

New Bern Amateur Radio Club



foto by W2RLG & W2HVX

Volume 32, Issue 9, September, 2009



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, September 3, 2009

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

Program: Tom McGraw will give us the current status of plans and projects for the River History Park at Jack's Island. This is part of the permanent infrastructure being planned as part of New Bern's 300 year anniversary celebrations. A lot has happened and changed since Tom first discussed these activities a few years ago.

FINANCIAL REPORT

Savings account stands at \$2461.48

Checking account was \$919.14, and from that has been deducted checks in the amount of:

| | |
|-----------------------|---------|
| Progress Energy | \$35.17 |
| ARRL renewal Melle | 37.00 |
| ARRL renewal Hemphill | 37.00 |
| Embarq phone | 29.97 |

Deposits for the month were:

| | |
|----------|---------|
| Melle | \$39.00 |
| Hemphill | 39.00 |

Checking Account balance now stands at: \$780.00

Ray Hemphill, **W7OPH**, Treasurer

Minutes of Meeting

6 August 2009

The regular monthly meeting of the New Bern Amateur Radio Club was held this date and the meeting was called to order at 6:30 by President Dave Warwick, **K4DJW**. There were 30 names on the roster, one of which is attached to these minutes. Introductions were made from the floor.

Dave proposed an auction/sale in lieu of the regular meeting in October. Ken, **K4KDM**, proposed to have it at St. Andrews October 1 2009. This should allow plenty of time to gather your items. More details will be announced at the 3 September meeting.

Bruce Arnold, **N8UTY**, announced the 2009 MS 150 is going to be the 2nd weekend of September. All members interested should contact him.

The next VE session will be next Saturday the 15th at 9:00 am at St. Andrews.

Mark Rappaport, **W2EAG**, gave a report on Field Day. He thanked the many members that helped make this a very successful one.

Rob Skrotsky, **KF6YDV**, gave a very interesting program on Marine VHF Radio and DSC (Digital Selective Calling) and the AIS (Automatic Information System). Rob does a great job and between his speaking, videos and hands on display of the new radio equipment makes his programs very informative.

Dave, **K4DJW**, Thanked Rob for his presentation. Thanked Sid, **WA4VBC**, for his work at the hospital and repeater site, Mac, **WA0ZGL**, and Mark, **W2EAG**, for the photos of Field day.

Motion to adjourn at 8:15

I would like to Thank Al Parker, W8UT, for the great looking newsletter we all enjoy each month.

Robert Melle, **KJ4HJH**, Secretary

The President's Corner

The September 3, 2009 meeting will be at the normal meeting place and time, Famous Pizza and Subs 6:30. I forgot that Rob, **KF6YDV**, had already scheduled a guest speaker for the Sept. meeting. The Club Auction will be moved back to October. That will give us more time to gather all our valuable electronic equipment that we want to get rid of.

Hurricane Bill passed by us without much ado. But we should all still stay prepared for any disaster. Food, water, batteries and an evacuation plan. Also, we still need to set up an antenna building workday, to build antennas for any shelters that need them. I saw an article in last months QST about a coaxial vertical antenna that is suppose to be as good as the J-pole, but lighter in weight. Maybe we could build some of each. I was thinking, (I know, that is scary) if any Club members need help installing an antenna (or anything else) maybe we could put a column in the News letter or send out a club e-mail for NEED HELP WITH.... And any club member could respond to help out.

November is nearing and we need to start thinking about Club Officer elections and other billets that need to be filled. So please think about what you can do to support our fine club. Thanks to all for your support.

73's Dave, **K4DJW**

ARES Angle

Are you ready? I know, I've asked this question before,... but today I'm asking it of myself: "Am I ready?" I'm uneasy about our ability to respond to a weather emergency. I hope we will have enough responders, enough equipment, adequate antennas for shelters... but I'm not convinced. And I'm even more uneasy about our ability to respond to any other emergency on short notice.

It's easy to procrastinate... no one ever had to teach me how. And it's easy to let your preparations get sidetracked. For example, my "go kit" is not ready to go. I've needed a few things in it, I've taken them out, and I haven't replaced them. I have stopped keeping everything in one spot to make it easy to find when I need to GO! Clearly I have some work to do, and I expect I'm not alone.

We need to be ready. We all think in terms of hurricanes as the only reason our services might be required, but unfortunately there are other disasters that might not give us nearly as much notice as a "weather event."

So I encourage all of you to think about how you'd respond if your services were required. And I don't even mean services in another county or state... I mean right here in Craven County.

Think about your emergency preparations as you prepare to help with this year's **Bike MS**. I hope to see as many of you as possible participating this year. There are more rest stops each day than there were last year, and there are three routes each day instead of two. That means more hams will be needed to provide good coverage. Let's show the hams from Raleigh and elsewhere in NC that the local hams are enthusiastic supporters of this event.

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

Bike MS Sept. 12-13

The **Historic New Bern Ride 2009** will be held September 12-13. **Bike MS** is a 2-day cycling event that raises funds to support people living with multiple sclerosis in Eastern North Carolina and throughout the United States.

Please help find a cure for Multiple Sclerosis by supporting my MS Bike Tour ride. I ride for Susan Hodge my next door neighbor, a young lady who is wheel

chair bound and for a friend and former Bridgeton Fire Department Chaplin and Ham, Reverend Godwin. You can make donations in my name on line at: <http://tinyurl.com/n7g7uo> then click on my name "John Jaskolka" and "Donate to John" Or make a check to "National Multiple Sclerosis Society" and give it to me. You can find more about MS at <http://www.msbike.org>
Thank you,
John Jaskolka, **KR4ZJ**

Volunteer operators are needed, if you are available, email or call Bruce, **N8UTY**: brucen8uty@gmail.com

The presenter - KF6YDV, Bob's bio.

Here's a biographical sketch of Bob, last month's program presenter:

I was first licensed as a general, KF6YDV in northern California in 1999 in preparation for full time cruising on our Freedom sailboat, which we did for 2 years up and down the east coast of the US. I am a nuclear engineer retired from GE nuclear Energy and retired captain from the navy reserve. On active duty I was a nuclear submariner.

My ham gear is a Furuno SSB onboard the sailboat (marine and amateur bands) and an Icom W32A dual band handheld. I hope to rekindle the ham skills with the club. With our small boat I have been one of the chase boats for Neuse River Days.

DX on 2 Meters? "Tropo"

Tropospheric (a.k.a. "Tropo") DX modes are defined by the mechanics behind them. A Tropo DX mode is any condition that scatters, reflects or refracts signals in the Troposphere allowing long distance reception (and hence interference) to occur in the VHF, UHF and/or microwave radio bands.

Refraction occurs when the normal Index of Refraction has been altered. Vertical boundaries between different types of air masses usually cause this.. where a temperature inversion (warm air over cooler air) exists. This causes signal enhancement.

When the vertical boundary becomes especially sharp, the amount of refraction becomes so severe that signals extend a great distance as though caught in a duct...thus the reference to tropospheric ducting.

More info may be found at the website from which the above was taken: <http://tinyurl.com/lmuk86>

For information, did you know that **WCPE** on 89.7 in Raleigh can be heard almost every morning when the band is open for extended signals. It makes a good beacon for band conditions. We hope to make good use of this for 2 meter DXing.

Ed just finished a yagi 13'10" long. If any one is interested he can make available the construction dimensions. Gain should be around 14 - 15 DBD

YAGI: ORIGIN 1940s: named after Hidetsugu *Yagi* (1886–1976), Japanese engineer.

The weekend of Sept 12th is a VHF contest. One could find some activity on 2 and 432 Mhz. Good to try out CW and SSB as well as FM simplex for station to station contacts.

Let us know if you are interested the low end of the 2 meter band.

Ed, **W2YPM** & Al, **W8UT**

BB-55 USS NORTH CAROLINA OPEN FOR GUEST OPERATORS

from **Monthly North Carolina Section News** 8/19

Licensed radio amateurs visiting the USS North Carolina may schedule a 2-hour appointment to operate from one of the original radio rooms aboard the battleship. A member of the Azalea Coast Amateur Radio Club will meet you at the battleship ticket window and take you to operate **NI4BK**.

Visiting amateurs can operate 20m SSB or CW. CW operators will need to bring their own key or use the ship's straight key. Azalea Coast club members will take care of all QSL cards. Appointments are free with regular paid ship admission. To make an appointment, contact Kim Sincox, Museum Services Director: 910-251-5797 extension 3006 or museum@battleshipnc.com.

Kudos to the Azalea Coast Amateur Radio Club for their outstanding support of Amateur Radio aboard the North Carolina! Volunteers from the club have worked to restore the ship's World War II transmitters. They sponsor several events annually: Pearl Harbor Remembrance Day, Museum Ships Weekend, and the NC QSO Party. They participate in various ship events such as Hidden Battleship, Battleship Alive and education programs for youth. During this year's Museum Ships Weekend **NI4BK** made 578 contacts!

Transceiver Power. A lot of us use a mobile transceiver with a 12 volt power supply for our base rig. This works fine, but be mindful of a potential problem. Most of the current mobile radios are compact; in fact some are ultra small. Consequently the inside of the radios are packed with parts. One potential problem area is the power on/off switch. If the on/off switch fails in some of the compact rigs it is next to impossible to replace this switch without dismantling just about all the radio. Sometime we can create a lot of problems in the replacement and if it goes back to the factory, the repair is not cheap. What some, including me, are doing is to cut the radio 12 volt power on and off by using the power supply on/off switch instead of the switch on the radio. I have not had any problems doing this. I guess it is possible to have a voltage spike with some power supplies, so beware. Just info to put in the hopper.

SWR or another way. Most of us when measuring performance of their antennas, transmission line, or other transmission components use a SWR meter. This is fine as SWR meters are not very expensive and will yield useable results. However is there another and better way to make these measurements? Using standing wave ratio (SWR) or voltage standing wave ratio (VSWR), sometimes called "vis-warr" measurements have been around along time, but now due to modern electronics Return Loss (RL) measurements are being used by most engineers and wireless systems field techs. RL is a measurement of the level of power being returned to the point of RL measurement relative to a known value... In this case a high number is desirable as it is indicating a number "below" or "down" from the known value and the farther below means less power being reflected. Since the returned power can never be more than the reference level, RL is stated as a negative number and normally in dBm. A formula for RL is: $RL = 10 \log (P1/P2)$. So, if we have some forward and reflected measurements we can calculate the RL. For example if we have a 100 watt input signal and 1 watt is reflected, we have $10 \log x 1/100, = 10 \log x .01, = 10 x -2, = -20$ and thus a RL of -20.

Of course if we can measure the RL directly it is much more desirable. Also, there are charts and graphs showing how SWR and RL relate to each other. Some sample SWR measurements vs. RL are: SWR of 1.9 = RL of -10, SWR of 1.5 = RL of -14, SWR of 1.22 = RL of -20, SWR of 1.12 = RL of -25, and SWR of 1.06 = RL of -30. A couple of advantages of dBm measurements are that the dB figures of various components can be added and the measurements are more precise (if the equipment is in calibration). The manufactures of a lot of commercial transmission equipment now list the specs in RL. Lastly what do you use the measure RL other than lab grade equipment? To be confident with the results obtained on-site unfortunately it requires some expensive equipment. I recently saw report on 5 different RL measurement devices and they varied all over the place due to being off on calibration because you can be dealing with some very small signal levels. For example an Anritsu Site Master that many wireless techs use costs \$6,0000 to \$20,000 or so depending on the frequency. Good results can be obtained by using a calibrated spectrum analyzer and a return loss bridge however, the equipment is not as easy to move around as a self contained unit. When dealing with repeaters and such where you have long coax runs, jumpers, duplexers, amps, etc RL will give you more precise information than SWR. I am sure Andy and others can add a lot to this discussion.

Swap Shop

For Sale: two DEKA brand 6 volt lead acid golf cart batteries in excellent condition, about 5 yrs old, bought for emergency standby, have been kept charged and ready, but not needed. Approx. 10x7x11 in. Orig. list price ~\$285 ea. But call Vince, **N6JIB**, at 249-9958 for a great deal -- mj wants them gone, talk to her ;-)

For Sale: Mosley Tri Band Beam, in pieces with clamps, some bolts, most if not all the coils and elements. Double wall boom. Massive and strong and heavy. It has been in my garage since we moved here. Reasonable.

Contact Ed Valentine, **W2YPM**, at 252-636-3161

Hamfests

Sept. 4 - 6, Shelby Hamfest at Dallas, NC, Gaston County Park. info at: <http://www.shelbyhamfest.org> or Email: chairman@shelbyhamfest.org **Talk-In:** 146.88 & 147.12

Sept. 12-13, Virginia Beach, VA Virginia Wesleyan College

[1584 Wesleyan Drive http://www.vabeachhamfest.com](http://www.vabeachhamfest.com)

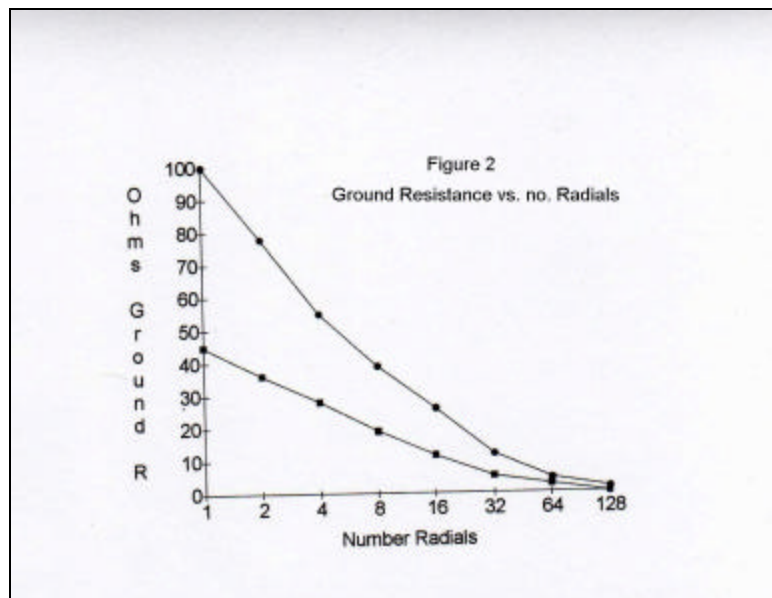
Talk-In: 146.970 info: Email: w4cac@arll.org

GROUND RESISTANCE REVISIT #TWO

Andy Griffith, W4ULD, 6-25-09

About a month ago I made a write-up on ground resistance vs. number of radials (GrndR3.doc) comparing some new data in the April-May QEX magazine with data I had collected over the years. The new data showed considerably less ground resistance for up to 64 radials compared to my data. I stated that I believed my data because it represented too many sources.

New data by the same author was presented in the latest issue of QEX (June-July 2009) for a 125 ft. vertical grounded wire at 1.9 MHz. This time the data closely followed my lowest resistance data up to 64 radials and extrapolated to near 0 resistance at 120 radials. In no case did the new data show a ground resistance better than my lowest data. I will still stick by my data in the attached figure since it represents data from a wide variety of sources collected over many years.



Cast of Characters:

President: Dave Warwick, K4DJW
Vice President: Pete Koonce, KA4SXX
Secretary: Bob Melle, KJ4HJH
Treasurer: Ray Hemphill, W7OPH
Emergency Communications: Jim Wright, KS4O
Assistant Em. Comm.: Mark Rappaport, W2EAG
Public Svc/Special Events/VEC: Bruce Arnold, N8UTY
Repeater Trustee: Billy Morton, KE4YMA
Program Committee Chairman: Igor T. Troll
Photography: Mac Eutsler, WA0ZGL

The Newsletter Team:

Al Parker, W8UT, Editor, Ray Hemphill, W7OPH, mailings
The NBARC Newsletter is the newsletter of the New Bern
Amateur Radio Club, Inc., 1508 Kimberly Road, New Bern,
NC 28562.. NBARC is an affiliated club with the ARRL and
ARES.

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given. Any inquiries, comments, items for Swap Shop,
suggestions, contributions, and letters for inclusion
should be sent to the Editor, W8UT, at e-mail:

anchor@EC.RR.COM

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: 3927 kHz, 0745 daily
Carolina Slow Net (CW): 3695 kHz, at 8PM ET (5wpm) daily
Coastal Carolina Emergency Net: 3908 kHz, 1900 daily
Tarheel Emergency Net: 3923 kHz, 1930 daily
Carolinas Net (CW): 3573 kHz, 1900 (20 WPM), 2200 (10
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>

1508 Kimberly Road, New Bern, NC 28562