



THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

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

April 2013

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PRESIDENT'S MESSAGE

On April 17th at 10:15 a.m., the Great Utah ShakeOut for 2013 will take place. 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.

Ground shaking during an earthquake is seldom the cause of injury. Most earthquake-related injuries and deaths are caused by collapsing walls and roofs, flying glass and falling objects. It is extremely important for a person to move as little as possible to reach the place of safety he or she has identified because most injuries occur when people try to move more than a short distance during the shaking.

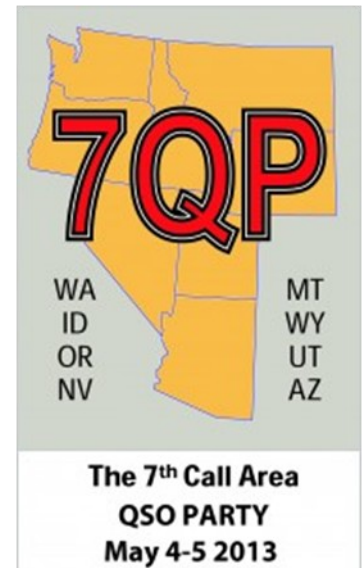
On [The Great Utah ShakeOut](#) web page, there is a link for signing up and various links for additional information. With each preparedness drill, we gain a better understanding for emergency preparedness which can help us get ready for earthquakes or other natural disasters that can hit Utah. Fires, floods, severe winter storms, extended power outages, extreme heat, drought, and landslides are other possible disasters that can happen in our state.

[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 4th, BARC will be participating in the [7th Call Area QSO Party](#) (7QP) from 7 AM to after 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, we will be at Angie's at 5:45 AM.

73,
Cordell
KE7IK



UPCOMING 2013 ACTIVITIES

ARRL Rocky Mountain Division Net — 10 April, 7:30 PM IRLP Node:9871

BARC Club Meeting - 13 April 10:00 AM
(Mesh networking presentation—[see page 4](#))

The Great Utah ShakeOut — 17 April, 10:15 AM (* Tyler Griffiths)
(Also see President's Message on [P 2](#))

RACES VHF Net — 18 Apr, 8:00 PM 447.00 IRLP 145.49 Promontory 147.18 Snowbird

ARRL Rocky Mountain Division Net — 8 May, 7:30 PM IRLP Node:9871

BARC Club Meeting — 11 May, 10:00 AM

RACES HF Net — 18 May 8:00 AM 3920 KHz

Mountain Man Rendezvous — 20-21 May (* Tammy & Dean Stevens)

Little Red Riding Hood Bicycle Race — 1 June (* Russ Leikis)

ARRL VEC-listed Local Radio test — 6 June, 7:00 PM ([Info on web site](#))
USU's ASTE building (Room 108 @ 1498 North 800 East, Logan, UT 84321)

RACES VHF Net — 20 Jun, 8:00 PM 447.00 IRLP 145.49 Promontory 147.18 Snowbird

Wasatch Back Relay — 20-21 June (* Tyler Griffiths)

Bridgerland Radio Rocket Recovery — 20-22 June (* Guy Hatch)

The Bear Lake Monster Ride — 22 June

Field Day (in place of June Club Meeting) — 22-23 June (* Ted McArthur)

Rocky Mountain Division Convention (Estes Park, CO) - 28-30 June
For Info go to: www.RockyMountainDivision.org

(* Contact for information or to volunteer to help with club involvement)

Local Radio Nets:

The **Weekly BARC net** is for BARC members and anyone else that would like to check in, held **every Tuesday night at 9:00 p.m.** local time on the Mt Logan BARC Repeater and Linked Systems (146.720)

The **BARC Ladies Net** is every **2nd and 4th Tuesday at 8:00 p.m.** on the BARC Repeater and Linked Systems (146.720). All licensed lady amateur radio operators are welcome to check in. Thanks, Shirley Larsen AD7HL

BARC April Club Meeting Saturday April 13th 2013, 10 AM

Presentation Topic: High Speed Multimedia Mesh Networks (HSMM-MESH) and Amateur Radio

Where: 3rd floor of the Cache County Sheriffs Complex on 200 North and 1225 West, Logan, Utah

Tom Baldwin KD7TRN and Kevin Reeve N7RXE will present an introduction to HSMM-MESH networks and how they can be used in Amateur Radio for fun, during events, and for emergencies. HSMM-MESH currently operate in the 2.4 Ghz Amateur Radio band and use surplus off the shelf equipment to function. You can get started for less than \$100.

March Activity Report

Thanks to BARC from the Logan Wilson Area March 9th Preparedness Fair Committee. There were more than 200 people attending. The booth provided a variety of communications topics including the battery-in-a-box brought by Kevin Reeve N7RXE. Lots of fair attendees stopped at the booth and expressed interest in amateur radio.

The ARES-E Letter for March 20, 2013

Tips: Batteries at the Heart of Portable Comms

Back about 20 years ago, NiCd batteries were notorious for having a pronounced memory effect caused by a special type of crystal formation within the battery. This particular mechanism has been eliminated in current NiCd cells but our memory of it, so to speak, is long.

Today's batteries all have some kind of memory in which the capacity of the battery changes with patterns and depths of discharge. Each type of battery chemistry exhibits this effect for different reasons - some types stronger than others. Unfortunately, it's also referred to as a "memory effect" which is confusing to those of us who remember the old "memory effect." Nothing like calling two different things by the same name to generate a lot of confusion!

Because this effect varies with battery type, blanket statements about it are unwise. Isidor Buchmann's *excellent* and very readable book, *Batteries In a Portable World*, and its sibling website, www.batteryuniversity.com, tackle the full spectrum of battery types and how to apply them. On the website, I highly recommend taking the opportunity to read the section "How to Prolong Battery Life." The book is available from the [ARRL Store](http://www.arrl.org) and other book sellers. Both should put a charge into your understanding of this important energy source that is crucial to effective emcomm operation. Good luck and may your batteries live long and prosper! - *Ward Silver, N0AX, Contributing Editor, QST; ARRL Contest Update Editor; St. Charles, Missouri*

Visit the New Citizen Corps and CERT Web Pages

The Citizen Corps website and CERT web page have relocated to new homes. FEMA has consolidated all of its online content, including content currently on the Citizen Corps website, into two websites: FEMA.gov and Ready.gov. In addition to reducing costs, this website migration provides an opportunity to increase the visibility of our programs to an entirely new audience and to recruit new volunteers. The new website locations also give you easy access to more resources than ever and an updated look and feel for online content.

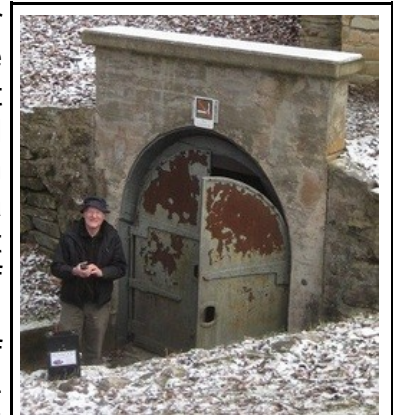
Now when you try visiting the original Citizen Corps website, you should be automatically redirected to the new page at www.ready.gov/citizen-corps. Likewise, if you try visiting the original CERT website, you should be automatically redirected to its new page at www.fema.gov/community-emergency-response-teams.

The new web pages should have all of the functions of the original Citizen Corps and CERT websites, including program registration and profile updates. We also intend to build out [State-specific pages](#) to drive more traffic to the State websites. If anything is missing or does not work properly, please do not hesitate to reach out to us at citizencorps@fema.dhs.gov.

Be sure to check out the new [Citizen Corps](#) and [CERT](#) web pages today for the latest program news and updates! -- FEMA

The ARRL Letter for March 14, 2013 Bob Bruninga, WB4APR, Takes APRS Underground

Bob Bruninga, WB4APR, led a group of radio amateurs earlier this month to Mammoth Cave -- the world's longest known cave system -- at Mammoth Cave National Park in Kentucky to test how the Automatic Packet Reporting System (APRS) can be used as a means to extend radio communications underground. "When used underground, VHF and UHF radios can only work within a few hundred feet of each other and only when in the line of sight of another radio," Bruninga explained. "This makes routine use of these radios of little value when underground; however, when APRS radios act as packet digipeaters, these few hundreds of feet can be extended by an order of magnitude." Bruninga, a senior research engineer at the US Naval Academy, developed APRS as a global, on-air protocol for supporting handheld position reporting and text messaging via VHF radio. Read more [here](#).



APRS developer Bob Bruninga, WB4APR -- an APRS-compatible handheld transceiver in hand and digipeter box in front of him -- at one of the entrances to Mammoth Cave.

The ARRL Letter for March 7, 2013 Florida Hams Prove that Ham Radio Works When Cell Phones Don't

After a day of exploring the Green Swamp Wildlife Management Area -- which covers 50,692 protected acres in Florida's Lake, Polk and Sumter Counties -- with his grandson, Joe Cody,

KE4WDP, of Winter Haven, Florida, saw that the roads were flooding and becoming hazardous. As he tried to drive out of the area, Cody's small pick-up truck got bogged down in the mud. Since he was out of cell phone range, Cody tried calling for help on the Dade City 146.880 repeater. Richard Parker, KF4ORW, of Dade City, Florida, heard the call and answered. Read more [here](#).

The ARRL Letter for March 14, 2013

US Postal Service Introduces Global Forever Stamp



In addition to an [increase](#) in postal rates in January 2013, the US Postal Service introduced a new [Global Forever First-Class Mail International stamp](#). Priced at \$1.10 each and offered in a pane of 20, the *new* stamp offers a single price for any First-Class Mail International 1-ounce letter to any country in the world, as well as 2-ounce letters to Canada. The stamp is available [online](#), at post offices in the US or by calling 1-800-782-6724. -- Thanks to ARRL Oklahoma Section Manager Kevin O'Dell, N0IRW, for the information.

The ARRL Letter for March 28, 2013

FCC News: FCC Chairman Julius Genachowski, FCC Commissioner Robert McDowell to Step Down

FCC Commissioner Julius Genachowski and FCC Commissioner Robert McDowell both announced last week that they would be leaving the Commission. McDowell announced his resignation during the FCC's open meeting on March 20, while Genachowski made his announcement in remarks to FCC staff on March 22.

Genachowski was nominated by President Barack Obama to lead the Commission in June 2009. McDowell was appointed by President George W. Bush in 2006 and re-appointed by President Obama in 2009. While Genachowski's term is up later this year, McDowell's term expires in 2014. Neither Genachowski nor McDowell has announced their post-Commission plans.



Both FCC Chairman Julius Genachowski (left) and FCC Commissioner Robert McDowell announced last week that they will soon be leaving the FCC.

The departure of Genachowski (a Democrat) and McDowell (a Republican), leaves Mignon Clyburn and Jessica Rosenworcel as the FCC's Democrats, and Ajit Pai as its sole Republican, giving Democrats a 2 to 1 voting advantage. Only three commissioners at a time may be members of the same political party. With two seats open on the FCC, the Obama Administration could advance a Republican and a Democratic nominee simultaneously, as it did with Pai and Rosenworcel in 2012. Read [more](#).

FCC News: FCC Grants ARRL's Request for Temporary Waiver for TDMA Systems



Acting upon a request by the ARRL, the FCC issued an *Order* (WT Docket No, 12-283) on March 25, granting a temporary waiver to transmit communications on amateur service channels above 30 MHz using single time-slot Time Division Multiple Access (TDMA) systems. The temporary waiver was granted pending the resolution of a related rulemaking proceeding (RM-11625).

In granting the temporary waiver, the FCC agreed with the ARRL, noting that the digital systems that radio amateurs have recently implemented are "compatible with existing amateur repeater channelization plans." The FCC also noted that allowing FXE and F7E as phone emissions and emission type FXD as a data emission "is unlikely to result in inharmonious emission types being used in the same segments of the frequency bands. We also conclude that allowing amateur stations to transmit these emission types is consistent with the basis and purpose of the amateur service, specifically to continue to contribute to the advancement of the radio art." Read [more](#).

Amateur Radio at the National Association of Broadcasters Convention



The ARRL will be promoting Amateur Radio at the annual convention of the National Association of Broadcasters -- NAB Show -- scheduled for April 6-11 at the Las Vegas Convention Center. Members of the Las Vegas Radio Amateurs Club will staff the ARRL booth at NAB, providing attendees with information about Amateur Radio. The booth also serves as a meeting place for radio amateurs attending the convention where they can talk with local leaders, as well as ARRL Pacific Division Director Bob Vallio,

W6RGG. Arrangements for the ARRL booth are being provided by NAB Science & Technology Vice President John Marino, KR1O. Read [more](#).

The ARRL Letter for April 4, 2013 ***Public Service: ARRL Meets with FEMA Administrator*** ***Craig Fugate, KK4INZ***

Federal Emergency Management Agency (FEMA) Administrator Craig Fugate, KK4INZ, met with ARRL leadership at FEMA Headquarters in Washington, DC last month. Fugate, an ARRL member, spoke with ARRL President Kay Craigie, N3KN, and ARRL Chief Executive Officer David Sumner, K1ZZ, as well as ARRL General Counsel Chris Imlay, W3KD, and ARRL Emergency Preparedness Manager Mike Corey, KI1U, about Amateur Radio's role in public service and disaster communications.

Fugate wrote on his [blog](#) about the meeting: "For those of you that are not familiar with Amateur Radio, or ham radio as it is sometimes referred, it is the use of certain radio frequencies as a hobby, to exchange non-commercial messages, as a tool for education and experimentation and for public service community activities, including assisting in emergency communications. As a radio amateur, I enjoyed talking with [the ARRL] about the contributions that hams can make in times of disaster 'when all else fails.'"

Fugate also mentioned that he was looking forward to ARRL Field Day in June, "where I will test my own field gear. It is a great event to encourage first responders and citizens to think about how to prepare for disasters and how to develop a plan for themselves and their communities. And perhaps it will inspire more to consider this great hobby that also has a long and legendary history of public service to the nation. We're grateful to our friends at the ARRL and look forward to partnering with them in exercises and efforts to plan, prepare, respond and recover from future events that we may face."



ARRL leadership traveled to Washington, DC last month to meet with FEMA Administrator Craig Fugate, KK4INZ. From left to right: ARRL General Counsel Christopher Imlay, W3KD; ARRL Chief Executive Officer David Sumner, K1ZZ; ARRL Emergency Preparedness Manager Mike Corey, K11U; ARRL President Kay Craigie, N3KN; FEMA Administrator Craig Fugate, KK4INZ, and FEMA Chief Technology Officer Ted Okada, K4HNL. [Photo courtesy of Craig Fugate, KK4INZ]

Fugate -- A Strong Proponent for Amateur Radio

In May 2011, [Fugate spoke at an earthquake communications preparedness forum](#) hosted by the FCC where he described the Amateur Radio operator as "the ultimate backup, the originators of what we call social media." In his remarks, Fugate praised Amateur Radio: "During the initial communications out of Haiti [during the January 2010 earthquake], volunteers using assigned frequencies that they are allocated, their own equipment, their own money, nobody pays them, were the first ones oftentimes getting word out in the critical first hours and first days as the rest of the systems came back up. I think that there is a tendency because we have done so much to build infrastructure and resiliency in all our other systems, we have tended to dismiss that role 'When Everything Else Fails.' Amateur Radio oftentimes is our last line of defense."

At the forum, Fugate said that he thinks "we get so sophisticated and we have gotten so used to the reliability and resilience in our wireless and wired and our broadcast industry and all of our public safety communications, that we can never fathom that they'll fail. They do. They have. They will. I think a strong Amateur Radio community [needs to be] plugged into these plans. Yes, most of the time they're going to be bored, because a lot of the time, there's not a lot they're going to be doing that other people aren't doing with Twitter and Facebook and everything else. But when you need Amateur Radio, you really need them."

FCC News: FCC Seeks to Reassess RF Exposure Limits



On March 27, the FCC released a *First Report and Order, Further Notice of Proposed Rulemaking* and a *Notice of Inquiry* (ET Docket Nos. 13-84 and 03-137). The documents seek to reassess the FCC's RF exposure limits and policies, as well as to propose changes to the FCC's rules regarding human exposure to RF electromagnetic fields. These proposed changes would affect the Amateur Radio Service (Part 97) rules.

In its *Notice of Inquiry*, the FCC included clarifications related to the application of occupational exposure limits for devices and at fixed transmitter sites. The FCC noted that it "should be helpful to licensees to codify our earlier adopted policy with regard the use of occupational/controlled limits at Amateur Radio stations." This policy was first established in the *RF Report and Order of 1996*, but it was not incorporated in the rules at that time. It allows amateur stations to be evaluated "with respect to occupational/controlled exposure limits, as long as appropriate training and information has been provided to the amateur licensee and members of his or her immediate household. Other nearby persons who are not members of the amateur licensee's household must be evaluated with respect to the general population/uncontrolled exposure limits."

"The ARRL has an RF Safety Committee, consisting of experts in the field," explained ARRL Chief Executive Officer David Sumner, K1ZZ; "The committee members, as well as Board members and staff are reviewing the lengthy document and will formulate a response." Read [more](#).

On the Air: 2013 World Amateur Radio Day -- April 18 -- Celebrates 100 Years of Disaster Communications

This year marks the 88th anniversary of the founding of the International Amateur Radio Union (IARU). To mark this occasion, the IARU and its more than 160 Member Societies will celebrate World Amateur Radio Day on April 18. For many years, the IARU Administrative Council has declared a theme for each World Amateur Radio Day. The theme for 2013 is *Amateur Radio: Entering Its Second Century of Disaster Communications*. The theme commemorates the first known use of Amateur Radio in a disaster situation: Herbert V. Akerberg -- a 15-year-old from Hilltop, Ohio -- is believed to be the first person to use Amateur Radio to call for help during a disaster. In late March 1913, the Scioto River in downtown Columbus, Ohio flooded its banks, killing more than 100 people. According to a November 2012 article in *The Columbus Dispatch*, Akerberg used his home radio transmitter to send SOS calls via Morse code for nearly 72 hours. Read [more](#).



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/> or by emailing membership@barconline.org.

The Bridgerland Amateur Radio Club provides the following to its members:

- A repeater system that covers northern Utah from Bear Lake to Salt Lake Valley.
- Events where you can practice your radio skills in a fun learning environment.
- Club meetings are held the second Saturday each month from October to 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 2013

*Dues are in effect January 1, 2013 through December 31, 2013
New Members Only, individual membership dues prorated quarterly
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 _____

Home Phone () _____ Work Phone () _____

E-mail _____

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

- 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 _____

ARRL member E-mail _____

Name _____ Call Sign _____

ARRL member E-mail _____

Name _____ Call Sign _____

ARRL member E-mail _____



Bridgerland Amateur Radio Club is an ARRL affiliated club

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://www.barconline.org/?q=node/242>

B.A.R.C. is a non-profit organization

Questions for Technician Class License

1. (T1C04) When are you allowed to operate your amateur station in a foreign country?
 - A. When the foreign country authorizes it
 - B. When there is a mutual agreement allowing third party communications
 - C. When authorization permits amateur communications in a foreign language
 - D. When you are communicating with non-licensed individuals in another country
2. (T2B02) What is the term used to describe the use of a sub-audible tone transmitted with normal voice audio to open the squelch of a receiver?
 - A. Carrier squelch
 - B. Tone burst
 - C. DTMF
 - D. CTCSS
3. (T3C02) Which of the following might be happening when VHF signals are being received from long distances?
 - A. Signals are being reflected from outer space
 - B. Signals are arriving by sub-surface ducting
 - C. Signals are being reflected by lightning storms in your area
 - D. Signals are being refracted from a sporadic E layer
4. (T4B03) What is the purpose of the squelch control on a transceiver?
 - A. To set the highest level of volume desired
 - B. To set the transmitter power level
 - C. To adjust the automatic gain control
 - D. To mute receiver output noise when no signal is being received
5. (T5C08) What is the formula used to calculate electrical power in a DC circuit?
 - A. Power (P) equals voltage (E) multiplied by current (I)
 - B. Power (P) equals voltage (E) divided by current (I)
 - C. Power (P) equals voltage (E) minus current (I)
 - D. Power (P) equals voltage (E) plus current (I)
6. (T6A01) What electrical component is used to oppose the flow of current in a DC circuit?
 - A. Inductor
 - B. Resistor
 - C. Voltmeter
 - D. Transformer
7. (T7A08) Which of the following circuits combines a speech signal and an RF carrier?
 - A. Beat frequency oscillator
 - B. Discriminator
 - C. Modulator
 - D. Noise blanker
8. (T8C11) What name is given to an amateur radio station that is used to connect other amateur stations to the Internet?
 - A. A gateway
 - B. A repeater
 - C. A digipeater
 - D. A beacon
9. (T9A04) What is a disadvantage of the "rubber duck" antenna supplied with most handheld radio transceivers?
 - A. It does not transmit or receive as effectively as a full-sized antenna
 - B. It transmits a circularly polarized signal
 - C. If the rubber end cap is lost it will unravel very quickly
 - D. All of these choices are correct
10. (T0C01) What type of radiation are VHF and UHF radio signals?
 - A. Gamma radiation
 - B. Ionizing radiation
 - C. Alpha radiation
 - D. Non-ionizing radiation

(For answers to test questions see page 12)

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

