

RAINBOW CANYONS AMATEUR RADIO CLUB NEWSLETTER CEDAR CITY, UTAH



Club Website: www.rcarc.info Number 6 – Vol. 8 August 2024

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.

2024 Club Officer's

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CQ, CQ, Summertime is here.



Presidents Message

Dear Fellow Amateur Radio Operators,

I hope everyone has had a great summer so far. It has been a hot dry summer, but we did have a good start to the month with the HamComm: Zion in St. George. It was good to see so many RCARC members participating in the classes. I hope everyone who attended learned a lot that can then be passed on to other members. I had a great time at the Fox Hunt talk and have some great ideas for a hunt this year (we will have the equipment at the BBQ, so try it out!). With all of the recent fires and earthquakes it is a good time to check through your equipment and see what you can do in the case of an emergency. This could be in the form of a fire, flooding or earthquake. Think about building your own radio box if you have not done so already, make sure you have backup batteries or a generator in case the power goes out and you need power. Once you have your equipment try it out.

Continued on Page 2

RCARC Club Nets:

7:00 a.m. Breakfast Net - Monday – Saturday – 146.760.
12:30 p.m. Daily – Utah Beehive Net On 7.272.
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- This is a Zoom Meeting.
8:30 p.m. Thursday's - WDN Digital Net. Using FLDIGI, FLMSG AND FLAMP – 3.581 +, 1500/MFSK32.
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.
8:00 pm. Sunday's – New Harmony Valley Net – Bumblebee Repeater. – 146.680 with a minus offset – PL 100.

Local Repeaters:

Iron Mountain

146.760 MHz – Tone 123.0 Hz
146.980 MHz – Tone 100.0 Hz
448.800 MHz – Tone 100.0 Hz
449.500 MHz – Tone 100.0 Hz
448.400 MHz -- Tone 100.0/FM & DMR

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

Bumblebee/New Harmony:

146.680 MHz – Tone 100.0 Hz

Rowberry:

449.925 MHz – Tone 100.0 VHF Remote

Dutton:

147.160 MHz + Tone 100.0 Hz.

Save The Date

August 13, 2024

RCARC Club Meeting.

Christ the King Catholic Church. 690 Cove Drive in the Pavilion. **BBQ. Presentation: Mobile Radio Installation Techniques. Foxhunt and more.**

September 10, 2024

RCARC Club Meeting.

7:00 pm. Cedar City Senior Center, 489 E. 200 South. **Ken Munford (K7KM) will give a presentation on antennas.**

October 8, 2024

RCARC Club Meeting.

7:00 pm. Cedar City Senior Center, 489 E. 200 South. **More info to follow**

November 12, 2024

RCARC Club Meeting.

7:00 pm. Cedar City Senior Center, 489 E. 200 South. **More info to follow**

President's Message **Continued from page 1.**

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! Remember you can always pick up the mic and see who is listening! 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! In September we will have a presentation from Ken (N7KM) on antenna design. We will have our Club BBQ and Potluck August 13th at 6:00 PM in the Christ the King Catholic Church, 690 Cove Dr. (same location as our Swap Meet). I will bring out some fox hunting gear for those who are interested and we will have a show and tell for installing mobile rigs. Hope to see you soon!

Fred (KI7TPD)

Congratulations To

JJ Baca

Who passed his Technician Class Exam on July 17, 2024.

His Call Sign is

KK7OUO

If you hear him, please say high and welcome him to the greatest hobby ever.

RCARC Monthly Breakfast

Please come 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 August

Wild Fires - Check out this URL for Utah Wild Fire Information <https://utahfireinfo.gov/>

See (InciWeb) additional Fire Information Website on Page 20

Breakfast Net		Friendship Net		
First Place	Second Place	First Place	W0KLH - Kevin	
K2MFK - Kevin	KI7SCX - John	K7HDX - Ron	W6DLW - Dennis	
K7ZI - Dick	N7SYI - Sylvia	N7WWB - Darlene	W9YNK - Benjamin	
KE6ZIM - Johnny	Third Place	K7NKH - Lee	Second Place	
KG7PBX - Linda	K7ZZQ - Johnny	K7ZI - Dick	KI7LUM - Bruce	
KI7TPD - Fred	KE8OYI - Caleb	KA7J - Lance	N7SYI - Sylvia	
KI7WEX - Bonnie	KK6FLO - Dave	KE8OYI - Caleb	Third Place	
W0KLH - Kevin		KI7LVC - Tim	WA7GVL - Paul	
		KI7TPD - Fred		
		KI7WEX - Bonnie		

**Rainbow Canyons Amateur Radio Club
Treasurer Report July 9, 2024**

Bank balance June 1, 2024 (reconciled)	\$2,495.25
June membership KI7ZAD, K6COF, KJ7ZNT, KJ7ZNY KD7RNO, KD6ZJR, KG6TGC	+ 90.00
Donation - Equip	+ 613.00
June Expenses Rocky mountain Power (98 repeater elec exp)	- 18.84
Bank Balance July 1, 2024 (Reconciled)	\$3,179.41
Outstanding Check # 133 Field day Exp	- 156.34
July Expenses Rocky Mountain Power (due 7/16/2024)	- 20.91
Funds Available afer 7/16/2024	<u>\$3,002.16</u>

Submitted by
Linda Shokrian KG7PBX
2023 RCARC Treasurer
435-867-5914

RCARC Upcoming Events

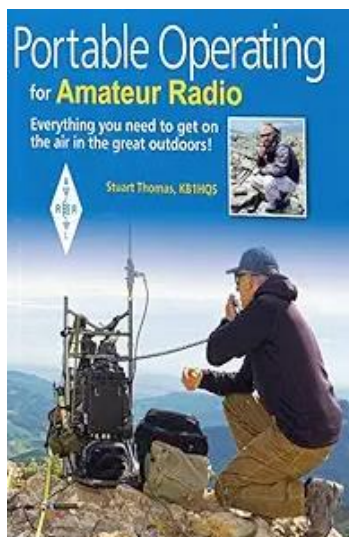
- **August 3, 2024** - Monthly Club Breakfast. Golden Corral Buffet & Grill (in the back room), 1379 S. Main Street, Cedar City.
- **August 13 2024** – Annual Barbecue Meeting at Christ the King Catholic Church at 690 Cove Drive, Cedar City. In Pavilion to rear of church. 6:00 PM. Presentation: Basic Mobile Radio Installation.
- **September 7, 2024** Cedar City Marathon. More information forthcoming. See story on page 17.
- **September 10, 2024** General Membership Meeting. Cedar City Senior Center 489 E. 200 S., Northside of building lower level. At 7:00 pm.

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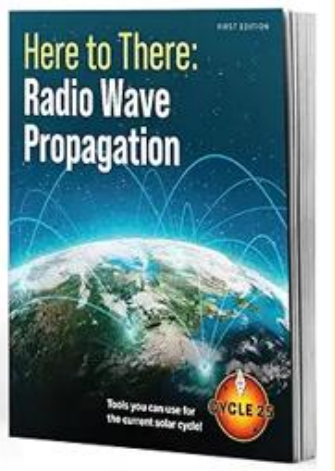
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RCARC Book Giveaway. Books are donated by Linda Shokrian (KG7PBX)

Shown below is the book that will be given away at the August 13, 2024 meeting.



The Book below was given away to Terry West at the July 9, 2024 meeting



Congratulations Terry West

See pic on page 19

Contact Us.

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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

RCARC Annual BBQ

When: Tuesday August 13, 2024.

Where: Christ the King Catholic Church Pavilion. 690 S. Cove Drive. Just S. of the Temple.
(See Flyer on page 18).

Time: 6:00 pm to 8:00 pm.





Buzz's August Safety Tip(s)



Safety in the Shack

There are two safety considerations to bear in mind when setting up a radio shack – electrical safety and RF safety.

You will no doubt be using radio equipment that is mains powered, and you will probably use 12 V supplies that can supply up to 25 A or more. Mains electricity can kill you and that innocuous looking power supply could easily cause a fire if a short circuit occurs and you don't have adequate safety precautions, such as a fuse.

Also, you will be producing radio frequency (RF) energy, which should be treated with respect.

Let's deal with each of these in turn.

Electrical safety

Firstly, every family member in your house should know how to turn the power off in your station. In the event of an emergency, and where you are still in contact with an electrically-live appliance, it could make the difference between life and death.

The wiring for your shack should ideally be controlled by one master switch and everyone in the house should know where it is. A fire extinguisher, suitable for use on electrical fires, is also a good investment.

Continued next column

All wires carrying power around your station should be of the proper size and quality for the job. Also, all equipment should be connected to a good earth.

When working on equipment you should, if possible, ensure that it is switched off and unplugged. Any capacitors should be discharged as they can store charge for a considerable time.

If you must work on live equipment only do so if you know what you are doing. Also, keep one hand in your pocket at all times and all metal jewelry should also be removed. Avoid bodily contact with any earthed object to prevent you becoming the return path for any voltage source to ground.

If possible do not work on equipment when alone and always make sure that you have the correct tools for the job.

RF Safety

Radio Amateurs should be concerned about two aspects of RF safety when planning a station and its associated antennas.

Physical contact with antennas and parts of the station, which may be RF 'hot' and where there is a risk of RF burn or electric shock, must be a primary consideration.

This might include feeders to the antennas, or ungrounded metallic objects within the station or nearby.

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RCARC July Breakfast Pictures



Brant (KJ7LTQ) and Maddie (KK7FLL) in foreground.



Bonnie (KI7WEX) in foreground right. Tammy (KI7LVB) back right.



Dick (K7ZI), Susan and Bruce (KI7LUM) with back to the camera.



Linda (KG7PBX) rear left and Tammy (KI7LVC) with Tim (KI7LVC) far right.



George (AL7BX), Linda (KG7PBX) and Sylvia (N7SIY) facing the window.



Maddie (KK7FLL), Brant (KI7LTQ) and Larry (N7SND) in rear.

Continued next column



RADIO NEWS

H. GERNSBACK, Editor and Publisher
ROBERT E. LACAULT, Associate Editor

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AUGUST, 1924

No. 2

The Solodyne Principle

By HUGO GERNSBACK

IN radio, as in most of the other arts, efficiency brought about by constant simplification is usually the key-note of our endeavors. Always in quest of simplified radio, RADIO NEWS this month takes pleasure in presenting to its readers the *Solodyne* principle. The word *Solodyne* (*Solo* meaning single and *Dyne* meaning power) translated means *Single-power*. The present day radio receiving outfit uses two sources of power namely the "A" battery for the heating of the filament, and the "B" battery for the high tension current supply.

The *Solodyne* principle does away *entirely* with the "B" battery and all high tension current. The only source of power under this epoch-making system is the "A" battery, which is now made to do double duty.

It should be understood from the start that the *Solodyne* principle does not represent any one circuit. In a short time we will see hundreds and thousands of *Solodyne* circuits. The word *Solodyne*, therefore, means simply a "B"-batteryless high-tensionless radio circuit. It implies the same meaning as the phrase *Super-Heterodyne* principle or the *Neutrodyne* principle, which do not represent any one circuit. As is well known of the two latter, several circuits of each system are in use.

The *Solodyne* principle, known in England under the term of *Unidyne*, was brought to the attention of the public by Messrs. G. V. Dowding and K. D. Rogers, Editors of a well known English radio publication. These experimenters have achieved remarkable results with the new system, which is fully described in this issue. The key-note of all *Solodyne* circuits lies in the two-grid vacuum tube. It is the same old vacuum tube with the addition of an extra grid. It is this extra grid which makes for greater efficiency in the *Solodyne* circuits.

Here we must diverge from the subject and state that the *Solodyne* principle is by no means new. As a matter of fact, RADIO NEWS published such a circuit about five years ago. Two-grid tubes have also been known since 1918 and perhaps before. There have been many patents or such circuits, but the honors nevertheless go to Messrs. Dowding and Rogers for the simple reason that they were the first to forcibly bring the system to the attention of the public at large, with a receiving set which can actually be worked, using only an "A" battery, suppressing the "B" battery entirely. These remarks are made solely for the reason that these English experimenters have already been criticized vigorously by the English radio press for exploiting old and well-known principles. RADIO NEWS is well aware of the fact that the same criticism will be directed to its policy in thus bringing before the American public the *Solodyne* principle, which the Editors frankly admit is by no means a novelty.

When Marconi first came out with his Wireless it was heralded as one of the greatest inventions the world had ever seen. Nevertheless Marconi did not invent wireless itself. The principles were well known and had been known

to every scientist since Heinrich Hertz, the real inventor, first published his researches. But the chief trouble with great inventors is that they are not practical. Heinrich Hertz did nothing with his discovery and did not dream that it could be used to send intelligence over great distances without wires. That honor belongs to Marconi who took the well known principle and made it practical.

Exactly so with the *Solodyne* principle, which in reality is old, but now for the first time is put to practical use.

And here we wish to sound another note of warning. The practical applications of the *Solodyne* principle are as yet new. In presenting the articles in this month's issue of RADIO NEWS to our readers, it should be thoroughly understood that the circuits shown here are of an experimental nature. They are by no means finished products, although a number of manufacturers who have witnessed performances of the circuits have been sufficiently impressed and plan the immediate building of sets.

Our advice to experimenters is to try out the circuits and see just what they will do. One of the important points to remember in the *Solodyne* circuit is that everything must be in perfect condition and adjustment. There is not much energy to lose, and only the best of apparatus will bring in results. Low-loss condensers and coils will give results. Then, too, we have the two-grid vacuum tube, which is the most important of all. These tubes have been manufactured for a number of years in Europe. In America we are behind in the production of them, but it is hoped that tube manufacturers will see their opportunity and turn out a worthwhile product, because the *Solodyne* circuit stands or falls by the two-grid tube. While it is true that it is possible to get good results with *Solodyne* circuits using ordinary tubes, as disclosed in an article in this issue, it is our opinion that a two-grid tube will give better results.

As for performance, it should be well understood that nothing extraordinary is claimed for the new circuits. It should be understood that a good one-bulb *Solodyne* circuit will not give vastly superior results to the ordinary single circuit regenerative receiver, BUT the advantages of the *Solodyne* circuits are that the "B" battery noises are done away with entirely; consequently DX signals will come in better and clearer, although not louder. The quality of the received speech and music seems to be much better as reproduced by the *Solodyne* circuits, than with circuits using "B" batteries. Then, of course, the suppression of the "B" battery is a real advantage. Wiring and connections are vastly simplified, and most important in the *Solodyne* circuits, it becomes an absolute impossibility to blow out vacuum tubes by wrong connections. It is well known that over 80 per cent. of the tubes are blown out, while only about 20 per cent. burn or wear out naturally.

We are confident that during the next few years the *Solodyne* principle will be adopted in the majority of radio receiving sets. RADIO NEWS will bring from month to month new *Solodyne* circuits and full discussion of them.

Safety in the Shack

Continued from page 5

Always arrange your antennas and feedlines so that they cannot be touched. This may mean re-routing them or putting them out of harm's reach.

The second aspect is safety near the antennas in the so-called "near field".

This is the region where the distance from a radiating antenna is less than the wavelength of the radiated energy.

This implies that on the lower HF bands, say on 160 meters (Top Band), the near field could extend a considerable distance from the antenna.

However, in practice such an antenna would also be physically large, and would result in the incident power being widely distributed over a large area. For resonant dipoles there is a significant magnetic field near the feed, and a high E field near the antenna tips – both of these need to be considered as a safety consideration.

Every radio amateur should always ensure that persons in or near the station are not within the near-field safety zone recommendation of the antenna when transmitting.

But what is that zone? This is complex and you need to read the document "RF Safety and the Radio Amateur" mentioned above.

If you read nothing else, there is a rough rule of thumb.

For example, if you use a dipole, and 400 Watts, take the frequency in MHz, and use that spacing in feet (ft).

Continued next column

That is, on 14 MHz a spacing of 14 ft is required as a safety distance. Or ... If you use a beam with a gain of 9dB, and a transmit power of 100W, take the frequency in MHz, and use that spacing.

As you can see the higher you go in frequency the further you must keep away from transmitting antennas. END



ARRL Audio News

Listen to [ARRL Audio News](#), available every Friday. ARRL Audio News is a summary of the week's top news stories in the world of amateur radio and ARRL, along with interviews and other features. The On the Air podcast and ARRL Audio News are available on Blubrry, iTunes, and Apple Podcasts. [On the Air | ARRL Audio News](#).

A Play on Words

They say REVENGE is best served cold.

They also say REVENGE is sweet.

So basically.....

REVENGE is:

ICE CREAM



2024 ARRL Rocky Mountain Division Convention

Nestled against the striking backdrop of Utah's red rock landscapes, the July 12/13, 2024 ARRL Rocky Mountain Division Convention served as a vibrant hub for radio enthusiasts from all walks of life. It was a unique opportunity to connect with fellow enthusiasts, learn from experts in the field, and explore the latest advancements in amateur radio technology and practices.

The event boasted an array of captivating workshops, thought-provoking presentations, hands-on demonstrations, and networking opportunities that possibly helped those in attendance broaden their skills, knowledge, and forge meaningful connections within the amateur radio community. The ARRL Rocky Mountain Division Convention 2024 provided an exciting weekend of discovery and growth.

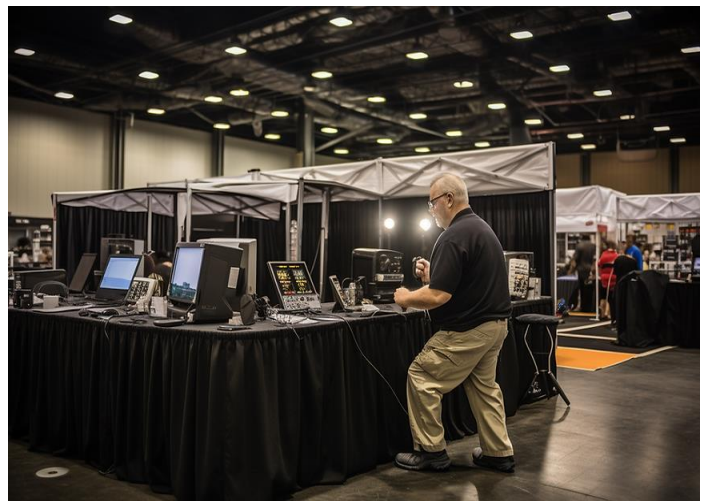
See Pic's Below:



Bucky Buckwalter (W0SUN) presenting Digital Communications. Fusion, DMR, DSTAR and other.



Gordon West (WB6NOA) and Dennis (W6DLW) Gordon presented a class on Tropospheric Ducting.



One of the Vendor booths in the vendor area.



Attendees checking out the plentiful amount of Swap meet gear.

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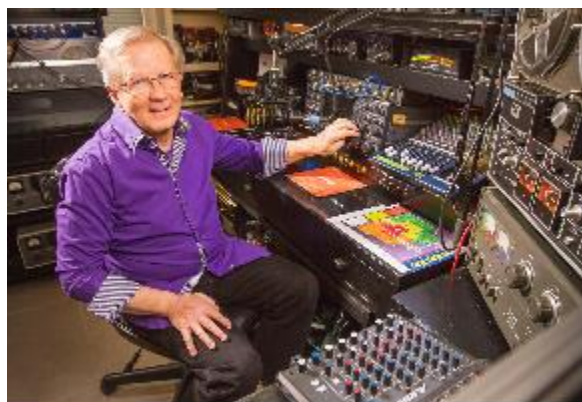
YOTA Camp Ham Shack Renamed for Bob Heil, K9EID, (SK)



The Youth on the Air (YOTA) Camp “ham shack” has been renamed the Bob Heil, K9EID, Memorial YOTA Camp Amateur Radio Shack.

Heil, 83, passed away on February 28, 2024. He was considered the man who defined the sound of live rock ‘n roll music and brought audio engineering principles into mainstream amateur radio use. He founded Heil Sound in 1966, through which he created the template for modern concert sound systems for musicians like the Grateful Dead, The Who, Joe Walsh, and Peter Frampton.

Heil was also known as a mentor and generous donor to amateur radio organizations who enjoyed helping others find success in ham radio and supported Youth on the Air from the very beginning.



Bob Heil, K9EID, SK. [Photo courtesy Heil Ham Radio]

Camp Director Neil Rapp, WB9VPG, said that when the camp first started, he asked Heil for some equipment. “Bob sent us the radios we needed right away,” said Rapp. “And when I asked for some additional radios with noise cancelling capability Heil responded ‘...have I ever told you no before?’ and sent six more noise cancelling radios.”

Rapp said he got the idea to rename the shack at the Dayton Hamvention® but left the final decision up to the YOTA kids. “It didn’t take long, and there was never any question, that it was the right thing to do,” Rapp added.

The 2024 Youth on the Air summer camp in the Americas will be held July 7 – 12 at Mount Saint Vincent University in Halifax, Nova Scotia, Canada. The first activation of the VE1YOTA callsign from the camp will begin the evening of Sunday, July 7 and concludes on Friday, July 12. Campers will operate the Heil memorial station as they finish projects, between sessions, and during free time.

In addition, campers will have the opportunity to operate the following dedicated times: Sunday, July 7 0000Z to 0200Z and from 2100Z to 0200Z on Monday, July 8; Wednesday, July 10 and Thursday, July 11.

The 2024 YOTA Americas Camp is hosted by Radio Amateurs of/du Canada.

Special QSL cards will be available for contacts made with YOTA camp from the Bob Heil, K9EID Memorial YOTA Camp Amateur Radio Shack. End

Continued next column

Amateur Extra Class Question Pool

The New Amateur Extra Class Question Pool has been released and is effective as of July 1, 2024. The new question pool is in effect through June 30, 2028.

The 2024 - 2028 pool is available as a Microsoft Word® document and as a PDF. The 10 graphics required for the new Extra-class question pool are available within the documents or separately in PDF and JPG file formats.

“The new pool incorporates significant changes compared to the 2020 - 2024 version,” said ARRL Volunteer Examiner Coordinator (VEC) Manager Maria Somma, AB1FM, and member of the National Conference of Volunteer Examiner Coordinator (NCVEC) Question Pool Committee (QPC). “We carefully went over the pool for technical accuracy, relevance to today’s amateur radio practices, syntax, grammar, style, format, and clarity and redundancy within and between the pools. With these goals in mind, 82 new questions were created, and 101 questions were eliminated, resulting in a reduction of the total number of questions from 622 to 603. Over 350 questions were modified. We considered a question modified when the knowledge being tested was not changed but wording was improved, or answers or distractors were replaced.”

Somma advised that the newly revised pool must be used for Extra-class license exams starting July 1, 2024. Exam designs based on the previous pool are no longer valid. Outdated versions of the Extra exams should be destroyed or thrown away to avoid a mix-up at the testing session.

ARRL VEC had planned to supply its officially appointed, field-stocked VE team leaders with the new Extra-class [exam booklet designs](#) around mid-June. But due to ARRL’s recent system disruption, that date is now to be determined. Supplies will be sent as soon as possible. In the interim, VE teams may contact the [ARRL VEC](#) to receive instructions on how to print new Extra exams.

RCARC July Membership Meeting Pictures



Members conversing before the meeting gets underway.



A meeting of the minds. No, really it says so right here.



Sylvia (N7SYI) and Ann (KJ7OGZ) waiting for the meeting to start.

Continued next column



Meeting called to order and Fred (KI7TPD) conducting the Pledge of Allegiance.



Fred (KI7TPD) conducting meeting business.



Fred (KI7TPD) updating attendees on upcoming events.

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The Gangs all here. L to R Terry West, Dennis (W6DLW), Gordon West (WB6NOA) outside his booth in the vendor area, Linda (KG7PBX), George (AL7BX), Fred (KI7TPD) and Bonnie (KI7WEX).



Having lunch at Black Bear Diner. L to R, Dennis (W6DLW), Terry West, Bucky Buckwalter (W0SUN), Fred (KI7TPD) Wesley Buckwalter (KF7CBU) and Bonnie (KI7WEX).

RCARC club member attendee's not making the picture scene were Paul (WA7GVL), Brody (K7VXV), Lee (K7NKH), Austin (W1EPR), Kevin (K2MFK) and Dave (KK6FLO).
End

Amateur Radio Participates in World's Largest Naval Exercise

07/21/2024

"Partners: Integrated and Prepared" is the theme for [Rim of the Pacific \(RIMPAC\) 2024](#), the world's largest international military maritime exercise, which began June 27, and will come to a close on August 1. Conducted from Joint Base Pearl Harbor – Hickam, Oahu, Hawaii, the exercise encompasses many islands in the Hawaiian chain.

The event included 29 nations, 40 surface ships, three submarines, 14 national land forces, over 150 aircraft, and more than 25,000 personnel, including amateur radio operators working with health care facilities.

The amateur radio portion of the exercise has been completed. ARRL Assistant Section Manager and State Government Liaison Michael Miller, KH6ML, said 36 amateur radio operators from Hawaii volunteered to demonstrate the value of amateur radio in emergency preparedness and response.

"It turned out very good," said Miller. "Some of hospitals, staff and administrators involved had their first experience with amateur radio. The operators were able to blend their skills using public service radios, satellite phones, as well as amateur radio."

Miller pointed out that hospitals on the smaller islands don't usually have a fulltime communications officer so working with amateur radio gives them experience for future emergencies. The amateurs worked with [Health Comm Hawaii](#) which provides amateur radio communications to health care associations in Hawaii during emergencies and disasters. "Health Comm Hawaii really needs 100 more operators for backup and to build skill sets through monthly exercises," Miller added.

Vice Adm. John Wade, commander, U.S. 3rd Fleet and RIMPAC 2024 Combined Task Force (CTF) commander, said the Rim of the Pacific exercise has grown over the years to be the world's largest and premier joint combined maritime training opportunity. "The exercise's purpose is to build relationships, to enhance interoperability and proficiency and, ultimately, contribute to the peace and stability in the vitally-important Indo-Pacific region."

Many of the volunteers participating in RIMPAC 2024 are also members of other vital emergency communication groups, such as Amateur Radio Emergency Service®(ARES®), Radio Amateur Civil Emergency Service (RACES), and Community Emergency Response Team (CERT). End

Mic Technique

Being heard clearly over the air is important, especially in the context of emergency communications. These techniques can help you be heard loud and clear.

Depend on Distance

Position the microphone two to four inches away from your mouth, and speak normally. If you have a quiet speaking voice, bring the mic closer. If you are a loud talker, move the mic away.

Microphones operate under the inverse-square rule: every doubling of the distance reduces the sound level by a power of two. So, a person who is four inches from the microphone will only be $\frac{1}{4}$ as loud on the radio as the same person who is two inches from the microphone.



No Need to Shout

Resist the urge to shout when you think the other person is having difficulty receiving you. Shouting into the mic introduces distortion and makes your signal even worse.

Shouting is also unhelpful in a noisy environment. The microphone doesn't necessarily hear the same sounds you do, and certainly not at the same volume. A well-designed communications microphone deliberately limits its effective range to an area about four inches in front of the microphone element. As a result, what may seem like a savagely noisy environment to you may not seem all that bad to your microphone.



Push, Then Talk

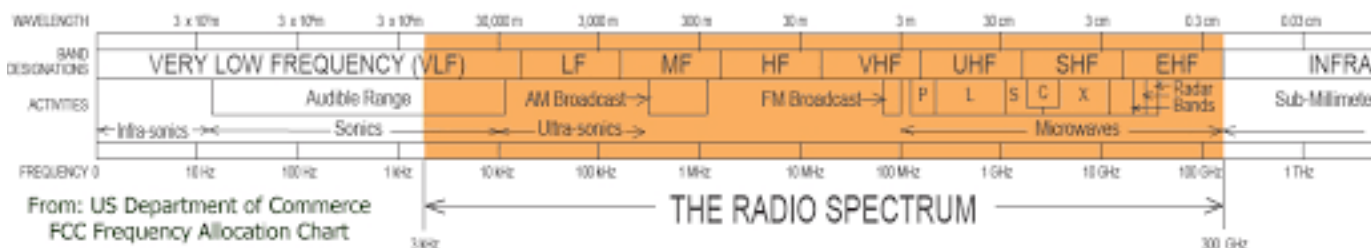
Finally, take care with the push-to-talk button. Starting to talk while pushing the button, or too soon after pushing it, can cause the person on the other end to miss entire syllables or words. Instead, squeeze the button, hesitate briefly, then speak. Hesitate again, and then release.

By adding those split-second hesitations at the beginning and end of transmissions, you can be certain that everything you say will be heard. This may seem awkward at first, but the technique will soon become a habit.

If you're new to your radio or microphone, ask a friend to help you do a quick test on the air. Engage in an actual conversation; the idea is to simulate your normal speech patterns and push-to-talk technique as closely as possible. Ask your friend to give you an honest evaluation of your technique, and make changes accordingly.

Ham Radio Frequencies By License

Meters	Technician	General	Extra
2200		135.7 - 137.8kHz/ALL	135.7 - 137.8kHz/ALL
630		472 - 479kHz/ALL	472 - 479kHz/ALL
160		1800 - 2000kHz/ALL	1800 - 2000kHz/ALL
80/75	3525-3600kHz/CW	3525 - 3600kHz/CW 3800 - 4000kHz/Ph	3500 - 4000kHz/ALL 3600 - 4000kHz/Ph
60		5 Channels	5 Channels
40	7025 - 7125kHz/CW	7025 - 7125kHz/CW 7175 = 7300kHz/Ph	7000 - 7300kHz/CW 7125 - 7300kHz/Ph
30		10.7 - 10.15MHz/CW	10.1 - 10.15MHz/CW
20		14.025 - 14.15MHz/CW 14.225 - 14.35MHz/Ph	14.0 - 14.35MHz/CW 14.175 - 14.35MHz/Ph
17		18.069 - 18.11MHz/CW 18.11 - 18.168MHz/Ph	18.069 - 18.11MHz/CW 18.11 - 18.168MHz/Ph
15	21.025 - 21.2MHz/CW	21.025 - 21.2MHz/CW 21.275 - 21.45MHz/Ph	21.0 - 21.45MHz/CW 21.2 - 21.45MHz/Ph
12		24.89 - 24.99MHz/CW 24.93 - 24.99MHz/Ph	24.89 - 24.99MHz/CW 24.93 - 24.99MHz/Ph
10	28.0 - 28.5MHz/CW 28.3 - 28.5MHz/Ph	28.0 - 28.3MHz/CW 28.3 - 29.7MHz/Ph	28.0 - 29.7MHz/CW 28.3 - 29.7MHz/Ph
6	50-54MHz/CW 50.1 - 54MHz/Ph	50 - 54MHz/CW 50.1 - 54MHz/Ph	50 - 54MHz/CW 50.1 - 54MHz/Ph
2	144-148MHz/CW 144.1 - 148MHz/Ph	144 - 148MHz/CW 144.1 - 148MHz/Ph	144 - 148MHz/CW 144.1 - 148MHz/Ph
1.25	222-225MHz/ALL	222 - 225MHz/ALL	222 - 225MHz/ALL
0.7	420-450MHz/ALL	420 - 450MHz/ALL	420 - 450MHz/ALL
0.33	902-928MHz/ALL	902 - 928MHz/ALL	902 - 928MHz/ALL
0.23	1240 - 1300MHz/ALL	1240 - 1300MHz/ALL	1240 - 1300MHz/ALL



Ham Radio Newsletters in the ARRL Rocky Mountain Division

Round Table Newsletter

Denver Radio Club, Denver Colorado.

roundtable@w0tx.org

<https://w0tx.org/roundtable>

Brennan Pate, AD0UZ –

AD0UZ@outlook.com

DTARC Encounters

Devils Tower Amateur Radio Club

newsletter@wy7dt.com

<http://www.wy7dt.com/newsletter.htm>

Betty Breen WY7MOM

newsletter@wy7dt.com

DARC Newsletter

Dixie Amateur Radio Club

St. George, Utah

ted@tasmus.com

<http://www.dixieham.org/resources>

Ted Asmus, K8UKE

ted@tasmus.com

Loveland Repeater Association Newsletter

Loveland Repeater Association

Loveland Colorado

w0ft@arrl.net

[http://sites.google.com/site/lovelandrepeater/
newsletter-archive](http://sites.google.com/site/lovelandrepeater/newsletter-archive)

Rob Streiby, W0FT

W0ft@pbroadband.net

NCARC Tri-Bander

Northern Colorado Amateur Radio Club

Fort Collins Colorado

newsletter@ncarc.net

<http://ncarc.net/node/9>

Ann Donoghue, K0ARD

newsletter@ncarc.net

Watts News

Ogden Amateur Radio Club

Ogden, Utah

k7hcp@arrl.net

<http://ogdenarc.org/newsletter.php>

Val Campbell, K7HCP

k7hcp@arr.net

Rainbow Canyons Amateur Radio Club (RCARC)

Cedar City, Utah

Rainbow Amateur Radio Club

rcarcnewsletter@gmail.com

<http://rcarc.info/newsletter.php>

Dennis West, W6DLW

rcarcnewsletter@gmail.com

W0TLM Newsletter

Monument Colorado

W0TLM Newsletter

<http://w0tlm.com/newsletter>

Rex Ishmael, WD0AJG

wd0ajg@yahoo.com



Continued next column

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Ham Radio Newsletters in the ARRL Rocky Mountain Division

Continued from page 16

The Microvolt

Utah Amateur Radio Club

Salt Lake City, Utah

microvolt@utaharc.org

<http://user.xmission.com/~uarc/microvolt>

Noji Ratzlaff, KN0JI

Kn0ji@arrl.net

UVARC Shack

Orem, Utah

UVARC Shack

uvarcshack@gmail.club

<https://uvarc.club>

Noji Ratzlaff, KN0JI

nojiratz@hotmail.com

Here is one in New Mexico

Dots and Dashes

Valencia County Amateur Radio Association

Peralta NM

Dots and Dashes

apoemge@q.com

<http://kc5our.com/wordpress/newslettersroster>

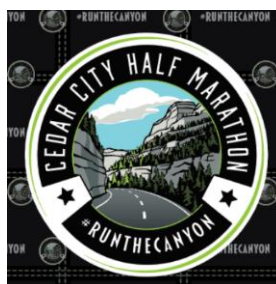
Ginger Eldridge, KC5MTI

apoemge@q.com

Have fun checking out these newsletters

See what's going on in other parts of the
country.

Happy reading.



Cedar City Half Marathon

Save the date:

September 7, 2024

More information to follow as we get closer to, the event.

The 15th annual running of the Cedar City Half Marathon down Cedar Canyon will feature plenty of pleasant surprises and one of the most spectacular downhill closed-canyon runs ever. Whether it's the sound of Coal Creek, breathtaking views, enthusiastic aid station volunteers, or energy-pumping music with crowds urging you to finish strong—the focus of the "Cedar Half" has always been on a quality runner experience over quantity. It's rare to run a half marathon or a canyon without worrying about traffic. You'll have the roads and trails to yourself in the Cedar Half. On race day, Cedar Canyon is closed to all vehicles, and at the mouth of Cedar Canyon all runners will transition onto Cedar's magnificent trail system all the way to the finish line.

The crisp canyon air rushes through aspens and the sounds of water rushing down Coal Creek accompany runners as they wind their way through eons of geologic formations to the mouth of Cedar Canyon. Majestic sandstone pyramids mark the intersection of the Great Basin and the Rocky Mountain formation. This is where runners will transition from SR-14 to Cedar City's spectacular trail system along Coal Creek through Canyon Park, Veterans Ball Fields, and the welcoming finish at the Bicentennial Soccer Complex. Along the Coal Creek Trail System there are three road underpasses allowing runners to avoid street traffic. The Start Line is 1/3-mile up SR-14 from Woods Ranch (Bus Drop Off). This is necessary to get the proper race distance.



**IT'S THAT TIME OF
YEAR AGAIN**

**Everyone is
welcome**

**The RCARC August
Meeting/Annual Potluck
Barbeque**



Date: Tuesday August 13, 2024

Time: 6:00 PM to 8:00 PM

Location: Christ the King Catholic Church, 690 Cove Drive in the Pavilion behind the church. Cedar City, Utah 84721

Note: **Burgers and Dogs will be provided by the club. Please bring a side dish to share with others.**

The Church is just South of the Temple



RCARC July Membership Meeting Pictures

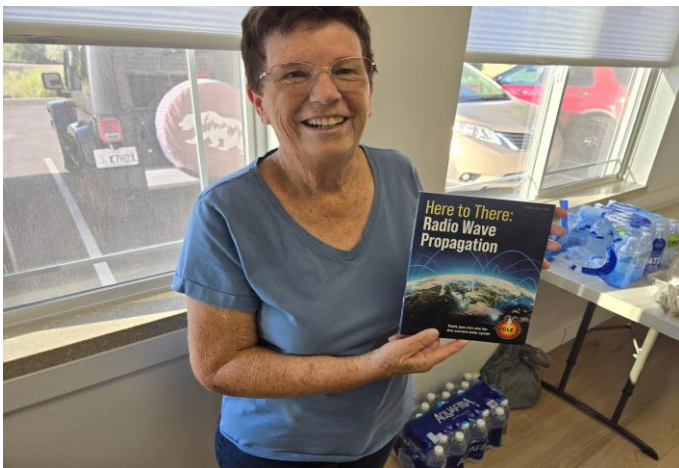
Continued from page 12



Another view of members listening to Fred (K17TPD) presenting club business.



Bucky Buckwalter (W0SUN) discussing Yaesu Wires X to the members.



Terry West winner of the Book Giveaway



Bucky Buckwalter (W0SUN) demonstrating how the various digital modes work. END



Bucky Buckwalter (W0SUN), presenting Digital Communications. Fusion, DMR, DSTAR and other.

Continued next column



Public Fire Information Website

InciWeb

<http://inciweb.nwccg.gov>

InciWeb is an interagency all-risk incident information management system. The web-based program provides information for wildland fire emergencies and prescribed fires, but can also be used for other natural disasters and emergency incidents such as earthquakes, floods, hurricanes, tornadoes, etc.

The system was developed with two primary missions:

- Provide the public a single source of incident related information; and
- Provide a standardized reporting tool for the Public Affairs community.

Official announcements include evacuations, road closures, news releases, maps, photographs, and basic information and current situation about the incident. End.

RCARC EComm Behind the Scene Activities

Over the last few months, members of the EComm group have continued to work on several projects. One of those projects is the readiness and safety of the EComm/Antenna Trailers.

Therefore, I would like to thank Brant (KJ7LTQ) for his expertise and knowledge in building and installing the new outriggers on the antenna trailer.

In addition, a great big thanks goes out to Anthony (KC6WFI) and Sonia (KD6HYH) Bartowski for their generosity in creating and installing shade covers over the windows in the EComm Trailer. This will diminish the glare and deflect the cold and heat as well.

THANK YOU!

Hacks & Hints

HACK

A Repurposed Banana Keeper

I have seen all sorts of ways to deal with headsets when they are not in use, from shoving them into drawers to putting them on foam dummy heads. Here is a solution that will let you keep your headphones in easy reach and away from harm.



Figure 2: A banana keeper can do double duty as a handy place to hang your headphones.

At a discount store one day, I noticed a stack of so-called Banana Keepers. A keeper consists of a plastic base and upright that is formed into a hook.

They were only \$1 each, so I bought two. I put one in my ham station where it keeps my headset out of harm's way (see Figure 2). The other went into the kitchen to serve a similar function for bananas!

Bob West, WABYCD

HINT

Battery Leakage Remover

At one time or another, most of us have left batteries in a device for too long, only to open the device and find a mess. This happened to me recently and I tried a product called CLR (an acronym for calcium, lime, and rust). It is available as a liquid or foam (see Figure 3). I sprayed CLR on the battery holder and the mess went away in less than 5 minutes. After a quick rinse and air dry, the battery compartment was clean.

I then used CLR on the battery-negative contact spring, which was covered with battery drainage and rust. Again, in 5 minutes it was clean. I lightly sanded the contact point and reassembled the device. It works fine. The repair was cheap, quick, and effective!

Dave Routzon, W5GT



Figure 3: CLR (an acronym for calcium, lime, and rust) is available from home stores and elsewhere as a liquid and as a spray foam.



Happy August Everyone