Rainbow Canyons Amateur Radio Club

June 2017

Club Officers:

President:
KG7PBX
Linda Shokrian

Vice-President:
KR7KR
Ken Richter

Treasurer:
AL7BX
George Gallis

Secretary & Editor:
K6QOG
Bill Stenger

Local Repeaters:
146.980 Mhz
Tone 100 hz

146.940 Mhz
Tone 100 hz

146.760 Mhz
Tone 123 hz

Remote Bases:
449.500 Mhz
Tone 100 hz

449.925 Mhz
Tone 100 hz

448.800 Mhz
Tone 100 hz

IRLP/Echolink
449.900 Mhz
Tone 100 hz

RCARC Websites:
http://www.rcarc.info and http://rainbowcanyons.com

RCARC NETS:
Breakfast Net:7:00am 146.760 Mhz 123 hz PL tone, Mon. - Sat.
Friendship Net: 9:00pm 146.760 Mhz 100 hz PL tone, every evening.

Club Monthly Breakfast is July 1st 9am at the Pastry Pub
Come in and place your order then come to the side room to be with other hams and your order will be brought to you. It is a most relaxing and friendly environment.

Club meets on the second Tuesday of each month at the Senior Center
Next club meeting is July 11th,7 PM.
TOPIC:
Bob Heil
from Heil Microphones via Skype will talk about types and uses of microphones. He will take questions.

Updates by Linda Shokrian KG7PBX

2017 Participation Award

To encourage participation and remind us how much fun Ham Radio can be, RCARC is offering a Participation Award for 2017 of a Yaesu 857d All Band Radio to be drawn for at the December 2017 meeting. Tickets will be given for participating in various activities all year long in 2017. For ways to earn tickets, please read the meeting handout for more information.

2017 Technician Class

Our next Technician Class will be October 5th thru November 1st, meeting each Thursday evening from 6p - 9p at the Senior Center located at 489 E 200 South here in Cedar City.

The test will be held 6 pm Thursday, November 9th, also at the Senior Center. Handouts will be available beginning at the July RCARC meeting.

Emergency Communications Group

EComm meets every other month in even months. We held our June meeting at the Visitor's Center Thursday, the 15th.

A representative of the Fire Road Race came and talked about the upcoming race being held on August 19th. For more information or if you wish to participate, please contact Brad Biedermann WA7HHE

Next EComm meeting is scheduled for August 17th, 2017 at 6 pm at the Visitor's Center.

There will be no meeting in July.

CERT

CERT meeting was held June 15th , 2017. Being Financially Prepared for an emergency was discussed. A few copies of the Emergency Financial First Aid Kit are available for handout if desired. See Linda KG7PBX

Next CERT meeting is scheduled for August 17th, at 7 pm at the Visitor's Center. (No July meeting). Topic TBA.

LEPC

LEPC (Local Emergency Planning Committee) meeting held Wednesday, June 21st, 2017 at the Heritage Center. After a brief update on the Brian Head Fire, Bill Lund gave an excellent presentation on Earthquakes and their probability here in Utah.

If you wish a copy of the monthly LEPC minutes, please contact Linda KG7PBX at Lgshokrian@gmail.com and she will send you one when it becomes available.

The next LEPC meeting will be August 16th, 2017 at 12 noon at the Heritage Center. (No July meeting).

ARRL June VHF Contest Local Style

The Photo showing Jon Rice's tower and a 58 feet of total boom length and 3 antennas @ 9300 feet elevation overlooking Junction, UT in Paiute County in Grid DM38. Near Grindstone Flat, about 10 Miles from Puffer Lake. Dick Parker K7ZI help set up the tower and antennas.

Jon was a single operator high power category for the contest. He operated the duration of the contest from 1800Z on Saturday until 0300Z Monday. Ended up with Green score of:

343 6Meter QSO's
6 2Meter QSO's
1 70cm QSO
Total 350 QSO's

Total Multipliers 132 with a green score of 46,332 points. points.

ARRL NEWSLETTER

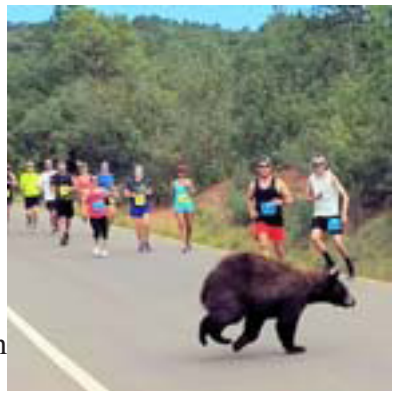
Federal Register Publishes New MF/LF Rules, But Operation is Not Yet Legal

The FCC Report and Order (R&O) spelling out operational rules to allow secondary Amateur Radio access to 630 meters and 2,200 meters now has appeared in the Federal Register, but radio amateurs still may not access the new bands. That's because specific procedures specific procedures, now under development, to detail how radio amateurs will notify the Utilities Technology Council (UTC) of their proposed station location prior to commencing operation, still must undergo approval. The FCC said the notification requirement is necessary to confirm that a station is not located within 1 kilometer of an active power line communication (PLC) system.

For more information see ARRL June 15th Newsletter.

Bear is Unwanted Volunteer, as ARES Team Supports Colorado Road Race

Lots of things can go awry when Amateur Radio volunteers are supporting public service events, from technical and weather problems to lost or injured participants. The 2017 Garden of the Gods 10-mile and 10-kilometer races in Colorado was no exception. On Sunday, June 11, the Pikes Peak Amateur Radio Emergency Service (ARES) deployed a dozen operators to support more than 1,400 runners in scenic Garden of the Gods Park just west of Colorado Springs. John Bloodgood, KD0SFY, Region 2, District 2 Emergency Coordinator and Public Information Officer said all was going well, with cooperative weather and only a slight delay due to traffic -- nothing out of the ordinary.

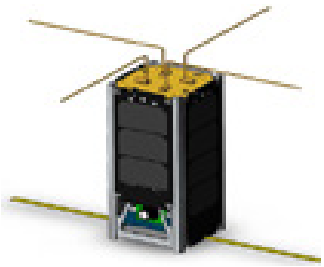


For more information see ARRL June 15th Newsletter.

INSPIRE-2 Ground Controllers Turn to Amateur Radio to Rescue Stalled Satellite

Amateur Radio came to the rescue of the INSPIRE-2 CubeSat, built by the University of Sydney in collaboration with the Australian National University, and the University of New South Wales. According to

the Wireless Institute of Australia (WIA), the CubeSat is designed to "explore the lower thermosphere, for re-entry research and in-orbit demonstration of technologies and miniaturized sensors" and is part of the QB-50 constellation of research CubeSats. Its operational frequency was coordinated by IARU to be in the satellite segment of the 70-centimeter Amateur Radio band.



After its deployment from the International Space Station (ISS) in late May, INSPIRE-2 showed no signs of life. The engineering group on the ground tested various scenarios on the INSPIRE-2 engineering model, concluding that the spacecraft's battery had depleted due to the CubeSat's extended stay on board the ISS prior to orbit. The ground controllers theorized that the satellite was trapped in an endless loop, but was still listening while trying to deploy its antenna, making reception of signals from Earth difficult.

The ground team devised a set of commands that, if received, would instruct the satellite to wait until its battery was charged before attempting to deploy its antenna. UNSW and ANU ground stations transmitted the recovery command without success, however, eventually deciding that more power was needed to overcome the lack of receiver sensitivity caused by the still-stowed antenna.

PI9CAM at the CAMRAS Foundation Dwingeloo Astronomic Observatory in Leiden, the Netherlands, responded to a call to the moonbounce community and offered to transmit a high-power signal using a 25-meter dish that's normally used for radio astronomy but also for EME.

Success of the approach was confirmed on June 11, and Dimitrios Tsifakis, VK1SV, who is part of the ANU team, was subsequently able to send commands to the satellite from the ANU Earth station for the first time. The satellite had come back to life!

WIA called it, "a wonderful example of successful collaboration between radio amateurs and the academic community." -- Thanks to WIA News.

For more information see ARRL June 22th Newsletter.

What happened at the last meeting June 13th

President Linda Shokrian KG7PBX called the meeting to order at 7 PM. She had everyone introduce themselves and say how many 2 M simplex contacts made.

Attendance:

KG7PBX	Linda Shokrian
K6QOG	Bill Stenger
AL7BX	George Gallis
KI7LUI	Tom Adams
KG7YIB	Carolyn Bauer
KG7YIC	Ken Bauer
N7SND	Larry Bell
KA7HGX	Tony Bennett
WA7HHE	Brad Biedermann
KB7HHB	Mardi Biedermann
KI7LUM	Bruce Bishop
KI7KON	Cory Bishop
WA7GTU	Don Blanchard
KI7LUR	Dan Carlson
KB7UMU	Sylvia Clements
KI7DRE	Larry Coles
KE6ZIM	John Ellison
KD6SFS	Brad Gunderson
KI7LUU	Collette Gunderson
KC7RKU	Leo Harrison
KA7J	Lance Jackson
K7VXV	Brody Johnson
K7NJ	Riki Kline
KI7LUY	Jim Lunt
KI7DRB	Bruce McDonald
KI7LVB	Tammy Nesmith
KI7LVC	Tim Nesmith
K7ZI	Dick Parker
KG7WEN	Monti Rugebregt
KF7WIY	Denice Sheffield
KF7GPZ	Fred Sheffield
KA7SWA	Kevin Truman
KG7YIA	Boyd Woolsey
KI7DRO	Dennis Gaede
KI7MWU	Thomas McFarland
KF6NUD	Paul Fice
KZ1B	Bob Vosper

Visitor: Sherry Bishop

Secretary Bill Stenger K6QOG mentioned that had been several corrections to May's newsletter and asked if there were any more. Dennis Gaede KI7DRO said his call sign was incorrect. Change noted. Linda called for a motion to accept the minutes. Motioned made by Don Blanchard WA7GTU and seconded by Larry Bell N7SND. Vote unanimous.

Treasurer George Gallis AL7BX reported little activity this past month. Balance is $1851.99. Linda called for a motion to accept the minutes. Motioned made by Denice Sheffield KF7WIY and seconded by Brody Johnson K7VXV. Vote unanimous.

Linda reminded everyone: see George to join RCARC and Don for the VHF Society. In December the club will give away a Yaesu 857 ALL Band transceiver. When you join the club and/or the VHF Society you will get a ticket for each and every club activity that you participate in you will also get a ticket. That includes coming to meetings, Field Day, Fox Hunts, anything that is designated as a club activity.

George described his unusual antenna and talked about it's performance on 40 M.

Don Blanchard WA7GTU gave an update on the repeater system at Frisco Peak, Iron Mountain, Bear Lake, Black Mountain and Blow Hard Peak.

Brody Johnson K7VXV said there would be a planning meeting Wed. 7:30pm at Linda's house and please sign up if you plan on coming to dinner on Field Day.

Brad and Sylvia KB7UMU will be on KSUB radio at 7:20am. Feel free to call in and ask questions.

Linda mentioned that there will be a Fire Road Race meeting on Thursday, 6pm, at the Visitor Center. If interested please come.

Linda gave out Check-in Ribbons with the help of Monti Rugebregt KG7WEN

1st place: Brody K7VXV, Sylvia KB7UMU, Terry KD7TTT and Ken KR7KR

2nd place: Lance KA7J and Boyd KG7YIA

3rd place: Jim Beal KG6LFU

Denice Sheffield KF7WIY explained the procedure for the Half-Marathon Saturday September 9th.

Linda talked about the advantages for yourself as well as for the rest of us, we are a community. There is value even when you have to ask for an early out.

Presentation 1
MESH

by Byran Lamoreaux KG7OOW

Wireless has become a big part of our lives because of cellphones and computers. The development of routers have made wireless possible. Routers now have embedded radios and communication is possible between routers. The following link Bryan has a 13 page slide presentation showing examples of how to use a router/modem and what can be accomplished.

https://goo.gl/MjDrkq

Presentation 2
Simplex Contest Success, Understanding the rules of the game.

by Ken Munford N7KM.

The club is presently involved in a VHF/UHF simplex contest. Many of the operators are new to the hobby and may not understand the limitations of their equipment and the basic rules of nature which govern their success or failure in this completion. For this reason let's review some basic facts which may reduce frustration and insure better success.

The most used piece of equipment used by new hams is a Handy-Talkie.

Let's look at a common handheld in terms of transmit and receive abilities.

To do this we will use the dB and dBm as a reference. dBm (sometimes dBmW or decibel-milliwatts) is an abbreviation for the power ratio in decibels (dB) of the measured power referenced to one milliwatt (mW).

A typical handheld has a transmit power out of 5 Watts this is equal to +37 dBm

A nice handheld has a receiver which provide a useable output with .16uV of received signal this equals -123 dBm.

The difference between the transmit +37dBm and receive -123 dBm = 160 dB. Therefore 160 dB is the total losses which can occur between two identical handhelds and still have communications.

What can be the source of loss between two handhelds? The losses are many and varied we will

discuss three primary contributors.

1. At VHF/UHF frequencies communication is basically line of sight. Your antenna needs to see the other station's antenna. The earth being round means its curvature largely determines this. A formula has been derived which allows us to compute the distance in miles we can see based upon the antennas height above ground in feet. D miles = 1.415 times the square root of the antenna height in feet. For example a ham holds the handheld in front of his mouth approximately 6 feet above the ground. The other operator holds her handheld at 5 feet above ground. How far can they talk? The formula indicates the first operator antenna can see 3.47 miles and the second operator can see 3.16 miles. We combine the two line of sight distances and find that they can expect to be able to communicate on the flat plains of Kansas 6.63 miles. Note: the 34/94 repeater is at 4,693 feet above the surrounding terrain, math says it sees 96.93 miles in each direction. Now you know why mountain tops are so valuable. The point is, to win at simplex, raise your antenna or location.

2. A wave radiates as a sphere and diminishes in intensity as the inverse of the square of the distance from the source. When you double the distance the wave is reduced to ¼ of its strength; three times the distance equals 1/9 of its intensity, etc. In our case, communication can be maintained until the intensity is reduced to less than .16 millionths of a volt at the receiver. To overcome this challenge, get a beam antenna and increase the intensity of the wave in the desired direction.

3. Multiple paths exist when waves travel between two points. Reflections from buildings, mountains, the ground or anything in the vicinity can cause wave to have different arrival times at the receiver. They may arrive in phase (addition) or out of phase (subtraction). For this reason hot spots exist and VHF/UHF is a matter of inches in location, and can mean communication or not. When using simplex, move around and use this phenomena to your advantage.

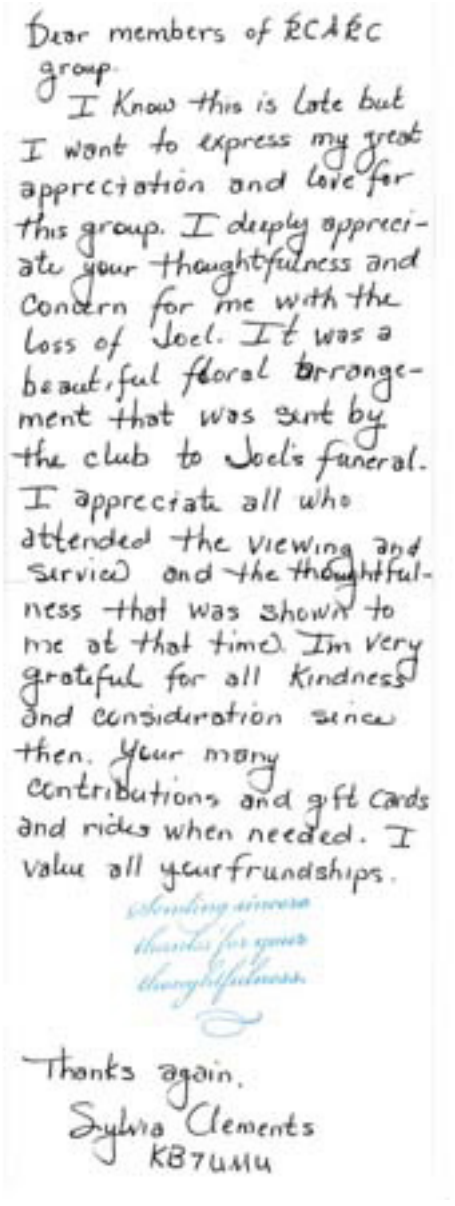
Understanding and playing by these basic rules will reduce your frustration and ensure your success, Enjoy the opportunity and have fun.

Linda asked if there were any questions or comments. Riki Kline K7NJ commented on the needed for CW in emergency situations. He used the example of a contact with Jon Rice NR7T in Cedar City and he was in Israel. On SSB they could barely hear each other. They switched to CW they heard each other perfectly and had a 10 minute conversation. CW is very much alive, 1,200 trainees completed this past year through the CW Academy.

Linda reminded everyone to look on the back of the agenda for up coming events. She called for a motion to adjourn: Dennis Gaede KI7DRO motioned and seconded by Don Blanchard WA7GTU. Vote was unanimous. Meeting adjourned at 9:12pm.

Submitted by:
Bill Stenger K6QOG
Secretary

A Thank You From Sylvia KB7UMU



Dear members of ECARC group.
I Know this is late but I want to express my great appreciation and love for this group. I deeply appreciate your thoughtfulness and concern for me with the loss of Joel. It was a beautiful floral arrangement that was sent by the club to Joel's funeral. I appreciate all who attended the viewing and service and the thoughtfulness that was shown to me at that time. Im very grateful for all kindness and consideration since then. Your many contributions and gft cards and rides when needed. I value all your frundships.

Sending sincere thanks for your thoughtfulness.

Thanks again.
Sylvia Clements
KB7UMU

Field Day 2017 RCARC STYLE




Antennas, Modes, Dinner with family and friends