



THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

NOVEMBER

October 1999

1999

<http://www.w7ivm.org>

UP, UP, AND AWAY...AGAIN



HAM PROFILE

By Boyd Humperts, W7MOY



Ladell Hoth KC7BDU & XYL Sharon

By:
Joseph C. Corbett
N7NJR

The Bridgerland Amateur Radio Club (BARC) sponsored a balloon flight on 9 October 1999. The payload was launched from Cornish, Utah. Cornish is a small northern Utah town located in Cache Valley about 5 miles from the Idaho Border.

The balloon payload consisted of a 440 MHz beacon, a payload controller, and a 35mm camera. The payload controller accepted various DTMF input sequences which allowed the ground controllers to take pictures on demand by inputting a 3 digit DTMF code. A separate 3 digit DTMF code also initiated a cut-down sequence to occur which separated the balloon from the payload.

The 35mm camera had an electronic initiated shutter and film advance. The pictures in this narrative were all taken with

Anyone who is familiar with the USU Library should know that Mr. Audio-Visual refers to Ladell Hoth, KC7BDU. Ladell has held a tech license for about 5 years, been member of BARC along with his brother Paul, KJ7RK. Incidentally it may have been Paul who tipped the scales of interest on a deer hunt several years ago way out in the boonies. Paul pulled out his HT, and wanted to know if Ladell wanted to speak to the family back home. With the help of the auto patch, Ladell tried it and was hooked. He enjoys back packing especially in the High Uintas, where he and son Cordell KD7BGX have used the HTs to good advantage. Incidentally he informs me that they have located a specific boulder at Stewart Lake in the Uintas where one can perch on the top thereof, and hit the 72 repeater solid as a rock, pretty neat. One can receive the

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**ANNUAL
CHRISTMAS PARTY
THURSDAY
December 9
6:30 PM**

**Copper Mill Restaurant
(Across from the
Logan Tabernacle**

about 50 north Main in Logan.)
(Cost?...still to be determined)

FOOD...

FUN ...

PRIZES

See Secretaries Corner in this issue for whom to contact for reservations.

This event will take the place of the regular Club meeting for December

Please Come and Join Us

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The President's Message

by Tyler Griffiths N7UWX



Hey,

It's November already and the year is almost over!

And being it's November it's time for elections again. There are still lots of openings on the ballot and if you would like to serve the club in one of these capacities please feel free to contact one of the members or member of the Presidency and have them nominate you from the floor on the 11th.

Also being the end of the year I need to remind you that club dues of \$25.00 a year are due on January 1st. We always do a complimentary mailing of the January newsletter to all members from the previous year whether you have paid or not but at the December club meeting, which is our Christmas party, applications will be available to renew your membership.

So November club meeting is Elections!

We will have some videos from Kenwood about some of their new radios. We will be playing them between the breaks in the elections. So come, vote, mingle and enjoy some good videos.

Also there has been a date set for the County Y2K preparation meeting! It will be on November 13th at 10:00 A.M. in the morning at the Bridgerland ATC. See the article in this newsletter for more information.

So we'll see ya at Club Meeting!

73 de Tyler N7UWX

TREASURER NEEDED

We will be taking nominations from the floor for a new Treasurer for the club when we do elections on Thursday, the 11th. If you, or someone you know would like to serve in this position, please let a member of the Presidency know or come prepared (with their permission) to nominate them at the club meeting.

Thanks from the Board

We finally have a date for the Cache County Y2K preparation meeting!

November 13, 1999

10:00 A.M.

Bridgerland ATC

1301 North 600 West

Logan, Utah

On December 31 Cache County Emergency Services is planning a exercise to test our readiness.

The plans are to have the Cache County EOC up and operational along with all the city stations beginning the evening of the December 31st.

The scenario will be that, because of Y2K glitches, all the phone lines have gone down and we need some way to communicate back to the county any emergencies that arise.

If all heck does break loose (and it is likely not going to) we will be prepared and in place to do the communicating that we as hams are so good at. If not this will be a great exercise to test our system, prove to city officials that it does work and give a dead line to cities to have everything in place.

We will be trying to plan some kind of rotating schedule so no one has to work all night.

If you are interested in emergency communication (which is one of the reasons the FCC lets us have our license's and frequency's) or have any comments, please plan on attending this meeting for more information.

You should also be receiving a letter in the mail with more information!

If you have any questions or comments please feel free to contact:

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AC70 Repeater System News



146.720, 449.625 145.310,
147.260, 146.640

This summer was an eventful one for the repeater committee. It started off with a trip up to Promitory Point to check out the 147.260 repeater. Under the watchful eye of Bill Neville (WA7KMF), the repeater was diagnosed to be in tip top shape. For those of you who are new to the club, this repeater is linked full time into the Mt. Logan (146.720) repeater. It has excellent coverage down the Wasatch Front.

The second trip planned was to Red Spur. Bill and, if memory serves me correctly, Jeff Tingey (KF7ZX) waded through the mud and snow to reach the top. As many of you know, this repeater has been out of service for some time. This first trip was a fact finding mission to determine what needed to be fixed or replaced. No other work was done.

The next trip was back to Red Spur to bring the 145.310 repeater back to life. Again under Bill's watchful eye and Bob Wood's (WA7MXZ) surgeon like hands, the repeater sprang back to life. Much of the repeater has been revamped and gone to with a fine tooth comb. Also, the feedline to the antenna was replaced along with other parts and pieces. Thanks to these wonderful talents and patience, we will again be able to communicate with our friends to the east.

Our next trip was to Mt. Logan (146.720), the hub of BARC system. After a hearty breakfast at one of the local greasy spoons, we left for the peak. The plans this trip were to repair the 449.625 repeater and to install some new firmware into the controller. The repeaters were also given a good lookover in preparation for the winter. Those going up for this trip were Bill Neville, Bob Wood, Tyler Griffiths (N7UWZ), Ted McCarthur (KB7PAB), Brian McCarthur (Not licensed), Kurtis Payne

(Not licensed), and yours truly. It was a beautiful day to be above the clouds.

For our last and final trip, we split up into two groups. One (Kurt, Ted, and myself) headed to Mt. Logan to upload a new command file into the controller, the other (Bill and Tyler) to Red Spur to work on some audio problems. Ted and I learned it was not a good idea to eat and then ride up with Kurt in his jeep to Mt. Logan. I think our minimum speed from the girls camp to the peak was 45 mph. Breakfast was well stirred upon reaching the top. A couple of hours were spent on both repeaters and the work was completed.

And that does it for this year. As a final note of sorts, because of the new programming, if you are having troubles with your autodial slots, let me know and we will get it fixed ASAP. Please contact me via E-mail at ab7zk@arrl.net or by phone at 757-6891.

It was a great year for the repeater committee. All of our repeaters are up and running well. And all are well prepared for winter. Enjoy!

-- Travis AB7ZK

Explanation of APRS by its Author

AUTOMATIC PACKET REPORTING SYSTEM (APRS) APRS is a shareware program that takes advantage of the availability of inexpensive GPS receivers to display the locations of moving stations on your PC. By connecting your PC computer to any radio network via an inexpensive (\$130) radio data modem, then all stations can see the movements of all other stations. APRS permits any number of stations to exchange data just like voice users but without the complexity of maintaining separate point-to-point links. The primary APRS display screen is the MAP display. To help mobile units find each other, there are radio nets standardizing on several radio channels:

144.39 MHz FM HAM radio VHF nets

10.151 MHz LSB Nationwide HAM tracking frequency

27.295 MHz CB Channel 29

APRS recognizes that one of the greatest real-time needs at any special event or emergency is the tracking of key assets:

Where is the Event Leader?
Where are the emergency vehicles?
What's the Weather at various points in the County?
Where are the power lines down?
Where is the head of the parade?
Where are the VIP's?
Where is the mobile TV camera?
Where is the hurricane?
WHERE IS THE FINISH LINE???

Included on the distribution disk are several README text files on applications of APRS such as for weather nets, direction finding, plotting satellite contacts, and tracking mobiles. In addition to the map display from any range from .5 to 4000 miles, there are several other data screens:

LATEST LIST - A list of the latest STATUS beacon from each station
POSITIONS - A list of all station positions
MESSAGES - Operator-to-operator message to or from your station
BULLETINS - A page for BULLETIN ANNOUNCEMENTS to all stations
TRAFFIC - A list of the last 23 lines of messages from ALL stations
ALL LOG - A time sequenced log of every new beacon or message sent
HEARD LOG - Shows a 24 hour history of who is on the air
DIGIPEATERS - Displays routing information

STATION TRACKING. Although APRS automatically tracks mobile stations interfaced to GPS or LORAN navigation, it also easily tracks manual reports. Any station can place an object on his map including himself and within seconds that object appears on all other station displays. In the example of a parade, as each checkpoint comes on line, its position is instantly displayed to all in the net.

Whenever a station moves, he just updates his position on his map and that movement is transmitted to all other stations. To track other event assets, any operator can simply maintain the positions and movements of all assets on his screen, all other displays

running APRS software display the same displays. There is also a Tracking command on the P display that will cause APRS to keep the map display always centered on a selected object.

SPACE APPLICATIONS: Some HAM radio satellites may not only transmit their current location, but can also be used for relaying station position reports between ground stations over large areas. The value of the map displays are in their ability to help students visualize the three dimensional geometry of an overhead pass.

FOX HUNTING OR DIRECTION FINDING: APRS is an excellent tool for plotting the location of a hidden transmitter, balloon, or interfering signal. APRS will display the intersection of bearing lines from a number of reporting stations and also overlapping signal strength contours if only signal strengths are reported. Finally, APRS includes the Fade-Circle Search and Rescue technique which can be used by a mobile with only an OMNI antenna to locate a hidden transmitter.

WEATHER STATION REPORTING: APRS position reports can also include the wind speed and direction, as well as other important weather conditions. APRS supports a serial interface option to the ULTIMETER-II home weather station. With this interface, your station includes WX conditions in your position report for display at all other stations in the network and you appear as a bright blue circle, with a line indicating wind speed and direction.

FREQUENCY COORDINATION: As more and more digital devices on amateur radio include APRS position information in their routine BEACONS, APRS makes an excellent tool for displaying the topology of radio networks as an aid to frequency coordination.

PROTOCOL - In order to efficiently use the radio channel, APRS assumes that old information is less important than new information.

Therefore, all packets are redundantly transmitted but at a longer and longer repetition rate. Each new packet is transmitted immediately, then 10 seconds later. After every transmission, the period is doubled. After ten minutes only six packets have been transmitted, and they stabilize to once every 10 minutes beyond that.

COMMANDS: The keyboard is always active and responds to over a hundred different commands. Aside from selecting the major displays shown above, and manipulating the map display, there are several other sub-menu commands and the message commands:

- F1 - Help - Select from a MENU of HELP commands
- C - Controls - Display a one line status of all control states
- F - FILES Menu - For Loading/Saving files, or Replaying tracks
- I - Input commands - Used to input posits, DF info or add OBJECTs to map
- O - OPERATIONS - Several commands for normal operations
- M - MAP Functions - Functions dealing with maps
- W - Weather Menu - Displays the number of beacons per hour per station
- R - READ - Displays your incoming and outgoing messages
- S - Send - Sends traffic to a station
- E - Erase - Erases outgoing traffic lines
- K - Kill - Kills incoming traffic lines
- T - Traffic - Displays message traffic between other stations

DEMONSTRATION FILE: To see how the APRS system works on our frequency, use FILES-LOAD to load the file called **FREQ579.BK**. This file contains all the local stations on 145.79 MHz in our area. To see the tracking of the GPS equipped Army/Navy game football run, load the file named **FBALL.BK** and replay the file named **FBALL.HST** and select to see only **FBALL**, or **CHASE1**.

To see the Marine Corps marathon event, load **MARATHON.BK** and replay the **MARTHON.HST** file. See Details in **RE-ADME.1st**.

REPLAY: The positions of any moving station can be replayed either from memory or from a file. Tracks are kept in on-line memory until 150 have been saved, and then are saved to a HISTORY file. During **REPLAY**, use the Calls command to toggle on and off the display of call signs, and use the HOME and page keys to center and zoom the map display if the mobile station moves off the screen. During replay, use these commands:

FINDING A COPY OF APRS: APRS can

be found on this site or on most other Amateur radio bulletin board systems. All you need is the **APRSxx.zip** file and the regional map file for your area, either **E, C, W, or SEMapsXX.zip**. You may also find even more local maps for your specific state, such as **GA, CA, OH, TX, MI, IL, IA, and MOMapsxx.zip**. After creating an APRS directory, be sure to use **PKUNZIP -d**. The **-d** option assures that the complete APRS directory structure is re-constructed as you unzip the files.

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Ham Profile Contd from Page 1

info on this location for a small fee.

Ladell sports a Yaesu HT and a 40-50 watt mobile/base station with a mag mount or two. The ownership of the roof mounted 2 meter antenna is subject to question. Son Cordell, who apparently claims some part of the investment, is probably trying to put the squeeze on ole daddy.

Ladell is a native Loganite, having lived within a couple of houses all his life. He is a graduate of Logan High, served in the ROTC having been on two championship rifle teams, so he most likely doesn't come home empty handed in the deer hunts. He served a two year mission in Great Britain where he absorbed a bit of cockney and a disdain for riding bikes on the left side of the road especially in thick English fogs. He graduated from USU in 63 with a degree in Business Education, spent a couple of years in 63-65 at the Pratt Institute in New York with work in the public library in Library Science.

He likes the out of doors, herding Boy Scouts and tending (now hear this folks), a 10,000 sq. foot garden with most varieties of eatables. He did admit the availability of a little bit of family slave labor in the project. In Cache valley, the name **HOTH** means **FISH-ERMEN**, Ladell has the habit.

His good frau, Sharon Liebes was born near Stockton, CA. She indicated her present occupation is homemaker and rabble rouser, in that order. We didn't pursue that latter category however. She has been active in their church responsibilities and apparently runs a tight and lovable home. The Hoths have seven children, four boys and three girls. Their oldest boy, Cordell, **KD7BGX**, has held a tech license for three years.

One final goodie, Sharon confided that they have perfected the ultimate process in producing perfect Providence style sauerkraut in their basement. That ought to be one for the local HazMat team. Eat up everyone.



the camera mounted on the payload.

The picture on Page 1 shows the balloon about 75% full of helium. Note the beautiful weather we had for launch!

As the balloon drifted upwards we took a series of 4 pictures. Each picture is about 2 minutes apart. The payload acted as a pendulum beneath the balloon which is why the picture is at an angle. It is difficult to say which direction the camera was pointed.

The picture above was taken with the camera pointed to the Southwest. The Wellsville mountains are at the far left. The Garland/Tremonton areas are at the center of the picture. In the distance is the Great Salt Lake and the Promontary Point area.

The payload was recovered just east of Franklin a few hundred yards.



We are shown below at the recovery site. We placed the payload in the back of my Blazer and Ryan KC7SMR has just entered the DTMF sequence to take a picture. My apologies to those missing on the right side of the picture. We could not look through the view finder so our positioning was guess work.

This launch was very fun and everyone had a great time. We launched shortly after 10:00 AM and recovered the payload at about 11:45 AM. The actual flight only lasted about 15 minutes. The balloon was drifting so fast to the East that we did not want to recover it in the mountains. We have another launch planned for the 6th of November. We hope to have ATV and GPS on the next flight. Please e-mail any comments to jccorbett@mtwest.net.

Secretary's Corner

by Beanie Lofthouse,
KJ7LQ



Greetings. Please come to the club meeting on November 11, it is elections and we would like to see plenty of involvement from all of you. Jump right in and help out!

Just a reminder that we are planning the Christmas Party. It will be at the Copper Mill again on December 9. We will meet at 6:30 instead of the usual meeting time. I will have a menu at the club meeting and we will take a vote as to what we want served. Please note that Cheryl Thurgood, N7YUE is the one to get reservations for the dinner. We will be taking reservations over the Tuesday night nets starting the 2nd of November. She can be reached by E-mail: paperlady@mtwest.net, phone 563-5201 and you may get in touch with me to give her messages by: lofthouse@mtwest.net or phone 245-6632. The food is great and we have prizes which makes a winning combination!

Our October club meeting was really informative, John Mabey, W7CWK and Brent Thomas, AC7H were up with their mobile EOC, what a great vehicle. John gave us some interesting history of the VHF Society. They also had lots of information about the tornado in SLC and the Riverdale flood and how the amateur radio operators helped with communications as well as clean up. It was a great meeting.

See you at the November club meeting.
73, Beanie KJ7LQ

NEW NET

The 10 Meter "No Name Net" is being held each Wednesday on 28.313 at 2100 Hours local time. The intent of this net is for the enjoyment of the hobby, learning from each other and to utilize the 10 meter band. All are welcome, especially those who are new to HF and those more experienced amateurs who are willing to share their experiences and 'know-how'. See you on Wednesday nights at 2100 local on 28.313.

73 de KC7RAF - Hall Blankenship