



ARES COMMUNICATOR

Information for Scott County Amateurs



September, 2019

Accurate, Reliable Emergency Communications for our Community

Volume 19, Number 9

Volunteer Monitor Program

Thanks for OO's Service

As the September 30 date for the closing of the Official Observer (OO) program nears, ARRL has expressed deep appreciation to the hundreds of volunteers who gave their time as Official Observers to help preserve the integrity of the Amateur Radio bands.

The Official Observer program has served the Amateur Radio community and assisted the FCC Enforcement Bureau for more than 85 years. The OO program is giving way to the new Volunteer Monitor (www.arrl.org/volunteer-monitor-program) program, established as part of a formal partnership between ARRL and the FCC. ARRL and the FCC signed a *Memorandum of Understanding* earlier this year that establishes the Volunteer Monitor program as a successor to the Official Observers. The first Volunteer Monitors should be in place and ready to begin their duties this fall.



"Thank you for your dedication and service," ARRL Regulatory Information Manager Dan Henderson, N1ND, said. "It was the good work of the OOs over many years that laid the foundation for the FCC to

recommend this new agreement for enforcement." The FCC proposed the program following the closures of several FCC regional offices and a reduction in field staff.

Last February, Riley Hollingsworth, K4ZDH, who once handled Amateur Radio enforcement for the FCC, was named to oversee the development and implementation phases of the Volunteer Monitor program.

Under the new VM program, volunteers trained and vetted by ARRL will monitor the airwaves and gather evidence that could be used to correct misconduct as well as to recognize exemplary on-air operation. ARRL will refer instances of flagrant violation

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to the FCC for action, in accordance with FCC guidelines, and the FCC will give priority to enforcement cases developed by the VM program.

Official Observers were invited to apply to become Volunteer Monitors, and many did. The requirements for being a Volunteer Monitor include:

- Ability to utilize state-of-the-art receiving equipment and to access no-cost remote receive sites;
- strong writing and communication skills
- An understanding of the importance of thorough documentation
- Basic word processing and data entry skills

The ability to send such information, including recordings, to ARRL electronically. Applicants must also be ARRL members, have no history of FCC enforcement action, hold a Technician-class or higher license, and been licensed for at least 3 years.

Applicants underwent a training and certification program administered by ARRL and were vetted by ARRL through at least one oral interview



cont'd pg. 2

ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)

Breakfast Saturday, Oct 12th

Digital Monday, Oct 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

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

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Volunteer Monitor - cont'd from page 1

and a preliminary evaluation by ARRL staff. Volunteer Monitors will serve 3-year terms at the pleasure of ARRL.

The objectives of the Volunteer Monitoring Program include improving and promoting knowledge and compliance of FCC Amateur Radio Service rules, extending and preserving the tradition of self-regulation and self-administration of the Amateur Radio Service by volunteers, and enabling the FCC Enforcement Bureau "to more efficiently and effectively utilize its resources in enforcing the Communications Act and Commission rules," according to the MOU.

BREAK - OVER



Who Done It?

A Japanese ship was leaving the port and on its way to open sea. The captain went to go oil some parts of the ship and took his ring off so it wouldn't get damaged. He left it on the table next to his bunk. When he returned, it was missing. He had suspected three crew members could be guilty and asked them what they had been doing for the ten minutes that he had been gone. The cook said, "I was in the kitchen preparing tonight's dinner." The engineer said, "I was working in the engine room making sure everything was running smoothly." The seaman said, "I was on the mast correcting the flag because someone had attached it upside down by mistake." The captain immediately knew who it was. How?



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Test Your NIMS Knowledge

This month we begin our review of ICS-800C, An Introduction to National Incident Management System. The goal of IS 800C is to familiarize participants with the National Response Framework and the ways it is applied in actual response situations.

Check your recall of the course material with this question.

1. Select the FALSE statement from below:
 - a. When assistance is coordinated by a Federal agency with primary jurisdiction, the Department of Homeland Security may activate Framework mechanisms to support the response without assuming overall leadership for the incident.
 - b. The Framework promotes partnerships with nongovernmental and voluntary organizations which provide specialized services that help individuals with special needs.
 - c. The Framework mandates that the private-sector entities responsible for critical infrastructure and key resources develop and exercise contingency plans.
 - d. The Framework is focused on incidents of all types, including acts of terrorism, major disasters, and other emergencies.

Check next month's ARES Communicator for the solution

August NIMS Knowledge Solution

1. Who is the principal Federal official for domestic incident management?
 - D. Secretary of Homeland Security

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 September 20, 2019.

Software	Version
Fldigi	4.1.08
Flwrap	1.3.4
Flmsg	4.0.14
Flamp	2.2.05

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.



The Carrington Event

160 Years Ago

by: Frank Donovan, W3LPL

September 1 marks the 160th anniversary of the Carrington Event, the strongest geomagnetic storm known to have hit Earth since at least the 14th century. The event was named for British astronomer Richard Carrington, who first viewed and sketched the huge sunspot complex on the sun from which a gigantic solar flare — a coronal mass ejection — erupted, as he watched. Within hours, Earth was virtually enveloped by an aurora borealis that was visible even at lower latitudes and into the tropics. It was a truly spectacular light show that in some places, turned night into day. When the flare interacted with Earth's magnetosphere, however, it was another story.

This was the Victorian age, when practical wireless was still a few decades off, but the "auroral phenomena," as it was called then, had "a remarkable manifestation of magnetic influence" on telegraph wires — the internet of the day, as it were. So considerable was the effect that *The New York Times* reported telegraph operators were able to disconnect the batteries that normally operated the system and were "working by the atmospheric current entirely!"

Although the operators subsequently were able to reconnect their batteries, the storm continued to affect the lines. A telegraph manager in Pittsburgh reported "streams of fire" emitted from the circuits. In Washington, DC, telegraph operator Frederick W. Royce was severely shocked as his forehead grazed a ground wire. A witness said an arc of fire jumped from Royce's head to the telegraphic equipment.

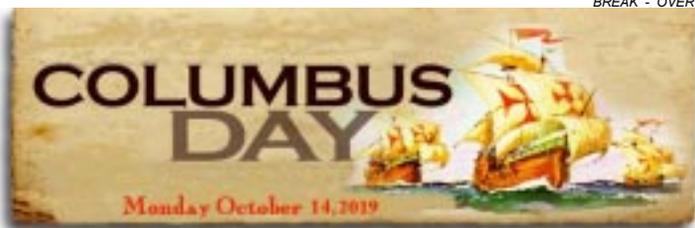
The *Times* account quoted an operator in Worcester, Massachusetts, who said, "During ten years' experience in telegraphing, I have frequently observed the effect of the Aurora Borealis on the wires, but never before have I seen it so grand and appalling."

Operators said that at times the polarity of the battery power supply would become reversed. "One moment the batteries would begin to boil over, and we would have so strong a circuit that the armature would not come away from the magnet; the next moment, there would be no current at all," a report from Quebec recounted.

Based on examinations of ice samples, scientists believe that geomagnetic storms two and three times stronger occurred prior to the 14th century.

After the Carrington Event, scientists began paying a lot more attention to solar phenomena and sunspots.

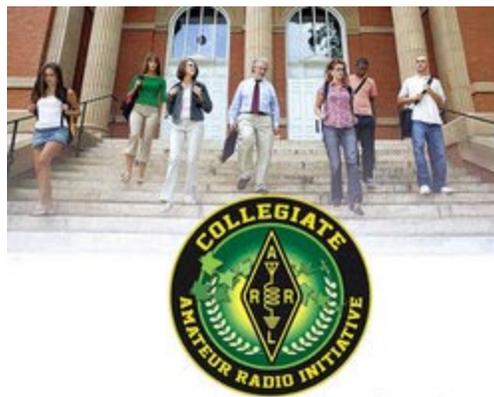
BREAK - OVER



Collegiate ARCs

Facebook Live Event

ARRL is inviting campus radio clubs to join a [Facebook Live Event](#) on Wednesday, October 16, at 6:30 PM PDT and MST; 7:30 PM MDT; 8:30 PM CDT, or 9:30 PM EDT. The [University of Arizona Amateur Radio Club \(K7UAZ\)](#) is hosting the event.



ARRL staff member Bob Inderbitzen, NQ1R, and students from the radio club will discuss topics involving Amateur Radio clubs at colleges and universities, including how to recruit student members, popular activities for campus radio clubs,

and Amateur Radio as a springboard for career connections, networking, and practical experience. Your ideas and questions are welcome, and student radio club members and advisors may participate.

This event will stream live on the ARRL Collegiate Amateur Radio Initiative (CARI) [Facebook](#) group, where collegiate radio clubs may share information, techniques, and resources. The [ARRL Collegiate Amateur Radio Initiative](#) is sponsored in part by the W1YSM Snyder Family Collegiate Amateur Radio Endowment Fund.

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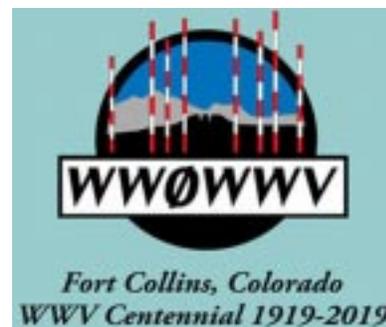
WWV Centennial Special Event

The culmination of months of planning will come to a head this weekend as the WWV Centennial Celebration and the related [WW0WWV](#) Amateur Radio special event get under way.

WW0WWV will begin operation on Saturday at 0000 UTC and continue through October 2 at 0000 UTC.

The National Institute of Standards and Technology (NIST), the Northern Colorado Amateur Radio Club (NCARC), and the WWV Amateur Radio Club have teamed up to organize 100th anniversary events.

WW0WWV will be active around the clock on 160 - 6 meters on



WWV cont'd on page 5

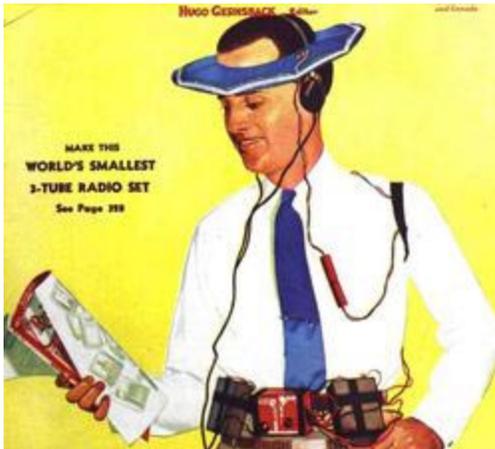
Radio on Your Belt

1930s Style

Since the advent of wireless technology, efforts have aimed at condensing the size of the necessary equipment to permit ease of transport, mobile installation, and radios that could be hand carried, slipped into a pocket or — in this case — carried on the belt.

Hugo Gernsback's *Radio-Craft* for December 1936 <
www.americanradiohistory.com/Archive-Radio-Craft/1930s/Radio-Craft-1936-12.pdf >

included the article, "How to Make the World's Smallest 3-Tube Radio Set" by Arthur Miller (likely not the playwright). It details how a clever radio crafter could construct a set worn on a belt around the waist and — in this case — with the antenna worn on the head in the manner of an old-time banker's eyeshade.



The individual wearing such equipment today likely would not only have to endure considerable pointing and laughing but would raise the alert level at any airport TSA checkpoint.

Vacuum tubes of the day were not too sensitive, required separate voltage sources for filament and plate, and were pretty hard on batteries. The filaments for the three tubes came from "a liquid unspillable storage cell" (i.e., rechargeable) to supply the necessary 2 V.

The article says this battery should last from 7 to 10 hours and came "with an oiled silk bag and fits in the hip pocket."

This was the sort of futuristic innovation that Gernsback typically featured in his publications, and the entire December 1936 issue of *Radio-Craft* is worth perusing.

"When using this 'Belt-Radio' the wearer is quite unmindful that the latest news or dance music is coming from an ultra-midget receiver which is actually being worn on the belt!" the article exults. "And it takes only a minute to put the whole equipment on — and less to take it off!"

According to Miller's article, building the three-tube set was easy. "The loop aerial is wound on a cardboard disc 13 ins. in dia," it explains. "Litz wire is used and 22 turns are interlaced around the 9 ribs." No mention of gauging hat size.

The article concedes just to "one disadvantage" in having to wear the antenna on one's head. "The 4-ft. cable connecting it

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!



Columbo Sez

It was clearly the seaman. It was a Japanese ship and a Japanese flag is white with a single red dot in the middle. It can't be hung upside down.



The MCT is coming! Don't miss it!



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)



Belt Radio - cont'd from page 4



with the receiver acts as a capacity and restricts the tuning range of the set," it explains.

The set tuned the AM broadcast band, and with the antenna on the head, directionality was less of an issue. While it might look silly to us now, project ideas such as this helped advance

the radio art toward the technology we use and enjoy today.

BREAK - OVER

WWW - cont'd from page 3

CW, SSB, and digital modes (FT8 operation will be Fox and Hound, except on 160 meters).

WW0WV will operate from the challenging RF environment at the WWV site near Fort Collins, Colorado. Logs will be streamed live to Club Log, and all logs will be uploaded to Logbook of The World (LoTW) after the event ends.

WW0WV committee member Dave Swartz, W0DAS, said he's been addressing last-minute details and putting out "many little fires." Swartz is camping out at the WWV site ahead of the special event.

WWV is reputed to be among the oldest — if not *the* oldest — continuously operating radio stations in the world. It started



A c1920 WWV transmitter, built by National Bureau of Standards staff and coupled with a hand-crank record player.

out as an experimental station that eventually became a time and frequency standard, and WWV often broadcast music in its early years.

WWV served as a beacon for Amateur Radio pioneers, who may only have had a rough idea of where they were transmitting. When

they began, early time announcements were in CW. Voice announcements did not start until 1950. Time announcements used to be every 5 minutes, but WWV switched to announcing the time every 60 seconds in 1971.

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 a microprocessor?
 - A. A low power analog signal processor used as a microwave detector
 - B. A computer on a single integrated circuit
 - C. A microwave detector, amplifier, and local oscillator on a single integrated circuit
 - D. A low voltage amplifier used in a microwave transmitter modulator stage
2. Which of the following connectors would be a good choice for a serial data port?
 - A. PL-259
 - B. Type N
 - C. Type SMA
 - D. DE-9
3. What is the peak-inverse-voltage across the rectifiers in a half-wave power supply?
 - A. One-half the normal peak output voltage of the power supply
 - B. One-half the normal output voltage of the power supply
 - C. Equal to the normal output voltage of the power supply
 - D. Two times the normal peak output voltage of the power supply

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



August General Pool Answers

1. Which of the following describes an integrated circuit operational amplifier?
 - D. Analog
2. What two devices in an Amateur Radio station might be connected using a USB interface?
 - A. Computer and transceiver
3. What is the main reason to use keyed connectors instead of non-keyed types?
 - B. Reduced chance of incorrect mating

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 5, 2019 Saturday 10:00 AM

St Paul Radio Club
Leon H. Dill (651) 425-0338
Email: w0coc@arll.net
Location: St. Paul Public Library
2105 Wilson Ave
Sun Ray Branch
Saint Paul MN 55119-4033
Walk-ins allowed, Pre-reg requested

October 9, 2019 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 19, 2019 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 26, 2019 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

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October 28, 2019 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

November 02, 2019 Saturday 10:00 AM

St Paul Radio Club
Leon H. Dill (651) 425-0338
Email: w0coe@arll.net
Location: St. Paul Public Library
2105 Wilson Ave
Sun Ray Branch
Saint Paul MN 55119-4033
Walk-ins allowed, Pre-reg requested



ARES Breakfast
Saturday
October 12th 2019
7:30AM
Hy-Vee Market Grille,
6150 Egan Dr, Savage, MN



NECOS Schedule October 2019

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

The NECOS script is on the Scott ARES website: www.scottares.org/Member Resources.htm

Date NECOS _____

September 2019

Sep 30th - KD0UWZ Chad

October 2019

Oct 7th N0BHC Bob First Mon. Net

Oct 14th - WA0DGW John

Oct 21st - KD0UWZ Chad

Oct 28th - N0BHC Bob

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