

# The $\Omega$ Town News

VOICE OF THE BRIDGERLAND AMATEUR RADIO CLUB

LOGAN, UTAH

MARCH 1993

Vol. III, Number 3

## Local amateur puts up the "Big One"

### 160 Meter Antenna

— By Joe Corbett N7NJR

On 19 December 1992 several area hams got together and helped me put up a 160 meter Inverted L Antenna. The antenna consists of a 50 foot section of 4 inch aluminum sprinkler pipe with a wire attached to the top, angled down, and tied off with some dacron rope to a fence. The antenna works the same as a quarter wavelength magnetic mount 2 meter antenna you put on the top of your car.

A full quarter wave 160 meter antenna would need to be about 140 feet high. This is impractical, so the top wire serves to make the antenna resonant on the Inverted L by adding the necessary length. Buried ground radials serve as the ground plane like the top of the car serves as a ground plane for a 2 meter antenna.

The story of my 160 Meter antenna actually started about 2 1/2 years ago when I put in a sprinkling system in my back yard. I rented the trencher and made several trenches through the back yard to lay the pipes. I knew some day I would like to put a 160 meter antenna in a far corner of my property similar to the one I saw at Jim's (K7OA) house. So while the trenches were open I put some RG-8 feed line through a PVC pipe to the spot where I planned to put the antenna. I also laid some 14 gauge bare copper wire as ground radials through all the trenches and ran them to the future antenna sight.

Last summer I purchased some scrap 4 inch aluminum pipe. I cut a 12 foot section, split it in half lengthwise for 2 feet and slipped it over a 40 foot section and secured it with two clamps. I also put another clamp around the pipe with 4

brass rings on the clamp. The brass rings are used to hold the guy ropes.

I ordered some antenna wire for the top section and attached it to the top of the antenna.

Last Fall, while shopping in Ogden, I saw some anchors intended to hold down aluminum sheds on sale. The boxes were damaged and weather beaten so they sold the four anchors for 5 dollars. I screwed these into the ground for the end of the guy ropes.

I buried a 4 foot section of an old 8" by 8" beam leaving about 18 inches above the ground. I placed a 4" PVC end cap on top of the beam and secured it with a quarter inch lag bolt. I also drilled a few holes near the bottom to let any water drain out that could accumulate. I mounted an electrical junction box on the side of the beam and ran the lead line and ground radials into it. I soldered the ground radials to the shield of the RG-8 cable and also soldered a small piece of antenna wire to the center conductor and placed a small connector on it which I used to bolt to the bottom of the antenna.

I measured out the lengths of each dacron guy rope and tied them to the brass rings. I also took a needle and thread and sewed up the ends of the dacron rope and the knots such that they can not come undone. I had noticed during the balloon launches that the ropes securing the parachute were sewn to prevent the knots from coming undone.

I finally finished my preparations last December. I have been frequently told that antennas work best if you put them up during the coldest time of the year. (The real reason is that on nicer days you always have higher priority things to do.) I made a few calls and shortly had 7 people volunteer to help.



Jim Lofthouse K7OA, Harl Goodsell W7LTH, Clayton Clark AC7O, Mike Farr KG7FZ, Mike's son Chris, Dave Rhodes N7PEI and Dean Stevens N7WDY arrived and in short order lifted  
(See "160" on page 5)

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

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753-4843

### Newsletter

Don Rawlinson WA7VNQ  
1055 E 2000 N  
North Logan UT 84321  
752-1269

## The Ohm Town News

is published monthly, except  
August, by the  
**Bridgerland Amateur  
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

## THE PRESIDENT'S SOAPBOX...

I would like to thank Scott (N7LMO) for the excellent presentation on the emergency radio pack and also Mike (KG7FZ) for the demonstration of the 72 hour kits. I got several good ideas from the meeting to better prepare myself for some unwanted future event.

I was especially interested in Mike's QRP rig. The number of "yes's" on the roll indicate enough interest in QRP that perhaps we could have a work meeting and build or discuss some QRP units.

For those new to Amateur Radio, QRP refers to a small, reduced-power, High Frequency (HF) radio transceiver. To operate the transmitters of these rigs you will need to have HF privileges. These QRP rigs are usually built from kits or designed by the amateur radio operator. These rigs can be used to communicate

around the world when conditions are right.

We hope several people will take advantage of the upcoming General Class training, learn the code, and join in the fun. It would be nice to have a QRP table at our Field Day activity.

Please come out to our March meeting and support the Sheriff's office. We will also be discussing Packet Radio. So, if you want to learn more about digital communications, I am sure you will enjoy this meeting.

73 - Joe N7NJR



## SCHEDULE FOR MARCH 11, 1993 CLUB MEETING

Lt. George Becker N7YUH will be there to discuss cooperation with the Sheriff's Office and the 146.72 repeater. Everyone should be there to show support for the county Sheriff for they provide us support and a great location for the 72 repeater. He is scheduled from 7:30 PM to 8:00 PM.

Dan Anderson KA0EOF will demonstrate packet radio. This is a great subject for all who would like to learn more about what equipment is needed to set up a packet radio station. Demonstrations will be shown on a projection screen so everyone can see how easy it is done.

Mark Jensen N7EVJ & Kevin Reeve N7RXE will show their home built packet projects (Poor Man's Packet.)

Dave Fullmer N7RRZ

## RESULTS of the AMATEUR RADIO INTEREST SURVEY

### Members responding to the Survey

AC7O	Clayton Clark	752-5332
	Casey Lofthouse	245-6632
	Glen Kartchner	752-2768
KA0EOF	Dan Anderson	753-4304
KB7FUB	Brian Potts	563-6467
KB7LLG	DeAnn Jensen	245-3373
KB7PAB	Ted McArthur	245-4904
KB7PNI	Clint Wellard	750-6718
KB7QIX	Rik Vernon	563-3549
KB7QIY	Chris Vernon	563-6530
KB7RAN	Amos Palmer	245-6132
KB7RAV	Cristi Anderson	753-4304
KB7RAY	David Allen	563-5504
KB7WL	Bruce Hunsaker	752-9649
KF7ZX	Jeff Tingey	
KG7FZ	Mike Farr	752-7063
	Mike Forsberg	245-6653
N7EVJ	Mark Jensen	245-3373
N7NJR	Joe Corbett	752-3263
N7NJS	Bennie Lofthouse	245-6632
N7NKR	Daniel Holmes	750-5737
N7NMZ	Marilyn Cregger	258-2892
N7NNP	Kim Merrill	245-3775
N7PDT	Shela Merrill	245-3775
N7PEO	Neil Holt	563-5916
N7QCA	Tia Merrill	245-3775
N7UXA	Brett Butler	752-5966
N7UXC	Stan Wellard	750-2910
N7VFC	Rich Vernon	563-6530
N7VQY	Blaine Hancey	753-2727
N7YTS	Lafaua Floyd	245-4753
N7YVS	Don Ferney	752-5471
W7MOY	Boyd Humpherys	752-4868
W7TTL	Kenneth Bliss	245-3023
WA7SHW	Khalil Godfrey	563-5812
WA7VNQ	Don Rawlinson	752-1269

### Committee Interest

The person listed as CHAIR has volunteered to lead each of the following committees. The others expressed interest in serving on the committee. The committee heads can contact those interested when planning the event.

#### 1. Balloon

CHAIR - N7UXC, KB7PNI, N7PDT, N7NJR, N7VFC, KG7FZ, KA0EOF, AC7O

#### 2. Christmas Party

CHAIR - KB7RAV, KG7FZ

#### 3. Field Day

N7YTS, KB7PNI, N7PDT, N7QCA, N7NNP, N7UXC, KG7FZ, KB7RAV, KA0EOF, N7PEO

#### 4. LoToJa

CHAIR - WA7VNQ, CoCHAIR - WA7SHW, N7YTS, KB7PNI, N7UXC, KB7QIX, N7VFC, KG7FZ, KB7RAV, KA0EOF, N7PEO, N7EVJ, KB7LLG, AC7O

#### 5. MARS

CHAIR - N7EVJ, CoCHAIR - KB7LLG, N7NNP, N7YTS

#### 6. Multiple Sclerosis 2 Day Bike Race

KB7PNI, N7UXC, KG7FZ, KB7FUB

#### 7. Nets

CHAIR - KA0EOF, WA7VNQ, KB7PNI, N7NKR, N7UXC, W7MOY, KG7FZ, N7PEO, AC7O

#### 8. Newsletter

CHAIR - WA7VNQ, N7UXC, KG7FZ, N7NJS

#### 9. Peak-To-Peak

Valley Support - AC7O, N7EVJ, KB7PAB, KB7PNI, N7PDT, N7QCA, N7NNP, KB7QTY, W7TTL, KG7FZ, KB7LLG, NYUXA

#### 10. Pony Express

CHAIR - WA7SHW, N7UXC, W7TTL, KG7FZ, WA7VNQ, KB7FUB, N7EVJ, KB7LLG, AC7O

#### 11. Publicity

CHAIR - N7YTO, N7NJS, KB7PNI

#### 12. Recruiting

CHAIR - KB7RAY, N7VQY, N7YTS

#### 13. Repeater

CHAIR - AC7O, KG7FZ, KB7RAN, N7UXA, N7PEO, N7EVJ, KB7LLG

#### 14. School/Discovery Center

N7NMZ, N7NNP, N7UXC, KG7FZ, KB7LLG, N7EVJ

#### 15. Sheriff/County Liaison

CHAIR - AC7O, KB7PAB, W7MOY, KA0EOF, N7YTS, N7PEO, KB7FUB, N7EVJ, KB7LLG

#### 16. Special Youth Committee

CHAIR - N7XLH, N7QCA, N7PDT, KG7FZ

#### 17. Training (Technician Class)

CHAIR - KB7PNI, N7NKR, N7UXC

#### 18. Training (Technician with HF, General Class)

CHAIR - KF7ZX

#### 19. Utah Hamfest 94 Committee

CHAIR - WA7VNQ, N7NJS

#### 20. VE Exam Coordinator

CHAIR - WO7N, N7VQY, KA0EOF, WA7SHW, N7NJR, AC7O

#### 21. Walkathon

CHAIR - N7EVJ, N7UXA, WA7VNQ, N7NNP, N7QCA, N7PDT, N7UXC, KG7FZ, KB7FUB, KB7LLG

#### 22. Biathlon

CHAIR - N7PEO, KB7LLG, N7EVJ, WA7VNQ, WA7SHW

### Interests

If you are doing a project in one of these areas you can contact others here who have the same interests.

#### Amateur Television

N7NJR, W7MOY, N7NKR, N7UXC, W7TTL, KG7FZ, KA0EOF, N7EVJ, KB7LLG, AC7O

#### Contesting

N7VQY, KG7FZ, KA0EOF, N7NJS

#### Digital Communications

WA7VNQ, N7YTS, N7VQY, N7NKR, N7NNP, KB7WI, W7TTL, KG7FZ, KB7RAN, KA0EOF, N7PEO, KB7FUB, AC7O

#### Direction Finding

WA7VNQ, KB7PNI, N7NJR, N7NNP, N7UXC, KG7FZ, N7PEO, N7EVJ, KB7LLG, AC7O, N7NJS

#### Emergency Preparedness

N7YTS, N7YVC, KB7PNI, N7NKR, W7MOY, KG7FZ, KB7RAV, KA0EOF, KB7LLG, N7UXA, N7PEO, KB7FUB, N7EVJ, AC7O, N7NJS

## Utah Hamfest 94 Update

A committee meeting was held in Ogden on February 27th and the following are definites as of now. (Next Mtg 3/27.)

**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 but mark your calendars now and plan to join us in '94.

- Don WA7VNQ

#### Emergency Radio Packs

WA7VNQ, N7YTS, N7YVC, N7NNP, N7UXC, W7MOY, KG7FZ, N7NJS, KB7RAV, KA0EOF, N7UXA, N7PEO, N7EVJ, KB7LLG, AC7O

#### Emergency/Solar Power

N7YTS, N7NNP, N7UXC, W7MOY, KG7FZ, KB7RAN, N7UXA, N7PEO, N7EVJ, KB7LLG

#### Home-Brew

N7YVC, N7NJR, N7NKR, N7NNP, KB7WI, W7TTL, W7MOY, KG7FZ

#### Mountain Topping

KB7PNI, N7NJR, N7NNP, KB7WI, N7UXA

#### Portable/Field 2 Meter and 70 Centimeter

#### Antennas

N7YTS, N7YVC, KB7PNI, N7NKR, N7NNP, W7MOY, KG7FZ, KB7RAN, KA0EOF, WA7VNQ, N7UXA, N7PEO, N7EVJ, KB7LLG, AC7O

#### Portable/fixed HF Antennas

N7YTS, N7YVC, N7NNP, KB7WI, N7NJR, W7TTL, W7MOY, KG7FZ, KA0EOF, N7UXA, AC7O

#### QRP - Low Power HF Communications

WA7VNQ, N7NNP, N7NJR, W7MOY, KG7FZ, N7EVJ, KB7LLG

#### Radio Control

WA7VNQ, N7YTS, N7NNP, N7VFC, KG7FZ, KB7RAN

#### Remote HF Operations

N7UXA, KB7WI, N7NJR, W7MOY, KA0EOF

#### Satellite

N7YTS, KB7PNI, N7UXC, KG7FZ, KA0EOF

#### Tower Designs

WA7VNQ, N7YTS, KB7PNI, KB7WI, W7MOY, KG7FZ, N7VQY

#### Homebrew Antennas

N7VQY, N7NJR

#### Balloon Flight

N7UXC, N7NJR

## MEETING REPORT

### February 1993

The second regular club meeting of 1993 was held on February 11, beginning at 7:30 PM in Room 107 of the Engineering Classroom Building, Utah State University

The meeting was under the direction of Mike Farr KG7FZ, Club Vice President.

### PROGRAM

Scott Cannon N7LMO gave an excellent demonstration on what equipment we should all have for emergency preparedness & 72-Hour kits that can be put together as grab-and go kits. The following items were included in his (or his dad's) grab-&-go bag.

- Hand held radio
- Gel Cell Batter (10 Ah 12 Volt)
- Hot Rod Antenna (1/2 wave)
- Carton of Chocolate Milk
- Camera
- Cigarette Lighter Adapter for Radio
- Coax Cables
  - PL259 Female to PL259 Male end
  - PL259 Male to PL259 Male end
  - BNC to PL259 Male end
  - PL259 Male to BNC end
- Gender Adapters
  - Male BNC to Female PL259
  - Female PL259 to Female PL259
  - Male PL259 to Male PL259
  - Male BNC to Male BNC
  - Female BNC to Female BNC
- Twin - lead J-Pole with hook
- AA Batteries
- AA Battery Pack for Radio
- AM/FM Radio with hand crank up battery supply
- Prong to 2 Prong AC Adapters
- Swiss Army Knife
- Personal First Aid Kit
- Hour Aspirin Kit
- Snickers Bar
- Spare Coaxial Connectors
- Electrical Tape
- TP
- Flashlight
- Flash Light Batteries
- Flashlight bulbs
- Extension Cord
- Set of tools
- Small Screw Driver
- Pliers
- Wire Cutters
- Duct Tape
- Roll of Twine with Tennis Ball
- Hook
- Ear phone for radio
- Lightning Arrester
- Ground Wire
- Nylon Straps
- SWR Meter
- Ten-Penny Nails

- Pencils & Paper
  - Radio Manual
  - TNC Manuals
  - Cable Ties
  - Assorted Power Connectors for radio
  - Matches
  - \$10 worth of quarters
- All this equipment will fit in a small gym bag

Mike Farr KG7FZ then showed us what items he carries for his 72 Hour Emergency Back Pack Kit.

They are as follows:

- 4 Liters of water in plastic pop bottles
  - Coat
  - Complete Change of clothing
  - Old Shoes
  - Boy Scout Manual
  - Survival Books
  - Old Hunting Clothes
  - Cooking items
  - Hobo Stove
  - Assorted Small Cans
  - Plastic cover sheet
  - AM Radio
  - Matches
  - Compass
  - Flashlight
  - Spare flashlight bulbs
  - Eating Tools
  - Extra Batteries
  - First aid supply kit
  - Quaker Oats
  - TP
  - Harmonica
  - Potpourri Candles
  - Gloves
  - Garbage Bags
  - Lipton Soups
  - Egg Cartons with waxed sawdust
  - Can of Sterno
  - Sleeping Bag
  - Can Opener
  - Dental Floss
  - Sewing Needles
  - Bouillon Cubes
  - Crackers
  - Jerky
  - Extra hand-held batteries
  - Fire Starter
  - Plastic Bag for water
  - Kleenex
  - Water Purification Tablets
  - Medication
  - Tinfoil
- All items can cost around \$10 to \$20

72-Hour Emergency hand out sheets were passed out.

DeAnn Jensen KB7LLG is taking orders for club tee shirts. All who would like them please contact her.

Dean Stevens N7WDY is taking orders for hats with call signs. All who would like one contact him

Meeting Adjourned at 8:40 PM and refreshments were served.

Written by DAVE FULLMER N7RRZ

## FOR SALE

### Yaesu FT102 HF Transceiver

With Extra Filters

Cushcraft A4

3 Element Tri-bander

Sell together for \$800

Mike Guthrie N7LLE

Phone 563-5818 anytime

### Kenwood TH25AT

2 mtr Handheld Radio

with accessories\*

\$150

\*battery charger, Cigarette Plug Adapter, and "Hot Rod" 1/2 wave telescoping ant.

VERY GOOD CONDITION

Call 752-7751 and ask for Jeff

8:30 AM to 5:00 PM

## TRAINING AND TESTING

The amateur radio basic course is continuing at the present time. For details on upcoming classes, please watch the newsletter and listen to the nets. If you would like more information on our upcoming schedule, please contact our training coordinator, Clint Wellard KB7PNI at 750-6718.

The next testing session to be held here in Logan will be on Saturday, April 17th. As with previous test sessions, it is currently planned to start at 9:00 am in Room 107 of the USU Engineering Building classroom wing. Any updates to this schedule will be published here in April. It will also be announced on the nets. (Tuesdays at 9:00 on 146.72.)

Remember, by the rules, you will need to have the following when you come to the test session:

- Two forms of ID. (If licensed, your original license and one form of ID.)
- \$5.40 - Cash or, preferably, a check made to ARRL-VEC
- A copy of your license, and/or copies of your pending 610 Form or certificates of credit along with the originals.
- You may bring a form 610 with your personal information filled out or a form will be available at the test session.
- Pencils or pens
- You may bring a calculator but you must show that it is not pre-programmed!
- You may use a typewriter or lap top computer only if you have special needs and you make arrangements in advance.

PLAN TO UPGRADE THIS YEAR

... "160"

the antenna into place. Clayton climbed the fence into the neighbors horse pasture and held the north guy rope, Harl held the south guy rope, Dean took the west guy rope, and Dave took the east rope.

I held the base down while Mike, Jim and Chris lifted the end up until Dean could pull the antenna to a vertical position. Those holding the guy ropes held it vertical while Mike and Jim helped me lift the antenna and place it in the 4 inch PVC end cap on top of the beam. I was pleased with how fast it went up. You would think we did this every day.

We cut the top antenna wire to make a total length of 127 feet, tied all the guy ropes to the anchors, tied the top wire down, then went into the house to see if it would tune up. I purchased a nice antenna tuner with my HF rig several years ago. The literature claimed it would tune 160 meter antennas. After playing with the tuner we found we had cut the wire too short. We went out and added 15 feet more and tried tuning again. This time the tuner matched the antenna such that the radio saw about 1:1 SWR over the entire band.

I have had many good contacts using the antenna. I also noticed when I listen to the local AM stations that my S meter pegs to 60 DB over 9. I almost think the radio serves to attenuate the signal before feeding the speaker. I guess the moral to all this is if you pursue a project long enough, it will eventually get done. I

appreciate Jim Lofthouse who inspired the project and also kept asking me over the last two years when I was going to get it done. I also appreciate the others who helped that Saturday morning.

73 - Joe N7NJR

## Proposal For A New Nightly Net

Cache Valley has seen outstanding growth in the number of new radio amateurs over the last few years. Due to this influx of new hams the Tuesday night net is not meeting the needs of our radio amateur population.

The needs such as emergency training, technical forums, equipment swap, etc. cannot be addressed when we have 40 to 50 check-ins each week and only an hour to conduct the net (FCC Regulation).

By having a nightly net we would be able to address all these needs as well provide each amateur the opportunity to check in as many as 20 times per month. Currently, you can check in only 4 to 5 times per month on the BARC Net. Let me emphasize that you are under no obligation to check-in 20 times per month. You can check in 20 times, 10 times, once or not at all but your participation of course is what makes the nets enjoyable! This nightly format will allow you the flexibility to check in when your schedule allows.

To maintain some consistency between the nightly nets I have two basic

guidelines that are essential to making this work.

1. The net will be at 9 pm (2100 hrs) local time (M-F).
2. All nets except the proposed Wednesday net will be on the 146.720 club repeater (M,T,TH,F). This is essential to those who wish to join our activities and are outside of the valley. We should encourage hams who live outside of Cache Valley to participate in our net activities because they will be a key to our success in times of disaster or emergency.

I have a proposed nightly net schedule as follows:

Day	Time	Freq.	Activity
M	9 pm	146.720	Swap Net /Rag Chew /Trivia
T	9 pm	146.720	Formal Net /Announcements/Newsline
W	9 pm	Simplex	*Joint EOC /BARC Emergency Training Net
Th	9 pm	146.720	Technical Q & A Forum
F	9 pm	146.720	1st half hour Packet Forum then switch to a packet frequency for 2nd half hour to experiment

*\*Once per month this net will be a formal training session with one amateur assigned operating from the new Emergency Operations Center (EOC). Jeff Tingey (KF7ZX) will be coordinating these efforts. Stay Tuned!*

Each nightly net requires a Net Control Station (NCS). Five amateurs would be assigned a specific night. Each NCS only has to conduct net 4 times in a month. At the end of the month, it would be the responsibility for each NCS to find a new NCS for the next month. It would also be their responsibility to locate another substitute NCS in the case that they are unable to support the net on their assigned night.

These nets work! While I lived in Nebraska 2-meter nets such as these were common and participation is fairly high (15-25), but small enough that interaction with other amateurs is possible. Your participation as either an NCS or as a nightly check-in is the key to making this successful. Lets get the nightly net on the air!

73, Dan Anderson (KA0EOF)  
BARC Net Manager



JOE'S WORK CREW!