

The Ω *Omega* Tower News

VOICE OF THE BRIDGERLAND AMATEUR RADIO CLUB

LOGAN, UTAH

APRIL 1993

Vol. III, Number 4

THE PRESIDENT'S SOAPBOX...

It was exciting to see the attendance at our meeting last month. The sheriff's office provides the rent and space for our repeater, and I am sure they appreciated the attendance and interest of our group. I would like to encourage you to contact George Becker N7YUH if you can make the time commitment to be better trained in helping the sheriff's office in times of emergency.

Thanks also go to Dave Fullmer N7RRZ and Dan Anderson KA0EOF for the excellent presentation on packet radio. It is

a very fun mode of our hobby and an excellent way of communication. The mail drop feature is handy to leave messages when the other amateur isn't at his radio.

It is very good to have a working BBS. Dan N7NKR has a Bulletin Board System (BBS) which allows mail forwarding and bulletin services. You can connect with the BBS by using USUBBS or N7NKR- 2 as the packet node address. The best way to learn the system is to get on and play with it. As a side note, be sure to set your call sign in your packet TNC before going on the air so your packets are properly identified.

We are going to have a build-it

night in our May meeting. We will not have enough space for everyone to finish a project, but we would like you to come and watch, and perhaps groups could get together some evening after the meeting and finish your projects.

We are planning on building the 2 meter copper pipe J pole, the twin lead J pole, a QRP receiver, and perhaps a microphone/headset for your handheld. I have built a DTMF 9 decoder which will turn on a speaker when the 9 key is transmitted over the air, but I haven't got a good way to get a PC board done. If you know of an inexpensive way, please let me know. If we can work it out, we could also build some of these. I don't have prices now, but I will at our next club meeting. We will need some commitments at the meeting if a kit needs to be procured. We will let you know as soon as we can via the net on Tuesday night.

We will also be making some announcements at the next club meeting about field day. We have been working and planning some excellent activities associated with field day and will announce these at our meeting in April. We hope you all can make it to the April meeting and perhaps bring a friend.



A bit late hitting the news, but here they are, your 1993 Bridgerland Officers
Back, left to right: Neal Holt, N7PEO, Board Chairman, Brian Potts, KB7FUB, Treasurer, Joe Corbett N7NJR, President; and Mike Farr, KG7FZ, Vice President.
Front, left to right: Dean Stevens, N7WDY, Board Member; DeAnn Jensen, KB7LLG, Board Member and Past President; and Dave Fullmer, N7RRZ, Secretary.

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Joe N7NJR

B.A.R.C. OFFICERS AND BOARD - 1993

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The Ohm Town News

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Radio Club, Inc.**
798 North 1500 East
Logan, Utah 84321

Dues for the Bridgerland Amateur Radio Club are \$10 per year for full membership and family memberships are available for \$12 per year. Only one copy of *The Ohm Town News* will be sent to a single address, unless full memberships are paid for each person wishing to have a copy. Dues can be paid to the Treasurer or to any executive officer and are due January 1st of each year. "Repeater Dues" are made on a volunteer basis.

Club meetings are held the second Thursday of each month, Sept.-May in room EC107 of the Engineering Building on the USU Campus. Starting time is 7:30 PM.

Net Manager: Dan Anderson KA0EOF, 541 W 100 S, Logan Utah 84321, 753-4304

SCHEDULE FOR APRIL 8, 1993 CLUB MEETING

Our April meeting will begin at 7:30 p.m., room EC107 of the Engineering Building, with a news documentary entitled "Last Voice From Kuwait." This 30 minute news video documents amateur radio involvement during Desert Storm.

Mark Jensen (N7EVJ) and DeAnn Jensen (KB7LLG) will then discuss the Military Amateur Radio Service (MARS) program and the services they render.

Finally, the remainder of the time will be turned over to a few of our local expert radio operators for an open panel discussion on proper radio operations and communications.

Brian KB7FUB

For Sale

I have the following items for sale. My wife says either they go or she goes! She is still worth keeping so help me out!

- Berkely Model 554 EPUT Meter, Rack Mount, to 99 Khz
- High Voltage Power Supply, 1500 VDC, 140 mils.
- 2 - VHF AM Transceivers, 10 W, Aerotron Model 5W10X, 118 Meg - 160 Meg
- Box of Stud Mount Rectifiers, 1N1581, 600 V PIV @ 6A
- ARC-5 Aircraft Transmitter, Tube Type, 2.1 to 3 meg
- I also have an 813 tube for anyone who may be interested.

To make an offer, call
Boyd Humpherys W7MOY
752-4868

Utah Hamfest 94 Update

A committee meeting was held in Ogden on March 27th. No new information is available yet but following are the confirmed dates and information, as now known. Please mark your calendars and plan to be with us.

(Next Committee Meeting will be on April 15th, WSU, Room ET 102 at 10:00 AM.)

Date: Saturday, June 4, 1994

Place: Weber State University
Student Union Building

Time: All day - exact times later.

Registration: Adults (16 and over)

\$5 before Feb 1 94

\$7 Feb 1 & before May 1 94

\$10 May 1 & after, or at the door

Registration: Youth (Under 16)

\$3 before Feb 1 94

\$5 Feb 1 & before May 1 94

\$7 May 1 & after, or at the door

More Details are coming soon.

SOME ANTENNA BASICS

by AC7O

Our new amateur radio operators, and some of the older ones, may appreciate a few thoughts on how to get the most out of our antennas.

To radiate efficiently an antenna must be resonant (except for special types we will talk about in future articles), and stretched out so that the currents in the wire are fully exposed to space. Your rubber duck is very convenient but a poor radiator because it is coiled up and short. A straight wire 19 inches long on your handheld (HH) is much better than a small rubber duck for that reason.

The best resonant antenna is a wire a half wave long, trimmed 5% short to allow for end effect. This is about 38 inches long for 2 meters. Half of this, the quarter wave, makes quite a good antenna if it works against a ground or counterpoise. The current is maximum at the base of a quarter wave so there must be some place for the current to go. On your handheld, the case and your hand form the ground. Some people also put a 19 inch dangling wire on the case to form a counterpoise, which works fine.

If you want to use a half wave antenna on your handheld you must have a coil between the antenna and your HH to convert the high impedance (about 300 ohms) at the end of the half wave dipole to the 50 ohms your HH needs. These are commercially available and are called hot rods. The same thing applies if you let the wire increase to five eighths of a wave length. A matching coil is again necessary and the 5/8 gives a larger signal

than the half wave or the quarter wave because it compresses the wave pattern, which is like a doughnut, in to a flatter doughnut, putting more signal straight out and less up and down. Remember, our two meter FM communication uses vertical polarization.

A good 2 meter antenna is the J-pole. The J is an I connected to a U. It is a half wave antenna, the I part, connected to a quarter wave parallel line matching transformer which is the U part. The top of the U is high impedance to match the lower end of the half wave dipole. The impedance reduces as you go down the U so you tap on your transmission line at the proper place for a match. The feed line lets you hang the J-pole up higher so you get out better.

Beams give you bigger signals, of course, but a bigger signal in one direction means less signal in other directions. You have to decide which way you want it to go or get a rotator and hunt. Hi.

These same principles apply to larger antennas for HF. A half wave horizontal dipole strung up high is the most efficient antenna you can get. it radiates more than 95% of the energy put into its terminals. Put it as high as you can up to a half wave high. The higher it is the lower the angle it will radiate which helps long distance communication. The impedance at the center is not much above 50 ohms, if the wire is not too high above ground. Your coax can be connected directly to the center, or use a balun if you wish. If you want to feed it on the end you can use a parallel line which makes it act exactly like a J-pole except the I part is horizontal. You can't use a coax line on the end because the

impedance is too high and would burn out the coax.

Read your antenna handbooks but always try to determine where the currents are and how the impedances can be matched in any system.

CALENDAR OF PUBLIC SERVICE EVENTS

Following are dates, as we now have them of the public service events of the year. They are subject to change, however. (The MS Walkathon has been canceled for Cache Valley this year.)

Cache Valley Biathlon

Saturday, May 22. Please note that this is a week earlier than usual.

Mountain Man Rendezvous

Saturday, May 29th.

Tour de Wellsvilles

Saturday, June 12. We have not yet been formally invited to help.

Little Mountain Bike Race

Saturday, July 10.

Pony Express

Saturday, June 26.

Logan Peak Hill Climb

Saturday, July 31.

Fall Camporee for Bridger Cache District

Saturday, September 25

Lo-To-Ja

Saturday, September 25.

There are also other pending events. Stay tuned to the net for details.

HELP!!

If you can help plan the Camporee activities for September 25, please call Dean, N7WDY, 753-2644.