



The Ohm Town News

December 1993

Logan Utah

Voice of the Bridgerland Amateur Radio Club

New Officers Elected

The Bridgerland Amateur Radio Club, Inc. has new officers for the 1994 year. Elected President was Dean Stevens N7WDY. Dean has been a board member for the past year. Vice President is Neil Holt, N7PEO, also a member of the board this past year. Brian Potts KB7FUB was elected again as the Treasurer of the club, and Cheryl Thurgood N7YUE was elected Secretary. Two board members positions were also filled. Tyler Griffiths N7UWX, and Terry Zollinger N7PEG were elected to those positions.

A change in the By-laws was also passed. The change allows business items to be voted on and decided by a simple majority of the members in attendance at the meeting. Business items also must be published in the *Ohm Town News* and then will be voted on during the next regular general meeting of the club. Previous wording in the By-laws required a vote by 2/5 of the total membership of the club to transact any business.

Several members of the club expressed concern and interest in implementing an absentee ballot system. Some club members would like to vote on items but because of work or other conflicts cannot attend club meetings. Blaine Hancey, KI7KA was asked to head a committee to propose a absentee ballot system to the club and changes to the bylaws.

Also voted on was the menu items for the Christmas dinner to be held on December 8th. Those attending the dinner will have their choice of Chicken Cordon Blue or Marinated Turkey with Shrimp. At least now you know what they are, and you will have time to think about what you want before you get there.

I see no reason why intelligence might not be instantaneously transmitted by electricity to any distance.

-- Samuel Morse 1832

Tropospheric Propagation

by Dr. Clayton Clark AC7O

This is the third in a series of elementary articles to help our new Hams understand the principles of our hobby.

Why is it that some days you can get a repeater on 2 meters in the Salt Lake Valley from Cache Valley loud and strong and other days you cannot get through at all. Why are TV signals from the Salt Lake stations direct (not on the cable) clear on some days and snowy on others?

The lower atmosphere, up to 10 miles high, is known as the troposphere. Don't confuse this with the ionosphere which is 50 to 200 miles up and affects our HF signals. VHF and UHF signals, (2 meters, 440, TV, FM,) do not go exactly line of sight in the troposphere. They would if the troposphere were uniform in air density and temperature but it is not. The normal air is heavier and warmer near the earth and gets less pressure and colder as you go up. The speed of radio waves through the air depends on the dielectric constant of the air which varies slightly with temperature and pressure. The result is that the upper part of a radio wave goes a little faster than the lower part of the wave in normal air so waves are bent slightly downward as they travel over the earth. The amount of cooling with increase in height is the major factor. In times of changing weather such as winter inversions there can be large changes in propagation path.

Inversion means that the air has become mixed such that instead of cooling with height it gets warmer with height. We have seen it warm on the ski slopes and cold in the valleys. When that happens in the path of your signal it will be bent up instead of down and your signal may never be heard from again. There have been cases where the signal over the pacific ocean has encountered an inversion to bend it up. Extra coolness was above to bend it down again and this up and down path was repeated so that 2 meter signals have gone to Hawaii.

continued on page 4

BARC Club Officers

| | | |
|----------------|--------------|--------|
| President | Joe Corbett | N7NJR |
| Vice President | Mike Farr | KG7FZ |
| Secretary | Dave Fullmer | N7RRZ |
| Treasurer | Brian Potts | KB7FUB |
| Board Member | Niel Holt | N7PEO |
| Board Member | DeAnn Jensen | KB7LLG |
| Board Member | Dean Stevens | N7WDY |

DUES

Dues for the Bridgerland Amateur Radio Club, Inc. are \$10.00 per person or \$12.00 per family per year. Dues can be paid to the Treasurer or any executive officer and are due January 1st of each 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 receive a copy. The Club maintains with a separate fund, several repeaters and autopatches in the valley. Your voluntary donations to this fund are appreciated.

The inside back cover of this newsletter has a application for membership form. Please fill it out when paying your dues. This will help the club maintain an accurate record of members. Send your dues to:

Brian Potts, Treasurer
Bridgerland Amateur Radio Club, Inc.
83 Pineview drive
Hyde Park, UT 84318

The *Ohm Town News* is published monthly except August. Please send any correspondence, articles, or address changes to the Editor...

Kevin Reeve N7RXE
162 North 500 East #B
Logan Utah 84321

Christmas Party

Date: DEC 8, 1993 at 6:30 at Zanavoo Lodge
up Logan Canyon
Cost: \$9.00 for adults, \$5.00 12 and under;
includes tax and gratuity

DOOR PRIZES AND PROGRAM PROVIDED
R.S.V.P. by November 23 net to DeAnn KB7LLG or
Cheryl N7YUE

Nets

VHF Nets

| | | |
|---------------|-------------------|---------------|
| Bridgerland | Tuesday 9:00 PM | 146.72 |
| MARA (local) | Sunday 9:00 PM | 147.20 |
| UARC info Net | Sunday 9:00 PM | 146.62 |
| UARC Packet | Sunday 8:00 PM | 146.62 |
| UBET | Wednesday 8:00 PM | 145.29/145.43 |
| VHF Swap-Net | Tuesday 8:00 PM | 146.94 |
| RACES* | 3rd Thur. 8:00 PM | 146.68/146.49 |

UHF Nets

| | | |
|-----------------|-------------------|--------|
| Bridgerland UHF | Wednesday 8:00 PM | 449.80 |
|-----------------|-------------------|--------|

HF Nets

| | | |
|-------------------|-------------------|-------|
| Beehive | Daily 12:30 PM | 7.272 |
| HF slow code | Daily 7:30 PM | 3.710 |
| FARM | Daily 8:00 PM | 3.937 |
| MARA (voice) | Saturday 7:30 AM | 3.918 |
| MARA (cw) | Saturday 8:00 AM | 3.723 |
| RACES* | 3rd Thur. 8:00 PM | 3.650 |
| Utah MARA (voice) | Saturday 8:30 AM | 3.873 |

Code Practice

| | | |
|-------|-------------------------------|--------|
| K7HLR | Daily 7:30 & 9:30 PM | 156.58 |
| | also on 3.698 MHz & 7.092 MHz | |

*NOTE: RACES Net is on VHF in even months and on HF during odd months. You must have a RACES number to check in.

Thanks to Clayton Clark; AC7O, and Blaine Hancey; KI7KA, for Net information. If you have additions or corrections to the above list, please contact the Editor.

For Sale

40 foot tubular freestanding tower
Triband 10-15-20 meter 3 element beam
Antenna Rotator
\$600.00 OBO

Contact Richard Sanders KG7JB 750-2991

The editor is looking for articles for upcoming editions of the newsletter. Do you have an experience in amateur radio to tell? How about some stories from those of you who have been in the hobby more than 10 years. I know some of you have had some great DX contacts or stories about the one that got away. Why not share them with us?

Presidents Corner...

By Joe Corbett N7NJR

It hardly seems possible but it is time for another Christmas party. I hope each of you will be able to attend and sign up with dues and repeater donations for next year. We have had a very busy year in Amateur Radio. So many of you have been willing to donate time and resources to the club activities. I would like to express my appreciation to all those who served in our various activities. I appreciated an executive board that was willing to attend all our meetings, and help with the general meetings. We also had several people help with the Tuesday night nets. I was not able to be on the air as much as I would have liked due to a busy travel schedule, but I never had to worry about them while I was gone.

I appreciate those who were willing to teach the classes for new Ham operators and also those who gave up Saturday mornings to help with the testing sessions. I feel we have made some good strides with our testing and training.

We had many hams help with projects offering communication services to groups in our community. I am sure these activities were very much appreciated by those we served. We also had a good Field Day this year. It was not as successful as we would have liked as far as contacts go, but maybe we ought to experience operation in mountainous areas because of the area we live in.

It is good to see growth in the club in the area of satellite communications. This mode of operation is not new, but is typically financially beyond most of our means, so having this capability available to club members is a very nice asset.

I am looking forward to having Dean N7WDY as our new president. He was the energy behind the Mountain Man special event station, and the Boy Scout camporee activities this year, and did a super job. I think we can look forward to an energetic year in 1994. I hope each of you will support Dean and the new executive committee in our events. I also hope each of you will try to expand your capabilities as operators by moving up a notch in your privileges, or learning new modes of operation.

Thanks again for your help this past year.

73 - Joe N7NJR

Hello

A Message from the Clubs President Elect

By Dean Stevens N7WDY

As 1993 comes to an end, and 1994 approaches, as usual there are changes that come to the Bridgerland Amateur Radio Club. One of which is a new club presidency. Whether it is unfortunate for me and fortunate for each of you, I haven't quite decided, but I am looking forward to a great new year working with all the new club officers, and feel we have a very outstanding group of people, who's interests lie in your behalf. I anticipate seeing our club accomplish many great things in the upcoming year.

One of the ways we all can accomplish our goals, and see the club progress in a way that will benefit all of us in a positive way, is to involve more of our amateur radio friends. Last year as I tackled the job of updating the Amateur Radio Operator list, I had an opportunity to see that there are close to 300 licensed operators in the valley. Many of you I had never met before, so I took the opportunity to make contact with you on the phone, to make sure you were still in the valley, and licensed. It was a great pleasure talking with so many new people.

The concern I have, is how do we get more involvement with our fellow HAMS that we do not see very often? I guess there are as many reasons as to why some of us don't come to the club activities as there are people. Whether our schedules are busy and conflict, to work, to personal commitments, the list can go on. Unfortunately, there is always the possibility, that someone has been offended, by another person, thus they no longer associate with the rest of the group. This is the area that I hope each one of us can overcome. I want to see ALL of US as friends, and let whatever has happened in the past go on down the river. There is so much knowledge and experience out there with every one of you fine people, that I feel we could really enhance the club, and our equipment, by getting more of us involved, and sharing ideas. I think we all realize, that there are as many great ideas, and suggestions, as there are excuses. I hope we all can re-evaluate ourselves, do a good "gut" check, and if at all possible, I would really like to see our participation increase, as we all together make 1994 the best year for the Bridgerland Amateur Radio Club.

I hope to see many of you out to the Christmas party so we can get aquatinted again.

Please feel free to contact me if you have a concern, suggestion, or just need to talk.

73 - Dean Stevens N7WDY

Tropospheric Propagation

continued from page 1

There have been many such QSO's. This is known as ducting. In the mountains we don't have much ducting but the temperature change with height above the top of a mountain where your signal must go can have a lot of effect on the strength at the other end. It normally bends down some so we can get over some mountains but sometimes it goes off into space if the air on the mountain top gets warmer with height.

Bending by inversions is sometimes more noticeable with high gain antennas. Take the case if an antenna made of eight vertical half waves in phase, stacked in a vertical line. This is a very good antenna, used on many repeaters and by some Hams. It has high gain because it compresses the radiation into a thin disk in all horizontal directions but does not waste power in a fat vertical lobe as a quarter wave ground plane antenna does. But when that thin disk, vertical beam hits the space above the mountain top it may be deflected. Then you get a strong signal where you want it or none at all. A broader vertical beam might have a better chance of getting something through. You can't be sure. We all put up the best antennas we can and use them. Sometimes we get through. Sometimes not. If not, we try a different path or wait for a better day.

It is fun to understand the principles of VHF and UHF wave propagation even if we can't do anything about it.

Are You Covered?

By Kevin Reeve N7RXE

Christmas is coming and I am sure you will be adding a few more goodies, that is Ham radio goodies, to your collection. Those of you who have been in the hobby for awhile probably have quite an investment in equipment. Today's full featured radios and accessories don't come cheap. So losing a radio to theft might set you back for awhile. After purchasing a mobile 2 meter radio, I made a call to my friendly car insurance agent to find out if my radio, mounted in the car would be covered. They did not know. After the questions about what type

of radio it was, and was it a CB, and what did I use it for, I was told they would check on it and get back to me. Later that same day a call came. It was a representative from the companies claim office. Going through the same questions again I got my answer, NO! If the radio is not mounted in a factory designated mounting slot for that type of radio it is not covered. I could however add a plan that would cover my radio in the car. It would cost about \$36.00 per year. I also checked with my renters insurance policy and it was not covered either. Like the auto insurance, they did have a add-on plan that would cover it.

I have heard the same stories from other amateurs as well. So what's my point. You might want to check out your insurance policies to see if you are covered. There are specialized insurance policies for amateur radio equipment. The ARRL has an very inexpensive plan that covers almost all of your gear including any computers you use with it. You do have to be member of the ARRL though.

Car break-ins are on the rise in the valley so take every precaution you can with your mobile and other amateur equipment you might leave in your car. Even cars in garages are not immune and theifs love high-tech electronic equipment.

Brushing Up

What is the total capacitance of two equal, series-connected capacitors?

- A. Half the capacitance of either capacitor
- B. Twice the capacitance of either capacitor
- C. The value of either capacitor
- D. The total capacitance cannot be determined without knowing the exact capacitances.

What is the maximum transmitting power permitted an amateur station on 24.95-MHz?

- A. 200 watts PEP output
- B. 1000 watts DC input
- C. 1500 watts PEP output
- D. 2000 watts input

Questions were taken from the General Class Question Pool.

Time to Renew

Be sure Santa's list has your request for membership to the Bridgerland Amateur Radio Club.

Dues are only \$10.00 per person or \$12.00 per family.

Fill out the form below and mail it or bring it along with you to the Christmas party.



Bridgerland Amateur Radio Club Membership Application

NAME _____ CALL _____

ADDRESS _____ CITY _____

STATE _____ ZIPCODE _____ PHONE _____

List additional family members and callsigns below only if you are paying for a family membership

| | |
|-------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

Dues to the amateur radio club are \$10.00 per person per year or \$12.00 per family per year. On family memberships only one copy of the club newsletter will be sent unless individual memberships are paid for each copy of the newsletter desired. The club maintains a separate equipment/repeater maintenance fund. Your voluntary contribution to this fund is greatly appreciated.

Membership dues \$ _____ Equipment/Repeater fund \$ _____ Total \$ _____

Please give this along with your payment to any executive officer or send it to: Brian Potts, Treasurer BARC, 83 Pineview Drive Hyde Park Utah, 84318.