BARC
BRIDGERLAND AMATEUR RADIO CLUB

THE OHM TOWN NEWS
Voice of the Bridgerland Amateur Radio Club
>>>>>>>>   http://www.barconline.org   <<<<<<<<

April 2015

Some Contents…

ARRL   Affiliated

Ohm
Sweet
Ohm

PRESIDENT'S MESSAGE

If you have never worked an HF contest before or don't have access to a HF rig, here is your chance to try your hand at working a contest, learn how to use contest logging software, or just watch and listen to a HF contest. BARC will be participating in the 7th Call Area QSO Party (7QP) contest on May 2nd from 7 AM to after midnight. This is a state QSO party involving the 7th call area states. We will be at the club ham shack in the Engineering Lab Building room EL224 on the USU campus. Drop by and we will get you involved with whatever you would like to do.

7QP is an amateur radio contest, held annually on the first Saturday in May. The stations of the US 7th call area (Arizona, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming) tries to work as many stations with the 7th call area, rest of US, Canada, and the world over an 18-hour period commencing at 1300 UTC (7AM MDT). 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.
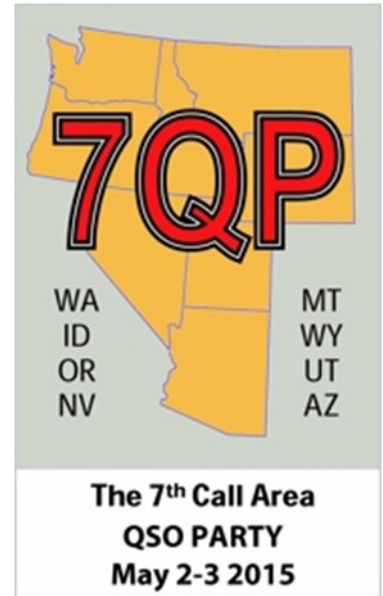
7QP has grown to be one of the popular QSO parties in the land. Here is some history of the origin of the 7QP. The 7QP replaced the "Oregon QSO Party" (OQP), which had been run by Central Oregon DX Club (CODXC) for several years. OQP had about as much activity as one would expect for a single-state QSO party for a sparsely populated state. In the last year of the OQP (2005) about 150 stations from Oregon participated -- at any level of participation. The contest lasted 12 hours, it was not a particularly busy 12 hours, and it took a lot of effort to achieve that level of participation.

After several years of effort with little to show for it, CODXC was motivated to come up with something bigger than the OQP. It seemed that our 7th-area neighbors (other than Washington, possibly) might want to join in.

K4XU floated this idea past the leader of the Washington Salmon Run (and the ARRL Contest Manager at the time) Ward Silver N0AX, at the NW DX convention in August 2004. Since the proposed date for the event was half a year removed from the Salmon Run, Ward thought it was a great idea. He noted that major contest club representatives from most of the W7 states were also at the convention. We rounded them up and had an impromptu meeting right there in the lobby of the hotel. The first decision made was that the contest would be held on the first Saturday in May. That also happened to be the same day that the Indiana (INQP) and New England (ENQP) QSO Parties were traditionally staged.

The reps included K8IA from AZ, K7BG from MT, K5RC from NV, K7UT from UT, W7SE from WY, W7QC from WA, and K4XU from OR. K7TQ later signed on for ID. They became the state 'captains' who agreed to promote the 7QP within their state. K5RC was the first 7QP chairman. Tom's extensive experience in running the Texas Armadillo Run was invaluable in getting us off the ground and marketing the contest to relevant constituencies. K4XU and the Central Oregon DX Club agreed to be the overall sponsor of the event and would draft rules for approval by the group.

UPCOMING 2015 ACTIVITIES

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

11 April, 10:00 AM — **BARC Club Meeting - D-STAR, Fusion and DMR**

15 April, 7:00 PM – Cache County ARES meeting at the Sheriff's Office

16 April, 8:00 PM - RACES VHF Net 147.18 Snowbird 147.20 IRLP 146.72 Mt. Logan

18 April, 8:00 AM — 5:00 PM One day ham class—General Class License (USU ENGR rm 302) for more information & study materials click here

21 April, 6:30-7:30 — Elmer Night-Cache County Sheriffs Office 3rd Floor

02 May, 7:00 AM — 7th Area QSO Party (See Presidents Message Page 2)

09 May, 10:00 AM — **BARC Club Meeting — Satellite AMSAT**

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

16 May, 8:00 AM — RACES HF Net 3920 KHz

19 May, 6:30-7:30—Elmer Night-Cache County Sheriffs Office 3rd Floor

20 May-Mountain Man Rendezvous   (more info)   (Tammy & Dean Stevens)

20 May, 7:00 PM — Cache County ARES meeting at the Sheriff's Office

04 June, 7:00 PM — VE Test Session USU Engineering BLD RM 302

06 June — Little Red Riding Hood   (more info)   (Russ Leikis)

For more calendar information see the barconline.org/calendar

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.

BARC Club Meetings are normally on the 2nd Saturday of the month at 10:00 A.M. on the 3rd floor of the Cache County Sheriffs Complex on 200 North and 1225 West, Logan, Utah.

If the 7QP was going to coexist with the Indiana and New England parties running on the same weekend, a compatible exchange format was needed. The OQP's serial number was dropped and the obligatory 5NN restored. Some debate remained on state/county designators – it was decided to use state first followed by three-character county codes.

The first running of 7QP in May of 2006 was a success, with almost 300 logs submitted (the high-water mark for OQP had been about 80), and it was possible to keep busy the entire 18 hours of the contest! The feedback from participants, including many veteran contesters, was very positive.

Computer logging support became more important each year, both for participants and the log-checking and scoring. K3CT was very helpful in providing 7QP support in N1MM. The other programs followed suit. K3CT was also inventive. Since most logging programs can only do one contest at a time, anyone trying to do all three (INQP, 7QP, and NEQP) has a difficult time switching between logs. His solution: the IN7QPNE -- all three rolled into one 'contest'. To help promote this, the sponsors of all three parties agreed that since each had log checking software capable of determining which QSOs in a log counted for its contest, the entrant could submit the same log to all three sponsors. This feature has allowed 7QP to quickly become one of the top ten QSO parties.

At the conclusion of the 2014 7QP, there were more counties active, 213 of 259, and mobiles than ever before. Still there are some counties that have never been active in 7QP and this is a continuing challenge of the 7QP.

More information on 7QP is at www.7QP.org. The 7th Area QSO Party is fun a radio event to see what counties, states, and DX stations that can be contacted.

73,
Cordell
KE7IK

The ARRL Letter for March 5, 2015
Number of US Amateur Radio Licensees at All-Time High

The US Amateur Radio population continues to soar. At the end of 2014, the total number of US Amateurs in the FCC's Universal Licensing System (ULS) database reached an all-time high of 726,275 -- and the trend has continued in the first 2 months of 2015, which saw the total rise to slightly more than 727,000. The figures exclude expired licenses that are within the 2-year grace period, and club

station licenses. Outside of a little dithering last fall, growth in the Amateur Radio Service in 2014 was steady, according to figures compiled by Joe Speroni, AH0A, on his FCC Amateur Radio Statistics web pages. Over the past decade, the number of Amateur Radio licenses in the ULS database grew by some 8.1 percent. But 2014 was also a banner year for the ARRL Volunteer Examiner Coordinator (VEC).
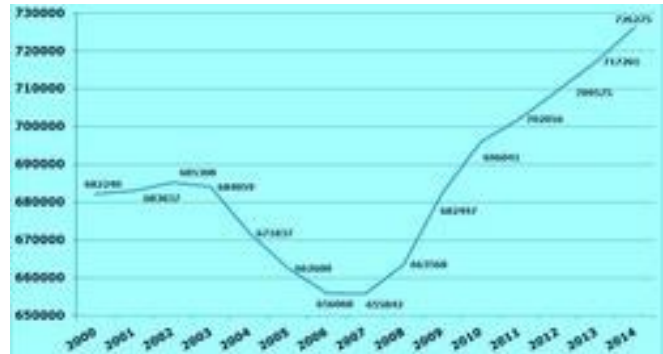
"For the first time in the ARRL VEC program's history, we have conducted more than 7000 Amateur Radio exam sessions in a year, an important milestone," said ARRL VEC Manager Maria Somma, AB1FM. "A total of 7216 ARRL-sponsored exam sessions were administered in 2014, compared to 6823 in 2013."

Amateur Radio numbers in the US from 2000 through 2014. The FCC dropped the Morse code requirement in 2007. **Click to enlarge the graphic.** [Prepared from statistics compiled by Joe Speroni, AH0A]

Somma said the number of new licensees spiked to more than 33,000 in 2014, up by about 15 percent from the previous year. Successful license upgrades rose last year by an unprecedented 13 percent over a year earlier.

At the end of 2014, there were 136,405 Amateur Extra, 169,524 General, and 357,236 Technician class licensees -- all record numbers, Somma pointed out. While the number of Amateur Extra licensees grew in each month of 2014, the number of Technicians and Generals -- and of licensees overall -- faltered a bit last July and September. Last year's overall upward trend quickly recovered, however, during the final quarter of 2014. The General population also dipped briefly in May 2014, before rebounding.

Somma believes the July and September dips may have been a result of applicants adjusting to the new Technician question pool that went into effect last July 1. "We always expect an adjustment period when a new question pool is introduced to the public, as VEs, teachers, and candidates must prepare new study and exam materials," she said. Somma called the dips "a normal part of the question pool cycle."

ARRL VEC Manager Maria Somma, AB1FM. Technician licensees comprise slightly less than one-half of the US Amateur Radio population. As of December 31, some 51,000 Advanced and 12,000 Novice licensees remained in the FCC database. The FCC no longer issues Advanced and Novice licenses, and their numbers continue to decline.

Once again, California far and away was home to the largest number of licensees among the 50 states, with 102,806 at the end of February. Texas was a distant second, with 51,022, Florida came in third, with 40,743, Washington was fourth, with 30,511, and Ohio was fifth at 28,256. With the exception of Ohio, the licensing trend in these states has been through the roof. In Ohio, ham radio numbers began to flag a bit in 2014, after holding steady for about the past 4 years.

The state with the fewest Amateur Radio licensees in 2014 was North Dakota, with 1477, but in an overall upward trajectory since around 2009. Others with small ham populations included Delaware (1715 and growing), Rhode Island (1926 and dropping), Wyoming (1868 and headed up), and Vermont (2101 and slipping, after a bump in 2013 and 2014). These numbers may go a long way toward explaining why these are rare multipliers in the ARRL November Sweepstakes and other events.

Club station licenses in the US numbered 11,501, according to Speroni's statistics. -- *Thanks to Joe Speroni, AH0A; FCC ULS licensing statistics; ARRL VEC*

NASA Soundbites Suitable for Ringtones

NASA Soundbites Suitable for Ringtones Include Juno "HI" CW Message: NASA is offering a collection of sounds from historic spaceflights and current missions that are suitable for cell phone ringtones or other purposes. "You can hear the roar of a space shuttle launch or Neil Armstrong's 'One small step for (a) man, one giant leap for mankind,' every time you get a phone call," NASA said. The files are available for download in MP3 and M4R (iPhone) sound file formats (M4R files must be imported via iTunes). One of the sounds is the Morse code "HI" message transmitted by the Juno spacecraft (photo) during its 2013 Earth flyby. -- *Thanks to Don Kirchner, KD0L; QRZ.com*

The ARRL Letter for March 12, 2015
ITU Smart Sustainable Development Model Report Touts Amateur Radio's Advantages

The use of Amateur Radio in disaster preparedness and response was among "best practices" cited in the International Telecommunication Union (ITU) *Smart Sustainable Development Model Report* for 2015. International Amateur Radio Union (IARU) President Tim Ellam, VE6SH/G4HUA, is a member of the Smart Sustainable Development Model Advisory Board, which prepared the report, published in January. The IARU is an ITU sector member.

"I strongly believe that telecommunications and [information and communication technologies] are critical to saving lives as well as integrating communities and countries into the global economy, particularly as we enter the post-2015 development era," ITU Telecommunication Development Bureau Director Brahima Sanou said in the preface to the report, which deemed Amateur Radio operators
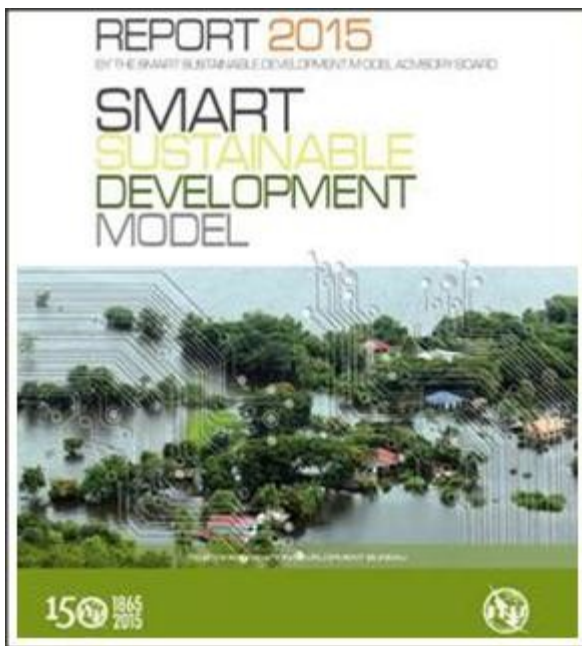
"well suited to respond in times of crisis."

"The resource of the Amateur Radio Service should continue to be utilized as new technologies are developed," the report said. "However, the best asset the Amateur Radio Service brings to emergency communications transcends technology. It provides skilled people 'on the ground' who can communicate using whatever technology is available."

The report cited trained volunteers and existing allocated spectrum as Amateur Radio's primary resources. "Amateur Radio services can be used in any area with an active population of radio amateurs, and is uniquely suited to situations in which other communication networks have been disrupted," the report said, noting that Amateur Radio "involves a community-driven response to disasters." Read more.

The ARRL Letter for March 19, 2015
ARRL President: H.R. 1301 is All About Fairness

The push is on to convince Congress to pass The Amateur Radio Parity Act of 2015 -- H.R. 1301, which was introduced in the US House early this month with bipartisan support and now has 22 co-sponsors. The full text of the bill now is available. If approved and signed by President Obama, the measure would direct the FCC to extend its rules relating to reasonable accommodation of Amateur Service communications to private land use restrictions -- also known collectively as "deed covenants, conditions, and restrictions" or CC&Rs. In the March issue of the *ARRL Legislative Update*, ARRL President Kay Craigie, N3KN, said the bill is "simple and sensible," and she urged all radio amateurs -- whether or not they are affected by CC&Rs -- to join the effort to gain cosponsors for the measure. A

ARRL President Kay Craigie, N3KN.

regularly updated H.R. 1301 page on the ARRL website includes key "talking points" and other information for Amateur Radio delegations or individuals to use when approaching US House members for their support.

"Private land use restrictions that prohibit antennas are growing at an alarming rate all over the country," President Craigie said in stressing the urgency of the current campaign. "This is not just a problem in cities, suburbs, and gated communities. It is everywhere." Part of the problem, she explained, is the uneven application of Amateur Radio antenna regulation from the public to the private sphere. While President Craigie's Virginia county has what she called "a very satisfactory antenna ordinance," similar accommodations do not extend to developments where homeowners associations and private land-use regulations hold sway.

"In our rural and small-town county, every new development must have a homeowners association, and they all prohibit antennas with cookie-cutter language," she said.

As President Craigie sees it, H.R. 1301 is all about fairness. "H.R. 1301 seeks regulatory parity -- not a blank check, not the heavy hand of the federal government, but simply the opportunity to negotiate reasonable accommodation," she said. "It seeks a level playing field."

President Craigie said she successfully reached out to her Member of Congress to support H.R. 1301, and she encouraged other radio amateurs to do the same.

"If private land-use restrictions do not affect you, please stand up for your fellow amateurs," she urged. "Please stand up for the youth we all want to attract into Amateur Radio. What is the point of helping youth get their licenses if they cannot go on to develop the skills of Amateur Radio because they cannot have antennas in their neighborhoods?"

At present, PRB-1 only applies to state and local zoning laws and ordinances. The FCC has been reluctant to extend the same legal protections to private land-use agreements without direction from Congress.

H.R. 1301 has been referred to the House Energy and Commerce Committee. Rep Greg Walden, W7EQI (R-OR), chairs that panel's Communications and Technology Subcommittee, which will consider the measure.

Colorado Governor Signs Amateur Radio Antenna Bill into Law

Friday the 13th turned out to be a lucky day for Colorado hams, as Gov John Hickenlooper signed into law an Amateur Radio antenna bill that mirrors the PRB-1 federal pre-emption policy. The signing brings the number of states that have similar Amateur Radio antenna laws in place to 32. The Colorado General Assembly, without amendment, passed Senate Bill 15-041, sponsored by Sen Chris Holbert and Rep Kevin Van Winkle. The new legislation, introduced in early January, specifies that no local government "shall enact or enforce an ordinance or resolution regulating Amateur Radio antennas that fails to conform" with PRB-1's "reasonable accommodation" provisions.

Colorado Gov John Hickenlooper (seated) signs the PRB-1 bill. Looking on were (L-R) Sen Chris Holbert; Colorado State Government Liaison Robert Wareham, N0ESQ; Colorado Section Manager Jack Ciaccia, WM0G; Colorado ARES member Richard Anderson, W9BNO, and Rep Kevin Van Winkle. [John Maxwell, W0VG, photo]

"There was absolutely *no* opposition from anyone at any time for this bill," ARRL Colorado Section Manager Jack Ciaccia, WM0G, enthused. "This was truly a bi-partisan bill, and we had terrific support from both sides of the aisle in both chambers. For junior House member Kevin Van Winkle, this was his *first* bill ever presented, supported, and passed. He was thrilled to get his first bill-signing pen."

The three-part PRB-1 federal policy states that local regulation of Amateur Radio antenna installations be based on health, safety, or aesthetic considerations; be crafted to reasonably accommodate Amateur Radio communications, and represent the minimum practicable regulation to accomplish the legitimate purpose of the local government.

Ciaccia said that the testimony of Colorado State Government Liaison Robert Wareham, N0ESQ, offered "an excellent opportunity to sell Amateur Radio and ARES" to the lawmakers.

"[T]he politicians had lots of glowing remarks, because Colorado hams have been very much involved with emergency communications in many of their communities for many years now, during just about every wildfire," Ciaccia said. He pointed out that hams had also impressed Colorado's lawmakers by providing emergency communication during the 2013 flood evacuations in isolated areas.

ARRL Colorado Section Manager Jack Ciaccia, WM0G, during a visit to ARRL Headquarters.

Following the bill signing, Ciaccia recounted, Gov Hickenlooper took another 15 minutes out of a busy day to meet with the ham contingent on hand and to personally thank the Amateur Radio community for its public service role.

Wareham aided in getting the legislation drafted and introduced by Sen Holbert and Rep Van Winkle, and he also testified on behalf of the measure while it was being heard in committee. ARRL General Counsel Chris Imlay, W3KD, provided legal expertise and case precedents and consulted directly with Wareham, also an attorney, as the bill made its way through the General Assembly.

Ciaccia thanked all Colorado ARRL members and radio amateurs "who provided grassroots support for this legislation."

Emergency Communication Lacking in Vanuatu Cyclone Recovery Effort

With the telecommunications and electrical power infrastructure in Vanuatu knocked out by the Category 5 Cyclone (hurricane) Pam, which struck the Pacific archipelago over the weekend, no organized emergency communication system has stepped in to fill the gap. Many locations have not been heard from since the storm hit. The extreme storm, with winds in excess of 155 MPH, caused severe damage throughout Vanuatu's 60 islands, devastating many communities, including the capital of Port Vila. The number of deaths is unclear, but the storm displaced thousands of residents, and recovery is expected to take a very long time. There are few Amateur Radio operators in Vanuatu, which has a population of approximately 250,000. Rod Newell, YJ8RN, who lives on Efate Island and is a member of the IARU Region 3 Disaster Communications Committee, has not been heard from since the storm struck. Over the years the idyllic location has been a haven for tourists and DXpeditioners (Vanuatu is number 102 on ClubLog's *Most Wanted DXCC List*). No communication has been heard from many of Vanuatu's islands, but relief teams and supplies have begun arriving from Australia and elsewhere.

Ironically, Vanuatu President Baldwin Lonsdale was in Japan at the UN World Conference on Disaster Risk Reduction when the cyclone struck his country. He made an emotional plea for humanitarian assistance and has since returned to Vanuatu. The BBC has reported that residents of some stricken regions have taken to drinking seawater, since no fresh water is available, and people have been scavenging for food. Drinking salt water can lead to dehydration and death. Formerly known as the New Hebrides, Vanuatu is one of the region's poorest nations.

IARU Emergency Telecommunications Guide Available Online

The International Amateur Radio Union (IARU) *Emergency Telecommunications Guide* is now available for download from the IARU website. The guide was developed to provide the IARU member-societies with materials suitable for training radio amateurs to participate in emergencies. It also was designed to provide guidance to individual Amateur Radio operators with little or no experience in handling emergency communications but desire to enhance their ability to participate in such events or to simply have a better understanding of the process. The IARU Administrative Council meeting approved the *Guide* at its 2014 meeting.

"IARU member-societies are encouraged to distribute this guide among its membership and, if necessary, to provide a translation into a language used within their own country," an IARU media release said. "This guide can also be used in conjunction with other training materials by leaders within the emergency communication community to train radio operators in the basic theory and practice of handling emergency communications traffic."

The IARU International Secretariat has invited feedback, comments, or suggestions regarding the *Guide*.

The ARRL Letter for April 2, 2015
Utah Group Puts Broadband-Hamnet to Work for Food Project

A small band of Amateur Radio volunteers in Utah's Salt Lake Valley successfully used a broadband Wi-Fi fnetwork set up on the 2.4 GHz amateur band to help coordinate the Boy Scouts of America's (BSA) "Scouting for Food" project on March 21. Scouting for Food is the Boy Scouts' annual community service event, in which Scouts collect items or donation to a food bank. Local radio amateurs provide both voice and digital mode communication.

This year for the first time they used a Broadband-Hamnet™ (BBHN) system that coupled modified wireless router gear operating on amateur frequencies to create a peer-to-peer Wi-Fi network to share audio and video over a generous patch of real estate. BBHN is a descendent of the former ARRL High Speed Multimedia (HSMM) Working Group efforts, earlier known as the "Hinternet" and pioneered by John Champa, K8OCL (SK), and others in the early 2000s.

"[W]e would call it Wi-Fi on steroids!" said David Bauman, KF7MCF. The Utah hams linked 13 nodes across the valley to form a network "that is like a mini private Internet," Bauman explained. They then used this network to send live video and audio back to the BSA Headquarters, showing them what was happening at food drop-off sites and at the [truck dispatch] headquarters. Bauman called it "a huge step forward in technology from the old days of Morse code." Retired clergyman Robert Jelf, KG7OHV, of Magna, headed up the team.

Brendan Bauman, KG7RWO, at his BBHN node, monitors the progress of the food collection project, just outside BSA Headquarters.

Just outside BSA Headquarters near the University of Utah, Brandon Bauman, KG7RWO, was able to watch via his laptop as volunteers miles away dropped off canned food items and as YRC freight dispatched trucks to pickup sites around the valley. Brandon was part of an Amateur Radio group that assists the Boy Scouts in the Scouting for Food Project each year by providing communications. This marked the first time BBHN technology was used to support the project in the Salt Lake Valley. Their Wi-Fi network, known as a wireless mesh network, was able to cover a large portion of the valley.

"The farthest point from our hub site was 8.5 miles across the city through a narrow path lined with lots of manmade objects for signals to bounce off," Jelf said. "While the mesh group was used to show video of the dispatch of trucks and of truck trailers at collection points within the hub site path, collection took place throughout the Wasatch Front area and elsewhere in Utah." Read more.

Amateur Radio to Have a Presence, Special Event at Preparedness Summit 2015

Amateur Radio will be part of the program when Preparedness Summit 2015 convenes April 14-17 in Atlanta. Special event station N4P will also be on the air from the conference location. The theme of this 10th Preparedness Summit is "Global Health Security: Preparing a Nation for Emerging Threats."

"Global health security preparedness issues such as protecting against infectious disease, the health effects of climate change and extreme weather, and cybersecurity threats to critical infrastructure, impact all levels of governmental public health and healthcare agencies," a Preparedness Summit 2015 announcement explained. The National Association of County and City Health Officials (NACCHO) organizes the event, which attracted 1600 participants in 2014.

Preparedness Summit 2015 will once again offer an Amateur Radio licensing prep session on April 14, with testing the following day. A ham radio demonstration, "When All Else Fails, Amateur Radio Gets Through," will take place on April 14 as well.

Special event station N4P will be on the air from the Preparedness Summit 2015 venue. Listen for N4P on or around 7.265, 14.265, 21.365, and 28.36 MHz. EchoLink activity using the Georgia Tech Radio Club's W4AQL call sign also will take place. A commemorative QSL card will be available for stations working N4P.

The complete Preparedness Summit agenda and more information are on the conference's website. -- *Thanks to Chuck Motes, K1DFS*

Two More Radio Amateurs Join International Space Station Crew

The ISS ham radio population expanded to three, following the arrival of NASA astronaut Scott Kelly and Russian cosmonauts Mikhail Kornienko, RN3BF, and Gennady Padalka, RN3DT, on March 28 (UTC). Kelly, 51, and Kornienko, 54, will remain aboard the ISS for 1 year -- the longest space mission ever assigned to a NASA astronaut.

European Space Agency Astronaut Samantha Cristoforetti, IZ0UDF, will head back to Earth in May, after Kjell Lindgren, KO5MOS; Oleg Kononenko, RN3DX, and Kimiya Yui arrive at the ISS as part of a scheduled crew rotation. Cristoforetti has conducted several Amateur Radio on the International Space Station school contacts during her ISS duty tour.

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 2015
Dues are in effect January 1, 2015 through December 31, 2015
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/join-barc via PayPal

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

Questions for Extra Class License

1. (E1A12) With your transceiver displaying the carrier frequency of CW signals, you hear a DX station's CQ on 3.500 MHz. Is it legal to return the call using CW on the same frequency?
A. Yes, the DX station initiated the contact
B. Yes, the displayed frequency is within the 80 meter CW band segment
C. No, sidebands from the CW signal will be out of the band.
D. No, USA stations are not permitted to use CW emissions below 3.525 MHz

2. (E2A02) What is the direction of a descending pass for an amateur satellite?
A. From north to south
B. From west to east
C. From east to west
D. From south to north

3. (E3C03) Where in the ionosphere does Aurora activity occur?
A. In the F1-region
B. In the F2-region
C. In the D-region
D. In the E-region

4. (E4B05) If a frequency counter with a specified accuracy of +/- 10 ppm reads 146,520,000 Hz, what is the most the actual frequency being measured could differ from the reading?
A. 146.52 Hz
B. 10 Hz
C. 146.52 kHz
D. 1465.20 Hz

5. (E5B04) What is the time constant of a circuit having two 220-microfarad capacitors and two 1-megohm resistors, all in parallel?
A. 55 seconds
B. 110 seconds
C. 440 seconds
D. 220 seconds

6. (E6C13) Which of the following is an advantage of BiCMOS logic?
A. Its simplicity results in much less expensive devices than standard CMOS
B. It is totally immune to electrostatic damage
C. It has the high input impedance of CMOS and the low output impedance of bipolar transistors
D. All of these choices are correct

7. (E7E04) What is one way a single-sideband phone signal can be generated?
A. By using a balanced modulator followed by a filter
B. By using a reactance modulator followed by a mixer
C. By using a loop modulator followed by a mixer
D. By driving a product detector with a DSB signal

8. (E8C04) What technique is used to minimize the bandwidth requirements of a PSK31 signal?
A. Zero-sum character encoding
B. Reed-Solomon character encoding
C. Use of sinusoidal data pulses
D. Use of trapezoidal data pulses

9. (E9C13) What is the main effect of placing a vertical antenna over an imperfect ground?
A. It causes increased SWR
B. It changes the impedance angle of the matching network
C. It reduces low-angle radiation
D. It reduces losses in the radiating portion of the antenna

10. (E0A04) When evaluating a site with multiple transmitters operating at the same time, the operators and licensees of which transmitters are responsible for mitigating over-exposure situations?
A. Only the most powerful transmitter
B. Only commercial transmitters
C. Each transmitter that produces 5% or more of its MPE exposure limit at accessible locations
D. Each transmitter operating with a duty-cycle greater than 50%

BARC Club Officers

President
Cordell Smart   KE7IK
president@barconline.org
(435)245-4581

Vice President
Ted McArthur   AC7II
ac7ii33@gmail.com
(435)770-9169

Secretary
Tammy Stevens   N7YTO
secretary@barconline.org
(435)753-2644

Treasurer
Kevin Reeve   N7RXE
treasurer@barconline.org
(435)753-1645

Board Members

Tyler Griffiths N7UWX	Kelly Hansen KF7TDP
N7UWX@comcast.net	Kjhansen65@gmail.com
(435)752-7269	(435)213-5660
Laurie Littledike KF7DKM	Russell Lekis KE7VFI
laurie9088@gmail.com	rleikis@gmail.com
(435)752-8029	(435)512-8166

Newsletter Editor
Dale Cox   KB7UPW
newsletter@barconline.org
(435)757-4063

Web Page Editors
Kevin Reeve N7RXE and Bob Wood WA7MXZ
webmaster@barconline.org

Answers to questions on page 13: 1-C, 2-A, 3-D, 4-D, 5-D, 6-C, 7-A, 8-C, 9-C, 10-C