

RAINBOW CANYONS AMATEUR RADIO CLUB NEWSLETTER

CEDAR CITY, UTAH



Club Websites: www.rcarc.info OR www.rainbowcanyons.com

Number 1 – Volume 2 - March 2019

Club Meeting Information

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

2019 Club Officer's

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Presidents Message

Greetings fellow HAMs!

It has been a busy month, but also a productive one! Many thanks to all of those who make our meetings great by asking questions, providing food and drinks, and by agreeing to lead a presentation or discussion. Even though we were displaced this month we were all able to come together and make our last meeting a productive one. At our meeting this month we will learn more about repeaters. Also bring your radio equipment if you need help with programming your radio, I am sure we can help!

On the fund-raising front I have been working with a couple of local businesses and it looks like we will be able to have some very nice callsign/name badges that we will be able to sell for \$10 each. I will bring examples to the next meeting, but they look really nice and include the Rainbow Canyons Amateur Radio Club logo. I have also been talking with a local embroidery/t-shirt business and we will be able to get Polo shirts with pockets in the men's style and the RCARC logo over the pocket. They do not make a women's Polo with a pocket... (sorry!!!), but we will be able to have the logo on the left-hand side.

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.

7:30 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.

8: p.m. Saturdays – SSTV – 449.925.

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

Local Repeaters:

146.980 MHz – Tone 100.0 hz
146.940 MHz – Tone 100.0 hz
146.760 MHz – Tone 123.0 hz
147.160 MHz + Tone 100.0 hz.
448.800 MHz – Tone 100.0 hz

Remote Bases:

449.500 MHz – Tone 100.0 hz
449.925 MHz – Tone 100.0 hz

ILRP/Echolink

449.900 MHz – Tone 100.0 hz



<p><u>Save The Date</u> Dayton Hamvention 2019 ARRL National Convention May 17-19, 2019 For additional information see: www.hamvention.org</p> <p>ARRL Field Day 2019 ARRL Field Day Activities June 22 and 23, 2019 Tentative Location – 3 Peaks Additional information to follow</p> <p>March 2019 RCARC Club Meeting Ham Radio Presentation Don Blanchard (WA7GTU) will be doing a presentation on Repeaters. See: Club meeting information on page one for location and meeting time.</p> <p>April 2019 RCARC Club Meeting Ham Radio Presentation presentation on the many different types of Antenna's See: Club meeting information on page one for location and meeting time.</p>	<p>Presidents Message cont'd from Page 1.</p> <p>We have many options for colors and we can also have an optional callsign or other message add on the back for an additional \$3. We will be able to sell the basic Polo with RCARC logo for \$30. They will also do t-shirts with or without pockets and we can sell those for \$20. For those who want a hat we can also have callsign hats made for \$15.</p> <p>I hope everyone has been getting out on the radio! We have many fine nets in the area as well as opportunities to participate on HF contests so get out there, have fun, and play on your radio! If you need help with setting up your radio, software or other equipment please ask your fellow HAMs for help! Part of the fun is helping others!</p> <p>Cheers!</p> <p>Fred (KI7TPD)</p>	<p>RCARC Club Breakfast</p> <p>Come join us the first Saturday of every month at 9:00 a.m. for breakfast at the Pastry Pub located at 86 W. Center Street, Cedar City. Check out their website at: www.cedarcitypastrypub.com</p> <hr/> <p><u>A little Ham Radio Humor</u></p> <p><u>THE BOOTLEGGER</u> The bootlegger walks into a radio store and tells the salesman that he would like to by the new HF rig over in the corner. The salesman says, "Sorry, we don't sell to bootleggers" He leaves, goes home, puts on a brown wig and sunglasses and goes back to the store and tells the salesman that he wants to buy that new rig in the corner. Sales guy says, "Sorry we don't sell to bootleggers". Old boot asks, "How do you know I'm a bootlegger?" and the salesman replies. "Because that's not a rig, it's a microwave oven."</p>
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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>

The FCC is Back in Business

01/29/2019

[UPDATED: 2019-01-29 @ 2115 UTC] In the wake of the more-than-month-long partial government shutdown, the FCC said today that it would be tackling the backlog of applications already in the queue over the course of a couple days. The FCC had earlier indicated that it would resume processing Amateur Radio applications starting today. Subsequently, the Commission requested that Volunteer Examiner Coordinators (VECs) give the agency time to work through its already-pending backlog, before they submit any additional new files. Information released before the shutdown said the FCC would take the first day it was open, which was Monday, January 28, to get idle systems up and running again.

"The FCC has resumed all operations since the partial funding lapse has ended," the FCC said via Twitter on Monday.

The ARRL VEC now is awaiting word that it can transmit some 2,300 pending Amateur Radio applications it has in the queue, many of them from 325 ARRL VEC examination sessions that took place during the shutdown or immediately prior to it. These do not include files that the other 13 VECs may be waiting to upload to the Universal Licensing System ([ULS](#)). ARRL VEC Manager Maria Somma, AB1FM, said the ARRL VEC won't send all its pending files until it's sure the system is working properly.

"We had some files already pending in their system, and then also uploaded a few new files into their system today to see if anything is happening yet," she said earlier. Once the FCC gives the okay, "we are sending all of our files!" Somma said.

In a January 28 [Public Notice](#) addressing filing deadlines, the FCC pointed out that its filing window, mail operations, and electronic filing systems have been unavailable or unsupported during the partial shutdown, "except for filings necessary for the protection of life and property and filings related to spectrum auction activities."

The FCC had announced in early January that all filings that would have been due during the suspension of operations, including applications to the ULS, would become due on the business day following the resumption of normal operations, January 29. "If the Commission is unable to restore electronic filing systems on the day the government reopens, the Commission may issue another *Public Notice* further extending filing deadlines." The January 28 *Public Notice* said the Commission was extending those deadlines by 1 day. "Thus, deadlines for all filings that would have been due from January 3 through January 29 are now extended until January 30, 2019," the FCC said.

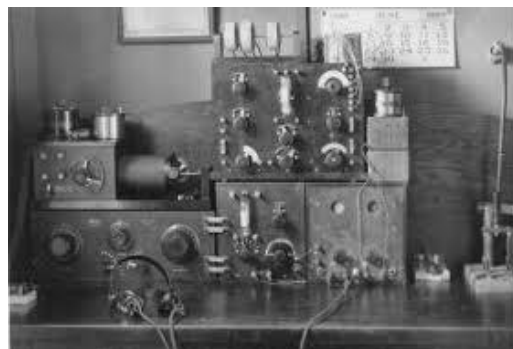
If an Amateur Radio license recently had expired or was about to expire before the shutdown, the licensee could apply for license renewal via the ULS and continue to operate while the FCC was closed, with the filed application remaining in limbo. Licensees who waited until the FCC reopened to apply will have 2 days to submit a renewal application before the license is considered to have expired in the FCC database.

The resumption of normal FCC operations means the FCC's January 30 open meeting will be an in-person session. The Commission had made provisions for a teleconference should the shutdown not be over by the meeting date. The FCC said, however, that due to the funding lapse, items initially included in the tentative agenda published on January 3 would not be considered at this week's meeting, which would address only "Commission announcements."

Vintage Ham Radios of the Past



1929 Radio Transmitter



Amateur Radio Station from a bygone era



Crystal Radio from 1925

Digital Modes Using Ham Radio Presentation and Demonstration



George Gallis (AL7BX) talks about Digital Modes using Ham Radio and the evolution to such modes from the 1970's to present day at the February 12, 2019 Rainbow Canyons Amateur Radio Club (RCARC) Meeting.

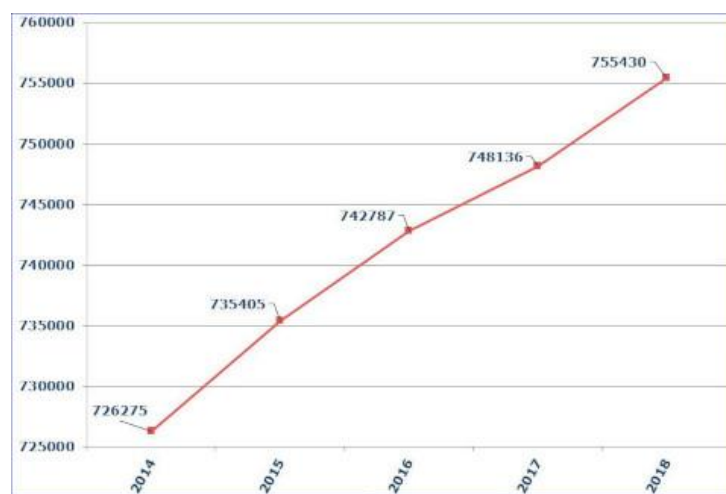
Ken Richter (KR7KR) who is tag teaming with George (AL7BX) on the Digital Mode using Ham Radio Presentation answers questions from the club members in attendance.



Meeting attendees listening to the Digital Modes using Ham Radio Presentation.

US Amateur Radio Population Grows Slightly in 2018

The US Amateur Radio population once again grew by about 1%, based upon 2017 and 2018 year-end FCC database statistics provided by Joe Speroni, AH0A. The 755,430 total licensees represent nearly 7,300 more license holders than those that were in the database at the end of 2017. Nearly 51% of the Amateur Radio population in the US -- 384,145 -- hold a Technician license. Generals are second with 175,949, and Amateur Extras number 147,369. Advanced and Novice licensee populations continue to decline, with 39,607 Advanced and 8,360 Novices, as the FCC no longer issues Advanced or Novice licenses. A more significant statistic is 31,576 *new* FCC licenses last year, although that's 620 fewer than came aboard in 2017.



"New amateur licenses granted by FCC are down 2% over last year," noted ARRL Volunteer Examiner Coordinator (VEC) Manager Maria Somma, AB1FM, "but this is the fifth year in a row the total has been greater than 31,000. I predict that the number of new licensees will be more than 30,000 at the end of this year as well, and I'm optimistic this trend will continue."

Upgrades also are down slightly, compared to last year -- 9,456 in 2018 versus 9,576 in 2017, she added. "For the fifth year in a row, we have conducted more than 7,000 Amateur Radio exam sessions in a year -- an important milestone for the

ARRL VEC," Somma recounted. "Our program continues to provide outstanding service to the ARRL, its members, and the entire Amateur Radio community."

ARRL VEC filed a total 30,393 license application forms last year, compared to 31,014 in 2017. That includes new, upgrade, modification, renewal, and club station filings.

At 7,035 in 2018, the number of exam sessions conducted by ARRL VEC marginally trailed the 7,075 held in 2017. ARRL VEC served 34,493 exam applicants in 2018, compared to 35,352 in 2017. Exam elements administered by ARRL decreased from 47,152 last year to 45,817 this year, Somma said. Nearly 1,800 new Volunteer Examiners (VEs) have been added to the ARRL VEC program.

Live Repeater Database

A new Live Repeater Database Link has been added the rainbowcanyons.com website. Once you've accessed the website select the [Western US Repeater Map](#) option in the menu. You will be taken to the database map.

Thanks to Don Blanchard (WA7GTU) for posting this link to the website. The map will display where the current repeaters are located in a geographical area. By clicking on a repeater tower icon, the information about that repeater site will display.

Using your computer mouse, you are able to enlarge or reduce the size of the map. By using the left click button and holding it down you are able to navigate the map in any direction.

Have fun navigating the map.



Just a reminder to set your clocks ahead on March 10th as "Daylight Savings Time" begins.

A Very Large Array

By George Gallis (AL7BX)

This past summer Linda, KG7PBX, and I visited the Very Large Array radio astronomy observatory in central New Mexico. I've seen some big dishes before but never 27 of them all working together in one place.

After leaving a Hamfest near Albuquerque we drove south to Socorro then about 50 miles west to a broad, flat, high altitude valley. Once you spot the dishes in the distance it takes a long time to actually get to them. There is a visitor center, gift shop and a walking tour out to one of the antennas.



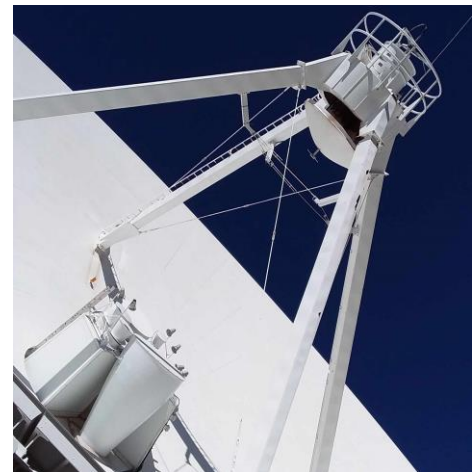
These 27 dish antennas are laid out in a Y shaped pattern 13 miles across. Dishes are moved into positions along the Y on special railroad tracks. Each dish is 82 feet in diameter and weighs 230 tons. Each dish has 8 different receivers in it. The frequencies used are 74 MHz, 300 MHz and others up to about 50 GHz. They are supposed to be looking for quasars, pulsars, gamma-ray bursts, masers and black holes.

It is quite impressive to stand next to one of these monsters. As you stare up at it, it will creak and move ever so slightly every couple of minutes to keep itself aimed at some target in outer space as the earth turns beneath it. Then remember that all 26 other dishes just made the same adjustment.



You can see the 74 MHz feed as a nearly square loop in one picture. And the 300 MHz feed looks to be a pair of crossed dipoles above that. The higher frequencies might use a Cassegrain reflector to feed points near the center of the dish. At least that is what it looks like to me since there really is no one around to ask. The displays in the visitor center didn't go into such detail as far as I could find.

We walked back to an admin building that had a second-floor viewing balcony. About that time the dishes were being aimed to a completely new target and we saw all of them turn and rotate up in unison. It was like a 'Temptations' video but slow motion.



We wandered back to the Visitor Center gift shop and got the T-shirt. In the parking lot looking back we saw all the dishes had moved to a completely direction again. We spent the night at a campground 15 miles away. It was certainly worth the effort to get off the Interstate highway.

RCARC Monthly Meeting Minutes February 12, 2019

We began with a bit of a mix-up: we were ousted out of our regular room because the Senior Citizen's Center was double booked. We had to compete with a bit of music all night.

Welcome and Pledge.

Club President Fred Govedich KI7TPD lead us in the Pledge.

Visitors and radio news.

1. Bruce Bishop KI7LUM passed his General License Test tonight.
2. Bruno DeBacker KG7VFN got his Technician License in 2015 but hasn't used it much. He is now retired and wants to get back into it.
3. Ken Munford N7KM had an E-Bay offer he couldn't refuse. A 1940 Vibroplex. It looked like a wreck but he was able to put it together and it works great.
4. Ed Padgett KK7ZL reported that he has completed his "All States" on the 20, 30, 40, and 80-meter bands.
5. Fred Govedich KI7TPD has been playing with his 3D printer and has made a Transformer Set.
6. Sylvia Clements KB7UMU had a chat with Idaho on the Intertie. She heard a new definition for snow: White Fungus.

Approval of Minutes by:

Secretary Tammy Nesmith KI7LVB sent in the Newsletter.

Treasurer's report:

Larry Bell N7SND reported that we have \$2526.45 in our account.

Repeater Update:

Don Blanchard WA7GTU reported that we've had a bit of down time due to the ice, but we will fix this problem this summer. All links are working. Another site has been added to the Rainbow Site.

Announcements:

1. VHF's will be meeting in Salt Lake City on February 23.
2. April 18 will be the "Utah Shake Out" – Earthquake Drill
3. Thursday, February 21, E-COMM will meet at 5:30 pm. in the Heritage Center, followed by CERT at 7:00 pm.
1. Russ Chaffee N7BO has been the VE Liaison for the past 22 years. There will be no test session in March but one will be on April 4th at the conclusion of the next Technician License Class. If you want to be the next VE Liaison, let Fred KI7TPD know, he will get in touch with Russ N7BO and get together with you and give you pointers. Russ can help get you set up and show you what you need to do after a test. He will still be around to be a back when needed. He is sending all his materials in to the ARRL tomorrow. As a reminder: St. George is also set up to give tests as well as Salt Lake City, Denver, Provo, and Delta.

1. Fund raising ideas

a. Club call sign badges. A local store can make metal badges that are held on with magnets. The more we buy as a group the lower the cost.

As a fundraiser the actual cost would be about \$6 or \$8 but we would charge \$10.

b. Club t-shirts. We could hold a contest to come up with a Club Logo / Design. Suggestions made were: Polo shirts are more appealing than just a t-shirt. Pockets are preferred. If they are florescent colors, we can use them for other events. Look for quality made product so they can last longer than 1 washing. No shrinking preferred.

c. Hat with Call Sign.

d. We will look into all these possibilities. The fundraiser money will go toward the prize at the end of the year. Participation tickets will begin to be earned tomorrow morning. Any club event will incur Participation Tickets: Breakfast and Friendship Nets. Club Meetings, Elmer's Nights, Field Day, Boy Scout-A-Rama ... Any public service provided by Ham Radio will count toward Participation Tickets.

6. Linda Shokrain KG7PBX talked of the backpack patches you can get for your Go Bags or Cert Bags or Helmet. They are approximately 3" x 6" and can use liquid stitch to glue them in place. The cost is \$8 - \$10 depending on the number being ordered.

7. Dennis West W6DLW the newsletter is beautiful.

8. Field Day update: We have formed the different committees. We have discussed the location at length. We will use 3 Peaks as a default until the weather permits a better look around. We will use the monthly meeting in May to prep and recruit better attendance.

Business:

Renew ARRL Insurance. It is not automatic. We will contact them to renew it.

Dennis West would like to request that "Asking for Echo Link connections" be added to the dialog for Net Control.

Ken Richter KR7KR has traffic for: Jonie, Alain, and Susan Bergeron.

Upcoming Events:

March Presentation will be on Repeaters

April Presentation will be on Antenna's

February Presentation:

Digital modes presentation and demo by George Gallis AL7BX and Ken Richter KR7KR.

Meeting Adjourned

Attendance:

Tom Adams KI7LUI, Bonnie Bain KI7WEX, Carolyn Bauer KG7YIB, Kenneth Bauer KG7YIC, Jim Beal KG6LFU, Larry Bell N7SND, Brad Biedermann WA7HHE, Bruce Bishop KI7LUM, Russ Chaffee N7BO, Sylvia Clements KB7UMU, Larry Coles KI7DRE, Bruno DeBacker KG7VVN, Johnny Ellison KE6ZIM, George Gallis AL7BX, Fred Govedich KI7TPD, Brad Gunderson KD6SFS, David Harris N7NKK, John Higley KI7SCX, Brody Johnson K7VXV, Jerel Johnson KI7SDA, Tyler Mudge, Ken Munford N7KM, Tammy Nesmith KI7LVB, Tim Nesmith LI7LVC, Burton Nichols KI7DRA, Ed Padgett KK7ZL, Kevin Raines KG7HZZ, Ken Richter KR7KR, Darlene Shelley KI7WEZ, Ronald Shelley K7HDX, Linda Shokrian KG7PBX, Bill Stenger K6QOG, Dennis West W6DLW, Sherry Bishop, Don Blanchard WA7GTU, Gavin Hollinger KC7IHE, Riki Kline K7NJ, Denice Sheffield KF7WYI, Fred Sheffield KF7GPZ.