



THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

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

February 2011

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ARRL Affiliated



PRESIDENT'S MESSAGE

In the January issue of QST, there was an article that talked about "The National Broadband Plan". The National Broadband Plan (NBP) is a roadmap for the future of Internet in the US. The web site referenced in the article, www.broadband.gov, provides a wealth of resources for understanding the NBP. The NBP was started in April 2009. There had been earlier initiatives for making Internet service widely available, but not as comprehensive as the NBP. One of those early plans was to use the existing power lines throughout the US and it was call Broadband over Power Lines or BPL. BPL was announced by the FCC in 2003. The extensive infrastructure of power lines would carry signals which would allow people in remote location to access the Internet. The signal frequencies that BPL uses are from 1.7 to 80 MHz which is used by amateur radio operators as well as international short-wave broadcasters and a variety of communications systems. When you put a signal on an unshielded open wire, what does that wire become? As we all know, it becomes an antenna. There were several areas back east that implemented BLP and those areas had many complaints of interference from amateur radio operators and other radio operators. Manassas, Virginia was the first US city to see a real, non-trial launch of BPL technology. However, Manassas pulled the plug on BLP last year with only 520 residents and businesses on the system sighting it was costing more to maintain than it was getting from BPL fees.

The NBP (376 pages) was delivered to Congress in March 2010. For the amateur radio operators, it was interesting for what it did and did not contain. BLP was referenced for its classification as an information service, but no mention of implementing it in the NBP goals. The Plan's goals call for speeds that BPL cannot deliver. Also it recommends that the FCC should take 500 megahertz of spectrum available for broadband use within the next 10 years, including 300 megahertz between 225 and 3700 MHz for mobile use within five years.

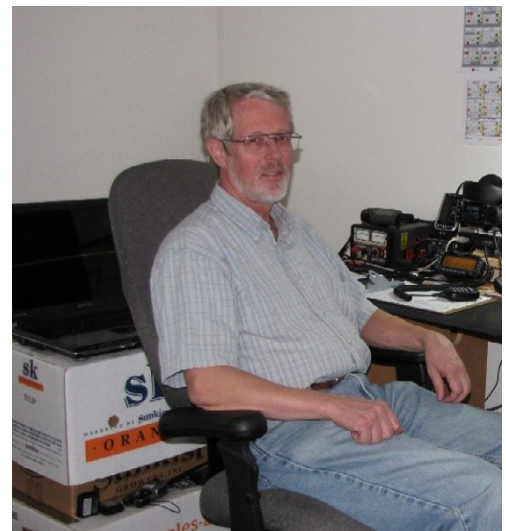
The President signed a Memorandum in June 2010 calling for the National Telecommunications and Information Administration (NTIA), to work with the FCC for allocating the 500 megahertz of spectrum. The NTIA extended the upper frequency limit to 4400 MHz, that has no impact on amateur radio frequencies but it should relieve pressure on the lower frequencies. NTIA is part of the Department of Commerce and is responsible for management of Federal spectrum, where as the FCC is responsible for non-Federal spectrum. The spectrum being looked at has both Federal and non-Federal users, including the amateur bands in this frequency range. To our advantage as amateur radio operators, we are secondary users to the Federal users, so our allocated frequencies are tied closely to theirs.

The NTIA web site, www.ntis.gov, has two documents, the Ten-Year Plan and Timetable and the Fast Track Evaluation. Hopefully the frequencies allocated for amateur radio use will not be impacted in the final implementation of the plans. But whenever there is commercial interest in the radio spectrum, we as users of the amateur radio spectrum sometimes have a hard time hanging on to the frequencies assigned to us.

73

Cordell

KE7IK



UPCOMING ACTIVITIES

Rocky Mountain Division HF Net - Feb 9, 7:30 PM 3939 kHz +/-

Technician License Class continues (See Below) - 10 February, 7:00 PM

Club Meeting - 12 February, 10:00 AM

Technician License Class continues - 17 February, 7:00 PM

RACES VHF Net - 17 February, 8:00 PM

Technician License Class concludes - 24 February, 7:00 PM

Club Meeting - 12 March, 10:00 AM

RACES HF Net - 19 March, 8:00 AM 3920 KHz

Club Meeting - 9 April, 10:00 AM

RACES VHF Net - 21 April, 8:00 PM

Club Meeting - 14 May, 10:00 AM

Mountain Man Rendezvous - 24-25 May

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.

ARES Meetings are usually held on the Third Wednesday of each month at 7 P.M. at the Cache County Sheriffs Complex. Contact Tyler Griffiths for more information.

The Bridgerland Amateur Radio Club and Utah-4H are sponsoring a Technician License Class in February. This class will be held on all 4 Thursdays in February from 7:00 to 9:30 P.M. It will be at USU in the ASTE Building at 1480 North 800 East in Logan, Utah. For more information about the class please go to <http://www.barconline.org/class>

Here is a link to an article about ham radio for emergency use in Cache Valley. <http://hardnewscafe.usu.edu/?p=3766>

HAM PROFILE

Jared Luther, K7LRX is our second new board member that we're introducing in the Ham Profile. Guy Hatch, N7WAT was profiled in last month's newsletter.

Jared always had an interest in radio, electronics and technology since his father owned a TV/Radio Repair Shop the day Jared was born. As a baby, Jared called his dad "Guy" and going to his dad's shop was to see "Guy's Toys." While still young, Jared remembers listening to his dad, Harvey KF7BV, talk on the 2M radio to Clayton and the other hams in the valley in the mid 80's. Of course, it was fun back then to call mom on the autopatch from scout camp when there was a ham along and have mom demand "Are you OK? Where are you calling me from?" Then try and convince her that all was well and you were calling from the campfire.

Jared's dad had a standing offer: Earn your license, and he'd buy you a radio (at least a working one). It was tempting, and Jared studied for his Novice and Technician licenses once, but the Morse Code requirement was too much of a deterrent. It wasn't until after Jared was married, the "No-Code Tech" license was available and Jared had a boring National Guard summer camp to read the Technician Study Guide. He earned his Technician license the summer of 1996 with the call KC7SKF. Dad still came through on his promise and found Jared an "almost new" Kenwood TH-79A dual band HT.



After realizing a hand held radio just wasn't going to cut it for working his first LOTOJA race in 1999, he took that excuse to purchase an Icom IC-2800H mobile dual band that has served him well to this day. He also uses a Kenwood TM-D700A mobile dual band radio to do APRS work. Jared thoroughly enjoys volunteering for events. The Cruise-In and LOTOJA were always highlights to the year.

In 2008 Jared was ready to do more work in amateur radio. He studied for his General license, joined the ARRL, and changed his call sign to K7LRX (think Luther Radio Transmission). With that Jared purchased a used HF radio (still needs a good antenna) and was determined to be more involved with BARC. Jared joined ARES/RACES and received his Volunteer Examiner Certification.

Jared is excited to be a member of the BARC Board this year and to get to know and serve the club members better. He is also working to get an ARES certification or two. He continues to slowly build his home ham shack and looks forward to his own first DX QSO. Until then, Field Day will have to do.

Jared's wife, Jennifer KE7WAJ is getting more involved in radio, ARES/RACES, and the club as well. They have 4 children and live in Providence.

BARC Budget 2011

For Voting by the Members

Category	Amount
Corporation Fees and General	\$250
Socials and Refreshments	\$350
Field Day	\$400
Swap Meet	\$50
Christmas Party	\$150
Promontory Site Rental	\$600
Pay Pal fees	\$50
General Expenses Total	\$1850
Income	
Dues - estimated	\$1900
Equipment / Repeater Donations	\$200
Other Donations - estimated	\$3000
Total Donations - estimated	\$5100

As part of approval of the budget, the board also asks members each year to give the board authority to allocate donations, to appropriate uses as needed for equipment, repeaters, and activities.

FYI income from dues for fiscal year 2010 was \$2005

- I approve the 2011 budget
 I Do Not approve the 2011 budget.

- I approve the authority of the BARC Board to allocate donations to appropriate uses as needed for equipment.
 I Do NOT approve the authority of the BARC Board to allocate donations to appropriate uses as needed for equipment.

Vote on February 12th at Club Meeting or mail your vote to P.O. Box 111, Providence UT 84332 to arrive before February 12th. You may also send it with another club member.

The ARRL Letter for January 6, 2011

On-the Air: ARRL Audio News Once Again Available from iTunes



The *ARRL Audio News* is once again available through iTunes, beginning today. You can find the URL for the Audio News' RSS feed [here](#). To download and subscribe to the *Audio News* at iTunes, log into your iTunes account and go to the "Advanced" pull-down menu. Click on "Subscribe to Podcast," insert <http://www.arrl.org/arrlletter/audio/aan.rss> in the dialogue box and click "OK." You are now subscribed! If you had previously subscribed to the *ARRL Audio News* via iTunes, you should not have to re-do these steps; episodes should appear in your podcast folder once you sync your device. Step-by-step photo instructions are available [here](#).

Of course, the *ARRL Audio News* is also available on the *ARRL Web site* and via telephone at 860-594-0384. The *ARRL Audio News* is compiled, edited and produced in conjunction with each *ARRL Letter* (except during the Dayton Hamvention, Thanksgiving and other times as announced).



The ARRL Letter for January 6, 2011

General Motors Turns to Ham to Solve Antenna Problem

When General Motors -- the world's second largest auto maker -- encountered a problem with the AM/FM antenna on its 2011 Chevrolet Camaro convertible, it was at a loss as to what to do. Spy photographs showed a pre-production version of the car with a long whip-style antenna on its rear fender. After what GM called "*an outcry among Camaro enthusiasts*," the company decided to rethink the antenna. But how?

On hardtop Camaros, the antenna is integrated into the rear windshield, but given the disappearing nature of this car's roof, that wasn't possible on the convertible. So GM turned to two antenna engineers - Don Hibbard, W8DBH, and Gregg Kittinger -- who were tasked with doing what some thought was impossible: concealing the AM/FM antenna without sacrificing radio reception, while not putting it inside the Camaro's windows. Read more [here](#).



The 2011 Chevrolet Camaro convertible -- available February 2011 -- features its AM/FM radio antenna inside the spoiler, thanks to some ham ingenuity. The "shark fin" antenna is for satellite radio, OnStar and cellular signals. Click [here](#) to watch a video about the design of this new antenna. [Photo courtesy of General Motors]

The world is a dangerous place to live; not because of the people who are evil, but because of the people who don't do anything about it.
- Albert Einstein

The ARRL Letter for January 13, 2011

On-the Air: ARRL Outgoing QSL Service Announces New Rate Structure

Effective January 17, 2011, a new pricing structure will go into effect for the ARRL Outgoing QSL Service. With the new rate structure, amateurs will no longer need to count outgoing cards and then guess as to what to pay based upon a half-pound rate; a simple weighing of the cards is all that is necessary to determine what amount to send to the Bureau. This new structure also accommodates a small rate increase in response to recent postage, shipping and handling costs. Read more [here](#).

The ARRL ARES E-Letter for January 19, 2011

Training: What is the Incident Command System?

The *Incident Command System* (ICS) is a standardized approach to incident management that:

- Enables a coordinated response among various jurisdictions and agencies.
- Establishes common processes for planning and managing resources.

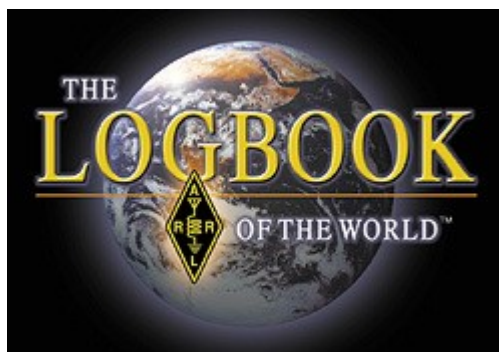
Allows for the integration of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure.

The *National Incident Management System* (NIMS) provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment.

The *National Response Framework* (NRF) is a guide to how the Nation conducts all-hazards response - from the smallest incident to the largest catastrophe. This key document establishes a comprehensive, national, all-hazards approach to domestic incident response. The Framework identifies the key response principles, roles, and structures that organize national response. It describes how communities, States, the Federal Government, and private-sector and nongovernmental partners apply these principles for a coordinated, effective national response. -- [FEMA](#)

The ARRL Letter for January 20, 2011

On the Air: Logbook of the World Now Supports VUCC



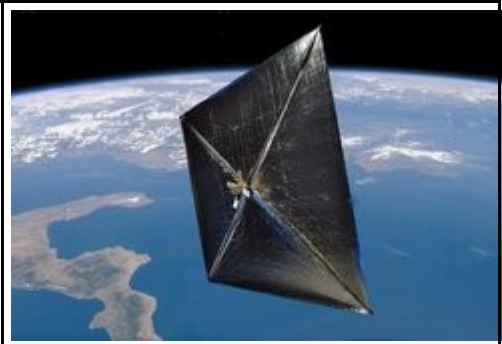
ARRL's Logbook of the World (LoTW) -- an online system for amateurs to confirm two-way contacts that can be used for various ARRL awards -- has been upgraded to support awards based on Maidenhead grid squares, such as VUCC and the Fred Fish Memorial Award. To take advantage of the new features, you need to log in to your LoTW account. VUCC is an open-ended award in that hams can work on throughout their lifetime, just like DXCC. But, like the Worked All States award, the VUCC rules require all the contacts to be made from a defined area. For VHF and UHF QSOs on 1296 MHz and below, this distance must be within 200 km. For SHF awards, contacts must be made from a single location, defined as within a 300 meter diameter circle. As such, the VUCC support in LoTW allows you to

make the rule -- or rules -- necessary to find the QSLs in LoTW that satisfy the VUCC rules. Don't have an LoTW account? It's easy to sign up. Read more [here](#).

The ARRL Letter for January 27, 2011

Amateur Radio in Space: NASA's Nanosatellite Heard by Hams

When a NASA nanosatellite -- [NanoSail-D](#) -- ejected unexpectedly on January 17 from the Fast Affordable Scientific and Technology Satellite ([FASTSAT](#)), the agency called upon Amateur Radio operators to help track it. [NASA asked radio amateurs to listen](#) on 437.270 MHz for the signal and verify that NanoSail-D was operating. NASA received almost 470 telemetry packets from 11 countries.



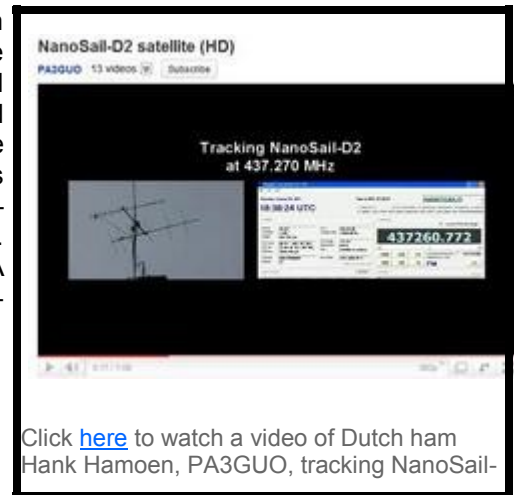
An artist's conception of NanoSail-D. [Image courtesy of NASA]

The NanoSail-D beacon sent an AX.25 packet every 10 seconds; the packet contained data about the spacecraft's systems operation. Listen [here](#) for a recording of the nanosatellite's beacon, made by Hank Hamoen, PA3GUO, on January 21.

Once the NanoSail-D team received confirmation that the nanosatellite did indeed eject, NanoSail-D principal investigator Dean Alhorn quickly enlisted Alan Sieg, WB5RMG, and Stan Sims, N4PMF, to try to pick up NanoSail-D's radio beacon. Both hams work at the Marshall Space Flight Center in Huntsville, Alabama.

"The timing could not have been better," Sieg said. "NanoSail-D was going to track right over Huntsville, and the chance to be the first ones to hear and decode the signal was irresistible." Right before 2300 UTC on January 17, they heard a faint signal. As the spacecraft soared overhead, the signal grew stronger and the operators were able to decode the first packet: NanoSail-D was alive and well. "You could have scraped Dean off the ceiling. He was bouncing around like a new father," Sieg recalled.

According to NASA, the nanosatellite was last heard at 1354 UTC on January 21. Telemetry indicates that the sail deployed on schedule and the satellite is now believed to be out of power, which NASA said was to be expected. NASA is now asking for visual tracking and sighting reports of NanoSail-D, which is about 650 km above the Earth. According to the agency, when the nanosatellite's sail reflects off the Sun, it could be up to 10 times as bright as the planet Venus -- especially later in the mission when the sail descends to lower orbits. You can track NanoSail-D on the [web](#) or on your [smart phone](#). NASA estimates that NanoSail-D will remain in low Earth orbit (LEO) between 70 and 120 days, depending on atmospheric conditions.



Click [here](#) to watch a video of Dutch ham Hank Hamoen, PA3GUO, tracking NanoSail-

The ARRL Letter for February 3, 2011

Scouting: Boy Scouts of America and ARRL Team Up to Help Scouts Learn Communications Skills

After working together for nearly a century to provide Scouts with the ability to learn radio communication skills, Boy Scouts of America and the ARRL have officially teamed up by signing a memorandum of understanding. This MOU designates the ARRL as a key resource for K2BSA and Radio Merit Badge training at the BSA National Scout Jamboree and establishes the ARRL as the go-to source for Scouts interested in learning about and becoming involved in radio communication.

BSA Chief Scout Executive Bob Mazzuca and ARRL President Kay Craigie, N3KN, launched the partnership January 31 by holding a unique communications meeting. Mazzuca joined Craigie virtually during an Internet video conference and document-signing ceremony. From separate locations, the pair took the opportunity to talk about the importance of each organization to the ongoing development of the other.



"Throughout the years, going all the way back to the Wireless Merit Badge in 1918, the ARRL has worked hand-in-hand with Boy Scouts of America to help teach Scouts the skills and joys of radio communication," said Chief Scout Executive Bob Mazzuca. "Today, we are making official a relationship that has been beneficial for both of our organizations for nearly a century." [Read more [here](#)]

The ARRL Letter for February 3, 2011

Legislative Matters: Amateur Radio Bill Introduced in the US Senate

On January 26, Senator Joe Lieberman (ID-CT), along with Senator Susan Collins (R-ME), introduced Senate Bill 191, *The Amateur Radio Emergency*



Communications Enhancement Act of 2011. Similar to [HR 81](#), [introduced in the US House by Representative Sheila Jackson Lee \(D-TX-18\)](#) on January 5, the bill, if passed, would direct the Department of Homeland Security ([DHS](#)) to undertake a study on emergency communications. S 191 has been referred to the [Committee on Homeland Security and Governmental Affairs](#). Lieberman is the Chairman of the committee, while Collins is the Ranking Member. Read more [here](#).

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 2011

*Dues are in effect January 1, 2011 through December 31, 2011
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 Extra Class License

1. (E1A09) Which frequency bands contain at least one segment authorized only to control operators holding an Amateur Extra Class operator license?
 - A. 80/75, 40, 20 and 15 meters
 - B. 80/75, 40, 20, and 10 meters
 - C. 80/75, 40, 30 and 10 meters
 - D. 160, 80/75, 40 and 20 meters
2. (E2A10) Why may the received signal from an amateur satellite exhibit a rapidly repeating fading effect?
 - A. Because the satellite is rotating
 - B. Because of ionospheric absorption
 - C. Because of the satellite's low orbital altitude
 - D. Because of the Doppler effect
3. (E3C13) What type of polarization does most ground-wave propagation have?
 - A. Vertical
 - B. Horizontal
 - C. Circular
 - D. Elliptical
4. (E4D07) Which of the following describes the most significant effect of an off-frequency signal when it is causing cross-modulation interference to a desired signal?
 - A. A large increase in background noise
 - B. A reduction in apparent signal strength
 - C. The desired signal can no longer be heard
 - D. The off-frequency unwanted signal is heard in addition to the desired signal
5. (E5D18) How many watts are consumed in a circuit having a power factor of 0.6 if the input is 200V AC at 5 amperes?
 - A. 200 watts
 - B. 1000 watts
 - C. 1600 watts
 - D. 600 watts
6. (E6F10) What characteristic of optoisolators is often used in power supplies?
 - A. They have low impedance between the light source and the phototransistor
 - B. They have very high impedance between the light source and the phototransistor
 - C. They have low impedance between the light source and the LED
 - D. They have very high impedance between the light source and the LED
7. (E7F09) What determines the accuracy of a frequency counter?
 - A. The accuracy of the time base
 - B. The speed of the logic devices used
 - C. Accuracy of the AC input frequency to the power supply
 - D. Proper balancing of the mixer diodes
8. (E8C09) What term describes a wide-bandwidth communications system in which the transmitted carrier frequency varies according to some predetermined sequence?
 - A. Amplitude companded single sideband
 - B. AMTOR
 - C. Time-domain frequency modulation
 - D. Spread-spectrum communication
9. (E9H05) What is the main drawback of a wire-loop antenna for direction finding?
 - A. It has a bidirectional pattern
 - B. It is non-rotatable
 - C. It receives equally well in all directions
 - D. It is practical for use only on VHF bands
10. (E0A05) What is one of the potential hazards of using microwaves in the amateur radio bands?
 - A. Microwaves are ionizing radiation
 - B. The high gain antennas commonly used can result in high exposure levels
 - C. Microwaves often travel long distances by ionospheric reflection
 - D. The extremely high frequency energy can damage the joints of antenna structures

(For answers to test questions see page 12)

BARC Club Officers

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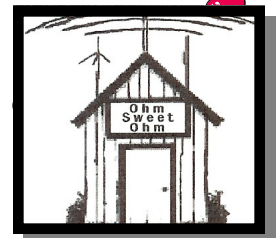
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Answers to questions on page 11: 1-A, 2-A, 3-A, 4-D, 5-D, 6-B, 7-A, 8-D, 9-A, 10-B