



THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

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

September 2012

Some Contents...

| | |
|--|------|
| Presidents Message | 2 |
| Upcoming Activities | 3 |
| Field Day Results | 4 |
| Rocket Recovery Report | 5-8 |
| ARRL News & Information | 9-12 |
| Test Questions for Extra Class License | 13 |
| 2012 Club Officers | 14 |



ARRL Affiliated



PRESIDENT'S MESSAGE

Welcome back from summer! At the end of June, we had Field Day up Logan Canyon. Our location was the same as last year just off the highway on the Swan Flat Road. It was an enjoyable time to do some camping and operate ham radio. Kelly Hansen KF7TDP brought up his IC-7000 and Alpha Delta DX multi band antenna to use for Field Day as one of the stations in the trailer. Theo K7TWT was trying out a MFJ vertical antenna to use as a deployable antenna and a NVIS antenna. There was plenty of space for camping and many came up early for a few days of camping. During Field Day, there were lots of hams checking out our Field Day event and many got on the radios to make contacts to other Field Day stations. Jason Turner from the Herald Journal stopped by to gather information on amateur radio and Field Day for an article that was published in the HJ on Sunday July 1. The article is on HJNews.com web site, just search for the phrase "ham radio" to locate article. The dinner on Saturday had some excellent food and was well attended. And the very best was the YouTube video that Kevin Reeve N7RXE made of our Field Day. There are two versions, with natural sounds <http://youtu.be/3d92rx5M4No>, and with voice over narration <http://youtu.be/DoqanmbRHRQ>. Kevin also submitted the video to Twit TV's Ham Nation net cast show with Gordon West, and hosted by Bob Heil. It was featured on episode #54 (<http://twit.tv/show/ham-nation/54>), about 16 minutes 45 seconds into the 1 hour program.

The ARRL Rocky Mountain Division Convention / Utah Hamfest was held at Ruby's Inn near Bryce Canyon on July 27-29. It was my first time to a division conference. It was interesting to meet individuals at the conference that I have talked to on the radio. There were many seminars and activities that were available. Our local D-STAR group gave four seminars on D-STAR. They were Beginner D-STAR, D-STAR Repeater/Gateway Building, D-STAR Show and Tell, and D-STAR Beyond Icom. Those that help with the D-STAR seminars were Ted McArthur AC7II, Tyler Griffiths N7UWX, Bob Wood WA7MXZ, Gary Roberts AG1T, John Hays K7VE, and I. Also Shirley Larsen AD7HL gave a seminar on Getting Ladies Involved in Ham Radio. It was a lot of work preparing the presentation but it was a lot of fun being at the convention.

This September will be a busy month for public service events. There is LOTOJA, Top of Utah, and the BEAR100. These are great public service events that enable you to gain valuable experience in providing communication support. This is a fun way to get out and use your radio, help a worthwhile cause and gain valuable experience that will come in handy in the event of a major emergency or disaster. It's also great PR for the club and amateur radio in general. Participating in these events is a thrilling experience for many different reasons. These include:

- The camaraderie of being part of a radio team that helps to ensure safety for hundreds, sometimes thousands, of event participants
- The chance to do something meaningful for a good cause
- The fun and satisfaction of using your radio equipment and opportunity to learn its various capabilities in real-life situations
- The beautiful places and settings that you get to enjoy



If you have not had a chance to help with a public service event, there is still time to help out. For the Top of Utah, contact Roger Ellis (ke7hte at gmail.com) and BEAR100 contact Ted McArthur (kb7bap at gmail.com).

And don't miss our Fall Pot Luck Social on September 6th. Everyone is invited. It starts at 6 PM and the location is 360 East 450 North, Millville (Providence South State Center Pavilion). Please bring a food item to share with the group, and don't forget to bring your own eating utensils, plate and cup. It's a great way to meet in person those voices you have talked to on the radio and have an eye-ball QSO.

73,
Cordell KE7IK

Field Day 2012

Even though Field Day is not a contest, we still keep track of the information and post it to the ARRL as part of the Field Day event. Here are the statistics from this year's event (Thanks everyone):

We submitted our information as a club station using emergency power (both battery and generator).

Our claimed score (includes both bonus and number of contacts) : 3490

Contacts: CW: 285

Digital: 32

Phone: 296

=====
Total: 613 contacts

We had contacts on: 160M, 80M, 40M, 20M, 15M, and 10M

We worked every state except one (Maine).

We worked 71 of the 80 ARRL sections.

How does this compare to other years:

2011 as 5A with 488 QSOs and a score of 2,394 points.

2010 as 5A with 539 QSOs and a score of 2,488 points.

2009 as 4A with 620 QSOs and a score of 2,508 points.

2008 as 4A with 473 QSOs and a score of 1,664 points.

2007 as 3A with 386 QSOs and a score of 1,790 points.

2006 (nothing posted on ARRL site)

2005 as 4A with 468 QSOs and a score of 1,806 points.

2004 as 4A with 585 QSOs and a score of 1,907 points.

2003 as 3A with 401 QSOs and a score of 1,510 points.

Those responsible for QSOs were (by number of QSOs)(as best as we can tell from the logs. I know there are others who worked them as well):

| | |
|-----------|-----------|
| AC7II 33 | AD7HL 6 |
| AD7QH 13 | AE7EI 9 |
| AE7HB 5 | AG1T 82 |
| K7OA 278 | KC7GCL 16 |
| KC9AVU 1 | KE7IK 31 |
| KF7ATL 11 | KF7DLF 2 |
| KF7TDP 10 | KF7WHX 4 |
| KF7ZZ 6 | N4KGY 4 |
| N7RXE 12 | N7SMI 90 |

And the most important statistic: 100% of those that attended had fun!

Not a bad effort I would say. Thanks again everyone for making this a successful Field Day event!

-Gary AG1T

THE Bridgerland Radio Rocket Recovery-7 (BRRR-7)

Guy Hatch, N7WAT July 7, 2012

This year's Rocket Recovery activity started out Wednesday morning, June 20 at Guy's home, joined by Guy's 9-year-old grandson, Ethan, and Val, KE7QHT, and Jeanette, KF7GSR, Campbell. We loaded Val and Jeanette Campbell's trailer with Guy's stuff, leaving Logan about 11 a.m. First stop was Paul Mueller's business to pick up the ESRA traffic cones, then on to Kevin, W7BOZ, Bosworth's, to pick up some of his larger and heavier equipment. Next stop was Brigham City to pick up the food containers and camp stove from Jeff Stork, KD7BCJ, then purchase some ice for the coolers. After a quick detour through Kaysville to pick up one more of Guy's grandsons, 8-year-old James, we were off for Green River. En route from Green River City to the competition site, we placed the ESRA cones at the turn-offs just prior to the site and arrived at the site about 7:30 p.m. We were joined on the road from Green River City to the site by Brandon Tibbitts, KD7IHW, currently living in Smithfield, and, at the site, by Brian Jenkins, KF7UOH, from Logan. Brian had come to the area earlier in the day and had scouted out a good camp site on the west edge of the large flat area previously designated as the general camp area. Since we arrived just before sunset, we had to scramble a bit to get our camp set up for the night before it got dark, with very little moonlight. A welcome, cool breeze came up during the night and everyone reported sleeping well.

Thursday dawned bright, clear and calm. Guy and his two grandsons, Ethan and James, went into Green River City early to speak with the rocket teams who were assembled at the John Wesley Powell Museum to give their project reports. We described our proposed visual observation, APRS tracking, and 70 cm DF beacon transmitter systems for this year. Unfortunately, just as Guy approached the bridge over Green River, his car had a flat tire and limped slowly over the Green River bridge to the museum parking lot. After the presentation, they were joined by Eric Shepherd, KF7PLB, from Willard, who has been preparing to set up our computer network and contact logging system for Field Day. Fortunately, Eric had a lug wrench the right size to work the one odd-ball lug nut on the wheel. After changing the tire to the drivable spare, we all headed back out to the site, where it soon warmed to a toasty 101+ degrees, with very slight breeze. We finished setting up the basic camp and got the kitchen tables and shade fly set up just prior to the arrival of Jeff Stork and Kevin Bosworth about 5 p.m. Yes, we used Brandon's APRS setup to help guide them past a couple of wrong turns on their way in ;-). Jeff's dinner was delicious; Dutch oven spicy chicken and baked beans, with fresh fruit, juice and water. We had experienced a few gusts of wind through the day. Soon after the sun went down, however, it got cool and calm enough to tolerate the work of putting up the N0KC antenna. It checked out fine with the antenna analyzer borrowed from Stan Wellard, W7SJW, who had helped with preparations but was not able to come this year. We started to listen a bit on the 40 meter band as darkness set in, and Guy made a couple of signal report contacts in Arizona and California, but we were all too tired by then to do any more contacting. With the concern that the wind might pick up again on Friday, we decided to not put up the ground plane vertical, which is much less wind-tolerant than the N0KC antenna. That left us 1A, at best, for potential Field Day operations.

Friday morning, we were joined at the site by Gaylen Roberts, KF7DLB, and two of his teenage grandsons, Jeffery and Colter, from Garden City. Gaylen had spoken to Guy several times over the months prior to this activity, that he really wanted to come, but didn't know if his work schedule would let him. We eagerly welcomed three additional, and very capable, helpers! We all then spent a couple of hours getting our base station and three observation sites set up to record and report the rocket landing locations, then enjoyed a very good breakfast. Unfortunately, the wind picked up with a vengeance about 9 a.m. and we spent the next hour staking down all our tents. Gusts up to over 40 mph (Brandon and Brian both had wind speed instruments) with sustained winds of 20+ mph kept rocket launches on hold, even though the range was officially open from 8 a.m. on. During this delay, we made a tour of the various work sites and spoke with the competition officials. Wind continued to hold off launches until 1 p.m. when the officials felt that the occasional "breaks" (only 10-20 mph) in the wind might give them an acceptable opportunity, so they loaded the Brigham Young University "Atticus V" solid motor single stage rocket on one of the rails and waited. We checked our observation posts and got them prepared to take readings in the event of a launch. This initially looked like a pretty dicey situation, with a high likelihood of a long drift into some totally nasty terrain to the north, but we were getting ready to do our part of

recording the event. Unfortunately, BYU's rocket came apart at about 500 feet altitude and descended, without parachute, in several pieces, the motor still burning, but with no apparent thrust. Easy to find!

(This is just the beginning of the story. The complete report is posted on the **BARC** Website, along with lots of pictures of the various activities.) Here are just a few photos from the report:



BRRR-7 camp. Beyond camp is the rocket range and the mesa to the northwest.



Center of camp: the kitchen and main work area.



Kevin, Jeff, Jeanette, and Val getting stuff set up and ready.



One of the competition launches, viewed to the south from camp.



Paul Hansen, WO7N, works Field Day, with the help of Ethan Hatch.



View of the rocket range from Observation Post #2, looking to the northeast.



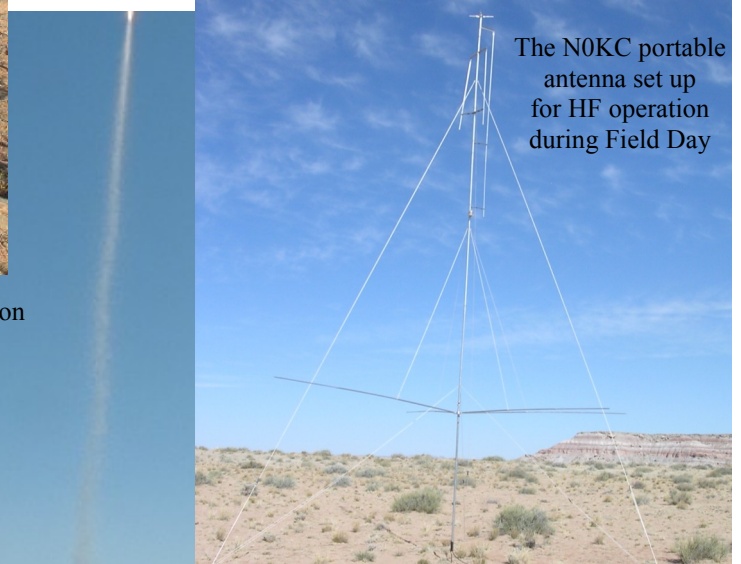
Rocket camp, morning of June 21



Kitchen area, with shade fly



Finished generator setup with sound barrier providing ample power for all camp operations



The NOKC portable antenna set up for HF operation during Field Day



One of the launches, afternoon June 22, viewed from base camp looking south



ARRL Rocky Mountain Division update — August 2012

===== 2012 Rocky Mountain Division Convention -- Success =====

The 2012 ARRL Rocky Mountain Division Convention held a few weeks ago in Bryce Canyon, Utah was a great success. Hams from all over the Division and other states attended and enjoyed many activities including vendors, technical and non-technical forums arranged in tracks (Emergency Preparedness, Special Topics, and D-STAR), VE exams, ham radio competitions, meals, prizes, DX University, and a timely address by Mike Corey KI1U, ARRL Emergency Preparedness and Response Manager.

A huge thank you goes out to everybody on the organizing committee who planned and ran this event.

===== Save the Date: 2013 Rocky Mountain Division Convention =====

As the dust settles in Bryce Canyon, the good folks in Colorado are spinning up the 2013 Division Convention in Estes Park. Mark your calendars for a superb event at the gateway of Rocky Mountain National Park on June 28-30, one weekend AFTER Field Day. Bookmark the event's website: <http://www.hamconcolorado.org/wordpress/> Many more details are forthcoming.

The ARRL Letter for August 9, 2012 Mars Rover *Curiosity* Successfully Lands on Red Planet

The Jet Propulsion Laboratory (JPL) confirmed that the rover *Curiosity*, after a 36 week space flight, landed successfully on Mars at 10:32 PM PDT on August 5 (0532 UTC August 6). Built by JPL and launched on November 26, 2011, the 2000 pound machine features something on its wheels that radio amateurs are sure to appreciate: Morse code.

If you look carefully at *Curiosity's* wheels, you might notice that along with treads, there are square and rectangular holes that have an interesting pattern. According to JPL Rover Mechanical Engineering Team Manager Richard Rainen, these holes actually have a purpose: odometer markers. "We will be looking at the visual odometer markers that we have on the wheels," he explained in a video. "There are asymmetric patterns, actually holes, inside the wheels of the rover that will leave an imprint on the surface of Mars. We're going to be looking at these imprints and verifying that it has traversed the distance it expects to traverse. If it looks like it's not traversing, even though the wheels are going,



The wheel's on Mars' newest resident feature Morse code. [Photo courtesy of NASA/JPL]

that is an indication that the vehicle is getting stuck and it will stop and call back home." Read more [here](#).

On the Air: ITU Assigns New Prefix for Niue: E6A-E6Z



On August 3, the ITU updated its [Table of International Call Sign Series](#) to reflect a call sign change for Niue. The island will now have the entire E6 prefix block. Niue -- an island located approximately 1700 miles northeast of New Zealand -- is a self-governing island nation that has been in free association with New Zealand since 1974. Prior to the change, the island used ZK2. According to the [CIA World Factbook](#), Niue is about 1.5 times the size of Washington, DC, and has a population of almost 1300 people.

On the Air: RAC Announces New Ontario Section Boundaries, Abbreviations

In March 2012, the Radio Amateurs of Canada (RAC) announced that it would split its Ontario Section into four new Sections "to create a management model that better communicates with, and represents the interests of, the overall Ontario amateur population." The new Section boundaries go into effect as of September 1, 2012. On August 8, RAC Chief Field Services Officer Doug Mercer, VO1DTM/VO1DM, announced the new Section boundaries, names and abbreviations. Read more [here](#).



The boundaries, names and abbreviations for the four new RAC Sections, effective September 1, 2012. View a larger image [here](#).

FCC News: Vanity Call Sign Fee to Increase September 4

On August 3, the FCC announced via a *Final Rule* in the *Federal Register* that the cost of an Amateur Radio vanity call sign will increase 80 cents, from \$14.20 to \$15. The new fees take effect 30 days after publication, making September 4, 2012, the first day the new fee is in effect. Earlier this year, the FCC released a *Notice of Proposed Rulemaking and Order*, seeking to raise the fee for Amateur Radio vanity call signs. The vanity call sign regulatory fee is payable not only when applying for a new vanity call sign, but also upon renewing a vanity call sign for a new 10 year term. Read more [here](#).

The ARES E-Letter for August 15, 2012 ARES Bits and Bytes

* **National Community/Neighborhood Exercise Series Continues** -- The series of Formidable Footprint exercises for neighborhood, community and faith based organizations continues on August 25 with a hurricane exercise and on September 29 for a solar storm exercise. A flood scenario is planned for October 27. Exercises have also been scheduled for the following scenarios: Earthquake; Influenza Pandemic; Tornado; and Wildfire. The Formidable Footprint exercise series has been developed in accordance with Homeland Security Exercise and Evaluation Program (HSEEP) protocols. The objective of the exercise series is for CERTs, Neighborhood Watch Programs, Neighborhood Associations, Community/Faith Based Organizations, Citizen Corps, Fire Corps and others to work as a team to become better prepared for the next disaster their community may face. There is NO CHARGE for participation in any of the Formidable Footprint exercises. For additional information or to register for upcoming exercises, click [here](#).

* **IS-144 Telecommunicators Emergency Response Taskforce** (TERT) Basic Course is available [here](#). While this course applies to Public Safety Answer Point (PSAP) personnel, there is some information in this course that would directly apply to Amateur Radio operators deployed to a disaster site. In my opinion, it would be appropriate for SKYWARN, ARES, and RACES operators. - Lloyd Colston, KC5FM, Altus, Oklahoma Emergency Management

The ARRL Letter for August 23, 2012

FCC News: FCC Releases Congressionally Mandated Study on Amateur Radio

On August 20 -- in response to a Spring 2012 Congressional directive -- the Federal Communications Commission released its findings on the *Uses and Capabilities of Amateur Radio Service Communications in Emergencies and Disaster Relief: Report to Congress Pursuant to Section 6414 of the Middle Class Tax Relief and Job Creation Act of 2012*.

This report contains the FCC's "review of the importance of emergency Amateur Radio Service communications relating to disasters, severe weather and other threats to lives and property in the United States; and recommendations for enhancements in the voluntary deployment of Amateur Radio operators in disaster and emergency communications and disaster relief efforts; and recommendations for improved integration of Amateur Radio operators in the planning and furtherance of initiatives of the federal government." It also required "that the study identify impediments to enhanced Amateur Radio Service communications and provide recommendations regarding the removal of such impediments."

"There are many positive things included in the FCC report to Congress," said ARRL Regulatory Information Manager Dan Henderson, N1ND. "We are pleased that the Commission highlighted the existing Amateur Radio infrastructure to provide disaster and time-critical communications. They also recognized the flexibility of the Amateur Service in working with federal, state, local and tribal emergency service agencies to supplement existing communications. The affirmation of the value that Amateur Radio brings to the communities across the country is underscored by the suggestion that 'DHS work with state, local, and tribal authorities so they may develop disaster area access or credentialing policies for trained amateur operators, including a means for documenting their qualifications...'"

While the FCC did hold Amateur Radio in a positive light in its discussion of emergency Amateur Radio Service communications, the FCC report was not as favorable in the portion of the study that addressed impediments to enhanced Amateur Radio Service communications. In the comments provided to the FCC as they prepared the study, the ARRL -- as well as numerous individuals -- cited the proliferation of specific land-use restrictions, such as deed restrictions and homeowners associations covenants, that prohibit the erection of even modest Amateur Radio antennas. Read more [here](#).



The ARRL Letter for August 30, 2012

Public Service: Hams Heed the Call to Help As Isaac Makes Landfall, Downgraded to Tropical Storm

Seven years to the day that Hurricane Katrina smashed into New Orleans, Hurricane Isaac came calling. But instead of making landfall right at New Orleans like Katrina (a Category 3 storm) did on August 28, 2005, Isaac veered slightly to the west of the city. Through it all, hams at WX4NHC -- the Amateur Radio station at the National Hurricane Center (NHC) in Miami, Florida -- and those supporting the Hurricane Watch Net and the VoIP Hurricane Net, along with various nets within the ARRL's Delta Division, relayed reports to their served agencies on Isaac's progress and the damage the storm created in its wake.

"Even though Isaac has made landfall and is currently tracking slowly up Central Louisiana to Arkansas, hams in the Delta Division are not done," explained ARRL Delta Division Director David Norris, K5UZ. "We had quite a few nets running as Isaac came ashore, and some are still going on, relaying damage reports and assisting with health-and-welfare traffic. As the American Red Cross and other served agencies venture out in the field within the next few days to assess the damage created by Isaac, hams in the Delta Division are ready to assist these teams with whatever communications support is necessary. Just because Isaac itself is over, we know that storms like this can bring tornadoes, power outages and other weather events in their wake, and we are prepared to continue to provide any support that is needed." Read more [here](#).



This combination of satellite images shows Tropical Storm Isaac (eventually Hurricane Isaac) (top) on August 27, 2012 and Hurricane Katrina (bottom) on August 28, 2005. [Images courtesy of NOAA]

IARU Supports Proposal for .radio Domain Name



The International Amateur Radio Union (IARU) has expressed public support for a **.radio** top-level domain name. Under the proposal as put forth by the European Broadcasting Union (EBU), registration will be available via the EBU to all eligible radio representative organizations and broadcasters, Internet radios, radio amateurs, radio professionals and their respective representative organizations, as well as companies providing radio-specific products and services in order to create a worldwide radio community. The proposal must be approved by the Internet Corporation for Assigned Names and Numbers ([ICANN](#)); this organization is responsible for the coordination of the global Internet's systems of unique identifiers and, in particular, ensuring its stable and secure operation. Read more [here](#).

Questions for Extra Class License

- 1.(E1C10) What types of amateur stations may automatically retransmit the radio signals of other amateur stations?
- A. Only beacon, repeater or space stations
 - B. Only auxiliary, repeater or space stations
 - C. Only earth stations, repeater stations or model craft
 - D. Only auxiliary, beacon or space stations
2. (E2C05) What is the function of a DX QSL Manager?
- A. To allocate frequencies for DXpeditions
 - B. To handle the receiving and sending of confirmation cards for a DX station
 - C. To run a net to allow many stations to contact a rare DX station
 - D. To relay calls to and from a DX station
3. (E3B05) Which amateur bands typically support long-path propagation?
- A. 160 to 40 meters
 - B. 30 to 10 meters
 - C. 160 to 10 meters
 - D. 6 meters to 2 meters
4. (E4C12) What is an undesirable effect of using too wide a filter bandwidth in the IF section of a receiver?
- A. Output-offset overshoot
 - B. Filter ringing
 - C. Thermal-noise distortion
 - D. Undesired signals may be heard
5. (E5C10) When using rectangular coordinates to graph the impedance of a circuit, what does the vertical axis represent?
- A. Resistive component
 - B. Reactive component
 - C. The sum of the reactive and resistive components
 - D. The difference between the resistive and reactive components
6. (E6D01) What is cathode ray tube (CRT) persistence?
- A. The time it takes for an image to appear after the electron beam is turned on
 - B. The relative brightness of the display under varying conditions of ambient light
 - C. The ability of the display to remain in focus under varying conditions
 - D. The length of time the image remains on the screen after the beam is turned off
7. (E7D14) What is one purpose of a "bleeder" resistor in a conventional (unregulated) power supply?
- A. To cut down on waste heat generated by the power supply
 - B. To balance the low-voltage filament windings
 - C. To improve output voltage regulation
 - D. To boost the amount of output current
8. (E8C01) Which one of the following digital codes consists of elements having unequal length?
- A. ASCII
 - B. AX.25
 - C. Baudot
 - D. Morse code
9. (E9D12) What is one advantage of using a trapped antenna?
- A. It has high directivity in the higher-frequency bands
 - B. It has high gain
 - C. It minimizes harmonic radiation
 - D. It may be used for multiband operation
10. (E0A05) What is one of the potential hazards of using microwaves in the amateur radio bands?
- A. Microwaves are ionizing radiation
 - B. The high gain antennas commonly used can result in high exposure levels
 - C. Microwaves often travel long distances by ionospheric reflection
 - D. The extremely high frequency energy can damage the joints of antenna structures

(For answers to test questions see page 14)

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

Guy Hatch N7WAT
gmhatch@yahoo.com
(435)753-5459

Roger Ellis AE7HB
ellis.roger@gmail.com
(435)277-0047

Newsletter Editor

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

Web Page Editor

Jacob Anawalt KD7YKO
webmaster@barconline.org
(435)753-9033

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

