

New Bern Amateur Radio Club



foto by W2RLG & WA0ZGL

Volume 31, Issue 10, October, 2008



Logo tnx to Eve, XYL of W2HVX

W4EWN/R

146.610/ 146.010 PL 100 Hz.
444.900 / 449.900 PL 100 Hz.

Website: <http://www.nbarc.org>

Next Meeting -- Thursday, October 2, 2008

6:30 PM at Famous Subs & Pizza, 2210 Neuse Blvd.

Program: To be announced. Show up and find out, it could be you?

Minutes of Meeting

NEW BERN AMATEUR RADIO CLUB

4 September 2008

The regular monthly meeting of the New Bern Amateur Radio Club was held on this day and the meeting was called to order by Vice President Pete Koonce, **KA4SXX**, at 6:45pm. President Dave Warwick, **K4DJW** was unable to make the meeting. Introductions were made from the floor with 28 members present.

The treasurer's report was in the newsletter as was the minutes of the last meeting. No changes were made to either report. There were no changes listed for the web site or the newsletter. The repeater report was normal with an indication that the 440 was off the air, but it would be repaired soon.

Ken, **K4KDM**, reported that the next license (tech) class would be held the 4th, 11th, and 18th of October. The 18th will be a brief refresher and then the exam. Ken distributed class outlines/instructors.

Jim, **KS4O**, Craven County EC, reported that the club communication trailer needed a home and that it would

have to be towed by a fairly hefty vehicle that needed an oversize ball hitch arrangement. Some repairs on the trailer are needed and volunteers would certainly be appreciated. Jim also mentioned that with the storm approach, shelters were being set up, **ARES**, would be activated, and HF 3.923 Mhz would be used for communication.

Bruce, **N8UTY**, announced that the **MS-150** would be happening soon and that club member volunteers were needed for all stations. He mentioned that they were expecting upwards of 2,400 cyclists this year. He also mentioned that there would be a Thursday evening planning session at 7pm, and that e-mails will be sent out with instructions.

Ralph, **N4RAB**, will be taking over the finances of the group. The club voted to recognize Charlie Gould, **K4VC**, for his outstanding service to the club for over twenty years. An excellent program was presented by Marijane Sipple, **NP2AZ**. She was assisted by husband Vince, **N6JIB**. Marijane flew Grumman Goose seaplanes in the Antilles Islands and in Hawaii. Great pictures! The meeting was adjourned at 8:10pm. No Door prize.

Ray Hemphill, **W7OPH**, Secretary.

NEW BERN AMATEUR RADIO CLUB, INC.
W4EWN
NEW BERN, NORTH CAROLINA
4 SEPTEMBER 2008

PROCLAMATION

Whereas, Charles Gould, amateur radio call sign K4VC,, being an active member in good standing of the New Bern Amateur Radio Club, Inc., and;

Whereas, Having achieved the Amateur Extra license, and demonstrated excellence in operating on the bands and frequencies, and volunteering in times of emergencies, and;

Whereas, 'Charlie' Gould consistently promoted the hobby and the membership of the New Bern Amateur Radio Club, and;

Whereas, For a period of more than twenty years managed the funds of the club, and assisted with rosters and newsletters, and;

Whereas, Since the inception of the Volunteer Examiner program, demonstrated outstanding leadership qualities in the continuation of making exam sessions frequently available to those interested in the hobby, and;

Now therefore let it be resolved, by affirmative vote of the membership of the New Bern Amateur Radio Club, that **Charles Gould, K4VC**, be extended the status of **life member emeritus**.

Adopted this forth day of September, 2008, and signed by the President of the New Bern Amateur Radio Club, Inc.,

David J. Warwick, K4DJW , President



Mac, WA0ZGL, Charlie, K4VC, Dave, K4DJW, The Presentation

ARES Angle

We got lucky with Hanna. The Craven County EOC did open, but our services were not required. I went to the EOC early Saturday to familiarize myself with the setup. One change that may prove useful is the availability of wireless internet access (wi-fi). The county IT department plans to have such internet access available, and it won't be restricted since it will be outside the county's internal network. This means we could have a laptop to use for access to weather sites and to Echolink. Since our "spot" is outside the courtroom that houses the EOC, we don't have the benefit of the projected information. We do, however, have 120VAC power available that is on one of their circuits with generator backup.

The NC Section's Simulated Emergency Test (SET) will take place beginning at 0800 on Saturday, October 4. Plans are still being finalized, and I hope to be able to tell you more at the October 2 meeting. Here is a quote from the September Section News Summary: "The test scenario will involve a major hurricane hitting our coast, causing widespread flooding along the coast and into the piedmont area. The mountains will also experience landslides due to heavy rainfall. Many portions of our state will suffer from power outages and communications disruptions. Less affected areas of the piedmont will have to deal with an influx of evacuees from other areas. The Tarheel Emergency Net will be active on 3.927MHz from 8am, opening immediately after the North Carolina Morning Net. We'll move to 7.232MHz if needed because of propagation."

If any of you have suggestions as to what we might do in Craven County, please let me know. This will be my first SET, and I'm open to suggestions.

Jim, **KS4O**
Craven County **ARES EC**



The Plaque, to go with the Proclamation

Amateur Radio Technician Class

SPONSOR: NEW BERN AMATEUR RADIO CLUB

LOCATION: ST. ANDREW LUTHERAN CHURCH

DATE: SATURDAYS: OCTOBER 4, 11, AND 18 2008

CONTACTS: Mac Eutsler, **WA0ZGL**, Ralph Bitely, **N4RAB**, Ken McCain, **K4KDM**



Why We're Here: Hams and Bike MS 2008*

by Gary Pearce, **KN4AQ**

I was shadowing Bob Bryan, the President of the Eastern NC Chapter of the MS Society. We'd left Rest Stop 3 a few miles back, and in the distance ahead there was a knot of people and bikes in the middle of the quiet, rural road. Not good.

As we pulled closer we could see that a female rider was lying on the pavement, right in the middle of the road. Two bikes had collided, and both riders went down. One was scraped up, and her wrist and elbow hurt. The other was still on the ground, bleeding a little from a gash on her forehead.

Another rider was on his cell phone, calling 911, but he didn't know exactly where they were. Around us were woods and fields – no buildings, intersections or addresses in sight. My GPS and computerized Street Atlas map pinpointed the location, and an ambulance was dispatched. I'd spent nearly a full day plotting the

turns on the map from the cue sheet - now it proved time well spent.

On the air, I declared the emergency. Since Bob was the responsible MS official, and the ambulance was on the way, there wasn't much for the net to do, but it did alert the other MS officials, and let SAGS in the area know what they'd be encountering on that stretch of road. And it brought one of our motorcycle team EMTs who was nearby to provide first aid. The net continued with routine business.

Moments later, Bruce Buck, **KC4UQN**, declared another emergency – another rider down, another ambulance needed, a few miles on the other side of Rest Stop 3.

An ambulance reached Bruce's location first. It was taking a long time for one to arrive at mine. There was an ambulance stationed at Rest Stop 3, and calls to Howard Barrett, **KG4MBD**, at the Rest Stop, and Bruce at the other accident, confirmed that the RS 3 ambulance had been dispatched to Bruce's incident. Bruce checked with his ambulance driver to make sure another one was on the way to my situation. It was, but it was coming from a lot farther away. It finally arrived, and took both riders to the hospital.

In this era of ubiquitous cell phones, it's rare for a SAG to be the first on scene with communications, although it can happen, as there is spotty cell coverage for much of the Bike MS course in rural Craven County outside New Bern. Our job is to get an official to the scene, and make sure things run smoothly until the accident is cleared. We get the location pinpointed, notify the MS officials, relay medical advice and questions, and monitor the situation until it's over.

This year was a little worse than usual for hospital transports, but there are usually one or two a day for every event. The accidents are usually single-bike spills, or collisions between two bikes. Auto-bike collisions are rare. I can only remember one in the 17 years I've been participating. But there was a fatal incident in the Charlotte ride last year when a load hanging off the side of a pickup struck a rider.

This was Chapter President Bob Bryan's last MS Bike Tour - he's moving to Florida to run another charity operation. He got quite a send-off. I'll be around next year to break in yet another Chapter official. Some of us hams have been around longer, and have seen a greater variety of bike events, than the MS folks ever will. They say they couldn't do it without us, and I think they're right.

*formerly known as the MS-150, Bike MS now hosts two-day rides totaling 60, 150 and 200 miles, with fun rides for the kids at the starting line. Well over 2000 bikes participated in this year's event



Ed, **KI4EQH**, mans Rest Stop 4



SAG 5, Jim, **KS4O**, loads a bike 1



Bob, **WB1CCY**, mans Rest Stop 5

More pix at:
<http://www.myfabrik.com/pearce10/public/garypearce/729F78CE9B42138F#>

Our thanks to Gary Pearce, **KN4AQ**, for the write-up and pix

VERTICAL ANTENNAS – PART III

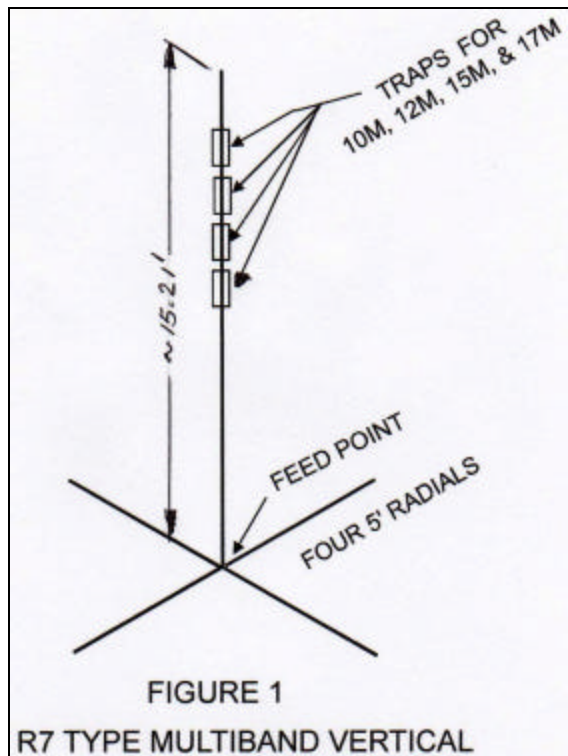
THE MULTIBAND TRAP VERTICAL

ANDY GRIFFITH, W4ULD

Another popular multiband vertical is the trap vertical for 10M, 12M, 15 M, 17M and 20M. This antenna is designated the R7 by one manufacturer. My design, which was done using the EZNEC+4 computer program, is depicted in Figure 1. The antenna consists of a vertical section containing the traps and four horizontal radials. The commercial version is fed at the base of the vertical with 50 ohm coax through a form of matching circuit. According to EZNEC+4, my design showed less than 2:1 SWR on all bands so a matching circuit should not be required. My design used 5/8 in. diameter copper water pipe and the vertical section was 15.21 ft. tall. I will say more about the traps later.

The multi trap vertical antenna has a low angle of radiation which is good for DX and has a quite small “footprint”. The gain is not as good as that of the ground plane antenna because of losses in the traps. Neither is the gain as good as that of a 30 ft. window line fed, rotatable dipole. So, if one is considering constructing an antenna for 10M through 20M, they should consider the 30 ft. long rotatable dipole. Such an antenna can be constructed light enough so that it can be rotated with a TV rotator or by the “strong arm” method. The gain of the multi-trap vertical compared to a rotatable dipole is shown in Table I.

I do not intend this article to be a construction article; however, for those interested in home brewing a multi-trap vertical, the traps I used in EZNEC+4 and their location above the radials is shown in Table II. The traps should be wound on 1/4 in. schedule 20 PVC pipe with #12 enameled wire. The capacitors



should be high voltage (at least 7 KV for 100 watt power) ceramic cylinder type. Alternatively, one can construct the caps from double sided Teflon circuit board. Ordinary phenolic or glass-epoxy board has too much loss for this application. Another way is to make the caps out of concentric brass hobby tubing using air as the dielectric. At least one commercial manufacturer uses this technique. With this method the traps can be tuned to frequency by adjusting the length of the concentric tubing that is engaged. Since there will be only about one foot between the centers of the traps, the length of the traps must be held to six inches or less.

The location of the traps predicted by EZNEC+4 is only approximate. When building a multitrap vertical one needs to provide some means of adjustment to locate the traps at the point where the antenna is resonant at the frequency of the traps. One should initially place the traps at their approximate location. Starting on 10M and preferably using an antenna analyzer such as the MFJ-259, adjust the trap position until the antenna is resonant at the trap frequency. Next go to 12M and repeat the process by adjusting the position of the 12M trap. Repeat this process for 15M and 17M. When the four higher bands are tuned, adjust the length of the vertical for resonance on 20M. This same procedure should be used if one is restoring or retuning a multi-trap vertical. The resonant frequency of the commercial traps must be determined beforehand using a “grid dip oscillator” or the “dip oscillator” kit that one can buy for the MFJ-259. Refer to the *ARRL Antenna Book* for details on how to measure the resonant frequency of traps.

I got deeper into this article than I had planned to. I built a multi-trap vertical many years ago. I no longer have the plans but I remember much of what I did. If anyone is interested in further details contact me at Agriffith003@ec.rr.com.

TABLE 1
GAIN OF ROTATABLE DIPOLE VS. R7 TRAP VERTICAL

FREQ., MHZ.	DIP. GAIN DB	ELEV. DEG.	TOTAL LOSS, DB	NET GAIN, DB	R7 GAIN DB	R7 VS DIP DB
28.4	6.82	11	1.01	5.81	0.49	-5.32
24.93	7.06	12	0.81	6.25	-1.13	-7.38
21.2	5.93	13	0.75	5.18	-1.70	-6.88
18.11	3.59	13	0.59	3.0	-1.60	-4.60
14.2	1.69	15	0.79	0.9	-0.06	-0.96

TOTAL LOSS FOR DIPOLE INCLUDES 65 FT. CQ-552 WINDOW LINE, BALUN, & TUNER
R7 GAIN IS ANTENNA GAIN MINUS LOSS IN 65 FT. RG-213
ELEV. DEG. IS RADIATION ANGLE FOR MAXIMUM GAIN OF R7. DIPOLE GAIN ADJUSTED TO THIS ANGLE
R7 VS DIP, DB IS DIFFERENCE BETWEEN NET GAIN OF DIPOLE AND NET GAIN OF R7. 1 S UNIT = 6 DB

TABLE II
TRAPS FOR TRAP VERTICAL

FREQ. MHz.	R, OHMS	L uHy.	C pF.	CENTER HEIGHT ABOVE BASE, FT.
28.4	.934	1.047	30	9.936
24.93	.798	1.019	40	10.884
21.2	.75	1.127	50	11.981
18.11	.88	1.545	50	13.184

R BASED ON Q=200

Cast of Characters:

President: Dave Warwick, K4DJW
Vice President: Pete Koonce, KA4SXX
Secretary: Ray Hemphill, W7OPH
Treasurer: Charlie Gould, K4VC
Public Svc/Special Events: Bruce Arnold, N8UTY
Trustee: Billy Morton, KE4YMA
Photography: Mac Eutsler, WA0ZGL
Emergency Communications: Jim Wright, KS4O
Assistant Em. Comm.: Dave Warwick, K4DJW
Program Committee Chairman: Bill Lindquist, K2UFC
Selected Local Nets Times are local time, unless otherwise stated
Club Net Manager: position open
Craven County ARES: 146.61 MHz, 2000 before threatening
wx; monitor during ARES activations
NC ARES Net, 3.923 MHz, 19:30 daily
Waterway Radio Cruising Club: 7268 kHz, 0745 daily
Fairfield Harbor Cruising Net, 7224, 0730 M-F
NC Morning Net: 3926 kHz, 0745 daily
Carolina Slow Net (CW): 3.571 kHz, at 8PM ET (5wpm) daily
Coastal Carolina Emergency Net: 3908 kHz, 1900 daily
Carolinas Net (CW): 3573 kHz, 1900 (25 WPM), 2200 (12-15
WPM) daily
Carteret County ARS/ARES: 145.45 mHz, 1930 Tues./ Emerg
Traffic handling 1st Tues. after 4th Sat., monthly Skywarn:
145.21 mHz, 2100 Tuesdays
Pamlico County ARES: 147.210 MHz, tone 151.4, 1930 Wed.
ENC Emergency: 146.685 mHz, 2100 Thursdays
ENC Traffic: 146.685 mHz, 2030 daily
NBARC Ragchew: 146.61 mHz, 2000 daily

The Newsletter Team:

Al Parker, W8UT, Editor
The NBARC Newsletter is the newsletter of the New Bern
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28560. NBARC is an affiliated club with the ARRL and ARES.
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