



THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

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

January 2011

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ARRL Affiliated

HAPPY
NEW YEAR



PRESIDENT'S MESSAGE

Hope everyone had a safe and happy holiday season. For this year, we have a tentative line up of interesting presentations for the club meetings. January's meeting topic is on antennas and coax. We will talk about the different types of antennas, important considerations in choosing the coax, weatherproofing coax connections, grounding, SWR, and other items for getting the signal from the radio to that distant station.

January is also that time of year for a reminder for club dues. Your membership helps support club activities and the BARC repeater system. The purpose of BARC is to advance general interest and welfare of amateur radio, to promote radio knowledge, cooperation and exchange of information between members, and to provide public service support for community activities. Hams from around Cache Valley attend the monthly club meetings to discuss activities, have aspects of the hobby presented, and to generally enjoy the fellowship of one another. This club is for you! So help make it as good as it can be!



BARC has some of the best repeater systems around. The club owned repeaters are open for your use. If you use the repeaters on a regular basis, your continued BARC membership is greatly appreciated. The repeaters are maintained by a portion of member's dues, and by additional money donations, the generous equipment and time donations of members. The BARC repeater system is comprised of four linked repeaters: 146.720 (Mt Logan), 449.625 (Mt Logan), 147.260 (Promontory), and 145.310 (Red Spur); and two valley floor repeaters: 146.640 and 147.200. Two of the repeaters have open phone patch capability: the 146.720 Mt Logan linked repeater and the 146.640 repeater. On the linked repeaters, you can be anywhere in their coverage area from south of Salt Lake City to north of Brigham city, Cache Valley, or in the Bear Lake area and make a local cache county phone call via the phone patch. The 147.200 valley floor repeater is also an IRLP node #3381 and has Echolink capabilities. Indeed, the repeater system is a great asset to have and to use.

The BARC membership application is in the newsletter if you want to mail it in, or you can go to our club web site and pay online (<http://www.barconline.org/?q=node/242>).

73's,
Cordell
KE7IK

UPCOMING ACTIVITIES

Happy New Year

2011

Club Meeting - 8 January 2011

RACES HF Net - 15 January 2011, 8:00 AM 3920 KHz

Technician License Class begins (See Below) - 3 February, 7:00 PM

Club Meeting - 12 February, 10:00 AM

RACES VHF Net - 17 February, 8:00 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

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 2011. 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 and to register for the class please go to <http://www.barconline.org/class>

Happy New Year

HAM PROFILE

This month we profile the first of our two new board members:

Guy Hatch, N7WAT

Guy's first experience with amateur radio was as a youth about 13 years old, when he and his cousin, Ron Hatch, decided to get their Novice licenses together. Ron's dad, Noal W7PWH, and Guy's dad, Ephraim W7PZI were both very involved in the early days of Ham radio as teenagers; building all of their own equipment. Their crowning moment was a QSO (possibly the first) from the summit of Mt. Timpanogos, overlooking Utah Valley, using a transceiver they had built and using a long wire antenna just thrown down the mountainside. Ron and Guy passed their Novice exams, including 5 WPM code; Ron was assigned KN7QEZ (now K7QEZ), and Guy's first call sign was KN7QEY. They monkeyed around with Noal's 2 meter mobile rig, but that was pretty much the extent of Guy's early experience, due mainly to limited funds.

About 3 years ago, Guy was called to be the Emergency Preparedness person in his LDS ward and decided that was enough of an excuse to get back into amateur radio. Passing the Technician license exam resulted in Guy's next call sign, KE7WAT. After joining BARC and attending Field Day the first time, he decided to go for his Amateur Extra ticket! As a self-reward



for passing the Extra exam, he applied for his current vanity call: N7WAT, and even got a vanity license plate for his car.

Guy's radio gear includes an ICOM IC-T90A HT, a Kenwood TS-120S HF transceiver, an MFJ-949 Tuner, and a Kenwood PS-30 power supply. Morse code is coming along using a "CW Touch Keyer-P4" kit for practice. Guy built and installed a 5-band trap dipole in his home attic, which has given him many hours of fun listening. Unfortunately, when he transmits more than about 25 watts, it triggers the upstairs smoke alarm (just RFI – not real smoke!). He has also built five 2 meter j-poles, two PVC pipe antenna masts, a 70 cm Yagi and attenuator for Rocket Recovery, and a 2 meter Yagi for Bunny Hunts. He is currently researching and designing a portable, shortened vertical HF antenna to build and to play with during this coming year's Rocket Recovery activity. A K2/100 kit, with SSB and 160 meter add-ons

If you want the Full Monty – contest logging software with RTTY built in – there is [WriteLog for Windows](#). You may also want to check out [NIMM Logger](#). It has the ability to incorporate *MMTTY*. Both of these packages will log all your contacts and alert you if a station is a “dupe” – a duplicate contact, one you’ve already worked.

Don’t wait until the morning of the contest to set up your equipment. Start gathering your tools now so that you have plenty of time to test your station and understand the software. Every RTTY program supports *macros* that will transmit pre-programmed text messages at the press of a single key. They are true sanity savers when it comes to digital contesting. Create the following software macros for your station. I’ll use my call sign and state (Connecticut) in these examples and assume we’re using the **F** keys along the top of your keyboard. The codes for beginning and ending transmission will vary according to the software you’ve chosen.

F1: <begin transmission> WB8IMY WB8IMY WB8IMY <end transmission>

(Use this to answer a CQ or QRZ?)

F2: <begin transmission> 599 CT CT WB8IMY K <end transmission>

(You’ve been heard and the station has sent his part of the exchange. Tap this key to reply with your information. Notice that I am sending my state abbreviation twice, just to make sure he copies it correctly.)

F3: <begin transmission> My state CT CT CT CT WB8IMY K <end transmission>

(Keep this macro handy in case the station sends “STATE?” or “AGAIN?”. That’s a sure sign that he is having difficulty copying you.)

These three macros are all you need for “hunting and pouncing” as you tune through the cacophony of RTTY signals. If you are new to RTTY contesting, hunting and pouncing is the easiest way to start. You simply tune from one RTTY signal to another, waiting for the opportunity to strike. Stations may solicit contacts by sending “CQ RU” or “CQ Test.” Or you may tune across a station that is just finishing a contact. When you see something like “TU WB8IMY QRZ” on your screen, its time to jab the macro button!

If you want to try calling CQ yourself, you’ll need a few more macros to handle the exchanges – and nerves of steel if you happen to live in a “rare” state such as Delaware, Wyoming, North Dakota, Hawaii, etc. You may suddenly find yourself on the business end of a pileup!

The contest kicks off at 1800 UTC on Saturday and ends at 2400 UTC Sunday. You’ll find the complete rules [here](#).

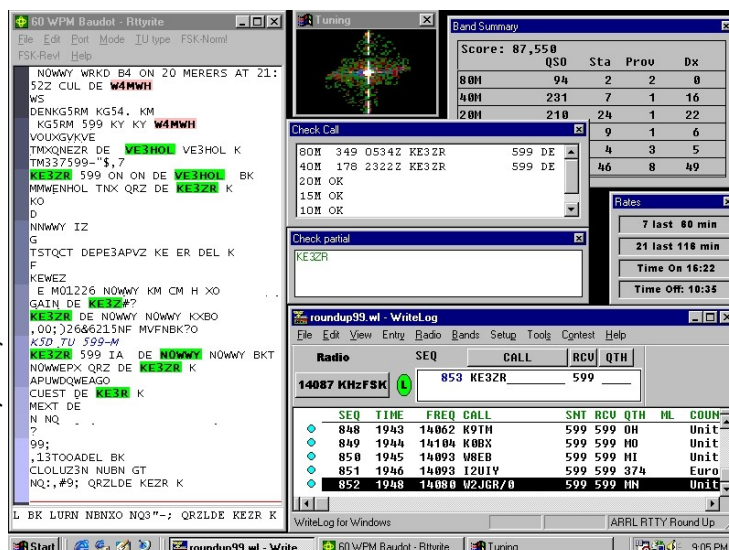
During the daylight hours you’ll find most of the Roundup action between 14.075 and 14.120 MHz. But don’t neglect 15 meters (between roughly 21.075 to 21.110 MHz) or 10 meters below about 28.100 MHz. If propagation is favorable, these bands could be hot.

As night falls, shift your attention to 40 meters between 7.040 and 7.100 MHz as well as 80 meters between 3.570 and 3.600 MHz.

You do not have to be a “big gun” station to have fun in the RTTY Roundup. Every contact counts as a point, so even the big guns are more than happy to add your call sign to their logs. In the space of 24 hours you’ll work DX and possibly gather contacts with enough US States to qualify for a Worked All States award. Best of all, you’ll be able to look back through your log and see how your station performed as propagation conditions changed, or as you tried a different antenna (contests are terrific for testing station performance).

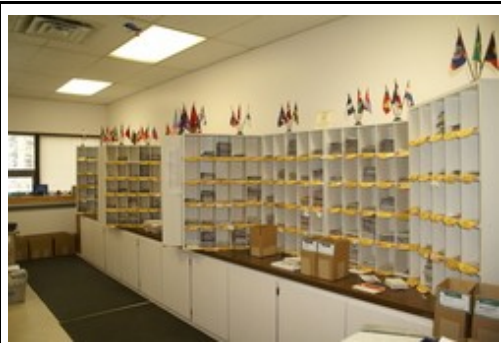
The RTTY Roundup is “family friendly,” too. If you’re a casual contester, you can start and stop at any time. And if you’re operating late at night, slip on a pair of headphones and enjoy the music of RTTY. Your loved ones will drift off to sleep hearing nothing more than the soft patter of keyboard keys.

By Steve Ford, [WB8IMY](#), QST Editor



The ARRL Letter for December 16, 2010

On the Air: 2010 a Banner Year for DXCC, Incoming/Outgoing QSL Bureau



The Outgoing QSL Bureau at ARRL Headquarters. More than 1 million QSL cards passed through the Incoming and Outgoing QSL Bureaus in 2010. [S. Khrystyne Keane, K1SFA, Photo]

With the coming of more sunspots, comes more DX. And when more amateurs are working DX, that means the ARRL's Membership and Volunteer Programs Department -- especially the DXCC desk and the ARRL Incoming and Outgoing QSL Bureaus -- goes into high gear.

"Compared to 2009, 2010 saw a dramatic increase in the number of cards we received from ARRL members that were sent to foreign QSL bureaus, as well as the number of cards we sent out to the bureaus," said DXCC Manager Bill Moore, NC1L. "In addition, the number of DXCC applications -- including those for

initial awards and endorsements -- also increased." Read more [here](#).



From The ARRL Web Site My Rediscovery of the Joy of Ham Radio

Steve Eden, KØSRE k0sre@arrl.net

A ham finds more than a bit of fun using PSK31.

I obtained my Technician class license in 2003 receiving the call KCØPLS. I put up my first homebrew antenna and began playing on 6 meters, VHF and UHF. I used repeaters, satellites, simplex, SSB, EchoLink and packet. This was fun, but the fun was wearing off. I knew I wanted to advance so I could try out more things. I upgraded to General and thought I would be able to try more bands and modes, and make contacts all over the world.

I obtained an HF radio, put up an antenna, got some advice from some of the "more seasoned" hams I knew and I gave it a try. Since I live inside a city, I didn't have a large yard to put up long-wire antennas or a big tower with beam antennas. I read up on antennas and gave a G5RV a try. I tried and tried but nearly all my contacts were in the US with maybe a Mexican contact thrown in. I wasn't able to go up against all those "big guns" with their big towers and legal limit amplifiers that I heard talking all over the world. I changed my antenna to a Carolina Windom, but I quickly became discouraged. Then I got busy with the family duties and taking care of business at work. I didn't try working HF much for quite a while.

Lightning Strikes

Then in the summer of 2009, I started to get into an experimental frame of mind. I had the misfortune of having my home computer damaged by lightning and had to rebuild my system. I started looking and found that I had compiled enough spare parts over the years to build a second computer. It wouldn't be a computer to brag about but I thought I would give it a try. I put the parts together and decided

to play with the operating system *Ubuntu (Linux)*. This would be the start of my new quest for personal discoveries through experimentation, which sounds perfect for ham radio, right?

As I was looking through a cabinet, my [Signalink](#) USB sound card fell out and hit me on the foot. I had purchased the Signalink a couple of years ago, but had put it away and forgotten about it. I had read an article online about the activities available while working with PSK31 and other digital modes, and how simple it was. This pain in my foot got me thinking that I might want to try the digital modes on my HF radio. It is sometimes amazing at how a pain in the foot gets your mind to whirling.

I put my *Ubuntu* powered computer next to my radios and started exploring. I found that there were software programs that would control my radio and let me have conversations on HF. The wonderful thing was that there were software programs written for *Linux*. I picked [Fldigi](#) as my program choice and built the cables I needed to connect my computer to the Signalink interface and my Yaesu FT-897. Then I started experimenting. I followed the directions in setting the volumes of the sound card and the transmit power of my radio. I watched the conversations going on to learn how folks passed information. I took a deep breath and typed my first transmission with PSK31, calling "CQ CQ CQ DE KØSRE PSE K."

The World Comes Back

Suddenly, the world of HF opened up and I began to experience the joy and excitement of ham radio like I had never experienced before. In the course of 2 days, I easily made contact with folks in age from their teens to their 80s. I met folks who could type 30 WPM or 10. I made contacts in the US, Canada, Mexico, Venezuela, Cuba, Grenada and France, all on 30 W! I *didn't* have a big tower with a beam antenna. I *didn't* have a legal limit amplifier. I found that an amplifier could be a bad thing if you didn't know how to control your signal while using the digital modes.

During the course of my conversations, I found that many of the people I talked to hadn't been on PSK31 for a very long time. I was complimented at times on the quality of the signal so some of them asked me for help experimenting. I told them how their signal looked as they adjusted their stations. I was asked what happened on my screen when they typed something on their computer. I found a group of people who were experimenting and enjoying their discoveries. I sat in awe at all of the conversations I saw taking place as I looked up and down the waterfall display.

If you have gotten bored or discouraged with your inability to make worldwide contacts, then consider putting in a little time and give PSK31 a chance. It works with all kinds of computers and different operating systems. It works with homebrew interfaces or interfaces you can purchase. Like nearly everything in ham radio, it's what you want to put into it. It gives a small station just as much of a chance to make worldwide contacts as the big guns on SSB. If you decide to give it a try, I hope to have a chance to contact you.

Set up your station, make some contacts, get comfortable with the mode and perhaps enjoy a little contesting or you can just have fun.

They say you put a new wrinkle in the gray matter of your brain every time you learn something new. I just felt my head and I think there is a new bump showing that wasn't there before.

Photos by Steve Eden, KØSRE. (To see article on web site including photos click [here](#))

Steve Eden, KØSRE, an ARRL member, has lived in Camdenton, Missouri at the beautiful Lake of the Ozarks since 1986 where he works in emergency services. His interest in Amateur Radio was started by his good friend Glenn, WØGDF, and he has been in Amateur Radio since 2003 currently holding a General class license. Steve's spouse, Stacy, is also a licensed amateur with the call sign WØSRE. Steve is currently employed as a Sergeant with the Camden County Missouri Sheriff's Office in charge of the E 9-1-1/Communications Division. He is also the Fire Chief for the Camdenton Fire Department and serves on the State of Missouri Region F Tactical Interoperability Communications Planning Committee. Steve can be reached at PO Box 3603, Camdenton, MO 65020.

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 84322-0111 or pay online at <http://www.barconline.org/?q=node/242>

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

Questions for General Class License

1. (G1A08) Which of the following frequencies is within the General Class portion of the 20 meter phone band?
 - A. 14005 kHz
 - B. 14105 kHz
 - C. 14305 kHz
 - D. 14405 kHz
2. (G2A07) Which of the following statements is true of the single sideband (SSB) voice mode?
 - A. Only one sideband and the carrier are transmitted; the other sideband is suppressed
 - B. Only one sideband is transmitted; the other sideband and carrier are suppressed
 - C. SSB voice transmissions have higher average power than any other mode
 - D. SSB is the only mode that is authorized on the 160, 75 and 40 meter amateur bands
3. (G3C05) Why is long distance communication on the 40, 60, 80 and 160 meter bands more difficult during the day?
 - A. The F layer absorbs these frequencies during daylight hours
 - B. The F layer is unstable during daylight hours
 - C. The D layer absorbs these frequencies during daylight hours
 - D. The E layer is unstable during daylight hours
4. (G4E07) When might a lead-acid storage battery give off explosive hydrogen gas?
 - A. When stored for long periods of time
 - B. When being discharged
 - C. When being charged
 - D. When not placed on a level surface
5. (G5C10) What is the inductance of three 10 millihenry inductors connected in parallel?
 - A. .30 Henrys
 - B. 3.3 Henrys
 - C. 3.3 millihenrys
 - D. 30 millihenrys
6. (G6C07) What is one disadvantage of an incandescent indicator compared to a LED?
 - A. Low power consumption
 - B. High speed
 - C. Long life
 - D. High power consumption
7. (G7A17) What portion of the AC cycle is converted to DC by a full-wave rectifier?
 - A. 90 degrees
 - B. 180 degrees
 - C. 270 degrees
 - D. 360 degrees
8. (G8A07) Which of the following phone emissions uses the narrowest frequency bandwidth?
 - A. Single sideband
 - B. Double sideband
 - C. Phase modulation
 - D. Frequency modulation
9. (G9C20) What happens when the feed-point of a cubical quad antenna is changed from the center of the lowest horizontal wire to the center of one of the vertical wires?
 - A. The polarization of the radiated signal changes from horizontal to vertical
 - B. The polarization of the radiated signal changes from vertical to horizontal
 - C. The direction of the main lobe is reversed
 - D. The radiated signal changes to an omnidirectional pattern
10. (G0B03) Which size of fuse or circuit breaker would be appropriate to use with a circuit that uses AWG number 14 wiring?
 - A. 100 amperes
 - B. 60 amperes
 - C. 30 amperes
 - D. 15 amperes

(For answers to test questions see page 11)

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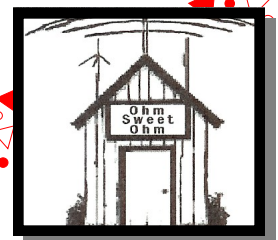
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Answers to questions on page 10: 1-C, 2-B, 3-C, 4-C, 5-C, 6-D, 7-D, 8-A, 9-A, 10-D