

# RAINBOW CANYONS AMATEUR RADIO CLUB NEWSLETTER

CEDAR CITY, UTAH



Club Website: [www.rcarc.info](http://www.rcarc.info) Number 5 – Vol. 4– April 2023

## Club Meeting Information

The RCARC meets at 7:00 p.m. on the 2<sup>nd</sup> Tuesday of each month at the Cedar City Senior Center, 489 E. 200 South. Down Stairs.

## 2023 Club Officer's

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1-435-867-5914

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CQ, CQ, - Happy Easter Everyone



## Presidents Message

Dear Fellow Amateur Radio Operators,

We finally had the weather relent and we had our first meeting of 2023! What a start to 2023 with a new storm almost every week (especially on Tuesday nights!).

We had a great time and presentation on common digital modes and next month we will learn about satellite communications from AL7BX George.

The Technician class has been going well and it looks like we may have a new batch of HAMs soon (April 13<sup>th</sup>). We have also started planning for our next RCARC swap meet scheduled for June 10<sup>th</sup>.

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.  
7:30 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

**April 11, 2023**

### **RCARC Club Meeting.**

7:00 pm. Cedar City Senior Center,  
489 E. 200 South. **Program: Ham  
Radio and Satellites. George Gallis  
(AL7BX)**

**May 9, 2023**

### **RCARC Club Meeting.**

7:00 pm. Cedar City Senior Center,  
489 E. 200 South. **Program to be  
determined.**

**June 13, 2023**

### **RCARC Club Meeting.**

7:00 pm. Cedar City Senior Center,  
489 E. 200 South. **Program to be  
determined**

**July 11, 2023**

### **RCARC Club Meeting.**

7:00 pm. Cedar City Senior Center,  
489 E. 200 South. **Program to be  
determined**

## **President's Message**

**Continued from page 1.**

I encourage you all to play, share, and have fun on the radio! We all have strengths and weaknesses but we are all interested in radio communications and can benefit from each other. If you are interested in any aspect of HAM radio please explore the topic, experiment, and share what you have done with the group! That is what makes this such a fun hobby! Don't be shy, we are all friends here!

In service,

Fred Govedich (KI7TPD)



## **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 April**



# **Happy Easter**

Breakfast Net		Friendship Net		
<b>First Place</b>	<b>Second Place</b>	<b>First Place</b>	W6DLW - Dennis	
K2MFK - Kevin	N7SND - Larry	K7HDX - Ron	<b>Second Place</b>	
K7ZI - Dick	<b>Third Place</b>	K7NKH - Lee	W9YNK - Benjamin	
KI7TPd - Fred	KI7SCX - John	K7WEP - Paul	KJ7LTQ - Brant	
KI7WEX - Bonnie		K7ZI - Dick	KE8YI - Caleb	
KC6WFI - Tony		KI7LUM - Bruce	N7TCE - Merlin	
KZC6ZIM - Johnny		KI7TPD - Fred	<b>Third Place</b>	
N7SIY - Silvia		KI7WEX - Bonnie	KK7FLL - Maddie	
KG7PBX - Linda		N7SIY - Silvia		
		N7WWB - Darlene		

**Rainbow Canyons Amateur Radio Club  
Treasurer Report March 14, 2023**

Bank balance (reconciled) Feb 28, 2023	<b>\$1,408.20</b>
Deposit - memberships KJ7JAO, W1EPR, KR7KR, KA7SEZ and Tyler Merrill Family	+ 85.00
Balance as of March 14, 2023	<b>\$1,493.20</b>
March Expenses	
Rocky Mountain Power (Due 3/17/2023)	- 18.82
Funds available as of March 17, 2023	<b>\$1,474.38</b>

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

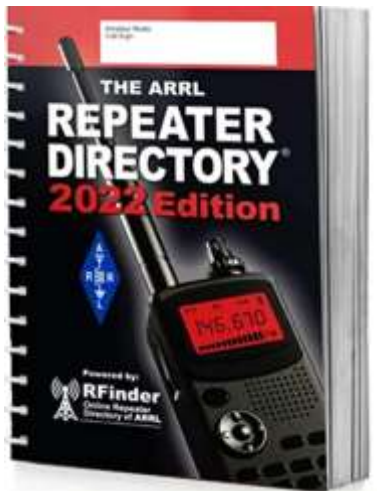


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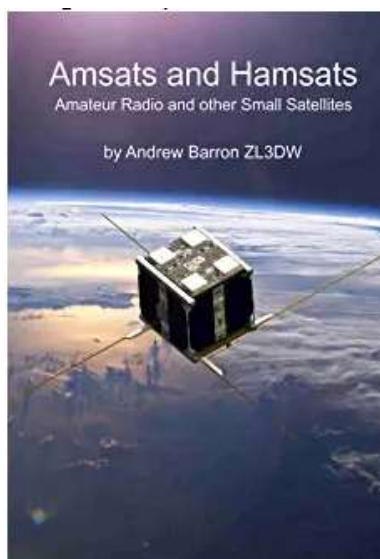
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**RCARC Book Giveaway.**  
Books are donated by  
**Linda Shokrian**  
(KG7PBX)

Shown below is the book that will be given away at the April 11, 2023 meeting.



The Book below was given away to  
**Dennis Rock** at the March meeting



**Congratulations**  
**Dennis**  
See Picture on page

## Contact Us.

### Mailing Address:

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### Club E-mail:

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### Newsletter E-mail:

[rcarcnewsletter@gmail.com](mailto:rcarcnewsletter@gmail.com)

### Website

[www.rcarc.info](http://www.rcarc.info)

### Face Book Page:

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

### To Join RCARC or Pay Dues:

Go to [www.rcarc.info](http://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**

## Registering for Utah Races

Utah RACES no longer accepts paper registration forms. RACES registration is now processed online only.

Please access the URL below and follow the instructions to register.

<http://utahdem.readyop.com/contact/register/4>



## Buzz's April Safety Tip(s)



# Staying Safe During a Flood:

The Southwest has had a wet year which creates the potential for spring flooding.

Is your property prone to flooding?

Do an assessment of your property to determine what your plan should be if flooding affects your area and consider flood insurance.

### **BE PREPARED:**

Follow common preparedness guidelines such as, 72 hours kits, emergency medication supplies, a family evacuation plan and out of area contact.

Clean out blockage & debris from gutters, drains, ditches, waterways on your property.

Acquire appropriate supplies to protect your home and property such as sand bags.

Stay informed by Listening to NOAA Weather Radio, registering with your local alerting system or [911register.com](http://911register.com), tv, social media, text **WCFLOOD** to 888777 for current emergency information and instructions regarding flooding.

### **IF THERE IS ACTIVE FLOODING:**

Consider the use of sandbags.

Respect road closures & barriers. Local responders use them to safely direct traffic out of flooded areas. Don't go around or you'll drown.

Don't walk, swim, or drive through flood waters.

Evacuate if you feel unsafe or you are told to do so.

Continued next page

If necessary, move to higher ground.

Stay off bridges over fast-moving water. Fast-moving water can wash bridges away without warning.

Stay inside your car if it is trapped in rapidly moving water. Get on the roof if water is rising inside the car.

**Listen to NOAA Weather Radio**, local alerting systems, tv, social media, 911register.com, text **WCFLOOD** to 888777 for current emergency information and instructions regarding flooding.

**If you are experiencing an emergency or active flooding and need assistance, call 9-1-1.**

## **What Should You Do Before a Flood? Understand Your Flood Risk**

Learn about the types of flooding that can impact your home and community. Types of flooding include flash floods, river floods, storm surges, coastal floods, burn scars, debris flows, ice/debris jams, snowmelt, dry wash, dam breaks, and levee failures.

- Reach out to your local office of emergency management for advice.
- Know your home and community's flood risk. Visit the FEMA Flood Map Service Center and search for your home using your address.

## **Make Plans to Stay Safe**

Flash floods can be sudden and violent. You may have little to no warning. Designate a place on higher ground that you can get to quickly. Plan to move to higher ground before flooding begins.

- **River floods:** Know if you are in an area that is prone to river floods. Review your evacuation plan so that you can leave quickly if officials advise you to evacuate.
- **Storm surge:** Be prepared to evacuate immediately if local officials advise. A storm surge can cause water levels to rise quickly and flood large areas in just minutes.
- **Coastal flooding:** Be prepared to evacuate immediately if local officials advise. Move inland before flooding begins.

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# RADIO NEWS

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

EDITORIAL AND GENERAL OFFICES, 53 PARK PLACE, NEW YORK



Vol. 4

APRIL, 1923

No. 10

## Radio and Education

ONE of the great uses for Radio in the future undoubtedly is education. More and more educators themselves are beginning to realize that Radio is the one means that will spread education more thoroughly, more economically and far better than any other means known.

When it is realized that a teacher or a professor can stand on a platform and give a lecture, any morning, that can be readily heard by a million or more school children or students, we begin to understand dimly the tremendous importance of the new art. This thought alone should set at rest those very few doubters who still have an idea that Radio is a fad and that it will not last. Indeed, we venture the guess that in a time not too far away, the States' or the Federal Government will have to subsidize broadcasting stations, which will be used primarily for educational purposes and secondarily for entertainment. This is the day of specialization, also the age when every one of us, from the most modest downwards, has and is continuing to get the best to be had if anywhere possible. The farmer in Idaho, in his modest shanty can read the best books for a few cents, while for a dollar or less he can hear Caruso sing any time he chooses, and at no cost whatsoever he can listen in by radio to Clemenceau as he gives his farewell speech in New York before departing for France—all things that were impossible 25 years ago.

Of course, numbers of our radio stations, even today, are making a specialty of sending out lectures, etc., but most of these are sent during the evening, mainly, for entertainment purposes, the lecture itself being given for that purpose primarily. Those of us in the right frame of mind who listen to such lectures retain a good bit of the information and thereby we are educated. We are afraid, however, that a large percentage of adults are more or less bored by dry lectures, and endeavor to tune out a lecture unless it has a special appeal to them.

When we speak of education and Radio, we have in mind schools and colleges, and this is a big thought that is now occupying our great pedagogues. If Professor Pupin, of Columbia University, delivers an historical lecture in New York, only a few hundred or, at the most, a thousand students can listen to his words. The rest of the country must be satisfied with the printed lecture. Or if Professor Einstein gives a few lectures here and there, the total number of persons who actually hear him speak is perhaps less than 5,000, when really it ought to be 10,000,000!

Now every educator knows that the effect of a student listening to a lecture and a student reading the same printed lecture gives vastly different results. When we listen to a great man as he delivers his lecture, and if we are at all interested, we follow his discourse with the greatest interest and we eagerly imbibe every word he utters. The same lecture, printed, becomes a cold, lifeless thing that does not at all hold the interest for us as does the spoken word. The ideal combination is that we first listen to the lecture by ear and then read it over by eye. That gives a 100 per cent retentivity value of the mind, as has long been realized by experts.

Now it is precisely this thing that is made possible by Radio. It is only a matter of time when every schoolroom and every classroom will have its radio outfit and its loud talker, so that the whole room can hear the lecture. The time will come when any lecture given in any part of the country will be listened to by all the schools and all the colleges of the land. It will be done as follows:

If in New York City, for instance at Columbia University, an authority gives a lecture, his words will be picked up and relayed to the New York Broadcasting Station, where the lecture

will be immediately broadcast. The receiving stations within a small radius will pick up this lecture and such schools and colleges within range will have no trouble tuning in to it, so that the entire class will hear every word loudly and distinctly. For stations located many hundreds or thousands of miles away, the following system will be used: The local broadcasting stations will receive the distant lecture on a specially-constructed super-sensitive receiving outfit. The sounds as they come in, which will be more or less weak, will then be picked up and amplified and rebroadcast. In other words, we have here the relayed broadcast which the writer advocated in a recent editorial entitled "Popularizing Radio." This plan, by the way, has now been endorsed by Mr. W. P. Davis, Vice-President of the Westinghouse Electric Co., who advocates this same plan. The local broadcasting station will then broadcast the lecture so that all schools or colleges within its radius will be able to listen to the distant New York lecture without trouble.

Nor will this thing be done just once in a while, but it will be a daily routine. If a famous professor speaks at San Francisco or at St. Louis, his words will be heard in New York classrooms loudly and distinctly by such relayed broadcast. Moreover, such lectures will be given and listened to each and every day, in the morning hours, and the early afternoon. It is realized that broadcast fans who listen for amusement only are still at business at this time of the day, and for that reason these hours, which happen to be school hours anyway, will be the ideal ones for such educational work. It will, of course, be realized that not only will lectures thus be heard in every classroom throughout the country, but every other educational subject imaginable can and will be given. The best teachers of languages will give their daily lessons, as will the best lecturers on mathematics, elocution, drama, geology, geography, and all other subjects that can be broadcast in the same manner.

Let no one think that this will do away with the teachers in the schoolrooms or classrooms. Quite the contrary. It will supplement their work, and their usefulness will be increased because, after all, it is the teacher who is the one in close touch with the pupils or students. When a great man gives a lecture, there are always many points not readily understood by the pupils, and the ensuing discussion after such lectures will be stimulated by the teacher himself.

Until the relayed broadcast has become perfected—it is admitted that it is as yet not perfect—we have another means of obtaining the same results, and that is by the Hoxey Palophotophone. If, for instance, a lecturer at Princeton gives an important talk, this lecture can be photographed on a film and preserved for all time; 10 or 50 years hence this lecture can be listened to by students at will, but for the present copies of the films can be made and sent to the various broadcasting stations which can broadcast the lecture at any time they choose. In other words, although a lecture is given in Princeton on a certain afternoon, it can be heard at various times in the future, in any school or classroom of the country, as it best suits the broadcast program.

Once it becomes universally known that such educational programs are being broadcast each and every day at stated hours, not only will schools and colleges make use of such lectures and information, but grown-ups in every part of the country, from mansions down to the humblest shacks, will eagerly listen to such educational programs and improve the mind which has not had the opportunity during youth to acquire a needed education.

H. GERNSBACK.

# Staying Safe During a Flood:

Continued from page 6

## What Should You Do During a Flood?

### ***Remember: Turn Around, Don't Drown!***

Never walk, swim, or drive through floodwater. Just 6 in (15 cm) of fast-moving floodwater can knock you over, and 12 in (30 cm) can carry your vehicle away.

## How Can You Stay Safe After a Flood?

### **Prevent Injuries**

Understand the dangers you may face and keep your loved ones safe.

- If you evacuated, wait for officials to say it is safe before going home.
- Avoid fallen power lines, poles, and wires. They can electrocute you.
- Watch out for falling trees and other debris.
- Use flashlights or battery-powered lanterns, rather than candles, to reduce fire risk.
- Many injuries happen during cleanup. Wear protective equipment, like boots, long pants, work gloves, eyewear, and an N95 respirator to protect your lungs. Follow the advice of local public health officials.
- Learn how to use equipment safely. Do not touch electrical equipment if it is wet or if you are standing in water because you could get electrocuted.
- Cleaning up is a big job. Take care of yourself. Work with a partner and take frequent breaks.

### **Protect Your Health**

Flooding can contaminate drinking water. Check with your local public health department about drinking water safety.

- Don't get sick from eating spoiled food. Throw out food that got wet or warm. When in doubt, throw it out!
- Stay away from floodwaters. They may contain sewage, sharp items, and chemicals that can make you ill.
- If your home was flooded:

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# RCARC March Breakfast Pictures



Members in line to order omelets and Bruce (K17LUM) creating his breakfast plate.



Brody (K7VXV) and daughter giving us some big smiles.



Member group Picture Continued next column



Fred (K17TPD) and Bonnie (K17WEX) smiling for the camera or is it the great food.



Room from a different view



Rear George (AL7BX) Brian (KG7OOW) and Linda (KG7PBX) in conversation. Standing Dick (K7ZI)

# Staying Safe During a Flood:

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- If possible, dry your home and everything in it as quickly as you can within 24 to 48 hours.
- If you cannot return to dry your home within 24 to 48 hours, you should assume you have mold growth. When it is safe to return home, completely dry everything, clean up the mold and make sure you don't still have a moisture problem.
- Keep wet areas well-ventilated. Throw away wet materials that can't be repaired or dried.
- Prevent carbon monoxide poisoning. Gasoline, propane, natural gas, or charcoal-burning devices should never be used inside a home, basement, garage, tent, or camper – or even outside near an open window. Carbon monoxide can't be seen or smelled, but it can kill you fast. If you start to feel sick, dizzy, or weak, get to fresh air right away – do not delay.

## Take Care of Yourself

It's normal to have a lot of bad feelings, stress, or anxiety.

- Eat healthy food and get enough sleep to help you deal with stress.
- You can contact the Disaster Distress Helpline for free if you need to talk to someone. Call or text 1-800-985-5990.



## RCARC EComm Board Meets

March 6, 2023 the new EComm Board Members met via Zoom to get organized and set direction for this coming year.

2023 Board members are Dennis West (W6DLW), Brad (WA7HHE), Ron (K7HDX), Fred (KI7TPD), Bonnie (KI7WEX), Darlene (N7WWB), Linda (KG7PBX) and Bruno (KG7VVN).

Following are some bullet points from the meeting:

- Brad (WA7HHE) provided an update on the upcoming SWUPHD Coalition Exercise to take place on 3/7/2023. This is a communications exercise of Utah's 5 Southern County Hospitals, Emergency Management Agencies and SWUPHD.
- Brad (WA7HHE) updated the group on the upcoming April 20, 2023 Utah Great Shakeout Event. Additional information to forthcoming.
- Dennis (W6DLW) brought the group up-to-date on the Boards request to invite key players of our served agencies, Iron County Emergency Management, SWUPHD and Cedar City Hospital to our April 20, 2023 general membership EComm meeting to share with us on how they feel we can help them with their needs and for us to share ways we may be able to help them.
- Ron (K7HDX) advised that the new MOU with Iron County Emergency Management will be sent to George Colson for review. Once review completed and accepted Ron will get the final copies and necessary signatures. Final copies to be filed on Google Drive.
- Ron (K7HDX) stated that he has updated the RCARC EComm Organizational Charter. A motion was made by Fred to accept the revised Charter as written. The motion was seconded by Linda. Motion passed.

Continued next column

- Ron (K7HDX) provided an update on the request to install a radio in George Colson's office. Ron advised that he and Bruno will move forward with identifying the radio, power supply and other equipment in George office and come up with a plan.
- Dennis (W6DLW) advised the new Board that Brad has agreed to continue as the liaison with our served agencies.
- Fred (KI7TPD) has volunteered to become the scribe for our meetings and to keep all records.
- There was discussion on setting up once a month training classes on FLDigi, Winlink and other topic's such The ICS System, ICS 100, 200 and others. More to follow.
- Meeting was then adjourned.



## A Brief History of Amateur Radio EmComm Organization

In the early days, amateur radio and hams were considered irritations and nuisances to the "real" communicators -- the commercial sector and the military. We were almost outlawed, and ultimately relegated to the "useless" frequencies of "200 meters and down." That was until it was demonstrated that we could actually be of use as a service. In 1913, college students/hams in Michigan and Ohio passed disaster messages when other means of communications were down in the aftermath of severe storms and flooding in that part of the country. A Department of Commerce bulletin followed, proposing a dedicated communications network of radio amateurs to serve during disasters. Five special licenses were reportedly issued. A magazine article noted that amateurs were now considered to be essential auxiliary assets of the national public welfare.

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# Lightning Protection Basics for the HF Station

By Walt Mahoney, KC1DON

With spring (hopefully) just around the corner, late winter is a great time to evaluate our station lightning protection arrangements prior to lightning season. This short article is not a comprehensive review of the subject, but does suggest some basic protective measures we can all take. The suggestions are based on my experiences as an AM broadcast engineer, and later in my career with industrial plant control systems. Two comprehensive resources are *Grounding and Bonding for the Radio Amateur* (2nd Ed., ARRL), and a three-part series, "Lightning Protection for the Amateur Radio Station," by Ron Block, KB2UYT (now NR2B), which was published in the June, July, and August 2002 issues of *QST*. The later articles are available for free online at <http://www.arrl.org/lightning-protection>.

Lightning as a natural phenomenon is usually (~90% of the time) a downward negative electric discharge, with the earth as the anode. The length of the discharge is usually 1 second or less, and the potential can vary between 40 and 120 kV. Once the arc is established, the rise time to peak current is about 0.3 seconds, during which time the peak current flow can be from 5 to over 200 kA. If we consider the time integral of the lightning current over the entire flash duration, the energy released is something on the order of 10 billion watts. The key takeaway with this amount of energy is, we don't need to take a direct hit to cause harm to people or damage equipment. A lightning strike will induce hazardous voltages in nearby conductors through induction or via any reasonably conductive material.

I am assuming that nobody will be operating their station when lightning is anywhere in the vicinity, and all equipment is de-energized and grounded per recommendations in the *ARRL Handbook*. Even in this condition, the two routes that damaging amounts of energy can be coupled to a transceiver are via the power supply and the antenna connections, with the antenna connection being far more vulnerable. These two routes require different protection strategies.

On the power input side, obviously the best protection is to unplug the power supply from the branch circuit. I realize this isn't a practical solution for everyone, and we may not even be at our operating location when the storm arrives. The next best thing in this case is to use a quality surge protected power strip having an on/off switch. The quality and effectiveness of these surge protective devices (SPDs) vary greatly, and as always one "gets what they paid for." I recommend the Tripp Lite "Isobar" power strips.

Look for units that are circuit breaker protected and provide a minimum of 900 joule protection, and be aware that some imported power strips offer zero surge protection beyond a simple fuse. Our most common transceiver configuration now uses an outboard 14 V dc power supply. Obtain a broadband ferrite ring and wind as many turns as can comfortably fit of the dc transceiver cable through the ferrite. It's important to wind the positive and negative conductors together, and locate the ferrite as close as possible to the transceiver.

Protecting the antenna connection is a little more challenging. As a kid I would unscrew the feed line PL-259 and stick it in a pickle jar, which sort of worked. In modern times we have coax antenna switches, and it goes without saying your transceiver should always be switched to a dummy load of an appropriate power rating when not in use. The dummy load is highly recommended to avoid transmitting into an open circuit when one inevitably forgets to throw the switch. Some switch manufacturers such as Alpha-Delta and Daiwa also incorporate gas discharge tube (GDT) surge protection. Look for a switch that grounds all unused connections, and be sure to ground the switch body itself. 450-ohm ladder line can be protected by old-time knife switches, which are getting scarce. The second step is to add a GDT-type lightning arrestor which will shunt current to ground when the gas ionizes at a given voltage.

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Continued next column

## RCARC March Technician Class

Thursday March 2, 2023 RCARC hosted the first of eight Technician Class License classes. The first session covered Sub-Elements T1 - A, B, C and D with Ron Shelley (K7HDX)

Sub Elements T1 - E, F & T2 – A, B and C with Fred Govedich (KI7TPD)

The second session covered Sub-Elements T3 – A, B, C & T4 – A, B with Dennis West (W6DLW). Sub-Elements T5 – A, B, C, D with Ken Richter (KR7KR).

The third session covered Sub-Elements T6 – A, B, C, D with Gavin Hollinger (KC7IHE). Sub-Elements T7 – A, B, C, D with Lance Jackson (KA7J).

The remaining classes are scheduled for March 30th, April 6 with testing on April 13, 2023.

**See Pic's below:**



March Technician Class Attendees (First Session).



Rob (K7HDX) welcoming the attendees and introduction of the upcoming sessions. In addition, discussing T1, A, B, C and D – Commission's Rules.

**Continued next column**



Fred (KI7TPD) discussing T1, E and F - Commission's Rules and T2, A, B and C - Operating Procedures.



Dennis (W6DLW) discussing T3, A, B, C and D – Radio Wave Propagation and T4, A and B – Amateur Radio Practices.



Ken Richter (KR7KR) discussing T5, A, B, C, and D – Electrical Principles.

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## Iron County Office of Emergency Management (OEM) E-Comm. Unit participates in Southwest Utah Healthcare Coalition Quarterly Exercise.

The Southwest Utah Healthcare Coalition Exercise is a communications exercise for Emergency Support Function 8, Public Health & Medical Services, and the Southwest Utah Healthcare Coalition. The purpose of this drill is to practice and validate emergency communication capabilities among healthcare facilities, emergency management, and other key partners in the Southwest Region of Utah.

On Tuesday March 7, 2023 E-Comm. members staffed the Radio Communication Room at Cedar City Hospital to assist in the exercise.

Pictured below is Jack Colter (KG7VEJ) who is monitoring the Digital Communications portion of the exercise. Brad Biedermann (WA7HHE) who was also monitoring the digital portion of the exercise and Dennis West (W6DLW) who was monitoring the VHF Radio Communications.



Jack (KG7VEJ) monitoring the HF portion of the net.



Jack (KG7VEJ) and Brad (WA7HHE) checking some setting issues.



Dennis (W6DLW) conducting the VHF Roll call portion of the exercise.

## Lightning Protection Basics for the HF Station

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As with SPDs, not all GDT arrestors are suitable for amateur use. Ideally, we want a device having a low let-through energy and minimal insertion losses. As part of my professional work with industrial radio modems, I found the Polyphaser IS-NEMP series offers the happy combination of low VSWR from 1.8 MHz through low-band VHF and a very fast-acting GDT. The housing and connectors are built to mil-spec standards. Again, there are less expensive arrestors of dubious provenance available through online sources. I caution some of these will demonstrate much greater VSWR than is advertised.

## Do you Need?

**Copper Wire** – Contact George Gibbon's (KD7DDX) at 435 383-2303. George has a large spool of wire and is willing to give some away.

**LMR 400 Coaxial Cable** – Contact Ken Munford (K7KM) at 435 590-6724. Ken has 3 Spools of cable.

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# RCARC March Technician Class

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Gavin (KC7IHE) discussing T6 Sub elements A, B, C and D, Electronic & Electrical Components.



Lance (KA7J) discussing Sub elements T7 – A, B, C and D, Practical Circuits.



Class attendees listening to Gavin (KC7IHE).

# RCARC Monthly Meeting Pictures



Linda (KG7PBX) & George (AL7BX) with hat on issuing the 2023 Utah VHF Society Repeater Books.



Meeting just about ready to get underway.



Pledge of allegiance

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## A Brief History of Amateur Radio EmComm Organization

Continued from page 11

ARRL was formed in 1914, and disaster response communications as provided by radio amateurs became organized and useful. In 1920, amateur radio was used to help recover a stolen car, of all things! Soon, the use of amateur radio for natural disasters that we traditionally think of now emerged with hams active in responding to deadly flooding in New Mexico and an ice storm in Minnesota.

More organization followed, with a memorandum of understanding emerging with the American railroad system for amateur radio support when the railroad's wire lines were down: There was an ARRL Railroad Emergency Service Committee. There was even a Q-signal designated: QRR, a kind of land SOS. More reports of disaster response communications provided by amateurs appeared in *QST*, much as they do there and here in this newsletter today. A major New England flood had amateurs supplying the only efficient means of communications from the devastated areas to the outside world, prompting the chairman of the Federal Radio Commission to say the future of radio depended on the amateurs.

Hams worked with the Burgess Battery Company for emergency radio power. Many of us old-timers, including myself, used those batteries when we were kids for our electrical experiments and kits. They looked like tall, thick candle columns! We learned our electrical principles from them. More organization followed, and traffic handling was recommended as the best way to gain discipline and proficiency to prepare for the efficiency and effectiveness needed in response communications situations.

ARRL Field Day was started to prepare amateurs for portable operation, as was necessary in disaster situations when commercial power and means of communications were down.

In 1935, the ARRL Emergency Corps was formed with the goal of having an Amateur Radio Emergency Station in every community - a goal that remains just as urgent today as it did then! To wit, just look at today's emphasis on the neighborhood and community as "first responder" and on self-reliance in the post-disaster survival chain. More "served agencies" emerged as potential partners, including the Red Cross. In 1936, major flooding across a 14-state region served as the ARRL Emergency Corps' first major testing, serving well, and solidifying amateur radio's status as a critical disaster response communications asset and public service. Communications operating protocols and the appointment of Emergency Coordinators followed.

Technical advances supported this evolution. Spark-gap transmitters gave way to the vacuum tube, making portable operations more viable. Articles on portable transmitters and receivers appeared in *QST*. Exploration and experimentation in the VHF region also spurred more development of portable equipment. The development of the variable frequency oscillator, or VFO -- something that modern generations of hams take for granted -- was at the time a liberating breakthrough offering more versatility and flexibility, and of course more efficiency in meeting the demands of a disaster response communications situation.

World War II meant a shutdown of amateur radio, but many hams joined the War Emergency Radio Service, which did provide some communications during the war period for natural disasters. After the war, ARRL reconstituted its disaster response communications programs and networks, and the first Simulated Emergency Test was run in 1946. The Cold War followed, and the government formed the Radio Amateur Civil Emergency Service (RACES) for civil defense (CD) purposes. It served as the forerunner of the modern emergency management model that we know so well today.

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## A Brief History of Amateur Radio EmComm Organization

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Throughout the 1960s and later up to today, the role, procedures, protocols, equipment, and techniques of amateur radio in public service, disaster, and emergency communications continue to evolve, ebb and flow. This evolution is fueled by advances in Amateur Radio technology and its application, lessons learned from each and every incident that involves amateur communications support. - *Rick Palm, K1CE, based on an excellent article titled "QRR: The Beginnings of Amateur Radio Emergency Communications" by Gil McElroy, VE3PKD, that appeared in the September 2007 issue of QST*

## RCARC Upcoming Events

### Save the Dates

Please mark your calendars for the following upcoming events:

- April 13<sup>th</sup> at 6:00 PM., Ham Radio License Testing. Cedar City Senior Center. 489 E. 200 S.
- April 20<sup>th</sup> at 10:15 AM. Utah Great Shakeout and Exercise.
- June 3<sup>rd</sup>, Ride the Gap Bicycle Race Event. Parowan. More info to follow.
- June 10<sup>th</sup> RCARC Swap Meet. More info to follow.
- June 24<sup>th</sup> & 25<sup>th</sup>, Sumner Field Day.
- August 26<sup>th</sup>, Cedar Breaks POTA Event. More info to follow.
- September 9, Cedar City Half Marathon. More info to follow

## RCARC Monthly Meeting Pictures

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Linda (KG7PBX) presenting the monthly treasurer's report.



George (AL7BX) giving the monthly repeater report.



Ron (K7HDX) updating the attendees about the upcoming club activities. **Continued on page 18**

# RCARC Monthly Meeting Pictures

Continued from page 17



Dennis Rock winner of the March Book giveaway. ARRL 2023 Repeater Book.



Ron (K7HDX) discussing several of the Digital Modes for Ham Radio Operators.



Fred (K17TPD) discussing several other Digital Modes for Ham Radio Operators.,

# A Little Humor



# Tips for New ARES Operators

Most hams new to public service operating begin their efforts on the air through a local 2-meter FM repeater. Area hams tend to congregate there for sundry activities: traffic and ARES nets, swap nets, weather spotter nets, club meetings, training nets, and informal chats, discussions, and weather report exchanges. You will quickly learn their protocols, courtesies, and nuances of repeater and net operating, which, along with simplex (i.e., direct communication without repeaters) operation, form the bedrock of public service operating. Listen at first, and don't transmit until you feel that you have a basic idea of the above. It could take listening to several nets over the course of many evenings before you feel comfortable transmitting and checking in.

To do it, you'll need a radio, of course! Start with a simple-to-operate 2-meter/70-cm FM handheld with a short, flexible rubber-coated antenna, or better yet, a simple "whip" antenna that will yield more gain. The marketplace has a plethora of choices available from many manufacturers, and most are advertised in *QST*. Browse the ads, and check out *QST*'s Product Review, which regularly features reviews of handhelds. Search for past reviews on ARRL's website -- [www.arrl.org/product-review](http://www.arrl.org/product-review) -- and ask local hams for their recommendations; try other hams' handheld radios.

You will be taking your radio into the field for public events, emergencies and disasters, so portability is a critical, needed feature. You will have to operate "off the grid," that is, away from commercial mains, so you will need alternative power sources such as batteries, portable generators, and solar panels. The same goes for antennas: you will want to find a balance between getting antenna gain sufficient to initiate and maintain communications from potentially remote locations, and the ability to easily transport and erect them in the field.

Keep power output as low as possible: Just a watt or two should be enough power to talk across your neighborhood or community on simplex and through your local repeater. Higher power output translates to faster battery discharge and depletion. Most handhelds come with a basic rechargeable battery pack and "wall wart" battery charger, but have as options larger capacity battery packs, and higher-power desk "drop-in" chargers that will charge your batteries faster (although faster charging rates tend to reduce the life of the battery). Buy a second battery pack to use when you're charging your first battery. Buy the optional alkaline battery holder as a backup in the event your standard rechargeable battery pack(s) fail(s). The use of batteries for handhelds and other types of radios was addressed in the Public Service column in the March 2015 issue of *QST*. The use of portable generators is discussed in the Public Service column in the October 2015 issue of *QST*.

For enhancing your reception and transmitted signal, forego higher power in favor of a better antenna instead. Consider purchasing a telescoping 5/8 wave whip antenna that replaces the rubber-coated shorty antenna that your radio came bundled with, which will give you higher gain, and hence, wider coverage for your signals and better "copy" on weak or distant stations. (Don't toss out the flexible rubber antenna, however: it's useful for close-in communications). - *Originally written by K1CE for The ARRL Operating Manual.*



**Continued Next Column**

# Community Emergency Response Team (CERT) Class

**April 8, 2023, from 9:00am to 5:00pm** at Festival Hall located in downtown Cedar City - 105 North 100 East, Cedar City, UT, 84720. If are not familiar with this location, please look it up before the class so you can arrive on time.

1. Community Emergency Response Teams (CERT Teams) respond in the period immediately after a disaster when response resources are overwhelmed or delayed. CERT Teams are a bridge to professional responders until they are able to arrive. This training covers basic skills that are important to know in a disaster when emergency services personnel may not be immediately available. This training is sponsored by the State of Utah, Div of Emergency Management and the Iron County Office of Emergency Management.
2. Skills taught during the CERT classes are:
  - a. First Aid
  - b. Incident Command System (ICS)
  - c. Light Search & Rescue
  - d. Emergency Communications and other skills
3. CERT classes also prepare families and communities prior to emergencies and assist neighbors during an emergency when first responders are not immediately available.
4. **The majority of this class is online**- so you can take it at your own pace and not have to leave the comfort and safety of your home. It requires about 6-7 hours online. Each module is about 1 hour long consisting of Power Point slides and some Videos. **You MUST complete the online training before attending the class.**
5. The cost for the class is FREE. We will conduct the practical hands-on portions of the course on SATURDAY, **April 8, 2023, from 9:00am to 5:00pm** at Festival Hall located in downtown Cedar City.
6. Course materials for the CERT program including the PowerPoint Presentation slides, Training Videos & participant manual can be downloaded and viewed at this FEMA/CERT site: <https://www.ready.gov/cert>
7. If the above FEMA link doesn't work, just copy the link and put it in your browser and Go. Scroll down on the site and view/download the CERT Presentation slides and View all of the CERT training Videos BEFORE the class.
8. We are encouraging both husband and wife members to take the course. It will be a review for some of our members and new material for others. Both members should sign up individually for the course. You can view the material together or separately as you wish, as long as both of you attend the practical portion
9. CERT Backpacks and supplies will be provided to Iron County Residents during the class on Saturday.
10. Hard copy CERT student manuals will be provided during the class from the Iron County Emergency Manager.
11. Finally, You MUST take the online CERT class and /or review all the PowerPoint slides BEFORE the Saturday class. Normally this is a 24 hour in-person class- Due to Covid and other issues we are teaching only the practical, hands-on portion in a single 8 hour class. **The remaining 16 hours you must review on your own.**
12. Please RSVP your name and email to the Iron County Emergency Manager at [gcolson@ironcounty.net](mailto:gcolson@ironcounty.net) before April 1<sup>st</sup> so we can arrange to have all of the needed supplies at the class.
13. Thank You

Terry Meissner  
Iron County CERT Coordinator  
(435) 691-3742  
[Tmeissner@escgroup.us](mailto:Tmeissner@escgroup.us)