



THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

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

October 2013

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PRESIDENT'S MESSAGE

The September issue of QST contained different articles on public service communications. It reminded me of the various public service activities that our club participated in: Little Red Riding Hood, Rocket Recovery, Wasatch Back Relay, LOTOJA, Top of Utah, and Bear 100. Each of these public service events presents a different operating perspective to the radio operator in using their radio skills and equipment.

As we provide support for these public service events, they provide the perfect introductory training for emergency operations. They help to develop our radio skills in a "Net" situation and gain experience in setting up our radio gear at remote locations for different conditions. Setting up a radio may be as simple as using your handheld with a new frequency. Other situations may require use of a mobile radio or a TNC with the radio.

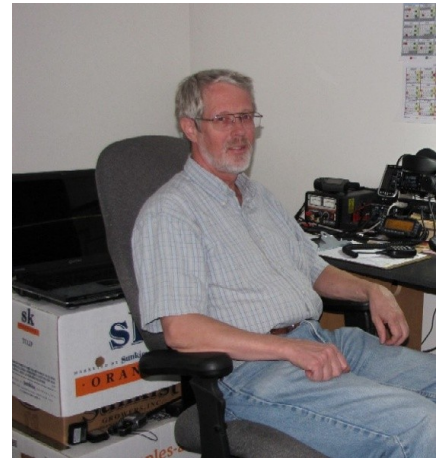
The radio equipment that you use for public service events could be your equipment from your ham shack or part of your Grab & Go Kit. Using your equipment from your grab and go kit allows you to verify the working condition of it. This is typical list of equipment for a [Grab & Go Kit](#).

The Federal Communications Commission Public Safety and Homeland Security Bureau <http://www.fcc.gov/pshs/services/amateur.html> established the amateur radio service as a voluntary non-commercial radio communications service that allows licensed operators to provide our nation with a pool of trained radio operators and technicians who can provide essential communications during civil and natural emergencies. The FCC part 97.1 rules has five principles that describe the basis and purpose of Amateur Radio Service. The first one is "Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communications service, particularly with respect to providing emergency communications".

The field of emergency response, including communications support, is rapidly changing. In the years following Hurricane Katrina, more communications systems are becoming "hardened" and there is more guidance and structure being given from the Department of Homeland Security (DHS) and the Federal Emergency Management Agency (FEMA). Where this communication support is provided for served agencies, there may be additional training requirements that the served agencies require. This additional training is available from the [ARRL](#) and [FEMA](#). This emergency communications would be part of Amateur Radio Emergency Service (ARES) and Radio Amateur Civil Emergency Service (RACES). Our club has more information on ARES and RACES at this [link](#).

Participating in public service events is an important part of maintaining our skills and radio equipment when our services are need for other purposes.

73,
Cordell
KE7IK



UPCOMING 2013 ACTIVITIES

- 10** October, 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)
- 12** October — 8:00 AM Swaproberfest and October Club Meeting (* Bill Neville)
Doors open 8:00 AM to Noon (Setup starts at 7) Entry is free, tables are free
At Cache County Fair Grounds located at 450 West 500 South in Logan
- 17** Oct, 8:00 PM — RACES VHF Net **447.00** IRLP **145.49** Promontory **147.18** Snowbird
- 19-20** October — JOTA-JOTI (BARC is not planning any organized participation)
56th Jamboree on the air—17th Jamboree on the Internet ([Info on web site](#))
- 13** November, 7:30 PM - ARRL Rocky Mountain Division Net IRLP Node: 9871
- 16** November, 10:00 AM — BARC Club Meeting — Club Elections for
next year, Digital Modes (1 week late due to RACES conference)
- 16** November 8:00 AM — RACES HF Net 3920 KHz
- 4** December — Club Christmas Party and dinner at Coppermill Restaurant.
Arrive at 6:00 PM, dinner served at 6:30. Two Entrees for \$17.50
Plus gratuity and tax for total of \$22.60 Roast beef & shrimp
- 7** December, 7:00 PM — ARRL VEC-listed Local Radio test ([Info on web site](#))
- 11** December, 7:30 PM - ARRL Rocky Mountain Division Net IRLP Node: 9871
- 19** Dec, 8:00 PM — RACES VHF Net **447.00** IRLP **145.49** Promontory **147.18** Snowbird

2014

- 8** January, 7:30 PM — ARRL Rocky Mountain Division Net IRLP Node: 9871
- 11** January, 10:00 AM — Club Meeting

(* 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.





ARRL News and Information

The ARES E-Letter for September 18, 2013

Docket of Disaster

A spate of natural disasters and resulting ARES responses have been reported by ARRL recently. Here is a digest:

Colorado Storms and Flooding

More than five dozen ARES volunteers have deployed in and around flood-stricken counties of Colorado, providing critical communication for Red Cross shelters and state and local emergency operation centers. Recent heavy rains have caused veritable mountainside tsunamis that have caused rivers and streams to overflow their banks, ravaged roads and property and displaced an undetermined number of residents. At least three people are known to have died. ARRL Colorado Section Manager Jack Ciaccia, WMØG, says that with power cut off to affected communities and many cell telephone towers along the Big Thompson River toppled by the flooding, ham radio is providing medical and health-and-welfare traffic between evacuation centers and the EOCs. The complete story, updated as of September 14, can be found [here](#).

Morgan Incident Fire, California

The Radio Amateur Civil Emergency Service ([RACES](#)) went on standby alert, and the Red Cross and the Salvation Army Team Emergency Radio Network ([SATERN](#)) were called out in the wake of the so-called [Morgan Incident Fire](#), in chaparral southeast of Clayton, California. The blaze, on the eastern flank of the north peak of Mount Diablo, put at least four Mount Diablo Amateur Radio Club ([MDARC](#)) repeaters off the air September 8. More [here](#).

Hurricane Watch Net Activates for Hurricane Ingrid

Hurricane Watch Net ([HWN](#)) manager Bobby Graves, KB5HAV, announced that the net planned to activate Sunday, September 15, at 1500 UTC on 14.325 MHz in response to the approach of Hurricane Ingrid, only the second hurricane of the 2013 season. More information [here](#).

ARES/RACES Stands Down After Rim Fire at Yosemite

Amateur Radio volunteers supporting the Red Cross and local government in the wake of the gigantic Rim Fire, in and near California's Yosemite National Park and the Stanislaus National Forest, have stood down after 16 days on duty. The initial callout on August 19 responded to a request to assist the Red Cross in setting up an evacuation center in Groveland, California. More information [here](#).

(All sources are ARRL).



The ARRL Letter for September 19, 2013

Public Service: Colorado ARES Teams Transition to Flood Damage Assessment



As the disaster response changes from rescue to recovery mode, Amateur Radio Emergency Service (ARES) volunteers in flood-stricken communities in Colorado shifted to damage assessment duty by mid-week. [Boulder County ARES](#) (BCARES) planned to shoot video of the devastation as teams move into the field -- a job Boulder County ARES Assistant Emergency Coordinator George Weber, KAØBSA, said was "something new" for his team. Damage assessment follows on the heels of an extended activation to help rescue, evacuate, and shelter flood victims.

"Boy, have we been busy!" Weber told BCARES members in announcing the callout. "This is even more than anyone ever planned for. I heard the term '500-year flood' being used."

Seven BCARES damage assessment volunteers were scheduled to ride along in county vehicles, equipped with mobile ham radio gear set up to work through several area repeaters. Plans called for using [APRS](#) as well. Weber expected the activation to last "a few days."

Colorado ARES volunteers have been deployed in and around flood-stricken counties of Colorado, providing critical communication for Red Cross shelters and state and local emergency operation centers. As of mid-week, the Red Cross had consolidated some shelters and no longer required Amateur Radio assistance. ARRL Colorado Section Manager Jack Ciaccia, WMØG, said that with power cut off to affected communities and many cell telephone towers down, ham radio has been supporting medical and health-and-welfare traffic between evacuation centers and the EOCs. In some cases, ham radio provided the only communication link for isolated communities.

On September 16, Colorado Section Emergency Coordinator Robert Wareham, NØESQ, represented ARES as Colorado Governor John Hickenlooper (D), FEMA Administrator Craig Fugate, KK4INZ, US Senators Mark Udall (D-CO) and Michael Bennett (D-CO), US Representative Cory Gardner (R-4), Mike Coffman (R-6), and Ed Perlmutter (D-7) visited the state emergency operations center. Wareham said that he and Emit Hurdelbrink, WØUAW -- a regional emergency coordinator -- spoke briefly with Hickenlooper "who thanked us for our service," Wareham said. He added that Fugate also spoke with him about the ARES post-flood activities. Wareham reported in a post to the ARRL [Colorado Section Facebook page](#) that ARES volunteers have been working shifts of 12 hours or longer since the flooding started.



Road and property damage in Jamestown, Colorado [Boulder County photo]

A Mountain Emergency Radio Network ([MERN](#)) repeater in Allenspark was instrumental in a medical rescue that involved a recently licensed ham. A ham in Nebraska, via an [EchoLink](#) repeater in Colorado, advised Robert McDonald, KDØSCC, of Allenspark, who drove 3 miles to alert fire dispatch. Estes Park ARES had set up in the fire station's emergency communications site.

Ciaccia said ham radio received kudos from the Allenspark Fire Chief, who attributed lives saved directly to ARES efforts. "The ability to get fast, accurate info to their residents as it was being disseminated was critical to their rescue and evacuation efforts," Ciaccia said.



A road washout in Left Hand Valley [Boulder County photo]

The flash flooding in Colorado has claimed at least eight lives, hundreds remain unaccounted for, untold numbers of homes and highways have been destroyed, and many residents still await evacuation, according to media accounts.

"Hams continue to staff evacuation shelters throughout the region and emergency operations centers (EOCs) for the state and multiple counties and municipalities," Wareham said over the weekend. The National Guard has been mobilized to help with evacuations and rescue operations. Wareham said that hams not directly involved in the disaster response served as storm spotters for the National Weather Service, providing reports on rainfall, creek and river levels.

Regulatory: FCC Dismisses "Encryption" Petition

The FCC has dismissed a [Petition for Rulemaking](#) (RM-11699) from a Massachusetts ham, that sought to amend the Part 97 Amateur Service rules to permit the encryption of certain amateur communications during emergency operations or related training exercises. The FCC put the petition filed by Don Rolph, AB1PH, of East Walpole on public notice in June. Rolph requested an additional exception to §97.113, which currently prohibits "messages encoded for the purpose of obscuring their meaning," but the FCC said in a September 18 [Order](#) that it's not persuaded his petition provides sufficient reasons to support the change.



"[W]e conclude that the record does not support Mr Rolph's assertion that the prohibition on encrypted amateur communications is impairing the ability of the Amateur Radio community to provide effective support to public safety agencies during emergencies," the FCC said.

The FCC said it received more than 300 comments on Rolph's petition, and those opposing the change outnumbered supporters two to one.

In denying the petition, the FCC concluded, "Thus, while the proposal could advance one purpose of the Amateur Radio Service -- value to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications -- it would undermine other characteristics and purposes of the service." Read [more](#).

DX: XZ1Z Back on the Air from Myanmar (Burma)!



Jay Oka, JA1TRC, reports that XZ1Z returned to the air a day earlier than expected from Naypyidaw, Myanmar (Burma), the nation's capital. Two stations are on the air, with Zorro, JH1AJT; Champ, E21EIC; and Ted, JJ1LIB, as operators.

Operation is primarily on CW and focused to the Americas. Wire antennas are in place for 160, 80, 40, 30 and 17, as well as a triband Yagi. By September 19, XZ1Z had been spotted on 80, 40, 20, and 17 meter CW and on 15

meter phone.

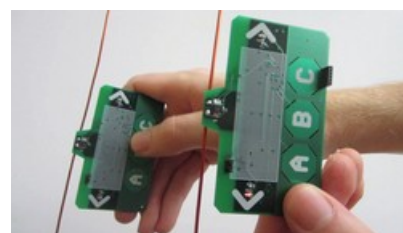
Oka says he plans to update the logs on [ClubLog](#) and upload to [LoTW](#). He points out that local time in Myanmar is UTC + 6:30. The earlier XZ1Z operation has been approved for DXCC credit.

Myanmar is the 24th most wanted DXCC entity, according to [ClubLog](#). QSL to JH1AJT, PO Box 8, Oiso, Nakagun, Kanagawa 259-0111, Japan. -- Thanks to [The Daily DX](#) via Jay S. OKA, JA1TRC

Technology: "Ambient Backscatter" Could Power Devices in the Future

[University of Washington](#) researchers believe we may be one step closer to an "Internet-of-things" reality. UW engineers have created a new wireless communication system that allows devices to interact with each other *without* relying on batteries or wires for power. Using something they call "[ambient backscatter](#)," these devices can interact with users and communicate with each other without using batteries. They exchange information by reflecting or absorbing existing radio signals. Two devices communicate by reflecting the existing signals to exchange information. The researchers built small, battery-free devices with antennas that can detect, harness and reflect a television signal, which then is picked up by other similar devices. The technology could enable a network of devices and sensors to communicate with no power source or human attention needed.

"We can repurpose wireless signals that are already around us into both a source of power and a communication medium," said lead researcher [Shyam Gollakota](#), a UW assistant professor of computer science and engineering. "It's hopefully going to have applications in a number of areas including wearable computing, smart homes and self-sustaining sensor networks."



The researchers published their results at the Association for Computing Machinery's [Special Interest Group on Data Communication](#) August 2013 [conference](#) in Hong Kong. Their research received the conference's "Best Paper" award. "Our devices form a network out of thin air," said co-author [Joshua Smith](#), a UW associate professor of computer science and engineering and of electrical engineering. "You can reflect these signals slightly to create a Morse code of communication between battery-free devices."

Using ambient backscatter, these devices can interact with users and communicate with each other without using batteries. They exchange information by reflecting or absorbing existing radio signals. [University of Washington photo]

The original [article and video](#) are on the UW website. For more information, contact Gollakota and Smith at abc@cs.washington.edu. -- *The University of Washington*

The ARRL Letter for October 3, 2013

Regulatory: FCC -- "We Regret the Disruption." Commission Shutdown Complete

The FCC appears to have ground to a complete halt for all intents and purposes beyond emergencies, as the Federal Government shutdown continues. This includes functions at the Commission's Gettysburg, Pennsylvania, facility, which handles all Amateur Radio licensing transactions, as well as the FCC's main website and the Amateur Radio call sign database (ULS).

"We regret the disruption, but during the Federal Government-wide shutdown, the FCC is limited to performing duties that are immediately necessary for the safety of life or the protection of property." a message on the FCC website says. "FCC online systems will not be available until further notice." The Commission refers anyone calling regarding an emergency "affecting the safety of life or the protection of property" to a Washington, DC, number, 202-418-1122, or an [e-mail address](#).

Assistant ARRL VEC Manager Perry Green, WY1O, said October 1 that the FCC appeared to have accepted "a small number" of modification and renewal applications, apparently as the shutdown was in process, but it took "far longer than usual" for that to happen. The ARRL VEC did not attempt to file additional applications, and it will hold for filing any applications resulting from Amateur Radio Volunteer Examiner-administered examination sessions.

"We have not submitted any VE sessions, which require batch filing and are assigned an FCC filing number," Green added. "At this point, we are unable to file any applications with the FCC, because it has shut down its servers. We do not expect the FCC to resume granting applications until it reopens." Green stressed that the ARRL VEC remains open for business and continues to monitor the situation. The ARRL VEC also is still processing International Amateur Radio Permit ([IARP](#)) applications.

While the FCC has stopped processing new, renewal or vanity call sign applications for the duration, it is still possible to reserve a 1 × 1 special event call sign, since that is not an FCC function.



Green points out that ARRL VEC exam sessions will go on as scheduled, at the option of the sponsors, but the ARRL VEC will not be able to file session paperwork for processing until the shutdown ends and the FCC is back in business again.

Green notes that exam session candidates have to put an FCC Registration Number (FRN) on their applications, if they have one. FRNs for current licensees are available via the ARRL's "Call Sign/Name Search" utility on the League's [home page](#). If the FRN is not available or has not yet been issued, applicants may use their Social Security numbers, which candidates must provide to obtain an FRN.

"So in this time of shutdown, they will need to submit their SSN on the VE session paperwork and gain their password at a later time," Green explained. "If that is not to their liking, they will have to wait for the FCC to open up again, which I'm sure at some time it will."

Radio amateurs whose licenses expire between October 1 and the day after normal FCC operations resume may continue to operate until then, even if they have not yet filed a renewal application. Pending an official FCC announcement that states otherwise, renewal applicants should apply no later than one day after the FCC reopens, if they want to continue to operate.

Amateur Radio applicants who passed an upgrade examination may still operate with their new privileges, even if their applications have not been accepted for filing by the FCC. Applicants must have a *Certificate of Completion of Examination (CSCE)*, issued by the VE team. When using their new privileges, such applicants should continue to identify by appending the appropriate designator to their current call signs, ie, /KT for Technician, /AG for General and /AE for Amateur Extra, as noted on the back of the CSCE.

If the closing date for comments on an open proceeding falls during the shutdown, comments will be considered timely filed on the day after the Commission reopens for business.

In late September the FCC posted a "[Plan for Orderly Shutdown](#)" in the event of a federal government shutdown. Only a handful of the FCC's 1754 employees were scheduled to remain on duty, including eight employees "retained to conduct interference detection, mitigation and disaster response operations." Only one "senior management official" in the Wireless Telecommunications Bureau -- which oversees Amateur Radio -- was scheduled to be on duty for the extent of the shutdown. The Commission emphasized earlier that it would not be open for normal operations "during any government-wide shutdown."

See "[The FCC Shutdown at a Glance!](#)" for updates.

Events: Scouting's Jamboree on the Air 2013 Will Be the Last for HB9S

The 2013 running of Scouting's Jamboree on the Air ([JOTA](#)) is less than a month away. The 56th JOTA will take place the weekend of October 19-20, from 0000 local time Saturday to 2400 local time Sunday. JOTA gives members of the [Boy Scouts of America](#) a chance to experience Amateur Radio firsthand, perhaps planting the seed for a lifetime of hamming. But this year's running of the world's largest Scouting event will be the last for the crew at HB9S at the World Scout Bureau, which plans to move its headquarters next year. JOTA 2013 will be a farewell party for HB9S, with a special QSL card (QSL via HB9AOF). An international team of Scout operators, including PA3BAR, the World JOTA Organizer, will be at the station for the occasion.



JOTA attracts nearly 750,000 Scouts, participating from 6000 stations in 150 countries. JOTA's goal is to foster Scout-to-Scout communication across borders, to allow as many Scouts as possible to talk to each other and learn about one another's activities and interests. The [JOTA guidelines](#) offer suggested frequencies and additional information.

Licensed mentors often open their stations to Scouts on JOTA weekend, serving as control operators. Radio operation will be on 80 through 6 meters and 2 meters and 70 centimeters FM simplex, all modes. Last year more than 18,500 US Scouts took part in JOTA from more than 200 stations -- up by nearly 500 percent from a year earlier. -- *Some information from [The Daily DX](#)*

Questions for General Class License

1. (G1C01) What is the maximum transmitting power an amateur station may use on 10.140 MHz?
 - A. 200 watts PEP output
 - B. 1000 watts PEP output
 - C. 1500 watts PEP output
 - D. 2000 watts PEP output
2. (G2C06) What does the term “zero beat” mean in CW operation?
 - A. Matching the speed of the transmitting station
 - B. Operating split to avoid interference on frequency
 - C. Sending without error
 - D. Matching your transmit frequency to the frequency of a received signal.
3. (G3B06) What usually happens to radio waves with frequencies below the Lowest Usable Frequency (LUF)?
 - A. They are bent back to the Earth
 - B. They pass through the ionosphere
 - C. They are completely absorbed by the ionosphere
 - D. They are bent and trapped in the ionosphere to circle the Earth
4. (G4C04) What is the effect on an audio device or telephone system if there is interference from a nearby CW transmitter?
 - A. On-and-off humming or clicking
 - B. A CW signal at a nearly pure audio frequency
 - C. A chirpy CW signal
 - D. Severely distorted audio
5. (G5A01) What is impedance?
 - A. The electric charge stored by a capacitor
 - B. The inverse of resistance
 - C. The opposition to the flow of current in an AC circuit
 - D. The force of repulsion between two similar electric fields
6. (G6A02) Which of the following types of capacitors are often used in power supply circuits to filter the rectified AC?
 - A. Disc ceramic
 - B. Vacuum variable
 - C. Mica
 - D. Electrolytic
7. (G7B09) What determines the frequency of an LC oscillator?
 - A. The number of stages in the counter
 - B. The number of stages in the divider
 - C. The inductance and capacitance in the tank circuit
 - D. The time delay of the lag circuit
8. (G8A06) What is one advantage of carrier suppression in a single-sideband phone transmission?
 - A. Audio fidelity is improved
 - B. Greater modulation percentage is obtainable with lower distortion
 - C. The available transmitter power can be used more effectively
 - D. Simpler receiving equipment can be used
9. (G9A02) What are the typical characteristic impedances of coaxial cables used for antenna feed lines at amateur stations?
 - A. 25 and 30 ohms
 - B. 50 and 75 ohms
 - C. 80 and 100 ohms
 - D. 500 and 750 ohms
10. (G0B02) What is the minimum wire size that may be safely used for a circuit that draws up to 20 amperes of continuous current?
 - A. AWG number 20
 - B. AWG number 16
 - C. AWG number 12
 - D. AWG number 8

(For answers to test questions see page 11)

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

