

# RAINBOW CANYONS AMATEUR RADIO CLUB NEWSLETTER

CEDAR CITY, UTAH



Club Websites: [www.rcarc.info](http://www.rcarc.info) OR [www.rainbowcanyons.com](http://www.rainbowcanyons.com) Number 4 – Vol. 3 – March 2022

## 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.

## 2022 Club Officer's

### President:

Fred Govedich

KI7TPD

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### Vice President

Ron Shelley

K7HDX

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[ronald.shelley@gmail.com](mailto:ronald.shelley@gmail.com)

### Secretary

Bonnie Bain

K17WEX

1-435-865-1653

[Bonnie.bain@gmail.com](mailto:Bonnie.bain@gmail.com)

### Treasurer

Linda Shokrian

KG7PBX

1-435-867-5914

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

### Newsletter Editor

Dennis L. West

W6DLW

1-760-953-7935

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



CQ, CQ, St. Patrick's Day



## Presidents Message

Dear Fellow Amateur Radio Operators,  
Hope everyone is having a great start to the year and that you are looking forward to another fun year of HAM radio! Winter Field Day went well and we had some great weather this year and everyone had a fun, but cold time. Next month we will have a presentation from S and K antennas on some of their new take-down J-Pole antennas. We will be starting our next HAM technician class so if you have any friends who want to start preparing for their HAM license let them know! We will try to have an 'Elmer' nights/classis soon as well as a swap meet in the early summer so start gathering your radio gear that you want to sell and maybe you can find a new rig that you want!

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

**March 8, 2022**

### **RCARC Club Meeting.**

7:00 pm. Cedar City Senior Center,  
489 E. 200 South. **S & K will do a  
presentation on their "New Take  
Down Antenna's".**

**April 12, 2022**

### **RCARC Club Meeting.**

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

**May10, 2022**

### **RCARC Club Meeting.**

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

**June 14, 2022**

### **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 have some new HAMS in the area so let's show them what they can do! 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 Club Breakfast**

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



## **RCARC Winter Field Day Statistics**

**CW contacts** – 72 – on 40 and 15 meters.

**Phone contacts** – 48 – on 80, 40, 20 and 15 meters.

**Digital contacts** – 40 - on 20 meters.



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



# **Happy St. Patrick's Day**



## Breakfast & Friendship Net Awards March 2022

Breakfast Net		Friendship Net		
<b>First Place</b>	<b>Third Place</b>	<b>First Place</b>	N7SIY - Sylvia	
KI7TPD - Fred	K7ZZQ - Johnny	K7HDX - Ron	<b>Second Place</b>	
KI7WEX - Bonnie		N7WWB - Darlene	KA7J - Lance	
K7ZI - Dick		K7NKH - Lee	KG7VEJ - Jack	
N7SIY - Sylvia		KI7TPD - Fred	KI7SXJ - Isaiah	
<b>Second Place</b>		KI7WEX - Bonnie	N7TCE - Merlin	
N7SND - Larry		K7WEP - Paul	<b>Third Place</b>	
KK7ZL - Ed		K7ZI - Dick	W6DLW Dennis	
K7DVP - Vernile		KI7LUM - Bruce	N7SND - Larry	
		KJ7LTQ - Brant		

### Rainbow Canyons Amateur Radio Club Treasurer Report as of February 8, 2022

Bank Statement has not been received yet so this report has not been reconciled but agrees with online bank balance as of February 8, 2022

#### Checks/expenses

Ck #109 - Field day Expense/ Soldering	- 23.87
Ck #110 - Flowers for Terry Lee SK	- 74.34
Rocky Mountain Power	- 21.04

#### Income

Memberships (see Linda for list of current)	+ 390.00
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Bank balance (not reconciled) February 8, 2022	\$2,241.15
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Submitted by  
Linda Shokrian KG7PBX  
2022 RCARC Treasurer  
435-867-5914

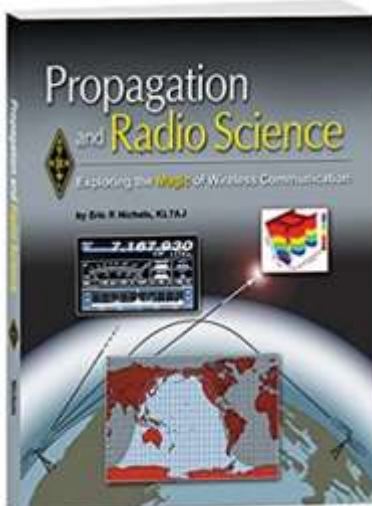


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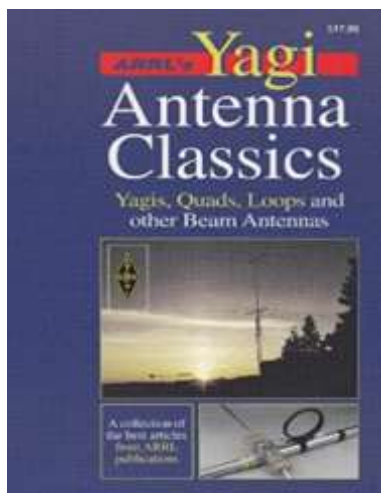
**RCARC March Book Giveaway. Books are donated by Linda Shokrian (KG7PBX)**

**Shown below is the book that will be given away at the March 8, 2022 meeting.**



**RCARC Book Giveaway Winner.**

**The winner of the February 8, 2022 book giveaway (pictured below) is: George Gallis (AL7BX)**



**Congratulations George**

## Contact Us.

### Mailing Address:

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

### Club E-mail:

[cedarcity.rcarc@gmail.com](mailto:cedarcity.rcarc@gmail.com)

### Newsletter E-mail:

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

### Website

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

[www.rainbowcanyons.com](http://www.rainbowcanyons.com)

### Face Book Page:

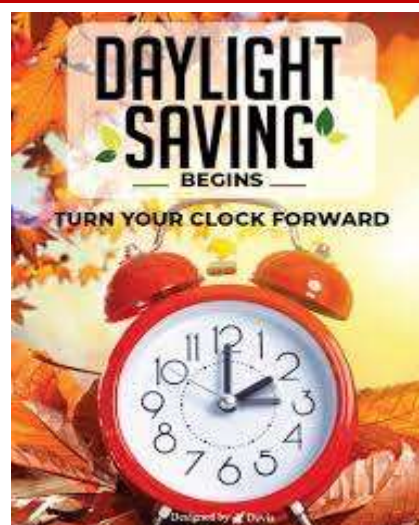
<https://www.facebook.com/groups/440325486875752/>

**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**



**Sunday March 13, 2022**



## Buzz's March Safety Tip(s)



During the winter months many people have space heaters they use to warm small areas. There have been a couple bad fires in the news lately caused by space heaters, some have taken lives. What a tragedy. Let's use those incidents to remind ourselves what to watch for and how to stay safe in our workplaces and homes.

### Follow these portable heater tips to help prevent winter fires and to stay safe this winter season.

Place space heaters on a solid, flat surface. Keep them at least three feet from things that can burn.



Check your space heater for cracked or damaged cords and plugs. Plug space heaters directly into wall outlets, don't use an extension cord or power strip.



Space heater safety tips. With the tragic news about the fire started by a space heater in New York City, I thought it would be timely to remind everyone about space heater safety. According to the National Fire Protection Association, nearly half (48%) of home heating equipment fires are reported during the months of December, January, February and March.

While more than two out of five (44%) of home heating fires involve space heaters, space heaters are involved in 86% of home heating fire deaths.

✓ If you are using a space heater to warm up, please be sure to plug all space heaters directly into a wall outlet and always turn it off when leaving the room or going to bed.

✓ In addition: ☐ Make sure a recognized testing laboratory has tested your heater. ☐ Make sure your heater has an automatic shut-off, so if it tips over, it shuts off. ☐ Keep anything that can burn, like bedding, clothing, and curtains, at least 3 feet away from your heater. ☐ Place space heaters on a solid, flat surface. ☐ Turn heaters off when you go to bed or leave the room.

Here is more information on winter heating and space heaters. <https://www.nfpa.org/public-education/by-topic/top-causes-of-fire/heating>

## RCARC CALENDAR IS BACK

Working with Russ Chaffe (N7BO) the calendar is up and running again.

To access the calendar for nets, meetings, training classes and other information ref. dates, times and location please see the calendar.

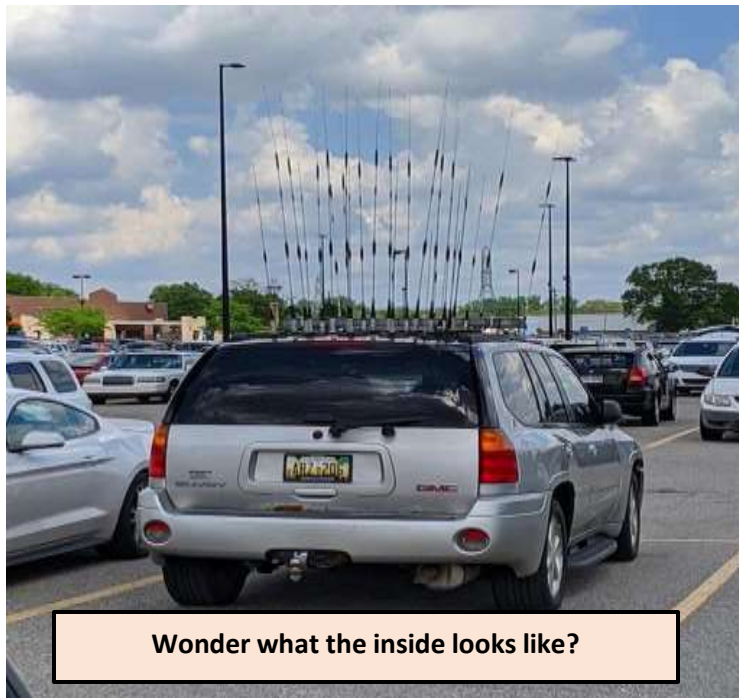
### To access the calendar:

1. Go to your favorite browser and type in **rcarc.info**.
2. When the home page comes up select **club info** from the menu on the left side of screen.
3. This will take you to the club info menu. Select **calendar**. The calendar page will then open.
4. As you browse through the calendar and there is something that you would like more info on place your cursor on the time listed for that event and left click just once. This will then bring up a second small window that will give you more detailed information if available.

If you have something you would like added to the calendar, please let me know. Editor.



Kenneth Rubio taking Technician Class License test at the February RCARC Meeting. Passed with a 100 percent score. Congratulation Kenneth.



Wonder what the inside looks like?

## Reminder

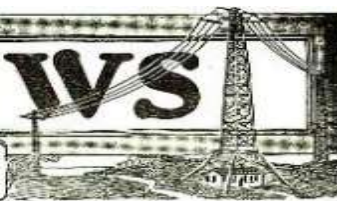
At the March 8, 2022 RCARC membership meeting. S & K will be on hand to present their new "Take Down Antenna"





# RADIO NEWS

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



Vol. 3

MARCH, 1922

No. 9

## Boom Times in Radio

**T**HE situation in radio for which every ardent well-wisher of the art has been longing, seems to have arrived at last.

Due to the activities of the various broadcasting stations throughout the country—there are now almost 80 such stations—the public, as we all know, has become an enthusiastic supporter of our great art.

But even the boldest prophet in radio, and the most ardent well wisher certainly never foresaw any such condition as has existed for the past few months and exists right now. The only parallel to the radio business at the present time is the recent rush to the Texas oil fields, or the boom times of the motion picture industry some years ago.

When the entire country is in the throes of depression, and with nearly every other industry, that one can name, running part time or else is at an entire standstill, the radio business is the young giant, that will soon rival such great industries as the automobile business—and this is not an idle prophecy.

The entire radio industry was caught unprepared when the rush started last December. No one had foreseen such a thing, or thought such a condition could be possible. People stormed stores in their effort to buy radio apparatus, and anything from a ten dollar outfit to a two hundred dollar one, found, and is finding, sales, just as rapidly as the material can be delivered.

During a single week, the writer has had on his desk correspondence, circulars, special letters and telegrams which show that over five million dollars of new capital went into the radio business for the period of a single week. Every manufacturer is working at capacity day and night, trying to keep pace with the demand, and the more he turns out, the more he falls back. It makes no difference what he makes—whether it is a knob, a dial, a detector or one of the expensive outfits—all find ready sale and overtax the capacity of every maker.

The public seemingly does not care what it buys or what the price is, and, as in any boom, it may be imagined that prices on radio goods are by no means low. In other words, the manufacturers and dealers are exacting top price.

This condition is a natural one, when people are storming the stores and are lining up behind the showcases six deep, and very often breaking the showcases in the bargain.

All these are bare facts, but we are far from saying that such a condition is a healthy one. A situation of this kind is the worst that can be imagined, for many reasons. In the first place, it makes for loose manufacturing methods. Some of the manufacturers who have not been in the game very long do not care what sort of material they turn out. Inspection is apt to be lax, and many a layman who starts in the radio field to-day is disappointed, for the reason that he cannot get results. Such a man will give the entire radio business a black eye, and we would impress upon all manufacturers to rather curtail their sales and turn out workable

instruments that will stand up, than make sales that will be a detriment to them later on.

The other dangerous condition that has sprung up lately is the ill-famed stock selling scheme. A manufacturer will get up a sample of a home radio outfit that looks like a Victrola, and run a full page advertisement of it in the daily papers. He has not a single outfit to sell, nor has he a plant in which to make them. Due to the boom conditions he will get many orders for future delivery, and he will show these orders to his victims as a proof that his venture is a tremendously profitable one. He will get out circulars and begin selling sock, as has been done in the past, to the detriment of the entire radio art.

When radio was young, several large concerns, as will be remembered, sold stock indiscriminately to the tune of many millions of dollars, out of which the public was defrauded. Due to this, the public for many years was wary of anything with the word "wireless" attached to it; as a result the entire radio business suffered proportionately. It is to be hoped that such business methods will be exposed as quickly as they spring up, as the radio business cannot now afford such dishonest methods.

The question which the writer is most often asked today is, how long will the boom last? When will the storm of prosperity blow over, leaving everyone prostrate with huge stocks on his hands?

It is our opinion that the present conditions will last for at least another year and that the radio business will be a very healthy one for several years to come. There will probably be the usual summer slack—although much less pronounced—and then a great rush for the fall and winter. The one thing regarding which we would caution dealers and jobbers is to be careful and not over-buy. Indications are that within the next six months there will be enough apparatus to go around. Tremendous efforts are being made by manufacturers to meet the situation, and with all the new capital being poured into the business, we estimate that within six months at the most the supply will exceed the demand. In other words, everyone, unless he buys carefully, will be overstocked, and the usual hardships will follow.

This not only holds true for the dealer who will find himself loaded with material on his shelves that he cannot move rapidly, but for the small manufacturer as well, who will have all his money tied up in merchandise for which the sale is not as brisk.

We will then witness the next cycle: price cutting, when real competition will begin in earnest. This condition, however, is at least six months distant, and perhaps a little further. It is due to come, however, at any time, for some of the supplies.

But as mentioned before, the radio business in general should be brisk for some time to come, and those who can read the future best, will no doubt reap the harvest.

H. GERNSBACK.



## RCARC ECOMM UNIT MEETS

Members of the RCARC EComm unit met on Thursday March 17<sup>th</sup> at 5:30 pm. at the Iron County EOC. Brad (WA7HHE) called the meeting to order.

Brad gave an overview of upcoming events that the EComm Unit will be participating in over the next few months:

1. March 10<sup>th</sup>, Southwest Utah Public Health Department (SWUPHD), Coalition Exercise.
2. April 16<sup>th</sup>, CCC/SPOC Conference.
3. April 21<sup>st</sup>, Great Utah Shake Out.

Additionally, conversations dealt with,

1. Understanding the Incident Command System (ICS) forms and their applications to the various exercises and programs.
2. Repairs and replacement of items on the EComm Antenna Tower Trailer along with finishing the Iron County CERT Trailer project. See Pictures below:



George Colson (Standing), Iron County Emergency Service's Manager addressing the attendees.



Brad (WA7HHE) conducting business.

## ARRL International DX Contest to Include New Categories, Rule Changes for 2022

Operators planning to participate in the [ARRL International DX Contest](#) should be aware of some new entry categories and rule changes. The CW edition is this weekend, starting at 0000 UTC on Saturday, February 19 (Friday evening, February 18 in North American time zones), and concludes at 2359 UTC on Sunday, February 20.

New this year: The Single-Operator, Single-Band (SOSB) category has been expanded to include *three* power level subcategories -- QRP (5 W PEP output or less), Low Power (100 W PEP output or less), and High Power (1,500 W PEP output or the maximum allowable power level established by the national licensing authority issuing the operator and/or station license, whichever is less) -- for both Non-Assisted and Unlimited (Assisted) entries.

Also new for the ARRL DX 2022 Affiliated Club Competition, multioperator DXpedition scores -- operations from outside the US and Canada -- may be distributed among Medium and Unlimited category clubs that each operator declares. To be eligible to receive the scores, the club must be active in the ARRL's Club Eligibility listing, and the operator's call sign must be included in the club's eligibility list. Each eligible operator's portion of the total station score will be attributed to the club of their choosing.

The [Affiliated Club Competition](#) rules include more details.

In addition, multioperator station accommodations put in place for 2021 have been extended to the 2022 running of the event. This permits multioperator station participants to operate from their home stations in conjunction with a multioperator station. The home stations must be within 100 kilometers (62 miles) of the multioperator station and must be within the same DXCC entity, US state, or Canadian province.

Complete [rules and more information](#) are available on the ARRL website.



# RCARC February General Membership Meeting Pic's

A special thanks to George (AL7BX) for his presentation on CTCSS & DTMF Tones.



Members waiting for the meeting to start.



Fred (K17TPD) calling meeting to order.



Pledge of Allegiance



Fred (K17TPD) conducting meeting business.



George (AL7BX) introducing his presentation on DTMF and CTCSS Tones and their application.



George (AL7BX) showing what the different tones look like on the waterfall.

**The Rainbow Canyons Amateur Radio Club (RCARC)  
is Sponsoring an Amateur Radio**

# **Technician Class**

**Beginner Level for Ham Radio**

**Dates: Thursdays - March 10, 17, 24, 31 and April 7<sup>th</sup>, 2022  
with the test, Thursday April 14, 2022  
Time: 6:00 pm - 9:00 pm**

**Where: Cedar City Senior Center  
489 E 200 South, Cedar City, UT 84720**

**Class Cost: Free**

**Study Manual: Free Download  
Please bring to class**

**<http://www.ad7fo.com/media/TechLic2018.pdf>**

This class will be presented live, in person at Cedar City Senior Center, live on Zoom (connect info will be sent out before first class - please be sure I have your email address) and a recording will be available on rcarc.info. You may attend however fits your schedule but must be present in person for testing on April 14th. If you cannot make the 14th, other arrangements can be made.



**Contact to register:**

**Linda Shokrian KG7PBX  
435-867-5914 or  
email: [Lgshokrian@gmail.com](mailto:Lgshokrian@gmail.com)**

**There is a \$15 ARRL Test Fee**



## RCARC MEMBERS PARTICIPATE IN SELF PREPAREDNESS SAFETY FAIR

On February 12<sup>th</sup>, the Enoch, Utah Stake sponsored a *Self-Preparedness fair*. The topic presented was “What would you do when normal communications are disrupted by either a disaster or other mode?” How would you communicate with your family, schools and other?

RCARC members assisted Dick Parker (K7ZI) in discussing with and handing out informational flyers to the attendee’s reference various forms of electronic communication, (not just ham radio), that are available to the public. They would include: FRS/GMRS, CB, Ham radio, Satellite phone, Business band radios, etc.

Each has its particular pro/con associated with it (availability, functionality, price, etc.) that people need to consider.

In addition, members provided live radio demonstrations through out the morning.

See Pictures below:



John (KI7SCX) Kevin (K2MFK) and Ron (K7HDX) speak with Safety Fair attendees about the various ways of communicating.

**Continued next column**



Kevin (K2MFK) discussing the upcoming RCARC sponsored Technician Class Flyer with an attendee.



Ron (K7HDX) pointing to a portable antenna that was set up to conduct the radio demos. (Kevin (K2MFK) discussing the difference between the short/long rubber HT antennas.



Dick (K7ZI) in conversation with attendees.

## RCARC ECOMM UNIT TO PARTICIPATE IN THE SOUTHWEST UTAH HEALTHCARE COALITION EXERCISE

The 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. RCARC E-comm members staff the Ham Radios at our local hospital and provide radio communication for Iron County.

The exercise will take place on March 10, 2022.



## Some New Rules Going into Effect this Year for ARRL Field Day

After taking a few detours over the past couple of years due to the COVID-19 pandemic, [ARRL Field Day](#) rules are being updated on a permanent basis starting this summer. ARRL conducted a Field Day community survey with invitations propagated far and wide, and direct emails sent to more than 15,000 individuals and ARRL-affiliated clubs. After sorting through, reviewing, and discussing the survey results, the ARRL Programs and Services Committee recommended a number of rule changes for ARRL Field Day, which will take place this year over the June 25 - 26 weekend.

Starting this year, the maximum PEP output for a transmitter used by anyone submitting a Field Day log will be 100 W. The power multiplier of 2 will remain in place, and the high-power category will be removed from the rules. Until this year, the maximum low-power limit had been 150 W for most ARRL-sponsored operating events.

The power multiplier will remain at 5 for QRP participants running a maximum of 5 W or less. As previously announced, 100 W is now the low-power category limit for all ARRL and IARU HF Contests, effective January 1, 2022.

A couple of changes instituted initially as accommodations for the COVID-19 pandemic will remain. Class D (Home) stations will continue to be able to earn points for contacts with other Class D stations. The club aggregate scoring change initiated in 2020 as a temporary measure will become part of the permanent rules. In the aggregate scoring plan, the scores of individual stations are combined under the score of a single club.

Another change, involving Rule 7.3.2 Media Publicity, has been modified. Rules to date have offered 100 bonus points for attempting to obtain publicity and demonstrating same. With the ease of posting via Facebook, Twitter, Instagram, and various other media websites, Field Day participants will now be required to obtain publicity, not just try to do so. Any combination of bona fide media hits would qualify for the bonus points. For example, posting the details of your upcoming or ongoing Field Day activity, or your Field Day results, on a club or news media site, on Facebook, or via Twitter and Instagram would meet the bonus criteria. Photos and videos are encouraged as part of media posts.

### A Little Ham Humor

An elderly ham driver was going down the interstate when suddenly his 2-meter rig crackled his call...Answering...he heard a fellow ham's urgent warning...." Hey Jim, just heard on the news that there's a car going down I-35 the wrong way, please be careful"!!

Jim replied, "Well I declare, it's not just one..... there's hundreds of them'!!!!!!!!!!

Continued next column



## Can RF-Receivers detect Earthquakes?

Evidence has been mounting that it might be possible to detect earthquakes by measuring the changes in the ionosphere.

The RF-Seismograph team has been collaborating with Earthquakes Canada to find a correlation between HF propagation and earthquakes. There was a distinct event that occurred on Nov 1st (M5.0 off the coast of Vancouver Island) which was detected by the RF-Seismograph.

We are in the process to correlate earthquakes that are bigger than M6.0 into the 4 years of data we have accumulated. Attached you will find a compilation of the year 2016 and all significant earthquake data that was given to us by Earthquakes Canada.

We also believe that tsunamis create RF-signatures and will further investigate on this.

**Please access the PDF study and findings here;**

<http://www3.telus.net/public/bc237/MDSR/IntroductionRF-SeismographandEarthqakes.pdf>

The RF-Seismograph uses a HF radio, a LIF interface to decode the IF via a sound card and a 9-band vertical antenna to receive and record RF-background noise and log the data into files.

For more info on LIF go to:

<http://users.skynet.be/myspace/mdsr/index.html>



## ARRL Announces New World-Wide Digital Contest

The [ARRL World Wide Digital Contest](#) will debut at 1800 UTC on June 4, ending at 2359 on June 5, 2022. All non-RTTY modes are permitted. Going forward, RTTY will be the sole mode for the ARRL RTTY Roundup, which will continue to take place in January.

In broad strokes, this will be an HF to 6-meter event, on 160, 80, 40, 20, 15, 10, and 6 meters, with single-operator and multi-single-entry categories. These are Single Operator, One Radio (SO1R), Single Operator, Two Radio (SO2R), and Multi-Single (MS). Overlays in the single-operator categories will include "all enclosed antennas" and "maximum of 8 operating hours." Single-operator entries may operate for 24 hours (with off times taken in one or two breaks that are at least 60 minutes long), while MS entries may operate for the full 30 hours.



Operating assistance is permitted for all operating categories.

Power categories will be:

- **QRP** (5 W transmitter output or less)
- **Low Power** (maximum 100 W PEP transmitter output)

The exchange for the World-Wide Digital Contest will be a station's four-character grid square designation. Stations may work each other once per band, regardless of digital mode.

**Continued on page 16**

## UTC (Zulu) Time Conversion Chart

UTC (Zulu)	PST/ALDT	PDT/MST	MDT/CST	CDT/EST	EDT/AST	ALST	HST	UTC (Zulu)	PST/ALDT	PDT/MST	MDT/CST	CDT/EST	EDT/AST	ALST	HST
0000*	1600	1700	1800	1900	2000	1500	1400	1300	0500	0600	0700	0800	0900	0400	0300
0100	1700	1800	1900	2000	2100	1600	1500	1400	0600	0700	0800	0900	1000	0500	0400
0200	1800	1900	2000	2100	2200	1700	1600	1500	0700	0800	0900	1000	1100	0600	0500
0300	1900	2000	2100	2200	2300	1800	1700	1600	0800	0900	1000	1100	1200	0700	0600
0400	2000	2100	2200	2300	0000*	1900	1800	1700	0900	1000	1100	1200	1300	0800	0700
0500	2100	2200	2300	0000*	0100	2000	1900	1800	1000	1100	1200	1300	1400	0900	0800
0600	2200	2300	0000*	0100	0200	2100	2000	1900	1100	1200	1300	1400	1500	1000	0900
0700	2300	0000*	0100	0200	0300	2200	2100	2000	1200	1300	1400	1500	1600	1100	1000
0800	0000*	0100	0200	0300	0400	2300	2200	2100	1300	1400	1500	1600	1700	1200	1100
0900	0100	0200	0300	0400	0500	0000*	2300	2200	1400	1500	1600	1700	1800	1300	1200
1000	0200	0300	0400	0500	0600	0100	0000*	2300	1500	1600	1700	1800	1900	1400	1300
1100	0300	0400	0500	0600	0700	0200	0100	2400	1600	1700	1800	1900	2000	1500	1400
1200	0400	0500	0600	0700	0800	0300	0200								

### Coordinated Universal Time, or Zulu

**PST** = Pacific Standard Time (UTC - 8 hours)

**ALDT** = Alaskan Daylight Time (UTC - 8 hours)

**PDT** = Pacific Daylight Time (UTC - 7 hours)

**MST** = Mountain Standard Time (UTC - 7 hours)

**MDT** = Mountain Daylight Time (UTC - 6 hours)

**CST** = Central Standard Time (UTC - 6 hours)

**CDT** = Central Daylight Time (UTC - 5 hours)

**EST** = Eastern Standard Time (UTC - 5 hours)

**EDT** = Eastern Daylight Time (UTC - 4 hours)

**AST** = Atlantic Standard Time (UTC - 4 hours)

**ALST** = Alaskan Standard Time (UTC - 9 hours)

**HST** = Hawaiian Standard Time (UTC - 10 hours)

**Copy and place in your wallet**

To Convert From:	To Zulu Time:
Eastern Standard	Add 5 hours
Eastern Daylight	Add 4 hours
Central Standard	Add 6 hours
Central Daylight	Add 5 hours
Mountain Standard	Add 7 hours
Mountain Daylight	Add 6 hours
Pacific Standard	Add 8 hours
Pacific Daylight	Add 7 hours



# Anatomy of a Rubber Duck



Longer versions of the rubber duck design may provide improved performance.

**H**ow did the rubber duck get its nickname? Some allege that Caroline Kennedy, daughter of President John F. Kennedy, used the term "rubber ducky" to describe the antenna on a Secret Service agent's radio. The agents thought it was cute and its usage spread from there. Others claim that the name originated with the late Tom Clark, K3IO, who was a NASA scientist in the 1960s.

Regardless of who gets credit for the name, the rubber duck antenna has a surprisingly long history. It was invented in 1958 to solve an annoying problem. In those days, portable radios used collapsible antennas. Not only were these antennas long and cumbersome (about 19 inches long for use at VHF frequencies, and sometimes even longer), they were prone to becoming permanently bent or even broken. If you've ever played with a collapsible antenna on a portable receiver, you know how easy they are to damage.

The soon-to-be-christened rubber duck design offered an alternative by twisting the entire length of the antenna into a much shorter, and much more flexible, spring. The spring was then encased in plastic or rubber with a connector at the bottom.

By the time the first amateur handheld transceivers appeared, rubber ducks were the established standard, and have remained so ever since.

## Performance

Rubber duck antennas are incredibly durable, and that's their major advantage — when it comes to performance on the air, these antennas are quite poor. They are highly inefficient, which means they do a mediocre job of radiating your transmitted signal.

A rubber duck antenna will limit the effective range of your handheld transceiver to just a few miles, depending on where you are located. If you're strolling through skyscraper canyons in a big city, the range will be even less. On the other hand, if you are on top of one of those tall buildings, you could communicate much farther.

If rubber ducks are such inferior antennas, why do so many people use them? The answer can be summarized in a single word: *repeaters*. The superior antennas and sensitive receivers found at most repeater installations compensate for deficiencies of the rubber ducks by relaying their weak signals. Powerful repeater transmitters can be heard by rubber-duck-equipped handheld radios as well.

Thanks to repeaters, a person with a handheld radio can communicate over substantial distances. A repeater effectively extends the range of a rubber duck antenna from a few miles to tens of miles or more.

## Making the Most of a Rubber Duck

There are a few things you can do to extend the range of your rubber duck antenna. Take your radio to a high location; if you're in a building, stand next to a window. If you're in a vehicle, pull over and stand outside — you'd be surprised at how much being inside a car will limit your range.

You may also want to consider purchasing a longer version of the rubber duck antenna. There are models that offer the same physical flexibility, but the helical antenna itself is longer. Longer rubber ducks are still not stellar performers, but they may significantly boost your communication range. For more tips, see "A Better Signal from Your Handheld," in the November/December 2021 issue of *On the Air*.



Far left: A typical rubber duck antenna. This model is designed for UHF frequencies.

Left: Here is a look inside a rubber duck antenna. The plastic covering has been removed so that you can see the spring-shaped antenna within.  
[Bob Witte, KØNR, photo]

## ARRL Announces New World-Wide Digital Contest- continued from Page 13

Participants will earn 1 point for each contact, plus 1 point for each 500 kilometers (310 miles) between stations. So, a contact between stations 1,000 kilometers apart would be worth 3 points. The total score is total contact points.

ARRL makes available a grid-center [distance calculation tool](#). Options include kilometers (always rounded up), distance between pairs, and points.

For instructions on how to [submit logs](#), visit the ARRL Contest page. Logs will be due 7 days after the event has concluded.

In succeeding years, the World-Wide Digital Contest will take place on the first full weekend of June.

[Full details](#) on the new operating event are on the ARRL website.

## Vintage Radio Pictures



Continued next Column





## DO YOU HAVE A RADIO GO BAG?

Would you be ready if a call came from your local public service group to provide some ham radio expertise for a day or so? Items in the following list are the basics of what should be in your radio go kit. Now is a good time to check your supplies and be prepared! Don't forget to put together a personal go kit, too.

- Dual-band (VHF/UHF) handheld radio and mini manual
- Full-size flexible whip antenna
- Copy of your Federal Communications Commission (FCC) license and any public service group or government agency IDs
- Mag-mount antenna with necessary adapters for connecting to various connectors
- Extra coaxial cable with the right connectors for your radios
- Extra battery packs and charger
- AA-cell battery pack if available and fresh batteries
- AC power supply and auxiliary power (cigarette lighter) adapter with spare fuses
- Headset with microphone (preferred) or speaker-mic
- Copy of your local public service team's frequencies, phone numbers, and procedures
- Pocket knife and/or multipurpose tool
- Flashlight or headlamp and spare batteries
- Pencil and notebook, clipboard, and permanent marker
- Duct tape, electrical tape, and a few small cable ties
- Cash for food, gas, and telephone calls (about \$20 in small bills and change)

## Citizens Corps Council/Single Point of Contact (CCC/SPOC) Emergency Preparedness Conference coming to Cedar City.

The conference is free: See information below to register and get your tickets.

This Local Citizens Corps (MRC, CERT, VIPS, Fire Corp and neighborhood Watch) conference will take place on Saturday, April 16<sup>th</sup>. It will be held at the Cedar City, Heritage Center from 9:00 am. to 4:00 pm.

There will be speakers discussing Ham Radio, School Reunification after an event, Red Cross, Mental Health & Resilience, Disaster Planning and the Enoch Flood, Opioid Response, Rapid Disaster Assessment in your neighborhoods, and more.

It is going to be a great day with lunch and a lot of good information being shared. If you are interested and able to attend, please go to the following link to register:

<https://www.eventbrite.com/e/cccs poc-emergency-preparedness-conference-tickets-162853863289>.

Then place it in your calendar so you don't forget. The Conference Organizer's would like to get an accurate report on attendees for room occupancy and food. The organizer's request that if you register, please make every effort to attend.



**What is the Amateur Radio Newsline?**

**A:** Amateur Radio Newsline™ is a free service to the amateur radio community. Ham Radio news stories from around the world. Check it out at the following URL. <https://www.arnewsline.org>

# Distress Call

It's unlikely that you will hear a radio distress call but hams should know how to respond to one. Hopefully you will never need to send a distress call yourself but it's best to know how to call for help in an emergency.

G2B02-2015 What is the first thing you should do if you are communicating with another amateur station and hear a station in distress break in?

**Acknowledge the station in distress and determine what assistance may be needed**

While some situations may be questionable, if life/health/property are genuinely threatened, it merits a distress call. Basically, if you would want police, fire, or ambulance response, it's a distress scenario.

Obviously if one is in town with a telephone nearby, the proper response is to call local emergency services (in USA, dial 911). But if the phones are down or someone is very remote, radio may be the only way to communicate.

Distress calls are formally done by voice mode using the term Mayday-Mayday! SOS is the CW mode or Morse visual equivalent of Mayday; you are even less likely to encounter it.

## **If you hear a distress call:**

First of all, stop whatever you are doing (QSO, or whatever) and cease all transmissions to avoid interfering with the distress call or a response.

Second (very important!), write down everything you hear related to the distress call. Under duress, people tend to forget things and stress will be high at both ends of the radio. Details about the incident are crucial for sending help. Include the date, time, frequency and mode.

Third, see if anybody else responds. Perhaps there is another station in a better position to react (location, facilities, etc.) If nobody else does, briefly ID and ask what is the nature of the incident. The distress station may not have a call sign or know proper radio procedure; be prepared to work with a non-ham at the other end. If time permits, confirm the details you wrote down with the distress caller.

Fourth, determine how to help the distress station. You need to get them help, but that depends on the location and nature of the trouble. If unclear or uncertain, contact local emergency services and let them help you sort it out, even if the distress is far away. In any case you must relay important detail such as the type of emergency, how many people are involved, and the distressed party's location. The Mayday caller may also provide specific guidance if they are trained and knowledgeable.

G2B12-2015 When is an amateur station allowed to use any means at its disposal to assist another station in distress?

**At any time during an actual emergency**



## Distress Call – Continued from Page 18

**To send a distress call should you ever need to:**

If the phones are down, use your VHF/UHF radio on a local repeater or [national simplex frequency](#) where other hams are likely to copy you (choose the most active local repeater).

If you are very remote and there is no chance any line-of-sight radios can pick you up, you'll need a HF rig and antenna. Use the most suitable band for calling Mayday or SOS, considering time of day and propagation conditions.

**G2B11-2015 What frequency should be used to send a distress call?**

***Whichever frequency has the best chance of communicating the distress message***

Whether locally on VHF/UHF or more distant HF distress calls, call “Mayday-Mayday” with ID. Wait for a response, then repeat until someone replies. Consider your power source; if limited to small batteries, don’t call too often or for long.

Once someone replies, give essential info only. At minimum, nature of emergency, how many people are involved, and location.

During VHF/UHF or HF nets or ordinary contacts a ham may report an urgent situation by transmitting “Emergency” and their call sign

**T2C06-2018 Which of the following is an accepted practice to get the immediate attention of a net control station when reporting an emergency?**

***Begin your transmission by saying "Priority" or "Emergency" followed by your call sign***

Another commonly-recognized emergency interruption is to transmit “break-break” plus your call. Upon hearing “emergency” or break-break” other hams should cease transmission and someone (NCS in case of net) should ask for info from the distress station.

By the way, the use of [phonetics](#) is essential for precise, reliable communication during a distress situation. Another good reason to know and practice the ITU phonetic alphabet.

In summary, we hope you will never have to send or respond to a distress call, but you should be familiar with them and know how to deal with either situation.

**It's that time again.  
Just another reminder to Spring Forward.  
March 13, 2022 at 2:00 am.**



## February RCARC Pastry Pub Breakfast Pic's



RCARC members gathered for breakfast in the newly decorated banquet room.



Terry West, Linda (KG7PBX) and George (AL7BX) in conversation.



Ed (KKZ7ZL) and wife Jan enjoying the morning break.

Continued next column



Caught Tammy (KI7LVB) and Tim (KI7LVC) just as they received their breakfast.



Dick (K7ZI) and Wife Susan on left. Brody (K7VXV) and son Colby enjoying breakfast.



Does anyone know what this antenna does and what band (s) it might cover. Just curious.



## Amateur Radio in Ukraine Ordered Off the Air in State of Emergency

A state of emergency was declared in Ukraine just prior to the Russian military invasion. Among other things, the February 24 decree from President Volodymyr Zelensky will remain in effect at least for 30 days and may be extended.



As published on the website of the Verkhovna Rada, Ukraine's unicameral legislative body, the state of emergency includes regulation of TV and radio activities and "a ban on the operation amateur radio transmitters for personal and collective use."

The decree also imposes a ban on mass events and on strikes and authorizes checking the documents of citizens, and if necessary, conducting searches on persons, vehicles, cargo, office space, and housing. A curfew could be imposed. "The situation changes rapidly," IARU Region 1 Secretary Mats Espling, SM6EAN, said. "IARU Region 1 continues to monitor the development and expect all radio amateurs to follow their national laws and regulations."



## Tickets are on Sale for Next QSO Today Virtual Ham Expo, March 12 - 13

ARRL Life Member Courtney Duncan, N5BF, will be the keynote speaker for the [QSO Today Virtual Ham Expo](#) on Saturday, March 12, in the QSO Today Virtual Ham Expo auditorium. The semi-annual virtual ham radio gathering will be live on March 12 - 13. Duncan will discuss the importance of amateur radio and technical hobbies in advancing global technology. Just retired from NASA's Jet Propulsion Laboratory (JPL), Duncan supported numerous missions involving digital and radio frequency hardware and software, most recently as telecommunications lead for the Ingenuity Mars Helicopter.



This edition of the QSO Today Virtual Ham Expo will showcase a wide range of topics with appeal to newcomers and veterans alike. It's a chance to update your amateur radio knowledge and get exposed to cutting edge ham radio technology as well as practical operating and building techniques. Like a live ham radio convention or Hamfest, the Expo has presentations, exhibits, and state-of-the-art "lounges" for face-to-face interaction among participants.

Some 60 ham radio luminaries [will address a multitude of topics](#), from DXpeditions to Solar Cycle 25. Some highlights include:

- Mike Crownover, AB5EB; Erwann Merrien, LB1QI, and Bill Straw, KO7SS [will discuss their plans](#) to operate from Bouvet Island in November 2022.

**Continued on Page 22**

## Tickets are on Sale for Next QSO Today Virtual Ham Expo, March 12 – 13 — Continued from Page22

- ARRL Central Division Director and ARRL Electromagnetic Compatibility Committee Chair Carl Luetzelschwab, K9LA, will present an [Update on Solar Cycle 25](#).
- [Chasing DX During A Contest](#) is the subject of a presentation by Bill Salyers, AJ8B. He'll offer best practices, tools, and techniques to increase your chances of logging DX during operating events.

Because it's a virtual event, you don't have to pick and choose which presentations you can attend. You can watch any one of them within 30 days of the Expo as well as explore exhibitor offerings from the comfort of your computer or other device.

[ARRL The National Association for Amateur Radio](#)® is a QSO Today Virtual Ham Expo Partner.

"Early bird" tickets are \$10 through March 6 and then \$13.50 to the end of the on-demand period. Tickets include entry for the live, 2-day event and the 30-day on-demand period.

## FCC: Amateur Service Licensees May Not Use Their Radios to Commit Criminal Acts

The FCC Enforcement Bureau has re-issued its earlier [Enforcement Advisory](#) that licensees in the Amateur Radio Service and licensees and operators in the Personal Radio Services are prohibited from using radios in those services to commit or facilitate criminal acts.

"The Bureau recognizes that these services can be used for a wide range of permitted and socially beneficial purposes, including emergency communications and speech that is protected under the First Amendment of the US Constitution," the FCC said.

Continued next column.

"Amateur and Personal Radio Services, however, may not be used to commit or facilitate crimes."

As it did in advisories in 2021, the Enforcement Bureau is reminding amateur licensees that they may not transmit, "communications intended to facilitate a criminal act" or "messages encoded for the purpose of obscuring their meaning."



"Likewise, individuals operating radios in the Personal Radio Services, a category that includes Citizens Band radios, Family Radio Service walkie-talkies, and General Mobile Radio Service, are prohibited from using those radios "in connection with any activity which is against Federal, State, or local law.

"Individuals using radios in the Amateur or Personal Radio Services in this manner may be subject to severe penalties, including significant fines, seizure of the offending equipment, and, in some cases, criminal prosecution.

"To report a crime, contact your local law enforcement office or the FBI, the FCC said." End.

It looks like the NAB (National Association of Broadcasters) is also opposing the Forest Service proposed site usage fees. Here is a link to an article about it:

[https://www.radioworld.com/news-and-business/business-and-law/nab-opposes-forest-service-proposal-to-add-comms-fee-for-rural-coverage?utm\\_source=SmartBrief&utm\\_medium=email&utm\\_campaign=0028F35E-226C-4B60-AC88-AB2831C8A639&utm\\_content=458CE37A-319F-4541-879D-EF31E37B58DA&utm\\_term=879f703b-a79d-4623-8014-727c57275280](https://www.radioworld.com/news-and-business/business-and-law/nab-opposes-forest-service-proposal-to-add-comms-fee-for-rural-coverage?utm_source=SmartBrief&utm_medium=email&utm_campaign=0028F35E-226C-4B60-AC88-AB2831C8A639&utm_content=458CE37A-319F-4541-879D-EF31E37B58DA&utm_term=879f703b-a79d-4623-8014-727c57275280)