



ARES COMMUNICATOR

Information for Scott County Amateurs



January, 2017

Accurate, Reliable Emergency Communications for our Community

Volume 17, Number 1

MN QSO Party

19th Annual
Saturday, February 4th, 2017

Minnesota QSO Party is presented by the Minnesota Wireless Association. Highlites of the event include:

- 8:00 AM CST (1400 UTC)
Through 6 PM CST (2400 UTC)
- Plaques and Certificates for Winners in All Categories
- Special Gift of Minnesota Premium Wild Rice for Top 20 Non-Minnesota Scores!



Here's where to find the Minnesota QSO Party!

Many of the mobile stations will be using APRS. You can track them with links on the [Activity Map](#) page or the [Mobile Operations](#) page.

The use of spotting networks is encouraged to maximize your number of contacts.. In addition to the normal DX Cluster sites you may want to try the [County Hunting Spots](#) site and the [Reverse Beacon Network](#).

The [Resources](#) page contains links to tools to make your contest experience better.

For N1MM users we have a new Mult Chaser add on written by Pat, NAØN. It will track your multipliers on a map. See the [Logging Programs](#) page for more information.

More information is available here: <http://www.w0aa.org>

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Band/Mode	Freq.	CST	Band/Mode	Freq.	CST
10 CW	28050	Noon	10 SSB	28450	2:00 PM
15 CW	21050	11:00 AM	15 SSB	21350	1:00 PM
20 CW	14050	All Day!	20 SSB	14270	All Day!
40 CW	7050 All Day!	40 SSB	7250 All Day!		
80 CW	3550 All Day!	80 SSB	3850 All Day!		
160 CW	1850 5:30 PM	160 SSB	1870 5:30 PM		

Note: Please be courteous and respect nearby users of these frequencies.

Submit your logs to mnqp@w0aa.org.

ARES stations are encouraged to participate in the event. ARES stations will use "ARES" as their name in the exchange. See the [MN ARES page](#) for information on a new certificate that will be awarded for the top ARES station.

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

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ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)
Breakfast Saturday, January 14th
Digital Monday, January 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

New "Amateur Radio Parity Act"

Bill Introduced in US House of Representatives

ARRL Letter

H.R. 555 - a new "Amateur Radio Parity Act" bill - has been introduced in the U.S. House of Representatives. The bill's language is identical to that of the 2015 measure, H.R. 1301, which passed in the House late last summer but failed in the waning days of the US Senate to gain the necessary support. As with H.R. 1301, the new measure introduced on January 13 in the 115th Congress was sponsored by Rep. Adam Kinzinger (R-IL), with initial co-sponsorship by Rep. Joe Courtney (D-CT) and Rep. Greg Walden, W7EQI (R-OR). Walden now chairs the House Committee on Energy and Commerce, to which the new bill has been referred. H.R. 555 will get an initial airing in the Subcommittee on Communications and Technology. When H.R. 1301 came up in committee, Walden spoke forcefully in favor of the measure, which ultimately attracted 126 House cosponsors.

Information on H.R. 555 can be found on the web at, <https://www.congress.gov/bill/115th-congress/house-bill/555?r=27>

"Rep. Kinzinger has again stepped forward to introduce this important legislation," said ARRL CEO Tom Gallagher, NY2RF. "Kinzinger's commitment stems from exposure to what the Amateur Radio community brings to the service of all communities. The ARRL and radio amateurs nationwide owe Rep. Kinzinger a resounding 'Thank You!' for his efforts on their behalf."

H.R. 555 calls on the FCC to establish rules prohibiting the application of deed restrictions that preclude Amateur Radio communications on their face or as applied. Deed restrictions

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Cabin Fever Reliever Ham Fest

February 18th, 2017 – 9am to 1pm

The Saint Cloud Amateur Radio Club would like to announce the 100 Year Anniversary Cabin Fever Reliever Hamfest at the Haehn Campus Center in the College of Saint Benedict. You can find directions here: <https://www.google.com/maps/dir/45.558506,-94.3186728/@45.5585958,-94.3216055,17z>

With our larger location, we are able to hold more vendors, have breakout sessions and a buffet! Check out the site for more information on each topic!

Tickets are \$10 at the door, \$9 before January 31st. Click on the link to order tickets now! In honor of the 100 Anniversary of the Saint Cloud Amateur Radio Club, we have decided to go big. As a result, you wont go home hungry. We will be offering 4 different buffets at the event.

To enter the buffet area, tickets are \$10. You can go up to the buffet as many times as you would like, but if you leave the buffet area and would like to go back, it is \$10 to reenter the buffet!

The Morning Scrambler from 9:30 to 11:30
Light and fluffy scrambled eggs with bacon. Served with freshly baked blueberry muffins and fresh seasonal fruit.

EggCeptional Eggs 9:30 to 11:30
Light and fluffy scrambled eggs garnished with diced peppers served with sausage and choice of cheesy potatoes. Complete the offering with blueberry muffins.

Strata from 10:30 to 12:30
A comforting breakfast casserole made from bread, eggs and milk. Choice of ham, mushroom and onion strata or broccoli and bell pepper strata. Paired with cheesy potatoes and fresh seasonal fruit.

French Toast Bake 10:30 to 12:30
French toast made with granola and cinnamon. Served piping hot bacon and fresh seasonal fruit.
All breakfast buffet entrees include regular coffee, orange juice and ice water. We will also have soda, water, food and other items sold on the main floor. No food or beverages will be allowed to be brought into the event.

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would have to impose the minimum practicable restriction on Amateur Radio communications to accomplish the lawful purposes of homeowners association seeking to enforce the restriction.

The ARRL Board of Directors is expected to discuss the pending legislation when it meets January 20-21.

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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.arrrl.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!

February 4, 2017 Saturday 10:00 AM

St Paul Radio Club

Leon H. Dill (651) 688-9964

Email: w0coec@arrrl.net

Location: Ramsey Co Library Maplewood

3025 Southlawn Dr

Saint Paul MN 55109-1577

Walk-ins allowed, Pre-reg requested

February 8, 2017 Wednesday 7:00 PM

Sponsor: VARC

James C. Rice (612) 384-7709

Email: jrice@danpatch.org

Location: Perkins Restaurant & Bakery

17387 Kenyon Avenue

Lakeville MN 55044-4459

Walk-ins allowed, Pre-reg requested

February 18, 2017 Saturday 9:00AM

Sponsor: SEMARC

Daniel M. Franz (651) 769-0358

Email: wd0gup@hotmail.com

Location: Zion Lutheran church

8500 Hillside Trl S

Cottage Grove MN 55016-3273

February 27, 2017 Monday 6:00 PM

Sponsor: SMARTS

Dale A. Blomgren (952) 402-2155

Email: kd0b@arrrl.net

Location: Carver County Library

7711 Kerber Blvd

Chanhassen MN 55317

Walk-ins allowed, Pre-reg requested

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. What frequency range is occupied by a 3 kHz USB signal with the displayed carrier frequency set to 14.347 MHz?
 - A. 14.347 to 14.647 MHz
 - B. 14.347 to 14.350 MHz
 - C. 14.344 to 14.347 MHz
 - D. 14.3455 to 14.3485 MHz
2. How close to the upper edge of the 20 meter General Class band should your displayed carrier frequency be when using 3 kHz wide USB?
 - A. 3 kHz above the edge of the band
 - B. 3 kHz below the edge of the band
 - C. Your displayed carrier frequency may be set at the edge of the band
 - D. Center your signal on the edge of the band
3. Which of the following direct, fused power connections would be the best for a 100-watt HF mobile installation?
 - A. To the battery using heavy gauge wire
 - B. To the alternator or generator using heavy gauge wire
 - C. To the battery using resistor wire
 - D. To the alternator or generator using resistor wire

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

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December General Pool Answers

1. What frequency range is occupied by a 3 kHz LSB signal when the displayed carrier frequency is set to 7.178 MHz?
 - C. 7.175 to 7.178 MHz
2. What is the purpose of a "corona ball" on a HF mobile antenna?
 - D. To reduce high voltage discharge from the tip of the antenna
3. Why is it best NOT to draw the DC power for a 100-watt HF transceiver from an automobile's auxiliary power socket?
 - B. The socket's wiring may be inadequate for the current being drawn by the transceiver

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WINTER FIELD DAY 2017

January 27/28, 2017

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.

We 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 will 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.

Purpose: To foster Ham camaraderie, field operation, emergency operating preparedness, and just plain on the air, outdoor fun in the midst of winter for American, Canadian and DX Amateurs. Don't let those winter doldrums keep you locked up in the house...get out and play some radio!!

When: Winter Field Day runs for 24 hours during the last full weekend in January each year from 1900 UTC (2pm EST) Saturday to 1900 UTC (2pm EST) Sunday. For 2017, the dates are January 28th and 29th. Station set-up may commence no earlier than 1900 UTC (2pm EST) on Friday, January 27th. Station setup may consume no more than 12 hours total. How & when you schedule/spend those 12 hours is up to you.

Bands: All Amateur bands, HF, VHF, & UHF except 12, 17, 30 and 60 meters.

Modes: Any mode CW, SSB, AM, FM, DStar, C4FM, DMR, Packet, PSK, SSTV, RTTY, Olivia, Satellite, etc...

Suggested Frequencies: (to make it easier for entrants to find each other) HF CW 1810-1820, 3.530-3.550, 7.030-7.050, 14.035-14.055, 21.030-21.050, 28.030-28.040 HF SSB lowest 30 kHz of the US General Class Phone bands (160m-15m), 28.400-28.425MHz (10m) 6m/VHF/UHF - adjacent to, but not on, nationally recognized simplex calling channels.

Complete rules and log info here: <https://www.winterfieldday.com/rules/>

ARRL Asks for New 5 MHz Band

ARRL Letter

ARRL has asked the FCC to allocate a new, secondary contiguous band at 5 MHz to the Amateur Service, while also retaining four of the current five 60-meter channels and current operating rules, including the 100 W PEP effective radiated power (ERP) limit. The federal government is the primary user of the 5 MHz spectrum. The proposed action would implement a portion of the Final Acts of World Radiocommunication Conference 2015 (WRC-15) that provided for a secondary international allocation of 5,351.5 to 5,366.5 kHz to the Amateur Service; that band includes 5,358.5 KHz, one of the existing 5 MHz channels in the US.

"Such implementation will allow radio amateurs engaged in emergency and disaster relief communications, and especially those between the United States and the Caribbean basin, to more reliably, more flexibly and more capably conduct those communications [and preparedness exercises], before the next hurricane season in the summer of 2017," ARRL said in a January 12 Petition for Rule Making. The FCC has not yet acted to implement other portions of the WRC-15 Final Acts.

The Petition for Rule Making can be found on the web in PDF format at, <http://www.arrrl.org/attachments/view/News/87580> .

The League said that 14 years of Amateur Radio experience using the five discrete 5-MHz channels have shown that hams can get along well with primary users at 5 MHz, while complying with the regulations established for their use. "Neither ARRL, nor, apparently, NTIA is aware of a single reported instance of interference to a federal user by a radio amateur operating at 5 MHz to date," ARRL said in its petition. NTIA - the National Telecommunications and Information Administration, which regulates federal spectrum - initially proposed the five channels for Amateur Radio use. In recent years, Amateur Radio has cooperated with federal users such as FEMA in conducting communication interoperability exercises.

In its Petition, ARRL also called upon the FCC to retain the same service rules now governing the five channels for the new band. The WRC-15 Final Acts stipulated a power limit of 15 W effective isotropic radiated power (EIRP), which the League said "completely defeats the entire premise for the allocation in the first place."

"For precisely the same reasons that the Commission consented to a power increase on the five channels as recently as 2011 [from 50 W PEP ERP to 100 W PEP ERP], the Commission should permit a power level of 100 W PEP ERP, assuming use of a 0 dBd gain antenna, in the contiguous 60-meter band," ARRL said. "To impose the power limit adopted at WRC-15 for the contiguous band would render the band unsuitable for emergency and public service communications."

Surf's Up!

Surfing the web for interesting topics related to radio, building, computing, and anything else interesting along the way.

How a Directional Coupler in an SWR meter works

<https://www.youtube.com/watch?v=byF1FLdbUiA>

This video describes how a dual directional coupler that is used in an SWR meter operates. It describes and demonstrates how voltages are developed that are directly proportional to the forward and reflected signals on a transmission line. The coupler shown is a common designed used by ham radio homebrewers in their SWR meter designs. It is widely published, and can be found in several issues of the ARRL Handbook.

BITX40

Work the world on 40 meters (\$59 USD)

<http://www.hfsigs.com/>

The new BITX40's Raduino is an Arduino Nano powered, small, hackable board based on the rock steady Si5351 synthesizer with a clean 16x2 frequency display, free and open source code, 6 analog ports, three oscillators and six digital lines.

The BITX boards are hand assembled by a collective of women. Each of the toroids is hand wound. This provides these women with livelihood. The assembled boards are then DC checked a final RF check is performed to check the receiver's sensitivity as well as transmitter's output before being shipped. Each board is individually numbered.

Solder Smoke News

<http://soldersmoke.blogspot.com/search/label/BITX40Module>

Serving the worldwide community of radio-electronic homebrewers. Providing blog support to the SolderSmoke podcast: <http://soldersmoke.com>

This homebrewer site contains a lot of interesting reading on the evolution and mods for the BITX40 (above).



Test Your NIMS Knowledge

This month we begin our review of ICS-200. This course is designed to enable personnel to operate efficiently during an incident or event within the Incident Command System (ICS). ICS-200 provides training on and resources for personnel who are likely to assume a supervisory position within the ICS.

Check your recall of the course material with this question.

1. ICS Form 201:

- A. Is completed by the Safety Officer in order to address safety concerns and identify mitigation measures
- B. Allows a Single Resource Boss to track major activities during each operational period
- C. Contains status information for briefing the incoming Incident Commander or team, or other resources
- D. Lists all resources and organization assignments for the upcoming operations period

Check next month's ARES Communicator for the solution

November NIMS Knowledge Solution

- 1. Branches within the ICS organization can be established:
 - C. Within Groups to organize resources



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 January 20, 2017.

Software	Version
Fldigi	3.23.20
Flwrap	1.3.4
Flmsg	4.0.1
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.



Password Hacked?

Between the 1 billion hacked Yahoo accounts and all the other cyberattacks that occurred last year, 2016 could easily be declared the year of the data breach. Although the companies we trust with our information need to do a better job encrypting data, a new report suggests that users are also not doing their part to protect themselves.

Keeper, a password management firm in Chicago that creates password management and digital vault software, found that as a whole we're making it too easy for criminals to get to our information.

The firm looked at 10 million passwords that became public due to the various data breaches last year, and the results were concerning.

Although security experts (ourselves included) have been warning about the risks of weak passwords for years, the most common passwords of 2016 remained the most obvious ones, which no one should be using. Topping the list was "123456," and the study revealed that 17 percent of people are still using it!

Another troubling observation is that four of the 10 most common passwords have fewer than six characters, making them that much easier for hackers to crack them.

So, what were the biggest culprits? Here's a list of 2016's top 10 weakest passwords:

- | | |
|--------------|---------------|
| 1. 1.123456 | 6. 1234567890 |
| 2. 123456789 | 7. 1234567 |
| 3. qwerty | 8. password |
| 4. 12345678 | 9. 123123 |
| 5. 111111 | 10. 987654321 |

You have heard it again and again: having a strong password helps protect your online accounts. It's one of the easiest steps you can take to protect your information. Obviously, if you see a password you use on this list (or anything similar), create a new one.

Storing passwords

You don't want to use the same password for all your different accounts but trying to remember all of them can be difficult. If you're afraid that you'll forget your new unique passwords, consider using a program like KeePass. It stores and organizes all your passwords offline.

What to do if you've been hacked

First of all, you need to figure out whether or not you've been hacked; most people don't know until it's too late. You can type your email address or username into the site Have I Been Pwned (<https://haveibeenpwned.com/>) and it will tell you immediately. (Don't worry about this site being a phishing scam, it has been vetted).

From there, you need to reset the hacked account's password. Answer your security questions or have a temporary password sent to a different, secure email address.

BREAK - OVER

KeePass

Store your passwords safely and easily

To download the program, navigate to the KeePass download page by using my blue link buttons below. There are two different versions of KeePass for you to choose from: Classic Edition and Professional Edition.

If you are a Mac user, you have to use the professional version. If you are a Windows user, it doesn't really matter what version you use, but the professional version has more features.

There are also portable versions for the Classic and Professional editions of KeePass, which you can put on a USB drive to take with you wherever you go. View the comparison chart here: <http://keepass.info/compare.html>

When you have decided which program to use, click the corresponding green download button. Your download should begin immediately.

Unless you're downloading KeePass onto a portable drive, click on the top "Installer" buttons to download the correct version of KeePass onto your computer.

When the download is complete, open and run the installation file. Be sure to read the Terms and Conditions before you accept. Remember, always read the fine print on anything you download to your computer!

Using the default installation options will give you a good starting point. When you come to the window that says "Select Additional Tasks" consider creating a Quick Launch icon so that you can find KeePass when you need to look up a password.

Complete the installation. After that, you can open KeePass and begin adding all of your passwords to keep them secure. It's a snap to keep your passwords protected with KeePass. Downloads links for free editions.

Download for Windows: <http://keepass.info/download.html>

Download for Mac: <http://keepass.info/download.html>

Please share this information with everyone. Just click on any of these social media buttons.

BREAK - OVER



Tips For Creating A New Password

- Use long, unique passphrases. The longer the better and make it something that's meaningful to you so that it's easier to remember.
- Use spelling mistakes and replace letters with symbols. Adding these simple variations will make it harder to crack.
- Use a password generator. You can add qualifications to increase its strength, like how many characters to use and which symbols are acceptable.

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Ultra-slim Camera Inspired by Bugs

Although smartphones may be getting thinner all the time, their cameras still present a bit of a problem. That's because they generally can't be made thinner than about 5 mm – after all, they've got that lens to accommodate. Scientists at Germany's Fraunhofer Institute for Applied Optics and Precision Engineering, however, have developed a flat camera that's just 2 mm thick ... and it has 135 tiny lenses instead of one "big" one.

Called the facetVISION, the camera takes its inspiration from insects' multi-faceted compound eyes. This means that each of its lenses captures a different part of the subject – all of those parts are combined like a mosaic, to form one overall composite image.



The facetVISION camera can be industrially manufactured in mass production. Fraunhofer researchers have shown this in trial runs.

In its present form, the camera has a maximum resolution of just four megapixels. Immediate uses for it could include applications such as automotive sensors, quality control in the printing industry, and medical engineering. Once developed further, however, it is believed that the resolution could get to over 10 megapixels, making it better suited for use in phones. It could be economically manufactured in large quantities using techniques similar to those presently used for producing semiconductors, in which large silicon wafers are sawed into smaller separate pieces.

This isn't the first compound eye-inspired camera that we've seen, incidentally. Although it was larger than the facetVISION, a 180-lens camera was developed by researchers from the University of Illinois at Urbana-Champaign in 2013.

BREAK - OVER

"What you leave behind is not what is engraved in stone monuments, but what is woven into the lives of others."

Pericles

Ho Ho Ho Merry Christmas



Meridian, Miss. Santa Claus and an elf get out of a T-45C Goshawk during a visit to Training Air Wing One for a children's Christmas party on Dec. 4, 2016.



ARES Breakfast

Saturday
January 14th 2017!!
7:30AM
Perkins Restaurant
Savage, MN

NECOS Schedule January 2017

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

Jan 23rd KB0FH Bob
Jan 30th WA0DGW John
February 2017
Feb 6th KD0UWZ Chad
Feb 13th KB0FH Bob
Feb 20th WA0DGW John
Feb 27th KD0UWZ Chad