



ARES COMMUNICATOR

Information for Scott County Amateurs



February, 2018

Accurate, Reliable Emergency Communications for our Community

Volume 18, Number 2

Midwinter Madness Hamfest!

March 24th Saurday

The 37th Annual Midwinter Madness Hobby Electronics Show is at the Buffalo Civic Center in Buffalo, MN. on Saturday, March 24th.

This is a nice drive out Hwy 55 West from the Twin Cities with free on-site parking and a short walk to the building entrance.

Admission is \$10 and children under 15 are free. Talk-in on the KØLTC Repeater 147.000 +600 - Call for KØLTC.

The site is the Buffalo Civic Center, 1306 County Road 134, Buffalo, MN - use your favorite navigation.

Lots to see and do so get there early! QSL Card Checking for ARRL awards at the ARRL booth. Drawings will be held at 12:30 PM : Grand Prize: \$300 Radio City Gift Certificate ,

First Prize: \$125 Radio City Gift

Certificate, Second Prize: \$75 Radio City Gift Certificate. Be sure to get your name in the bucket for these great prizes!

Amateur Radio VE Testing session will be held starting at 7:30 AM. Advance registration encouraged. you can email for more testing info: <mwmve@kØltc.org>

for more information and registration. the VE Exam fee is \$15. In addition to your head full of knowledge, bring the following to the exam session:

- Government issued photo ID (i.e.: Drivers License; School ID if a minor)
- Amateur Radio License original AND photocopy (if currently licensed)



- Know your Social Security Number (if currently NOT licensed)
- Pen (for paperwork) and Pencil (for answers)
- Calculator without saved formulas (we have loaner basic calculators)
- Exam session fee \$15.00 check or cash (prefer check made out to: ARRL/VEC)

GOOD LUCK!

Got stuff to sell or exhibit? Sign up for a table! Advance table registration closes Wednesday March 21st. A limited number of tables may be available the day of the event. Prices are as follows:

- 8 foot Swap Table: \$30.00 each. Rent 3 or more tables for \$25.00 each
- Electricity \$15/vendor
- Club Information Table: \$20.00 each (No selling personal/club items)

For more table info and state of Minnesota tax reporting forms, email <swap@kØltc.org>

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ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)

Breakfast Saturday, March 10th

Digital Monday, March 12th

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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Surf's Up!

Surfing the web for interesting topics related to radio, building, computing, and anything else interesting along the way. Send your 'finds' to the editor and share the fun!

Radio Shack Tandy Books

https://archive.org/details/tandy_books

Remember when Radio Shack actually sold electronic parts? Rows of blister-pack components of all types. Need some 74HXXX logic? LEDs, pots, caps, the Shack was the place to go. There was always the rack of books. The series of Forest Mimms notebooks, TRS80 programming, Z80 programming, Basic, VisiCalc, and on and on. Check out the link for some of your old favorites.

Schematic & PCB Design

KiCad

<http://kicad-pcb.org/>

KiCad is an open source software suite for Electronic Design Automation (EDA). The programs handle Schematic Capture, and PCB Layout with Gerber output. The suite runs on Windows, Linux and macOS and is licensed under GNU GPL v3.

OSH park

<https://oshpark.com/>

OSH Park produces bare printed circuit boards, focused on the needs of prototyping, hobby design, and light production. All our services offer purple soldermask over bare copper.

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Easy EDA

<https://easyeda.com/>

Easy EDA offers circuit simulation, PCB design, Electronic circuit design online for free. Draw schematics quickly using the available libraries on browser. Verify analog, digital and mixed signal circuits with spice subcircuits and models. Online PCB Design multiple layers, thousands of pads, you could still operate quickly and layout smoothly. Import your designs from Eagle, Altium, Kicad and LTspice

Dip Trace

<https://diptrace.com/>

Convert schematic to PCB and back annotate easily. Wide import/export capabilities. Board design with manual routing and shape-based autorouter. Fast and easy creation and import of new components. Ready-to-go templates and smart bulk editing tools. 140,000+ components in the standard libraries. Real-time 3D PCB preview on any stage of development.

PCBWay

<https://www.pcbway.com/>

Current special offer is ten two-layer boards for \$5.00 Pricing and quantity offers change periodically. Shipping is via DHL and you will have the boards usually within a week.

ALL PCB

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

Check current terms and pricing. Ordering process is similar to other Chinese PCB manufacturers.

JLC PBC

<https://jlcpcb.com/>

The current offer is 10 boards 100mm x 100mm for \$2.00 plus DHL shipping. The offer does change periodically so be sure to check. If your design will layout to allow 3 boards side-by-side in a 100mm x 100mm board, you essentially receive 30 copies of your board for \$2.00!

PCB Shopper

<https://pcbshopper.com/>

Site serves electronics professionals and hobbyists who are looking for the lowest cost manufacturer for their printed circuit boards. We also want to help you find free PCB CAD software that meets your needs, taking into account that many free packages are limited versions of commercial programs.

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Scott County ARES Contacts

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Chaska, MN
KD0UWZ at scottares.org



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!

March 3, 2018 Saturday 10:00 AM

Sponsor: St Paul Radio Club

Leon H. Dill (651) 688-9964

Email: w0coe@arrrl.net

Location: Ramsey Co Library Maplewood

3025 Southlawn Dr

Saint Paul MN 55109-1577

Walk-ins allowed, Pre-reg requested

March 14, 2018 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

March 17, 2018 Saturday 8:45 AM

Sponsor: Bloomington Off/Emergency Mgmt

Daniel J. Royer (952) 888-9756

Email: dandroyer@gmail.com

Location: City Hall-Police Department

1800 W Old Shakopee Rd

Bloomington MN 55431

March 17, 2018 Saturday 9:00 AM

Sponsor: SEMARC

Daniel M. Franz (651) 769-0358

Email: wd0gup@hotmail.com

Location: Zion Lutheran Church

8500 Hillside Trail South

Cottage Grove MN 55016

Walk-ins allowed, Pre-reg requested

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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 is the peak-to-peak voltage of a sine wave that has an RMS voltage of 120 volts?
A. 84.8 volts
B. 169.7 volts
C. 240.0 volts
D. 339.4 volts
2. What will happen to the resistance if the temperature of a resistor is increased?
A. It will change depending on the resistor's reactance coefficient
B. It will stay the same
C. It will change depending on the resistor's temperature coefficient
D. It will become time dependent
3. What is the total resistance of a 10 ohm, a 20 ohm, and a 50 ohm resistor in parallel?
A. 5.9 ohms
B. 0.17 ohms
C. 10000 ohms
D. 80 ohms

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

January General Pool Answers

1. Which value of an AC signal results in the same power dissipation as a DC voltage of the same value?
C. The RMS value
2. What causes a voltage to appear across the secondary winding of a transformer when an AC voltage source is connected across its primary winding?
C. Mutual inductance
3. If three equal value resistors in parallel produce 50 ohms of resistance, and the same three resistors in series produce 450 ohms, what is the value of each resistor?
C. 150 ohms

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March 26, 2018 Monday 6:00 PM

Sponsor: SMARTS

Dale A. Blomgren (952) 402-2155

Email: kdzerob@aol.com

Location: Carver County Library

7711 Kerber Blvd

Chanhassen MN 55317

Walk-ins allowed, Pre-reg requested

FT8 DXpedition Mode

Joe, K1JT

You have probably heard something about recent efforts to develop a special “FT8 DXpedition Mode” in WSJT-X. This message aims to bring you up-to-date on our progress, and generally to make our plans more widely known.

The basic goal of *FT8 DXpedition Mode* is to enable DXpeditions to make FT8 QSOs at the highest possible rates. We have been working together with members of the Baker Island (KH1/KH7Z) group. Their planned expedition will take place in June-July 2018. Like most major DXpeditions, this one will almost certainly make a majority of its QSOs using SSB and CW. However, the group is well aware of the rapid rise of FT8 popularity, and they plan to use FT8 as well.

Making FT8 QSOs with KH1/KH7Z will require the DXpedition and everyone trying to work them to use a new, yet-to-be-released version of WSJT-X.

We have tested the new program features on the air several times, and found them to work well. Another test run will probably be scheduled in a month or so. There will be plenty of advance publicity inviting others to upgrade to a “Release Candidate” called WSJT-X v1.9.0-rc1, and to join in trying to work one or more specific “pseudo-DXpedition” stations at a certain time and frequency. In this way, we hope to continue shaking bugs out of the program and generally to improve its usability — both for the DX operator and those seeking to work him.

FT8 DXpedition mode includes a number of new and innovative features. For further details on what’s in store, I draw your attention to a draft of the “FT8 DXpedition Mode User Guide” posted here: http://physics.princeton.edu/pulsar/k1jt/FT8_DXpedition_Mode.pdf

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First Thursday Net

Metro District Hospital Net

The Association of Emergency Radio Organizations (AERO) sponsors a Metro District ARES net held on the first Thursday of each month. The purpose of the net is to provide an opportunity to exercise Dual-band xcvrs installed at hospitals and clinics in the metro area.

The net is open to all amateur radio ops and provides the opportunity to participate in a directed net and practice directed net procedures.

Everyone is welcome!

- First Thursday of each month
- 12:30PM (lunch time)
- 146.700 - (PL118.8)



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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. The Operational Period Briefing:

- A. Helps keep the public and media informed about the incident status and operational accomplishments
- B. Presents the Incident Action Plan (IAP) for the upcoming period to supervisory personnel
- C. Provides an orientation to individual resources at the beginning of their assignments
- D. Sets forth the specific tasks, reporting relationships, and expectations for support staff

Check next month's ARES Communicator for the solution



January NIMS Knowledge Solution

1. A delegation of authority:

- A. May be needed when the incident scope is complex or beyond existing authorities



NBEMS Current Versions

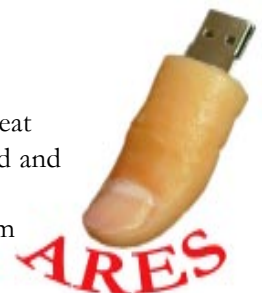
The current version of the Fldigi manual is available at NBEMS Info page at www.scottares.org. Look under the ‘Help Sheets’ heading.

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

Here are the most recent releases as of January 20, 2018.

Software	Version
Fldigi	4.0.12
Flwrap	1.3.4
Flmsg	4.0.3
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.



NIMS Updated

IS Core Courses to be Revised

ARESE-Letter

NIMS, the National Incident Management System, went through an extensive update this past fall. As a result, the core courses in FEMA's Independent Study (IS) program — IS-100, 200, 700 and 800 — along with many other NIMS courses, will be updated this year. As usual, those who take the current versions will be grandfathered; however, if it's been ten years or so since an ARES communicator has taken these courses, it would be a good idea to take the 2018 versions as refreshers.

The Incident Command System is the emergency/disaster response template or model of management adopted by emergency management/public safety in the US. It is critically important that radio amateurs involved in supporting served agencies, and especially ARES members, be well versed in the ICS and its protocols. Any operator deploying to a disaster area will be left outside looking in, if they have not taken the ICS courses to become familiar with planning and actions in a disaster theater of operations. While the courses have not yet been updated, the new NIMS 2017 Instructor and Student Learning Materials have been released and are published on the FEMA Independent Study website.

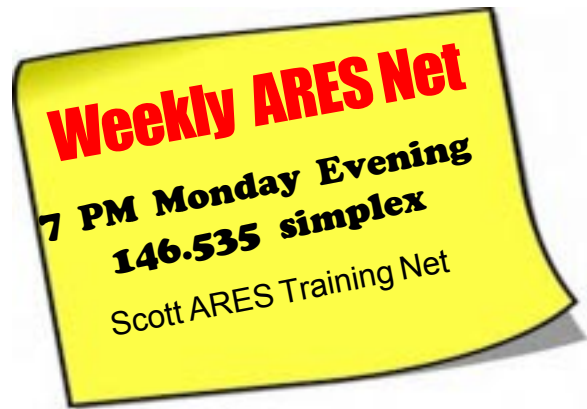
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AUXCOMM, COMT Courses

"AUXCOMM," an abbreviation for "auxiliary communications," was developed by the US Department of Homeland Security's Office of Emergency Communication (OEC) in 2009 with the assistance of Amateur Radio subject matter experts. The goal was to educate as many amateur service entities to work and train with public safety personnel, understand the value of the NIMS Incident Command System (ICS) and the role of the Communications Unit Leader (COML) in the ICS. AUXCOMM, although not an official national ICS position, is most often identified as a Technical Specialist (THSP) in the Communications Unit. The process on how this can be accomplished is described in the FEMA NIMS *Guidelines for the Credentialing of Personnel* and FEMA's *Type 3 All-Hazard Incident Management System Qualification Guide*.

OEC subsequently developed the AUXCOMM technical assistance workshop and produced the Auxiliary Communications Field Operations Guide (AUXFOG). This guide and other OEC products are available at < <https://www.dhs.gov/publication/fog-documents>>. The TRG-AUXCOMM (the course designator) is designed to educate amateurs and state officials involved with volunteer groups on the typical emergency operations center (EOC) environment.

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The Scott ARES net meets every Monday evening at 7:00 PM either on 146.535 simplex or on the first Monday of the month the WBORMK repeater 147.165 (PL 107.2).

The net is in a directed net format and provides the opportunity to practice working in an emergency net style.

There is help available in setting up and using NBEMS digital messaging software and generally a weekly digital message for practice.

Everyone is welcome to check in and contribute two cents worth!



ARES Breakfast

Saturday
March 12th 2018
7:30AM

Hy-Vee Market Grille,
6150 Egan Dr, Savage, MN

NECOS Schedule February 2017

The first Monday or the month the net is held on the WBORMK repeater, Carver. You will find WBORMK here: [147.165/765 PL 107.2](https://www.fcc.gov/licenses/licenses-and-permits/frequency-coordinates/147.165-765)

Date NECOS_____

Feb 26th KD0UWZ Chad

March 2018

Mar 5th N0BHC Bob- First Monday Net

Mar 12th WA0DGW John

Mar 19th KD0UWZ Chad

Mar 26nd N0BHC Bob

April 2018

Apr 2nd WA0DGW John - First Monday Net