

# New Bern Amateur Radio Club



foto by W2RLG & W2HVX

Volume 30, Issue 7, July, 2007



**W4EWN/R**

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

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

## Next Meeting -- Thursday, July 5, 2007

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

**Program:** The meeting on July 5<sup>th</sup> will be held at the Sheriff's office starting at 5:30pm for a tour of the 911 dispatch center. After the tour the meeting will move back to Famous Subs restaurant for dinner and the remainder of the meeting.

### FINANCIAL REPORT

JUNE 01, 2007 --- JUNE 30, 2007

#### **CHECKING**

Balance @ May 31, 2007           \$ 1,507.22

#### Expenses:

06/08 Prog Nrg                   23.01

06/19 Embarq                    26.51

Total                           (\$ 49.52)

Subtotal                         \$ 1,457.70

#### Deposits:

06/07 Membership           \$ 40.00

Total                           \$ 40.00

Balance @ June 30, 2007       \$ 1,497.70

#### **SAVINGS**

Balance @ May 31, 2007       \$ 2,856.33

Deposits: - none

Balance @ June 30, 2007       \$ 2,856.33

**GRAND TOTAL**                               **\$ 4,354.03**

CR Gould, **K4VC**, Treasurer

### NEUSE RIVER DAY

#### NBARC CREW BEATS NRD HICCUPS

Despite some needed initial adjustments and a few road bumps along the way, we managed to "get the messages through."

Inexplicably, the VHF/UHF crossband radio in the comm trailer refused to do its crossing. With only a slight delay, the crossband rig in **W2HVX**'s car was again pressed into service.

As reports of paddlers' positions came in, some transmissions had to be repeated due to broken-up signals. Again, the 4-mile and 8-mile races went in opposite directions (down the Trent and up the Neuse, respectively) and we're not sure about possible dead spots into the repeater. Weak signals may also have been due to interference by metal poles supporting bimini tops. Tony, **N4WAJ**, found that relocating in the boat improved his transmissions.

Special acknowledgement goes to Ethan Warwick, **K4EAW**, for his willingness to take over an important post

without any prior notice. Even in a controlled net environment, he passed requested information to the race directors like a seasoned operator. Nice job!

Once the two long races were complete, our marine communications were no longer needed. And because several activities on shore were consolidated under one tent, we needed fewer ops than in the past. We will suggest some changes to the **NRF** staff for next year as to who should have radio shadows.

So, thanks to the following participants in 2007 Neuse River Day:

Net Controls: Bill, **K4VHO**, and Ray, **W7OPH**

Event Manager Shadow: Sonny, **W3ADD**

NRF Tent: Bruce, **N8UTY**

Launch Site: Ethan, **K4EAW**

Shore Standbys: John, **KR4ZJ**, and Bob, **W2HVX**

Marine Ops: Dick, **K4JJW** (Safety Boat Coordinator),

Dave, **K4DJW**, Pete, **KA4SXX**, Tony, **N4WAJ**,

Ed, **KI4EQH**, Lloyd, **KC2KR**, Charlie, **K4VC**,

Ken, **K4KDM**, and Ralph, **N4RAB**

73, Bob, **W2HVX**

## 2007 Neuse River Day Group



First Row, l/r: Pete, **KA4SXX**, Tony, **N4WAJ**, Bill, **K4VHO**, Sonny, **W3ADD**, Ed, **KI4EQH**, Bob, **W2HVX**, Ray, **W7OPH**

Second Row: Ethan, **K4EAW**, Dave, **K4DJW**, Bruce, **N8UTY**, Ken, **K4KDM**

Third Row: Charlie, **K4VC**, Ralph, **N4RAB**, Lloyd, **KC2KR**

Not shown: Dick, **K4JJW** (Safety Boat Coordinator), John, **KR4ZJ** (who ran in the Merci Clinic Run)

## Minutes of the meeting -

June 7, 2007

The regular meeting of the New Bern Amateur Radio Club was held on the above date and the meeting was called to order by President Mac Eutsler, **WA0ZGL**, at approximately 6:35pm. Introductions were made from the floor with thirty-three present; roster is attached.

The club members were reminded the next meeting on July 5<sup>th</sup> will be held at the Sheriff's office starting at 5:30pm for a tour of the 911 dispatch center. After the tour the meeting would move back to Famous Subs restaurant for dinner and the remainder of the meeting.

Jamie, **KJ4JK**, gave the evening's presentation. He presented a narrated slide show of his RV trip out West. Jamie's wife Susan helped him remember all the details.

The meeting was adjourned at 7:25pm.

Respectfully Submitted,  
Robbie Rikard, **KG4MBQ**, Secretary

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## VE Test Session

The VE session of 06/16 produced 5 new General class hams, and 1 new Extra. The Extra passed Tech., Gen., and Extra in rapid succession.

We provided accommodations to one legally blind applicant, who upgraded to General. Tom, **KJ4IV**, read the questions and Ray, **W7OPH**, read the answers and marked the answer sheet with the applicant's response. This same applicant passed the Tech exam under similar provisions with the Morehead City group at their May session.

CR Gould, **K4VC**

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## Getting to Know Folks

This month we have some biographical sketches of two of our newest members, possibly our first brother team:

First, Dick --

I am originally from the Albany, NY area, and served in the USAF as a MORSE intercept operator, and a NCO of a DF net in the Far East. I'm retired from GE Power Generation in Schenectady NY. I have had an amateur license for a number of years but have not been active. I have a General class and am studying for an Extra class. Current equipment is a hand held Kenwood TH G71.

I am looking forward to getting back active. Enjoyed my first meeting and thought it was a great bunch of guys.

73,

Dick Boyack, **WA2LUQ**

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Second, Bob --

I was first licensed in 1955 as **KN2OXT** and over the years upgraded to General, Advanced and then Extra. I've had periods when I was very active in the hobby with towers and beams and all the rest that made my neighbors wonder what in the world I was doing. Due to my job and frequent relocations, I also had times when the hobby took a back seat. Several years ago, I was the President and technical advisor to the 19/79 repeater group in Rochester, NY. I can tell stories of the numerous repair trips to the repeater shack in the cold and snowy winters. Great fun!

I retired from Honeywell after 27 years in the Field Engineering Division where I held numerous management positions. After my main career, I decided to have my own business and started an aviation training operation. Didn't make a lot of money but enjoyed the many hours I spent training pilots. Finally hung it up and moved to Florida in 2001 but after 6 years decided it wasn't the place for me or my wife. We moved to New Bern in January of this year and can't say enough good things about the location or the people. I think that joining the **NBARC** will re-ignite my desire to become as active in the hobby as I was in years past.

Not sure if we'll make the June meeting as we still have a summer place in upstate NY and it's our chance to spend time with the kids and grandkids.

73,

Bob Boyack, **K2OXT**

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### The ARES Angle

I have often talked about conditioning your batteries to make sure they are at peak capability. And then I forgot to do it.

At Neuse River Day, I had depended on a 17 amp hour battery to keep my handy running on full power all day long. 17 amp hours should be sufficient for several days of active use with that HT. It did not last the whole day. Why? Although fully charged at the beginning, it had not been conditioned for some time. I brought it home and took it through several charge-deplete cycles and it is now able to hold a charge like it should.

Egg on my face? A lesson learned? Whatever. Don't make the same mistake. Condition your batteries. It was one thing to find this out on Neuse River Day, when I had alternatives, than it would have been during a long deployment, when there would have been none. Verbum sapientum, as the Romans say -- "A word to the wise."

You are wise, aren't you?

And for now, that's the ARES Angle.

Bruce, **N8UTY**

Craven Co. EC

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**Tuesday, June 19, 2007 3:54 PM**

**Subject: NC Antenna Bill Passes!!**

The North Carolina Senate passed H1340, the "Amateur Radio Antenna Bill" around 3:30pm today! The bill was introduced by Senator Julia Boseman (D-New Hanover) who described the importance of Amateur Radio in her hurricane-prone county. She also suggested members with questions about the bill or Amateur Radio contact Senator Stan Bingham (R-Davidson) whose call is **KJ4AX!** The vote was 49-0 in favor and the bill now goes back to the state house for concurrence on a date change, a formality. After that it's off to the governor for his signature.

Thanks to all of you for your efforts to build support for this legislation with your representatives! Don't forget to thank them for their vote of support for Amateur Radio in North Carolina.

ARRL North Carolina Section

Section Manager: Timothy B. Slay, **N4IB**

[n4ib@arrrl.org](mailto:n4ib@arrrl.org)

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### **President's Corner**

Wow! The future at the gas station may be "fill me up...sugar". The newest research in the area of battery power is in sugars. Both in the July issue of QST and on the web, the excitement is in the research in using sugar as the source for battery energy. Not speaking of anything more than powering cell phones and other small electronic devices, the researchers at St. Louis University in Missouri have created a fuel cell battery that runs on virtually any sugar source, including soft drinks. They say it has the potential to operate three to four times longer on a single charge than conventional lithium ion batteries. Quoting from the article in QST and articles found on the web, I can't help but get a little excited about the obvious potentials in this new technology. The researchers also tell us to recharge this type of cell one merely has to add a source of sugar. This is an instant process with no time involved being plugged into an outlet. Even more attractive is all materials used in the making of the sugar cell are biodegradable and the only byproduct is ordinary water. Pretty slice I would say. This deal surely bears following.

Hope to see you all at the 911 center at 5:30 on the 5<sup>th</sup> of July. It should be a very interesting tour. HAVE FUN AND BE SAFE. **WA0ZGL**

Since some of us may be using Power Poles, I thought this would be of interest:

### **Power Pole Connectors --Just a WARNING!!!!**

Do not try to substitute the "Chinese copies" of the Anderson Power Pole connectors marketed by **TYCO** under the **AMP** name, for the "real thing"!!! They fit together terribly, the contacts are inferior to the Anderson ones. Maybe the "what's his name" CEO wanted more profits to buy more \$6500 shower curtains!

I have been meaning to pass this along some time ago. I got a sample package from TYCO for possible use for an "engineering project" I was involved in. I was putting some of these on some ham stuff a few days ago and didn't

think I'd still had any of the samples left! They LOOK identical, but the housings do not nest together neatly like the originals. They are not compatible with the originals. The dovetails in the nesting lugs are slightly bigger. Only "ID" on them is the word "China" molded into the rear edge (as opposed to Anderson on the originals). Also the contacts mate with the Anderson connectors but not really reliably.

Anyway, these things are crap! They "look" OK, but they are not carefully made. Steer clear of them. I think Allied Electronics has them in their line, and possibly others. **DON'T USE THEM, YOU WILL BE DISAPPOINTED AND FRUSTRATED! Stick to the original Anderson Power Poles!**

73,

Sandy, **W5TVW** June 09, 2007

## BALUNS VI POWER LOSS

Andy Griffith, **W4ULD**

Determining power loss in a balun is another area where expensive equipment is required for direct measurement. Mainly, non-inductive resistors up to about 1000 ohms with ratings up to at least 100W. I worried about loss for a long time until I realized that the loss under most circumstances is much less than 1 dB. There is more loss in common T-network antenna tuners than in a balun. The reason for this is that the transmission line wound on a balun is quite short.

I made a direct measurement once by constructing two identical 4:1 voltage baluns and placing them back to back with their balanced terminals connected together. The input (unbalanced) terminal of one was connected to a 600 watt dummy load and the input of the other was connected to an antenna tuner. Thus the baluns were operating at 4:1 and 1:4 ratios. A Bird 43 wattmeter was placed between the transmitter and the tuner and at the dummy load. The tuner was tuned for 1:1 SWR. Thus the power was measured under 1:1 SWR conditions where the accuracy of the measurements was the greatest. Measurements were taken with and without the baluns in place so the loss through the tuner could be measured and subtracted from the total loss to get the loss through the baluns. Between 3.9 MHz. and 28.7 MHz. I measured losses in each balun between 0 and 0.193 dB. Of course, these values will be higher for loads below and above the design loads.

One can also use the formula for loss in a transmission line based on input and output SWR. The SWR's must be based on the characteristic impedance ( $Z_0$ ) of the line wound on the balun. This is seldom known with high accuracy. The formula is:

$$Loss(dB) = 10 \log \frac{C(A^2 - 1)}{A(1 - C^2)}$$

$$A = \frac{SI + 1}{SI - 1} \qquad C = \frac{SL - 1}{SL + 1}$$

$SI$  = Input SWR based on line impedance on the balun ( $Z_0$ )

$SL$  = Load SWR based on  $Z_0$

Using the 1:1 balun we designed in Part IV and 67 ohms for  $Z_0$ ,  $SL = 3.27$ , and  $SI = 2.03$ , we calculate .08 dB loss at 29 MHz.

73, Andy – **W4ULD**

Cast of Characters:

President: Mac Eutsler, WA0ZGL  
Vice President: Pete Koonce, KA4SXX  
Secretary: Robbie Rikard, KG4MBQ  
Treasurer: Charlie Gould, K4VC  
Communications: Bruce Arnold, N8UTY  
Trustee: Billy Morton, KE4YMA  
Assistant Treasurer: Ralph Bitely, N4RAB  
Public Service/Photog: Bob Chamberlain, W2HVX  
Emergency Communications: Bruce Arnold, N8UTY  
Assistant Em. Comm.: Dave Warwick, K4DJW  
Program Committee Chairman: Bill Lindquist, K2UFC

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**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): 3571 kHz, 8PMET (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

**New Bern Amateur Radio Club**

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

103 Outrigger Rd., New Bern, NC 28562

**The Newsletter Team:**

Al Parker, W8UT, Editor  
Charlie Gould, K4VC, Data Base/Labels/P.O.mail  
Bob Chamberlain, W2HVX, graphics & photography

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The NBARC Newsletter is the newsletter of the New Bern Amateur Radio Club, Inc., 103 Outrigger Rd., New Bern, NC 28562. NBARC is an affiliated club with the ARRL and ARES.

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