



# ARES COMMUNICATOR

## Information for Scott County Amateurs



August, 2016

Accurate, Reliable Emergency Communications for our Community

Volume 16, Number 8

## HELP WANTED

### Ham Communicators



### Carver-Scott Humane Society 5K Fun Run Fundraiser "Run/Walk Fur Love"

Saturday September 24th, Shakopee  
Time: 9am - Noon

This event is for the benefit of the Carver-Scott Humane Society ([www.carverscotths.org](http://www.carverscotths.org)). What you've never heard of them? This is the organization that is behind the Pets of the Week pictures in your local weekly newspaper!

Scott ARES will provide safety and coordination communications for the event. There is an operating spot for every Ham who volunteers their skills and equipment to benefit the community. You get to enjoy your hobby while contributing to over 300 happily wagging tails during the next year. WOOF! What's holding you up? Email your help today!

The course starts in Lion's Park and follows a loop through Shakopee city streets. There are 200 runners anticipated at this year's event.

To Volunteer your services for this worthwhile event, email [N0BHC@ScottARES.org](mailto:N0BHC@ScottARES.org) as soon as possible.

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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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## Section Manager Election Results

Two incumbent Section Managers were declared re-elected in balloted elections that concluded on August 23, when ballots were counted at ARRL Headquarters.

In Minnesota, incumbent SM Skip Jackson, KS0J, of Inver Grove Heights, Minnesota, received 452 votes to 396 for challenger Ann Foster, K0ANN, of St Anthony. Jackson has served as Minnesota Section Manager since 2004.

In Ohio, Scott Yonally, N8SY, earned a new term as SM, outpolling Matt Welch, W8DEC, of Windsor, 1392 to 483. Yonally, of Mansfield, has been Ohio's SM since 2014.

After 25 years, Connecticut will be getting a new Section Manager. Charles Motes Jr, K1DFS, of Plainville, will take the reins from Betsey Doane, K1EIC, of Shelton. Doane decided not to run for another term of office after leading the Connecticut Section since 1991. Motes has served as Connecticut's Official Observer Coordinator since 2008. He's also been an Emergency Coordinator.

New terms for all successful candidates will begin on October first.

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## ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)

Breakfast Saturday, September 10th

Digital Monday, September 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

## Summer Events '16

Grab your HT and have some fun volunteering for a Public Service event this summer! You get the chance to use your communications skills to benefit the community and meet some new Hams. Hey, there might even be a "Free Lunch" thrown in for good measure.

Check out the events listed below and volunteer for a couple hours of ham radio fun!



### Saturday, September 24th

09:00 - Noon

#### Shakopee Run/Walk For Love

Carver/Scott Humane Society 5K

Contact Bob - N0BHC@ScottARES.org

### Saturday, October 1st

07:00 - 11:30 AM

#### 2016 Scenic Half Marathon of Belle Plaine

Contact: Don [KC0QNA@yahoo.com](mailto:KC0QNA@yahoo.com)

### Sunday, October 16<sup>th</sup>

8 AM

#### 2016 Mankato Marathon

Contact: Don [KC0QNA@yahoo.com](mailto:KC0QNA@yahoo.com)

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*"That which a man knows dies with him;  
therefore, transmit your knowledge."*

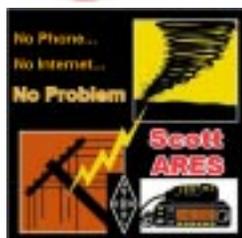
Intendant of the Building

## Scott County ARES Contacts

Emergency Coordinator  
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Asst Emergency Coordinator  
Chad Palm KD0UWZ  
Chaska, MN  
KD0UWZ at [scottares.org](http://scottares.org)



## RFI Eliminated!

from RFI mailing list

This is about an Illinois ham who has been plagued with for several years with serious RFI spurs on all bands 20 meters and above. It made some frequencies on two meters unusable including 146.94 FM.

The interference varied in frequency in that it slowly drifted across the FM repeater channel.

Using a portable receiver it was determined to be outside his house (he did pull all the breakers in his house).

Next suspect was the Comcast distribution amplifier high on a pole outside his house. For some reason he followed the cable drops radiating from the pole in each direction using his radio to track the noise.

One path took him to the next door neighbor where the noise got quite loud. Ah ha...he says.

The neighbor was very cooperative and they systematically opened breakers in the power panel. When they got to the family room the noise in the portable radio stopped. Trouble was, there was little in the family room except reading lights. On a hunch he asked what was on the other side of the wall.

It turned out to be the garage powered by the same circuit. A quick survey revealed a Hitachi 7.2 to 14 volt Ni-Cad/Ni-MH (model UC-14YFA) cordless drill battery charger that was plugged in all the time.

Testing showed RFI anytime the charger was plugged in, battery or not caused serious RFI. He took his neighbor to a local big box store and bought the him a new Dewalt cordless drill system.

The ham joked he was glad that the noise did not come from a washing machine or flat screen TV!

Neighbor rewarded for being cooperative and the was problem solved!

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## National Marshmallow Toasting Day



August 30th

## 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](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!

### September 3, 2016 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

### September 14, 2016 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

### September 17, 2016 Saturday 9:00AM

**Sponsor:** SEMARC

Daniel M. Franz (651) 769-0358

**Email:** [wd0gup@hotmail.com](mailto:wd0gup@hotmail.com)

**Location:** Zion Lutheran church

8500 Hillside Trl S

Cottage Grove MN 55016-3273

### September 24, 2016 Saturday 9:00 AM

**Sponsor:** Bloomington Off/Emergency Mgmt

Daniel J. Royer (952) 888-9756

**Email:** [dan-arrl@droyer.org](mailto:dan-arrl@droyer.org)

**Location:** City Hall-Police Department

1800 W Old Shakopee Rd

Bloomington MN 55431

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. When must you add the special identifier "AG" after your call sign if you are a Technician Class licensee and have a CSCE for General Class operator privileges, but the FCC has not yet posted your upgrade on its Web site?

- A. Whenever you operate using General Class frequency privileges
- B. Whenever you operate on any amateur frequency
- C. Whenever you operate using Technician frequency privileges
- D. A special identifier is not required as long as your General Class license application has been filed with the FCC

2. Which of the following can be determined with a directional wattmeter?

- A. Standing wave ratio
- B. Antenna front-to-back ratio
- C. RF interference
- D. Radio wave propagation

3. Which of the following would reduce RF interference caused by common-mode current on an audio cable?

- A. Placing a ferrite bead around the cable
- B. Adding series capacitors to the conductors
- C. Adding shunt inductors to the conductors
- D. Adding an additional insulating jacket to the cable

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

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## May General Pool Answers

1. What is one good way to avoid unwanted effects of stray RF energy in an amateur station?

- A. Connect all equipment grounds together

2. Which of the following is one use for a Digital Signal Process in an amateur station?

- B. To remove noise from received signals

3. What is the purpose of a speech processor as used in a modern transceiver?

- A. Increase the intelligibility of transmitted phone signals during poor conditions

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# Patriotic Programmer

Freq up that HT!

A. Nony Moose, Tecknickle Correspondent

If your HT has a feature (benefit?) that allows download programming of frequencies, what is holding you up? Do you have one of those 'custom' cables available from the radio manufacturer that don't work? Frustrated trying to figure it out? Confused by the Chinese instructions on the software on the mini-CD?

Well, fret no more pilgrim! The Moose has found a solution that even he could figure out! That means it has to be simple and not use more than three wires at any one time!

The stuff you need are four basic parts: Chip 1) CP2102 USB to TTL converter, Plugs 2) Stereo (dual circuit) plugs, 1 - 3.5mm and 1 - 2.5mm, Wire 3) 14" of wire each (3 colors, red white, blue). We will get to sources for the chip in a couple of minutes.

You can find the CP2102 with an Internet search or check the following links:

<http://www.banggood.com/Wholesale-USB-To-TTL-COM-Converter-Module-buildin-In-CP2102-New-p-27989.html> or, EBay search: "USB 2.0 to TTL UART 5PIN Module Serial Converter CP2102 STC PRGMR"

Here is the finished patriotic programmer! This version of the CP2102 converter is enclosed in clear shrink wrap tubing that insulates while providing a view of the pretty flashing lights!



You will have to plug in the soldering iron and make three connections: TX Data (Blue), RX Data (Red), and Gnd (White). The connections to the plugs are wired like this picture.



cont'd col. 2

Ready for the smoke test? Okay, take a deep breath and plug the CP2102 into a USB port on your computer. Do not connect a radio yet. Just keep your pants on, that is coming!

Windows will make you wait until the installation is complete. After making you wait long enough to be impressed with the difficulty of the configuration the screen will announce "Silicon Labs CP210X USB to UART Bridge (COM X) installed." COM X will be the number your computer assigns to the CP2102. Make a note of this COM port number. You will need this info when using the programming software.

If your computer can't find the CP2102 driver you can download the correct installer from the Silicon Labs website here: [www.silabs.com/products/mcu/Pages/USBtoUARTBridgeVCPDrivers.aspx](http://www.silabs.com/products/mcu/Pages/USBtoUARTBridgeVCPDrivers.aspx)

Okay, now for the good part. Next month we'll take a look at the programming software that makes loading all those frequencies into the radio a snap! You can find the CHIRP software here: <http://chirp.danplanet.com/projects/chirp/wiki/Home> if you just cannot wait. A. Nony Moose, known for his frugality, takes some heat for using software titled "CHIRP". Some say, "It figures, you must have some bird-brains in the family tree!" The Moose proudly wears the CHEAP label. Hey, don't complain, you just made a programming cable, that actually works, for less than \$ 5.00! See you next month for troubleshooting tips and a look at CHIRP in use.

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## Here We Grow!

ARRL Letter 11Aug2016

The ARRL Volunteer Examiner Coordinator (VEC) reports that 20,447 new US Amateur Radio licenses have been issued since January 1. That's nearly 1500 ahead of the number that had been issued by this time last year. At the present pace, the total is on track to exceed 30,000 new radio amateurs for the third straight year by the end of the year.

"While I am thrilled with this prospect, I'm also keenly aware that without some mentoring, these new hams' initial curiosity and enchantment may fade if they don't get on the air right away," said ARRL VEC Manager Maria Somma, AB1FM.

"Let's show these new hams what the magic is all about," she urged.

In addition, the ARRL VEC reports that upgrades are on track to reach nearly 11,000 by year's end.

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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. Resources within the Staging Areas:
  - A. Are managed by the Logistics Section
  - B. Are awaiting operational assignment
  - C. Include out-of-service resources that are being made ready for deployment
  - D. Include those being made ready for demobilization and return to their jurisdictions

*Check next month's ARES Communicator for the solution*

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## July NIMS Knowledge Solution

1. These levels of the ICS organization may have Deputy positions:
  - Branch
  - Incident Commander
  - \_\_\_\_\_
  - D. Section

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## 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/download.html](http://www.w1hkj.com/download.html) and <http://www.scottares.org/NBEMS.htm>

Here are the most recent releases as of August 20, 2016.

Software	Version
Fldigi	3.23.13
Flwrap	1.3.4
Flmsg	3.00.02
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.



## Fall Hamfests 2016

### Sep 10, 2016 Saturday Rush City Radio Rendezvous

Location: Rush City High School  
51001 Fairfield Avenue  
Rush City, MN 55069  
Website: <http://www.qrz.com/db/K0ECM>  
Sponsor: East Central Minnesota Amateur Radio Club (ECMARC)  
Talk-In: 145.330 -600 (PL 146.2)  
Public Contact: Larry Jilek , KA0MEN Email: [lj@ecenet.com](mailto:lj@ecenet.com)  
51835 Belle Isle Drive Rush City, MN 55069  
Phone: 320-358-4205

### Sep 24, 2016 Saturday SMARTSFEST 2016

Location: Henderson Community Center  
510 Main Street  
Henderson, MN 56044  
Sponsor: SERT Radio Club & SMARTS Club  
Talk-In: 146.610 - (PL 136.5)  
Public Contact: Don Burgess , KC0QNA Email: [kc0qna@yahoo.com](mailto:kc0qna@yahoo.com)  
410 Gloria Avenue Green Isle, MN 55338  
Phone: 612-578-7561

### Sep 24, 2016 Saturday North Dakota State Convention (RRRA Hamfest)

Location: RRV Fairgrounds - Hartl Building  
1805 Main Ave West  
West Fargo, ND 58078  
Website: <http://www.rrra.org>  
Sponsor: Red River Radio Amateurs  
Talk-In: 145.350 (PL 123.0) & 444.875 (PL 123.0)  
Public Contact: Bob Kirkeby , W0HNV Email: [wb0dsf@gmail.com](mailto:wb0dsf@gmail.com)  
122 2nd Avenue East West Fargo, ND 58078  
Phone: 701-541-3411

### Oct 01, 2016 Last Chance Tailgate

Location: West Medicine Lake Community Center  
1705 Forestview Lane North  
Plymouth, MN  
Website: <http://tcfmc.org>  
Sponsor: Twin City FM Club  
Talk-In: 146.76 (PL 114.8)  
Public Contact: Paul Ramey , WG0G Email: [wg0g@arrl.net](mailto:wg0g@arrl.net)  
2847 County Road G Glenwood City, WI 54013  
Phone: 612-747-1244

BREAK - OVER

## RFI Lockup!

ARRL Letter 08/09/2016

Police in Evanston, Illinois, contacted the ARRL Lab, after an apparent interference source began plaguing wireless vehicle key fobs, cell phones, and other wireless electronics. Key fob owners found they could not open or start their vehicles remotely until their vehicles were towed at least a block away, nor were they able to call for help on their cell phones when problems occurred. The police turned to ARRL for help after striking out with the FCC, which told them it considered key fob malfunctions a problem for automakers, although the interference was affecting not just key fobs but cell phones, which are a licensed radio service. ARRL Lab EMC Specialist Mike Gruber, W1MG, believes the FCC should have paid more attention.



*The 600-block of Dempster Street where key fobs mysteriously failed to function.*

“This situation is indicative of what can happen as a result of insufficient FCC enforcement, especially with regard to electrical noise and noncompliant consumer devices,” Gruber said. Evanston authorities worried that a serious situation could develop if someone were unable to call 911, putting public safety at risk. They also were concerned that the RFI could be intentional and indicate some nefarious or illegal activity. Given the seriousness of this situation, Gruber contacted Central Division Director Kermit Carlson, W9XA, to ask if he could look into the matter.

On June 2, Carlson met with an Evanston police officer, her sergeant, a local business owner, and the local alderman, and he quickly confirmed that the 600 block of Dempster Avenue in Evanston was plagued with an odd RFI problem. Carlson determined that the problem prevailed along a set of eight on-street parallel parking spots in the downtown commercial district of the North Chicago suburb.

Carlson employed a Radar Engineers 240A Noise Signature Receiver and UHF Yagi antenna to survey the affected block. Since key fobs typically operate at around 315 MHz and 433 MHz, he looked on both frequencies. The survey identified several noise sources in the affected block, but in particular a

strong signal in the middle of the block. The interference source turned out to be a recently replaced neon sign switching-mode power supply, which was generating a substantial signal within the on-street parking area just across the sidewalk, between 8 and 40 feet from the sign.

The problematic power supply interference also disabled Carlson’s cell phone when he was within a few feet of the device. Carlson anticipated that further investigation would show that the harmful interference could disrupt licensed radio services in close proximity. The troublesome transformer was not replaced, but the building owner agreed to turn off the sign should problems arise.

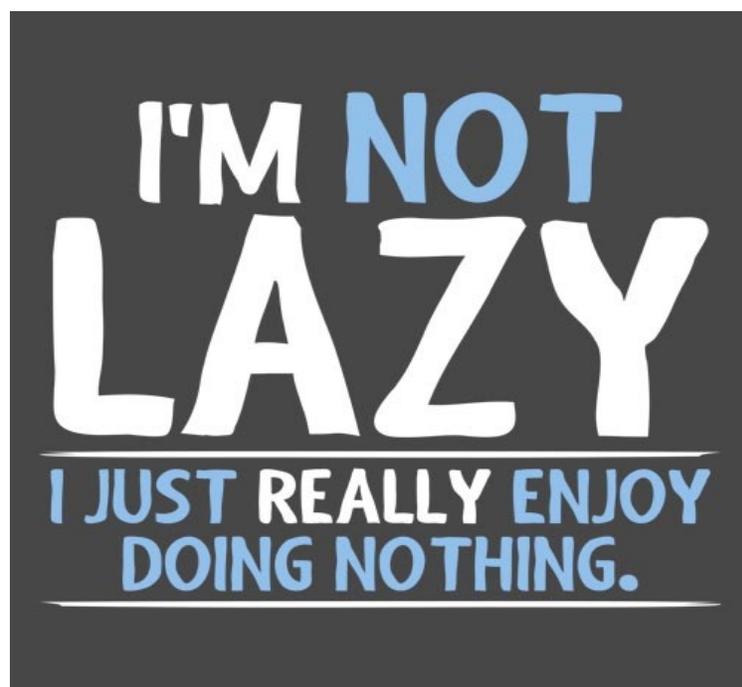
Carlson called the Evanston case “a particularly alarming example of radio interference,” especially since local authorities considered it a public safety matter. “This situation demonstrates the electromagnetic compatibility problems that are evolving in an atmosphere of noncompliant, unintentional RF-emitting devices,” he said.

A return visit to the area with calibrated antennas and equipment capable of measuring the radiated signal strength with quasi-peak detection is planned for later this year. Since the initial visit, several other instances of unexplained key fob malfunctions have been reported in the Greater Chicago area.

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## Deep Thoughts





Phishing scams have been running rampant in recent days, all too often taking hundreds of thousands of innocent victims to the cleaners and leaving them red-faced and with little to no money left in the bank.

The cost to businesses according to a recent FBI report shows that since January 2015, email scams account for a stunning \$3.1 billion in losses. We all end up paying this cost in higher prices for goods and services we purchase as consumers.

Let's take a look at one phishing scam you have seen in your email in-box: Spear Phishing. Spear Phishing is a little bit more complicated to catch. Think of it like this: deceptive phishing is like a net cast out over the sea to catch as many fish as possible. Spear phishing uses a dagger, directly aimed at you personally. In this type of email scam, the troublemakers will craft the email to be hyper-personal to you. It will use your name, could include your phone number, your position at work and more. The goal, however, is the same as deceptive phishing - getting you to click on malicious link.

Need some examples? Spear phishing attacks have been used in campaigns to break into your webcam, and have even stooped so low as to trick users into downloading a pamphlet on how to stay safe with an inevitable terrorist attack on the way.

What to look for:

- Don't download unsolicited email attachments, especially from unknown sources.
- Don't click on links in suspicious emails.
- Don't trust "official" emails from companies you don't do business with.
- Take a second to look at any "official" emails before you follow any instructions.

Check back for more phishing scams to watch next month.



### ARES Breakfast

Saturday  
September 10th  
7:30AM  
Perkins Restaurant  
Savage, MN

## Picking Ripe Watermelon

How can you tell if a watermelon is ripe?



Watermelon has to be the one fruit that truly epitomizes summer. Well, when it's ripe. Unripe watermelon is a big disappointment! You spend all that time cutting this huge melon, only to find it not be so sweet and juicy as you imagined.

### Tips for Picking a Ripe Watermelon

- Best places to buy a watermelon is from your local farmer's market or fruit stand. Fruits like watermelon are picked when ripe, unlike those found in supermarkets.
- Watermelons sold in commercial grocery stores are often picked early, so they can ripen while being transported. However, the melons can arrive too early, even too late, and making them, well, just not good.
- Look for a melon that is nice looking, meaning free of dents, bruises, cuts, etc.
- Check under the melon - if it has a yellow or light bottom, it should be ripe. If it's stripes are found all around the melon, pass on it. It's just not ready yet.
- You may see people at the market tapping on watermelon. What exactly are they listening for? They are checking for signs of hollowness. It sounds hollow, it's ripe. Not hollow, unripe.
- Look for a heavy melon. Watermelons are made up of mostly water, so an ideal melon should be heavy for its size.

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## NECOS Schedule August 2016

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](https://www.facebook.com/WB0RMK)

**Aug 29**    **KB0FH Bob**  
**September**  
**Sep 5**    **WA0DGW John**  
              **/ N0BHC Bob**  
**Sep 12**    **KD0UWZ Chad**  
**Sep 19**    **KB0FH Bob**  
**Sep 26**    **WA0DGW John**  
              **/ N0BHC Bob**