



The Listening Post



Affiliated Club

Voice of the Azalea Coast Amateur Radio Club

2006 Officers:

President:: Bill Usher, AG4PA
 Vice-President:: Hari Volikas, KI4HLB
 Secretary: David Williams, KF4CQS
 Treasurer: Larry Modlin, KG4SYQ

2006 Committee Chairs:

VE Testing: Jeff Jolly, KE4LKB and Jack Jacobs, WD4OIN
 Net Coordinator: Bill Usher, AG4PA
 Public Affairs: Bill Morine, N2COP
 ARES EC: David Williams, KF4CQS

Meetings:

Next Meeting: September 19th 7:30 PM
 Location: UNCW Cameron Hall
 Check website for updates

VE Testing:

Next Session: October 14th 10:00 AM
 Location: UNCW Morton Hall
 Check website for updates

Nets:

ACARC Ragchew: Mondays at 9 pm
 ACARC Repeater: 147.180 (88.5)
 ARES: Wednesdays at 8 pm
 ARES Repeater: 146.670 (88.5)

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President Chatter

The Azalea Coast Amateur Radio Club has had a busy summer.

On May 20, AD4DN and K4YNY checked out the club's repeater. The machine was found to be working well within its expected limitations. The repeaters reliability over the years was noted, and no immediate changes were recommended. Specific recommendations for accessing the repeater were presented, which will be repeated from time to time over the club reflector.

On May 26, at the request of the folks at the USS North Carolina Battleship Memorial, WD4OIN, W2KJ, KX2H, N1KFC, N2COP and AG4PA assisted in a presentation to approximately 125 students at the D.C. Virgo Middle School in Wilmington. The theme of the presentation was communications to and from the battleship during World War II. Club members conducted a Morse code demonstration, utilizing two code practice oscillators as demonstration stations, and assisted the students in tapping out their own names and short messages. To emphasize the progress made from that day to this, the difference in size and capability in communications electronics past and present was demonstrated. An HF SSB station was set up and the students were able to have QSOs with a local station (via ground wave we suspect). With club members as control operators, students were allowed to chat with each other on VHF FM via HT's. After the demonstration, members joined the students and staff of D.C. Virgo for a pig pickin', which was most enjoyable. Many thanks to all who lent their equipment and expertise to the effort.

On May 30, 2006 aboard the North Carolina, a rather historic event took place. From 9:09 through 9:34AM (local), successful CW contact was made on 20 meters between KX2H, pounding the brass through the ship's original equipment TDE, and W1SSR in Wrentham, Mass. This contact was most certainly the first time the TDE transmitter had been on the air since "The Showboat" was decommissioned in 1947. "Mac"—W1SSR—is a "plank owner" i.e. he served on the ship during her entire period of active service as a CW radio-man. The TDE had been restored to operating conditions by club members over the past several years. Previously, club members had restored to operating condition another of the ship's original equipment transmitters, a TBM-4, and made successful CW contact with "Mac" in early 2002. The TBM-4 was placed in service on 7/15/41 and the TDE on 9/25/44. Getting this equipment back on the air after a slumber of some 5 plus decades is quite a coup for the club and the staff of the battleship. "Mac" keeps in touch with the ship and the club, and he was promised he would be the first contact when restoration was complete. We are proud to have kept this promise on both occasions.

On June 3 & 4, the USS North Carolina (BB-55) was activated for Museum Ships Weekend, utilizing the clubs call sign NI4BK (NIBK was the Ship's call sign during her WWII service). SSB equipment was the club's modern gear and the ship's original cabling and antennas. CW equipment, except for the telegraph key, was all original WWII vintage ship's equipment, restored by members. The logbooks show 307 contacts—289 SSB & 18 CW—into 36 states, Europe and Canada. We did manage to contact 5 of the other partici-

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President Chatter Continued

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pating ships, including the New Jersey (BB-62), the event's sponsor. Our compatriots on the New Jersey shared our woes over CW interference with SSB communications, due to the proximity of the antennas. Recall, if you will—the ship did not utilize the SSB mode during her active service, for obvious reasons.

Field Day 2006—Due to a variety of circumstances, it was necessary for club members to arrange for and manage transportation and set up of the county's emergency communications tower, without assistance from county personnel. Thanks to WA3IRG and his excellent training session, all went off "...without a hitch..." Fervent thanks to those who responded to the call, some at the last moment, who demonstrated the true spirit of who we are and what we do. Special thanks to the New Hanover County Department of Emergency Management for the use of the tower, and the unique training opportunity. The club donated 4 copies of the new Technician Class examination manual to the New Hanover County Public Library. Assistant Library Director Harry Tuchmayer accepted the donation. Wilmington Mayor Bill Safo took part in the opening festivities and lent his support for a good part of the afternoon, and under the tutelage of W4EBR, got on the air and enjoyed a QSO. Mr. Safo was most effusive in his support for Amateur Radio. A few stalwarts worked through the night, and by Sunday afternoon, the totals read 419 SSB contacts, 102 CW—with W4EBR leading the pack with 153, followed closely by KI4HLB with 152. KR6DJ bagged 64 CW contacts. Pot luck dinner on Saturday evening provided not only good food but a wonderful opportunity for camaraderie. Many thanks to all who participated, especially in set up and tear down.

July was rather quiet, but things picked up again in August. At the August 15 Club meeting, a power point program was presented on FISTS, The International Morse Preservation Society. FISTS is sponsoring a "Get Your Feet Wet Weekend"—in CW—from September 15 through 18. On August 19 & 20, the usual suspects met for breakfast and then convoyed on down to the US Coast Guard Station Oak Island to participate in International Lighthouse/ Lightship Weekend. Once again, many thanks to those who were there for set up and tear down, especially those who could not stay to operate, but donated their time, effort, and expertise nonetheless. We had a pretty good crew of participants and bagged 139 total contacts—85 SSB & 54 CW—hitting 31 states and 13 countries on 6 bands, including one noteworthy contact on 160 meters. We hit 16 lighthouses, 4 of them DX.

I believe we can be reasonably pleased with our operating activity tallies—Museum Ships and Field Day in June and Lighthouse in August. If we are not at the absolute rock bottom of the sun-spot cycle yet, nevertheless we've been down so long it sure looks like up from here. With some good preparation, hard work and some skilled operators who can pull gold out of mud, our efforts are usually at worst moderately successful and things will only get better as move into the upward curve of the next cycle. Experience gained now will pay dividends in the future. Check out the club web-site at www.ac4rc.org for updates & further info and pictures of club activities.

From your club president,
Bill Usher

A Ham Radio Friendship Story

By Allan Pellnat, KX2H

For a long time while hunting DX I have always kept my ears tuned for any SP2 prefix. SP2 is that part of northern Poland that was known as East Prussia in the early part of the 20th century when my father was born there in the city of Elbing.

Finally in the late nineteen eighties I managed a very brief QSO with SP2ASJ, Jurek Szark in the city of Elblag. Elblag being the current Polish spelling and pronunciation for Prussian Elbing. I sent Jurek a QSL by direct mail with an IRC requesting a his card from the birthplace of my ancestors.

A few weeks later I received an Air Mail letter from Jurek containing his QSL card and a short letter written in passable English. We began a mail correspondence and not too successful CW on the air schedule for 15 meters. Although he had a call-sign he had no station of his own and had to bid for operating time on a club station. I was employed by AT&T, he was a switchman in his local telephone exchange. I cannot speak or write Polish. His self taught English was remarkably good. My children were grown and out on their own. His two children were of elementary school age.

In 1988 my wife and I made a trip to Elblag to meet Jurek and his family. We were warmly greeted and experienced hospitality that must have cost a great deal in the thriving black markets of the then Communist economy of Poland. Suffice to say that crossing the border into Poland in 1988 was like taking a step of fifty years back in time.

In 1991, Jurek came to visit us in our home in Rochester, NY. What I had thought was going to be a few weeks of pleasant tourism turned into an entire year where he entered the under the table world of illegal immigrant employment in the U.S.A.

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A Ham Radio Friendship Story Continued

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His presence in the U.S. was legal. He had a tourist visa but he was not supposed to work. He did mostly menial restaurant work but learned the art of making pizza in the process. At one point he was fired from a dishwashing job in a trendy upscale restaurant directly across the street from Rochester's symphony concert hall because the owner had found two Vietnamese immigrants who would do the job for the wages of just one.

During his stay in the U.S. Jurek frequented yard sales, church rummage sales and hamfests buying huge quantities of children's clothing and radio gear which was shipped back to Poland to be resold at a profit on the black market. When he returned to Elblag with a sizeable nestegg he opened the first authentic New York style pizzeria in northern Poland. We had suffered through the Polish concept of pizza in Gdansk during our 1988 visit but that is another story.

Jurek spends less time in ham radio now because of the demands of his growing pizza businesses. We don't attempt on the air schedules any more but do exchange occasional e-mails and annual Christmas cards. I am the son and grandson of immigrants and have always had empathy for immigrant's experiences. I made an on the air friend through ham radio who also taught me some things about the current situation in the U.S. Virtually all immigration has an economic motive. Whether legal or illegal most immigrants contribute positively in one way or another to our economy and society. Some, such as Jurek, take what they learn back home with them and their lives are changed for the better by their experiences.

Tech Corner

By John Jeter, N2JDJ

I hope everybody is safe and well after another close brush with Mother Nature. This edition of tech corner will cover some cool types of matching systems for circular polarized antennas for VHF, UHF, and beyond. Matching networks for CP modified ring antennas can be a bit tricky, but it really isn't "voodoo magic" as some hams might think.

Basically, you can use a modified "T"-match, as well as a modified gamma match, or a modified delta match. (See ARRL antenna manual). Because the delta match is more complex, we will only examine the modified "T" and gamma matching networks.

The overall goal is to match the input impedance as close to 52 ohms as possible (to reduce the SWR), and increase the "Q" (electromagnetic coupling) of RF energy, to "excite" the driven elements. If you can achieve a 1.5 to 1.0 match or lower, you are doing very well. The modified gamma match is the simplest matching network to employ here. Keeping in mind we are using a DC ground, shunt RF feed, the matching element(s) are the only component isolated from the driven element and ground, (zero current/voltage point). You can use an antenna analyzer/grid dip meter, to determine the RF feed point (copper strap), from the matching element(s) to the driven element(s), and match it as close to 52 ohms as possible on EITHER side of the CP ring for the gamma match, and on BOTH sides for the "T" match (See Pics below).

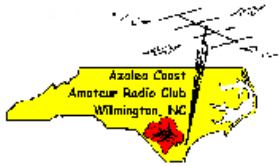
Cut the matching element(s) to $1/16^{\text{th}}$ wavelength for a $1/4$ wave driven element, and $1/8^{\text{th}}$ wavelength for a $1/2$ wave driven element, trim as necessary. Do not forget to make math corrections for velocity factor etc. You may use either a variable capacitor or a fixed value mica capacitor to tune and load the matching element(s) to the driven element(s). The rated voltage for either cap MUST be high enough to tolerate the high level of RF current, which due to increased resonance, will be high in this type of antenna circuit. The 2nd goal is to achieve zero reactance (resonance) in the antenna system, by using the matching network. The capacitive reactance is canceled out by the inductive reactance, therefore equaling zero ohms of total reactance. (See ARRL antenna manual for more theory).

The beauty here is that you can experiment using various series, parallel, and complex capacitive/inductive circuits (resonant tank circuits) to form the perfect matching network for your modified CP ring antenna, where the matching element(s) are fed in series/parallel using 0-200 pF capacitors. I prefer using variable high voltage capacitors, so I can tune the matching network to zero reactance, achieving a near perfect match with almost perfect antenna resonance. Brass or copper tubing can be used, as well as aluminum tubing, but copper and brass are easier to solder and manipulate, for building this type of antenna system. Use your imagination to find isolation brackets made of PVC or nylon at your local hardware store, you will be amazed at what you can find in the plumbing section, and the prices are usually very affordable for the average budget.



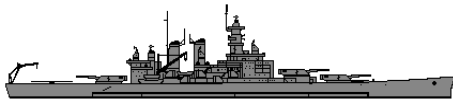
If you have any questions, please contact me by email at any time. That's all of the space I have for this edition, so 73's to all, see you on the air soon!

N2JDJ (jjeter@ec.rr.com)



VOICE OF THE AZALEA COAST AMATEUR RADIO CLUB
JUNE 2006

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We're on the web!
www.ac4rc.org



VE Testing Results from June 10th and August 12th

Element 1 (5WPM MORSE CODE)	1 Test Taken	1 Test Passed
Element 2 (TECHNICIAN)	2 Tests Taken	2 Test Passed
Element 3 (GENERAL)	5 Tests Taken	2 Test Passed
Element 4 (EXTRA)	3 Test Taken	0 Test Passed
Totals	11 Tests Taken	5 Tests Passed

There were 17 VE's in attendance overall

Calendar of Events

September

1st (Fri)	National Preparedness Month Begins
4th (Mon)	Labor Day
7th (Wed)	VHF Association Meeting
9th to 11th (Sat-Mon)	ARRL September VHF QSO Party
10th (Sat)	North American CW Sprint
15th to 18th (Fri-Mon)	FISTS Get Your Feet Wet Weekend
16th (Sat)	Amateur Radio Public Awareness Day
19th (Tue)	ACARC Club Meeting (UNCW)
23rd (Sat)	First Day of Autumn
23rd to 24th (Sat-Sun)	ARRL VEC Exam Day

October

7th/8th (Sat/Sun)	ARRL Simulated Emergency Test
15th & 16th (Sat/Sun)	Boy Scouts Jamboree On The Air
17th (Tue)	ACARC Club Meeting (McDaniels)
28th to 29th (Sat/Sub)	CQ WW DX SSB Contest
28th (Sat 8am-12pm)	New Hanover County ARES S.E.T.

November

4th to 6th (Sat-Mon)	ARRL November Sweepstakes CW
18th to 21st (Sat-Tue)	ARRL November Sweepstakes SSB
21st (Tue)	ACARC Club Meeting (UNCW)

December

5th (Tue)	ACARC Holiday Party (Place TBD)
7th (Thu)	Pearl Harbor Day (Battleship On Air)