

New Bern Amateur Radio Club



W4EWN/R

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

Volume 26, Issue 2

February, 2003

Website: www2.cconnect.net/newbernarc

View the Newsletter there in color

February Meeting -- Thursday, Feb. 6, 2003

6:30 PM at The Berne Restaurant

Program for the December meeting Ray, **W7OPH** will give a program on "The ABC's of It". We will leave the rest to the imagination of the group.

It's that time still !! 2003 NBARC annual dues of \$20.00 are now payable. We work on a calendar fiscal year - so Jan. 1 starts the count down. We have not increased NBARC dues for over 10 years, so it still is a bargain. Many members have already "re-upped" for 2003 but there are still some "laggards".

Send your checks to the PO box or to Charlie, **K4VC** @ 103 Outrigger Rd., New Bern, NC 28562-8845

License Renewals

The Following from our Volunteer Exam Co-ord.

Recently there have been several inquiries from NBARC members relative to renewing their amateur license. By way of review and for future reference, there are three roads leading to renewal:

1). Easy Street -- if you are a member of ARRL they will handle the task for you, free. The appropriate phone number is 1-860-594-0300. This is the ARRL VEC office.

For non members, they charge \$12.00 (compare to w5yi - figure). Non-members will get a "membership pitch" relative to the benefits of a \$39 annual fee, including the free renewal and the many other benefits.

2). Medium Hard Ave. -- W5YI will handle the details for you at a cost of \$12.50. W5YI, PO Box 56510, Dallas, TX 75356, or 1-800-669-9594

3). Real Tough Way -- obtaining the forms, studying the instructions, (four pages of fine print), filling them out, and mailing them to the FCC. You can get the forms via FAX, by calling the FCC @ 202-418-0177. You can down-load them from the web at <http://www.fcc.gov/formpage/html>. You can request them via snail-mail at FCC, 1270 Fairfield Rd., Gettysburg, PA 17325. The completed form is returned to that address.

Note: any renewal application MUST be on form 605 -- NOT form NCV605. This latter form is used exclusively by VE testing teams.

Charlie, **K4VEC**

FINANCIAL REPORT

Jan. 01, 2003 ----- Jan. 31, 2003

Checking

Balance @ December 31, 2002 \$ 1,649.71

Expenses:

01/06 C P & L \$ 25.88

01/17 Copies 50.00

01/19 Sprint 39.32

01/21 Stamps 37.00

Total \$ 152.20

Subtotal \$ 1,497.51

Deposits

01/03 \$ 381.00

01/14 120.00

Total \$ 501.00

Balance @ Jan. 31, 2003 \$ 1,998.51

Savings

Balance \$ 1,142.01

Grand Total **\$ 3,140.52**



Ralph, **N4RAB**, who presented the Jan. program.

(W2HVX file foto)

MINUTES 01/02/03

President, Mac, WA0ZGL opened the first meeting of the New Year at 7:05 PM wishing the attendees a Happy New Year in his welcoming comments. There were 3 visitors and 22 members in attendance. The usual self-introductions followed.

Mac commented upon the contribution by Mr. Roger Wormell, of Oriental, NC, of a Icom R-71-A receiver, and a Yaesu FT-757 transceiver. Thanks for the efforts of Vince, N6JIB, and Mary Jane, NP2AZ, who picked up the packages and brought them to the meeting. The equipment is being checked for proper operation and will be subject to further comments in a future meeting.

18 members paid their 2003 dues during the course of the meeting - including one new member: Bill Lindquist, K2UFC. Bill made his presence known by having his ticket drawn for the door prize. (Did somebody plan it that way?) Welcome Bill! We look forward to your active participation in future club activities.

The first meeting of the new year required the introduction and installation of the officers for the coming year. The new/(old) officers were named and installed.

Information on the W4EWN repeater status was the next item of discussion. Ed, W2YPM and Sid, WA4VBC spent some time tweaking the controls. It appears that the duplexer may be deteriorating and will possibly need replacement during the fiscal year. There has also been some progress on the arrangements to move W4EWN from Riverdale to the WCTI-TV tower. Stand by for future developments.

It was announced that a new 440 machine had been set up in Newport on 449.825 with a 100 HZ tone, for use on the popular Internet Radio Linking Protocol (IRLP). Information and operation parameters for this system are available at various web sites including: ARRL's web page, SERA's web page, and the KD4RAA.net page. KD4RAA is the Raleigh reflector for IRLP on two meters.

The meeting was turned over to Ralph, N4RAB, who revisited his trip to Alaska. From early May until early Sept, 2002, Ralph and his XYL put 14K miles on their rig and trailer, as they joined a 30-unit caravan. Ralph reported he had little success in meeting HF schedules with locals back home. Alaska is not noted for good propagation, during the summer months. He mentioned several interesting VHF contacts. His excellent slide projection presentation, and maps made for a fine evening. He had photographic evidence that there is a signpost in Alaska, pointing to New Bern, NC. His slides of Denali National Park, the glaciers, and the wildlife they saw were awesome.

The meeting was duly adjourned.
Temporary Secy, Charlie, K4VC

The Communications Corner

I believe this is the longest, coldest spell of weather we've had in the ten years since I've been living in eastern North Carolina. I hope everyone has done OK with it -- my pipes froze up one day, but none burst, and they were easily thawed. We had a good call-up for ARES on the night of the snowstorm, at Stanley Kite's request. We had around 15 check-ins, with only a half-hour's notice, so we can all be proud of that.

Mac WA0ZGL keeps asking when the next fox hunt will be. "Warmer weather, Mac." Did anyone see the Zapchecker field strength gadget in this month's QST? Looks like a great fox-hunting implement.

It's not too soon to be thinking about Field Day -- only 5 months off. The first question is, do we want to go back to Union Point Park? I bet the answer is "Yes." I will go ahead and secure the facility for us, it can hardly be done too far ahead.

Have you ever noticed how much traffic there is on the 145.45 repeater down in Morehead City? You can almost always raise a QSO on that machine. Even though it is a smaller club, they have a number of folks who make it a point to monitor the repeater and to respond to calls. I think we could do the same with our 146.61 repeater. If just a few of us -- five or so -- would make a commitment to monitor it when we are just hacking around in our homes or cars, and to answer any call that came along, then traffic would increase dynamically. Might be a good thing to throw out a call from time to time, also.

I guess we won't be seeing our public service coordinator, Bob Chamberlain W2HVX, at meetings for a while -- Bob injured his Achilles tendon in January. Ouch! Bob, if you need help with antenna maintenance or anything else, let us know. My main question is, can you run net control for our public service events from the home QTH? :-)

And for now, that's the Communications Corner.
Bruce **N8UTY**
Communications Coordinator/Craven County EC

Just received this from **KN4AQ**. I've been looking into this Echolink stuff, you may have seen the article in QST. Gary wrote it for the RARS newsletter but said we could print it in ours if we wished. There is some interest in these new developments, we might think about doing a club presentation on this stuff also. I want to know more about this IRLP thing also.

Bruce, 1/29/03

ECHOLINK and Internet Linking

By Gary Pearce **KN4AQ**

Echolink is one of several systems for linking hams together using the Internet and VoIP (Voice over Internet Protocol). I've been playing with it a little since about November, and it's something you might find interesting. It's also something to watch out for.

Here in Raleigh, Internet linking got a big push when Danny Musten KD4RAA, Jim Price WW4M and Ron Casey K4JDR built their impressive series of repeaters using IRLP (Internet Radio Linking Project), along with traditional RF linking. They have several repeaters, including a network of UHF repeaters, capable of being linked to the world using IRLP. The 146.775 machine in west Raleigh is linked full-time to an IRLP "reflector" -- a system that allows dozens of repeaters from around the world to be linked together all at once. It makes that repeater a real gateway to the world, with almost constant traffic. Their UHF repeater system has IRLP "Point-to-Point" linking capability, letting users dial-up a link to other IRLP equipped repeaters around the world "as needed." You just dial some touch-tones, including the node number of the repeater you want to connect to, and you are now talking through a repeater in Kinston, Denver, Honolulu, Sydney -- your choice of about 800 repeaters world-wide (and growing fast). The audio and control signals are all sent via the Internet. (For more information, see www.kd4raa.net.)

Echolink is similar, but it has some significant differences. I'll compare and contrast it with IRLP.

IRLP allows connections only radio systems on its network. As a "user," you can't connect to the IRLP network directly from your computer. The only people who are permitted to make the radio/computer/IRLP connection are registered sysops. To be a sysop, you need to use the IRLP interface card and software, set up in a computer running Linux (not Windows or Macintosh). The IRLP administrators manage your IRLP computer remotely. The IRLP rules say that all connections to the IRLP system begin and end on-the-air, with radio systems. It doesn't have to be a repeater -- your radio system can be a simplex base station. It just has to be radio.

Echolink is a more open system. First, it uses Windows software. You can download it and install it on your own PC for free -- *if* you are a licensed ham. The administrators check your call sign when you register, and you're not permitted to log into the system until your call sign "checks out." Second, you can connect to any of the thousand or so other stations logged on directly from your computer. You need a microphone / speaker or headset on your computer. There's no radio

connected on your end at all! Echolink can and often does connect repeaters together, but it can do more. (IRLP could do all that, they just decided not to.)

I suppose there is an inevitable popularity contest between Echolink and IRLP. Echolink is already “winning,” because it’s more flexible and available. IRLP might have an edge in what I’ll call “stability.” It’s more work to get an IRLP connected system going, so you might expect that someone who had done that much work would keep it going for a long time. Echolink connections on repeaters might be a bit more “easy come – easy go,” but there’s no reason a dedicated ham or club couldn’t maintain an Echolink connection for years.

ON THE “AIR” WITH ECHOLINK

You download the Echolink software from www.echolink.org. On my DSL connection it just took a minute or two. Installation is quick and routine, and setup is pretty simple. Part of setup is registering the software with your call sign and e-mail address. The instructions say that the system administrators verify call signs “by hand,” so it might a few hours or a day before you get system access. Once you do, a list of active stations appears in a window. (The only thing tricky about setting up Echolink is making it work through a “firewall” like you have in a Linksys router. If you are connecting through a firewall, read the help files and follow the instructions carefully. Several hams I know have made it work.)

Browse the station list looking for something that catches your eye (call signs and locations are listed), and double-click on the station you want to connect to.

What, or who, can you connect to? There are four categories of “stations”: repeaters, links, users, and conferences. “Repeaters” is obvious – you make a connection that puts your voice out on a repeater somewhere, and you talk to hams who are using radios on the repeater. “Links” are hams who have connected their computer to their simplex base station, using one of several interfaces (including the well-known RigBlaster). “Users” are hams who are just connected via their computer – no radio attached, which is the way I’m currently connected. And “conferences” are facilities that allow dozens or even hundreds of repeaters, links and users to all be connected together at one time.

If you connect to a repeater or “link,” there is probably an automatic announcement made that gives your call sign and says you’ve connected. That’s an option the repeater sysop can make. You may or may not hear anything about that on your end, but you do get an on-screen indication of a successful connection. If there is activity on the repeater, you hear the hams talking. If the repeater is not busy, you might just hear silence.

When it’s time to talk, your keyboard’s SPACEBAR becomes your push-to-talk switch. You get a ‘TX’ icon on screen, and an audio “meter” that tells you what your sound card audio is doing. You might need to open your computer’s “audio control” panel and adjust your mic level. You talk, they hear you, and when you’re done you push the spacebar again to let go, and you listen. If you’ve connected to a repeater that’s not busy, you can just push the spacebar and say something like “KN4AQ is connected through Echolink. Anybody around?” Sometimes you make contact, sometimes you don’t.

If you connect to a “user” –someone just on a computer with no radio connection, you still use the spacebar for PTT. You’re opening up a path to the other “station’s” speaker, though, not activating a transmitter. Your connection is still “simplex” – only one of you can talk at a time, and there is no way to interrupt someone who’s on a long-winded monolog. On repeaters, you do have to worry about timers, so you can set your own timer in the Echolink software setup to cut you off.

When I leave Echolink connected for a few hours while I’m at the PC, I’ll get someone just dropping in every now and then. In fact, while I was writing this article, a ham in Buffalo NY just called me and we chatted for about a half hour. When you are talking “user-to-user” with no radio system, call signs are not required, but hams tend to use them anyway. The conversations I’ve had were all very ham-radio-like, mostly using typical on-air procedure. Some of that procedure falls away when I’m talking to people I know well.

Roundtables can and do happen on Echolink. If you have a broadband connection (DSL, cable-modem), you can permit several “stations” to connect to you. Each connection takes about 15 to 20 kbps bandwidth, so a broadband connection can handle as many as 10 or 15. A dial-up connection has only 20 to 30 kbps available, so a single connection uses it all up.

It gets a bit complex, and I’m no expert on the network connection aspect of things, but if I’m connected to another station, and you then connect to me, you are brought into the roundtable (or conference) connection through me. If someone connects to you, then that person is brought into the whole conference – we’re all talking together. It’s not unusual to have several hams on a repeater or two connected to several more hams just on computers, all one big, happy conversation.

If a lot of hams want to participate in a single event, they can go to a conference server that can handle dozens or even hundreds of connections.

Speaking of dial-up, Echolink works OK using a dial-up connection. The audio quality is just as good. The

problem I've seen is that there are sometimes silent "gaps" in transmission (and reception, when I used it dial-up at a motel on the road). The software collects data in a buffer before presenting it to the sound card and speaker, and if the data packets containing the audio are delayed, there can be a gap for a half second or so... then the audio picks back up where it left off, mid-syllable. If data is missing or delayed longer, you might miss a word or two. I've only had one conversation where the path was so bad I couldn't understand what the person was saying. Missing bits of audio happen now and then. Connections between stations with broadband on each end are generally flawless.

Echolink is a second or maybe third generation implementation of VoIP for ham radio. I didn't try any of the earlier ones, but I heard complaints that the software, hardware and internet connections all left something to be desired. Echolink seems stable, and it works well. All the VoIP systems have a small timing issue because there is some buffering and delay as audio crosses the Internet. An itchy trigger-finger doesn't mix well with Internet linked systems. Leave long pauses.

REALLY ON THE AIR WITH ECHOLINK

If you decide to go beyond the Echolink "user" connection and hook it up to a radio, there are some things to keep in mind. It seems easy – the "sysop" mode is part of the software, so you just make connections between your sound card and serial connector to your radio using RigBlaster or one of the custom interfaces available, and you are on the radio. But what frequency to operate on?

You shouldn't operate on a repeater frequency unless you get permission from the repeater owner, and make the right technical adjustments. And when you do set up on a repeater, your radio becomes an Auxiliary Station as defined in the rules. Auxiliary Stations are not permitted on two meters, although you'll find a lot of them being set up that way for Echolink connections. The big problem is the potential for interference to co-channel neighbor repeaters from a busy link radio, especially during band openings. Linking the computer connection from home to the repeater is probably best done on SERA coordinated link frequencies.

You can operate on a simplex channel with less rigmarole. The FCC's Riley Hollingsworth told me in a *Repeater Journal* interview that he is inclined to let hams experiment with these systems without close FCC oversight for now to see what develops, as long as hams follow the general guidelines of the rules, and as long as a ham is in control of the emissions of any transmitter. If you plug your computer with Echolink into your base station transmitter, you are still the control operator, and

must maintain full-time active control. You can use remote control (using a radio control link above 222.15 MHz) if you've got the capability. Otherwise you should not walk or drive away from your radio when it's open to other users via the net. "Automatic control," a kind of fuzzy concept that allows repeaters and certain other stations to operate without immediate monitoring by a control operator, is not available to your Echolink-connected base station.

The February issues of the *Repeater Journal* and *QST* both have articles about using Internet linking, and recommendations on how to stay legal.

IS IT HAM RADIO?

This is a good question to start a debate with. The initial reaction I get is an emphatic "NO!" Lots of people say IRLP isn't ham radio, even though IRLP only permits signals that originate on the radio (mostly on repeaters) to cross its network. Well, some people say repeaters aren't ham radio, either! The question really gets dicey when it's two hams talking between computers on Echolink, with *no* radio connection. How could that *possibly* be ham radio?

Well, what is ham radio? It's talking on the air, of course. But is that all? Is going to a club meeting, attending a hamfest, reading a ham magazine, building a project, or erecting an antenna "ham radio"? With that in mind, Echolink's "of, by and for hams" orientation certainly makes it "ham radio."

What I think worries people is diminishing the on-air aspect of Amateur Radio. Without on-air, we have nothing special. Anyone can use VoIP. We don't need thousands of VoIP "contacts" replacing on-air activity.

So Internet linking has the ability to both enhance and detract from Amateur Radio. Linked repeaters and stations can spur activity as hams talk and listen to each other who otherwise might not get on the air today. Even all-computer contacts might keep hams interested in the hobby who might otherwise drop out. I suppose that the ease of connection on the Internet (and it is very easy to have quiet, high-fidelity conversations) might be a siren-song that pulls people off the air. Today, you have to be sitting by your computer to do it, leaving our handheld and mobile operation as a distinct ham-radio difference. But a very wireless Internet is coming - one more way ham radio will no longer be special.

Internet Linking is not going to go away, though, for better or for worse. The more you know about it, the better off you are. It's your decision how much time you devote to on-air and off-air aspects of Amateur Radio.

When I first set up Echolink last November, I saw maybe one other ham in the Raleigh area listed, and a handful in North Carolina. Now there are a handful

around Raleigh, and a dozen or two around the state. It's growing fast, but it's a long way from being in every shack. Is it in yours?

Caption for graphic: (graphic not available)

This is an actual Echolink operating "window". The list of stations in the upper left is just a small sample of all the available stations – just look at the size and position of the Windows "scroll-bar." In this example, I am actually connected to the KD4CWB repeater (in Knoxville, TN). N4GBK is also connected. You can see the "audio meter" – the bar in the lower left that's half-blue and half-gray, and the "Connected" and "RX" indicators in the lower right. If we could animate this picture, you'd see the meter bob left-to-right following voice peaks. Also in the lower-right corner there is a white box next to a "send" button. Anyone connected can type text notes in the box and send them back and forth while others are speaking with voice. So someone on a computer connection can actually be "interrupted" with a text message, if they're watching the screen.

73,
Bruce, N8UTY

LOG of SV/Pelago

COLD!!!

That is the only way to describe this trip so far. At the present time we are at anchor in the Miami area deciding what to do. We are somewhat undecided, but will probably cross to the Bahamas later on this month (that is if the weather co operates).....

Christmas was spent with other cruisers at the Municipal Marina in Vero Beach. One of the other boats organized a Pot Luck and it was quite a success. There was so much food that there actually were leftovers, that is unheard of. And there were no hordes of cannibals there to eat everything in sight. You know the kind, they bring two cans of boiled potatoes or a can of peanuts and five hungry teenagers!!! If it is not nailed down they eat it all.

Also, Tammy and I joined the 21st century and got a damn cell phone, it has a Vero phone number, but we can switch to a North Carolina phone when we get back..... here it is and it will be active until we cross to the Bahamas 772 696 3907.....

Did something else at Vero, and this will be unimportant to some of you, but we installed a higher

speed "radio" modem, now we can send and receive pictures easily..... PLEASE READ AND HEED, NOTHING OVER 20K AND JPEG PLEASE!!!!

From Vero we moved down to Stuart Fl and took a mooring for a week. Nice place, very friendly and comfortable anchorage. Convenient for shopping and there is a bus service. Found a gun shop that would make a grown man cry, and he even has CANNONS!!! He had a matching pair of swivel guns that had sequential serial numbers... both for a cool \$32,000.00 asking price in US dollars, but he had a lot of nice pieces; lots of early Colts.

Another thing that was on the MUST list was to get some more damn blankets, it has been so stinkin cold, wake up and it is 39 degrees in the boat. Give me a break,,,,, and the reason for this is all the Canadians came across the border and did not shut the damn door!!

Went out New Years eve with 26 other people to a nice restaurant for dinner and what have you.

Will have some interesting stuff (I hope) on the next "What worked" and "What did not" especially about the new radio modem and the additional solar cells.

It is actually warm today, reached 80 degrees and Tammy was able to put on a Bikini for the first time..

From the Log of Pelago

Rick and Tammy, Miami Fl 11 Jan 03

(they were still there the last wk of Jan., ed.)

preliminary report of "what worked and what did not" re: solar panels and wind gen combo

During Jan of 2002, Tammy and I installed one 75 watt Siemens solar panel on Pelago, over the summer of 2002, we upgraded and installed another 75 watt panel. One miscalculation on my part was that in reality we could have installed a pair of 100 watt panels vice a pair of 75's but what the hell..... We still are using the same wind generator, a hi-bred 300 upgraded to 400 watt wind generator

Current battery system is five Trojan grp 31 total of 650 amp hours (in a perfect world)

here is some hard data on the results...

We have had three periods at anchor, Vero (terrible for wind gen), Stuart (fair for wind gen), and Miami (fair for wind gen)

We have had a total of 34 days at anchor.

Electric usage high vs. Bahamas due to TV being on for sometimes five hours straight, refrigerator 24X7, Marine SSB some usage, Ham daily usage. of course lights (quartz halogen). We really have NOT been conservative on battery usage !!!!!
TOTAL HOURS ON ENGINE FOR ANCHOR PERIODS 27 HRS..

Most of that engine time was to make 150 gallons of water and to make hot water. usually when the engine would be on we would plug everything in (laptop, cameras, radios, etc to inverter to charge), consequently that engine time was not just to charge or top off batteries,,,

Just have to say we are pleased with the results of the combination... and wonder how the total effect will be on fuel. Tammy is convinced that during the same period prior to addition of solar we would have had the engine on a minimum of 100 hours, just to keep up with demand..

Anyhow this is the "early results" and we are keeping good track of the engine time and for what purpose the engine is on water/power etc, to see in the spring how we fared

Rick and Tammy

Tech Information

Some time ago I ran out of contact cleaner and ordered some from Radio Shack. A little pricey but what can you do. Well, when the order arrived, the total cost was \$25 for a 11-ounce can. I called RS and asked what the deal was. The lady was very nice and informed me that the order required special handling, NAZMAT you know. Dang...I didn't ask the right questions when I ordered the darn stuff! Anyway, lesson learned. You should know that I use the stuff very sparingly. To make this story longer, I was listening to a rag chew on 20 meters a month back. The Hams were discussing contact cleaners and how awful their price. One guy told how he had discovered that Lowe's carried contact cleaners. In the electrical department you will find CRC brand "QD" contact cleaner in 11 oz. cans for \$6.98. You know I ran right down to Lowe's and purchased a can of "QD". Lesson learned, it pays to listen... **wa0zg**

January Operating Events

Contests

February 15-16 ARRL International DX Contest (CW)

March 1 - 2 ARRL International DX Contest (Phone) for details see:

<http://www.arrl.org/contests/calendar.html>

Hamfests

Feb. 1 Charleston ARS, Charleston/Ladson, SC
(sorry this didn't appear last mo.)

Feb. 9 FrostFest, Richmond, VA

Contact: Pat Wilson, W4PW

Phone: 804-932-9424

Email: w4pw@arrl.net

<http://www.frostfest.com>

Feb. 23 Elkin, NC

Contact: Robert Waller, AC4SS

Phone: 276-728-3432

Email: rgwaller@psknet.com

Mar. 8 - 9 - Charlotte, NC Mecklenburg ARS

Contact: Tom Hunt, KA3VVJPhone: 704-948-7373

Email: hamfest@w4bfb.org

<http://www.w4bfb.org/hamfest>

Feb. 1 - Charleston, SC, Charleston ARS

Contact: Jenny Myers, WA4NGV

Phone: 843-747-2324

Email: brycemyers@aol.com

Feb. 9 - Richmond, VA, - "Frostfest"

Virginia Section Convention

Contact: Pat Wilson, W4PW

Phone: 804-932-9424

Email: w4pw@arrl.net

WHAT ARE THE ODDS ??

As Treasurer, I write a Receipt for each payment of dues as they come in. That receipt number appears on our roster, followed by the year: i.e., 7xx-03.

In preparing this months deposit, I wrote receipt number 795. The check representing this receipt was numbered -- guess what -- #795.

SWAP SHOP

FOR SALE: for non-ham friend. **Azden 5000** 2 meter retired CAP mobile with mag mount antenna and mount bracket. Manual included with schematic. 25W 20 memories, 140.000 to 149.999 mc. Probably early 1990's but works fine, price reduced to \$40 call George, **N2UCH**, at 249-4999 or email at n2uch@cconnect.net

FOR SALE: Yaesu FT-757GX hf transceiver with operating and tech manuals. Operates good. Appearance is fair. This is an all mode rig operating 160 -10 meters. This is the rig that has "the switch" for wide band operating. \$250.00
Contact Mac, **WA0ZGL**

Cast of Characters:

President: Mac Eutsler, WA0ZGL
Vice President: Pete Koonce, KA4SXX
Secretary: Ray Hemphill, W7OPH
Treasurer: Charlie Gould, K4VC
Communications: Bruce Arnold, N8UTY
Trustee: Tommie Phelps, WA4EME
Assistant Secretary: Doug Whitford, KF4YHG
Assistant Treasurer: Ralph Bitely, N3XID
Program Chairman:
Public Service/Photog: Bob Chamberlain, W2HVX
Emergency Communications: Bruce Arnold, N8UTY
Assistant Em. Comm.: Dave Warwick, KB4EBT

Selected Local Nets

Club Net Manager: Billie Morton, KE4YMA
Craven County ARES: 146.61 MHz, 2000 before threatening wx; monitor during ARES activations
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): 3715kHz, 1800 (5wpm) daily
Coastal Carolina Emergency Net: 3907 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
NBARC Traffic: 146.61 mHz, 2000 Tuesdays
Skywarn: 145.21 mHz, 2100 Tuesdays
ENC Emergency: 146.685 mHz, 2100 Tuesdays
ENC Traffic: 146.685 mHz, 2030 daily
NBARC Ragchew: 146.61 mHz, daily, after ENC Traffic closes

New Bern Amateur Radio Club

www2.cconnect.net/newbernarc
P.O. Box 12483
New Bern, NC 28561-2483

FOR SALE: ICOM - R71A communications receiver. Operates 130kc-30 Meg. Works very good. Appearance is nice. \$250.00
Contact Mac, **WA0ZGL**

WANTED: Will buy tubes & parts for use in getting & keeping tube eqpt going. Will help anyone who wants to get tube type equipment working and on the air (I work free, or for junk).
Al, **W8UT** anchor@ec.rr.com or 636-0837

The Newsletter Team:

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

The NBARC Newsletter is the newsletter of the New Bern Amateur Radio Club, Inc., PO Box 12483 New Bern, NC 28561. NBARC is an affiliated club with the ARRL and ARES

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