

TRAFFIC CALL

*Newsletter of the Ben White Memorial Nets
Founded 1938*

Hit and Bounce CW Traffic Net - Hit and Bounce Slow Net

MAY 2001

HBN MANAGER'S REPORT

Sis WD8DIN, Mgr

Although band conditions changed from day to day, and sometimes minute by minute, it wasn't easy, but April results show the dedication of our top-notch traffic handlers. We cleared 429 of 468 pieces of traffic listed, and QNI 574 from fifty-one different stations. Average time per session: 37.1 minutes. Top arfers in April (ten or more QTC) are K8LJG 99; KA8WNO 57; W2EAG 33; K8KV 31; NGIA 29; W8RTN 21; WA4DOX 18; WX4H 15; AB4E 14; KK3F 12; WA3UNX, N4ABM and WA3JXW 11 each. Top QNI's (20 days +): 29, WX4H and K2BCL; 26, W0GRW; 25, KA8WNO and AB4E; 24, W2MTA; 23 NIDHT; 22, K8LJG, KK3F and N3DE; 20, WA3UNX.

Many thanks to everyone for a job well done.

Silent Key

For those of you who missed the QNC sent May I by AA8PI, it is as follows:

SORRY TO PASS THIS INFO BUT RALPH W2NGL IS A SILENT KEY X IRS PASSING WAS A SURPRISE TO MANY OF US X PLEASE LET HBN MEMBERS KNOW X 73

CLIFF N2AKZ

NIEW QN1 in April: K9QEW Daryl in IL, W4YE Leland in VA and KILGQ Dennis in NH.

A thought....

It has been suggested that we consider moving HBN to the vicinity of our alternate frequency, 7114KHz. What are your thoughts on this, pro or con?

Let's wish Sam, WB5ZJN a safe and enjoyable trip to Italy! 73, ARF, Sis

HAPPY BIRTHDAY!

MAY: 22 K8LJG;
23 AA4AT; 24 AA2YV;
26 WA3YLO; 28 KA8WNO;
31 W8RTN.

JUNE: 8 KWIU;
8 KCIDI; 10 WB8S1W;
12 WOUC; 18 WA4SRD;
29 K2BCL.

HIT AND BOUNCE SLOW NET

MANAGER'S COMMENTS

C. M. (SAM) Shearer, WB5ZJN Mgr.
Charles "Chuck" Punzell, N30N, Asst. Mgr.

Another month of lousy band conditions did not denture 28 of our tenaciously talented technocrats form their net. Thanks to all for hanging in there. This too shall pass! Top ranked QNI's this month go to K2BCL (29), K2YAI (29), VE3DTR (29), and close behind were KG2HA (28), W3QQ (28), NR9K (27), WA3DUH (26), WB5ZJN (26), N30N (25), and W2MTA (23). We appreciate everyone who QNI'ed.

Traffic: Let's make it a policy that HBSN will not let any traffic be listed that we do not take and, if we can not directly deliver it, let's relay it to another net. If you hear traffic listed, and no one can deliver it, and, especially if your are going to HBN, by all means take the traffic and relay it there. Also, many of you are active on afternoon and evening nets. Don't hesitate to take the traffic and list it there. The main thing is that we want to be known as a net where, if traffic is listed, we will be taken and it will get passed.

Going to Italy: From May 17 to May 28, I will be off the air due to a tour in Italy with the 46 singers in the Kent State University Chorale. This is my top ensemble at the university, and we will be singing in Florence, Rome, Venice, and Greve. We are all very excited about the trip, and, although we will be singing quite a lot, we will have some time to play "tourist" and taste some Italian vino. The net will be in the most capable hands of our Assistant Net Manager, Chuck Punzell, N30N. Ciao, baby!

Change: **Deadline for news 30th** of each month via **USPS or Email through 5th** of following month.

Introduce yourself.. send your profile, and photo, if possible. I found some issues of TC from a few years ago with some interesting ones- an update would be appreciated, and we'd like to hear from the new participants. Thanks.

PROFILE: AF4QZ

No one in my family are hams. My interests came about in a pretty strange way ... H1.

I was spending the night at a friends house, and his dad was a pilot with a plane. Now I love to fly, so when their next door neighbor came over (a ham) and asked if we could all fly the next day to a hamfest, I jumped on the offer, hey I LOVED TO FLY.!!! When we got to the hamfest, I saw all the funny looking guys walking around with their radios, and funny letters on their hats and shirts. It really interested me, and that's how it all started!

Well, I've been a ham for two years now. I got my first license in February 1999 with the No-Code Tech License. In July of that year I passed the 5 WPM and got my TechPlus, then in September I passed the 13 and General, then December of 1999 I passed the Advanced, and finally in February 2000 I passed the Extra and 20 WPM and got my Extra. Just recently, I got interested in CW. I was always active in voice-traffic nets, and I decided that I wanted to do more. I turned to the keyer and CN and began checking in as the South Carolina rep. I increased my recv/xmit speed and went on to become a 4m rep and NCS of CN. I now spend most of my "hamlife" on CW--98% of the time. I'm can receive just about as fast as you want to send and try to respond at that same speed.

Compact 40 MIETER ANTENNA - Obie WA4DOX

Several years ago, while visiting Sis, WD8DIN, in Hendersonville, NC, I inquired about the ubiquitous 40-meter full-wave loop that I knew was responsible for a consistent BIG signal all over the Hit-and-Bounce-Net operating area, with a transmit power level of only 100 watts.

She pointed to the back yard where four Radio Shack TV masts supported a single wire loop fed by RG-58 coax. I was amazed. Since the HBN is no ordinary CW traffic net, being wide-coverage, there are check-ins from Maine to Florida to Texas to Minnesota. That's a pretty grand coverage area and omnidirectionality is obviously a must.

At that time, I would use either a 40meter inverted vee or an R-7 vertical, depending on directionality needs. My vee runs northeast to southwest, so it was going to be poor in those directions, thus I would rely on the R-7 more than the dipole since I could hear everyone on the R-7 while I wasn't so lucky on the vee.

At that time, I was also QNI more than NCS so I didn't have to switch between the two antennas very often, but when I took up a permanent HBN NCS slot, I decided to incorporate a 40-meter full-wave loop into my antenna farm. Living on 24 acres, I have toyed with the idea of rhombics, etc., but they are fixed arrays and require special supports, like 60-foot telephone poles, precisely placed. 20 of my 24 acres is wooded, and I could likely find just the right trees for one rhombic, but I want to operate Amateur Radio and not take up amateur surveying.

My antenna farm is on the west side of the house, and each of the three already installed antennas incorporated mother nature to hold things up. The two inverted vees, one for 80 and one for 40 have their apices (the plural of apex) as high up as I could manage with a 40-foot telescoping ladder. The R-7 multiband vertical is on a mast which is bolted to what's left of a tree that I sawed off well above head height. The nice things about using trees for antenna supports are that you don't have to dig any holes, you don't have to mix any concrete and you don't have to use any guy-wires. Nothing beats mother nature's system of holding trees in place.

My initial calculations told me that for a square loop, such as Sis's, I'd have to find four trees, each about thirty-three feet apart at the corners of a square -more or less. I walked and looked and measured and so on for a couple of hours, finally deciding on four which I felt would suit my needs. I made the calculation and cut the wire and then set about climbing my telescoping ladder to fix insulators to the trees, threading the wire as I finished each insulator. Since Sis's loop was no more than 20' off the ground, I decided to keep mine low - no need to "reinvent the wheel" here.

My first reaction as I measured the SWR was that I had done something wrong. The antenna appeared to be resonant at a much higher frequency than I had anticipated and the SWR appeared to be fairly constant, never dipping below 2: 1. Nonetheless, I was able to tune the loop using my rig's internal tuner, so I just dealt with it. I later re-read the ARRL Antenna Manual and discovered that the number used for the calculation for a full-wave loop was not related to the number used for the calculation for a half-wave dipole. I had recalled $468/f$, where f is the frequency in MHz, with the result in feet, for a half-wave dipole. Doubling that to $936/f$ for a full-wave loop is where I went wrong. The formula for a full-wave loop is $1005/f$ which results in a *much* longer wire for a given frequency.

Well, I got a second chance to measure the loop a few months after I installed it since a strong wind snapped my AWG-12 solid wire like a wet noodle. I should have known **better** and used AWG-12 stranded, but the day I installed the antenna, I was out of stranded wire and had lots of solid wire just begging to be used up. I went to the hardware store and looked for AWG-12 stranded with black insulation (it hides better in the trees than say white or red, for example), but the salesperson said I'd have to wait until the following shipment as they were out of stock of the 500foot contractor-priced rolls (about half of what you pay for the same wire by-the-foot). In the meantime, I was having to resort to using my dipole and R-7 to NCS the HBN and it became such a burden that I could hardly wait to rebuild the loop.

Once the wire arrived, I calculated the length, this time 142.7 feet using the right formula versus 132.9 feet using the wrong formula. Now the problem was that the four trees were no longer the correct distance apart. Had they been Radio Shack TV poles, I could have simply moved them a few feet to prevent the wires from being slack. Trees are much harder to move, no thanks to mother nature.

I decided on a compromise. I located a fifth tree, beyond the west side of the loop, but too far away to simply bolt an insulator and thread the wire (else the wire would not reach the ending point which was just inches from the starting point, the antenna being a loop). I still bolted an insulator to the tree, but I rotated it 90-degrees so that I could pass a rope through it from below, where one end of the rope was tied to an eyelet that was bolted to the tree about four feet off the ground, and the other end of it was tied to a block of wood which had another insulator bolted to its end. This Rube Goldberg contraption became my "tensioner" and allowed me to slacken the antenna while threading it through the other five insulators and then tension it when I was done.

Yesterday, I replaced the stranded loop since it had come down in a windstorm last year - yes I've been using the dipole and R-7, much to my chagrin and no doubt to others as well, not being to hear the NCS. I cut 150 feet of wire and started threading, from start to finish in just under 20 minutes. It does take time moving a 20-foot extension ladder from tree to tree, collapsing and extending it five times. I fixed one end of the wire to the center insulator* (see note) permanently and then temporarily fixed the other end of the wire to the second terminal.

I checked the antenna using an WJ SWR Analyzer and found the resonant spot to be around 6.7 MHz. Calculating that I needed some seven feet less wire, I whacked off a chunk, temporarily fixing the end to the center insulator. That brought resonance up to about 6.9 MHz, close but no cigar. Another two feet removed brought it to 7.0 N4Hz, still not quite close enough. Before trimming another inch though, I decided it would be a good idea to imitate a permanent connection (meaning that I should wrap the free end of the wire twice around the insulator and then three times around the antenna wire before connecting it to the center insulator) in order to determine what effect this would have on the resonant frequency. The "fixing" of the end of the wire brought the resonance up to 7.004 N4Hz, an increase of 4 MHz, some 10% of my goal of 7.042 N4Hz. I calculated the "distance" to 7.042 N1Hz as some 9.3 inches and conservatively cut the wire only 8.0 inches, recalling that very well-known saying, "gee, I've cut this wire three times and it's still too short". A final check and resonance was calculated to be 7.040 MHz which is right on the QRP calling frequency, and close enough for me. All told, I spent a couple of hours putting this antenna up, but the performance of this antenna far outweighs any time it takes to put it together.

If you are used to the tuning characteristics of a dipole, you know that there is a pretty good "null" in SWR at resonance often as low as 1.1:1 or 1.2:1 and that SWR rises rather quickly away from resonance, resulting in a fairly narrow-bandwidth antenna. This is a normal characteristic of a higher-Q resonant circuit. The resonant SWR of the full-wave loop is around 1.8:1, and it is not a drastic "null" so the SWR rises fairly slowly away from resonance, resulting in a fairly wide-bandwidth antenna. For a dipole, it is typical to have a 3:1 SWR

bandwidth of less than 100 kHz at 40 meters. The loop, on the other hand, has a 3:1 SWR bandwidth of more than 300 kHz at 40 meters; hence it can easily be used from the bottom of the band to the top of the band, including MARS operation.

Getting back to the subject, this is a compact 40-meter antenna. It requires only 35 feet on each side of a square. Radio Shack TV masts and less than 150' of AWG-12 STRANDED wire are all it takes to work. If you are worried that the AWG-12 wire may be too heavy for the poles - or too obvious to the neighbors - then use AWG-20 stranded wire whatever size it takes to suit your budget and your Home Owner's Association or to stay within your deed's Covenants, Conditions and Restrictions Even small city housing lots are at least 50-feet wide. With a 50 x 50 backyard, you can enjoy using this excellent antenna more easily than you could enjoy using a dipole. I have been able to tune the loop on all bands from 40 meters to 10 meters with fantastic results.

* I use some nifty military surplus center insulators that I purchased real cheap from Fair Radio Sales <http://www.fairradio.com> - I checked their website and it appears they no longer have any of these, but FYI: INSULATOR ANTENNA IL-4/GRA4 NSN 5970-00405-8233 are still around if you look for them. If you wish to use these, be warned in advance that the center insulator's coaxial connector is a Type-N female, thus if you're using PL-259's you'll need a UG-1461U adapter and if you're using BNC's you'll need a UG201/TJ adapter. Since all of my coaxial cables are terminated in Type-N connectors, I don't need to use adapters. * I found a great compact CW straight key, also at Fair Radio Sales: <http://www.fairradio.com/Ocan.html>

73, **OBIE...**

TRAFFIC HANDLERS' PICNIC

Saturday, July 28, 2001 At the QTH of W2MTA in Newark Valley, NY. Friday night supper at a local restaurant. Many new motel facilities available in Vestal NY area along the Parkway, Route 434, some 15 miles from Bill's QTH. Other facilities available at Endicott, Johnson City and Owego.

EMAIL ADDRESS UPDATE

WA2CUW: My Email Addresses are now
Cogard67@aol.com and wa2cuw@arrl.net

K2BCL: k2bcl@juno.com

KJ4N: Please change my email address to **kj4n@arrl.net**. Effective April 20, 2001, my old address, ylham@ix.netcom.com, will no longer be valid. If email to that address should be returned to you, please forward to **kj4n@arrl.net**. Thanks much. Jan Scheuerman, **ylham@ix.netcom.com** or **kj4n@arrl.net**

Home Page: <http://www.geocities.com/ylham> QCWA Edison #196:
http://www.geocities.com/ylham/qg/i_dex.html -KJ4N

LOOKING BACK...

"I spotted something in "QST" May '01 p109. From the 75/50/25 years ago, there is a feature of George, WINJM with a '51 picture. Thought the ops would be interested. I have listened to his high speed code practice for years".

KA8WNO's Reflections of the past over last 15 or so years...

HBN has had a good number of NCS arfers that I remember. One was Larry, WA8HGH, of Ohio. He was NCS on (I think) Tuesdays for a number of years. Far as I know, he was the only arfer I served with in WW2. We were on the USS Samuel Chase during the invasion of Sicily. I was a radioman with Admiral Hall's staff and Larry was attached to the ship. Didn't know him then and never met Larry. Discovered the above when a profile of him was printed in TC a year or so before he died, about 1995, I think.

A favorite of mine was Gale, VE3GSQ. I told her about HbN when passing tfc on ean/4. I met Gale and her OM Phil, VE3FAS, in NY at the tfc handlers picnic in, I think, 1994. Arriving at the picnic the following summer, at the same location, I was told she had been buried the day before. A terrible shock.

Art, AA4AT, was a regular NCS for quite a few years. Believe he had too many other irons in the fire to continue.

Lynne, WAIKPP was an active HBN NCS for a few years. She had too many other things going on in R.I. and got away from BBN and maybe CW.

Everyone's friend, Pete, W2WSS, had a regular stint as NCS for awhile, but like many of our arfers, had too many other obligations to continue.

Another favorite of all of us, Marcia, KWIU, is a fine NCS, but she is one busy lady and had to give up HBN NCS some time back.

A few of our more recent HBN addicts may not remember Gale, NJ4L, HBN manager for many years. He was the best of them all, I think.

C.W. versus I.C.W -KA5NNG

Contrary to what has been written by some, C.W. and I.C.W. are not the same thing. In an ordinary CW. transmitter, when you close the key and keep it down, you get a continuous wave at the transmit frequency, hence the designation continuous wave transmitter. But, when the key is closed on an I.C.W. transmitter, you get a series of "wavetrains" at the transmit frequency, each separated from the next by a period of "nosignal". The repetition rate (ie: how many wave trains occur per second) determines the pitch of the received signal. The objective was to allow reception of code transmissions on a receiver designed for A.M. reception, meaning, a receiver which has no B.F.O. It could be viewed as roughly equivalent to A2 type emission, where the RF is first amplitude modulated by a tone and then that modulated wave is keyed. I.C.W. also is somewhat similar to a spark transmitter signal except that instead of "trains" of damped waves, the "trains" consist of waves of constant amplitude and frequency.

The actual mechanism of creating the I.C.W. waves varied. In some transmitters, it was accomplished by means of a mechanically driven "interrupter" or chopper. In other cases, it was by means of what is called a "self-rectifying" oscillator. This is an oscillator in which an A.C. voltage is used as the plate supply, so that the tube only generates RF output during the positive half-cycles of the plate voltage.

Change in lineup HBSN NCS 05/06/01
The Meeting Places- when and where:
HBSN 3714 kHz 7:30 AM Daily

Sunday	VE3DTR	John
Monday	Open	
Tuesday	NR9K	Ad
Wednesday	WB5ZJN	Sam
Thursday	N3ON	Chuck
Friday	WD8DHC	Mike
Saturday	Open	

HBN 7042KHz 8:30AM Daily
(alt 7114 Khz)

Sunday	WA4DOX	Obie
Monday	KA8WNO	Jack
Tuesday	WA3UNX	Don
Wednesday	N4ABM	Ole
Thursday	KC8GMT	Lora
Friday	WD8DIN	Sis
Saturday	W2EAG	Mark

Treasurer's Report

Ole, N4ABM Treasurer

HBN/HSBN Balance as of May 14/2001:

Last Balance MAR 22/01 \$67.52

Contribs After March 22/01

Apr 11/01	K3NNI	\$20.00
Apr 19/01	WA3YLO	\$15.00
Apr 20/01	AC4DV	\$20.00
May 12/01	WFIM	\$20.00

Latest Balance May 12/01 \$142.52

To make contributions, please make checks payable to
Merritt Olson, 12106 Stirrup Rd., Reston Va.
20191-2104.

Do not make checks out to HBN.

Checks are preferred for purposes of record keeping.

Do not send contributions to Traffic Call.

Send address corrections or changes to the editor of
 Traffic Call via radiogram, USPS, or email:
arfer@-hitandbounce.net or injun20@hotmail.com

"Say Arf !".

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