



THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

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

May 2013

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ARRL Affiliated



PRESIDENT'S MESSAGE

Recently, I taught the Boy Scout Radio Merit badge to a group of scouts. In preparing to teach the merit badge, I went looking for why amateur radio was also called "Ham" radio. Searching the internet I found many versions for the origin of "Ham" radio. It seems that the real explanation appears to be lost in the mists of time, for there were a number of theories with some more plausible than others.



Here is the definition of ["What is a Ham" from the ARRL:](#)

What is a Ham?-

"Ham: a poor operator. A 'plug.'"

That's the definition of the word given in G. M. Dodge's The Telegraph Instructor even before radio. The definition has never changed in wire telegraphy. The first wireless operators

were landline telegraphers who left their offices to go to sea or to man the coastal stations. They brought with them their language and much of the tradition of their older profession.

In those early days, spark was king and every station occupied the same wavelength-or, more accurately perhaps, every station occupied the whole spectrum with its broad spark signal. Government stations, ships, coastal stations and the increasingly numerous amateur operators all competed for time and signal supremacy in each other's receivers. Many of the amateur stations were very powerful. Two amateurs, working each other across town, could effectively jam all the other operations in the area. When this happened, frustrated commercial operators would call the ship whose weaker signals had been blotted out by amateurs and say "SRI OM THOSE #&\$!@ HAMS ARE JAMMING YOU." (*SRI OM is short for Sorry Old Man.*)

Amateurs, possibly unfamiliar with the real meaning of the term, picked it up and applied it to themselves in true "[Yankee Doodle](#)" fashion and wore it with pride. As the years advanced, the original meaning has completely disappeared.

-Louise Ramsey Moreau W3WRE/WB6BBO

Here is another one I found. The early 1900's were filled with magazines catering to the experimenter. (Everyone at the end of the Victorian age apparently viewed himself as an inventor or tinkerer.) One of these magazines was called Home Amateur Mechanic, and it featured many simple radio sets a person could build. It is likely that when asked what kind of radio an operator was using, he might send back RIG HR ES HAM, meaning that it was one of the circuits shown in Home Amateur Mechanic magazine. Since telegraphers tend to abbreviate everything, due to the low throughput of Morse, this is plausible, and Home Amateur Mechanic magazine certainly did exist in the correct era.

But here is one that amateur radio operators can relate to. HAM means "Haven't Any Money". I'm dreaming of that tower and beam right now. But wait, what about the rotor and coax cost!

73,
Cordell
KE7IK

UPCOMING 2013 ACTIVITIES

- 11 May 10:00 AM — BARC Club Meeting
- 18 May 8:00 AM — RACES HF Net 3920 KHz
- 20-21 May — [Mountain Man Rendezvous](#) (* Tammy & Dean Stevens)
- 1 June — [Little Red Riding Hood](#) Bicycle Race (* Russ Leikis)
- 6 June, 7:00 PM — ARRL VEC-listed Local Radio test ([Info on web site](#))
USU's ASTE building (Room 108 @ 1498 North 800 East, Logan, UT 84321)
- 8 June — [Tour De Cure](#) (Box Elder Co.)
- 12 June, 7:30 PM — ARRL Rocky Mountain Division Net IRLP Node:9871
- 20 Jun, 8:00 PM — RACES VHF Net 447.00 IRLP 145.49 Promontory 147.18 Snowbird
- 20-21 June — Wasatch Back Relay (* Tyler Griffiths)
- 20-22 June — Bridgerland Radio Rocket Recovery (* Guy Hatch)
- 22-23 June — Field Day (in place of June Club Meeting) (* Ted McArthur)
- 28-30 June — ARRL Rocky Mountain Division Convention (Estes Park, CO)
For Info go to: www.RockyMountainDivision.org or [HamCon Colorado](#)
- 20 July 8:00 AM — RACES HF Net 3920 KHz
- 17 August — Bike the Bear Bicycle Race
- 7 September — LOTOJA Bicycle Race
- 21 September — Top Of Utah Marathon

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

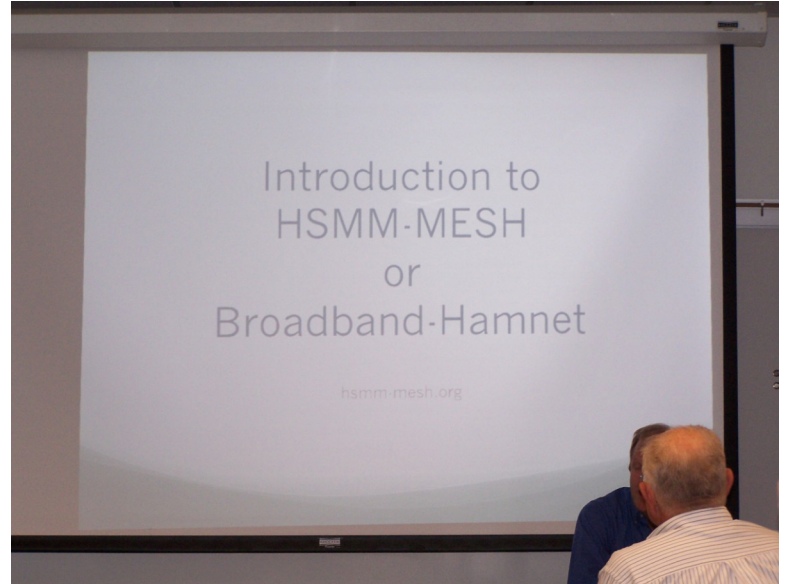
Local Radio Nets:

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

A few pictures and information about recent activities

Tom Baldwin KD7TRN and Kevin Reeve N7RXE did a great job at the April BARC Club meeting with their presentation about HSMM-MESH networking. They explained what it is and how it works, and gave a demonstration of how to program the router and connect a system together. They gave some examples of how one of these networks can be used and their advantages over a typical computer network.



For the 7th Call Area QSO Party on March 4 Jared Smith (N7SMI) did something a little different, he chose the intersection of the Wyoming, Utah and Idaho borders. On the windy desolate hilltop after about 7 hours and 591 voice QSO's he called it quits but only after his tent had blown down numerous times and then looked like a storm was coming.



The ARRL Letter for April 11, 2013

New Legislation in Idaho Clarifies Exemption for Guyed Amateur Radio Towers



On April 1, Idaho Governor C. L. "Butch" Otter (R) signed Senate Bill 1065 into law. This new law is an amendment to a current Idaho law regarding guyed towers, which states that guyed towers "shall be lighted, marked and painted or otherwise constructed to be visible in clear air during daylight hours from a distance of not less than 2000 feet." With the passage of SB 1065, both guyed Amateur Radio and CB antenna support structures are exempt from these regulations.

According to ARRL Idaho Section Manager Ed Stuckey, AI7H, Governor Otter signed the original legislation into law in 2012, but there was an exemption for telecommunications towers. "This year, we went back [to the legislature] to specifically define Amateur Radio towers as one of the types of telecommunications towers," he said, "ARRL Idaho Section Government Liaison Rex Green, K7DMV, put a huge amount of effort into firming up the groundwork behind the legislation. We also had the good fortune to have Idaho State Senator Lee Heider, KE7GAG, take an interest in the legislation, and he acted as the Senate sponsor for the bill." Read [more](#).

The ARRL Letter for April 18, 2013

FCC Enforcement: FCC Issues Two Forfeiture Notices for Cell Phone Jamming



On April 9, the FCC found two businesses -- The Supply Room in Oxford, Alabama and Taylor Oilfield Manufacturing in Broussard, Louisiana -- to have "apparently willfully and repeatedly violated" the FCC's rules operating multiple cellular phone jammers that were illegally imported to the US. The FCC issued a *Notice of Apparent Liability for Forfeiture and Order (NAL)* to each business: The Supply Room received an *NAL* in the amount of \$144,000, while Taylor Oilfield Manufacturing received an *NAL* in the amount of \$126,000. Read [more](#).

BPL: FCC Again Denies ARRL's Petition in BPL Proceeding

On April 16, the FCC issued a *Second Memorandum Opinion and Order*, denying the ARRL's December 2011 *Petition for Reconsideration* that sought reconsideration of the FCC's *Second Report and Order*, "fundamentally affirm[ing]" its rules for Access Broadband over Power Line (Access BPL) systems. In denying the ARRL's *Petition*, the FCC noted that the *Petition* "[did] not raise new arguments based on new information in the record or on the Commission's new analysis of limited points as directed by the Court, nor does it demonstrate any errors or omissions in the Commission's previous

decisions," and that its previous rulings "strike an appropriate balance between the dual objectives of providing for Access BPL technology -- which has potential applications for broadband and Smart Grid uses -- while protecting incumbent radio services against harmful interference."

The ARRL made 14 principal points in its *Petition*, each of which was aimed at urging the FCC to enact additional rules that would permit BPL systems to operate without the severe interference potential inherent in BPL technology. The ARRL argued that the current rules do not address this severe interference potential, which was manifested in every deployment of BPL in which the safeguards urged by the ARRL were absent. The FCC dismissed all of the ARRL's arguments, claiming that the ARRL "did not submit any new information," made "no new argument" or that it had, in the Commission's view, failed to make its point.

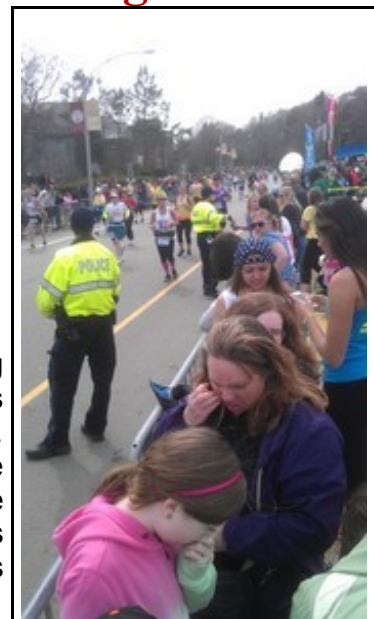
ARRL General Counsel Chris Imlay, W3KD, said that full time, mandatory notching of amateur bands to a notch depth not less than 25 dB was "the least that the FCC should have required in its rules, because interference prevention is possible; *post-hoc* remediation is not. In this instance, the FCC has not acted responsibly in its stewardship of the MF and HF radio spectrum. The ARRL will continue to vigilantly guard against the abuse and pollution of the radio spectrum in the use of BPL technology on a case-by-case basis as necessary, wherever necessary." Read [more](#).



Public Service: Radio Amateurs Provide Communication Support in Boston Marathon Bombings

As has happened many times in years past, over 200 Amateur Radio operators participated in communications for the Boston Marathon on Monday, April 15, 2013. Unlike prior challenging situations such as very warm weather for the runners or other weather-related challenges, this year's marathon will be remembered for the bombings that took place at the finish line. Despite this heinous act, professional first responders, medical volunteers from the American Red Cross that staffed the route, and Amateur Radio operators performed magnificently in the face of adversity.

"Within minutes, cell phone systems became overloaded and making phone calls and text messages was difficult. Amateur Radio operators performed communication duties under duress and performed admirably. No Amateur Radio volunteers were injured on the course in this terrible act," said Steve Schwarm, W3EVE, who is the Amateur Radio Course Communication Coordinator and associated with a consortium of clubs and groups known as Marathon Amateur Radio Communications (MARC). Read [more](#).



At mile 20 of the Boston Marathon, anxious spectators monitor their smartphones immediately after the explosion. [Phil Temples, K9HI, photo]

The ARRL Letter for April 25, 2013

Public Service: Chinese Amateurs Assist in Earthquake's Aftermath



On the morning of Saturday, April 20, a powerful earthquake measuring 7.0 on the Richter scale struck Ya'an City in China's Sichuan province. The epicenter was near Lushan County. As of Wednesday, April 24, almost 200 people have been killed and more than 11,000 people are injured.

Radio amateurs in Sichuan province took immediate action. Liu Hu, BD8AAA, and BA8DX led a team to the disaster area to provide emergency communication services. Even in the aftermath of the earthquake, the FM repeater in Ya'an City was still functioning; BG8FUW in Lushan County and BG8EYD in Ya'an City used this repeater to coordinate local efforts.

According to IARU Region 3 Disaster Communications Committee Chairman Jim Linton, VK3PC, it has been raining in the earthquake area. "Effective traffic control has been very important to transport tents, water, foods and medicines into the area," he said. "The rural communities around Ya'an City are along the same seismic fault where the Great Sichuan Earthquake killed more than 90,000 people five years ago in one of China's worst natural disasters. The latest earthquake on Saturday left tens of thousands of people in tents or cars, unable to return home or too afraid to go back as aftershocks continued. Badly hit Lushan County is now a large refugee camp, with tents set up and volunteers providing meals."

Immediately after the earthquake, the Chinese Radio Sports Association and Chinese Radio Amateur Club asked all amateurs to avoid 3.855, 7.050 and 14.270 MHz, as these frequencies were being used for disaster relief communications. As of April 22, public communication is back to normal in the disaster area and amateurs are free to once again use these frequencies. -- *Thanks to Fan Bin, BA1RB, and Jim Linton, VK3PC, for the information*

Dayton Hamvention®: Get Ready for the 2013 ARRL EXPO at the Dayton Hamvention

The Dayton Hamvention® -- the largest gathering of radio amateurs in the US -- is just around the corner, May 17-19. Held annually at the Hara Arena Conference and Exhibition Center in the Dayton suburb of Trotwood, Ohio, Hamvention is sponsored by the Dayton Amateur Radio Association.

This year's "ARRL Dayton Team" includes more than 100 people -- volunteers, officials and Headquarters staff. The centerpiece of the ARRL's participation is ARRL EXPO 2013, a large exhibit area in Hara's Ballarena Hall. First introduced in 2005, ARRL EXPO has become a popular mainstay at the event. "ARRL EXPO is a show-within-a-show, and the area will be filled with membership program representatives and exhibits that cover a variety of Amateur Radio topics and interest areas," explained ARRL Marketing Manager Bob Inderbitzen, NQ1R, who also serves as the ARRL EXPO Coordinator. "The ARRL has put together dozens of exhibits, programs and activities to help represent the very best of our programs, services and information. There will be something for every ham at ARRL EXPO."



This year's ARRL EXPO will include a spotlight on W1AW, the Hiram Percy Maxim Memorial Station. The world's most famous Amateur Radio station turns 75 in September. Dayton attendees will enjoy a special W1AW exhibit, including photographs of the station from over the years. Read [more](#).

Changes to FCC Radiotelegraph Operator Certificates Coming May 20

[Effective May 20, 2013](#), the FCC will no longer accept applications for First (T1), Second (T2) or Third Class (T3) Radiotelegraph Operator Certificates. In addition, the FCC has consolidated the T1 and T2 Radiotelegraph Operator Certificates into a new license class called the Radiotelegraph Operator License (T). According to the FCC, this change takes effect upon renewal: T1s and T2s that are renewed on or after May 20, 2013 will be renewed as Ts, but existing T1s and T2s will retain their current license class for the duration of the current license term. The Commission also consolidated the T3 with Marine Radio Operator Permits (MP); T3s renewed on or after May 20, 2013 will be renewed as MPs, but existing T3s will retain their current license class for the duration of the current license term. These new rules were first announced in a *Report and Order* ([WT Docket No. 10-177](#)), issued January 8, 2013.



The ARRL Letter for May 2, 2013 FCC News: President Obama Nominates Financier and Former Telecom Executive Tom Wheeler as FCC Chairman

On Wednesday, May 1, President Barack Obama announced that he nominated Tom Wheeler to be the new Chairman of the Federal Communications Commission. If the Senate confirms the nomination, Wheeler will replace Julius Genachowski who announced his resignation from the FCC in March. Pending Wheeler's confirmation, FCC Commissioner Mignon Clyburn -- the agency's soon-to-be senior Democrat -- will serve as the Commission's acting chairman.

Wheeler, 67, has served as an informal adviser to Obama in recent years and has been a major fundraiser for his political campaigns. He has a background as a venture capitalist and as a lobbyist for the communications industry. He is the former President of the National Cable Television Association (now known as National Cable & Telecommunications Association) and former Chief Executive Officer of the Cellular Telecommunications & Internet Association. Currently, he is a Managing Director at Core Capital Partners, a venture capital firm in Washington, DC. Read [more](#).



On May 1, President Obama announced that he nominated Tom Wheeler to be the new Chairman of the Federal Communications Commission. [Screengrab courtesy of the White House]

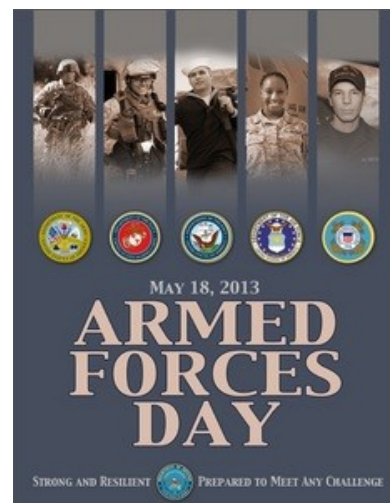
Dayton Hamvention®: DX Activities Featured at ARRL EXPO at the 2013 Dayton Hamvention



The ARRL will present a variety of DX activities as part of the ARRL EXPO -- the ARRL's "show within a show" at the 2013 Dayton Hamvention, to be held May 17-19 at Hara Arena, near Dayton, Ohio. Activities will include DXCC card checking and the opportunity to drop off QSL cards for the ARRL Outgoing QSL Bureau, as well as to apply for awards, such as the IARU Worked All Continents Award, the IARU Region 3 Operating Award and several awards administered by the Japan Amateur Radio League. In addition, representatives from the International Amateur Radio Union and several IARU Member Societies will be on hand within the EXPO area. Read [more](#).

On the Air: Annual Armed Forces Day Crossband Test Scheduled for May 11

In celebration of the 63rd anniversary of Armed Forces Day (AFD), the Army, Air Force, Navy, Marine Corps and Coast Guard are co-sponsoring the annual Military/Amateur Radio Crossband Communications Test. Although Armed Forces Day is traditionally celebrated on the third Saturday in May -- May 18 in 2013 -- the AFD Military/Amateur Crossband Communications Test will be conducted on May 11 to prevent conflict with the Dayton Hamvention®, scheduled for May 17-19. The annual celebration features traditional military-to-amateur crossband communications SSB voice and Morse code tests. These tests give Amateur Radio operators and short wave listeners an opportunity to demonstrate their individual technical skills and to receive recognition from the appropriate military radio station for their proven expertise. QSL cards will be provided to stations making contact with the military stations. Read [more](#).



Seattle Will Host the 32nd Digital Communications Conference

Digital communications enthusiasts will be heading to the Pacific Northwest this autumn for the 32nd annual ARRL/TAPR Digital Communications Conference (DCC), September 20-22, at Cedarbrook Lodge near Seattle, Washington. The ARRL/TAPR DCC is an international forum for radio amateurs to meet, publish their work and present new ideas and techniques. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The DCC is for all levels of technical experience -- not just the expert. Introductory sessions are scheduled throughout the conference to introduce new technical topics for both beginners and experts. Read [more](#).



Questions for General Class License

1. (G1C06) Which of the following is a limitation on transmitter power on 1.8 MHz band?
 - A. 200 watts PEP output
 - B. 1000 watts PEP output
 - C. 1200 watts PEP output
 - D. 1500 watts PEP output
2. (G2D06) How is a directional antenna pointed when making a "long-path" contact with another station?
 - A. Toward the rising Sun
 - B. Along the gray line
 - C. 180 degrees from its short-path heading
 - D. Toward the north
3. (G3B12) What factors affect the Maximum Usable Frequency (MUF)?
 - A. Path distance and location
 - B. Time of day and season
 - C. Solar radiation and ionospheric disturbances
 - D. All of these choices are correct
4. (G4C11) Which of the following is one use for a Digital Signal Processor in an amateur station?
 - A. To provide adequate grounding
 - B. To remove noise from received signals
 - C. To increase antenna gain
 - D. To increase antenna bandwidth
5. (G5A12) What is one reason to use an impedance matching transformer?
 - A. To minimize transmitter power output
 - B. To maximize the transfer of power
 - C. To reduce power supply ripple
 - D. To minimize radiation resistance
6. (G6B02) What are two major ratings that must not be exceeded for silicon diode rectifiers?
 - A. Peak inverse voltage; average forward current
 - B. Average power; average voltage
 - C. Capacitive reactance; avalanche voltage
 - D. Peak load impedance; peak voltage
7. (G7B01) Complex digital circuitry can often be replaced by what type of integrated circuit?
 - A. Microcontroller
 - B. Charge-coupled device
 - C. Phase detector
 - D. Window comparator
8. (G8A03) What is the name of the process which changes the frequency of an RF wave to convey information?
 - A. Frequency convolution
 - B. Frequency transformation
 - C. Frequency conversion
 - D. Frequency modulation
9. (G9B08) How does the feed-point impedance of a 1/2 wave dipole change as the feed-point location is moved from the center toward the ends?
 - A. It steadily increases
 - B. It steadily decreases
 - C. It peaks at about 1/8 wavelength from the end
 - D. It is unaffected by the location of the feed point
10. (G0A04) What does "time averaging" mean in reference to RF radiation exposure?
 - A. The average time of day when the exposure occurs
 - B. The average time it takes RF radiation to have any long-term effect on the body
 - C. The total time of the exposure
 - D. The total RF exposure averaged over a certain time

(For answers to test questions see page 11)

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
N7UWX@comcast.net
(435)752-7269

Theo Thomson K7TWT
Theo@tec-electric.com

Jared Smith N7SMI
jared@smithplanet.com
(435)563-3746

Newsletter Editor

Dale Cox KB7UPW
newsletter@barconline.org
(435)563-3836

Web Page Editors

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

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

