

RAINBOW CANYONS AMATEUR RADIO CLUB NEWSLETTER

CEDAR CITY, UTAH



Club Websites: www.rcarc.info OR www.rainbowcanyons.com Number 1 – Vol. 8 – September, 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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CQ, CQ, Happy Labor Day



President's Message

Greetings
Fellow HAMs!

Summer is almost over! The BBQ was great! It was great meeting with everyone and spending a delightful afternoon in the park. It is good to see so many people interested in radio. I hope everyone has been getting out on the radio despite the warm weather! Thank you to everyone who helped!

Thank you to everyone who helped out with the Fire Road Race. I think everything went well and it is good that we can help out in these activities. It keeps us sharp and it keeps us working with our equipment under conditions that are less than ideal. Next month on Sept. 7th we have the Half Marathon! Remember if you need help with setting up your radio, software or other equipment please ask your fellow HAMs for help. Part of the fun is helping others!

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.

11: a.m. Saturdays (Mtn. Time) QCWA – 160 Net, Utah Chapter, 12: p.m. Freq. 7.272.
7:00 p.m. Every Thursday – RCARC CW Net on 146.980.

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



Save The Date

September, 7, 2019

10th Annual Half Marathon Race.

Tuesday, September 10th

RCARC Meeting presentation will be on Raspberry PI's – Fred Govedich.

October, 2019

RCARC October's Meeting Presentation will be Antenna's & End Fed's –

Don Blanchard

November 2019

RCARC 2020 Board Member Elections

More information to follow

December 2019

Christmas Party

Presidents Message Continued from page 1.

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

A reminder that our monthly Breakfast will be September 14th (not the 7th) due to the Half Marathon!

Cheers!
Fred (K17TPD)

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. Check out their website at:

www.cedarcitypastrypub.com

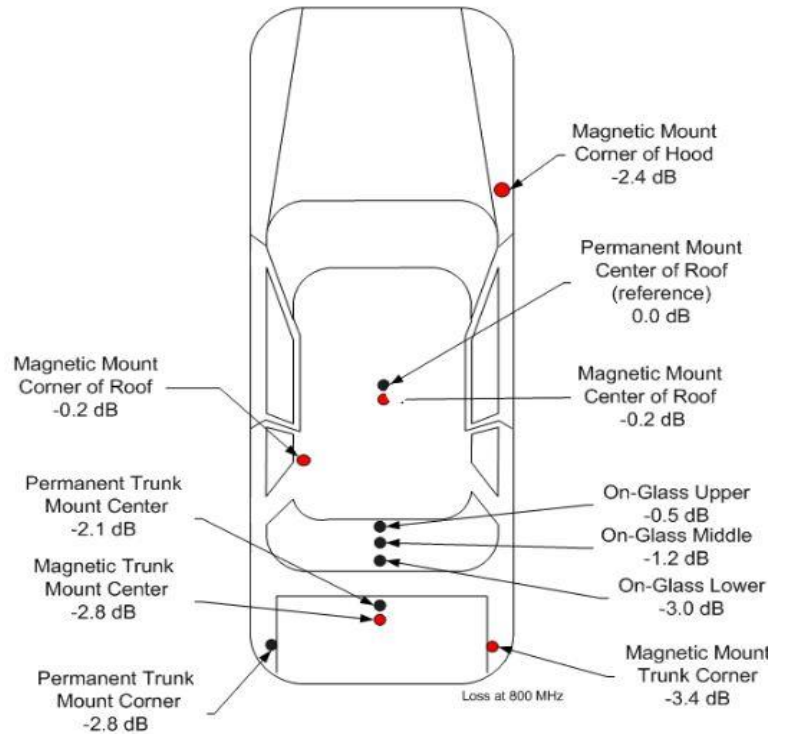


RCARC members and friends enjoy good conversation and fellowship at the August 2019 Pastry Pub breakfast. The Breakfast is held the first Saturday of each month at 9:00 am.

Vintage Ham Radio Pic's of the Past



Mobile Antenna Mounting Consideration



A typical 5/8 wave 145 MHz (2 meter) antenna requires a ground plane of at least 42" in diameter. At 450 MHz just 15" is required and at 800 MHz a minimum of 8" is considered sufficient.

In terms of mounting mobile antennas on a vehicle, there are five general locations: the roof, front fender, rear fender, trunk and rear window glass (although other glass mount locations may be used). Of these, the center of an automobile roof is considered the best for mobile antenna placement, followed by the center of the trunk lid, the fenders, and then on-glass mounting.

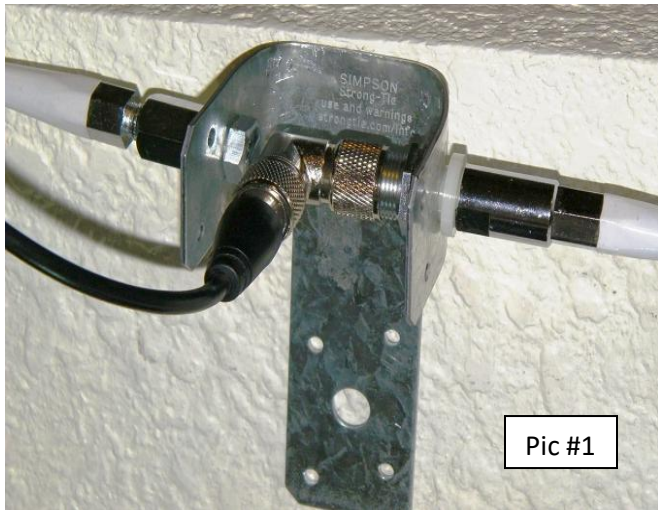
Simple and Inexpensive Dipole and V Antenna Mount

by John, KL7JR

If you do lots of experimenting with whip type antennas, here is an idea for a unique, simple and inexpensive method for mounting them!

The Simpson Strong Tie "T" (aka hurricane connector) runs less than \$5 at Home Depot or Lowes and already comes with two 1/2" holes predrilled. Just bend (or use as is for horizontal dipole) and install CB 3/8" connectors and go!

The V beam mount (shown in picture #1. below), is bolted to a 1/2" EMT mast for mobile use. Use as a horizontal dipole or bend 90 degrees for a horizontal V beam! Just bolt bottom of "T" to your mast. For heavier antennas, use two "T's" back-to-back bolted or welded together.



Use as a horizontal dipole or bend 90 degrees for a horizontal V beam!
Just bolt bottom of "T" to your mast. For heavier antennas, use two "T's" back-to-back bolted or welded together.

On left of photo (Picture 2) to right shows bending for vertical or horizontal dipole.
On right it is shown bent for V type antennas and mounted on short mast.

Both already Arctic proven!

73 - John - KL7JR

Article: Global Institutions Support Amateur Radio Communication and Experimentation

08/05/2019

Former ARRL CEO David Sumner, K1ZZ, has contributed to the [latest edition](#) of *ITU News Magazine* — published by the [International Telecommunication Union](#) (ITU). The issue is devoted to "terrestrial wireless communications," which includes the Amateur Radio and Amateur Satellite services.

Continued on page 5

Article: Global Institutions Support Amateur Radio Communication and Experimentation

Sumner's article, "Self-training, intercommunication and technical investigations: the amateur service in the 21st Century," discusses Amateur Radio within the context of a global network of experimenters and communicators who, in Sumner's words, "expand the body of human knowledge and technical skills that are essential to development and offer a resource that can literally save lives when natural disasters disrupt normal communications channels."

"Amateur licensees are grateful that ITU member-states continue to recognize the benefits of providing direct access to the radio spectrum to qualified individuals," said Sumner, who now serves as secretary of the International Amateur Radio Union (IARU), an ITU sector member.

Sumner points out that access to frequency bands "spaced throughout the radio spectrum" is critical to Amateur Radio's future. He notes that the initial pattern of ham allocations dates back to 1927 and the International Radiotelegraph Conference. Allocations have been extended and expanded at subsequent conferences, most recently at World Radio Communications Conference 2015 (WRC-15), when ham radio obtained a tiny secondary band near 5.3 MHz. (An earlier WRC was responsible for the Amateur Service's two lowest-frequency allocations, 135.7 – 137.8 kHz and 472 – 479 kHz.)

On the other end of the radio spectrum, the 1979 World Administrative Radio Conference (WARC) extended terrestrial allocations above 40 GHz to include amateur allocations. "If a future World Radiocommunication Conference extends allocations above 275 GHz, adequate provisions for amateur experimentation should be made," Sumner observed.

The first item on the agenda for WRC-19, which takes place this fall in Egypt, calls on delegates to consider an allocation at 50 MHz to the Amateur Service in ITU Region 1 (Europe, Africa, and the Middle East) that aligns with existing allocations in Regions 2 and 3. "Harmonized allocations highly facilitate intercommunication," Sumner asserted.

Sumner notes that ITU "plays an essential role" in keeping the spectrum clear of unwanted interference and emissions, an effort he said is "especially vital to the Amateur Service, which uses sensitive receivers to compensate for practical and regulatory limitations on antennas and transmitter power levels."

Sumner also pointed to the role radio amateurs can play in developing and refining communication protocols, including digital techniques, to improve weak-signal performance. He noted that Joseph Taylor, K1JT — a codeveloper of such digital modes as FT8, FT4, and JT65 — received an ITU Gold Medal in recognition of his outstanding contributions to radiocommunication.

Sumner explained that the IARU — a federation of more than 140 member-societies — represents the interests of radio amateurs around the world before ITU. The IARU's contribution to the work of ITU began in 1932 with its admission to participate in the work of the International Radio Communications Consultative Committee (CCIR). IARU is a member of the ITU Radiocommunication and Development sectors.

"The IARU is proud to be an active member of the ITU community," Sumner said in conclusion.

A Blast from the Past

Interesting Historical video about Amateur Radio from 1939! **Left click cursor on link. Then depress Ctrl & Click.** <https://www.youtube.com/watch?v=WG8VXcFWOXU&t=2s> or copy and paste in your browser.

65 Great Things About Ham Radio

Five years ago, on CQ's 60th anniversary, we ran a feature throughout the year titled "60 Great Things About Ham Radio," in which we listed five "great things" each month. The series was quite popular and we have continued to receive requests to reprint it. So now, in honor of our 65th anniversary, we're repeating the list—with a few updates as well as five more "Great Things About Ham Radio."

1. It works when nothing else does
2. It makes you part of a worldwide community
3. The opportunity to help neighbors by providing public service and emergency communications
4. Some of the nicest people you'll ever meet
5. Some of the smartest people you'll ever meet
6. Some of the most interesting people you'll ever meet
7. Some of the most generous people you'll ever meet (along with some of the cheapest!)
8. Lifelong friendships
9. Friends around the world (including those you haven't met yet)
10. The opportunity to go interesting places you might not otherwise go to
11. The opportunity to do interesting things you might not otherwise get to do
12. The opportunity to expand your knowledge of geography
13. The opportunity to expand your knowledge of earth and space science
14. Practical uses for high school math
15. Practical uses for high school physics
16. A good way to practice a foreign language
17. A good way to keep in touch with faraway friends and relatives
18. A good way to get driving directions when visiting someplace new (with or without GPS)
19. A good way to find the best places to eat when visiting someplace new (with or without GPS).
20. Finding "non-touristy" off-the-beaten-path places to stay, eat, visit, etc.
21. A good way to learn about virtually any topic
22. A good way to bridge the generation gap
23. A good way to keep tabs on elderly/infirm people
24. People named Joe (Walsh, Rudi, Taylor)
25. How many of your non-ham friends have actually talked to someone in some remote place such as Cape Verde or the Seychelles?
26. How many of your non-ham friends might have talked to an astronaut aboard the space station?
27. How many of your non-ham neighbors might have a satellite uplink station in their basements—or in the palms of their hands?
28. How many of your non-ham neighbors might have a TV studio in their garage?
29. What other hobby group has designed, built, and had launched its own fleet of communication satellites?
30. Where else can you play with meteors?

Continued on Page 7



History & Timeline of Morse Code

May 20, 1836- Samuel Morse had the idea to invent a faster way of communicating. After receiving a slow horse message that his wife was gravely ill, he traveled across the country as quickly as he could only to learned that his wife passed away two days ago.

1837- Morse creates a partnership between Dr. Leonard Gale and Alfred Vail. These two men helped Morse significantly with the science behind the telegraph.

January 1838- Morse changes the telegraphic dictionary. Instead of using number codes to represent words, he made a code for every letter to reduce the chance of unwanted people decoding each word being transmitted.

February 1838- Morse demonstrates the telegraph to President Martin Van Buren and his cabinet.

1840- Morse is granted an United States patent for his telegraph.

1842- Experiments on underwater transmission are done by Samuel Morse and Dr. Gale.

March 3, 1843- Congress votes to grant \$30,000 for an experimental telegraph line from Washington, D.C., to Baltimore, Maryland.

May 24, 1844- Samuel Morse sends the first telegraphed message from the Supreme Court chamber in Washington, D.C., to the Railroad Depot in Baltimore, Maryland.

1845- First arrest by telegraph. John Tawell was found guilty of murdering his mistress and hanged.

Continued on Page 7

History & Timeline of Morse Code

1846- The telegraph line is extended from Baltimore to Philadelphia. Different telegraph companies start to appear and Morse's patent rights are threatened. In an 1848 letter to a friend, Morse describes how he fought to be the sole inventor of the telegraph despite previous inventions:

"I have been so constantly under the necessity of watching the movements of the most unprincipled set of pirates I have ever known, that all my time has been occupied in defense, in putting evidence into something like legal shape that I am the inventor of the Electro-Magnetic Telegraph! Would you have believed it ten years ago that a question could be raised on that subject?"

1851- Paul Julius Reuter, German businessman, was one of the first to see potential in the telegraph. His first business was in plugging a cross border gap in the telegraph that linked Germany and Belgium, using relay messages.

1964- Railroads used telegraphs a lot because they needed to be able to communicate instantly between far-flung stations. Therefore, the telegraph allowed railroads to operate more effectively. Because of the railroads, American life improved as goods were being transported long distances, thus making more goods available to more people at a cheaper price.

1965- The first Internet system, ARPANET, was developed by using the science of the telegraph as a foundation.

Editor's Note: The Morse Code Timeline ends in 1965. Through additional research I was not able to locate any further information.



65 Great Things About Ham Radio

31. Moon bounce
32. Informal way to improve technical skills
33. Informal way to improve communication skills
34. Introduces a variety of career paths
35. Offers unparalleled opportunities for career networking
36. Opportunities for competition in contesting and foxhunting
37. A good way to collect really cool postcards from around the world (despite the growth of electronic confirmations)
38. Nearly endless variety of different things to do, on and off the air
39. Ham fests
40. Dayton
41. Field Day
42. Working DX
43. Being DX
44. DX-pedition's
45. Contesting
46. Award-chasing
47. Double-hop sporadic-E
48. Worldwide DX on 6 meters (once or twice every 11 years) [The current extended sunspot minimum has shown that mechanisms other than F2 propagation can offer intercontinental DX on the "magic band" at any point in the solar cycle.]
49. Tropospheric ducting
50. Gray-line propagation
51. TEP, chordal hops, etc.
52. Getting through on CW when nothing else will
53. Unexpected band openings
54. Building your own gear
55. Using gear, you've built yourself
56. Operating QRP from some remote location
57. Experimenting with antennas
58. Working DX while mobile or while hiking
59. Experimenting with new modes and new technology
60. The opportunity to help build an internet that doesn't rely on the internet
61. DXing on your HT via IRLP and Echolink
62. Contributing to scientific knowledge about propagation
63. Keeping track of other people's GPS units via APRS
64. Ham radio balloon launches to the edge of space, and as always...
65. Reading CQ!

Permission is hereby granted to reprint this list in amateur radio club newsletters, provided credit is given to CQ magazine. Online editions must include a link to the CQ website, <http://www.cq-amateur-radio.com>.





Breakfast & Friendship Net Awards

Breakfast Net	Friendship Net
First Place	First Place
Sylvia KB7UMU	Fred KI7TPD
Fred KI7TPD	Bonnie KI7WEX
Bonnie KI7WEX	Dennis W6DLW
Second Place	Second Place
Daniel KI7JUA	Dick K7ZI
	Sylvia KB7UMU
Third Place	Third Place
Linda KG7PBX	Bruce KI7LUM
ED KK7ZL	

ARRL Announces “Happy 150!” Hiram Percy Maxim Birthday Celebration

07/02/2019

This year marks the 150th anniversary of the birth of ARRL’s first president and cofounder Hiram Percy Maxim (HPM), W1AW, born on September 2, 1869. ARRL will hold an operating event this summer to celebrate HPM’s legacy, getting under way at 0000 UTC on August 31 and continuing until 2359 UTC on September 8. It is open to all radio amateurs.

The event goal is straightforward: Contact as many participating stations as possible. W1AW and *all* ARRL members will append “/150” to their call signs during this event (DX operators who are ARRL members may operate as <call sign>/150, if permitted by their country of license.) Participating stations will exchange a signal report and their **ARRL/RAC Section**. DX stations will send a signal report and “DX.” Those taking part may use all Amateur Radio bands, excluding 60, 30, 17, and 12 meters.

The event will recognize three mode groups: CW, phone (any voice modes), and digital. Submit Cabrillo log files. ARRL will calculate all final scores based on participant uploads to the ARRL event web app (link not yet active).

There are 84 multipliers, which only count once. These include the 83 ARRL/RAC Sections (RAC sections include the Canadian Northern Territories, encompassing VE8, VY1, and VY0), and DX. The W1AW operating schedule during this period may be adjusted as necessary to accommodate on-air celebration operating activities. Contacts with W1AW/150 will earn 3 points apiece. Contacts with any ARRL member will earn 2 points each. These stations will also identify as <call sign>/150. Contacts with nonmembers will earn 1 point each.

Participants can earn 150 bonus points by:

- Contacting W1AW/150 on each band and mode.
- Uploading entries (ARRL members only).

Continued on Page 10

Petition for Rulemaking Asks FCC to Create a New 8-Meter Amateur Band

06/27/2019

The FCC has put on public notice for comment a *Petition for Rulemaking* ([RM-11843](#)) that seeks the creation of a new 8-meter Amateur Radio allocation on a secondary basis. The Petition suggests the new band could be centered on an industrial-scientific-medical (ISM) segment somewhere between 40.51 and 40.70 MHz. The spectrum between 40 and 41 MHz is currently allocated to the Federal Government and, as such, within the purview of the National Telecommunications and Information Administration (NTIA). ARRL member Michelle Bradley, KU3N, of Maryland, filed the petition in May on behalf of REC Networks, which she founded and described in the *Petition* as “a leading advocate for a citizen’s access to spectrum,” including Amateur Radio spectrum.

“REC feels that the time is right for the Commission to open a *Notice of Inquiry* and eventually a *Notice of Proposed Rulemaking*, and in cooperation with the NTIA, this new band opportunity can be realized to spark the next generation of ‘makers’ in the fields of science, technology, education, and math (STEM), especially women and girls,” Bradley told the FCC in the *Petition*. “The more opportunities we give to make things, the more opportunities we have to build a pool of experts in STEM, right here at home.”

The *Petition* said the objective of a new band would be “an effort to foster experimentation into the propagation characteristics of this band midway between the 10- and 6-meter bands.” An allocation in the 8-meter band is available to radio amateurs in Ireland, where the Irish Radio Transmitters Society has developed a band plan for 40 – 41 MHz.

“REC perceives this spectrum can be used for weak signal experimentation and eventually general amateur use, especially along transatlantic paths using CW, SSB, digital modes such as FT8 and digital voice,” the *Petition* said. “As no radios are mass-produced for this band at this time, this opens up new opportunities for ‘makers’ to construct transmitters, receivers, and antenna systems that can be used in this spectrum.”

Continued on next column

REC anticipates “very low” usage of the new band, “with peak usage around sporadic-E episodes, operating events such as ARRL Field Day, and VHF contests, as well as during the peak of sunspot cycles,” Bradley told the Commission. “[W]e feel that the sharing of 40 MHz can be accomplished in a manner that serves the needs of the Amateur Radio Service while meeting the organizational missions of Federal Government agencies that utilize this spectrum.”

Interested parties may file short comments on RM-11843 via the FCC’s [Electronic Comment Filing Service \(Express\)](#). Visit the FCC [“How to Comment on FCC Proceedings”](#) page for information on filing extended comments.



Trade or Sell your HAM Gear

Hello everyone Buzz here. Your Newsletter Editor wanted me to announce that starting with the October issue of the RCARC Newsletter you will be able to list and sell your Ham Equipment. [This space will be for Ham equipment and accessories only.](#)

So how does it work? On or before the 20th of each month send to me Buzz an e-mail at rcarcnewsletter@gmail.com Your name, call sign, a description of what you are selling, the cost, condition and either a phone number or e-mail address. This information will be placed in the newsletter.

For our members wishing to purchase or get further information please contact the listed seller direct. The listing will stay posted for two months and then be deleted. However, if you sell your item before the two-month period end, please e-mail me and let me know that you’ve sold the item.

Have fun and happy sales to you.

ARRL Announces "Happy 150!" Hiram Percy Maxim Birthday Celebration

- Using social media to publicize this event and/or participation before, during, and/or after the event.
- Operating with 5 W PEP output or less throughout the event.
- Making at least 20 contacts while operating portable.
- Completing at least 150 contacts.

Online certificates will be awarded, and available **via download** only. Updates and results will be **publicized**. This event has no power or operator categories. Participating ARRL members who use Logbook of The World (LoTW) are encouraged to **create a separate LoTW certificate** for uploading <call sign>/150 contacts. Members should upload their logs for this event using their /150 certificate. This event requires online web app submissions. No email or paper submissions will be accepted.

RCARC Reminder

The RCARC Board is asking for your input as to what type of Grand Prize you want to be raffled at our Christmas Party this year.

Please provide your thoughts, idea's and wishes to any of the Board members.

[Their contact information is available on page 1.](#)

So far, the following prizes have been suggested:

1. A dual band Mobile Radio.
2. An Antenna Analyzer.
3. External Battery.

(Give us your thoughts on what brands and model numbers).

Is there something else you would like to see as the main raffle prize? Let a Board member know.

E-mail a Board Member or e-mail rcarcnewsletter@gmail.com with your thoughts and ideas.

This & That

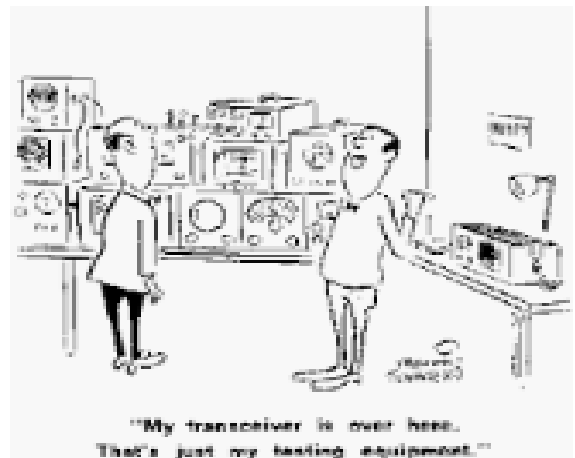
RCARC new Morse Code Net

The CW Net is every Thursday Night at 7:00 pm. On 146.980

Happy Keying

Cedar City Half Marathon

This year Marathon will take place on Saturday September 7th. If you haven't signed up to work this event and would like to contact Ron Shelley (K7HDX) for an assignment. [Contact info is on page 1 under Board Members.](#)



Rainbow Canyons Amateur Radio Club (RCARC) August 2019 Annual Bar-B-Que Pictures

Club members enjoying good food and fellowship at the Main Street Park



It was a wonderful evening in the Park. With a lot of food and fun.



RCARC August 2019 Annual Bar-B-Que Pictures continued.



Brody (K7VXV) getting ready to char the Burgers & Dogs.



Fred Govedich (K17TPD) presenting Riki Kline (K7NJ) an Award Certificate for his many contacts on CW during field Day this past June.

The following Poem was submitted by Vernile Prince (K7DVP)

Smile by Spike Milligan

Smiling is infectious; you can catch it like the flu;
When someone smiled at me today, I started smiling too.
I walked around the corner, and someone saw me grin;
When he smiled, I realized I had passed it on to him.
I thought about the smile and then realized its worth,
A single smile like mine could travel round the earth.
So, if you feel a smile begin don't leave it undetected;
Start an epidemic and get the world infected.

RCARC Monthly Breakfast
Date Change

The RCARC Breakfast date for September has been changed to Saturday September 14th due to the Half Marathon Race which is on Saturday September 7th this year.

We will meet at 9:00 am on September 14th at the Pastry Pub. Hope to see you all there.

ARLX007 WWV Centennial Committee Prepares for Trial Run of WW0WWV Special Event

SB SPCL @ ARL \$ARLX007

ARLX007 WWV Centennial Committee Prepares for Trial Run of WW0WWV Special Event

ZCZC AX07

QST de W1AW

Special Bulletin 7 ARLX007

From ARRL Headquarters

Newington CT August 20, 2019

To all radio amateurs

SB SPCL ARL ARLX007

ARLX007 WWV Centennial Committee Prepares for Trial Run of WW0WWV Special Event

The WWV Centennial Committee reports that it will conduct a trial run of special event station WW0WWV over the August 24/25 weekend. Radios and antennas began arriving last week, and a tower and beam will be erected, along with several vertical antennas. WW0WWV will be set up adjacent to the WWV transmitter site in Fort Collins, Colorado. WWV turns 100 years old on October 1.

"We'll be testing band and notch filtering, in an attempt to reign in the extreme RF environment created by WWV and WWVB," said Dave Swartz, W0DAS, of the Northern Colorado Amateur Radio Club (NCARC).

The club will carry out the special event operation in conjunction with the WWV Amateur Radio Club and the National Institute of Standards and Technology (NIST), which operates WWV/WWVH/WWVB.

The special event site is within 1/3 of a mile of all six WWV transmitters and the 50 kW WWVB transmitter. "On-air tests will start Saturday afternoon, August 24, and run through Sunday, August 25," Swartz said, adding that organizers will post specific times and frequencies on the WWV Centennial Committee website.

The WWV Centennial special event is set to run from September 28 through October 2, and round-the-clock operation will take place on CW, SSB, and digital modes. Operations will shift among HF bands following typical propagation and will include 160 meters as well as satellites (SO-50, AO-91, and AO-92) and 6-meter meteor scatter.

Up to four stations will be on the air for routine operations. A fifth station will schedule contacts with schools, universities, and museums, as well as conducting unscheduled contacts. The additional station will periodically broadcast an AM carrier from a radio locked with WWV's 10 MHz signal.

"At this point we have filled our operator's slots and met equipment goals, but we need more financial resources to cover basic operating expenses, return shipping, and site logistics," Swartz said. Members of the Amateur Radio industry have contributed equipment, including radios, amplifiers, and antennas.

NIST has announced that it will not be able to open the doors of WWV to the public for the event. "Due to a number of reasons, the scope of the formal celebration will be limited to only 100 invited participants," the WWV Centennial Committee announced. "WW0WWV will be the main public event for the centennial celebration."

Visit the WWV Centennial Committee website at <http://www100.com/> to see how you can get involved.

NNNN /EX

Note: There are no RCARC Meeting Minutes for August as the Annual Bar-B-Que was scheduled in its place.

However, listed below are the attendees at the RCARC August BBQ, August 13, 2019.

Tom Adams KI7LUI; Isaiah Arnold KI7SXJ, Michelle Arnold KG7YID, and Isaiah's siblings Ethan and Sam; Bonnie Bain KI7WEX; Brad Biedermann WA7HHE; Don Blanchard WA7GTU, and wife Linda Blanchard; Sylvia Clements KB7UMU; Bruno DeBacker KG7VVN; George Gallis AL7BX; Bryan Graden KD7NSH and wife Sarah Graden and 5 kids; Fred Govedich KI7TPD; David Harris N7NKK; John Higley KI7SCX; Brody Johnson K7VXV and Helen Johnson WB7FET and family Kolby, Kaylon and Rachel; Jerel Johnson KI7SDA and wife Amy Johnson; Riki Kline K7NJ and Becki Kline; Merlin Mackay N7TCE and wife Edith Mackay; Keith Morris KC6ZGG and wife Robin Morris; Tammy Nesmith KI7LVB and Tim Nesmith KI7LVC; Ed Padgett KK7ZL and Jan; Vernile Prince K7DVP and wife E L Prince; Ken Richter KR7KR; Monti Rugebregt KG7WEN; Denise Sheffield KF7WIY and Fred Sheffield KF7GPZ; Ron Shelley K7HDX; Linda Shokrain KG7PBX; Dennis West W6DLW and wife Terry West.