

RAINBOW CANYONS AMATEUR RADIO CLUB NEWSLETTER

CEDAR CITY, UTAH



Club Websites: www.rcarc.info OR www.rainbowcanyons.com Number 3 – Vol. 1 – January 2021

Club Meeting Information

The RCARC meets at 7:00 p.m. on the 2nd Tuesday of each month at the Cedar City Senior Center, 489 E. 200 South. **On Hold UFN. COVID-19**

2020 Club Officer's

President:

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KI7TPD

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Dennis L. West

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CQ, CQ, Happy New Year 2021



Presidents Message

Greetings fellow HAMs!

Hope everyone had a wonderful Holiday season and that you are looking forward to another year that I hope does not have the same issues as 2020!

The Annual Christmas meeting was fun and congratulations to all of the winners who won the grand prizes this year!

I would like to thank everyone for a great 2020 year despite all of the issues COVID-19 has caused.

I hope to build on everything we did last year and once we have the pandemic under control, we can start to meet in person again.

As part of this we are going to try to have more 'Elmer' nights/classes and online activities that will help new and old Hams connect with our Hobby!

Winter Field Day is coming up fast! It is January 30 and 31.

We will meet out at the Iron County EOC Saturday morning to set up. We will have the EComm trailer, but come ready for cold weather!

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RCARC Club Nets:

7:00 a.m. Breakfast Net - Monday – Saturday – 146.760.

12:30 p.m. Daily – Utah Beehive Net On 7.272.

7:00 p.m. Tuesday's Southwestern Utah Digital Net. Using FLDIGI, FLMSG AND FLAMP – 146.680, 1500/MT63-2KL

8:30 p.m. Tuesday's - ORCA Digital Net. Using FLDIGI, FLMSG AND FLAMP – 3.581 +, 1500/MFSK32.

8:00 p.m. Wednesday – Panguitch Net – 147.160.

7: pm. Thursday – Morse Code Net- 146.980. M-offset. PL 100

8: p.m. Saturdays – SSTV – 449.925.

9:00 p.m. Daily – Friendship Net – 146.760.

11: a.m. Saturdays (Mtn. Time)
QCWA – 160 Net, Utah Chapter, 12: p.m. Freq. 7.272.

Local Repeaters:

146.980 MHz – Tone 100.0 Hz

146.940 MHz – Tone 100.0 Hz

146.760 MHz – Tone 123.0 Hz

147.160 MHz + Tone 100.0 Hz.

448.800 MHz – Tone 100.0 Hz

146.680 MHz – Tone 100.0 Hz

Remote Bases:

449.500 MHz – Tone 100.0 Hz

449.925 MHz – Tone 100.0 Hz

ILRP/Echolink

449.900 MHz – Tone 100.0 Hz

Save The Date

January 12, 2021

RCARC Club Meeting.

Radio meeting

February 9, 2021

RCARC Club Meeting.

Radio meeting

March 9, 2021

RCARC Club Meeting.

Radio meeting

**Meetings start at 7 pm.
on the Iron Mountain
Repeater - 146.760,
minus offset with a PL
of 123.0**

**Also available through
Echolink – KG7PBX.**

President's Message

Continued.

I encourage you all to play, share, and have fun! Everyone has strengths and weaknesses and we are all in this because we love some aspect of radio communications.

If you are interested in how radios, antennas, or other equipment works then please explore the topic, experiment, and share what you have done with the group! We will continue to have virtual presentations so you will have plenty of opportunities to show off what you have learned.

We have members who have been doing this for less than a year up to those who have been doing this for decades.

That is what makes this such a fun hobby! Don't be shy, we are all friends here!

In service,

Fred Govedich (KI7TPD)

RCARC Club Breakfast

Come join us the first Saturday of every month at 9:00 a.m. for breakfast at the Pastry Pub located at 86 W. Center Street, Cedar City. Check out their website at:

www.cedarcitypastrypub.com

"Let me get this straight: You have thousands of dollars of ham gear, but you still can't hear me calling you from the kitchen?"



**Happy Birthday and
Anniversary to those
celebrating in January**



Happy New Year!



Breakfast & Friendship Net Awards

Breakfast Net		Friendship Net	
First Place	Second Place	First Place	Second Place
KI7WEX - Bonnie	K7ZZQ - Johnny	KI7WEX - Bonnie	K7NKH - Lee
KI7TPD - Fred	Third Place	KI7TPD - Fred	KB7UMU - Sylvia
KG7PBX - Linda	KF7WIY - Denise	KA7J - Lance	KI7LUM - Bruce
N7SND - Larry		KJ7OZI - Paul	Third Place
KI7SDA - Jerel		KI7SXJ - Isaiah	N7SND - Larry
KK7ZL - Ed		N7TCE - Merlin	
K7DVP - Vernile		KJ7LTQ - Brant	
KB7UMU - Sylvia		N7WWB - Darlene	
KI7LUO - Melody		K7HDX - Ron	
		W6DLW - Dennis	



RCARC CLUB DUES ARE NOW DUE

Rainbow Canyons Amateur Radio Club (RCARC)

Please fill out the below form with the applicable information. Check the individual or family membership. If family members are hams please add their name and call sign's in the space provided.

Name		
Call Sign		
Address		
City, Street and Zip Code.		
Phone		
E-mail		
Dues	\$ 15.00 Individual	\$ 20.00 Family
Family	Name: Name: Name: Name:	Call Sign: Call Sign: Call Sign: Call Sign:

Please submit payment to:

Linda Shokrian (KG7PBX) at 2438 W. Carmel Canyon Drive. Cedar City, Utah 84720.

Please write your call sign on your check. Make check payable to RCARC.

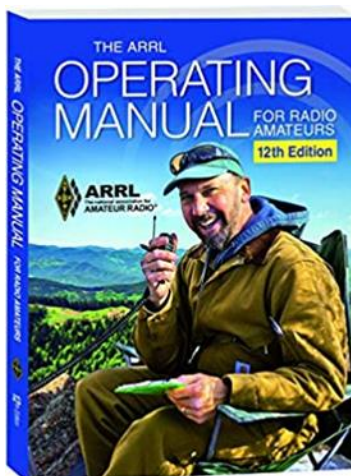
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RCARC January Meeting Book Giveaway

The book shown below will be awarded to one of our RCARC members at our club meeting on January 12, 2021

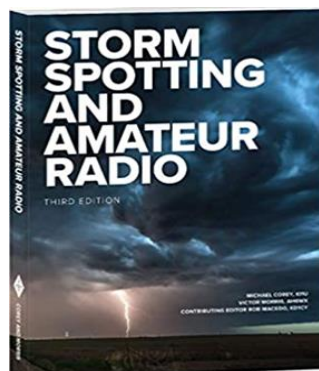
This book is being donated by Linda Shokrian (KG7PBX).



RCARC Book Giveaway Winner.

The winner of the December 8, 2020 book giveaway, ARRL's Storm Spotting and Amateur Radio is:

Lance Jackson (KA7J)



**Congratulations
Lance**

Contact Us.

Mailing Address:

195 E. Fiddler's Canyon Road #3.
Cedar City, Utah 84721

Club E-mail:

cedarcity.rcarc@gmail.com

Newsletter E-mail:

rcarcnewsletter@gmail.com

Website

www.rcarc.info

www.rainbowcanyons.com

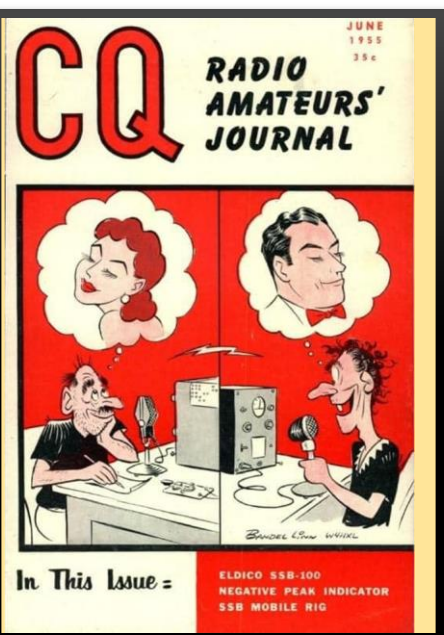
Face Book Page:

<https://www.facebook.com/groups/440325486875752/>

To Join RCARC or Pay Dues:

Go to www.rcarc.info select "Club Info" and then "Join" RCARC. Follow the instructions on the template.

Make check payable to RCARC.
Please write call sign on check.





Buzz's January Safety Tip(s)



Avalanche

Editor's Note: While we may not have Avalanches in and around Cedar City, they are prevalent in other areas of the State and neighboring States.

If you do find yourself in one of these areas please be safe and aware.

An avalanche is a large amount of snow moving quickly down a mountain, typically on slopes of 30 to 45 degrees. When an avalanche stops, the snow becomes solid like concrete and people are unable to dig out. People caught in avalanches can die from suffocation, trauma or hypothermia.

Avalanches can:

- Be caused by people, new snow and wind.
- Move at speeds of 60 to 80 MPH.
- Peak during the period of December through March.

How to protect yourself from an avalanche

- Get training on how to recognize hazardous conditions and avalanche-prone locations.
- Learn how to properly use safety equipment.
- Sign up for alerts on current avalanche dangers.
- Sign up for [email updates](#) and follow the [latest guidelines](#) about coronavirus from the Centers for Disease Control and Prevention (CDC) and your local authorities to prevent the spread of COVID-19.

- Wear a mask when possible, including when not wearing a ski mask. Children under 2 years old, people who have trouble breathing, and people who cannot remove masks on their own should not wear them.
- Remember, there is [no evidence](#) that cold weather and snow can kill the coronavirus disease 2019 (COVID-19).
 - Be sure to have several clean masks to use in case your mask becomes wet or damp from snow. Cloth masks should not be worn when they become damp or wet. Be sure to wash your mask regularly.
 - Masks may make it difficult to breathe, especially for those engaging in high intensity activities. If you are unable to wear a mask, maintain a distance of at least six feet between yourself and others.
- Get proper equipment to protect yourself from head injuries and create air pockets.
- Use devices to support rescue.
- Always have a buddy, preferably one familiar with the area.
 - When possible, maintain a distance of at least six feet between yourself and your buddy if your buddy is not a part of your household. This will help slow the spread of COVID-19.

Prepare NOW

The most important actions you can take to survive an avalanche are done before it happens:

- Learn about your local avalanche risk.
- Sign up for alerts from a U.S. Forest Service Avalanche Center near you. Your community may also have a local warning system.

Continued next column

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Ham Radio Winter Field Day

January 30 and 31, 2021

For the last few years Amateur Radio operators across North America have established temporary ham radio stations in public locations during Winter Field Day to showcase the science and skill of Amateur Radio. This event is open to the public and all are encouraged to attend.

This year's RCARC's Winter Field Day Operations will be held at the Iron County Emergency Operations Center (EOC) facility on Kitty Hawk Drive between Bull Dog Road and Airport Road across from the Cedar City Animal Control Office.

Set up will commence at 8 am. On Saturday January 30, 2021 and Winter Field Day will start at 12 pm. and continue for 24 hours until 12 pm. on Sunday January 31, 2021.

Field Day demonstrates ham radio's ability to work reliably under any conditions from almost any location and create an independent communications network.

"It's easy for anyone to pick up a computer or smartphone, connect to the Internet and communicate, with no knowledge of how the devices function or connect to each other," said **Sean Kutzko KX9X** of the American Radio Relay League, the National Association for Amateur Radio. "But if there's an interruption of service or you're out of range of a cell tower, you have no way to communicate."

Ham radio functions completely independent of the Internet or cell phone infrastructure, can interface with tablets or smartphones, and can be set up almost anywhere in minutes. That's the beauty of Amateur Radio during a communications outage."

"Hams can literally throw a wire in a tree for an antenna, connect it to a battery-powered transmitter and communicate around the world," Kutzko added.



Pictures from last years's Winter Field Day at 3- Peaks



The tower is up and operational.



Fred (KI7TPD) and Ron (K7HDX) working at night.



Dennis (W6DLW) and Johnny (KI6ZIM) working 40 meters.

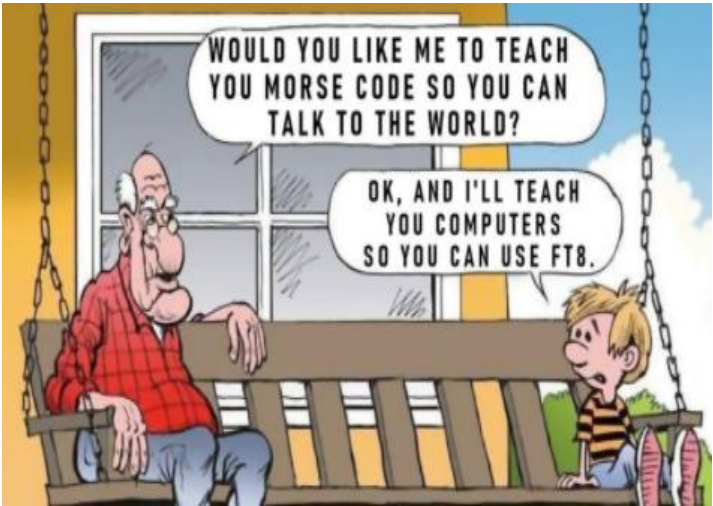
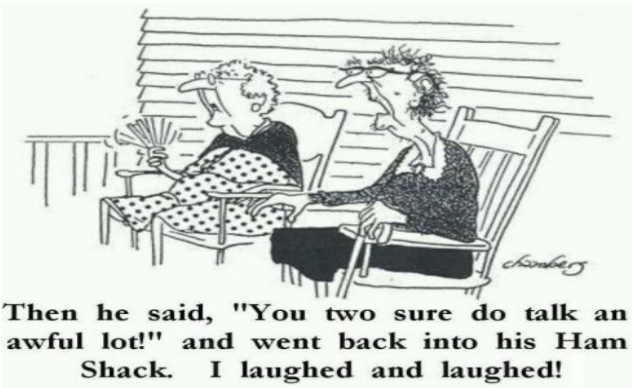
RCARC December Breakfast
Pictures at the Pastry Pub.



Members enjoying breakfast. However, it was a little quite due to the social distancing. Come join us the 1st Saturday of each month at 9:00 am.



Some Ham Humor



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FCC to Require Email Addresses on Applications

From ARRL Headquarters
Newington CT. December 2, 2020
To all radio amateurs

Amateur radio licensees and candidates will have to provide the FCC with an email address on applications, effective sometime in mid-2021.

If no email address is included, the FCC may dismiss the application s defective.

The FCC is fully transitioning to electronic correspondence and will no longer print or provide wireless licensees with hard-copy authorizations or registrations by mail.

A Report and Order (R&O) on "Completing the Transition to Electronic Filing, Licenses and Authorizations, and Correspondence in the Wireless Radio Services" in WT Docket 19-212 was adopted on September 16.

The new rules will go into effect 6 months after publication in the Federal Register, which hasn't happened yet, but the FCC is already strongly encouraging applicants to provide an email address.

When an email address is provided, licensees will receive an official electronic copy of their licenses when the application is granted.

The Report and Order can be found in PDF format online at,
<https://www.fcc.gov/document/fcc-adopts-electronic-licensing-report-and-order>

Under Section 97.21 of the new rules, a person holding a valid amateur station license "must apply to the FCC for a modification of the license grant as necessary to show the correct mailing and email address, licensee name, club name, license trustee name, or license custodian name."

Continued next column

For a club or military recreation station license, the application must be presented in document form to a club station call sign administrator who must submit the information to the FCC in an electronic batch file.

Under new Section 97.23, each license will have to show the grantee's correct name, mailing address, and email address. "The email address must be an address where the grantee can receive electronic correspondence," the amended rule will state.

"Revocation of the station license or suspension of the operator license may result when correspondence from the FCC is returned as undeliverable because the grantee failed to provide the correct email address." End.

The ARRL has filed comments with the FCC in response to the commissions notification to start collecting license fees for Amateur Radio licenses.

The League has made some very good arguments as to why the FCC should not be charging fees for licenses in the amateur service.

You can see them here:

https://ecfsapi.fcc.gov/file/111762316365/ARRL%20Comments%20MD%202020-270%2011_16_2020.pdf

... or go to the ARRL website, see the story on this issue dated 11/19 and click on the words "Formal Comments" in the 2nd paragraph.

Avalanche

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- Learn the signs of an avalanche and how to use safety and rescue equipment.
- Receive first aid training so you can recognize and treat suffocation, hypothermia, traumatic injury and shock.
- Travel with a guide who knows which locations to avoid. Always travel in pairs.
 - When possible, maintain a distance of at least six feet between yourself and those who are not a part of your household. This will help slow the spread of COVID-19.
- Follow avalanche warnings on roads. Roads may be closed, or vehicles may be advised not to stop on the roadside.
- Avoid areas of increased risk, such as slopes steeper than 30 degrees or areas under steep slopes.
- Know the signs of increased danger, including recent avalanches and shooting cracks across slopes.
- Wear a helmet to help reduce head injuries and create air pockets.
- Masks may make it difficult to breathe while performing high intensity activities or if you become trapped during an avalanche. Remove your mask if you are having difficulty breathing.
- Wear an avalanche beacon to help rescuers locate you.
- Use an avalanche airbag that may help you from being completely buried.
- Carry a collapsible avalanche probe and a small shovel to help rescue others.

Survive DURING

- Use and carry safety equipment and rescue gear.
- If your partner or others are buried, call 9-1-1 and then begin to search if it is safe to do so.

Continued next column

- If you have the proper training, treat others for suffocation, hypothermia, traumatic injury or shock.
 - Some first aid activities may increase the likelihood of the spread of COVID-19 because they require close contact between two people. Follow guidelines from the [Red Cross](#) on how to perform a breathing assessment and rescue breaths in children or adults during the COVID-19 pandemic.
 - If you are experiencing a medical emergency and are able to call 9-1-1, let the operator know if you have, or think you might have, COVID-19. If you can, put on a mask before help arrives.

Be Safe AFTER

Know the signs and ways to treat hypothermia.

- Hypothermia is an unusually low body temperature. A body temperature below 95 degrees is an emergency.
 - Signs: Shivering, exhaustion, confusion, fumbling hands, memory loss, slurred speech and drowsiness.
 - Actions: Go to a warm room or shelter. Warm the center of the body first—chest, neck, head and groin. Keep the person dry and wrapped up in warm blankets, including the head and neck.
- Engage virtually with your community through video and phone calls. Know that it's normal to feel anxious or stressed. Take care of your body and talk to someone if you are feeling upset. Many people may already feel fear and anxiety about the coronavirus 2019 (COVID-19). The threat of an avalanche can add additional stress. Follow CDC guidance for [managing stress during a traumatic event](#) and [managing stress during COVID-19](#).

Associated Content

- [Avalanche Information Sheet](#) (PDF)
- [The National Avalanche Center](#)
- [Coronavirus](#) (Federal Government Response)
- [Keeping Children Healthy During the COVID-19 Outbreak](#) End.

December 2020 RCARC Christmas Radio Meeting and Prize Give away

Due to the Covid19 situation and restrictions the Rainbow Canyons Amateur Radio Club (RCARC) meets monthly via ham radio. Under normal conditions this would have been our annual Christmas meeting and party with potluck and all.

However, since we were not able to meet as a group it was decided to do the Prize give away over the radio using a random number drawing process. During the meeting roll call each member checking in was issued a number. Using a random number App. numbers were selected and at which point the selected number was matched with the number issued during roll call and that member was awarded the prize.

There was a total of 10 prizes to be given away:

Regular Prize:

1. Laminated Grid Square Map of the World.
2. Arrow Antenna – J – Pole.
3. ARRL Storm Spotting and Amateur Radio Book

Grand Prizes:

1. 3- QYT 8900D Mobile Radios.
2. 3 – Miady LPF20AH, 12.8V Batteries.

Special Prize:

1. Morse Code, Paddle Key Kit (To be won by one of the CW Net attendees).

The winners are listed below

Prize	Name	Call Sign
Storm Spotting and Amateur Radio Book	Lance Jackson	KA7J
Laminated Grid Square Map	Jack Coulter	KG7VEJ
Arrow J-Pole Antenna	Ken Richter	KR7KR
Morse Code Paddle Key Kit	Bonnie Bain	KI7WEX

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Prize	Name	Call Sign
QYT 8900D Mobile Radio	Ron Shelly	K7HDX
QYT 8900D Mobile Radio	Brant Palmer	KJ7LTQ
QYT 8900D Mobile Radio	Dennis L. West	W6DLW
Miady LPF20AH, 12.8V Battery.	Larry Bell	N7SND
Miady LPF20AH, 12.8V Battery.	Terry West	No Call
Miady LPF20AH, 12.8V Battery.	Don Blanchard	WA7GTU

Following the prize give away Ken Munford (K7KM) gave a Zoom presentation on **Antenna Basic, Basics. The KIS way (Keep It Simple).**

Chuckle for the day.

I was driving when I saw the flash of a traffic camera. I figured that my picture had been taken for exceeding the limit even though I knew that I was not speeding.

Just to be sure, I went around the block and passed the same spot, driving even more slowly, but again the camera flashed. Now I began to think that this was quite funny, so I drove even slower as I passed the area once more, but the traffic camera again flashed.

I tried a fourth and fifth time with the same results and was now laughing as the camera flashed while I rolled past at a snail's pace.

Two weeks later, I got five tickets in the mail for driving without a seat belt.

You know, you just can't fix stupid.

The Votes Are In!



At the December 2020 RCARC General Membership (Radio) Meeting the following Members were elected as the 2021 Club Board Officers:

Position	Name	Call Sign
President	Fred Govedich	KI7TPD
Vice President	Ron Shelley	K7HDX
Secretary	Bonnie Bain	KI7WEZ
Treasurer	Linda Shokrian	KG7PBX
Newsletter Editor	Dennis L. West	W6DLW

In addition, the next time you see Larry Bell (N7SND) or hear him on the radio please give a thank you for his dedicated service the last three years as the Club Treasurer.

Larry

Thank you for a job well done and your
dedicated commitment to the
Rainbow Canyons Amateur Radio Club.



Australian Radio Amateurs Denied Access to 60 Meters

After considering several options for a 5 MHz amateur allocation, the Australian Communications and Media Authority (**ACMA**) has come down in favor of national government interests. Following a formal **consultation** (a “proceeding” in FCC parlance), ACMA has decided not to permit ham operation on the 5351.5 – 5366.5 kHz band. The 15 kHz-wide band was allocated to the amateur service on a secondary basis in 2017, but as ACMA explained, “unresolved sharing issues” prevented ham radio use of the band, operated on by more than 500 other licensed services (mostly land mobile and aeronautical services), as well as by the Australian military.

Options ranged from Australia-wide access to the whole band or part of the band, to a segmented or channelized amateur allocation, to no amateur access. ACMA decided that national defense and security use of the allocation were “of high importance” in determining maximum public benefit and decided on the last option.

“In balancing Defence’s existing use of the 5351.5 – 5366.5 kHz band against the impacts of introducing use by the amateur service, the ACMA has decided not to support amateur use in the band,” the agency said. “Public and non-public submissions from the Department of Defence showed that expanding the use of the 5351.5 – 5366.5 kHz band to potentially several thousand amateur operators could impact important radiocommunications operations. The ACMA recognizes the high level of interest shown by the amateur community in adding this band and understands there will be disappointment. However, we are confident the decision is appropriate and consistent with the objects of the Radiocommunications Act. In particular, this includes supporting defence and national interest objectives.”

Continued next column

Australia’s International Amateur Radio Union (IARU) member-society, the Wireless Institute of Australia (WIA), argued for amateur access to 5351.5 – 5365 kHz as a compromise.

WIA survey showed most Australian radio amateurs preferred that choice. WIA noted that because the band was agreed upon at World Radiocommunication Conference 2015 on a shared secondary basis, as well as allowing low-power, such as 15 W EIRP (effective isotropic radiated power) operation, “amateur radio operators in over 80 countries around the world have been granted access to the band, including many of our near Pacific neighbors, New Zealand and Indonesia.”

“Australian amateur operators therefore have a strong desire to be able to commence communications on this band with these countries,” WIA concluded. Two spot 5 MHz frequencies are allocated to the Wireless Institute Civil Emergency Network (WICEN) “to provide emergency and safety communications.”

Radio amateurs in New Zealand lost access to 60 meters in late October. Use of this band by radio amateurs was provisional, allowing hams to use two frequencies in the band — 5353.0 kHz and 5362.0 kHz — as part of a trial.

In the US, ARRL proposed amateur access to the band in a 2017 **Petition for Rule Making**, seeking a new, contiguous secondary band at 5 MHz to the Amateur Radio Service. ARRL also asked the Commission to retain shared access to four of the current five 60-meter channels (one would be within the new band) as well as the current operating rules, including the 100 W PEP (peak envelope power) effective radiated power (ERP) limit. The federal government is the primary user of the 5 MHz spectrum. So-called “interoperability” frequencies in the band have been shared by amateur and federal government entities such as Military Auxiliary Radio System (MARS) during exercises and actual emergencies. End

Utah VHF Society

Dues are Due

If you wish to renew or join follow the below described methods or go to:

http://utahvhfs.org/uvhfs_join_renew.html
and follow the instruction there.

If you wish to mail a check, dues may be sent to:

Utah VHF Society
P.O. Box 482
Bountiful, UT 84011-0482

The PayPal account address for the Utah VHF Society is:

paypal@utahvhfs.org

- **IMPORTANT:** Please note that the above email address is pronounced "Pay Pal at Utah Vee Aiche Eff Ess dot Org"
- **PLEASE** check the spelling of the email address to which you are sending your payment and make sure that it is correct and has the word "UTAH" in it - and then check again before you send your payment!

Please note that this is not a link, but the address to which you should send your payment after you log into PayPal. At the moment, we don't have a "shopping cart" set up for PayPal - sorry.

If you have a PayPal account, follow these easy steps:

Log into your PayPal account

1. Click on the "**Send Money**" tab
2. Where it says "**To**", enter the Utah VHF Society's PayPal address: paypal@utahvhfs.org

Continued next column

Under "**Amount**" enter the number based on the number of years' membership you wish. *Please enter the amount for at least two years to help minimize the amount of PayPal fees.*

3. Select "**Purchase**" and select either "**Goods**" or "**Services**". *Please do not select anything under the "Personal" tab.*
4. Hit the "**Continue**" button. This will take you to a new screen.
5. Select your method of payment and hit the "**Send Money**" button
6. **Thank you for your support!**

If you *don't* have PayPal, don't worry - you can still pay by check/mail to the address above, or in person at the next swap meet.

When you pay via PayPal, please include the following:

- Under "**Subject**" please put "Utah VHF Society Dues for <your name>" - remembering to put your name in there.
- Under "**Message**" please include:
 - **Your name, address and phone number.** Also note if you do **NOT** want your name, address and/or phone number to appear in the Utah VHF Society booklet.
 - **Your callsign** - if you have one.
 - Whether or not you would like to be included on the net roster. If you don't say "yes" we'll assume that you don't check in on that net regularly.
 - Indicate whether or not you are a member of ARRL.

The Utah VHF Society is a non-profit (IRS501c3) organization founded in 1968 to promote the installation and use of VHF amateur repeaters throughout Utah. The Society also provides financial support for aligned repeaters and serves as frequency coordinator for the state. End.

Transatlantic Tests Mark 99th Anniversary

12/09/2020

On December 11, 1921, radio history was made when the signal from amateur station 1BCG in Greenwich, Connecticut, was heard in Ardrossan, Scotland, marking the first successful transatlantic radio transmission using shortwave frequencies. Between 1921 and 1924, radio amateurs experimented with transmitting across the Atlantic. Sponsored by ARRL, these Transatlantic Tests aimed to prove that shorter wavelength frequencies could propagate long distances using transmitters running less than 1 kW. The initial run of the Transatlantic Tests was a failure. For the second Transatlantic Tests, ARRL dispatched receiver designer Paul Godley, 2ZE, considered one of the best of operators the day, to Europe to listen for participating stations. His nine-tube receiver employed the latest superheterodyne technology, which he modified for the frequencies used.

In one of those historical coincidences, during his voyage to England, Godley met Harold Beverage, who convinced him to use a specially designed, highly sensitive, and directional 1,300-foot antenna, referred to as the Beverage Antenna.

During a pre-event dinner arranged by his British hosts, Godley also met wireless pioneer Guglielmo Marconi, who asked him to remind US amateurs that "I, too, am but an amateur."

Over the course of the test period, more than two dozen stations were heard between 230 and 235 meters, roughly 1.3 MHz in what is now the AM broadcast band. Some utilized spark-gap transmitters, others employed vacuum-tube CW transmitters. The one heard most consistently was a CW transmitter operated by six members of the Radio Club of America — Ernest Amy, 2VK; Edwin Armstrong; George Burghard, 2SS; Minton Cronkhite, 1BCG; John Grinan, NJ2PZ, and Walker Inman, 2BGM. From 1BCG, they transmitted their message at 2152 UTC (then GMT) on December 11, 1921:

Continued next column

"No.1 de 1BCG. W-12 [Words 12], New York, Date 11/12-21, To Paul Godley, Ardrossan, Scotland, Hearty Congratulations, Burghard, Inman, Grinan, Armstrong, Amy, Cronkhite"

Reporting on the accomplishment, ARRL Secretary Kenneth B. Warner, 1EH, declared, "Excelsior!" The designation "test" evolved to "contest." Inaugural contests include Field Day in 1934, the International Test in 1927, Sweepstakes in 1930, and the ARRL DX contest in 1932. — Thanks to Clark Burgard, N1BCG, and Mike Marinaro, WN1M End



More Ham Humor



"When I said I want to see foreign countries, I didn't mean for you to show me your EQSL cards!"



Rail Riding Radio

Scott Parker, KDØHRM

A Minnesota club plays radio while railroading through the forests of the Lake Superior region.

Most of us have multiple hobby interests and it's always fun when we can combine them into a single event. Besides being an Amateur Radio operator, I'm lucky enough to be a locomotive engineer on the North Shore Scenic Railroad out of Duluth, Minnesota. We use VHF radios for railroad work, which would seem to limit opportunities to combine ham radio with railroads. Not true! Our railroad is part of the Midwest's premier Museum. While volunteering at the railroad, I've been involved in several radio projects. Recently, several local amateurs helped to design and install a repeater system for the 30-mile rail route. The system is used by train crews to communicate with each other as well as train dispatchers.

In 2011, I became curious as to how an HF station might operate from a moving passenger train. Many ham operators design and test their equipment to operate in harsh emergency conditions. Those operating conditions are never the same and never predictable. Operating "railroad mobile" would be another opportunity to adapt HF gear to an environment that was certainly not designed with long range communications in mind. A modest test involved a simple 20-meter wire attached to some existing insulators on a rail car's roof. A small group of operators made some good contacts and seeded the idea for a railroad mobile club.

Presidential Portable

In 2012, a small group got together and created the North Shore Scenic Railroad Radio Club with call sign NSØSR. Our goal is to sponsor at least one mobile event each fall for an entire day, operating as a special event station. This gives us an opportunity to design and test new antennas while operating in a very temporary and restricting environment. Using backup power for multiple stations in close proximity was also required as only 34 V dc train line power is available.

These 100-year-old 34 V wires didn't run through the entire train and power was only available when the engine was operating. The portable generator allowed us to position our stations wherever it was convenient and to keep them operating when the train was idle.

On October 6, 2012, we operated from the old Duluth Missabe & Iron Range Railway Presidential Support Car W24. This early 20th century Pullman car has a large baggage area perfect for group gatherings. Large doors offer great views and fresh air. There is also a small seating area where operators can relax and soak in the "clickety-clack" of the ride as they enjoy a bygone era. Private state rooms were used for operating both 20- and 40-meter stations. These rooms allowed up to four operators to assist in radio traffic and logging while sitting in 1920s comfort. High back Pullman chairs and large windows transported them back to the era of elegant railroad travel.

The rail car's roof has three heavy-duty steel conduits welded along the length of the 85-foot car. These were installed when the 105-ton passenger car underwent renovations in the beginning of the 20th century to include such amenities as electric lighting. Our group used this conduit to attach an "X" bracing of 2 × 3-inch pine boards. Nine of the X braces were installed along the coach, allowing for both the 20- and 40-meter dipoles. Air choke baluns were placed on both ends of the coax runs, which were dropped down the side of the coach into the radio rooms. Due to height restrictions, our dipoles were limited to being no more than 3 feet off the roof. The total antenna height above the rail head was around 18 feet.

Rolling Radios

Our stations consisted of Icom 7200 and 7000 transceivers, both running off large AGM batteries. A Honda generator was on hand for charging and powering the laptops used in logging and PSK operations. A pair of Dunestar filters were used for out of band rejection considering our antennas were only a couple of feet apart. The filters worked flawlessly and neither station experienced interference.

Also on our train was a Soo Line Railway caboose in which we installed a CW station consisting of a Yaesu FT-817D transceiver driving a vertical antenna mounted to the roof grab irons. A second roof vertical was used for an Automatic Packet Reporting System (APRS) station. Antennas performed well with the exception of when we entered a tunnel. For that brief moment, the cell phone adage, "Can you hear me now?" applied.

Our rail cars were attached to the morning train from Duluth to Two Harbors, Minnesota. This regularly scheduled tourist trip winds through the woods and along Lake Superior slowing for a few waterfalls and scenic locales. These provided great operating vistas for our purposes.

Continued on page 16

Continued next column

Rail Riding Radio

Continued

We left Duluth for the morning excursion and operated for 2 hours during the ride northeast along Lake Superior to Two Harbors. At Two Harbors, we took a lunch break while the excursion train stopped for the passengers to explore the area. After a 2 hour stop at Two Harbors, it was all aboard and another 2 hours of operating as we traveled back to Duluth.

The evening trip saw us switched onto the local tourist dinner train for another trip up the shore and back. We called our favorite pizzeria and placed an order. We stopped the train next to the eatery and picked up our food for the evening. Not too many amateur field operations can say they've done that!

Eighteen local hams operated over the several hours we were moving. It was great fun explaining to contacts that we were on a moving train. Many contacts mentioned having relatives either working for or retired from various railroads all over the country. We made just under 200 contacts with people from coast to coast as well as Canada, Mexico, and Cuba. Most had never made contact with a railroad mobile HF station. Some were skeptical until they heard the locomotive horn in the background or verified our moving APRS signal.

A Good Match

We are very lucky to have supportive staff at the railroad. It also helps that the general manager has been involved in radio himself for decades. For local hams, our relationship with the museum is a great combination of being able to help out the museum with technical radio work as well as further the HF side of our hobby. It also gives us practice in using the space and conditions given to make an HF station work. Any time that we can practice our abilities to operate in unfamiliar environments we prepare ourselves for unknown situations in the future. Whether those are emergencies or a weekend operating session, they are all good preparation. End.



Silent Key - then what happens?

With the majority of radio amateurs now over 65, **Randy Hall K7AGE** looks at how amateurs can prepare for their passing and ease the burden those left behind face in dealing with the collection of radio equipment

Watch Silent Key, then what happens at the below URL:

<https://www.youtube.com/watch?v=ZIQFipXP4No>

Other videos by K7AGE can be seen at <https://www.youtube.com/c/K7AGE/videos>

Some radio amateurs choose to leave a bequest in their will leaving part of their estate to an amateur radio registered charity such as the Radio Communications Foundation. The value of the bequest will be deducted from your estate before Inheritance Tax is worked out.

<https://commsfoundation.org/how-to-donate/>

Did you ever wonder why?

If we were not meant to have midnight snacks, why is there a light in the refrigerator?

Humorous Amateur Radio Definitions

For those new to ham radio, here are some useful definitions, pertaining to antennas and DX-ing.

- **S.W.R.** -- A term, applied to any part of the antenna system, which means: "Savings-to-Watt Ratio". Based on the inverse relationship of dollars in the bank and effective radiated power.
Characteristic Impedance The usual reaction of your spouse when told about the proposed antenna system.
- **Traps** -- Devices installed in antennas to collect rain-water, to keep it from running further down the antenna.
- **Wind Loading** -- The measure of how much more awkward it gets to handle a big beam as you ascend the tower.
- **Balun** -- (Pronounced: "balloon" by many). An anti-surveillance device, installed in coaxial lines at the antenna, to prevent nosy neighbors from eavesdropping on you through their TV sets.
- **Trans match** -- A device mistakenly believed to decrease S.W.R. The premise is that this device allows you to load up into a mismatched antenna. Unfortunately, it the cost of one that lowers your S.W.R.
- **House Bracket** -- A device which secures the house and the tower together. It lets the tower do double-duty by holding up the house during severe windstorms.
- **Rotator Control Box** -- A device which is designed to let you monitor antenna "windmilling".
- **Windmilling** -- A technique whereby prevailing winds are allowed to rotate the antenna, enabling the operator to "scan" the radio horizon.
- **Dummy Load** -- A measure of the stress exerted on a tower by a ham who climbs the tower without a safety belt.
- **Coax** -- (Usually mis-pronounced as two syllables). A term applied to the maneuvering of a piece of transmission line through the attic or walls of a house.
- **Db's Gain** -- A bunch of yellow-jacketed wasps found a great place to build their nest, at the bottom of the rotator housing on my tower.
- **Db's Loss** -- Fortunately, lightning struck the tower and the wasps were totally destroyed.
- **Vertical** -- A much-maligned antenna, said by some critics to "radiate equally poorly in all directions". This is not true, as many who have built one know. In fact, the vertical can have directional characteristics, and not radiate at all in some directions. I hope this clears up that myth once and for all!
- **Sloper** -- A variation of the vertical, where high winds have affected thin-walled aluminum tubing used in the construction.
- **Inverted Vee** -- A clever, but inferior, reverse adaptation of the true, "upright Vee", which allows the use of a single support instead of the usual two.
- **Dipole** -- Another modification of the true "Vee", and used where it is not possible to get the center feed point close to the ground.
- **Ground Plane** -- Usually, an array of 1/4-wavelength arms extending from the base of some verticals (or "slopers"). These arms are not recommended unless a rotator is also used, to take advantage of their directional features.
- **Directional Coupler** -- A device inserted into the transmission line which monitors the environment outside the shack, by utilizing the antenna as a remote sensor. For example, when the antenna responds to weather conditions such as severe icing or heavy winds, the coupler will produce indications of these responses. A special directional coupler has even been designed, presumably, to tell you when BIRDS are sitting on your antenna!
- **Smith Chart** -- An alias, to be used when you don't want people to know what chart you really used to design your antenna.

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Continued on Page 18

Humorous Amateur Radio Definitions

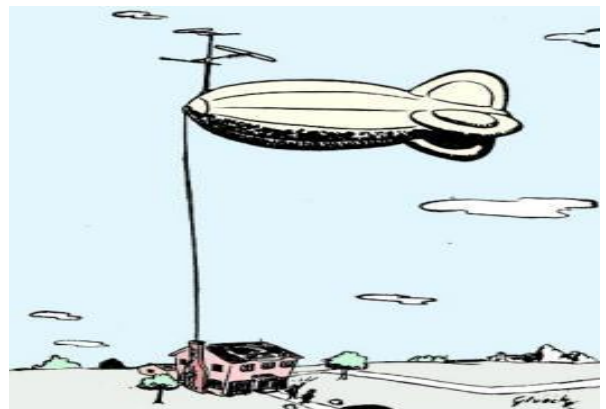
Continued

- **Long Path** -- The direction you are told to aim your antenna, to work a rare DX station, as suggested by the other fellows in the pileup.
- **Element Spacing** -- A critical antenna design factor which is optimized to place the tunable traps on a beam as far out of reach as possible, from the tower.
- **Diversity Effect** -- A property in which the quad-type antenna far excels over the Yagi-type antenna. It relates to the number of directions an antenna can collapse into, under heavy winds.
- **Selective Fading** -- A quirk of propagation, whereby a signal arrives at a distant point by multipath, and where the different signal components arrive with varying phase relationships. This causes the signal to be "cancelled out" at some points. This wonderful effect helps eliminate some of the QRM from distant DX stations when you are trying to copy the pileup.
- **"Off the back of the Antenna"** -- A technique used by more experienced DX-ers, where the antenna is pointed away from the station being contacted. This creates a challenge similar to running QRP.
- **QRP** -- Restricting final input power to the transmitter to anything less than 500 watts, on 20 meters.
- **Speech Processor** -- A "state of the art" device which permits one to communicate with as many others at the same time as possible. However, beginner operators need to learn how to use one properly, to expand the signal beyond a narrow, 3 KHz bandwidth.
- **"IMOKINCALLBK"** -- An expression used in a CW QSO, to say: "you send me your QSL card first, turkey, and then I'll send you mine".
- **IRC** -- An economic instrument, administered by the Postal Service, to control the balance-of-trade deficit.
- **Parasitic Element** -- A person who takes lists for DX-stations.
- **LISTS** -- A method of making DX contacts, where some self-appointed person takes a list "on the air" (aka: his buddies on 2-meters) of people who wish to "work" a person in some DX location. This makes it easy for hams who do not have the patience or time to learn real DX skills to get a quick, easy contact. In fact, if you can't hear the actual report from the foreign station, the list-controller will often help ("...OK, there, WB6xxx, did you hear Jose give you a '59' signal report?").
- **QSL Manager** -- The station you worked in Juan De Nova tells you to send a "Green Stamp" to a ham in Germany who is called a "QSL Manager". It is his duty to send your card to a ham in California, who then (after holding it for 8 months) sends you a QSL card.

More Humor



Nope, condensor is alright



Continued next column

Elementary Radio Quiz

By Harold Glenn

Check your radio knowledge.

1. Light and electricity are energy, and travel in the form of:
 - a. waves
 - b. frequency
 - c. amplitude
 - d. electrons
2. Which has the longest wave length?
 - a. light
 - b. heat
 - c. radio
3. The inductor is:
 - a. a coil
 - b. a condenser
 - c. an air core
 - d. an iron core
4. The to-and-fro surge of an electric current in a circuit is called:
 - a. detection
 - b. inductance
 - c. oscillation
 - d. capacitance
5. The loudspeaker changes:
 - a. sound into electric waves
 - b. r.f. to a.f.
 - c. a.f. to r.f.
 - d. electric waves into sound waves
6. In order to operate, the loudspeaker must have:
 - a. r.f. waves
 - b. a.f. waves
 - c. pure direct current
 - d. pure a.c. sine wave

7. The purpose of the detector is to change:
 - a. a.f. to r.f.
 - b. r.f. to a.f.
 - c. resonance to oscillation
 - d. oscillation to resonance
8. The action of the detector is called:
 - a. resonance
 - b. rectification
 - c. oscillation
9. Resistance in the tuned circuit causes:
 - a. distortion
 - b. rectification
 - c. broad tuning
 - d. oscillation
10. What is the frequency of 60-cycle, 117-volt, 100-watt house current?

Quiz answers on page 22

The Radio Month December 1949 Radio-Electronics

Phone vision will be tested under actual operating conditions early in 1950, Zenith Radio Corp., developer of the system, announced last month. Under the plan, subscribers pay for reception of the latest Hollywood motion pictures. The pictures will be transmitted in Chicago over Zenith's Channel 2 station, but will move quickly and violently from side to side on the screen; the program material will be recognizable but unwatchable. A subscriber who wishes to watch the program calls his telephone operator, who connects his phone line with signals provided by the station to neutralize the picture "jiggle." Charges will be made on the regular telephone bill, amounting to 75¢ or \$1 per picture. Three hundred subscriber installations are being made for the several-month test. Zenith says that no one can hope to synthesize the necessary correction signals without building about \$17,000 worth of equipment in his basement, so that bootlegging is impossible.

Continued next column

DIY Amateur Ham Radio Operators Answer the COVID-19 Call.



Since the coronavirus pandemic hit the U.S., a record number of ham radio candidates have prepared for tests and achieved their FCC license.

Although often seen as a volunteer support group aiding communications during natural disasters, most amateur ham radio enthusiasts simply enjoy the do-it-yourself (DIY) nature of putting together and improving their radio stations while communicating with the world-wide community.

According to the American Radio Relay League (ARRL), the national association for Amateur Radio in the US, defines Amateur Radio as a valuable volunteer emergency communications service and public resource. Since 1914, amateur radio – also known as ham radio – have been working in basements, attics and outside RF shacks, tinkering with their and communicating around the globe with other ham operators. People from all walks of life use ham radio to talk across town, around the world, or even into space, all without the Internet or cell phones.

But unlike Citizen-Band (CB) radios, all amateur radio operators must pass a test from the Federal Communications Commission (FCC). Interest in the use of amateur radios and especially in preparing and taking the FCC tests have soared with the [exponential rise of the coronavirus](#) outbreak.

The FCC reports that there are more than 765,000 amateur radio license holders in the U.S., while noting a recent increase in the number of new ham licenses since the COVID-19 pandemic. Various sites that provide online courses in preparations for a ham radio test also acknowledge the increase in interest.

For example, HamRadioPrep.com claims to have experienced a huge surge in new students in the last few weeks of March 2020, stating that the number of persons signing up for the amateur radio license courses, “has soared more than 706% since news of the coronavirus outbreak dominated headlines. At the same time, the FCC shows a 7.1% uptick in new amateur licensees in the first week of March in 2020 vs the same week in 2019.”

In addition to emergency communication support, ham radio operators have been helping build DIY medical equipment during the COVID-19 crisis. For example, George Zafiropoulos (KJ6VU), a ham operator in the San Francisco Bay area and well-known ham podcaster, has designed a development board to do ham radio projects with microcontrollers (Arduino, PIC, Raspberry Pi, Feather). A few fellow hams picked up the design and are now using BenchDuino to test valves in home brew ventilators with the University of Florida. Check out their [Facebook](#) page to learn more.

George’s regular [Ham Radio Workbench](#) Podcast is geared to the hands-on DIY type technical ham. Details about the BenchDuino design that was adopted by the U of F ventilator project can be found on [this link](#).

DIY engineers and techs can see details of the ventilator project on [groups.io](#) by searching for message topic is “High Cycle Rainbird and Passive Valve Testing”. Many amateur radio operators were involved with this project including Jack Purdum, W8TEE, Gordon Gibby, KX4Z, Farhan in India and many others, working in conjunction with the University of Florida.

Continued on page 21

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DIY Amateur Ham Radio Operators Answer the COVID-19 Call. **Continued**

A more traditional way that ham operators help during national crisis is found in the Medical Reserve Corps (MRC). The MRC was created as an extension of the Freedom Corps, which was created after the September 11th attacks in 2001 as a coordinating council with the goal of, “working to strengthen our culture of service and help find opportunities for every American to start volunteering.” The MRC has close ties with agencies within the [Department of Health](#), which is why the primary goal of the MRC is to function as an auxiliary to medical first responders.

Amateur ham radio operators help the MRC in many ways. For example, operators support non-critical HIPAA compliant communication across “points of dispersing” (PODS) stations, such as those that offer vaccines for influenza or possible COVID-19 to elderly patients or first responders. Servicing such patients are often best done at isolated temporary healthcare locations that avoid the general public. Also, this support helps alleviate tying up key medical professional and supplies desperately needed in regular hospitals.

General wellness is another area where amateur radio operators contributed during emergencies. In a public crisis, the MRC typically staffs call centers and COVID-19 hotlines for local communities. To help ease the overburdening of cellular networks, amateur radio operators can provide another mechanism of communications between volunteers are providing food or delivering supplies.

Another wellness activity provided by hams is the hosting of daily wellness discussions via their local repeater antennas. Admittedly, this usually only helps older ham’s feel connected and not alone. Still, it does provide an outlet for them to reduce outreach to primary channels.

Continued next column

The coronavirus outbreak has proven to be a very different type of crisis from natural disasters like hurricanes, fires and earthquakes.

During those catastrophes, ham operators typically support communications for auxiliary functions with the Red Cross.

“In practice the Red Cross is better deployed for larger scale situations that have more of an international humanitarian aid focus, such as major storm or property damage like 9/11, Katrina, Sandy, Tornado, etc.,” explains Steve Bossert (K2GOG), a ham operator active in the MRC chapter in Dutchess County NY. “Chapters of MRC are designed to operate on a county-by-county basis to directly serve the areas for which they are responsible.

The MRC is also better at thinking about leveraging VHF/UHF resources this way compared to HF resources from an amateur radio perspective.”

The Overlook Mountain Amateur Radio Club ([OMARC](#)) in New York is just one of hundreds of area amateur radio clubs across the nation that are doing wellness nets. The OMARC offers such nets on a wide area 2m repeater every evening at 6PM.

The popularity of amateur ham radio among DIYs cannot be denied. The hobby and service have even found its way into Hollywood. In one example from few years back, the storyline from the ABC television series Last Man Standing, starring Tim Allen, featured an amateur radio shack.



Continued on page 22

DIY Amateur Ham Radio Operators Answer the COVID-19 Call. **Continued**

Although often seen as a volunteer support group aiding communications during natural disasters, most amateur ham radio enthusiasts simply enjoy the do-it-yourself (DIY) nature of putting together and improving their radio stations while communicating with the world-wide community.

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If you currently hold a ham license or hope to have one soon, be sure to connect with those ham operators mentioned in my story. You might even catch me evenings or weekends at KG70NX. End.



Answers to the “Elementary Radio Quiz” on page 19.

1. a
2. c
3. a
4. c
5. d
6. b
7. b
8. b
9. c
10. 60 cycles



Larry King Obama Satire CB Radio Vs Ham Amateur Radio Parody

Please access the URL below:

<https://youtu.be/CoJpklU8g9k>



Radio Equipment for Sale

Make	Band	Comments
Alnico	220 MHz.	VHF FM Transceiver. Includes, Radio, Power Cable, Mounting Bracket and Microphone
Radio Shack	10 Meters	10 Meter Transceiver. Includes, Radio, Power Cable, Mounting Bracket and Microphone.
Cobra	Citizen Band	40 channel CB radio, with built in Weather Channels and built-in Public-Address System. Includes, Radio, Power Cord, Mounting Bracket and Microphone.
Kenwood	2-Meter	2 -Meter FM Transceiver. Needs Microphone.

All radios are in very good condition. If you are interested in any of the items above please e-mail Dennis West (W6DLW) at W6DLW@Outlook.com. Items will be sold on a first come first serve basis.

Please make offer.

SKYWARN Recognition Day 2020 Deemed A Success

Judging by the list of more than 700 [registered participants](#), SKYWARN® Recognition Day (SRD) on December 5 was a success. Cosponsored by [ARRL](#) and the National Weather Service (NWS), SRD recognizes radio amateurs for the vital public service they provide during severe weather. Participants ranged from NWS offices, radio amateurs, non-amateur radio spotters, and non-SKYWARN spotters. Radio amateurs -- the first SKYWARN volunteers -- comprise a



large percentage of SKYWARN volunteers across the country, providing vital communication between the NWS and emergency management in the event that telecommunication systems are knocked out.

The NWS Milwaukee Forecast Office reported more than 150 contacts logged across 35 states. The NWS office in Springfield, Missouri, tweeted, "What would SKYWARN Recognition Day be without a special thanks to the net control operators?" The NWS office in Chicago tweeted, "SKYWARN Recognition Day has come to an end; thanking everyone for attending and to all of our spotters across the nation."

Continued next column

SKYWARN Recognition Day planner and organizer Michael Lewis, KG4KJQ, who is the Warning Coordination Meteorologist in the northern Indiana NWS Forecast Office, expressed appreciation to the SRD Planning Team and the Facebook livestream presenters for helping to make the event a success.



The NWS Forecast Office in northern Indiana registered 34 radio amateurs. The office serves 37 counties in northern Indiana, southwest lower Michigan, and northwest Ohio.

Given the COVID-19 pandemic, SRD was handled a little differently than in the past. Normally, radio amateurs participate from their home stations and from stations at NWS forecast offices, with the goal of contacting as many NWS forecast offices as possible. This year, participation from NWS forecast offices was minimal, and the focus shifted to contacting as many SKYWARN trained spotters as possible. New this year, SRD was opened to all SKYWARN spotters, and a SKYWARN Recognition Day [Facebook page](#) was created, hosting a variety of live and recorded segments throughout the day.

Oregon ARRL VEC Testing Group Offers Testing from the Comfort of Your Car

Volunteer Examiners in Grant County, Oregon, affiliated with the ARRL Volunteer Examiner Coordinator (VEC), put their heads together to overcome adversity and hold a safe and secure drive-in exam session that took pandemic precautions into account.



Current health regulations in Oregon precluded both indoor and outdoor gatherings, so the Grant County Amateur Radio Club, the local ARES Group, and the Grant County Emergency Radio Infrastructure Coalition (ERIC) combined forces to offer five candidates the chance to obtain their first license or to upgrade their existing license, all from the comfort of their vehicles.

"Many amateur radio clubs have experimented with exams via the internet," said Steve Fletcher, K7AA, who is the ARES Emergency Coordinator for Grant County. "In eastern Oregon, with the cooperation of the County Roads Department, we chose to hold a 'drive-up' exam session on Saturday, December 12. Under the circumstances, we used four ARRL VEs for the exam instead of the required three.

Continued next column

"Wheeler County ARES loaned Stuart Bottom, K7FG, to help as the third required Amateur Extra-class Volunteer Examiner.

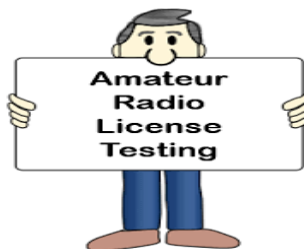


Fletcher reports three new Technician-class licensees and two new General-class radio amateurs resulted from the session.

Required ARRL VEC forms contained pre-printed data -- including the FCC Registration Number (FRN) -- were given to the candidates on a clipboard. Each candidate took the exam in the front seat of their own vehicle. Cell phones, papers, and anything not required for the exam were removed.

"Everyone dressed warmly, and most candidates had their heaters running," Fletcher reported. A camper owned by Ronda Metler, KB5LAX, and a communications van owned by Fletcher served as sites to check results and sign forms.

The Grant County Roads Department loaned its parking area for the exam session. *Thanks to Steve Fletcher, K7AA; photos courtesy of Thomas Dekany End.*





2021