrated as Fibonacci day because when the date is written in the mm/dd format (11/23), the digits in the date form a Fibonacci sequence: 1,1,2,3. A Fibonacci sequence is a series of numbers where a number is the sum of the two numbers before it. For example: 1, 1, 2, 3...is a Fibonacci sequence. Here, 2 is the sum of the two numbers before it (1+1). Similarly, 3 is the sum of the two numbers before it (1+2).

The Fibonacci sequence, one of the biggest accomplishments of Leonardo of Pisa came from a simple puzzle about rabbit population. In his book *Liber acaci*, Fibonacci posed this puzzle: if there are a pair of newly born rabbit - male and female - in the field and if they are able to produce another pair of rabbits in their second month of life, how many pairs of rabbits will be there after a year? (It is rumored the resourceful Germans developed the tasty hasenpfeffer to make use of Fibonacci's hares.)

Follow Your Fibonacci *cont'd on page 6*

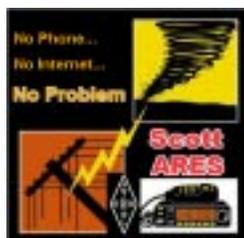
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WINTER FIELD DAY

Winter Field Day Association

Winter Field Day Association (WFDA) is a dedicated group of Amateur Radio Operators who believe that emergency communications in a winter environment is just as important as the preparations and practice that is done each summer but with some additional unique operational concerns.

They believe, as do those entities of ARRL Organizations like ARES & RACES, that maintaining your operational skills should not be limited to fair weather scenarios. The addition of a Winter Field Day is aimed to enhance those already important skills of those that who generously volunteer their time and equipment to these organizations. This is why WFDA is open to all licensed amateur radio operators worldwide.

Disasters are unpredictable by nature and can strike when you least expect them. WFDA's goal is to help enhance your skills and ready you for all environmental conditions found in the US and Canada during the spring, summer, fall, and winter.

Preparedness is the key to a professional and timely response during any event and this is what local and state authorities are expecting when they reach out to the emergency service groups that offer their services.

If you are serious about emergency communications as we are; we welcome you to join us for our yearly event. We are sure that you will find this event a pleasant change and challenge to that of a normal summer time field day.

The contest runs for 24 hours during the last full weekend in January each year from 1700 UTC (12:00 noon EST) Saturday to 1700 UTC (12:00 noon EST) Sunday. For 2016, the dates are January 30 and 31, 2016. Station set up may begin no earlier than 1300 UTC (8:00 AM EST) on January 30, 2016.

The contest activity covers all bands except the WARC bands and any mode. Participant classes are based on the number of operators and location (warm or cold). The exchange is familiar to summer field Day ops: callsign, station class, and ARRL section. Scoring is uncomplicated, one point per QSO per band with a multiplier of 1 for each mode per band i.e. 2 modes, five bands, mult equals 10! Bonus points are also part of the scoring.

I wonder if anyone has a fish house on Prior Lake??? This mid-winter activity could be a lot of fun and good training.

BREAK - OVER

"People who are crazy enough to think they can change the world, are the ones who do."

Steve Jobs

Amateur Radio License Exam

Want to become a ham? Want to upgrade your license? You can find information and resources to success in ham radio at this page: <http://www.scottares.org/License Info.htm>

If you want to ask questions or find a local Elmer (Mentor) just drop an email to: newhaminfo@scottares.org

The hams in Scott ARES gather for breakfast the first Saturday of the month at the Perkins Restaurant in Savage. Bring you ham radio questions and talk to local amateur radio operators.

Now that you have done the work to study for your upgrade, here is where to find a convenient exam session near you. There is a VE exam search engine at: http://www.arrl.org/exam_sessions/search

Walk-ins allowed at most sessions however it is always best to check the details at the specific session you are planning to attend.

Below is a list of scheduled sessions close to Scott County. Good Luck!

November 11, 2015 Wed. 7:00PM

James C. Rice (612) 384-7709

Email: jrice@danpatch.org

Location: Perkins Restaurant & Bakery

17387 Kenyon Ave,

Lakeville, MN 55044

Time: 7:00 PM (Walk-ins allowed)

November 21, 2015 Sat. 9:00 AM

Contact: SEMARC

(651) 769-0358

Zion Lutheran church

8500 Hillside Trail South

Cottage Grove MN 55016-3273

Walk-ins allowed

November 30, 2015 Mon. 6:00 PM

Dale A. Blomgren (952) 402-2155

Email: kd0b@arrl.net

Carver County Library

7711 Kerber Blvd

Chanhassen MN 55317

Walk-ins allowed, Pre-reg requested.

December 9, 2015 Wed. 7:00PM

James C. Rice (612) 384-7709

Email: jrice@danpatch.org

Location: Perkins Restaurant & Bakery

17387 Kenyon Ave,

Lakeville, MN 55044

Time: 7:00 PM (Walk-ins allowed)

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.

Strap on your thinking cap and see what you can recall. Here is this month's sample:

1. Who or what determines "good engineering and good amateur practice" as applied to the operation of an amateur station in all respects not covered by the Part 97 rules?

- A. The FCC
- B. The Control Operator
- C. The IEEE
- D. The ITU

2. What is the maximum symbol rate permitted for RTTY or data emission transmitted at frequencies below 28 MHz?

- A. 56 kilobaud
- B. 19.6 kilobaud
- C. 1200 baud
- D. 300 baud

3. How should the transceiver audio input be adjusted when transmitting PSK31 data signals?

- A. So that the transceiver is at maximum rated output power
- B. So that the transceiver ALC system does not activate
- C. So that the transceiver operates at no more than 25% of rated power
- D. So that the transceiver ALC indicator shows half scale

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



October General Pool Answers

1. What is a use for an antenna analyzer other than measuring the SWR of an antenna system?

C. Determining the impedance of an unknown or unmarked coaxial cable.

2. Which of the following might be useful in reducing RF interference to audio-frequency devices?

B. Bypass capacitor.

3. What is a "capacitance hat", when referring to a mobile antenna?

C. A device to electrically lengthen a physically short antenna

Test Your NIMS Knowledge

This month we will begin our review of ICS-800: National Response Framework. The purpose of the National Response Framework is to ensure that all response partners across the Nation understand domestic incident response roles, responsibilities, and relationships in order to respond more effectively to any type of incident. The Framework focuses on response and short-term recovery instead of all of the phases of incident management.

Check your recall of the course material with this question.

Whose duties include operation of the National Response Coordination Center, the effective support of all Emergency Support Functions, and, more generally, preparation for, protection against, response to, and recovery from all-hazards incidents?

- A. The President
- B. Secretary of Homeland Security
- C. DHS Director of Operations Coordination
- D. FEMA Administrator

Check next month's ARES Communicator for the solution

October 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



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.

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 November 10, 2015.

Software	Version
Fldigi	3.23.04
Flwrap	1.3.4
Flmsg	2.0.12
Flamp	2.2.03



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.



**ON VETERANS DAY,
WE HONOR
THOSE WHO SERVED**

Congressman John Kline

On November 11th – the anniversary of the armistice that brought an end to World War I – we pause to celebrate Veterans Day and honor those men and women who bravely wore our country's uniform.

The freedoms and liberties we cherish this day and every day are owed to the sacrifice of countless Americans who answered their nation's call to serve. On Veterans Day, we will pause to express our gratitude to our veterans.

As a 25-year veteran of the U.S. Marine Corps whose wife is a retired Army nurse and son has served three tours in Iraq and Afghanistan, it is an honor, privilege, and duty to ensure Congress supports those men and women who served.

We can do so much more to live by our words, not just utter them. If you are a veteran, I want to express my sincere gratitude to the sacrifices you made for our country. Happy Veterans Day!

\$30 Million Stolen

The Dridex Virus was the Thief!

If you ever find yourself wondering if you need to be as safe on the Internet as we're always telling you to be, consider the jaw-dropping amount of money that hackers stole with last year's Dridex malware. To remind you, hackers infected computers and took them over, stealing logins, passwords and siphoning money out of bank accounts.

These hackers, who called themselves Evil Corp, used a Macro virus hidden within a Microsoft Word or Excel file. Whoever opened those attachments unknowingly let the Evil Corp hackers steal their information, like bank account logins and passwords.

They used a Trojan virus, which isn't duplicated and spread from computer to computer. Instead, Evil Corp targeted specific victims, and they were quite smart about it. Instead of focusing on individuals, Evil Corp's victims were mostly the finance departments of small businesses. "Smart" because they ultimately stole more than \$30 million.

In fact, the FBI says the Evil Corp hackers also tried to steal \$1 million from a Pennsylvania public school district. They did manage to transfer \$3.5 million from Penneco Oil, also in Pennsylvania. The Evil Corp hackers found their victims from a database containing 385 million email addresses.

Now, almost a year after we started telling you about the Dridex hack, there is good news to report: Evil Corp's leader has been arrested. The Dridex hacks were serious enough to get the UK's National Crime Agency and the United State's FBI involved.

They arrested a 30-year-old Moldavian man, Andrey Ghinkul. Other members of Evil Corp have not yet been named. There's more good news. In addition to the arrest, the FBI says it's seized the botnet used by Evil Corp.

If the Evil Corp hackers eluded the FBI and Britain's National Crime Agency for a year, and stole \$30 million from companies around the world, you can imagine that hackers see everyday people as easy victims.

How can you protect yourself?

- Don't download email attachments, even if they look like they're coming from your bank. These are most likely phishing emails. It's very unlikely your bank would send you a link to open. If anything, it will alert you that you have an attachment, like your bank statement, waiting for you on its website. Accessing it may require a two-step verification process.

- Make sure your anti-virus program is up to date. Many anti-virus programs will block infected attachments from even coming into your email box. To make sure you have a good anti-virus program.

BREAK - OVER

"Nothing will work unless you do."

Holly Luyah

Lightning Hot Lead

F-35A Firing Test

A Lockheed Martin F-35A Lightning II fighter aircraft has fired its machine guns for the first time while airborne. The three bursts from the internal Gun Airborne Unit (GAU)-22/A 25mm Gatling gun system mark the second phase of testing to certify that the machine gun configuration is functional in all parts of the F-35A Conventional TakeOff and Landing (CTOL) variant's configurations and flight envelope.

The test was carried out over the Edwards Air Force Flight Test Center's gun harmonizing range in California using the F-35A test aircraft AF-2, which was converted to conform to full-production internal gun installation. The four-barrel, 182-round, 25mm gun is embedded in the F-35A's left wing and covered by a door to reduce its radar signature when not in use. It had previously performed 13 ground firings before the October 30 flight test.

Designed to engage air-to-ground and air-to-air targets, the machine gun is part of the standard armament for all three variants of the 5th generation fighter. The F-35 is designed to combine stealth with fighter speed and agility, as well as advanced sensors and networking capability. Ultimately, it's intended to replace a large number of US combat aircraft, as well as those of 10 other nations.



Lockheed says that the latest test was a major milestone for obtaining US Air Force Initial Operational Capability (IOC) next year. Further testing will be carried out over the next year as the gun is fully integrated into the production F-35's systems and sensor fusion software, which feeds data to the pilot's helmet display. These tests will include air-to-air and air-to-ground exercises and are expected to be completed by 2017.

"The successful aerial gun test sortie was a culmination of several years' planning, which intensified in the first half of 2015 at the Edwards F-35 Integrated Test Force Flight Test Squadron with a team of Air Force, Lockheed Martin, Pratt & Whitney, General Dynamics, and Northrop Grumman personnel," said Mike Glass, Edwards ITF flight test director. "The results of this testing will be used in future blocks of testing, where the accuracy and mission effectiveness capabilities will be evaluated."

BREAK - OVER

WINTER HAZARD AWARENESS WEEK

November 9 - 13, 2015

While the danger from winter weather varies across the country, nearly all Americans, regardless of where they live, are likely to face some type of severe winter weather at some point in their lives. Winter storms can range from a moderate snow over a few hours to a blizzard with blinding, wind-driven snow that lasts for several days. Many winter storms are accompanied by dangerously low temperatures and sometimes by strong winds, icing, sleet and freezing rain.

One of the primary concerns is the winter weather's ability to knock out heat, power and communications services to your home or office, sometimes for days at a time. Heavy snowfall and extreme cold can immobilize an entire region.

The National Weather Service refers to winter storms as the "Deceptive Killers" because most deaths are indirectly related to the storm. Instead, people die in traffic accidents on icy roads and of hypothermia from prolonged exposure to cold. It is important to be prepared for winter weather before it strikes.

Be Prepared!

To prepare for a winter storm you should do the following:

- Before winter approaches, add the following supplies to your emergency kit:

- Rock salt to melt ice on walkways.
- Sand to improve traction.
- Snow shovels and other snow removal equipment.
- Sufficient heating fuel. Store a good supply of dry, seasoned wood for your fireplace or wood-burning stove.

Adequate clothing and blankets to keep you warm.

- Make a Family Communications Plan. It is important to know how you will contact one another in case of an emergency.

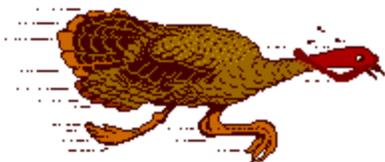
- Listen to local news channels for information from the National Weather Service.

- Minimize travel. If travel is necessary, keep a disaster supplies kit in your vehicle.

- Bring pets/companion animals inside during winter weather.

Visit the MN DPS website for more information: <https://dps.mn.gov/divisions/hsem/weather-awareness-preparedness/>

BREAK - OVER



Fibonacci Day - cont'd from page 1

Born in 1170 in Pisa, Italy, Fibonacci was also responsible for making the Hindu-Arabic numerals popular in Europe. In *Liber acaci* he advocated the use of these numerals, explained the use of zero, provided ways to convert between currencies and different measurements, and described how to calculate interest.

One of the beauties of the Fibonacci sequence is that the series is evident all over the natural world. Petal arrangements in flowers, the ordering of leaves in plants, the shell of the nautilus, the DNA molecule and even hurricanes show patterns that correspond to the sequence.

Artists and designers and woodworkers may be unwitting benefactors of Fibonacci's work. The ratio of two successive numbers in the Fibonacci sequence is very close to the Golden Ratio? The Golden Ratio is approximately equal to 1.6. Objects whose length and breadth exhibit the Golden Ratio are thought to be the most pleasing to the eye.

BREAK - OVER



ARES Breakfast
Saturday November 14th
7:30AM
Perkins Restaurant
Savage, MN

NECOS Schedule November 2015

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

November

- Nov 2 KB0FH Bob
- Nov 9 WA0DGW John
- Nov 16 KC0YHH Tony
- Nov 23 KD0UWZ Chad
- Nov 30 KB0FH Bob

December

- Dec 7 Open
- Dec 14 KC0YHH Tony
- Dec 21 KD0UWZ Chad
- Dec 28 KB0FH Bob