RAINBOW CANYONS AMATEUR RADIO CLUB NEWSLETTER

Club Website: www.rcarc.info Number 8 – Vol. 1 January 2026

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. Down Stairs.

2026 Club Officer's

President:
Fred Govedich
KI7TPD
1-435-559-2682
fred.govedich@gmail.com

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Ron Shelley
K7HDX
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Newsletter Editor/Historian
Dennis L. West
W6DLW
1-760-953-7935
rcarcnewsletter@gmail.com

CQ, CQ, Happy New Year Evereyone

Presidents Message

Dear Fellow Amateur Radio Operators,

I hope you had a great Christmas! The RCARC Christmas party was a lot of fun as usual and I hope everyone enjoyed themselves. Congratulations to all of the winners (especially Sylvia who the grand prize, a Icom 2730).

All of the food was great so I would like to thank everyone who brought something to share (and for spending time with everyone at the party).

Looks like winter might finally here with colder temperatures and snow. With the cooler weather and active bands, I hope everyone can get on the air and play with your new Christmas radios! ☺

We will have our club breakfast on January 3rd at the Golden Corral at 9:00 am. Our next meeting will be January 13th at the Cedar City Senior Center at 7:00 pm. Our next big activity is Winter Field Day and is a great opportunity to come out and get on the air and everyone is welcome.

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RCARC Club Nets:
7 a.m. Breakfast Net - Monday – Saturday – 146.760.
12:30 p.m. Daily – Utah Beehive Net On 7.272.
8 pm. Wednesday – Panguitch Net – 147.160.
7:30 p.m. Thursday– Morse Code Net- This is a Zoom Meeting.
8:00 p.m. Thursday's (Mtn Time) – Western Digital Net. Using FLDIGI, FLMSG AND FLAMP – 3.581 +, 1500/MFSK32.
9:00 p.m. Daily – Friendship Net – 146.760.
11 am. Saturdays (Mtn. Time) QCWA – 160 Net, Utah Chapter, 12 pm. Freq. 7.272.
8 pm. Sunday's – New Harmony Net – Bumblebee Repeater. – 146.680.
7 pm Sunday's Southern Utah 2 Meter SSB Roundtable at 7 pm on 144.250 MHz

Local Repeaters:

Intermountain Intertie:

146.940 MHz – Tone 100.0 Frisco.
146.800 MHz – Tone 100.0 Blow Hard
147.200 MHz + Tone 100.0 Tod's/Hatch
146.820 MHz – Tone 100.0 Utah Hill

Iron Mountain

146.760 MHz – Tone 123.0 Hz
146.980 MHz – Tone 100.0 Hz
448.800 MHz – Tone 100.0 Hz connected to Dutton.
449.500 MHz – Tone 100.0 Hz – Off Air
448.400 MHz -- Tone 100.0/FM & DMR

Bumblebee/New Harmony:

146.680 MHz – Tone 100.0 Hz

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Save The Date

January 13, 2026

RCARC Club Meeting.

7:00 pm. Cedar City Senior Center, 489 E. 200 South. Presentation: Salt Lake National Weather Service/Skywarn.

February 10, 2026

RCARC Club Meeting.

7:00 pm. Cedar City Senior Center, 489 E. 200 South. Presentation: Amateur Radio Television. Russ (N7BO) and Brant (KJ7LTQ).

March 10, 2026

RCARC Club Meeting.

7:00 pm. Cedar City Senior Center, 489 E. 200 South.

April 14, 2026

RCARC Club Meeting.

7:00 pm. Cedar City Senior Center, 489 E. 200 South.

President's Message

Continued from page 1.

Winter Field Day will be held on January 24-25, 2025. We will be using the N7U callsign and we will be set up at the Iron County EOC located on Kittyhawk just like last year. For those who are interested in participating please let me know! Be prepared for cold weather!

Remember if you need help with setting up your radio, software, or other equipment please ask your fellow HAMs for help. Part of the fun is helping others! As always, I would like to thank everyone who makes our meetings great by asking questions. I would also like to thank all of our net controls for the nets and everyone who participates!

Cheers!
Fred (KI7TPD)

Local Repeaters continued.

From page 1

Rowberry:
449.925 MHz – Tone 100.0 VHF Remote

Dutton:
147.160 MHz + Tone 100.0 Hz.

Winlink- Gateways
Local VHF – K7HDX-10 – 145.030
Portable VHF – K7HDX –11-- 145.050
Local VHF – KG7VEI -- 145.070

RCARC Monthly Breakfast

Please cone join us on the first Saturday of each month at 9:00 am. for our club breakfast. We meet at the Golden Corral Buffet & Grill (in the back room), 1379 S. Main Street, Cedar City. Their menu offers an unmatched variety of quality foods from breakfast to dinner.

See you there.

Happy Birthday and Anniversary to those celebrating in January

Happy New Year

Breakfast & Friendship Net Awards

January 2026

Breakfast Net		Friendship Net		
First Place	**Second Place**	**First Place**	N7BO - Russ	**Third Place**
K2MFK - Kevin	KB7QXB - Shirleen	K7HDX - Ron	N7SND - Larry	N7SIY - Sylvia
KG7PBX - Linda	N7BO - Russ	N7WWB - Darlene	**Second Place**	W0KLH - Kevin
KI7TPD - Fred	W0KLH - Kevin	K7NKH - Lee	KI7LUM - Bruce	W6DLW - Dennis
KI7WEX - Bonnie		KA7J - Lance		
N7SND - Larry	**Third Place**	KB7QXB - Shirleen		
	WA7GVL - Paul	KI7LVB - Tammy		
		KI7LVC - Tim		
		KI7TPD - Fred		
		KI7WEX - Bonnie		

Rainbow Canyons Amateur Radio Club
Treasurer Report Dec 9,, 2025

Bank balance Nov 1, 2025	**$2,708.31**
Expenses	
Rocky mountain Power (98 repeater elec exp)	- 11.64
Bank Balance Nov 30, 2025	**$2,696.67**
Dec Outstanding	
Membership -	
KF7GPZ & KF7WIY (4 years family), KD6VGL	95.00
Expenses -	
Rocky Mountain Power (due 12/17/25)	-11.77
Funds Available after 12/17/2025	**$2,779.90**
Waiting for - Check order credit	+ 36.21

Submitted by
Linda Shokrian KG7PBX
2025 RCARC Treasurer
435-867-5914

RCARC Upcoming Events

January 13, 2026 RCARC Club Meeting. 7:00 pm Cedar City Senior Center, 489 E. 200 S. Northside of building, Lower level. Presentation: Salt Lake City, National Weather Service – Skywarn.

Winter Field Day, January 24th and 25th, 2026. **See info on page 9**

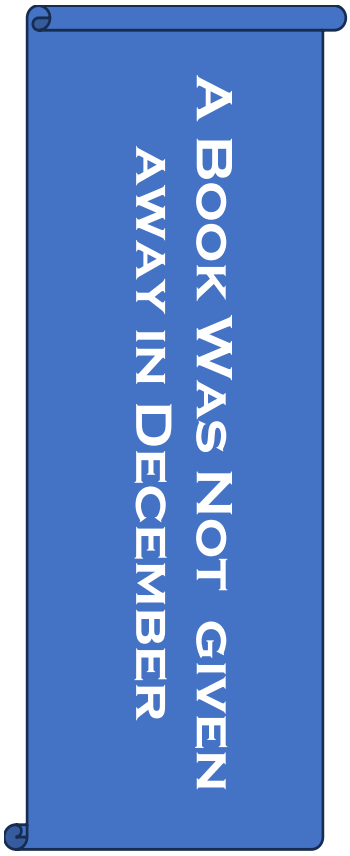
February 10, 2026 RCARC Club Meeting. 7:00 pm. Cedar City Senior Center, 489 E. 200 S. Northside of building, Lower level. Presentation: Amateur Radio Television – Russ (N7BO) and Brant (KJ7LTQ).

March 10, 2026 RCARC Club Meeting. 7:00 pm. Cedar City Senior Center, 489 E. 200 S. Northside of building, Lower level. Presentation: To Be Determined.

In This Issue

RCARC Book Giveaway. Books are donated by Linda Shokrian (KG7PBX).

The Book below will be given away at the January 2026 club meeting



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

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.

Thank You

Notice

Congratulation to Jay Potts, who a few weeks ago passed his General Class License Exam.

Jay's new call sign is **KM7DNW.**

Congratulations Jay

Buzz's January Safety Tip(s)

Ham Radio Workbench Safety

To ensure safety at your ham radio workbench, always unplug equipment before working on it, use insulated tools, and keep one hand in your pocket to avoid creating a circuit across your chest. Ground your station properly to protect against electrical hazards and lightning, avoid working with wet hands, and ensure all equipment is in good condition without frayed cords or broken plugs. For RF safety, limit exposure to high power levels, and use an RF exposure calculator to determine safe distances from your antenna.

Electrical safety

- **Unplug everything**: Always unplug equipment before opening it up or working on internal components.
- **Use insulated tools**: Use tools with insulated handles to prevent electrical shock.
- **Work with dry hands**: Never touch electrical equipment with wet hands.
- **Avoid shortcuts**: Don't touch grounded metal objects or wet floors while working on a powered device.
- **Keep one hand in your pocket**: If you do touch a "hot" point, this prevents electricity from traveling across your chest and through your heart.

Continued next column

- **Check cords and plugs**: Ensure all power cords and plugs are in good condition. Discard any with frayed insulation or broken parts.

Grounding and RF safety

- **Properly ground your station**: A properly grounded station is crucial for safety against lightning and electrical faults.
- **Ground antennas**: Ensure any antennas requiring grounding are properly grounded.
- **Use an anti-static mat**: An anti-static mat can protect your sensitive electronics from electrostatic discharge (ESD).
- **Limit RF exposure**: Use an RF exposure calculator to understand the potential risks from your transmitted signal.
- **Reduce power when possible**: Use the lowest power necessary for your communication to reduce risk and potential interference.
- **Avoid touching the antenna**: Do not touch your antenna while the transmitter is on.

General workbench safety

- **Cleanliness is key**: Keep your workbench clean of debris like metal shavings, sawdust, and oil, which can cause shorts or fires.

Continued on page 6

Ham Radio Workbench Safety

Continued from page 5

- **Organize your space**: Keep your workspace organized to prevent tripping hazards and make it easier to find the tools you need.
- **Don't wear jewelry**: Remove metal jewelry before working on electronics to prevent accidental short circuits.
- **Work in a well-lit area**: Good lighting is essential for performing intricate work safely and accurately.

Soldering safety

- **Use a fume absorber:** Turn on a fume absorber with a carbon filter to remove harmful fumes from your workspace.
- **Wear a dust mask:** Use a disposable dust mask to protect your lungs from fumes.
- **Use an anti-static wrist strap:** Connect yourself to ground with a strap to prevent damage to sensitive electronic components from static electricity.

Specific equipment warnings

- **Power lines:** Be extremely careful during antenna installation, as contact with power lines can be fatal. Even a few feet away can be dangerous.
- **Old radios:** Old equipment may have hazards like two-wire plugs that could lead to the chassis being live if they are not properly grounded.

See URL next column in regards to Harbor Freight.

Continued next column

Harbor Freight Hidden Gems for You're Ham Radio Workbench

https://www.google.com/search?sca_esv=81bd514f0afe5427&rlz=1C1LOQA_enUS746US746&q=you+tube+ham+radio+workbench+safety.&nfpr=1&sa=X&ved=2ahUKEwjv76OB_ZqRAxUXGDQIHcfPJCgQvgUoAXoECBEQAg&biw=1685&bih=826&dpr=1.14&sei=sM0saa63K9n30PEPrvuGuQc#fpstate=ive&vld=cid:30d447ad,vid:Fk09zJdHTMc,st:0

There will be several commercials that you can skip by clicking the skip icon.

Ham Radio Terms Word Scramble

	WORD	HINT
1.	ERNCKHUK	Short Press on PTT
2.	MBWOHERWE	Home Made
3.	ETRNMO	ELMER
4.	PGCLPNIPI	Overdriving an Amplifier Circuit
5.	ELPIOD	Half Wave Antenna
6.	GFNDIA	Signal Reduction
7.	GRDURGNOIN	Electrical connection to earth
8.	EIOBML	A Vehicle
9.	RETOSW	Support Structure
10.	IGYA	Directional

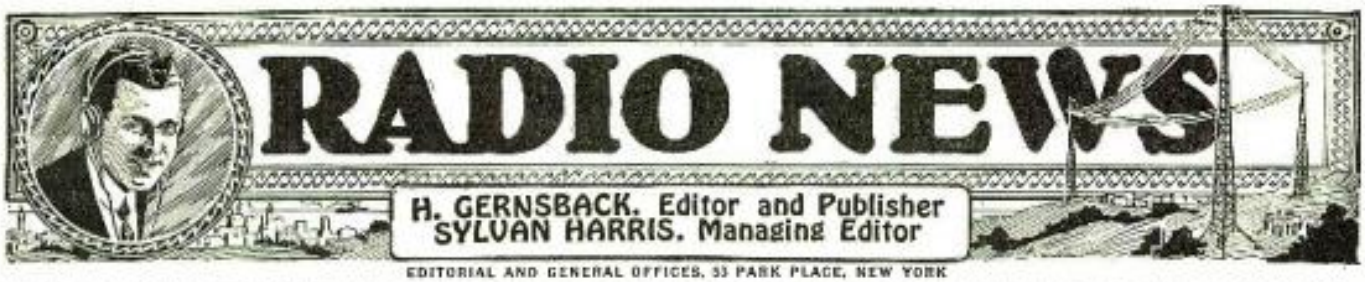
See answers for Word Scramble on page 12.

Ham Radio Trivia?

1. **What do the Amateur Radio Stations NA1SS and RS0ISS have in common.**

2. **In amateur radio parlance, what does the two-letter phrase "DX" stand for?**

See answers on page 16



EDITORIAL AND GENERAL OFFICES, 53 PARK PLACE, NEW YORK

Vol. 7 JANUARY, 1926 No. 7

WHAT RADIO SET SHALL I SELECT?

By HUGO GERNSBACK

IN the October, 1924, issue of RADIO NEWS, I published an editorial entitled "What Outfit Shall I Buy?" At that time in America the crystal set was already in the decline while the 1-, 2-, and 3-tube sets—particularly the latter—were in reigning favor. In the short space of time elapsing between that time and the present there has been a quiet revolution in the radio industry. Where at that time the 3-tube set was considered an average set, the condition today has changed to one where 4-, 5-, 6-, and 8-tube sets are now on top. Crystal sets, while still being manufactured in goodly quantities, are used only in the large cities for local reception, where they probably will always be used, while the one-tube set is always used by beginners and amateurs, but, in America at least, never for family use.

We have become educated to the 4- and 5-tube sets, and the average set in this country now may be said to be of the 5-tube type. For the past two years the set business in this country has made tremendous strides, and it is practically only in America that sets are in huge demand. In England, for instance, the set business is as yet in its infancy, whereas the parts business is practically 80 to 90 per cent. of all the business done. The Englishman, as yet, does not buy sets, but prefers to buy parts or "components" as they are called there. The reason for this is that in Europe conditions are different from those in America, first as to the broadcasting element, second as to the temper of the population.

In America all broadcast stations operate between 200 and 546 meters. It is, therefore, rather a simple matter to manufacture a set that will take in the entire wave band. In Europe this is not so easy, inasmuch as broadcast stations operate all the way from 186 to 4,000 meters. It has not as yet been common in Europe to build a set to take in this entire wave band without resorting to plug-in coils or complicated switching methods, although in Germany sets of this type are just now being introduced.

It may be said here that Germany is probably the second country after the United States in the diversity of radio set manufacturing, and dozens of different types are being built there at present. In France, too, as well as the rest of Europe, and most of the other countries, with the possible exception of Australia, complete radio sets have not as yet taken the popular fancy, and those that do go in for radio build their own or have some private person build the sets for them.

Here in America several years ago, the cry was "What Set Shall I Buy? Do I wish a crystal set, a 1-tube affair, or a 3-tube set?" Today this is past history and the prospective buyer wants to know "What set shall I *select*?" There is a fine distinction between the two, for the average layman in radio today knows pretty well that what he really wants is a multiple tube set. He knows that his friends have 4-, 5-, or 6-tube sets and he also knows that most of these, if made by a reputable manufacturer, probably perform about the same. In the large cities people no longer buy radio sets on performance only. A study of the subject reveals that today it is the lady of the house who aids in selecting a set. She will probably be more impressed with the looks of the set than with its performance. What she wants is a piece of furniture that will look well in the house, and will compromise with the male members of the family only when it comes to certain technical points on the performance of the set. Quite rightfully, the ladies in the household must be satisfied—first, because the radio set must be an ornament, second, because your wife or your daughter, spending more time in the house than the male members of the family, naturally derives more entertainment and satisfaction from the set. This is not surprising, particularly now that the early morning broadcast periods are taken up with Women's Hours, and that there is plenty of entertainment in the early and late afternoons.

Also, the female members of the household are not interested at all in distant stations. That is, in our large cities. There are so many good local programs on the air that it is not necessary to fish for the distant stations. When a set is selected, however, the male member of the family, like as not, will insist that the set perform for DX work so he can sit up into the wee hours of the morning fishing for stations if he cares to do so. The set, therefore, in almost all cases, will have to perform well, not only for the locals, but also for the distant stations.

Nor is this all. People in America no longer are satisfied with just a set. It must reproduce loudly, must have "lots of pep," as the young hopeful of the family will no doubt tell you, and on top of this it must reproduce sounds normally, clearly and without distortion. Sets that squeal and shriek are falling into disfavor more and more, and within the next two years it will be certain that no one will even think of buying a set that howls and shrieks and grates on one's nerves.

So far this has been the bone of contention of the manufacturers, and rightly so. It is a comparatively simple matter to stop a set from squealing and bring all the stations in clearly, without extra, unwanted sounds. The trouble, however, is that there are still sets in which the squealing is purposely not eliminated. While a well neutralized or balanced set will bring in the distant stations without the squeals, it may be said, generally speaking, that the sets that oscillate and do squeal often bring in the distant stations better than those that do not. Of course, as in all things, there are exceptions to this, because there are many excellent sets that bring in the distant stations wonderfully well without squealing. However, such sets are not as yet in the majority.

Out in the country fifty or one hundred miles removed from a broadcast station, conditions naturally differ from those in the large city. Here the first and only consideration is: "Will the set bring in the distant stations well?" Where there are no locals, naturally we must go fishing and there it is that the distance-performing element becomes the most important one. This is particularly the case with farmers and other dwellers in sections of the country removed from broadcast stations. In such cases, the appearance of the set at times will have to be sacrificed in order to get the correct performance.

For this class of the population the 4- and 5-tube sets are standard today. In other still more remote sections of the country, where performance for the distant stations is the greatest necessity, the super-heterodyne 6- and 8-tube sets may be said to predominate, although even here the 4- and 5-tube sets perform well.

From these remarks it will be readily seen how to select a set this year. If a set is put out by a reputable manufacturer, there will be little choice between the different makes. It will be a matter of personal preference, of which set makes the greatest appeal to the various members of the household, of price, etc.

There is a radio set for every taste and every purse, just as there is a car and a phonograph for everyone.

And, finally, I wish to repeat my recommendation of several years' standing, namely: "*The time to buy a radio set is now.*" There is no likelihood of a complete revolution in radio sets for many years to come. The set that was bought last year, the set that was bought this year, and the one that will be bought next year, will perform for many years to come. As a matter of fact, many excellent sets of the ancient vintage of 1923 are still performing well and will continue to do so. It is true that everything improves in time, but that is also the case with everything else. It is the case with automobiles, toothbrushes, or can-openers. All of this, however, does not deter you from buying such articles now and should certainly not deter you from buying a well-made radio set *now*.

RCARC 2026 New Board Member

At the December 2025 RCARC General Membership Meeting the following Members were elected for the 2026 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/Historian	Dennis L. West	W6DLW

Reminder
RCARC 2026
Dues are Due

Hello everyone, Buzz here with a reminder that the club dues are coming due at the end of this month

For information in regards to RCARC dues contact Linda Shokrian (KG7PBX) at (435-867-5914 or fill out and submit the dues form.

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 signs 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.

2026
Winter Field Day

History

In June of 2006, Charles, N5PVL, asked if SPAR (The Society for the Preservation of Amateur Radio) would be interested in sponsoring a Winter Field Day activity. Discussions, proposed rules, and modifications followed, and in September, SPAR's Board of Directors voted to approve sponsoring a Winter Field Day. Next came a flurry of activities to get the word out, and the first Winter Field Day was held just four months later, on January 13-14, 2007. Based on comments from participants, Winter Field Day would soon become an annual event.

Walt (W5ALT) and **Charlie (KY5U)** contributed significantly to the success of SPAR and WFD. However, due to health issues, activity within SPAR slowly declined, and so did their support of WFD.

Because of these health issues and the aging members of SPAR's Board of Directors, there was a delay in scoring and releasing the 2015 WFD results. Members who had participated in WFD over the last nine years were upset, and with no official response from SPAR, rumors spread, and some feared that WFD might fade away. Stepping up to the challenge of keeping WFD alive, a small group of WFD enthusiasts banded together and formed the **Winter Field Day Association (WFDA)**.

In late 2015, the remaining SPAR Board Members handed over the reins and the responsibility of Winter Field Day to the Winter Field Day Association, who scored the 2015 entries, and have been promoting the event ever since.

A WFD committee was formed to oversee the rules and manage the event. Subtle changes to the rules have been made as needed, but the event's purpose has remained the same.

Through the hard work and dedication of **Tom (W8WFD), Bill (VE3FI), Dave (W3DET), Erik (WX4ET), and Ken (N8KC)**, Winter Field Day has continued to grow and thrive. For many who have participated in WFD over the years, it is no longer just an event but an annual tradition. In 2022, the WFDA processed over 2,500 logs from stations around the world, and once again reigns of Winter Field Day were passed to a new board of directors.

RCARC Winter Field Day Information

This year's RCARC's Winter Field Day Operations will be held at the Iron County Emergency Operations Center (EOC) facility at 1302 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 24, 2026 and Winter Field Day will start at 12 pm. and continue for 24 hours until 12 pm. on Sunday January 25, 2026.

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. END

RCARC December Christmas Breakfast Pictures.

On December 6, 2025 approximately 20 RCARC club members came together for a Christmas potluck breakfast at Linda's (KG7PBX's) residence. See pic's below:

Club members in conversation before breakfast being served.

Breakfast is now served.

Breakfast is underway

Bonnie (KI7WEX) in foreground with other members to fill their plates.

Continued next column

Sonja (K6HDH), Tony (KC6WFI) right with Fred (KI7TPD) in the background center and Tammy (KI7LVB) to left.

Brody (K7VXV) and Family in conversation.

Bonnie (KI7WEX) and Russ (N7BO) clowning around for the picture.

Iron County's Community Emergency Response Team (CERT) and RCARC Emergency Communications (EComm) Unit Christmas Party

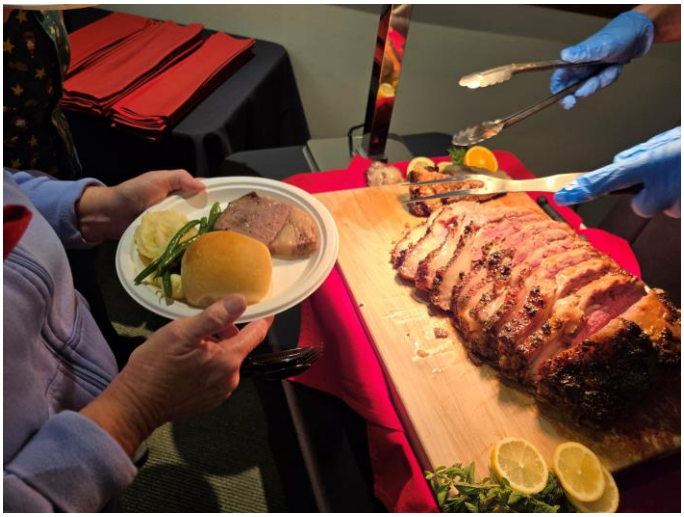
At 6:00 PM on December 11, 2025 RCARC EComm & CERT members gathered at the Cedar City, Heritage Center for the annual Christmas Party get together hosted by (George Colson) Iron County's Office of Emergency Management (OEM). **See pics below.**

George Colson, Iron County Emergency manager welcoming attendees to the Christmas Dinner.

The serving line is Ready

Continued next column

Members making their way through the serving line.



The Prime Rib was over the top.

EComm and CERT Members enjoying dinner and conversation.

Continued on page 20

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
3. **The *preferred* way to pay is via the Hamclubonline web site - *link*: If you haven't been to this site and created an account, see the sidebar to the right.**
    1. **To minimize the fees associated with online payment, we requires that you renew for at least *two years* at a time.**
4. Select "**Purchase**" and select either "**Goods**" or "**Services**". *Please do not select anything under the "Personal" tab.*
5. Hit the "**Continue**" button. This will take you to a new screen.
6. Select your method of payment and hit the "**Send Money**" button
7. ***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.

Answers to Word Scramble on page 6

1.	Kerchunk	6.	Fading
2.	Home Brew	7.	Grounding
3.	Mentor	8.	Mobile
4.	Clipping	9.	Towers
5.	Dipole	10.	Yagi

Continued next column

RCARC December Meeting and Christmas Party Pictures

Fred (KI7TPD) conducting the Pledge of Allegiance.

Fred (KI7TPD conducting meeting business.

George (AL7BX) giving the repeater report.

Continued next column

Brody (K7VXV) and Terry West carving the turkey.

Brody (K7VXV) carving the ham

Brody (KG7VXV) and Terry West getting the 2 Hams and 2 Turkeys ready for serving

Continued on page 15

Antenna Rotators and Their Use

K	O	K	T	O	E	N	Q	K	G	N	X	F	S	S
J	Z	X	T	V	C	D	F	L	V	P	I	R	R	I
A	Y	D	S	J	Z	I	A	O	E	P	T	J	O	G
W	R	F	P	X	T	R	E	R	O	R	O	N	T	N
P	N	R	E	R	R	E	V	T	Q	C	H	O	A	A
O	H	U	R	P	A	C	X	N	T	Z	V	I	T	L
S	T	G	F	S	C	T	S	O	P	B	U	T	O	G
I	U	L	O	F	K	I	A	C	J	H	L	A	R	A
T	M	D	R	G	I	O	O	N	Y	Y	Q	V	E	A
I	I	V	M	A	N	N	J	D	T	N	P	E	C	F
O	Z	L	A	G	G	V	U	N	P	E	Y	L	M	H
N	A	D	N	U	K	D	H	I	K	J	N	E	P	Z
I	A	G	C	Q	Z	C	V	V	K	S	J	N	M	N
N	F	E	E	G	U	D	L	R	N	N	I	B	A	R
G	U	W	T	X	N	R	Y	T	X	P	B	Y	V	G

ROTATORS	ANTENNA	CONTROL	DIRECTION	POSITIONING
ELEVATION	AZIMUTH	TRACKING	PERFORMANCE	SIGNAL

RCARC December Meeting and Christmas Party Pictures

Continued from page 13

Potluck Desserts.

More Potluck Desserts.

Potluck Dip and fruit trays.

Continued next column

Additional Potluck Side dishes.

Potluck Hot Dishes.

Darlene (N7WWB) slicing the Smoked Cheese

Continued on page 19

LINK CONFIRMED BETWEEN RADIO EMISSIONS, AURORAS

The top story this week looks at auroras - something a lot of us have been doing, or trying to do, especially if those brilliant shimmering light shows have been keeping us off the air. Scientists have just made a new discovery about what exactly makes them happen - and curiously, it's radio!

Scientists at the University of Southampton have confirmed what they consider to be an unmistakable cause-and-effect relationship between radio emissions and sudden auroral eruptions.

The international team's findings, called unprecedented by the scientific community, have been published in the journal Nature Communications. The researchers speculate that this will alter the means by which space weather is forecast.

According to published reports, the use of advanced ground-based observatories made it possible for the researchers to detect and identify signature patterns of low-frequency radio wave emissions in the magnetosphere that were immediately succeeded – repeatedly – by auroral explosions.

This discovery provides a missing piece for physicists who, until now, were never certain of the immediate trigger behind the violent energy release that expresses itself as the northern and southern lights. End

Answers to Trivia Questions on page 6

1. **They are both located on the International Space Station.**

2. **DX is often used to indicate a station in a country outside one's own, regardless of "distance"**

INDIAN AMATEURS HELP WOMAN LOST IN BANGLADESH

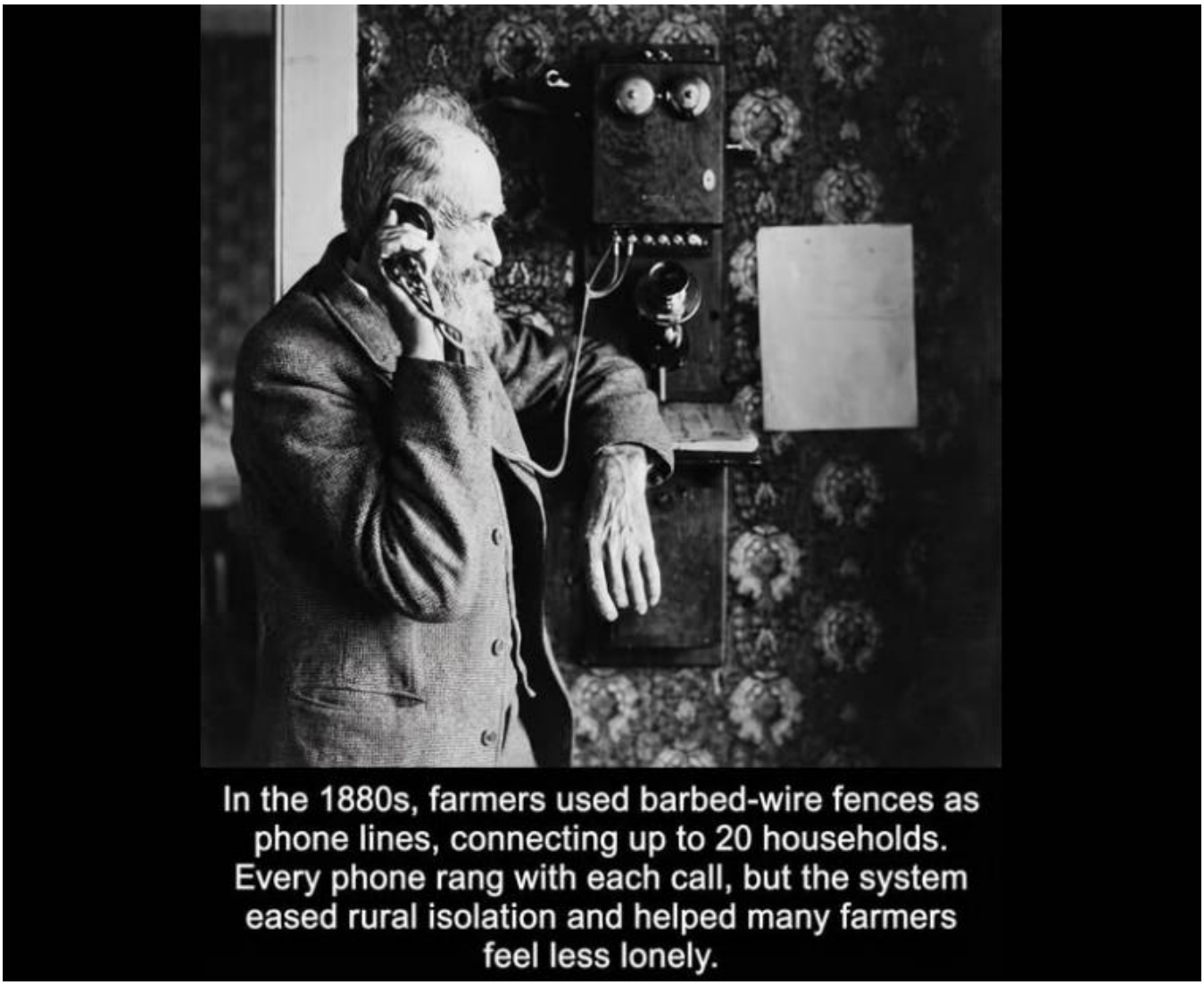
A ham radio club in West Bengal, India, best known for its special skill in helping reunite family members who are lost - sometimes for years - has once again made use of its robust network on behalf of a woman who'd gone missing two decades ago.

An older woman, believed to have been begging on the streets of Bangladesh for survival for years, has reconnected with her family in India through the efforts of the West Bengal Radio Club, an organization with a specialty in missing-persons cases.

The woman's disappearance was traced to a religious pilgrimage she made nearly 20 years ago - an annual gathering near the Ganges River. With the volume of pilgrims at the event, known as the Gangasagar Mela, it is not uncommon for many attendees to get lost or to go missing. According to the club's secretary, Ambarish Nag Biswas, VU2JFA, the woman, who is now about 70 years of age and from a village in India, somehow joined a group of pilgrims from Bangladesh. That is how she is believed to have taken a detour to Bangladesh instead of returning home.

News accounts said that she was soon living on the street, begging. Recently, ham radio contacts in Bangladesh reached out to the West Bengal hams asking them to intervene after they questioned her and she uttered one of the few words she could: "Sagar," the name of the district she came from in India. Using photographs of her and their wide network of contacts, the West Bengal hams finally reached her surviving family members, according to a report in the Australia India News. She has two surviving sons in Delhi. Her husband and one son have since died. Attempts at uniting her with her sons is underway. End

Barbed-Wire Phone Lines



In the late 19th century, many rural communities lacked access to formal telephone infrastructure, which was expensive and slow to reach isolated farms. Resourceful farmers discovered that the metal strands of their barbed-wire fences could conduct electrical signals well enough to function as improvised phone lines. By attaching simple telephone sets to the fences, they created their own local networks at virtually no cost.

These "barbed-wire telephone lines" often formed party lines connecting entire neighborhoods. When someone made a call, every phone on the network rang at once, meaning conversations were rarely private. Still, these homegrown systems allowed families spread across miles of farmland to communicate quickly, share news, and coordinate daily tasks in ways that had never been possible before.

Beyond their practical uses, these networks became an unexpected social lifeline. Isolation was a serious challenge for rural farmers, especially during harsh winters, and the ability to chat with neighbors helped ease loneliness and depression. What began as a clever workaround evolved into an important part of community life proof that technology, even in improvised form, can bring people together.

#farmers #thehistoriansden

HAM RADIO Operator RV'ers/Tenters...

QUARTZFEST* 2026

What? Quartzfest© is an annual HAM Radio RV and tenters Boondocking event which is held in late January every year with dates coinciding with the Quartzsite Arizona "RV Show".

When? January 18th thru 24th of 2026 (make sure you add these important dates to your 2026 calendar)

Where? 7 miles south of Quartzsite Arizona - on US 95 at La Paz Valley Road

Who Can Attend? ANYONE! If you don't have your Amateur Radio Operators License yet, you'll be able to take your Amateur Radio Operators License Exams at Quartzfest©

Cost? $5.00 per person for the entire week

Our Annual Amateur Radio "get together" is called "Quartzfest©" and is open to ALL to attend. Quartzfest© is not a club, no officers and no dues..and only costs $5.00 per person for the entire week of fun!! During the week of Quartzfest©, RV's are everywhere across the desert, as far as you can see..every make and model you can imagine!

There are hundreds of groups that meet in Quartzsite every year in different parts of the desert who share like interests. Our group, Quartzfest©, started out in 1997 as just a few HAM RV'ers getting together, camping in their RV's in the middle of the desert..no power, no running water. Solar Panels and Generators are in use everywhere (Porta-Potties are available for our tent campers and day visitors).

Quartzfest© is similar to a Hamfest but lasts an entire week and is packed full of scheduled Seminars and Activities (no vendors are allowed on BLM land though). Talks range in topics from Genealogy and Crafts for Non-HAM's to Solar Power and Battery Information, Technical information for the seasoned HAM, and introductory information for the new HAM. Also included in the week's activities are Amateur Radio License Testing, Antenna Walkabout (touring other HAM's RV Antenna installations), Solar Walkabout, 4x4 Off Road Trip in the Desert, Prospecting, Campfires (some with musical entertainment), Pot Luck dinner, Hootenanny and lot's more!

We Camp on BLM (Bureau of Land Management) land which is FREE, but you can only camp there for 14 days at a time.

For more information, drop a note to our Quartzfest Organizer*

Kris - KR1SS

kristynweed@gmail.com

or visit us on the web

quartzfest.org

RCARC December Meeting and Christmas Party Pictures

Continued from page 15

Russ (N7BO) saying grace before the meal.

Dinner is being served.

Truly a Bountiful Feast for all.

Continued next column

Club members enjoying their meals.

The room got quit. Members enjoying dinner.

It's Prize Giveaway Time

Sylvia (N7SIY) won the grand Prize. The ICOM 2730 Dual Band Mobile Radio.

Continued on page 22

Ham Radio Equipment for Sale

For further information on the items listed below contact Anthony Karbowksi (KC6WFI) at 760-881-6618 or email him at pba001@yahoo.com to make an offer.

Item	Price ranges on eBay and other sales websites	
Kenwood HF Transceiver TS 520S Tube	$200.00	$1,300.00
Astron RS 35M Power Supply	$120.00	$450.00
Kenwood UHF FM Transceiver TK 840 with Power Supply	$25.00	$105.00
Kenwood 2 Meter FM Transceiver TR7730		
Kenwood 2 Meter FM Transceiver TM733A	$173.00	$330.00
Textronixs 100 MHz Oscilloscope 2235	$130.00	$295.00
MFJ 949C Deluxe Versa Tuner 2	$100.00	
MFJ 16010ST Antenna Tuner	$40.00	$75.00
Radio Shack SWR Meter		
Spider Paddle Key	$150.00	$700.00
MFJ 945E Mobile Tuner	$115.00	$175.00
Workman 2 Meter /440 SWR Watt Meter	$80.00	$120.00
KLH Speaker		
Equipment from Roger Simister KC7UT		

Iron County's Community Emergency Response Team (CERT) and RCARC Emergency Communications (EComm) Unit Christmas Party

Continued from page 11

Additional members enjoying dinner.

The rest of the gang enjoying their meals.

The catering crew

Continued on page 21

RCARC December Meeting and Christmas Party Pictures

Continued from page 19

Kevin (K2MKF) won the Jpole Antenna.

Brant (KJ7LTQ) won the Wolf River Coil Whips for tunning.

Darlene (N7WWB) picked up the stocking full of goodies for Lee (K7NKH) who was not present.

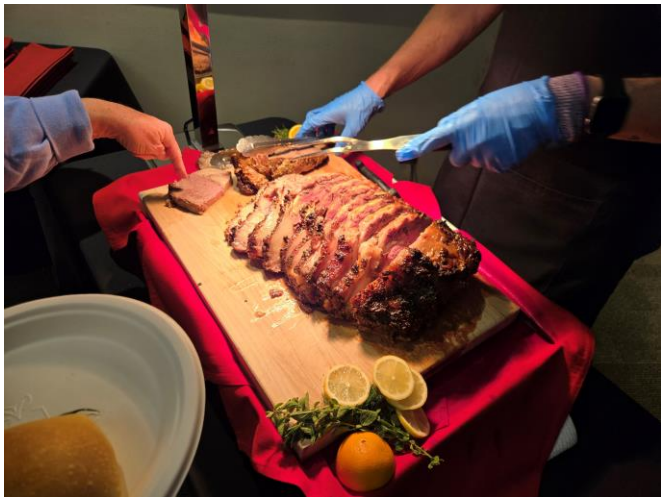
See more winner pictures on page 23

Iron County's Community Emergency Response Team (CERT) and RCARC Emergency Communications (EComm) Unit Christmas Party

Continued from page 20

Salad and Rolls

Potatoes and Vegetables



Prime Rib Station

US Amateur Radio Bands

Operator license classes: **E** = Amateur Extra **A** = Advanced **G** = General **T** = Technician **N** = Novice
CW operation is permitted throughout all amateur bands. Except as noted, all frequencies are in megahertz (MHz).
= RTTY, data, phone, image = USB phone, RTTY, data and CW = RTTY and data = phone and image
= SSB phone = CW only

LF – Low Frequency band

2200 Meters (135 kHz) E,A,G
1 W EIRP maximum

136.7 kHz — 137.8 kHz

MF – Medium Frequency bands

630 Meters (472 kHz) E,A,G
5 W EIRP max, except in Alaska within 496 miles of Russia where the limit is **1 W EIRP**

472 kHz — 479 kHz

160 Meters (1.8 MHz) E,A,G

1.800 — 1.900 — 2.000 MHz

Amateurs wishing to operate on **2200 or 630 meters** must first register with the Utilities Technology Council online at **https://utc.org/plc-database-amateur-notification-process/**. You need only register once for each band.

HF – High Frequency bands

80 Meters (3.5 MHz) E,A,G,T,N

3.500 3.600 3.700 4.000

E
A
G

N,T (200 W)

3.525 3.600 3.800 4.000

60 Meters (5.3 MHz) E, A, G (100 W)

CW, Digital

5.332 5.348 5.3585 5.373 5.405

2.8 kHz

5.3305 5.3465 5.3570 5.3715 5.4035

USB

General, Advanced, and Extra licensees may operate on a secondary basis with a maximum ERP of 100 W (relative to a half-wave dipole antenna).

40 Meters (7 MHz) E,A,G,T,N

7.000 7.075 7.100 7.300

ITU 1,3, & stations in 2 that are west of 130° west or below 20° north

E
A
G

N,T 200 W

7.025 7.125 7.175 7.300

N,T outside Region 2

30 Meters (10.1 MHz) E,A,G

10.100 10.150

200 Watts Maximum

20 Meters (14 MHz) E,A,G

14.000 14.150 14.350

E
A
G

14.025 14.150 14.175 14.225

17 Meters (18 MHz) E,A,G

18.068 18.110 18.168

15 Meters (21 MHz) E,A,G,T,N

21.000 21.200 21.450

E
A
G

N,T (200 W)

21.025 21.200 21.225 21.275

12 Meters (24 MHz) E,A,G

24.890 24.930 24.990

10 Meters (28 MHz) E,A,G,T,N

28.000 28.300 29.700

E, A, G

N,T (200 W)

28.000 28.500

VHF – Very High Frequency bands

6 Meters (50 MHz) E,A,G,T

50.1

50.0 54.0

2 Meters (144 MHz) E,A,G,T

144.1

144.0 148.0

1.25 Meters (222 MHz) E,A,G,T,N

E, A, G, T
N (25 W)

222.0 225.0

UHF – Ultra High Frequency bands

70 cm (420 MHz) E,A,G,T

420.0 450.0

33 cm (902 MHz) E,A,G,T

902.0 928.0

23 cm (1240 MHz) E,A,G,T,N

1240 1300

E, A, G, T
N (5 W)

1270 1295

SHF&EHF – Super and Extremely High Frequency bands

All licensees except Novices are authorized all modes on the following frequencies:

2300-2310 MHz	3400-3450 MHz	10.0-10.5 GHz	47.0-47.2 GHz	122.25-123.0 GHz	241-250 GHz
2390-2450 MHz	5650-5925 MHz	24.0-24.25 GHz	76.0-81.0 GHz	134-141 GHz	All above 275 GHz

See www.arrl.org/band-plan for detailed band plans.

OTAbands **rev. 07/25/2024**

RCARC December Meeting and Christmas Party Pictures

More Prize Drawing Winners

Continued from page 22

Creation of FM Radio

November 5, 1935 — New York City.
Edwin Howard Armstrong stood before the Institute of Radio Engineers with a paper titled “A Method of Reducing Disturbances in Radio Signaling by a System of Frequency Modulation.”
Then he switched on his invention—and the room froze.
Not because the radio failed, but because, for the first time, it was silent. No hiss, no crackle, no distortion—just clear, unbroken sound. A voice came through the speakers as if the speaker were standing beside them. Music flowed, clean and whole. Armstrong had created FM radio, and in that instant, he made every AM transmitter in America obsolete.
It should have been his triumph. Instead, it marked the beginning of his undoing.
Armstrong wasn’t an unknown tinkerer. He’d already transformed radio twice over: first with the regenerative circuit in 1912, which made receivers practical; then with the superheterodyne receiver in 1918, still the backbone of broadcasting today. He was a giant. And giants, he would learn, threaten empires.
RCA, led by David Sarnoff, had poured fortunes into AM infrastructure—patents, towers, transmitters, entire networks. FM wasn’t a simple upgrade; it was a revolution that made their investments worthless. And revolutions aren’t welcomed by monopolies.

Armstrong’s FM network blossomed briefly in the 1940s, broadcasting on frequencies between 42 and 50 MHz. The sound was flawless. Stations spread across the country. The future he’d imagined was taking shape. Then, in 1945, after years of corporate pressure, the FCC quietly redrew the dial. FM would move to 88–108 MHz. Officially, it was a technical reallocation. In practice, it was a kill shot. Every FM radio, every transmitter, every dollar invested—instantly obsolete. The new rules limited FM’s power while RCA pivoted to television, branding FM as yesterday’s news before it ever truly began.
What followed was attrition by litigation. Years of lawsuits drained Armstrong’s fortune and his strength. His health faltered; his marriage fractured. The man who had given the world clear sound was left surrounded by static—legal, financial, emotional.
On January 31, 1954, Edwin Armstrong dressed carefully in his overcoat, hat, and gloves. He left a note for his wife, Marion, and stepped through the window of his 13th-floor Manhattan apartment. He was 63.

Marion later said RCA hadn’t just taken his inventions—they’d taken his life.
But they couldn’t take his creation. FM endured, not because corporations willed it, but because it was better. Today, nearly every station broadcasts in FM. Every time a song plays without a hiss, every time a voice reaches you clearly from across the airwaves—you’re hearing Armstrong’s legacy.
He died believing he’d failed. But every clear note on the radio proves he hadn’t. In a world of noise, Edwin Howard Armstrong gave us clarity—and even those who tried to silence him couldn’t erase his signal.
#fblifestyle #history #neverforget

REPORT: COOLING IONOSPHERE COULD DISRUPT, RESHAPE RADIO COMMUNICATION

Our top story takes us to Japan, where researchers studying the ionosphere have discovered that the cooling of temperatures up there may cause major shifts in our ability to communicate by radio.

The continued cooling of the ionosphere 100 km above sea level may someday disrupt and reshape shortwave communications, according to scientists at Kyushu University in Japan. The drop in ionospheric temperatures is the result of rising CO2 levels - the same phenomenon identified as the source of global warming down here on Earth.

The researchers' study, published in Geophysical Research Letters, found that the cooling ionosphere lowers the air density and speeds up wind circulation - two factors that have an impact on satellite orbits and space debris. In addition, the ability to communicate by radio also changes as a result of small-scale plasma irregularities. Shortwave radio, radio broadcasting, air traffic control and maritime communication could all experience a variety of major changes, the scientists said.

The study leader, Huixin Liu of Kyushu's Faculty of Science, told the Physics World website: This may be good news for ham radio amateurs, as you will likely receive more signals from faraway countries more often. For radio communications, however, especially at HF and VHF frequencies employed for aviation, ships and rescue operations, it means more noise and frequent disruption in communication and hence safety.

She said that in the long term, the telecommunications industry may need to respond to these changes by either adjusting their frequencies or changing the design of their equipment. End

ISS EXPEDITION 73 CREW RETURNS TO EARTH

ISS Expedition 73 has ended with the return to Earth of a NASA astronaut and two Roscosmos cosmonauts.

Roscosmos cosmonauts Sergey Ryzhikov and Alexey Zubritsky returned to Earth with US astronaut Jonny Kim, KJ5HKP, after 245 days in space aboard the International Space Station.

Their landing in Kazahstan via Soyuz MS-27 on the 9th of December, ended Kim's tenure, which included both Expedition 72 and 73. It was the first trip to the space station for both Kim and Zubritsky. Kim received his amateur radio operator's license in July of 2024.

While in space, Kim accomplished a number of important milestones, including participation in the 2025 ARRL Field Day in the US with fellow astronaut Nichole Ayers KJ5GWI.

He was also part of the space station's first transmission since 2018 of Ham TV since its repairs and return to service. That took place in October with a Scout group in the UK.

Did you Know

RCARC has a club event calendar.

How to access:

1. Open up URL rcarc.info.
2. Select club info.
3. Select calendar.
4. Move cursor over the item you want information on to highlight it.
5. Left click and more detailed information if available will display on the screen.

A Little Ham Humor

A ham is sitting at his desk answering a letter from his insurance company...

"I am writing in response to your request for additional information for block 3 of the accident reporting form. You said in your letter that I should explain more fully, and I trust that the following details will be sufficient.

I am an Amateur Radio Operator and on the day of the accident I was working alone on the top section of my new 80-foot antenna tower. When I had completed my work, I discovered that I had over the course of several trips up the tower, brought up about 300 pounds of tools and spare hardware. Rather than carry the now unneeded tools and materials down by hand, I decided to lower the items down in a small barrel by using a pulley which was attached to the gin-pole at the top of the tower.

Securing the rope at ground level, I went to the top of the tower and loaded the tools and material into the barrel. Then I went back to the ground and untied the rope, holding it tightly to insure a slow descent of the 300 pounds of tools, (you will note that in block 11 of the report form that I weigh about 155 pounds).

Due to my surprise at being jerked off the ground so suddenly, I lost my presence of mind and forgot to let go of the rope. Needless to say, I proceeded up the side of the tower at a rather rapid rate. In the vicinity of the 40-foot level, I met the barrel coming down. This explains my fractured skull and broken collarbone. Slowed only slightly, I continued my ascent up the side of the tower, not stopping until the fingers of my right hand were two knuckles deep into the pulley.

Luckily, by this time I had regained my presence of mind and was able to hold onto the rope in spite of the intense pain. At the same time however, the barrel of tools hit the ground and the bottom fell out of the barrel. Lacking the weight of the tools, the barrel now weighed only about 20 pounds. Once again, I'll refer to my weight as given in block 11. As you can imagine, I began a rapid descent down the side of the tower. In the vicinity of the 40-foot level I met the barrel coming up. Well, this accounts for the two fractured ankles, the lacerations of my legs and the unmentionable injury to my groin area.

The encounter with the barrel slowed me enough to lessen my injuries when I fell into the pile of tools, and I was fortunate to have only 3 vertebrae cracked. I am sorry to report however, that as I lay there on the tools, in pain, unable to stand and not observing the barrel 80 feet above me, I again lost my presence of mind-- I let go of the rope." End

Graffiti at Iron Mountain Repeater Site

In late November or early December there was Graffiti painted on the Iron Mountain Repeater building.

Looks like a paint project next spring.