



ARES COMMUNICATOR

Information for Scott County Amateurs



September, 2018

Accurate, Reliable Emergency Communications for our Community

Volume 18, Number 9

73 Radio City

"It's Time to Retire."

News Release
Sept. 11th, 2018

It's been a wonderful 36 years for us at Radio City and we have decided to retire and close Radio City. We are so thankful for the many years of support and we have enjoyed working you, our customers. The technical, intelligent and polite conversations plus advice have been invigorating, thus making this decision extremely difficult for us.

We appreciate all the teachers, Elmers, VE examiners, ham and astronomy clubs efforts in growing new ham radio operators and amateur astronomers into our special community.

We will also miss going to and supporting amateur radio and astronomy clubs all over MN and IA at their events. We will greatly miss all the friendships we have been privileged to maintain with many of our customers.

We plan to exit by this year's end or a bit sooner as we empty our shelves of new and used materials.

Upcoming Events:

Sidewalk Sale:

Our final sidewalk sale is this **Saturday Sept 15th**. We are digging deep for this event. It will be held rain or shine. Currently forecasts are calling for a mild 85F with just a 20% chance of showers.

Final Goodbye Tour:

We will be at **Smartfest** in Cologne, MN on **Saturday September 22nd**. We will also be in Carlton MN for their **Fallfest** on **Saturday September 29th**.

Goodbye Party:

Please come on by on Saturday **October 6th** for our good bye party. We will of course have cake and coffee for everybody.

cont'd col. 2

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

EDITOR: Bob Reid, Scott County Emergency Coordinator

Snail Mail: 13600 Princeton Circle
Savage, MN. 55378

E-Mail: N0BHC@aol.com

Phone: Home 952-894-5178 Portable 612-280-9328

Other Necessary Details:

Service:

We will complete servicing items we currently have in the service dept. We will not be accepting any additional 'Out of warranty' items. 'In warranty' items will be still be processed by Radio City per normal until about **October 31st, 2018**.

Consignment :

We will no longer accept more items for consignment. All items that have NOT been sold need to be picked up the week of **Oct 13th, 2018**. We will consider all items not picked up by then to be abandoned.

In closing we will very much miss all of you and perhaps there is someone out there interested in running the store under New Management.

Thanks again for all your support,
Dan and Maline Fish

BREAK - OVER



ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)

Breakfast Saturday, October 13th

Digital Monday, October 15th

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

BSA On-air Activity

The KZ4BSA Atlanta GA. Area Council Amateur Radio Club is [planning a very busy fall calendar of operating events.

The Scouts will be operating at Bert Adams Scout Reservation, Covington, GA every weekend in October. The signal can be found primarily on the usual JOTA frequencies (see table below).

October 5- 7, operation will be with the EGWA TAWA DEE Lodge of the Order of the Arrow at their Trailblazer Encampment.

October 12- 14 and 26- 28, Operation will move to the Atlanta Area Council Spooky- Ree Camp out for the Cub Scouts

October 19- 21, KZ4BSA will be participating in Jamboree on the Air (JOTA) Contacts will be rewarded with a QSL card (an SASE would be appreciated). They are anticipating a good JOTA log this year.

When you are tuning the bands, take a couple of minutes to check the frequencies below and see if there are some Scouts eager for a contact. Remember that Technician Class licensees have HF privileges on the 10M band. You will make their day!

Scouting Frequencies

Band	BSA Calling	Segment
80 m	3.940 & 3.690 3.670 – 3.690	3.920 – 3.940
40 m	7.190 & 7.090 7.270 – 7.290	7.180 – 7.200
20 m	14.290 14.320 – 14.340	14.270 – 14.290
17 m	18.140	18.140 – 18.150
15 m	21.360	21.360 – 21.400
12 m	24.960	24.960 – 24.980
10 m	28.390	28.350 – 28.400
6 m	50.160	50.160 – 50.200

BREAK - OVER

Test Your NIMS Knowledge

This month we begin our review of ICS-700, An Introduction to National Incident Management System. This course is designed to enable personnel to operate efficiently during an incident or event within the Incident Command System (ICS). ICS-700 provides an overview of the NIMS structure.

Check your recall of the course material with this question.

- Mutual aid agreements and assistance agreements provide:
 - Strategies for restoring critical infrastructure that affects multiple sectors and jurisdictions across specified geographical areas.
 - Mechanisms to quickly obtain emergency assistance in the form of personnel, equipment, materials, and other associated services.
 - Steps for ensuring the continuity of government at the local, tribal, and State levels following a catastrophic incident.
 - Lists of specialized codes for facilitating communication among responders representing different departments, agencies, and jurisdictions.

Check next month's ARES Communicator for the solution

August NIMS Knowledge Solution

1. The National Response Framework (NRF) presents the guiding principles that:

- Are singly focused on improving Federal homeland security agencies' response to catastrophic natural hazards and terrorist-related incidents.

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.

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 www.scottares.org/NBEMS.htm

Here are the most recent releases as of Aug. 23 2018.

Software	Version
Fldigi	4.0.18
Flwrap	1.3.4
Flmsg	4.0.6
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.



Scott County ARES Contacts

Emergency Coordinator
Bob Reid N0BHC
13600 Princeton Circle
Savage, MN 55378
952-894-5178
N0BHC@arrl.net



Asst Emergency Coordinator
Chad Palm KD0UWZ
Chaska, MN
KD0UWZ at scottares.org



WWV-WWVH Shut Down Proposal

ARRL members and Amateur Radio clubs are expressing increased concern over the inclusion of WWV and WWVH on a list of proposed cuts in the White House's National Institute of Standards and Technology < www.nist.gov > Fiscal Year 2019 budget request. The proposed cuts also would include the Atomic Clock signal from WWVB used to synchronize specially equipped clocks and watches. Online petitions soliciting signatures include one < <https://petitions.whitehouse.gov/petition/maintain-funding-nist-stations-www-wwwh> > established by Tom Kelly II, W7NSS, of Portland, Oregon, who would like to see funding for the stations maintained. At this point, the budget item is only a proposal, not a final decision. That would be up to the Congress to decide.

ARRL is among those worried over the possible loss of WWV, WWVH, and WWVB and is suggesting that members of the Amateur Radio



community who value the stations for their precise time and frequency signals and other information sign Kelly's petition and/or contact their members of Congress promptly, explaining how the stations are important to them, beyond government and military use.

Kelly's petition, which may be signed by US residents, notes that WWV is among the oldest radio stations in the US, having been established in 1920. "The station has transmitted the official US time for nearly 100 years, and is an instrumental part in the telecommunications field, ranging from broadcasting to scientific research and education," his petition says.

"Additionally, these stations transmit marine storm warnings from the National Weather Service, GPS satellite health reports, and specific information concerning current solar activity and radio propagation conditions. These broadcasts are an essential resource to the worldwide communications industry."

NIST's full Fiscal Year (FY) 2019 budget request to Congress calls for the agency to "discontinue the dissemination of the US time and frequency via the NIST radio stations in Hawaii and Fort Collins, Colorado." The agency noted, "These radio stations transmit signals that are used to synchronize consumer electronic products like wall clocks, clock radios, and wristwatches, and may be used in other applications like appliances, cameras, and irrigation controllers." The specific cut, which would come from the NIST Fundamental Measurement, Quantum Science, and Measurement Dissemination budget, would amount to \$6.3 million.

In its budget request, NIST said that it plans to consolidate and focus work on its efforts in quantum science while

maintaining essential core capabilities in measurement science research and measurement dissemination, as well as eliminate "efforts that have been replaced by newer technologies, measurement science research that lies outside NIST's core mission space, and programs that can no longer be supported due to facility deterioration."

WWV and WWVH broadcast time and frequency information 24/7, including time announcements, standard time intervals, standard frequencies, UT1 time corrections, a BCD time code, geophysical alerts, and marine storm warnings. Transmissions are broadcast from separate transmitters on 5, 10, 15, and 20 MHz. An experimental 25 MHz signal is also currently on the air. WWVB transmits standard Coordinated Universal Time (UTC) signals on 60 kHz to appropriately equipped timekeeping devices.

NIST Public Relations Director Gail Porter told Tom Witherspoon, K4SWL — editor of *The SWLing Post*, < <https://swling.com/blog/> > which has been tracking developments — that NIST "is proud of the time and frequency services we provide through our radio stations, and understands that these services are important to many people."

NIST Director Walter Copan has supported the overall budget request. "This budget request ensures that NIST can continue to work at the frontiers of measurement science by preserving investment in core metrology research," Copan said. "Through its constitutionally mandated role, NIST performs work that only the government can do, and produces enormous return on US taxpayers' investment. Translating measurements into technically sound standards across all industries enables effective international trade and US competitiveness."

BREAK - OVER



You measure my life in hours and I serve you by expiring. I'm quick when I'm thin and slow when I'm fat. The Wind is my enemy. What am I?



HDD Antenna

A. Nony Moose

Looking for the best high frequency antenna for your station? Build the HDD antenna! Coax-fed HF antennas are variations on the center-fed halfwave dipole. Let's start in the middle and work our way to each end.

The center insulator provides three requirements: insulate the legs of the antenna, provide a point to attach the coax feedline, and provide a center support attachment point.

Here is the center insulator for the HDD antenna.

To get started, you need to accumulate the following list of material. Online sources are provided for some of the parts. Be sure to check out the URL for the Bolt Depot. They have a wide variety and types of fasteners and are rapid shippers.

- Qty Description
- 5" 1-1/2in Sched 40 PVC DWV Plain End Pipe
- 2 1-1/2 in. PVC Sch. 40 Socket Cap
- 3 Wire eye bolts (w/ nuts) #10-24 x 1".
- 3 Hex machine screw nuts #10-24.
- 2 Machine screws, Phillips pan head #4-40 x 1/2"
- 2 Hex machine screw nuts #4-40
- 4 Sheet metal screws, Phillips pan head #6 x 1/2"



- www.boltdotcom/
- 1 SO-239 chassis mount connector www.ebay.com/itm/Coax-Connector-UHF-SO-239-Heavy-Chassis-Mount-by-W5SWL/221584357143
- 4 Burndy KS15 Servit splitbolt connector www.ebay.com/itm/NEW-BURNDY-Servit-Split-Bolt-Connector-14-8-AWG-5-Pack-KS15RK/283111722858
- 20" #18 stranded wire
- 1 Ring terminal or #6 solder lug

Okay, now proceed to fabricate: cut, drill, solder, screw, etc until you have something that looks like the earlier picture! A word of advice when drilling the hole for the chassis mount coax connector. Make sure you allow for the screw-on shell of the male connector! Drilling the hole large enough will save a trip to the store for another PVC cap. If you mount your SO-239 as pictured, it tends to stay dry but the hole in the PVC cap must be large enough to accommodate the cable connector.



Next month we will move ahead with the calculating, cutting, and tuning of the two legs of the antenna. Have you figured out why this is named the HDD antenna? Can you also figure out why this is called the "best" antenna? Better check in next month for the answers.

BREAK - OVER



"You cannot do a kindness too soon, for you never know how soon it will be too late."

Ralph Waldo Emerson



First Thursday Net

Metro District Hospital Net

The Metro District ARES Hospital net is 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)

EAS Test Oct 3rd

Scott ARES Net

NPSTC News Release

WASHINGTON -FEMA, in coordination with the Federal Communications Commission (FCC), postponed the nationwide test of the Emergency Alert System (EAS) and Wireless Emergency Alerts (WEA) until October 3 due to ongoing response efforts to Hurricane Florence.

The WEA portion of the test commences at 2:18 p.m. EDT, and the EAS portion follows at 2:20 p.m. EDT. The test will assess the operational readiness of the infrastructure for distribution of a national message and determine whether improvements are needed.

October 3 was the previously scheduled back-up date for the test, which was originally set up for this Thursday, September 20. A backup date is always planned in case of widespread severe weather or other significant events on the primary test date. FEMA and the nation's emergency management community remain committed to the life-saving activities occurring through parts of North Carolina and South Carolina.

For further information on the test, go to < www.fema.gov/emergency-alert-test.>

###

Background: In 2007, FEMA began modernizing the nation's public alert and warning system by integrating new technologies into the existing alert systems. The new system, known as the Integrated Public Alert and Warning System (IPAWS) became operational in 2011.

Today, IPAWS supports more than 1,000 state, local, tribal, territorial and federal users through a standardized message format. IPAWS enables public safety alerting authorities such as emergency managers, police, and fire departments to send the same alert and warning message over multiple communication pathways at the same time to citizens in harm's way, helping to save lives.

For more information on FEMA's IPAWS, go to:< www.fema.gov/ipaws>. For more preparedness information, go to< www.ready.gov >.

On Oct. 3rd, at 1:18PM (Central time), FEMA will be doing an emergency notification test. They will be sending cell phone notifications to cell phones that are capable of getting emergency alert notifications. The WEA, Wireless Emergency Alert, test message will have a header that reads "Presidential Alert" and text that says:

"THIS IS A TEST of the National Wireless Emergency Alert System. No action is needed."

Scott ARES will have a net active on 146.535 MHz and all members are encouraged to simply make a check-in call.

BREAK - OVER

Surf's Up!

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

Crystal Sets to SSB

http://www.qrparci.org/wa0itp/csts_book.pdf

Interesting reading on basic info on Ham radio and electronics by Frank W. Harris, KØIYE.

'Scoping out an Uno

www.baldengineer.com/six-oscilloscope-measurements-using-arduino.html

The Bald Engineer is poking around an Arduino Uno to demonstrate the measurement options on a scope. There are more signals than you might first suspect.

DIY PCB Stencil Attempt

<https://imgur.com/a/ky2DuyN>

Applying solder paste to the pads of a surface mount device can be a complicated as you want to make it. The more professional method involves using a stencil to precisely place the paste. Here is a blow by blow account of the process. Homebrew ingenuity at work!

Hitchhiker's Guide to PCB Design

<https://resources.ema-eda.com/pcb-design-content-central/the-hitchhikers-guide-to-pcb-design>

This a FREE cheeky, easy-to-understand dive into the PCB design and manufacturing process. The ebook takes readers on the journey of Ian, a new engineer getting his footing in PCB design, who makes some serious design faux pas resulting in a non-manufacturable design.

Semiconductor Document Library

<http://n4trb.com/AmateurRadio/SemiconductorHistory/SemiconductorDocuments.htm>

This a collection of transistor manufacturers promotion booklets aimed at education the 'experimenter' to the revolutionary new transistor! Great collection of pamphlets from the 50's and 60's.



Chinese Dataminer

Mac Adaware Doctor

Tom's Hardware

People use ad-blockers for all sorts of reasons. Some want to stop advertising companies from collecting information about them, some don't want to financially support ad-dependent websites and some just want the sites they visit to load faster. It's unlikely that anyone would use an ad-blocker because they want to share their browsing history with someone in China, but that appears to be exactly what the Adware Doctor app does.

Adware Doctor is one of the highest grossing paid apps in the Mac App Store. It's supposed to do what every other ad-blocker does: prevent online tracking and stop advertisements from loading. Yet after numerous complaints about the app doing things it shouldn't, like changing settings in Safari and secretly collecting users' browser history, Objective-See owner Patrick Wardle decided to figure out what exactly the suspicious doc is up to.

Wardle detailed his findings in a blog post. The long and short of it is that even though Adware Doctor is an effective ad-blocker, it also collects browser history from Safari, Chrome and Firefox, which it then bundles up and sends to someone in China. Wardle said the actual exfiltration is currently disabled, but the version of Adware Doctor available in the Mac App Store will still collect this information and get ready to send it as soon as it can.

It's bad enough that a tool people use to protect their privacy has been secretly compromising it. But the problem is made worse by the fact that Adware Doctor is available via the Mac App Store, the entire point of which is to offer macOS users a trusted place to find software that's been vetted by Apple (and, of course, to centralize the distribution of desktop software using the mobile app model so Apple gets a 30 percent cut of these

Worse still is the fact that Adware Doctor remains available even though Wardle said he notified Apple of its clear violations of Mac App Store policies a month ago. Apple didn't catch Adware Doctor's problems before releasing the app in the Mac App Store, failed to respond after numerous people complained about the app and has yet to remove it.

Apple even inadvertently markets Adware Doctor on its website. The page for the Mac App Store includes lists of the most popular apps in the marketplace, and there Adware Doctor sits, right in the number fourth spot. It's possible the page is automatically generated, but it still helps this dubious utility get even more attention from curious macOS users.

Anyone using Adware Doctor should immediately delete the app. There are plenty of alternatives that offer similar features, so even if the developer explains why the app secretly collected and shared this data, you shouldn't miss it. But the same can't be said of the Mac App Store.

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.

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

1. What is the inductance of a 20 millihenry inductor in series with a 50 millihenry inductor?
A. .07 millihenrys
B. 14.3 millihenrys
C. 70 millihenrys
D. 1000 millihenrys
2. Which of the following components should be added to a capacitor to increase the capacitance?
A. An inductor in series
B. A resistor in series
C. A capacitor in parallel
D. A capacitor in series
3. What is an effect of inter-turn capacitance in an inductor?
A. The magnetic field may become inverted
B. The inductor may become self resonant at some frequencies
C. The permeability will increase
D. The voltage rating may be exceeded

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



A Candle!



BREAK - OVER

August General Pool Answers

1. How should the winding axes of solenoid inductors be placed to minimize their mutual inductance?
C. At right angles
2. What is the peak-inverse-voltage rating of a rectifier?
C. The maximum voltage the rectifier will handle in the non-conducting direction
3. When two or more diodes are connected in parallel to increase current handling capacity, what is the purpose of the resistor connected in series with each diode?
C. To ensure that one diode doesn't carry most of the current

BREAK - OVER

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!

October 10, 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

October 20, 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

October 27, 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

October 29, 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

cont'd from col 1

November 3, 2018 Saturday 10:00 AM

St Paul Radio Club

Leon H. Dill (651) 688-9964

Email: w0coec@arll.net

Location: Ramsey Co Library Maplewood

3025 Southlawn Dr

Saint Paul MN 55109-1577

Walk-ins allowed, Pre-reg requested

BREAK - OVER

Monday Evening 7PM

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

October 13th 2018

7:30AM

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

NECOS Schedule October 2018

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

Date NECOS_____

Sep 24th KD0UWZ Chad

October 2018

Oct 1st - N0BHC Bob First Mon. Net

Oct 8th - WA0DGW John

Oct 15th - KD0UWZ Chad

Oct 22nd - N0BHC Bob

cont'd col. 2