



THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

>>>>>>> <https://www.barconline.org> <<<<<<<<

April 2017

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PRESIDENT'S MESSAGE

At the last club meeting we had some excellent Mini Ecomm Conference presentations. The presentations were an Ecomm Trailer demo by Theo Thompson K7TWT, Grab n Go Radio Kits by Kent AD7HK and Shirley AD7HL Larsen, Medical/First Aid Grab n Go Kits by Brian Jenkins KF7UOH, Solar Power demo by Chris Clement K7CTC, 72 hr Kit demo by Laurie Littledike KF7DKM, CERT demo by Russ Leikis KE7VFI, and Portable HF demo by Jared Smith N7SMI.

Every year we need to review our Grab n Go Kits and 72 Hr Kits that we have prepared for emergency situations. The review and inventory makes sure that expendable items are fresh, and you have not borrowed something and forgot to put it back. It's also a good time to check your HTs, portable radios are in good working order, and update any repeater frequencies that might have changed. Also the information presented at the Ecomm Conference could give you ideas to improve or add items to your Grab n Go Kit and 72 hr Kits. So when all else fails, you are ready with your Grab n Go Kit and 72 Hr Kit.

The month of April is when the [Great Utah ShakeOut](#) drill is held. This is an opportunity to learn how to be better prepared for major earthquakes and how to protect ourselves during earthquakes. Participating is a great way for you or your organization to gain a better understanding in taking appropriate action to reduce injuries and fatalities during earthquakes, and to recover quickly from big earthquakes.

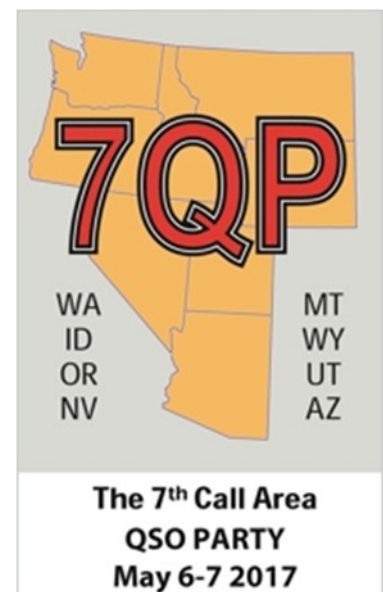
[Be Ready Utah](#) is the State of Utah's official emergency preparedness campaign managed by the Division of Homeland Security. It's designed as a bottom-up approach for preparedness with the focus on every individual's personal responsibility in preparedness first. The web site provides valuable information for individuals and families, communities, and others on how to get started with simple, basic steps to preparedness.

Next month on May 6th, BARC will be participating in the [7th Call Area QSO Party](#) (7QP) from 7 AM to midnight. 7QP is a state QSO party involving the 7th call area states where 7th call area stations work everyone, others work 7th area stations only. Stations that are in the 7th call area give a signal report and a 5-letter state/county code. There are 259 counties in the 7th call area and each county may be active with a fixed, portable, and/or a mobile station. Non 7th area stations give a signal report with their state/province/"DX" two-letter code. Also, the Indiana QSO Party and New England QSO Party are happening the same weekend, and those stations will be giving their appropriate exchange. It is fun to see what counties, states, and DX stations that can be contacted.

If you would like to try your hand at working a contest, making some contacts, learning how to use contest logging software, we will be at the club ham shack in the Engineering Lab Building room EL224 on the USU campus. This is a good time to learn about working a contest. There will be Elmer's there to help those who are new to contesting in providing exchange information specific to the contest, to learn how to use contest logging software, or you can just watch and listen to the contest. Drop by the club ham shack and we will get you involved with whatever you would like to do.

Those who would like to meet for breakfast before the 7QP, we will be at Angie's at 6:15 AM.

73,
Cordell
KE7IK



UPCOMING 2017 ACTIVITIES

- 08 Apr, 10:00 AM-BARC Club Meeting** Cache County Sheriff's Office 3rd Floor
Types of Radios, Good and Not as Good
- 12 Apr, 7:30 PM - ARRL Rocky Mountain Division Net** 147.200/IRLP Node:9871
- 15 Apr, 3:00 PM—ARRL VEC License Test Session** @ USU Engineering (NEW)
Building Room 302, Logan, UT. This test follows the one day General License
class. ([More Info Here](#))
- 18 Apr, 6:30-9:00—Elmer Night** @ Cache County Sheriff's Office 3rd Floor
- 19 Apr, 7:00 PM — Cache County ARES meeting** at the Sheriff's Office
- 20 Apr, 8:00 PM - RACES VHF Net** 146.72 Mt. Logan 147.180 Snowbird 147.20 IRLP
- 06 May, 7 AM to Midnight—7QP** 7th Call Area QSO Party - ([More Info](#))
- 10 May, 7:30 PM - ARRL Rocky Mountain Division Net** 147.200/IRLP Node:9871
- 13 May, 10:00 AM - BARC Club Mtg** - Cache County Sheriff's Office 3rd Floor
DMR, Fusion, D-Star, P25 Hot Spots and Dongles
- 16 May, 6:30-9:00—Elmer Night** @ Cache County Sheriff's Office 3rd Floor
- 17 May, 7:00-9:00 PM — Cache County ARES meeting** at the Sheriff's Office
- 20 May, 8:00 AM — RACES HF Net** 3920 KHz
- 01 June, 7:00 PM—ARRL VEC License Test Session** @ **BATC room 806/808**
- 2-3 June, Wasatch Back Relay** - Lead Person for BARC: Tyler Griffiths ([More Info](#))
- 03 June, Little Red Riding Hood** bicycle race — Lead Person: Russ Leikis ([Info](#))

For more calendar information see the barconline.org/calendar

March Club Meeting:

If you missed the March BARC club meeting it included an EMCOM mini conference. There were several presentations that were given about various areas related to radio and/or emergency preparedness. It was well prepared and well done, thanks to all that participated. The presentation on Solar power given by K7CTC can be found [here](#) and the presentation on 72 hour kits given by KF7DKM can be found [here](#).



At the Utah VHF Society swap meet on February 25th, an update was presented on the Frisco Peak and Bear Lake repeater site failures due to the extreme winter weather. They were asking for anyone that could volunteer their time or donations to help rebuild these sites. The VHF Society previously provided monetary help for BARC to update the equipment on the Mt Logan repeater site several years ago. KE7IK, AC7II, and N7UWX discussed the possibility of the club providing a donation to help rebuild these sites.

At the March BARC board meeting a proposal was made for BARC to provide a donation of \$1000 to the Utah VHF Society to assist in the repair of the damaged Frisco Peak and Bear Lake repeater sites. Donations from our area would primarily be used to help with the Bear Lake Repeater site. The Board felt that it would be good for the Club Membership to be aware of the problems and wanted the membership to be able to vote to support the UVHFS with this project. This will be voted on at the April club meeting held at 10:00 AM on April 8 at the Cache County Sheriffs Office located at 200 North 1225 West, Logan, Utah on the 3rd Floor. It will be explained more at the club meeting but if you are not able to attend and would like to to vote on it please fill out this form and have someone bring it to the meeting.

FOR:

Against:

The ARRL Letter for March 16, 2017

Boy Scouts Announce 2017 JOTA-JOTI Theme

Scouting's World Jamboree on the Air/Jamboree on the Internet (JOTA-JOTI) Team has [announced](#) the theme for this fall's JOTA-JOTI event: "60 Years Connecting Scouts." The 2017 theme recognizes the event's beginnings in 1957 and commemorates its growth in participation and in the expanding communication channels activated this coming October. In addition to Amateur Radio, those channels include internet-based channels and other internet-based options, including social media, ScoutLink, IRC chat services, Skype, and more.



"It also recognizes the goal of the event -- connecting Scouts so that they can engage in conversations with other Scouts across town and around the world," said JOTA Coordinator Jim Wilson, K5ND. "This allows them to discover geographic and cultural differences and similarities. Plus, they are exposed to the technology that makes all this happen."

The JOTA-JOTI logo contest is about to start. Plans for 2017 include a simplified registration system. According to the [World JOTA-JOTI Report 2016](#), more than 1 million Scouters in 156 countries and at 33,000+ locations took part in JOTA-JOTI last fall. The numbers for US participants were 10,700 for JOTA and 560 for JOTI. Wilson said there was a problem integrating those statistics into the final report.

Hams Support Miami Marathon Communications for the 15th Consecutive Year

More than 40 South Florida Amateur Radio volunteers supported event and emergency communications on January 29 at the 15th running of the [Miami Marathon](#) and Half Marathon. Amateur Radio has been a critical part of this major international event each year. Depending on their assignments, volunteers report as early as 4:30 AM for the start of the event and may remain in place for up to 9 hours. Many of the hams who turned out this year have volunteered for all or many of the 15 Miami Marathon events.

Operating from a mobile command unit at the finish area, two net control stations (NCS) manage traffic from all of the radio amateurs deployed throughout the course. The command unit offers NCSs immediate access to police, fire, public safety, medical, and race officials. Hams at each of the 23 aid stations along the 26-mile course coordinate communication with aid station captains and public service officials to ensure a rapid and accurate flow of critical information to command, including information on injured runners, medical supply requests, traffic, weather, and other critical situations.



Amateur Radio volunteers also are stationed at the course start, finish, course split, medical tent, and SAG wagon, as well as in the lead vehicles. For redundancy and backup, both primary and secondary UHF and VHF repeaters cover the entire course. With hundreds of thousands of spectators on hand to cheer the runners, ham radio has proven consistently to be the most reliable form of emergency communication in the race environment, said Miami Marathon Communications Director Benjamin Nemser, WA4DZS, who is also a Miami-Dade County ARES member.

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From the first Miami Marathon in 2003, the event has grown from some 3,000 runners to more than 25,000.

Runners in the Miami Marathon raise millions of dollars for a multitude of charities. Athletes with disabilities also compete, as do more than 4,000 middle school youngsters. Read [more](#). -- Thanks to Benjamin Nemser, WA4DZS, Communications Director, Miami Marathon, Miami-Dade County ARES, via the [ARRL ARES E-Letter](#)



The ARRL Letter for March 30, 2017

New Bands! FCC Issues Amateur Radio Service Rules for 630 Meters and 2,200 Meters

The Amateur Service will officially get two new bands in the near future. The FCC has adopted rules that will allow Amateur Radio access to the 630 and 2,200-meter bands, with minor conditions. A *Report and Order (R&O)* was released on March 29. The new rules become effective 30 days following publication in *The Federal Register*. The R&O, which also addresses several non-Amateur Radio issues, allocates the 472-479 kHz band (630 meters) to the Amateur Service on a secondary basis and amends Part 97 to provide for Amateur Service use of that band as well as of the previously allocated 135.7-137.8 kHz band (2,200 meters). The R&O also amends Part 80 rules to authorize radio buoy operations in the 1900-2000 kHz band under a ship station license.



"It's a big win for the Amateur community and the ARRL," ARRL CEO Tom Gallagher, NY2RF, said. "We are excited by the FCC's action to authorize Amateur Radio access for the first time on the MF and LF spectrum."

The FCC said the Amateur Radio service rules it has adopted for 630 meters and 2,200 meters allow "for co-existence with Power Line Carrier (PLC) systems that use these bands." Utilities have opposed Amateur Radio use of the MF and LF spectrum, fearing interference to unlicensed Part 15 PLC systems used to manage the power grid.

Amateurs operating on 472-479 kHz would be permitted a maximum equivalent isotropically radiated power (EIRP) of 5 W, except in parts of Alaska within 800 kilometers (approximately 496 miles) of Russia, where the maximum would be 1 W EIRP. Amateurs operating in the 135.7-137.8 kHz band could run up to 1 W EIRP.

The FCC is requiring a 1-kilometer separation distance between radio amateurs using the two new bands and electric power transmission lines with PLC systems on those bands. Amateur Radio operators will have to notify UTC of station location prior to commencing operations.

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The FCC also placed a 60-meter (approximately 197 feet) above-ground-level (AGL) height limit on transmitting antennas used on 630 meters and 2,200 meters. The bands would be available to General class and higher licensees, and permissible modes would include CW, RTTY, data, phone, and image. Automatically controlled stations would be permitted to operate in the bands. More details soon, on the ARRL website.

Amateur Radio Links Search for Amelia Earhart's Plane with ISS Crew, Classroom

One of the enduring mysteries of the 20th century was the 1937 disappearance of famed aviator Amelia Earhart and her flight companion and navigator Fred Noonan, while she was attempting to circle the globe. It appeared that Earhart's plane went down in the South Pacific in the vicinity of Howland Island; her last-known radio transmission came from there. On February 18, a team from [Nauticos](#) -- with stratospheric explorer Alan Eustace and aviation pioneer Elgen Long, W7FT -- departed Honolulu for the vicinity of Howland Island, some 1,600 miles to the southwest, to complete the Eustace Earhart Discovery deep sea search for Earhart's lost Lockheed *Electra*. Nauticos provides ocean technology services to government, science, and industry.



Tom Vinson, NY0V/mm, on the *Mermaid Vigilance*, with Education Officer Sally Smith.

The team has been conducting a sonar survey of about 1,800 square miles of sea floor where it's believed the aircraft may rest, and Amateur Radio has provided a means to link the crew of the research vessel *Mermaid Vigilance* with youngsters following the expedition, as well as with the International Space Station (ISS) crew.

Among those involved in the Earhart search is ARRL Midwest Division Director Rod Blocksome, K0DAS, of Iowa. Earhart was born and raised in Kansas and lived in Iowa and Minnesota. Bryan McCoy, KA0YSQ, of Iowa, also is on the *Mermaid Vigilance*, which is carrying out the deep-water sonar search for the lost aircraft. The team is using autonomous underwater technology provided by the [Woods Hole Oceanographic Institution](#) to image the ocean floor nearly

18,000 feet below. On March 17, the team launched the REMUS vehicle to search the depths of the Central Pacific.

On March 20, another Midwesterner -- Tom Vinson, NY0V, of Minnesota -- joined other crew members in [making contact](#) with US Astronaut and ISS Commander Shane Kimbrough, KE5HOD, who was at the controls of NA1SS aboard the ISS. A couple of Russian-speaking crew members also had the opportunity to speak with one of the cosmonauts on board the ISS.

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Earlier, on March 15, Vinson assumed Kimbrough's role to host a [question-and-answer session](#) of his own, with Virginia fifth graders in the classroom of teacher Kathy Lamont, KM4TAY, an alumna of ARRL's Teacher Institute. The contact was routed over 20 meters from the vessel to Hawaii, and then via *EchoLink* to Virginia. "My kids had a lot of fun," she recounted later. Vinson said that promoting science, technology, engineering, and mathematics (STEM) education "is what we're all about," with support from Rockwell Collins.



According to [The Daily DX](#), Vinson has been on 7.027 and 7.165 MHz around 0600 UTC "and whenever I am up on the sunrise across the US." Blocksome will join him in Majuro, where they will operate April 5-7 using the V73 prefix with their home call signs.

Centennial of Amateur Radio Blackout for World War I Occurs on April 6

World War I commenced in Europe in August 1914, and the US, under President Woodrow Wilson, was determined to remain neutral. As the fighting and the enemy's resolve intensified, and Germany began sinking ships attempting to evade a naval blockade of England as well as non-military vessels - including the *Lusitania* with a loss of nearly 1,200 lives -- it became inevitable that the US would enter the fray. Leaders of the newly formed American Radio Relay League encouraged the organization's 3,000 members to be prepared.

The US officially declared war on Germany and Austria-Hungary on April 6, 1917, and the US government immediately ordered most private radio stations in the US either to shut down or be taken over by the government. For the duration of WWI, it was against the law for private citizens to even own an operational radio transmitter or receiver, so amateur transmitting and receiving stations had to be disassembled. Amateur Radio operating privileges were not restored until November 1919 (QST resumed publication a few months earlier).



Once the US declared war, QST editorials urged qualified amateurs to volunteer their desperately needed skills to the military. Enlistees were particularly directed to the Navy, the nation's principal service user of wireless.

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A specific program was developed to induct volunteer amateurs into the Naval Reserve for the duration -- the Class 4 Naval Reserve. The requirements included citizenship, the ability to pass a physical examination, and skill in sending and receiving Morse code at 10 WPM. Many volunteering radio amateurs chose to join this reserve, ARRL's first Communications Manager Fred H. Schnell, 1MO, among them. He went to sea as a chief radioman.

ARRL co-founder Clarence D. Tuska received a commission as a lieutenant in the US Army Signal Corps, and he established a radio training school at Ellington Airfield near Houston, Texas.

QST suspended publication for the duration of the war. -- *Thanks to Mike Marinaro, WN1M, and United States Early Radio History by Thomas H. White.*



The cover of the April 1917 edition of QST.

Editors Note: Many of the good news articles published in The Ohm Town News are found in the e-mails received from the ARRL organization. By becoming a member of the ARRL you receive a copy of the QST magazine monthly and if you wish you can also receive e-mails with news articles and important information. If you are a member of the ARRL please indicate that on your membership registration or renewal form. The BARC club is an ARRL affiliated club and it is helpful to know how many ARRL members we have. (P.S. Now is the time to renew your membership in BARC if you have not renewed it yet this year, the renewal form is on the next page or you can do it online at www.barconline.org.)

Membership in **The Bridgerland Amateur Radio Club, Inc. (BARC)** is open to anyone interested in Amateur Radio. You do not need an amateur license to join. Learn more online at <http://www.barconline.org/>.

Students receive free membership while they are in school.

BARC provides the following to its members:

- A repeater system that covers northern Utah from Bear Lake to Salt Lake Valley.
- Public Service Events where you can practice your radio skills in a fun learning environment.
- Club meetings are held the second Saturday each month; October, November and January through May. An opportunity to meet and learn from other amateur operators.
- Social activities where members can make friends and interact with other members.



Your tax deductible membership supports club activities and the BARC repeater system.



The Bridgerland Amateur Radio Club, Inc.

Membership application for the year 2017

Dues are in effect January 1, 2017 through December 31, 2017

Please indicate if you or family member is an American Radio Relay League (ARRL) member

Name _____ Call Sign _____ Date Paid _____

ARRL member

P.O. Box _____ Street Address _____

City _____ State _____ Zip Code _____

Phone () _____

E-mail _____

(The club's newsletter, THE OHM TOWN NEWS, is sent to your E-mail Address)

Student Membership (no cost while you are in school, give school name and year graduating)

_____ Your School _____ Year Graduating

Individual Membership - \$25 \$ _____

Addition Family members in same household - \$3 ea \$ _____

Donation for Repeater upgrades / equipment purchases \$ _____

Total \$ _____

Names and Call Signs of additional family members

Name _____ Call Sign _____

E-mail _____ ARRL member

Name _____ Call Sign _____

E-mail _____ ARRL member

Mail your completed form and a check to: B.A.R.C., P.O. Box 111, Providence UT 84332-0111 or pay online at <http://barconline.org/join-barc/> via PayPal

B.A.R.C. is a non-profit 501(c)(3) organization



Bridgerland Amateur Radio Club is an ARRL affiliated club

Questions for The General Class License

1. (G1A04) Which of the following amateur bands is restricted to communication on only specific channels, rather than frequency ranges?
 - A. 11 meters
 - B. 12 meters
 - C. 30 meters
 - D. 60 meters
2. (G2A03) Which of the following is most commonly used for SSB voice communications in the VHF and UHF bands?
 - A. Upper sideband
 - B. Lower sideband
 - C. Vestigial sideband
 - D. Double sideband
3. (G3C09) What type of radio wave propagation allows a signal to be detected at a distance too far for ground wave propagation but too near for normal sky-wave propagation?
 - A. Faraday rotation
 - B. Scatter
 - C. Sporadic-E skip
 - D. Short-path skip
4. (G4C07) What is one good way to avoid unwanted effects of stray RF energy in an amateur station?
 - A. Connect all equipment grounds together
 - B. Install an RF filter in series with the ground wire
 - C. Use a ground loop for best conductivity
 - D. Install a few ferrite beads on the ground wire where it connects to your station
5. (G5B04) How many watts of electrical power are used by a 12 VDC light bulb that draws 0.2 amperes?
 - A. 2.4 watts
 - B. 24 watts
 - C. 6 watts
 - D. 60 watts
6. (G6A02) What is an advantage of the low internal resistance of nickel-cadmium batteries?
 - A. Long life
 - B. High discharge current
 - C. High voltage
 - D. Rapid recharge
7. (G7B08) How is the efficiency of an RF power amplifier determined?
 - A. Divide the DC input power by the DC output power
 - B. Divide the RF output power by the DC input power
 - C. Multiply the RF input power by the reciprocal of the RF output power
 - D. Add the RF input power to the DC output power
8. (G8B03) What is another term for the mixing of two RF signals?
 - A. Heterodyning
 - B. Synthesizing
 - C. Cancellation
 - D. Phase inverting
9. (G9B06) Where should the radial wires of a ground-mounted vertical antenna system be placed?
 - A. As high as possible above the ground
 - B. Parallel to the antenna element
 - C. On the surface of the Earth or buried a few inches below the ground
 - D. At the center of the antenna
10. (G0A03) How can you determine that your station complies with FCC RF exposure regulations?
 - A. By calculation based on FCC OET Bulletin 65
 - B. By calculation based on computer modeling
 - C. By measurement of field strength using calibrated equipment
 - D. All of these choices are correct

(For answers to test questions see bottom of page [12](#))

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Answers to questions on page [11](#): 1-D, 2-A, 3-B, 4-A, 5-A, 6-B, 7-B, 8-A, 9-C, 10-D