



THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

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

October 2016

Some Contents...

President's Message	2
Upcoming Activities	3
SwaptoberFest Club Activity	6
ARRL News and Information	7-12
Test Questions for General Class License	13
2016 Club Officers.....	14



ARRL Affiliated



PRESIDENT'S MESSAGE

The September issue of QST contained different articles on amateur radio public service. Our club provides public service to various activities including 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.

Here are ten tips to help make you a better communicator for a public service event.

1) Ensure your transceiver is working. Have you ever gone somewhere in a hurry and noted when you arrived that your rig wasn't working? Forget to recharge those batteries? Forget a connecting cable? Loose connections? No spare fuse on hand?

2) Ensure your mike is located where it won't be keyed accidentally. You've heard of "hot mikes" or "open mikes." This can be caused by the mike resting in a location that allows it to easily key itself. Some people have even been known to be sitting on their mike! Use a mike hook and keep everyone happy.

3) Ensure you are tuned to the proper frequency. Have you ever keyed the mike and no one answered? Keyed it again and the repeater courtesy tone did not sound? Maybe you nudged the memory switch or the tuning knob. Don't forget to monitor your local emergency radio net frequency if you suspect an emergency is in progress.

4) Adjust for background noise and interference. Have you ever listened to someone on the repeater who had his radio, iPod, MP3, or CD player turned up, was talking from the highway in a convertible, or just had his windows rolled down? The wind howling down his mike usually won. Or maybe you have to talk near loud conversations, generators, announcements, a band, or loud machinery.

The solution? Cup your hands around the mike.

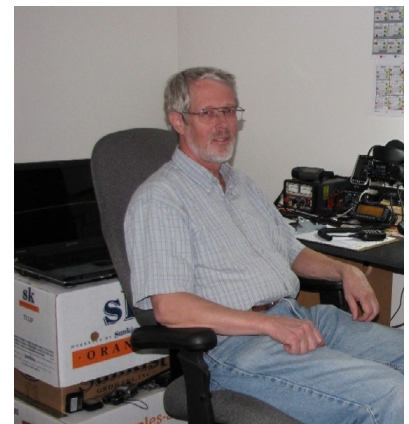
You already know that most mikes work best when your mouth is a couple of inches away from its front grill and that talking at it from its side rather than head-on works better. If you get any closer to the mike, you will only sound like a bad sixties Rock 'n Roll singer.

5) Communicate Clearly. Before transmitting, listen for a short time to the frequency you have switched to, there may be a pause in communications between some stations or an ongoing net operation.

Always make it clear who you are and who you are talking to.

State the name or call sign of the station you are calling followed by your name or call sign. For example, "KB7UPW this is KE7IK."

There are two types of nets, informal (open) net and formal (directed) net.



(Continued on page 4)

UPCOMING 2016 ACTIVITIES

- 6** October, 7:00 PM — **ARRL VEC License Test Session** @ USU Engineering Building Room 302, Logan, UT ([More Info Here](#))
- 8** Oct, **SwaptoberFest (Club Mtg for October)** — Bill Neville ([More Info Here](#))
- 12** Oct, 7:30 PM — **ARRL Rocky Mountain Division Net** 147.200/IRLP Node:9871
- 14-15** October — **JOTA** ([More Info Here](#))
- 19** Oct, 7:00 PM — Cache County **ARES meeting** at the Sheriff's Office
- 20** Oct, 8:00 PM - **RACES VHF Net** 146.72 Mt. Logan 147.180 Snowbird 147.20 IRLP
- 22** Oct, 8:00 AM - **One Day Ham Class Tech** USU Eng Bld, Rm 302, Logan ([Info](#))
- 9** Nov, 7:30 PM - **ARRL Rocky Mountain Division Net** 147.200/IRLP Node:9871
- 12** Nov, 10:00 AM - **BARC Club Mtg** — Elections of Club Officers for 2017, also - Making efficient HF contacts: techniques, tricks & tips
- 16** Nov, 7:00 PM — Cache County **ARES meeting** at the Sheriff's Office
- 19** Nov, 8:00 AM — **RACES HF Net** 3920 KHz
- 8** Dec, 6:30 PM — **BARC Christmas Party/Club Meeting** @ The Bluebird
- 14** Dec, 7:30 PM - **ARRL Rocky Mountain Division Net** 147.200/IRLP Node:9871
- 15** Dec, 8:00 PM - **RACES VHF Net** 146.72 Mt. Logan 147.180 Snowbird 147.20 IRLP
- 21** Dec, 7:00 PM — Cache County **ARES meeting** at the Sheriff's Office

For more calendar information see the barconline.org/calendar

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.

(President's Message Continued from page 2)

During an informal (open) net, net control is relaxed considerably. Stations can call one another directly, and even have casual conversations on the frequency. Net control will intervene only when there is net traffic to pass. An informal net may be appropriate for public service nets and in anticipation of an impending event such as when a storm is moving into the area. It may also make sense when activity on the net dies down for extended periods of time.

During a formal (directed) net, the net control station typically exercises strict control, requiring every station to get its permission before passing traffic. A directed net is essential if the frequency is busy since net control must be able to select the stations with the most urgent traffic first. In a formal communications situation, you would be calling a Net Control Station. Once you have called the Net Control Station, you will then be told to proceed or to stand by. Ask permission of the Net Control Station before you contact any other station on that frequency. For example, "Net Control this is KE7IK. Request informal with KB7UPW". A good Net Control Station will then direct stations requiring direct communication off the main frequency to a named, pre-arranged tactical net. For example, "KE7IK call KB7UPW on Tactical One," requiring the two stations to shift to a secondary tactical frequency labeled Tactical One.

During public service events such as Bike-a-Thons, marathons, and parades, tactical call signs are often more useful than regular call signs. "Mile marker One" and "Aid Station One" are more descriptive in these situations.

Remember that all stations must still ID with their FCC call signs every 10 minutes during a conversation and at the end of their final transmission in their conversation.

6) Pause a second before speaking. After keying the mike, allow the repeater relays to do their thing before you speak into the mike. Otherwise, your first words will be clipped off.

7) Ensure you know how to set the CTCSS (PL tone) without the manual. Have you ever tried to access an unfamiliar repeater and didn't know how to change the CTCSS tone on your rig? How many menu items did you have to go through to find the right commands?

8) Don't "ker-chunk" the repeater. Not only is it illegal to key a transceiver's mike without identifying yourself, it is annoying to everyone who is monitoring the frequency.

9) Use Plain Language. It is especially important to use clear communications during emergencies. Speak slowly and clearly. Like your English teacher used to say, "Enunciate and articulate." Think before you talk.

Keep your transmissions brief.

Pause every 30 seconds during lengthy transmissions – this allows the receiving station to catch up while writing it all down – and allows other stations with priority traffic to break in.

USE PLAIN ENGLISH. Don't use slang, jargon, or acronyms that could confuse others listening.

When transmitting numbers, fourteen can sound like forty, fifteen like fifty, etc. Say the number in two different ways, such as, "There are forty – four zero – cars in the pileup." When the noise level is high, count up to the number, such as, "There are four – one, two, three, four injured persons on scene."

Say “Affirmative” and “Negative” instead of “yes” and “no.” They are easier to understand over the radio.

The ARRL communications procedures require the use of “Roger” to indicate a transmission has been received correctly (2005 ARES Field Resources Manual, p. 61). Other acceptable words are “Understood” or “Acknowledged.” Some hams use “QSL,” but this is considered as jargon in a formal net, as is the use of “QTH” rather than “location.”

If you are in a busy net, say “Over” when you have finished what you are saying on the air for that exchange. If no further communication is expected, conclude with the word “Out.” Never say “Over and Out” unless you are rehearsing for a part in an old war movie.

Remember that there are many people listening to you when you use the local repeater. Communicating in a professional manner speaks well for you and the Amateur Radio Service you represent.

10) Ensure you have a minimal “Go Kit” in your car for emergencies.

This topic is the subject of whole articles. However, as a minimum, you should carry the following items in your vehicle besides your mobile rig:

- 2-meter hand held
- Earphone / headphones
- Spare fuses
- Electrical and duct tape
- Cheap Volt-Ohm-Meter
- Extra batteries (alkaline battery holder is a plus)
- Copy of your FCC license and issued ID for access to central command and control facility responsible for carrying out the principles of emergency preparedness and emergency management.
- Paper and pencil
- Appropriate clothing
- Food/snacks and water
- First Aid Kit
- Flashlight

73,
Cordell
KE7IK

Jared (N7SMI) had a great time on the Island of Tuvalu, he is returning now and I am sure we will learn more of what he was able to do there. This trip and the events that we have all participated in this summer will help us all prepare better so we can be ready for whatever is in store for us and Ham Radio in the future.





BRIDGERLAND AMATEUR RADIO CLUB

Online

SwaptoberFest

Saturday October 8th 2016



Barc Club Store
Vintage Equipment

Lots of prizes
DMR Utah

146.72 - .600 103.5 * DSTAR NU7TS B 449.575/N7RDS B 447.925 *
Intertie 449.650 - 5 PL 100 * DMR 447.000/447.125

Cache County Fairgrounds Pavilion

450 West 500 South Logan, UT

7:00 Set-up Doors Open 8:00 AM - 12:00 PM

Great Prizes

Refreshments

Admission & Tables Free



YAESU



MFJ



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The ARRL Letter for September 29, 2016

Momentum Building to Urge Senate Passage of the Amateur Radio Parity Act

The response to ARRL's call to action urging the support of US Senators for the Amateur Radio Parity Act, [H.R. 1301](#), has been gratifying -- although the campaign continues. More than 50,000 e-mails have been sent to Capitol Hill via [Rally Congress](#), and all 100 US Senate members have been contacted. The League continues to encourage members of the Amateur Radio community who have not yet done so to reach out to their two US Senators seeking their support. Just where things stand with respect to the bill's future in the US Senate is not yet entirely clear.

"As of this moment, we have no date set for action by the Senate," said ARRL Hudson Division Director Mike Lisenco, N2YBB, who has been deeply involved in promoting passage of the legislation. "The Senate will adjourn the September work period soon and members will return home to campaign. If we do not achieve consideration before they go into hiatus, we will have to wait until they return after Election Day."

On September 12, the US House of Representatives [approved](#) H.R. 1301 on a voice vote under a suspension of the rules, culminating many years of effort on ARRL's part to gain legislation that would enable radio amateurs living in deed-restricted communities to erect antennas that support Amateur Radio communication. The bill calls on the FCC to amend its Part 97 rules "to prohibit the application to amateur stations of certain private land-use restrictions, and for other purposes."

Shepherded by ARRL, the overwhelming grassroots support for H.R. 1301 from the Amateur Radio community was credited for getting the bill through the US House, but it faces significant obstacles to passage in the US Senate. The earlier US Senate version of the bill, S. 1685, no longer is in play, and the Senate is expected to vote on the version of H.R. 1301 that the House adopted this month. The vote came after ARRL worked with the Community Association Institute -- which represents homeowners associations -- to develop language that both organizations could support.

Rally Congress makes it easy to generate letters to Senators in support of The Amateur Radio Parity Act. The entire process takes just a couple of minutes.

"So it is critical that ARRL members continue to write their Senators," Lisenco urged. "To those who have already written, thank you! If you haven't done so already, please do so today. We can only do so much. After that, it becomes the responsibility of the membership to participate."

As the [amended bill](#) provides, "Community associations should fairly administer private land-use regulations in the interest of their communities, while nevertheless permitting the installation and maintenance of effective outdoor Amateur Radio antennas. There exist antenna designs and installations that can be consistent with the aesthetics and physical characteristics of land and structures in community associations while accommodating communications in the Amateur Radio services."

[More information](#) on The Amateur Radio Parity Act is on the ARRL website.

(Continued on page 8)



AT&T's New "AirGig" is *Not* Your Father's BPL

Recalling the earlier efforts of the FCC and telecommunications and utility interests to roll out "Broadband over Power Line" ([BPL](#)) technology, the Amateur Radio community has been buzzing with questions about AT&T's just-announced "[AirGig](#)" BPL plan to make broadband available via apparently similar technology. ARRL's earlier anti-BPL campaign, and market forces, eventually led to the demise of the prior BPL initiative. ARRL Laboratory Manager Ed Hare, W1RFI, who spearheaded the earlier effort to quantify BPL's threat to Amateur Radio's HF spectrum and remains the resident expert on the subject, said this newest BPL incarnation should *not* pose an interference issue for radio amateurs.

"This technology uses millimeter-wave RF signals (30 GHz to 300 GHz) coupled onto the surface of power lines to transmit the signal along the line with relatively low losses," Hare explained. "After looking at this technology, it looks nothing like the type of HF and VHF BPL that caused us so many problems years ago. The sky is not falling."



The "old" BPL technology, seen here, employed frequencies in the HF range.

Hare added that it is not likely that the AT&T technology will even use Amateur Radio bands, so there is little reason for concern even among those amateurs who use spectrum above 24 GHz.

According to AT&T's September 20 announcement, the company is "deep in the experimentation phase" of the developing technology, which it says would be "easier to deploy than fiber, can run over license-free spectrum, and can deliver ultra-fast wireless connectivity to any home or handheld wireless device." AT&T said its initial -- and continuing -- testing at AT&T outdoor facilities "has been positive," and initial field trials are set to begin in 2017.

Hare said the League will keep an eye and ear out for interference problems, but he believes that the frequencies involved and the fact that these signals should not propagate far from the lines will pose little risk to the Amateur Radio Service. Read [more](#).

FCC Updates Notice on Amateur Radio Operation in CEPT Countries

The FCC has updated its [Public Notice](#) on Amateur Radio operation in European Conference of Postal and Telecommunications Administrations ([CEPT](#)) countries that have adopted certain recommendations regarding the US. The updated notice, in English, German, and French, includes some additional countries where operation is permitted. Licensees operating in CEPT countries must have a copy of the *Public Notice*, proof of US citizenship, and evidence of an FCC Amateur Radio license grant. These must be shown to "proper authorities" upon request.

Subject to regulations in force in the country visited, a US citizen holding an FCC General, Advanced, or Amateur Extra Class Amateur Radio license grant "is authorized to utilize temporarily an Amateur Station in a [CEPT] country that has implemented certain recommendations with respect to the United States."

Advanced or Amateur Extra class operators are granted CEPT Radio Amateur License privileges, in accordance with CEPT [Recommendation T/R 61-01](#) (as amended). General class operators are granted CEPT Novice Radio Amateur License privileges, in accordance with ECC [Recommendation \(05\)06](#) (as amended).

The [Public Notice](#) includes complete details. Read [more](#).

In Brief...

Amateur Radio-Military Interoperability Exercise Set for October 31-November 1: An Amateur Radio-military interoperability exercise will take place October 31-November 1. The event will begin at 1200 UTC on October 31 and continue through 2359 UTC on November 1 on 60 meter channels 1-4 -5.3305 MHz, 5.3465 MHz, 5.357 MHz, and 5.3715 MHz, respectively. During this exercise, military stations will attempt to make radio contact with stations in as many of the 3077 US counties as possible. Radio amateurs providing "county status" information will receive a US Department of Defense "interoperability QSL card." For more information, [contact](#) the Military Auxiliary Radio Service (MARS).

The ARRL Letter for September 29, 2016 Amateur Radio Volunteers Go on Alert during Major Puerto Rico Power Outage

Amateur Radio volunteers went on alert following an afternoon explosion on September 21 at a power station in Salinas that left some 1.5 million residents of the Commonwealth of Puerto Rico without power. ARRL Public Information Coordinator Angel Santana, WP3GW, said that as the evening wore on, the most sought-after items were ice and potable water -- which depend on electricity to power the pumps that deliver it. The outage also resulted in traffic jams due to non-functioning signal lights. The governor of Puerto Rico declared a State of Emergency.

"On the Amateur Radio side, the VHF/UHF linked repeater system of the Federación de Radio Aficionados de Puerto Rico (FRA), an ARRL-affiliated club, was the main source of information," Santana told ARRL. "As soon as the situation began, lots of mobile and portable stations got on the air from east to west to report on the power loss, and ham radio was among the first to report the explosion, as smoke was observed soaring toward the sky."



A NASA-provided [view from space](#) shows how much of Puerto Rico appears dark outside of San Juan during the power outage.

According to FEMA, the fire at the Salinas switching station caused the island-wide power generation plant to shut down as a safety precaution. FEMA said that all critical facilities operated on back-up generators, and airports, police stations, and water plants received priority as power was restored. The agency said telecommunications were operating normally.

Santana said designated repeaters on 2 meters and 70 centimeters that remained up and running served as the primary network for any emergency or health care traffic. On HF, Antonio Santiago, KP4IA, in Toa Alta was "the main source of what was happening even before the situation got to the mainland news services," checking into nets on 20, 40, and 75 meters and relaying information about the situation to other amateur stations on the mainland, Santana said.

Santana said that two cellular phone companies had problems, and at least one death was reported, due to carbon monoxide poisoning from a generator. A few vehicle accidents also occurred, he said.

(Continued on page 10)

ARRL Outgoing QSL Service to Raise Rates

Although ARRL believes it's important to maintain the long-standing tradition of the [ARRL Outgoing QSL Service](#) as a membership benefit, increased administration costs will require an increase in rates, in order to keep the Service available and viable.

"The Service has been a member benefit for decades," an ARRL statement said. "Since its official formation in November 1976, tens of millions of QSL cards have been shipped from ARRL Headquarters to Amateur Radio QSL bureaus of other national societies worldwide. At one time, this benefit offered a safe, reliable, and inexpensive way to exchange QSL cards for a fraction of the cost of the postal service. What amateurs saved in financial cost, however, was made up for in time; it could take months, or even years, to send and receive a QSL through the bureau."



Effective on November 1, the rate for 1 ounce of outgoing QSLs via the Service will increase to match the 1 ounce USPS international postage rate. As of September 2016, this rate is \$1.15 per ounce -- about 10 cards. An additional service fee of \$7 will be charged per individual transaction, to cover administrative costs.

ARRL said QSLing is very different now, and, while postal services are generally more reliable than in years past, international shipping costs have risen significantly. "With the advent of the Internet and online QSL confirmation services such as ARRL's Logbook of The World, fewer and fewer paper cards are being exchanged," the ARRL statement observed.

Calling the Outgoing QSL Service "a significant tradition in the world of Amateur Radio," the League said it's committed to keeping that tradition and service alive for members who enjoy using it. "We are committed to ensuring our members will be able to send their QSL cards through the Service for decades to come."

More than 200 US Stations Signed Up for Scouting's Jamboree on the Air

So far, 219 US stations have registered to take part in Scouting's 2016 Jamboree on the Air ([JOTA](#)), which will take place October 14-16. [Registration](#) remains open for the 59th annual event. Last year, 400 US stations signed up. JOTA officials are asking JOTA 2016 participants not only to register for this year's event, but to follow up with a post-JOTA report.

"We expect to have several thousand stations around the world signed up by JOTA weekend," JOTA Coordinator Jim Wilson, K5ND, said in a JOTA-JOTI (Jamboree on the Internet) update. "Make sure you register your station." Designated Scouting frequencies are on the "[Guidelines for Amateur Radio Operators](#)" page. "Twenty meters is probably the go-to band during the daytime," Wilson said. "Try moving off

(Continued on page 11)



the calling frequency and spreading out while making those contacts." Wilson noted that, in addition to the DX spotting websites, there's a Scout station [spotting cluster](#).

He also suggested taking advantage of "modes that don't require radio waves," including the dedicated [D-STAR](#) Scouting reflector 033A, as well as [DMR](#), [IRLP](#) with topic channel 9091, and [Echolink](#), with conference node JOTA-365. Doug Crompton, WA3DSP, and Elliott Liggett, W7QED, have set up [Allstar](#) node 41760 for JOTA/Scouting conversations, Wilson added. In addition to social media, [ScoutLink](#) is an excellent way to connect to Scouts around the world with only an Internet connection, he said.

"Dave Edwards, KD2E, and Andy O'Brien, K3UK, have developed a [Scout scheduling page](#)," Wilson said. "You can use this to post your frequency and to pick up on other stations as well."

More than 1 million Scouts in 150+ countries -- at nearly 18,000 stations -- are expected to take part in JOTA 2016, engaging with other Scouts to talk about Amateur Radio and their Scouting experiences. "JOTA is about conversations across town and around the world, rather than about contacts," Wilson said.

Retired Librarian Who Was Maine's First Woman Radio Amateur Turns 108

Mary Cousins, ex-W1GSC, who was the first woman in Maine to obtain an Amateur Radio license, celebrated her 108th birthday on September 20. Now a resident of a care facility in the coastal fishing village of Deer Isle, Cousins was treated to a party complete with a cake decorated with images of

local newspaper articles from 1908, the year she was born. The confection also bore an image of her 1933 "Amateur First" radio license, issued to Mary Sibyl Wallace -- her maiden name -- by the old Federal Radio Commission, when Cousins was 24. The FCC came into being the following year. Cousins' old call sign has since been reissued at least once. Cousins said she operated Morse, although she does not remember the code anymore, and used to relay weather information using that mode.

Cousins, a native of nearby Stonington, Maine, worked as the town's librarian, a school bus driver, and a telephone operator. She said she never stops learning new things.



Mary Cousins, ex-W1GSC, admires her 108th birthday cake. [Island Nursing Home and Care Center photo]



The "Amateur First" Radio Operator License issued by the Federal Radio Commission in 1933 to Mary Sibyl Wallace.

Cousins told Bangor TV station WFVX that in the 1930s, ham radio "was something that the girls did not do, and the boys were all doing it at the time, and I said, 'I can do it too.' And I did."

Her cake also bore images of Stonington as it looked in 1908, when Teddy Roosevelt was the US president. Enlivening the party were 108 balloons and live piano music. Cousins received and read cards from many well-wishers.

Her son John told WFVX, "When she decides she's going to do something, she's going to do it. I think 100 was going to be the goal. She wanted to reach 100. She did. And then she said, 'Well, might as well go for 105.' I think she's working on 110 now."

In Brief...

ARRL to Host CHIRP Radio Programming Webinar: ARRL will host a [CHIRP](#) Radio Programming [webinar](#) on October 19 at 8 PM ET (0000 UTC on October 20 in US time zones). This presentation will offer a brief overview of the free, open-source *CHIRP* software, which can be used to program most radios. Attendees will learn: What *CHIRP* is, which radios are supported, how to get *CHIRP*, and how to troubleshoot *CHIRP*. Presenter James Lee, N1DDK, became active in *CHIRP* development for the initial TYT9800 driver. He is a hardware development engineer for Qualcomm. [Register](#) now! Those signing up will receive a confirmation e-mail containing information about joining the webinar.

Logbook of The World to No Longer Accept Contacts Signed by TQSL Versions Earlier Than 2.0: As of 1400 UTC on January 16, ARRL's Logbook of The World (LoTW) no longer will accept contacts that have been digitally signed by versions of *TQSL* earlier than version 2.0. Users of earlier versions are encouraged to upgrade as soon as possible, as older *TQSL* versions contain uncorrected defects and display inaccurate error messages. The current versions of *TQSL* for Windows, OS X, and Linux are available online at <https://lotw.arrl.org/lotw-help/installation/>. -- Thanks to Norm Fusaro, W3IZ

The ARRL Letter for September 15, 2016 ARDF Team USA Enjoys Success in Bulgaria

Fifteen of the best on-foot hidden transmitter hunters in the US are back home after picking up seven medals in the 18th [World Amateur Radio Direction Finding \(ARDF\) Championships](#) and World Cup events in Bulgaria. As [reported](#) in *The ARRL Letter* for September 1, Vadim Afonkin, KB1RLI, of Massachusetts, earned a bronze medal in the M40 class of the 80 meter classic event during the ARDF World Cup, an optional competition for individuals that preceded the Championships. Alla Mezhevaya of Illinois won silver in the World Cup 2 meter classic competition in the W35 class.

In the September 1 World Cup [sprint](#) event, Afonkin took gold in the M40 category, while Team USA Captain Ruth Bromer, WB4QZG, of North Carolina, took bronze in the W60 category. The next day, she won a second bronze medal in the [foxoring](#) event.

On September 8 during the World Championship events for national teams, Afonkin won an individual bronze medal on a 5.85 kilometer 2 meter classic course, finishing in 1:11:52. Bromer and Karla Leach, KC7BLA, took home a team bronze medal that same day in the W60 category, on a 4.25 kilometer 80 meter classic course.

More than 400 competitors representing 39 nations took to the courses near Varna, a popular resort on the Black Sea coast. Competitors were divided into six age categories for men and five for women, in accordance with [rules](#) established by the International Amateur Radio Union ([IARU](#)).



Team USA team members included nine men and six women from eight states, ranging in age from 26 to 74. They qualified for the team owing to their excellent performance in the [2016 USA ARDF Championships](#) in Texas and the [2015 USA ARDF Championships](#) in Colorado.

Visit the [Homing In](#) website of ARRL Amateur Radio Direction Finding Coordinator Joe Moell, K0OV, for more information on ARDF. -- Read [more](#).

Questions for The General Class License

1. (G1A02) On which of the following bands is phone operation prohibited?
 - A. 160 meters
 - B. 30 meters
 - C. 17 meters
 - D. 12 meters
2. (G2B03) If propagation changes during your contact and you notice increasing interference from other activity on the same frequency, what should you do?
 - A. Tell the interfering stations to change frequency
 - B. Report the interference to your local Amateur Auxiliary Coordinator
 - C. As a common courtesy, move your contact to another frequency
 - D. Increase power to overcome interference
3. (G3B03) Which of the following applies when selecting a frequency for lowest attenuation when transmitting on HF?
 - A. Select a frequency just below the MUF
 - B. Select a frequency just above the LUF
 - C. Select a frequency just below the critical frequency
 - D. Select a frequency just above the critical frequency
4. (G4C13) Which of the following can perform automatic notching of interfering carriers?
 - A. Bandpass tuning
 - B. A Digital Signal Processor (DSP) filter
 - C. Balanced mixing
 - D. A noise limiter
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. (G6B13) Which of these connector types is commonly used for RF connections at frequencies up to 150 MHz?
 - A. Octal
 - B. RJ-11
 - C. PL-259
 - D. DB-25
7. (G7B06) What is a shift register?
 - A. A clocked array of circuits that passes data in steps along the array
 - B. An array of operational amplifiers used for tri-state arithmetic operations
 - C. A digital mixer
 - D. An analog mixer
8. (G8B08) Why is it important to know the duty cycle of the mode you are using when transmitting?
 - A. To aid in tuning your transmitter
 - B. Some modes have high duty cycles which could exceed the transmitter's average power rating.
 - C. To allow time for the other station to break in during a transmission
 - D. All of these choices are correct
9. (G9B03) What happens to the feed point impedance of a ground plane antenna when its radials are changed from horizontal to sloping downward?
 - A. It decreases
 - B. It increases
 - C. It stays the same
 - D. It reaches a maximum at an angle of 45 degrees
10. (G0A05) What must you do if an evaluation of your station shows RF energy radiated from your station exceeds permissible limits?
 - A. Take action to prevent human exposure to the excessive RF fields
 - B. File an Environmental Impact Statement (EIS-97) with the FCC
 - C. Secure written permission from your neighbors to operate above the controlled MPE limits
 - D. All of these choices are correct

(For answers to test questions see bottom of [page 14](#))

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Answers to questions on [page 13](#): 1-B, 2-C, 3-A, 4-B, 5-C, 6-C, 7-A, 8-B, 9-B, 10-A