



THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

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

January 2014

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ARRL Affiliated



PRESIDENT'S MESSAGE

Hope everyone had a safe and happy holiday season. It's a new year and it should be a great year for surfing the radio waves. The Solar Cycle 24 is at its peak so the next few years are going to be good for the upper HF bands.

January is also that time of year for a reminder for club dues. Your membership helps support club activities and the BARC repeater system. BARC has some of the best repeater systems around. 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!

Beginning this month, we will have the Elmer Nights. Elmer Nights are for anyone needing help on anything, such as how to I program my new radio, or if you have question on anything else. The dates and times will be announced on our weekly BARC Net and sent out on the BARC mailing list. You can bring in your equipment with its instruction manual and we can help you with your radio, or just drop by to say hello and visit.

In the next month or so, we will open up on our club web page the activity sign-up page for this year's 2014 public service activities. The activities are part of our club's ham radio public service participation for community events, races, etc. Public Service provides opportunities for Amateur Radio Operators to contribute their skills and equipment in support of different events in our area. I would like to ask of you to get involved in at least one club public service event this year. Just pick one that you think you would like to get involved in and sign up. Then you will be contacted to help with that event.

73,
Cordell
KE7IK



UPCOMING 2014 ACTIVITIES

8 January, 7:30 PM — ARRL Rocky Mountain Division Net IRLP Node: 9871

11 January, 10:00 AM — BARC Club Meeting

18 January 8:00 AM — RACES HF Net 3920 KHz

18 January — Northern Colorado ARC Hamfest (Loveland, CO) [More Info](#)

25 January — Albuquerque Winter Tailgate Swapfest (Albuquerque, NM) [More Info](#)

8 February, 10:00 AM — BARC Club Meeting

9 February — The Swapfest (Brighton, CO) [More Info](#)

12 February, 7:30 PM - ARRL Rocky Mountain Division Net IRLP Node: 9871

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

1 March, 8:00 AM — VE Test Session at the USU ASTE Bldg RM 108

8 March, 10:00 AM — BARC Club Meeting

12 March, 7:30 PM - ARRL Rocky Mountain Division Net IRLP Node: 9871

15 March 8:00 AM — RACES HF Net 3920 KHz

5 April — Longmont ARC LARCFest (Longmont, CO) [More Info](#)

Local Radio Nets:

The **Weekly BARC net** is for BARC members and anyone else that would like to check in, held **every Tuesday night at 9:00 p.m.** local time on the Mt Logan BARC Repeater and Linked Systems (146.720)

The **BARC Ladies Net** is every **2nd and 4th Tuesday at 8:00 p.m.** on the BARC Repeater and Linked Systems (146.720). All licensed lady amateur radio operators are welcome to check in.

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

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.

Some Interesting News and Information From Jared Smith N7SMI

The ARRL is celebrating its 100th birthday by having a year-long QSO party. The Centennial QSO Party will have W1AW portable operations in each state and most territories. Each state will be on the air for two separate one week blocks. You earn points by working W1AW portable operations, special ARRL event stations W100AW and W1HQ, and other ARRL members, appointees, staff, and officers. With two weeks dedicated to portable operations in each state, 2014 is a great time to earn your Worked All States award - and you could even earn it by working only W1AW operations.

Utah's first week of operating is January 8 - 14. There will be two W1AW/7 stations from Utah on the air around the clock, including CW, SSB, and Digital shifts from the stations of N7SMI, N5LZ, and WF4U here in Cache Valley. If you'd like to observe or guest operate these stations and see what it's like to be on the business end of a pile-up, please contact Jared (N7SMI).

More details on the ARRL Centennial QSO Party are available at <http://www.arrl.org/centennial-qso-party>

Thanks,

Jared

FCC/FEMA Tips for Communicating During an Emergency

Preparing for an emergency:

1. **Know what type of landline telephone service you have.** Some newer forms of telephone service will not work without electric power. Understand whether you have this newer type of service, such as Voice over IP (VoIP), which is provided over broadband connections, or more traditional telephone service, which typically is powered over copper telephone lines. Ask your service provider if you are unsure.
 - ◇ **If you have newer telephone service** that works with battery backup equipment during power outages, test the battery periodically, understand how long it should last, learn how to replace it, and consider having a spare battery that you can charge before a storm. If you do not have battery backup equipment, ask your provider if they can supply it or if it is available elsewhere.
 - If your electricity goes out and you don't need to use the phone right away, you can disconnect the battery to prevent it from draining and plug it back in when you need to receive or make calls. Once power is restored, plug the battery back in so it can recharge.
 - ◇ **If you have traditional telephone service**, it may work during electric power outages – but you may need to use a “corded” phone. Remember that many cordless home phones rely on electric power to operate.
2. **Charge your wireless phone if a storm is coming.** Also consider keeping an extra battery and a car charger on hand.
3. **Charge your laptop or tablet computer if a storm is coming.** If your electricity goes

out but secure WiFi is available in your community, you may be able to use your computer or tablet to go online and send emails. You may also be able to use the battery power in these devices to recharge your wireless phone using a USB cable, but be careful not to drain the battery power of your computer or tablet if you need to go online.

4. **Broadcasters are an important source of news during emergencies, so consider keeping a battery-operated, solar-powered, or hand-crank-operated radio or portable television** for use during power outages. Make sure you have charged or fresh batteries if needed. Some hand-cranked radios can also be used to charge cell phones, but check the instruction manual before assuming this is the case.

During an emergency:

1. **Limit non-emergency phone calls.** This will minimize network congestion, free up "space" on the network for emergency communications, and conserve battery power if you are using a wireless phone. If you do need to make a call, try to keep it brief and only convey vital information to emergency personnel and/or family.
2. **For non-emergencies, try text messaging from your wireless phone.** In many cases, text messages to other wireless devices will go through when your call may not, though there may be a delivery delay during times of network congestion. (In most locations you cannot send a text message to 911, however.)
3. **Adjust your wireless phone.** Check your wireless device or manual for ways to conserve battery power, such as dimming the brightness of your display screen and disabling certain applications. If you have difficulty accessing your wireless network, consider connecting to WiFi service if your phone is WiFi-capable. If the wireless network in your area is damaged and you do not see any signal bars on your phone, consider turning your phone off to prevent the battery from draining as your phone seeks a usable wireless signal.
4. **Call 911 only for emergencies.** Learn and use the designated number in your state for highway accidents or other non-life-threatening incidents.
5. **Wait 10 seconds before redialing a call.** Redialing a wireless call multiple times in quick succession can increase network congestion, further limiting the ability of all users to place calls. If you must make a call, space out your call attempts.
6. **If you have Call Forwarding on a landline phone at home, consider forwarding those calls to your wireless number,** particularly in the event of an evacuation, so that you can continue to receive incoming calls to your home telephone number; and
7. **If you do not have electric power in your home and are using your car to charge wireless phones or listen to news on the car radio, be careful.** Don't try to reach your car if it is not safe to do so, and remain vigilant about carbon monoxide emissions from your car, especially if it is in a closed space.

Find more information at www.ready.gov, <http://www.redcross.org>, or www.fema.gov.

Updated: October 23, 2013

BARC 2014 Activity's

It's already 2014 and time for everyone to start thinking about Public Service activities for the year.

Here are a few of the figures from our activity participation last year:

- ◆ The club put in about 6518 hours helping with public service events in our area. A fair bit of that was from other clubs too.
- ◆ LOTOJA, accumulated about 1558 hours. Over 1300 hours of those just from BARC members, over 250 hours coming from participants from other clubs along the way.
- ◆ Little Red totaled up 432 hours.
- ◆ The Top of Utah Marathon tallied up about 280 hours.
- ◆ Rocket Recovery had about 312 hours. And with the projected college participation this year they will need ton's more help from hams!
- ◆ The Bear 100 included 912 hours between both days.
- ◆ And Field Day racked up over 2700 hours. Some people spent the week setting up for the event!

None of these totals include all the hours that the activity organizer's put in to plan these events. I would guess that just for LOTOJA the organizer's put in over 250 hours!

This shows that we all need everyone's help with these events for the coming year. All our events will require the same participation level or higher this year.

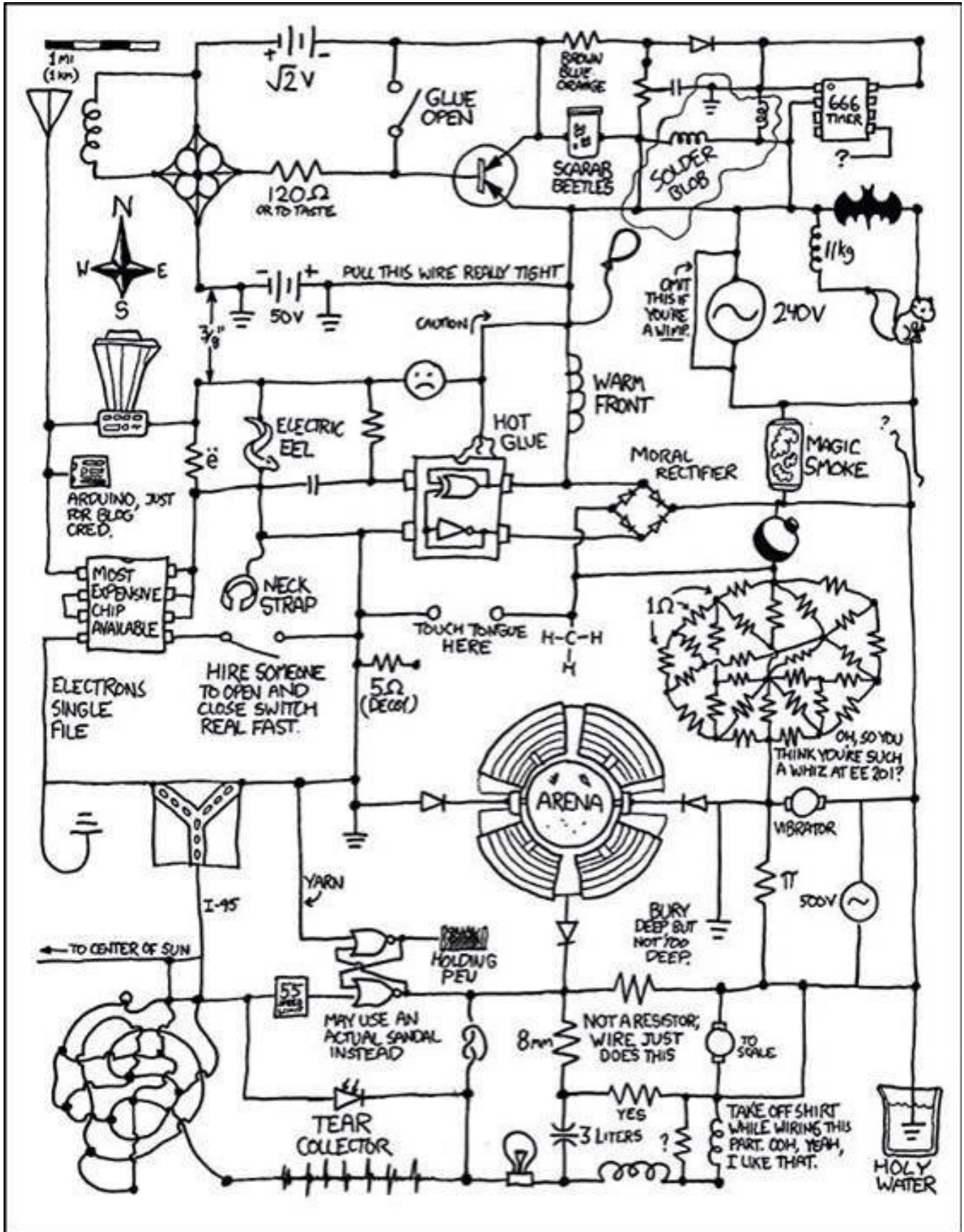
You can go to this link to sign up for the public service events that BARC participates in:

<http://goo.gl/OF9SNB>

When you fill out the form please use one form per person participating. This includes spouses and children. Reason being so we can track exact participation and get the highly valued T-Shirt counts right!

Make sure you use information that we can contact you at! We have had people in the past use email addresses that they no longer used and we were unable to contact those people.

Tyler Found this diagram for a new project and thought others might enjoy it.



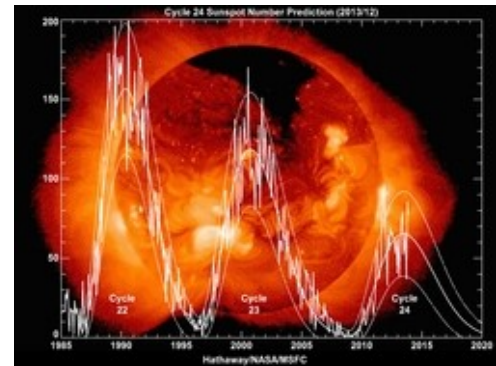
The ARRL Letter for December 19, 2013

Science: Solar Scientists Say Cycle 24 is the Weakest in More than a Century

Four leading solar scientists on December 11 told journalists attending the American Geophysical Union (AGU) [fall conference](#) in San Francisco that current solar Cycle 24 has demonstrated extremely low sunspot activity and appears to be the weakest cycle of the past 10 cycles -- more than 100 years. This already has resulted in milder "space weather" and less-intense geomagnetic storms and "energetic particle events," such as coronal mass ejections (CMEs), NASA scientist Nat Gopalswamy said.

"The weak activity of Cycle 24 is thought to be due to the weak polar magnetic field in Cycle 23," an AGU news release explained. "If this trend continues for the next couple of cycles, the Sun may be heading for a global minimum."

The scientists drew no specific conclusions regarding the impact of the extremely weak Cycle 24 on radio propagation. Stanford University's Leif Svalgaard said this weak cycle had been predicted based on the behavior of the Sun's polar magnetic fields, which translate into fewer sunspots. Svalgaard believes that in a few years it will be possible to use polar field data to determine the robustness of Cycle 25. The Sun's weak polar magnetic field could lead to an increase in cosmic ray activity, which could affect manned spaceflight.



[Cycle 24 sunspot number prediction](#). [NASA]

In addition to Svalgaard and Gopalswamy, the other scientists were Martin Mlynczak of NASA-Langley, and Joe Giacalone of the University of Arizona.

According to [Spaceweather.com](#), since 2004 there have been 821 days without sunspots, compared to 486 days for the "typical" solar minimum, but none of these days fell within 2012 or 2013.

On the Air: Get Ready -- The ARRL Centennial QSO Party Kicks Off January 1!



The ARRL celebrates its centennial in 2014.

As part of the mix of events marking the League's 100th anniversary, the [ARRL Centennial QSO Party](#) gets underway at 0001 UTC on January 1. This is a year-long operating event, in which participants can accumulate points and win awards, as well as work new stations and make new friends. During 2014 W1AW will be on the air at least twice from every US state and from most US territories, and it will be easy to work all states solely by contacting W1AW portable operations. This will be the first ARRL-sponsored operating event for which every member is worth at least one point. The event is open to all, although only ARRL members and appointees, elected officials, HQ staff, and W1AW are worth [points](#). Working the ARRL's president, for example, earns 300 points!

To qualify for points, all contacts must be two-way (no cross-band or cross-mode contacts), using CW, phone (FM, SSB, AM, digital voice), digital (any digital mode, such as PSK31, RTTY) on 160, 80, 40, 30, 17, 15, 12, 10, 6, 2 and 1.25 meters, plus 70 centimeters and satellite. Stations [exchange](#) signal report and ARRL abbreviation. Contacts do not have to be contest-style, and providing ARRL organizational information is not required. A centennial database will assign point values to all logs submitted electronically. Those not submitting electronically, however, will need to obtain the QSO information during the contact. Since this is not a contest, participants may make contacts in any fashion they prefer.

The Centennial QSO Party is scored by totaling the values of all eligible contacts. There are no multipliers or bonus points. Logs submitted via Logbook of the World ([LoTW](#)) will be scored automatically.

For full information, visit the [ARRL Centennial QSO Party](#) webpage. [Contact us](#) if you have questions. Read [more](#).

DX: K9W Wake Atoll Commemorative DXpedition Tops 100,000 Contacts

The [K9W](#) Wake Atoll DXpedition team reports that it logged slightly more than 100,000 contacts during its November DXpedition in the South Pacific.



"The Wake Atoll DXpedition team wants to thank the DX community for the outstanding response to 'The Forgotten 98' Commemorative DXpedition," Team Leader Lou Dietrich, N2TU, said on the DXpedition's behalf. "Also, we need to express our gratitude to our hosts on Wake, the United States Air Force." Because of issues stemming from the partial federal government shutdown the DXpedition had to postpone its startup from October until November.

North American hams worked the lion's share of the contacts -- just over 35 percent, with Asia and Europe not far behind at 32 percent and 27 percent, respectively. The rest of the world had a more difficult time putting K9W into the log. Contacts with Oceania accounted for slightly more than 3 percent of the total, with South America contacts comprising slightly less than 2 percent, and with Africa less than 1 percent. K9W logged 53,765 CW, 38,700 SSB, and 7,562 digital contacts. The K9W DXpedition was the recipient of a [Colvin Award](#) grant. Contacts will be uploaded to Logbook of The World ([LoTW](#)). Read [more](#).

Public Service: New York District ARES Members Give Back for Santa

Seventeen members of the New York District Amateur Radio Emergency Service® (ARES) provided communication support for [Operation Santa Claus](#), sponsored by [Community Mayors Inc.](#) The event takes place each holiday season at JFK Airport, Port Authority Hanger #19, which is transformed into an improvised North Pole. During the invitation-only event, more than 5000 special youngsters and caregivers from the Greater New York City area enjoy snacks and receive toys. Then, pandemonium ensues as Santa Claus and Mrs Claus finally arrive on a 727 towed into the hangar. Community Mayors, a 501(C)(3) nonprofit, delivers "recreational therapy" for more than 50,000 children with disabilities in the New York City area through the sponsorship of events and activities.

"Op Santa" attracts one of the largest turnouts of Amateur Radio operators at a public service event. For ARES members, the annual celebration is a true test of operator skill. Many volunteers at Operation Santa Claus are from uniformed services, such as the New York City Fire Department, the Port Authority Police of New York and New Jersey, the NYPD, the Secret Service, FBI, TSA, and branches of Homeland Security. Each service has its own radio frequencies and modes, so ARES acts as the communication glue between volunteers and the Mayors. Before guests arrive, ARES operators are assigned to shadow someone throughout the event as they go about their duties. Net control operators coordinate ARES members' locations and traffic. Transmissions must be crisp and seamless. Tactical call signs are employed. OpSanta requires operators to think fast and on their feet, and the action is relentless.



Santa and Mrs Claus at Operation Santa Claus 2013 with members of NY District ARES. [David Korchin, KC2WNW, photo]

"In the midst of live stage presentations, marching bands, and excited children calling out for Santa, radio headsets are essential," said ARES volunteer David Korchin, KC2WNW. And occasionally, the unexpected arises.

"This year two children became separated from their classes -- not fun in a room with 4000 people. It was brought to the attention of the event organizers via our net," Korchin said, adding that one or two youngster get separated from their groups every year.

For the ARES members it's an exciting operational challenge, and the gratification of volunteer work is immediate. "When you see the wondrous looks on the faces of children as Santa Claus arrives and takes a few turns around the hangar in his special toy train, all the hard work and preparation becomes worthwhile," Korchin said. "Operation Santa Claus is one of the many ways Amateur Radio really gets to give back for the privilege of our licenses and access to frequencies -- and it's a great way to meet Santa." -- *Thanks to David Korchin, KC2WNW*

The ARES E-Letter for December 18, 2013

New Year's Resolution: Become a CERT Leader

The *Community Emergency Response Team* (CERT) concept is a major, growing concern in the quickly evolving arena of emergency management on a micro versus macro scale and deserves the full attention of ARES and indeed any radio amateur as a top priority for the coming year.

CERT is the wave of the future -- the immediate future -- as limited resources for disaster response at all levels of government (local, state and federal) are bumping up against ever-increasing need of the populace in the face of elevating incidence and ferocity of natural and man-made disaster. The CERT concept is part of the answer to the horns of this dilemma: residents on a street or apartment complex in their neighborhood will network and be trained to take care of themselves in the first critical post-disaster hours and possibly days when no outside help is available. Think of the CERT program as a kind of block party, only instead of socializing over hot dogs and hamburgers, neighbors get together to train and plan to look after each other when under siege of disaster effects. When you really think about this concept, it has implications that are of a serious, life and death nature.



The CERT program is a FEMA program, part of its Citizen Corps and Ready campaigns, but had its origins in forward-thinking fire and EMS units in southern California decades ago. Neighbors are trained in conducting an initial assessment of their own homes and survival kits. They learn to reduce the immediate dangers presented by a disaster by turning off utilities, suppressing small fires, evacuating the area, and helping others. They learn to treat people in the immediate area. They learn to implement their own Incident Command System - they establish a command post, staging area, and medical triage and treatment areas. They learn to collect damage information and develop a plan of operation based on life-saving priorities and available resources. And they learn to establish and maintain communications with responders and the outside world.

The radio amateur, especially an ARES-registered operator, is the ideal candidate for forming and leading a neighborhood Community Emergency Response Team. A critical part of the CERT's planning and operations is radio communications, and we as radio amateurs have the experience and credibility for this emergency support function out of the gate. Become a CERT leader! Every journey of recruiting a dozen homes on a street for a CERT begins with the first, perhaps your next door neighbor. Talk to him or her "over the fence" and start planning and drafting your team. Read and use the FEMA publication [Starting and Maintaining a CERT](#).

There are many resources to help you! You can start with [FEMA's Independent Study Course on CERT](#). A reader recently called my attention to a new library of disaster-related training with numerous videos, including several on *Neighborhood Preparedness and Response*. I haven't had a chance to review it yet, but I will. The library can be accessed at the [Just In Time Disaster Training](#) web site. FEMA has a number of resources available to the CERT members and leader. You can get the [CERT National Newsletter](#). You can [Search CERT programs by ZIP code](#). You can get a [Directory of Existing CERTs by State](#).

You can [register](#) a new CERT *program* with FEMA on-line. This page is to register CERT programs only, however, not to register individuals or individual teams sponsored by a local CERT Program. To be an official CERT Program, the program must be operated by a local emergency response organization such as your local Fire Department or Office of Emergency Management and endorsed by the local Citizen Corps Council if your community has one. The program coordinators must conduct the CERT Basic Training Course and hold a CERT exercise at least once a year. There must be a point of contact to be posted with other program information on the national CERT website.

Search to find a CERT program in your locale to help you set up and establish your neighborhood CERT. The CERT concept can also be extended to workplaces - the same ideals apply!

Conclusion: You are On Your Own! "Winging It is Not an Emergency Plan"

The government's promotional language often reads like this: "When a disaster or overwhelming event occurs and responders are not immediately available, CERTs can assist . . ." Let's examine what they're really saying in plain terms: When your house and family are in immediate danger in the first minutes and hours after a disaster, you are on your own. There will likely be no EMS, fire, police nor any other agency responders to save you and your family and neighbors. Your survival is up to you alone, based on your preparations and the help from your immediate neighbors on your street. Your chances will be greatly enhanced with an organized neighborhood response, the kind of response that is at the heart of the CERT concept. Make it your New Year's resolution to form your own neighborhood CERT! -- *Rick Palm, K1CE*

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 2014

Dues are in effect January 1, 2014 through December 31, 2014

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 General Class License

1. (G1B11) How does the FCC require an amateur station to be operated in all respects not specifically covered by the Part 97 rules?
 - A. In conformance with the rules of the IARU
 - B. In conformance with Amateur Radio custom
 - C. In conformance with good engineering and good amateur practice
 - D. All of these choices are correct
2. (G2A02) Which of the following modes is most commonly used for voice communications on the 160, 75, and 40 meter bands?
 - A. Upper sideband
 - B. Lower sideband
 - C. Vestigial sideband
 - D. Double sideband
3. (G3A04) Which of the following amateur radio HF frequencies are least reliable for long distance communications during periods of low solar activity?
 - A. 3.5 MHz and lower
 - B. 7 MHz
 - C. 10 MHz
 - D. 21 MHz and higher
4. (G4A03) What is normally meant by operating a transceiver in "split" mode?
 - A. The radio is operating at half power
 - B. The transceiver is operating from an external power source
 - C. The transceiver is set to different transmit and receive frequencies
 - D. The transmitter is emitting a SSB signal, as opposed to DSB operation
5. (G5A05) How does an inductor react to AC?
 - A. As the frequency of the applied AC increases, the reactance decreases
 - B. As the amplitude of the applied AC increases, the reactance increases
 - C. As the amplitude of the applied AC increases, the reactance decreases
 - D. As the frequency of the applied AC increases, the reactance increases
6. (G6A04) Which of the following is an advantage of an electrolytic capacitor?
 - A. Tight tolerance
 - B. Non-polarized
 - C. High capacitance for given volume
 - D. Inexpensive RF capacitor
7. (G7B10) Which of the following is a characteristic of a Class A amplifier?
 - A. Low standby power
 - B. High Efficiency
 - C. No need for bias
 - D. Low distortion
8. (G8A01) What is the name of the process that changes the envelope of an RF wave to carry information?
 - A. Phase modulation
 - B. Frequency modulation
 - C. Spread spectrum modulation
 - D. Amplitude modulation
9. (G9A05) How does the attenuation of coaxial cable change as the frequency of the signal it is carrying increases?
 - A. It is independent of frequency
 - B. It increases
 - C. It decreases
 - D. It reaches a maximum at approximately 18 MHz
10. (G0B06) Why must the metal enclosure of every item of station equipment be grounded?
 - A. It prevents blowing of fuses in case of an internal short circuit
 - B. It prevents signal overload
 - C. It ensures that the neutral wire is grounded
 - D. It ensures that hazardous voltages cannot appear on the chassis

(For answers to test questions see page 14)

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