



# ARES COMMUNICATOR

Information for Scott County Amateurs



April, 2018

Accurate, Reliable Emergency Communications for our Community

Volume 18, Number 4

## Time is Running Out!

### SKYWARN Training nearly complete

Additional training sessions have been added to the schedule including a New Prague location.

Net operations rely upon a high degree of independence from spotters. Spotters are trained about Basic Storm Structure and the sequence of events of an Approaching Severe Thunderstorm. The goal of this info is to educate the Spotter on how to place themselves safely near severe weather and how to report into the net.

Special emphasis is placed on training the spotter how to differentiate severe weather from weather easily confused with severe weather with a specially prepared video and slide presentation. Many useful Weather Terms are learned to facilitate communication on the net.

To qualify, radio amateurs must pass a multiple choice test every two years. Spotters are expected to monitor severe weather potential and activate themselves as needed and available and place themselves at useful locations.

Reports are requested from anyone seeing severe weather. Updates from the NWS about current conditions are repeated or updated every ten minutes. Occasionally, the NWS will request information from a specific location or regarding specific conditions.

Check out the training dates below and make plans to update your skills. You can find more info about specific classes under the "Classes" tab at: [www.metroskywarn.org](http://www.metroskywarn.org)



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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](mailto:N0BHC@aol.com)

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

### Wed 5-2-18 6 PM - 10 PM

City of Roseville  
Roseville Fire Station  
2701 Lexington Ave N  
Roseville, MN  
REGISTRATION REQUIRED.  
Facility info contact: [Emily.Nelson@cityofroseville.com](mailto:Emily.Nelson@cityofroseville.com)

### Sat 5-5-18 9 AM - 1 PM

SEMARC  
Zion Lutheran Church  
8500 Hillside Trail S  
Cottage Grove, MN  
REGISTRATION REQUIRED  
Walk ins welcome if room is available  
Facility info: Dave at 612-250-3417  
[finster99@comcast.net](mailto:finster99@comcast.net)

Spotter Training cont'd on page 2



## ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)

Breakfast Saturday, May 12th

Digital Monday, May 14th

### 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

## Spotter Training - cont'd from page 1

### Tues 5-8-18 6 PM – 10 PM

Hennepin County Emergency Management  
Hennepin County Public Works - EOC Room  
1600 Prairie Dr.  
Medina, MN  
Walk ins welcome.  
Facility info contact: Michael.Ostlund@hennepin.us

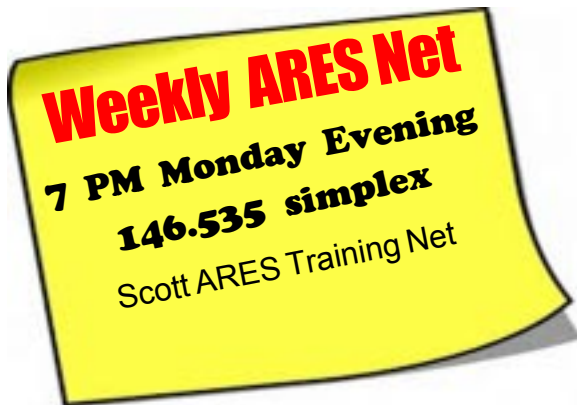
### Sat 5-12-18 12PM – 4PM

Blaine City Hall  
10801 Town Square Dr.  
Blaine, MN (Radisson Road and 109th Ave North)  
Walk ins welcome  
Facility info contact: Ryan@MetroSkywarn.org

### Sat 5-12-18 9AM – 12PM

New Prague Community Ed.  
Community Room  
410 Central Ave N  
New Prague, MN  
REGISTRATION REQUIRED  
For assistance in registering call 952-758-1734

BREAK - OVER



## 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



## 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 information and intelligence function may be organized in one of the following ways:

- Within the Command Staff
- As a Unit Within the Planning Section
- As a Branch Within the Operations Section

- (a) At a separate Incident Command Post
- (b) Under the Communications Unit within Logistics
- (c) As a separate General Staff Section
- (d) Outside the command structure for security reasons

Check next month's ARES Communicator for the solution

## March NIMS Knowledge Solution

Which is the top priority within the ICS common leadership responsibilities?

- D. Ensuring safe work practices

## NBEMS Current Versions

The current version of the Fldigi manual is available at NBEMS Info page at [www.scottares.org](http://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/](http://www.w1hkj.com/) and [www.scottares.org/NBEMS.htm](http://www.scottares.org/NBEMS.htm)

Here are the most recent releases as of April 16, 2018.

Software	Version
Fldigi	4.0.16
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.



## Armed Forces Day Event

### Crossband contacts / bulletins

The Army Military Auxiliary Radio System will host this year's Armed Forces Day Crossband Test, scheduled for May 12, 2018. This annual event is open to all radio operators, and will not impact any public or private communications.

For more than 50 years, military and amateur stations have taken part in this event, which is only an exercise scenario, designed to include hobbyist and government radio operators alike. The AFD Crossband Test is a unique opportunity to test two-way communications between military communicators and radio stations in the Amateur Radio Service (ARS), as authorized in 47 CFR 97.111.

These tests provide opportunities and challenges for radio operators to demonstrate individual technical skills in a tightly-controlled exercise scenario that does not impact any public or private communications.

Military stations will transmit on selected military frequencies and will announce the specific ARS frequencies monitored. All times are ZULU (Z), and all frequencies are Upper Side Band (USB) unless otherwise noted.

The frequencies used for the test will not impact any public or private communications, and will not stray outside the confines of the exercise. The following stations will be making two way radiotelephone contacts with stations in the ARS between the time periods listed on the frequencies listed in kilohertz below.

WAR, WUG-2 and NSS will also make CW contacts.

#### AAZ / FT HUACHUCA, AZ

1500Z - 2359Z 5,330.5 14,438.5 18,211.0

#### AAC / BARROW ARMY RESERVE CTR, KY

1300Z - 0100Z 5,346.5 7,542.0 13,963.5  
20,920.0

#### ABH / SCHOFIELD BARRACKS, HI

1600Z - 2300Z 5,357.0 14,438.5 18,272.0  
20,997.0

#### ABM1 / CAMP ZAMA, JAPAN

1500Z - 0100Z 14,487.0 20,994.0

#### ADB / CAMP FOSTER, OKINAWA

1500Z - 0100Z 14,487.0 20,994.0

#### WAR / PENTAGON WASHINGTON, DC

1200Z - 2400Z 5,357.0 13,963.5 18,211.0  
24,760.0 USB + CW

#### WUG-2 / ARMY CORPS OF ENGRS, TN

1300Z - 0200Z 5,403.5 13,910.5 18,293.0  
20,973.5 USB + CW

#### AIR / ANDREWS AFB

1200Z - 2400Z 4,517.0 7,305.0 15,807.0  
20,740.0

#### AGA2SY / HANCOCK FIELD, NY

1200Z - 2400Z 4,575.0 7,540.0 13,993.0

#### AGA5SC / SCOTT AFB, IL

1600Z - 2300Z 3,308.0 4,872.0 7,545.0

#### AGA9TR / TRAVIS AFB, CA

1600Z - 0100Z 5,346.5 7,329.0 13,996.0  
14,411.0

#### AFM4AF / NAVAL SUPPORT ACTIVITY MID-SOUTH MILLINTON, TN

1200Z - 0300Z 7,375.5 13,498.0

#### NMC1 / COAST GUARD ISLAND, ALAMEDA, CA

1700Z - 2359Z 7,542.0 15,740.5 22,924.5

#### NIIW / USS MIDWAY CV-41 SAN DIEGO, CA

1400Z - 0400Z 4,013.5 5,371.5 7,493.5  
14,383.5 18,211.0

#### NWKJ / USS YORKTOWN CV-10 CHARLESTON, SC

1200Z - 2200Z 4,000.0 7,360.0 14,663.5

#### NEPM / USS IOWA BB 61 LOS ANGELES, CA

1500Z - 2359Z 4,043.5 6,903.5 14,463.5  
18,293.0

#### NWVC / LST-325 EVANSVILLE, IN

1200Z - 0400Z 4,007.0 6,913.0 9,988.5  
13,974.0

#### NSS / US NAVAL ACADEMY ANNAPOLIS, MD

1300Z - 0200Z 4,038.5 5,330.5 7,533.5  
9,447.0 14,487.0 17,545.0 USB + CW

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AFD cont'd on page 4



## Armed Forces Day - cont'd from page 3

An AFD test message will be transmitted utilizing the Military Standard (MIL-STD) Serial PSK waveform (M110) followed by MIL-STD Wide Shift FSK (850 Hz RTTY) as described in MIL-STD 188-110A/B.

Technical information regarding these waveforms is provided at:[http://www.n2ckh.com/MARS\\_ALE\\_FORUM/MSDMT.html](http://www.n2ckh.com/MARS_ALE_FORUM/MSDMT.html).

The AFD test message will also be sent at 0300Z in Continuous Wave (CW) mode (refer to the far right column in the table below).

The message will be transmitted on the following frequencies in kilohertz and at the listed times:

Time	Callsign	Frequency
1400Z	AGA2SY	13,506.5 kHz
	ACC	17,443.0 kHz
1420Z	WAR	13,506.5 kHz
	AGA2SY	17,443.0 kHz
1440Z	ACC	13,506.5 kHz
	WAR	17,443.0 kHz
1500Z	AAZ	13,506.5 kHz
	AAZ	7,443.0 kHz
2200Z	ADB	13,506.5 kHz
	AGA2SY	17,443.0 kHz
0300Z	NWVC	5,346.5 kHz

For those who wish to document their contacts with a QSL card, go to <http://www.usarmymars.org/events> and complete the request form.

BREAK - OVER



## 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)

— // —

**Some people grumble  
that roses have thorns;  
I am grateful that  
thorns have roses.**

— // —

## Phone Contesting Tips

Andy Faber, AE6Y

*(Ed Note: Contesting requires the exchange of information rapidly with a high degree of accuracy. Gee, that sounds like emergency communications! You can build your emergency skills and have a lot of fun on the air. To begin just operate for a short time to get the hang of the contest. Careful, you might become hooked.)*

This article is prompted by the recent WPX SSB contest, in which I worked thousands of guys from Aruba as P49Y, which engendered much reflection (and teeth-gnashing, to be sure) about how U.S. hams can be best understood from the DX end. I'm not addressing this to relatively clear-channel domestic contests but to the situation where you are trying to get through to a DX station that may be hearing a pileup, plus noise, ear-splitting splatter from adjacent stations and all of the other sonic annoyances that make many contesters prefer CW. If there is no pileup and you know the DX station can hear you completely clearly, then you'll get through regardless, but if not, here are some suggestions:

First, be sure you are calling on his exact frequency. In CW contests, it can be helpful to separate yourself from the pack by calling off frequency, but that's not true in SSB. Off-frequency stations sound distorted and are hard to understand. The DX station may well come back to a weaker, but more intelligible station that is on frequency, even if you are louder. In order to work you, he has to figure out which way to adjust the RIT, and then go ahead and do it. A tired operator on the other end may just not bother, until he has worked everyone else.

Second, make sure your audio is clean. It is so much easier to understand clear audio, even if it is weaker than a louder, distorted signal. KH7XS mentioned in his 3830 posting that this year there particularly seemed to be over-processed signals coming from South America, and I noticed the same thing. It used to be that the Italians who were the worst offenders, but they seem to be better now. This weekend, the Cubans were particularly hard to understand. The prize for the easiest audio to understand goes each contest to the hams from the British Isles. The G's, M's and their derivatives invariably have very clean (and usually nicely treble) audio that can be understood even when the signal doesn't budge the S-meter. On several occasions I chose a weak but clear Brit over a loud, but distorted, competitor.

Ok, so you have a clean signal and are calling on frequency, now how do you get the information through, both your callsign and your contact number (or other information).

Here are some tips:

If you are loud enough and have an easily recognizable call, you can skip phonetics. So this weekend, when K1AR called, he was easy to pick out, same for K3UA, K3ZO, N6AA, and a few others. But for most guys, and when in doubt, use

phonetics. Endless bandwidth has been expended on the subject of phonetics, and people have differing opinions on the topic, but here are my thoughts from being on the DX end:

The first thing to understand is that the standard, "recommended" international alphabet works dismally in marginal conditions. The words are too short, and some don't have unique sounds. Generally speaking, the one-syllable words just get lost, while the two syllable words are better, and the longer ones are even better.

Thus, one-syllable words like "Fox", "Golf" and "Mike" are horrible. Some of the two-syllable ones are OK (e.g., "Hotel" and "Quebec"), but others, such as "Alpha" and "Delta", or "X-ray" and "Echo", "Kilo" and "Tango" sound very similar, so are easily confused. I worked a guy with the suffix XXE, and had to get a number of repeats until he finally said "X-Ray X-ray Ecuador," which did the trick.

There are two basic cures for these problems. The first is only to use these crummy phonetics the first time as a trial. If the DX station asks for a repeat, say your call twice, once with the standard phonetics and once with different ones. Don't just keep repeating your call the same way. Something in either the way you say it or the way the DX hears it is creating ambiguity. If you keep repeating the call the same way it may well be that part of it is just hard to decipher, and it may not get any easier.

If the DX station is a good English speaker then custom phonetics may work, such as "King George Six..." In fact when I thought a KK4 station was a K4, he used a very effective phonetic, "King Kong Four..." WA2JQK uses "Jack Queen King" in domestic contests, but that won't work well for non-native speakers. The Wyoming station N7MZW uses "Many Zebras Walking" sometimes domestically, but I noticed he was using normal phonetics in WPX.

The second approach is to switch to the geographical phonetic alphabet. This features longer and more distinctive-sounding words, which are much easier to understand. For example if your suffix is, say, HLF, then you can say "Hotel Lima Fox," then try "Honolulu London Florida." When I give my call with last letter "Yankee" and get asked for a repeat it works much better to say "Last letter Yankee, last letter Yokohama." Many of the geographic phonetics work particularly well for speakers of Romance languages like Spanish and Italian (e.g., terms like "Guatemala", "Nicaragua", and "Santiago"). There are a few letters for which there are not good geographic equivalents. Obviously, "X-ray" is one of them. For "Echo", "England" is sometimes used, but "Ecuador" is better. Although "London" and "Lima" are both geographic terms, "London" is much better. And "Denmark Mexico" is many times superior to "Delta Mike."

Numbers in the callsign can also cause trouble. What if the station comes back to "K3" instead of "K6"? In general, just try to repeat the number, but if he still doesn't get it, you can try counting, e.g. "Kilo Six, 1, 2, 3, 4, 5, 6." Or for us West Coasters, "Kilo Six in California, West Coast" can be useful.

## Contesting - cont'd from page 5

Which brings me to the subject of numbers in exchanges like WPX. I commented in a 3830 post a few years ago that the English numbers that everyone uses are just too ambiguous, most of them being plain too short. I recommended using some Spanish numbers, like “cuatro” and “ocho”, but that suggestion went nowhere, so I hereby drop it, unless you are trying to get through to a native Spanish or Italian speaker. In fact, In WPX, I just couldn't understand a number from a CO8 station with terrible audio. I kept asking, “your number 424?”, “your number 242?”, “your number 224”, etc. Normally, one doesn't confuse “two” and “four,” but this guy's audio was driving me crazy and I wasn't sure how well he was understanding me either. Finally I had the presence of mind to ask in Spanish, and when he said “dos cuatro cuatro,” he was in the log. If he had said that in the beginning I would have understood him in spite of his maladjusted audio.

One source of confusion for the DX station is not knowing how many digits there are, particularly later in the contest when a number can have 1, 2, 3, or 4 digits. There are a couple of ways to help. For example: suppose the DX station thinks he hears “[garble] six six” and he asks: “your number six six?” If your number is just 6, you can say to be helpful “Negative. My number zero zero six, number six.” Adding the word “number” in front of the digit indicates there are no missing digits. If your number is 66, just say “Roger, roger.” If it's 56, say “Negative, number five six, fifty-six.” If it's 256, say, “Negative. Number two five six, two fifty-six (or even “two hundred and fifty-six”). I know we were taught that it is incorrect to say “two hundred and fifty-six,” and we should just say “two hundred fifty-six,” but using the “and” makes it more intelligible.

In general, it's usually best to say your number twice, in two different ways. For example it's often hard to discern, “two three” from “three three”. So you can say: “five nine, two three, twenty-three,” since “twenty” and “thirty” sound very different. Similarly if your number is 15 and you say “one five”, that might be confused with “one nine”, so say “one five, fifteen.” If it's late in the contest and you might be expected to have a three-digit number you can say “zero two three, only twenty-three”. And if you have a one digit number late in the contest, it's best to add zeros, saying, e.g., “zero zero nine, number nine”, not just “nine.”

I hope these tips from the DX end are helpful. They should be even more useful in the next few years, as declining sunspots forcing us increasingly into the QRM alleys of 20 and 40 meters.

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 percentage of power loss would result from a transmission line loss of 1 dB?  
A. 10.9%  
B. 12.2%  
C. 20.5%  
D. 25.9%
2. Which part of a transformer is normally connected to the incoming source of energy?  
A. The secondary  
B. The primary  
C. The core  
D. The plates
3. Which of the following is a reason not to use wire-wound resistors in an RF circuit?  
A. The resistor's tolerance value would not be adequate for such a circuit  
B. The resistor's inductance could make circuit performance unpredictable  
C. The resistor could overheat  
D. The resistor's internal capacitance would detune the circuit

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



## March General Pool Answers

1. What is the RMS voltage of a sine wave with a value of 17 volts peak?  
B. 12 volts
2. Which of the following components should be added to an existing resistor to increase the resistance?  
B. A resistor in series
3. What is an advantage of using a ferrite core toroidal inductor?  
A. Large values of inductance may be obtained  
B. The magnetic properties of the core may be optimized for a specific range of frequencies  
C. Most of the magnetic field is contained in the core  
D. All of these choices are correct



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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](mailto: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](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!

### April 30, 2018 Monday 6:00 PM

Sponsor: SMARTS  
Dale A. Blomgren (952) 402-2155  
Email: [kdzerob@aol.com](mailto:kdzerob@aol.com)  
Location: Carver County Library  
7711 Kerber Blvd  
Chanhausen MN 55317  
Walk-ins allowed, Pre-reg requested

### May 5, 2018 Saturday 10:00 AM

St Paul Radio Club  
Leon H. Dill (651) 688-9964  
Email: [w0coec@arrl.net](mailto:w0coec@arrl.net)  
Location: Ramsey Co Library Maplewood  
3025 Southlawn Dr  
Saint Paul MN 55109-1577  
Walk-ins allowed, Pre-reg requested

### May 9, 2018 Wednesday 7:00 PM

Sponsor: VARC  
James C. Rice (612) 384-7709  
Email: [jrice@danpatch.org](mailto:jrice@danpatch.org)  
Location: Perkins Restaurant & Bakery  
17387 Kenyon Avenue  
Lakeville MN 55044-4459  
Walk-ins allowed, Pre-reg requested

### MY 19, 2018 Saturday 9:00 AM

Sponsor: SEMARC  
Daniel M. Franz (651) 769-0358  
Email: [wd0gup@hotmail.com](mailto:wd0gup@hotmail.com)  
Location: Zion Lutheran Church  
8500 Hillside Trail South  
Cottage Grove MN 55016  
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  
May 12th 2018  
7:30AM

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

## NECOS Schedule April 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 \_\_\_\_\_

Apr 30th KD0UWZ Chad

May 2018

May 7th N0BHC Bob - First Mon. Net

May 14th WA0DGW John

May 21st KD0UWZ Chad

May 28th N0BHC Bob

June 2018

Jun 4th WA0DGW John- First Mon. Net

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