



ARES COMMUNICATOR

Information for Scott County Amateurs



November, 2017

Accurate, Reliable Emergency Communications for our Community

Volume 17, Number 11

SKYWARN Recognition Day

Saturday, December 2

Skywarn Recognition Day (SRD) will take place this year on Saturday, December 2 from 0000 until 2400 UTC (starts on the evening of Friday, December 1, in US time zones). During the SKYWARN Special Event, ham radio operators will set up stations at National Weather Service (NWS) offices and contact other radio amateurs around the world.

Participating Amateur Radio stations will exchange a brief description of their current weather with as many NWS-based stations as possible on 80, 40, 20, 15, 10, 6, and 2 meters plus 70 centimeters. Contacts via repeaters are permitted.

SRD was developed jointly in 1999 by the NWS and ARRL to celebrate the contributions SKYWARN volunteers make to the NWS mission — the protection of life and property. Amateur Radio operators, which comprise a large percentage of SKYWARN volunteers, also provide vital communication between the NWS and emergency managers, if normal communications become inoperative.

How to Participate

1. Object For all amateur stations to exchange QSO information with as many National Weather Service Stations as possible on 80, 40, 20, 15, 10, 6, and 2 meter and 70 cm. Contacts via repeaters are permitted. SKYWARNTM Recognition Day serves to celebrate the contributions to public safety made by amateur radio operators during threatening weather.

2. Date NWS stations will operate December 2, 2017, from 0000 - 2400 UTC.



SRD 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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Election Results

Dakota Division Director & Vice Director

by: Kent, KA0LDG, Director Dakota Division

Hot off the press and on the ARRL website: "The votes are in, and the ballots have been tallied at ARRL Headquarters in contested Director and Vice Director elections.

In a two-way race to fill the Dakota Division Director's chair being vacated by Kent Olson, KA0LDG, the Division's members have elected Matt Holden, K0BBC, of Bloomington, Minnesota. Holden, the current Vice Director, received 698 votes, while Dean Summers, N0ND, of Dickinson, North Dakota, got 345 votes. Holden had been appointed as Vice Director in February 2016 after former Director Greg Widin, K0GW, became ARRL First Vice President. Olson announced earlier this year that he would not seek another term.

In a four-way race for the Vice Director's chair that Holden will vacate, the winner was Lynn Nelson, W0ND, of Minot, North Dakota. Nelson earned 427 votes; Tom Karnauskas, N0UW, of Owatonna, Minnesota, received 338 votes; Chris Stallkamp, KI0D, of Selby, South Dakota got 175 votes; and Jay Maynard, K5ZC, of Fairmont, Minnesota, picked up 93 votes. Nelson is North Dakota Section Manager, while Stallkamp is South Dakota Section Manager.

Election Results cont'd on page 2

ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)

Breakfast Saturday, December 9th

Digital Monday, December 11th

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

Skywarn Recognition Day - cont'd from page 1

3. Exchange: Call sign, signal report, QTH, and a one or two word description of the weather occurring at your site (“sunny”, “partly cloudy”, “windy”, etc.).

4. Modes: NWS stations will work various modes including SSB, FM, AM, RTTY, CW, and PSK31. While working digital modes, special event stations will append “NWS” to their call sign (e.g., N0A/NWS).

5. Station Control Operator: It is suggested that during SRD operations a non-NWS volunteer should serve as a control operator for your station.

6. Event and QSL Information: The National Weather Service will provide event information via the internet. Event certificates will once again be electronic and printable from the main website after the conclusion of SRD.

The Twin Cities National Weather Service Office will be participating in the event according to the website listing of participating offices: http://www.weather.gov/crh/skywarn_participating_offices

KOMPX, Twin Cities (Chanhassen MN) Bands: 80M, 40M, 20M, 15M, 10M, 6M, 2M, 440 Mhz

Modes: CW, RTTY, PSK, FM, EchoLink, IRLP Time: 00z-24z

You can find a list of operating stations along with certificate printing instructions at: http://www.weather.gov/media/crh/skywarn/SRD2016_endorsement_checklist.pdf

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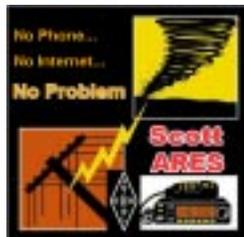
Happy Thanksgiving

Scott County ARES Contacts

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Asst Emergency Coordinator
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Election Results - cont'd from page 1

The Ethics and Elections Committee established the eligibility of all candidates and declared all unopposed candidates elected for 3-year terms starting January 1, 2018.”

Thanks to all the candidates for your interest in leading the division. There hasn't been an election in the Dakota Division for years, and this shows that you care and are interested. Congratulations to both Matt, KØBBC & Lynn, WØND! They will take over as Director and Vice Director on January 1st, 2018, so please give them your support throughout their term. Thank you for supporting Matt & I these last few years, and thank you for being an ARRL member!

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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.

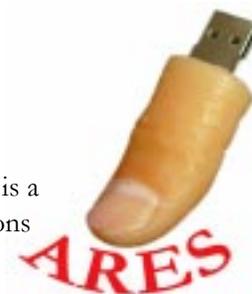
Now is a good time to check to your digital software to make sure you are running the newest versions. You can find the most recent versions posted at both: www.w1hkj.com/ and <http://www.scottares.org/NBEMS.htm>

Here are the most recent releases as of November 20, 2017.

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.



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!

November 27, 2017 Monday 6:00 PM

Sponsor: SMARTS

Dale A. Blomgren (952) 402-2155

Email: kdzerob@aol.com

Location: Carver County Library

7711 Kerber Blvd

Chanhausen MN 55317

Walk-ins allowed, Pre-reg requested

December 2, 2017 Saturday 10:00 AM

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

December 13, 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

December 18, 2017 Tuesday 6:00 PM

Sponsor: SMARTS

Dale A. Blomgren (952) 402-2155

Email: kdzerob@aol.com

Location: Carver County Library

7711 Kerber Blvd

Chanhausen MN 55317

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. How many watts of electrical power are used by a 12-VDC light bulb that draws 0.2 amperes?
A. 2.4 watts
B. 24 watts
C. 6 watts
D. 60 watts
2. What is the output PEP from a transmitter if an oscilloscope measures 200 volts peak-to-peak across a 50-ohm dummy load connected to the transmitter output?
A. 1.4 watts
B. 100 watts
C. 353.5 watts
D. 400 watts
3. Which of the following is an advantage of an electrolytic capacitor?
A. Tight tolerance
B. Non-polarized
C. High capacitance for given volume
D. Inexpensive RF capacitor

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

BREAK - OVER

October General Pool Answers

1. How does the total current relate to the individual currents in each branch of a parallel circuit?
C. It equals the sum of the currents through each branch
2. How many watts of electrical power are used if 400 VDC is supplied to an 800-ohm load?
B. 200 watts
3. Which of the following is an advantage of ceramic capacitors as compared to other types of capacitors?
D. Comparatively low cost

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cont'd from col 1

January 6, 2018 Saturday 10:00 AM

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

BREAK - OVER

Haunted Faucet RFI

RFI email reflector

A Ham posted a plea for help with a strange problem: Hope some one can assist me with this RFI problem.

We have a kitchen faucet made by Delta (Model 9192T). The faucet will turn on when you touch it and turn off when you touch it again. It actually worked pretty good. The control module and solenoid is powered by 6 AA batteries.

Unfortunately, when I use my transmitter the faucet will toggle the water off and on.

I have contacted Delta and they said there isn't a solution, other than disabling the touch feature (problem?). The installer did not give me much room to work and it will not be easy to disable the touch feature and we like this feature.

Any one have any other suggestions?

Misery loves company so there was some relief when another ham posted his experience: I have had the exact same faucet for 4 years. Same problem here. (I love the touch tap btw). The worst band was 40m, but I would activate the unit on most bands. If you can copy CW, you could copy my transmission by listening to the tap turn on-and of with my keying.

Tried everything...ferrites on all leads to the device etc. 40 and 80m Yagi at 100' with CM chokes on all lines. No solution found....except...just make sure you manually turn the faucet off before you operate. It drove my wife nuts, but she learned to just get up and turn the tap off. It was really creepy at first to see the tap turning on and off magically by itself. Actually scared the kids at first but they got used to it..."oh, Dad is on the radio again!"

I have since moved my station to a remote location so that sure solved my problem.

Another chimed in with his tale: I had one at the old house that reacted to 160m full power only. Would turn on but never off other than the timeout.

We have one at the new house, but antennas are 100' further away and no issues over the past 4 years from HF. My 900 MHz talkie turns it on/off if I'm within about 4' of it.

The responses seemed to merge toward the idea the faucet had some type of 'antenna' and 'detector'. Suggested cause / solutions headed in that direction: Sometimes the feedlines radiate excessively and cause RF in the shack. What antenna are you using? Unbalanced antennas can be a problem, like long wire end fed etc.



The haunted faucet!

Make sure your coax is in good shape along with the connectors. Sometimes loose PL259's cause havoc.

There are a lot of gadgets out on the market now with electronic devices embedded and susceptible to stray RF. I had a CO2 detector that would go off when I transmitted with high power, mfg said there was nothing they could do. So I purchased one that operates off battery and it works fine. That told me the house wiring was acting like an antenna.

Unfortunately the discussion came to a close and the original poster didn't return to tie up the thread. The situation gives you cause to wonder, How clean is my shack?

BREAK - OVER



*"Today is all we have.
Yesterday is gone.
Tomorrow never comes.
When you go to bed tonight and
then wake up, what day will it
be? Not tomorrow, but today."*

Elroy Eims



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)



LED

LEDs are everywhere; there's even a good chance that you're reading this article about LEDs by the light emitted from one or more LEDs. So, what the heck is an LED anyway? You're about to find out.

LED stands for Light-Emitting Diode, an electronic device made up of two different types of semiconductor material. Similar in concept to the semiconductor material used in various computer components, such as RAM, processors, and transistors, diodes are devices that allow the flow of electricity to occur in only one direction.

An LED does the same thing: It blocks the flow of electricity in one direction while letting it move freely in the other. When electricity in the form of electrons travels across the junction between the two types of semiconductor material, energy is given up in the form of light.

The credit for the first instance of an LED belongs to Oleg Losev, a Russian inventor who demonstrated an LED in 1927. It took almost four decades before the invention was put to a practical use. LEDs first started appearing in commercial applications in 1962, when Texas Instruments made available an LED that gave off light in the infrared spectrum. These initial LEDs were used primarily in remote control devices, such as early television remotes.

The first visible light LED also made its appearance in 1962, emitting a somewhat feeble but visible red light. Another decade would pass before the brightness would be substantially increased, and additional colors, primarily yellow and a red-orange, were made available.

LEDs took off in 1976 with the introduction of high-brightness and high-efficiency models that could be used in a wide variety of applications, including communications and as indicators in instrumentation. Eventually, LEDs were used in calculators as numeric displays.

LEDs in the late 70s and early 80s were limited to only a few colors; red, yellow, red-orange, and green were the prominent colors available. While it was possible in the lab to produce LEDs with different colors, the cost of production kept additions to the LED color spectrum from being mass-produced.

It was thought that an LED producing light in the blue spectrum would allow LEDs to be used in full color displays. The search was on for a commercially viable blue LED, which, when combined with existing red and yellow LEDs, could

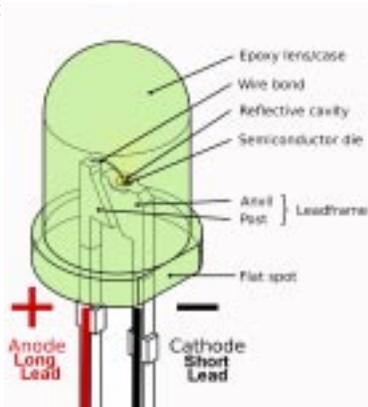
produce a wide spectrum of colors. The first high-brightness blue LED made its debut in 1994. High-power and high-efficiency blue LEDs appeared a few years later.

The idea of using LEDs for a full spectrum display never got too far until the invention of the white LED, which occurred shortly after high-efficiency blue LEDs appeared.

You may see the term LED TV or LED monitor, most of these types of displays use an LCD (Liquid Crystal Display) for the actual display component, and use LEDs to illuminate the LCDs. That's not to say true LED-based displays aren't available in monitors and TVs using OLED (Organic LED) technology; they just tend to be pricey and difficult to manufacture at large scales. But as the manufacturing process continues to mature, so does LED lighting.

The LED technology continues to mature and a wide range of uses for LEDs have already been discovered, including:

- Infrared LEDs used for controlling appliances. Check that TV remote; chances are there's an infrared LED at the business end of the remote.
- LEDs are used as indicator lights in appliances and instrumentation. At one time, neon and incandescent lights



LED cont'd on page 6



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!

Electrical Technology

www.electrical4u.com/

The site covers entire aspects of the subject, from basic engineering to advanced and modern topics related to Electrical Engineering and Technology. This site plays a vital role for getting extra knowledge beyond the text books. Materials on this site are written in very simple and understandable English. Information on this site can also be utilized as reference for different fields of electrical engineering and technology. This site has many sections like, Engineering Articles, Competitive MCQs, Conceptual Engineering Videos, Engineering Community for discussing any topic etc.

Ham Tools & Projects

<http://www.n5dux.com/ham/>

"Welcome to N5DUX Ham Tools. These are just some of my pet programming projects that I've made to answer a question, do a job or pass some time. I hope you find them useful. I will continue to work on them so long as there is a need." Be sure to check out the "PDF archive/library". There is a surprise on almost every line!



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!

LED - cont'd from page 5

were commonly used. Now LEDs, which are more efficient, have a long life, and are generally less expensive, have taken over this use.

- LEDs are used in displays, including alphanumeric displays seen in everything from early calculators to clocks, advertising signs, and transportation displays. And don't forget that it's likely your TV and computer monitor are using LEDs to illuminate the display.

cont'd col. 2

cont'd from col. 1

- And of course, we can't forget illumination; LEDs are well on their way to completely replacing the incandescent light bulbs perfected by Thomas Edison. Along the way, fluorescents in homes and commercial venues are also seeing less and less use.

LEDs will continue to be used in a wide variety of products, and new uses are being rolled out all the time. The one rule to remember is, limit current to less than 10ma IF you want to see the light more than once!

BREAK - OVER

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.

Representatives from Assisting or Cooperating Agencies and Organizations coordinate through:

- A. Liaison Officer
- B. Operations Section Chief
- C. Public Information Officer
- D. Logistics Section Chief

Check next month's ARES Communicator for the solution

October NIMS Knowledge Solution

1. The Medical Unit is responsible for the development of the Medical Plan, obtaining medical aid, and:

- A. Transportation for injured and ill incident personnel

BREAK - OVER



ARES Breakfast

Saturday
December 9th 2017
7:30AM

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

NECOS Schedule December 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

Date	NECOS _____
Nov 27th	KD0UWZ Chad
December 2017	
Dec 4th	N0BHC Bob - First Monday Net
Dec 11th	WA0DGW John
Dec 18th	KD0UWZ Chad
Dec 25th	Merry Christmas
Jan 1st	N0BHC Bob - First Monday Net
Jan 8th	WA0DGW John