

September 2011 – Presidents/VP Corner:

Presidents Note:

The weather will soon be turning cold. Now would be the best time to check your outside equipment, antenna, mast/tower and coax. I haven't checked mine yet this year but plan a trip to the top of my house within the next few weeks to inspect my antennas, coax and tighten and loose bolts or nuts. If any Club Member wants to check the SWR on their personal equipment remember the Club has tooling that Members can borrow and use. If you are having problems with your personal equipment and don't know what to do or how to fix it, come to a Club Meeting or ask on the Net for help. There are always those that are willing to help. That is what Amateur Radio is all about, "HELPING" when the call is made or requested.

The Club year just around the corner. If you are interested in being in the Club Presidency and take part in keeping the Club going and on track keep it in mind.

73's
Bob Haynie KC7JOK

What's Happening?

Wednesday, August 24th, was the Fair Parade. Several members of our Club assisted the Parade Committee with communications support. Paul Hales, W7PAH, volunteered to be the communications chair and coordinator.

Thursday August 25th was our Club Meeting and was held at the Bunderson Center in Brigham City. The topic was Weather Spotting and reporting. Other than a problem getting in the building and then the locked room the meeting was great. Mike Seaman came up from the Salt Lake National Weather Service and gave us a great presentation and information on Weather Spotting and reporting. Many Club Members signed up to be Spotters.



Thanks Mike for your time and efforts on our behalf and those in Box Elder County.

The Great Utah Shake Out

At 10:15 a.m. Tuesday April 17th 2012, thousands of Utah volunteers will "Drop, Cover and Hold On" in the Great Utah Shake Out, the largest earthquake drill in Utah history!

To volunteer and be part of the drill go to the following web site and sign up:

<http://shakeout.org/utah/>

You can also view lists of those who have volunteered and are going to participate in the drill.

Box Elder Fair Parade 2011 –

We had a real good turn out for the parade this year. The parade organizers did a great job of putting the parade together. There were about 80 entries in the parade and most of them had no problems with getting there early and in place prior to the starting time. The radio operators were great. They all arrived at the pre-parade meeting on time, except me and I was only 5 minutes late, so I didn't miss too much. They all completed their assignments with great skill and I did not hear any complaints from the parade staff. Ralph Richards even stayed after his section cleared to help the entry from Utah State University as their mascot was very late arriving and was the last entry in the parade, THANKS RALPH. Other than the normal problems of the HH going off frequency, bad speaker mics and the open mic everything went great.

Thanks everyone.
Paul Hales W7PAH

Brigham City Repeater Update:

Boyd Young, N7WFM, has agreed to stay on as an assistant to the '29 Trustee.
Jeff Stork, KD7BCJ, who was presented a few months ago as the new 145.290 Repeater Trustee has yet to contact Boyd. A message was sent to Jeff to find out if he is still interested in being the Trustee. He has yet to respond. If Jeff is too busy and cannot perform the Trustee duties a new Trustee will be selected. Keep listening for the new '29 repeater call sign.

We are still in process of looking for and obtaining funds to get a new repeater radio for the '29.

Fielding-Riverside Repeater Update:

The Repeater is UP & RUNNING!
Bob Anderson, AA7TR, and Paul Hales, W7PAH, replaced the 2-Meter Repeater Radio at the '22 site.
Lynn Walker, N7TOP, from Ogden was good enough to allow our Club to use some of the extra communications equipment he has.

Wayne Jenson, AB7TS, our current '22 Repeater Trustee, may be moving out of the county within the next few months. He has asked to be released as the Repeater Trustee. He made this known early to allow time for a new Trustee to be found and presented before the Club at an up coming meeting.

Wayne has also been one of our main Net Control Operators for the Wednesday Night Net for many years. Now is your chance to start thinking about stepping in and taking part. Volunteer to read the Net script and call the roll one evening. Again this is a "MAY BE" situation but each of you should be aware of this possible change.

Thanks Wayne for all you have done in support of the Club and the Net Operations.

Because of layoffs and changes at ATK we are no longer able to mail, Snail Mail, the newsletter. Due to the cost of printing and postage it has been determined and will be necessary to publish the newsletter on the Club web site only. We hope that this will not be a problem for our members.

Also the ATK Recreational Council has notified our Club and others that they, ATK, will no longer be funding Clubs. We are now looking at other options including applying for and becoming a non-profit organization through the State and IRS.

Club Meeting Notes:

None this month.

GSARC Activities:

September 2011

Club Meeting – 22-Sept-2011

Location: Northpark Elementary, Tremonton

Time: 1800 to 2000 hrs (6:00 PM to 8:00 PM)

Peach Days Parade Communications Assistance

Date: **10-Sept-2011**

Meeting and Assignments: 0730 to 0800 hrs

Net Control location: across from McFarland Ford

Parade Start Time: 1000 hrs (10:00 AM)

Emergency Preparedness Fair, Brigham City
Canceled per the Brigham CCC

October 2011

Club Meeting – 27-Oct-2011

Location: Bunderson Center, Brigham City
Time: 1900 to 2100 hrs (7:00 to 9:00 PM)

BSA JOTA Communication Assistance

Location: TBA
Date: xxxx

November 2011

Club Meeting – TBA

Breakfast

December 2011

No Club Meeting – “Happy Holidays”

If you have an article, comment, picture or information you would like to post in this newsletter please send it to:

Bob Haynie KC7JOK
119 South 600 West
Brigham City, Utah 84302

- or -

bhaynie72@hotmail.com

Club Information:

**Golden Spike Amateur Radio Club
Info NET:**

Wednesday night: 2000 hrs. (8:00 PM)
Carried over the 145.430, 145.290, 147.220 and 448.300 MHz repeaters

NET Coordinator: Wayne Jenson, AB7TS
NET Assistant: Sandra Farnsworth, KE7EHJ

**Box Elder County Emergency
Training NET:**

Sunday night: 1930 hrs. (7:30 PM)
Carried over the 145.430, 145.290, 147.220 and 448.300 MHz repeaters

NET Coordinator: Boyd Giles, KC0VLO
NET Assistant: Deloss Everton, W7TEU

Linked Repeaters:

- 145.430 - (pl .123) MHz (Blue Springs Hills)
- 448.300 - (pl .123) MHz (Blue Springs Hills)
- 145.290 - (pl .123) MHz (Brigham City)
- 147.220 - (pl .123) MHz (Fielding-Riverside)

Officers:

- President: Bob Haynie, KC7JOK
- Vice President: Doug Harford, K7DKH
- Treasurer: Byron Okada, KE7IRH
- Secretary: Peggy Harford, K7PGE

Newsletter Editor: Bob Haynie, KC7JOK

Repeater Trustees:

- '43 Site: Rob Daines, KK7DO
- '29 Site: Jeff Stork, KD7BCJ
Boyd Young, N7WFM (assistant)
- '22 Site: Wayne Jenson, AB7TS

Club Web Site:

<http://www.ubetarc.org/> (as of: 06-Nov-2006)

Web Maintained by: Dave Cook, KD7OUP

The Web site will be updated as Dave gets time though the Site Name (URL) may remain the same for quite some time.

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Box Elder County ARES *Amateur Radio Emergency Service*

September 2011:

Training and preparation are so important to us as Amateur Radio Operators. We are not the only ones that have to practice and prepare for emergencies. City, County and State workers are involved in emergency preparedness. A great web site to look through is “Be Ready Utah”, <http://www.bereadyutah.gov/>. There is a lot of really good information and suggestions. There is even a place where you can insert how many members in your family and for how many days you want to have your emergency kit supplies ready for. The site will give you a suggested list of how much water and different foods to collect for your kits. If you are struggling and are having a tough time figuring out what to put in you personal emergency kit I really suggest you check out the “Be Ready Utah” web site. Many people have pets, as we do, that they would want to take with them if there were an emergency. The site even has a place where you can add pet requirements to your kit.

I have been thinking about having our own little disaster drill. This would be a check to see what each of us could do and what we each need to add to our kits, Personal and Communications Grab-n-Go.

Also, this month there is going to be a drill held Peach Days weekend by the Red Cross. There is going to be a shelter setup, we have been told at the Brigham Middle School. I am trying to get more information. Listen to the local Net for more information.

Modes, Methods and Applications - Continued:

Digital Modes

Traffic nets handling large volumes of written or high precision traffic should consider using one of the digital modes. Digital modes can be used to transmit long lists such as health and welfare traffic, and logistics messages involving lists of people or supplies. Some digital modes provide virtually error-free transmission and relays can be accomplished by retransmitting the received digital message without having to retype it. Packet systems can provide automatic relays.

Digital modes that do not provide automatic error correction should only be used when clean and interference-free signals can be guaranteed. These modes include RTTY, AMTOR mode A, and PSK31 in BPSK mode.

HF:

The best digital modes for HF operation are packet, AMTOR mode B, and PSK31 in QPSK mode. In general, antenna and radio considerations are similar to voice or CW operation, although certain digital signals require less power than voice modes to achieve the same effect.

VHF/UHF:

The TNC2 (Terminal Node Controller, Version 2) FM packet is the most common mode used on VHF and UHF frequencies. The antenna and coverage considerations are the same as for FM voice.

Packet:

Packet communication is error-free in point to point "automated repeat request" (ARQ) or "forward error correction"(FEC) broadcast modes. The most effective way to send messages via packet radio is to use a "bulletin board." The sending station "posts" his messages on the bulletin board, and other stations can then retrieve their messages at will. Urgent messages can also be sent directly to the receiving station if needed. Bulletin-board stations are also useful when a number of stations are sending messages to a single point, such as a command post, weather service office, or emergency operations center. Similarly, bulletin-boards can be useful in handling outgoing traffic. Stations with traffic can post messages to the bulletin-board. The traffic handlers can periodically pick up the traffic and send it to the outbound NTS nets.

If your group is using FM packet, ask if transmissions are simplex point to point, or if nodes, digipeaters, or bulletin-board forwarding systems are being used. You will need to know which frequencies and modes are used and for what purpose, what their callsigns or aliases are, and how various parts of the system interconnect. A consideration is that multipath propagation may distort digital signals enough to cause failure when a voice might still be understandable. The solution is the same as in voice mode -- move the antenna a few inches or feet until you get a clear signal.

AMTOR Mode B:

AMTOR mode B (also known as "FEC" mode) is an advanced teletype mode with forward error correction, making it ideal for high precision messages over long distances.

PSK31:

The ability of PSK31 to be usable in very poor conditions makes it ideal for HF emergency communication. In addition, the efficiency resulting from the very narrow bandwidth of the PSK31 signal means that even a low power transmitter will work quite well. There are two PSK31 modes: BPSK, which has no error correction, and QPSK, which has forward error-correction. BPSK should be used unless the received copy is poor, since QPSK is 3dB less efficient and requires more careful tuning. Under all but the worst conditions, BPSK will provide perfect transmissions.

Packet Teleprinting Over Radio (PACTOR):

This is a combination of packet and AMTOR. It is designed for HF use only, and combines the best features of both. PACTOR uses FEC and ARQ modes, and a standard keyboard. PACTOR is quite robust (more so than AMTOR and RTTY), but can be slowed by poor band conditions.

TCP/IP Packet:

TCP/IP Internet protocols and network services are useable on packet radio. TCP/IP systems have advantages over conventional packet protocols that could be important in Amateur emcomm operations. One IP system is JNOS, which has extensions written by Johannes Reinalda, WG7J, to the original NOS (Network Operating System) written by Phil Karn, KA9Q..

- JNOS is a TCP/IP oriented e-mail system. If you're familiar with Internet e-mail, you're familiar with typing e-mail into JNOS.
- It sends e-mail via SMTP mail protocol and can interface to Internet. A JNOS station can relay packet radio messages to the Internet and vice versa, unattended.
- It will print incoming messages automatically onto a printer, unattended. If the printer is a cut-sheet printer such as an inkjet or laser printer, individual messages will automatically appear on separate sheets.
- The operator can open up to eight windows for multiple sessions for messaging. It has a ninth window for command mode for controlling the system, and a tenth window for debugging.
- It can multi-task efficiently on a 386 computer with 1megabyte of memory. In a minimal configuration, it can run on a PC/XT (640KB 8086) as an end-node station.
- It supports multiple communications ports and multiple radio/TNC combinations.
- It is shareware, and is available on the internet.

APRS:

While not a message handling mode, APRS is a digital information mode with applications in emcomm. Originally called "Automatic Position Reporting System," this mode is now sometimes called "Automatic Packet Reporting System," owing to new applications of the technology. The newest application of APRS is the automated reporting of data from digital weather stations. The original application for APRS, developed by Bob Bruninga WB4APR, is to track a station's location. A GPS receiver is connected to a computer, and its position information is transmitted to other stations using APRS packet software, displaying the location of the sending station on a map. APRS also has a messaging mode similar to Internet "Instant Messaging" where quick one-line messages can be exchanged.

APRS has two obvious applications for emcomm. First, the locations of various emergency vehicles can be tracked visually in real time in an automated and unattended fashion. Second, weather and other environmental data can be reported automatically in near real-time. Both applications can both speed data acquisition and reduce the work load on critical emergency nets.

Related considerations:

Become familiar with, and practice using, any digital mode or system well in advance of an emergency. Most are complex enough that some experience is required to use them efficiently and effectively.

Digital communications can be enhanced by composing the message off-line in a text editor. With a little ingenuity, "fill in the blank" forms can be created in most word processors to reduce the amount of typing required and help standardize message formats. For packet communication, consider an emcomm-specific program like ARESPACK (see *Reference Links* below).

The high duty-cycle of many digital modes requires a rugged radio and power supply with adequate cooling. Test your equipment under field conditions for an extended period of time to identify any possible problems.

Amateur Television (ATV)

There are two forms of ATV -- slow-scan and fast-scan. Fast-scan ATV is live, full motion TV similar to what you see on commercial TV, but usually at reduced quality. Slow-scan ATV uses a voice-grade channel to send a still picture line by line. It can take more than a minute for a color picture to be transmitted.

ATV has a number of emcomm applications, but all involve letting emergency managers see what is going on in the field without ever leaving their offices. ATV crews usually take a passive "observer" approach, and avoid interaction with bystanders to ensure that a situation is accurately represented. No emcomm ATV transmission should ever be "staged" for the camera.

Reference Links:

- [PSK31--Has RTTY's Replacement Arrived?](#) By Steve Ford, WB8IMY
- [Surfin': Make a Packet Racket with a Sound Card](#) By Stan Horzepa, WA1LOU
- [Getting Started in Digital Communications - RTTY, Packet, Amtor, PSK31](#)
- [ARESPACK software \(free download\)](#)

Review:

Choosing the correct mode and frequency for each type of message will make your nets more efficient and improve service to your agency. Voice modes are low precision, multi-point modes, and many digital modes are high precision point to point modes. Sometimes, Amateur Radio is not the best way to send a message. Confidential messages are best sent via telephone, fax or courier.

73's
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