

Feed Line



Volume 14, No 6

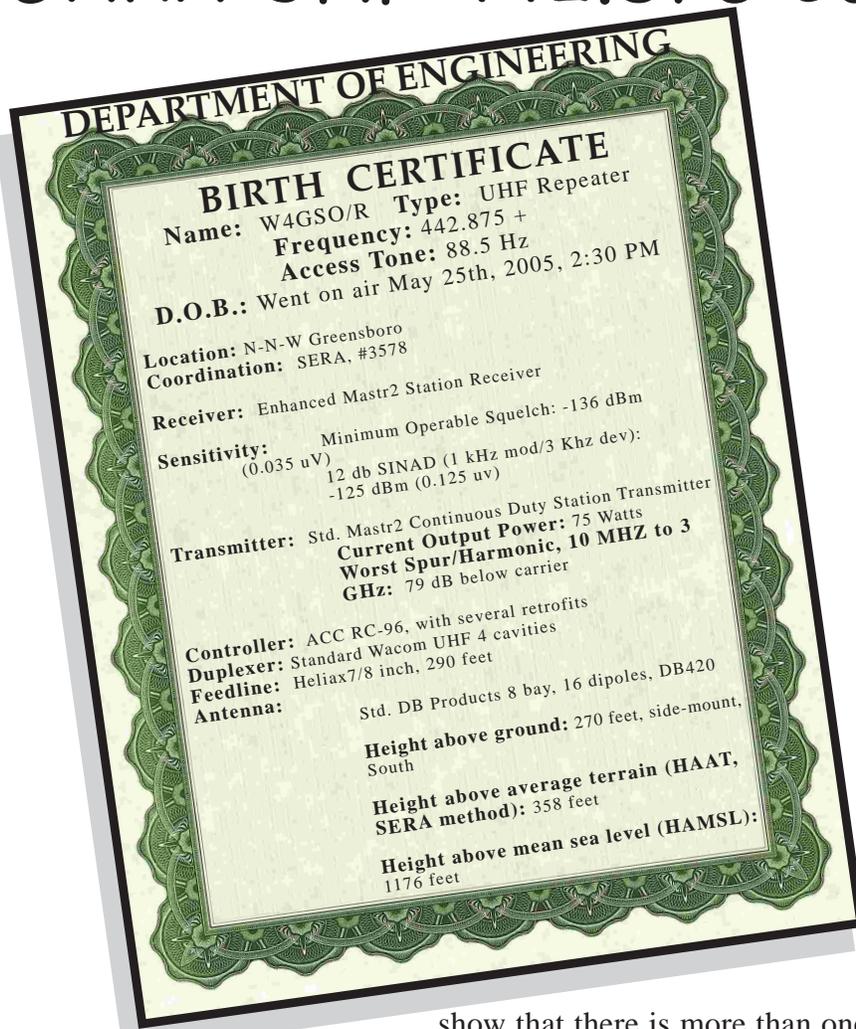
Web Site: www.w4gso.org

June, 2005

Editor: Tom Forrest, N4GVK

E-mail: info@w4gso.org

GARA UHF 442.875 Comes to Life



IN THIS ISSUE

UHF coverage map.....Page 4
Soccer Tournament.....Page 5
Meet the member.....Page 7

DON'T FORGET

E-mail John, KI4BMS, and let him know if you plan to attend the picnic, Sept. 17 - ki4bms@arrl.net

Next Meeting June 27

The next meeting of the Greensboro Amateur Radio Association will be held at the Golden Corral Steak House off Wendover. If you'd like to eat be there at 6:30 PM with the meeting beginning at about 7:15 PM.

The program will be presented by the Guilford County Department of Emergency Management.

Engineering Report

By Arch, KT4AT
Engineering Chairman

VHF Update: Two subjects on VHF this month. The first is the Phelps Dodge duplexer. Intermodulation distortion measurements continue. Measurements 4 cavities-at-a-time

show that there is more than one cavity intermoding. Before making a final assessment, I have designed specialty filters and a method to measure those cavities one at a time. This is not an easy thing to do, and will be worth an article for QEX, or RF Design. Final disposition within a week.

The second subject this

month is interference. There is heavy kerchunking going on not only in 145.15, but also in 145.25, the GAS repeater. Started two days after the Soccer Tournament. Both machines have the same sounding kerchunking signal, and are subjected to this in turn (15 for a while, then 25 for a while, then back,...). This may be another machine somewhere generating a

Continued on Page 2

Engineering Report ...from page 1

roving spur. Although that spur would have to carry a 100 Hz modulation to open 15, and 88.5 to open 25. Will find out, not a question of if, just a question of when...

UHF Machine: Finally, we are on the air with Machine 1. Machine 1 was completed, and passed all outgoing QA tests. It was put on the air on May 25th. Thanks to Carlton, N4DFA, Tom, N4GVK, and a prior Club Member gone up North, Drew, N9VP to help filling the cabinet. And full it is. Coverage is excellent, similar (some say better) to 145.15. Performance-wise, the UHF machine is maxed out. 145.15 is not. Need to complete that closed-loop preamp I started in 2001... Will provide close to another 2 dB of Noise Figure reduction in 145.15.

Machine 2 has also been completed, and has passed all outgoing QA tests as well. Performance of Machine 2 is similar to Machine 1. The only thing with Machine 2 is that the power supply which came with it is not a 30 Amp, but an 18 Amp. We will swap power supplies with one of the VHF ones. VHF is running at about 18 Amps, so the smaller power supply will do fine there. UHF is running around 25 Amps, so the 30 Amp supply will fit better.

Machine 2 has been put in storage until we can get the GARA tall cabinet still at Guilford College up at the site. To this effect:

Help Needed

Who: Two Hams and a Truck

Mission: Go pick up the GARA cabinet at Guilford College and deliver to Forest Cemetery location

Comments: cabinet is between 40 and 80 pounds. Will need also hand truck and ties to get it down the stairs. Roy can be guide in the Guilford College building maze.



Carlton O'Rork, N4DFA, right, gets some help from Drew Taylor, N9VP at the installation of the UHF repeater. The VHF 145.150 repeater is in the background. (Photo by N4GVK)

Ham Happenings NEWS briefs

Family Loss

Our prayers and sympathy go out to GARA member Ernie Wall, NC4EW and his family for the loss of Ernie's father, William Bernard Wall, on June 3.

50 Years Ago...

From the Greensboro Daily News, June 12-18, 1955

For the first time since World War II, Greensboro underwent an air raid test. With the help of 24 ham radio operators and 100 auxiliary police officers, the Greensboro-Guilford County Civil Defense Organization tested six new sirens located at strategic points in the city, including the Jefferson Standard building downtown. The "ham" operators and police were stationed at various points about the city to report on the audibility of the sirens at those points.

(Reprinted from the News & Record People & Places, June 12-18, 2005.)

Founder of Ten-Tec SK

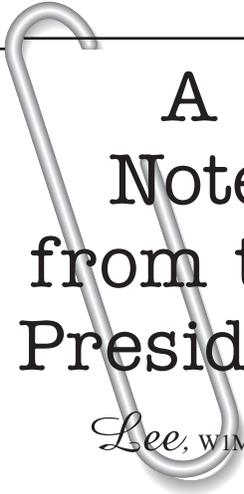
K4FW, Albert R. Kahn, passed away on June 15th. Al started Ten-Tec after being bored with retired life. He had previously started the speaker/microphone company Electro Voice.

The company was founded by Al Kahn and Lou Burroughs in the basement of The Century Tire and Rubber Company in South Bend, Indiana as Radio Engineers. 1930 Kahn and Burroughs developed a public address system for Knute Rockne,

As the football coach at Notre Dame University. Rockne used the system to address the team during drills on four adjacent fields. He called the system his "Electric Voice".

"The Feed Line" is ©2005 by the Greensboro Amateur Radio Association and published monthly. Our address is P.O. Box 7054, Greensboro, NC 27417. The purpose of the newsletter is to provide the club and prospective members information about the club and amateur radio in general. Material and information should reach the editor by the first Friday of the month for the next edition of the newsletter. Opinions expressed in "The Feed Line" do not necessarily represent the views of the officers, directors, editor or members of the Greensboro Amateur Radio Association. Material may be reproduced, provided proper credit is given to GARA.

from Lee Wimbs, W1MBS, GARA President



A Note from the President

Lee, W1MBS

MacGyver.

A number of years ago some of the Production staff at WFMY-TV started calling me MacGyver. This was based on a television character called MacGyver, who was played by actor Richard Dean Anderson. This weekly series on ABC featured the star solving a number of technical issues with ordinary items. And it seemed I was able to fix a number of problems using what parts were available.

I admit some of the solutions I came up with were using strange components, and extended imagination, but the issues were corrected. Albert Einstein once said 'Imagination was far better than education, because it was unlimited'. So sometimes we have to work with what we have available.

At the monthly GARA meeting the program was given by Clark Doggett, KG4HOM, who talked about 9-11 and being prepared. I was thinking how much preparation was needed. What do we need to carry with us, what can we get locally, and how can we best utilize what we have?

Are we really prepared?

A number of important items were mentioned by Clark. Simple things we take for granted.

Items such as a pencil, a piece of paper, extra medication, or just a bottle of water to drink. Do you have enough gas in the car to reach the next destination? How charged are the batteries in your handheld?

What if an emergency happened within the next hour? Would we be ready? How many of us have 'stock piled' enough items to get past the crisis? Where is that emergency bag you put together in a quiet time?

Last night Sheari and I went to a home improvement center for a couple of items. As we left she picked up a publication. The title, 'Hurricane Preparation Guide 2005' should be a clue to the contents. This is the season for hurricanes in North Carolina. Add this to the list of things we need to prepare for. You might pack a raincoat or maybe a flashlight for this one.

Tonight as I write this things are quiet. The birds are singing outside my window. My telephone is not ringing with another major issue. And all I can hear on television is a rerun of 'Andy'. So things in my neighborhood must be fairly normal. But if conditions were to change, could you be the next MacGyver? Could you take the items you have available and correct the problems confronting you?

The lesson we need to learn is very simple. Prepare now, solve the problems later. Pack that emergency bag with items you will

need. Get the extra batteries, the extra clothes, the extra meds, and anything else that might be needed in an emergency and store them in a place that is easy access. And then hope you never need those items. But we as hams must be ready. It is one of the things we do best.

Law Targets Illegal CB'ers

C-B operators in North Carolina have something new to worry about. This as state law bans the use of illegal 11 meter radio gear such as frequency sliders and high power amps.

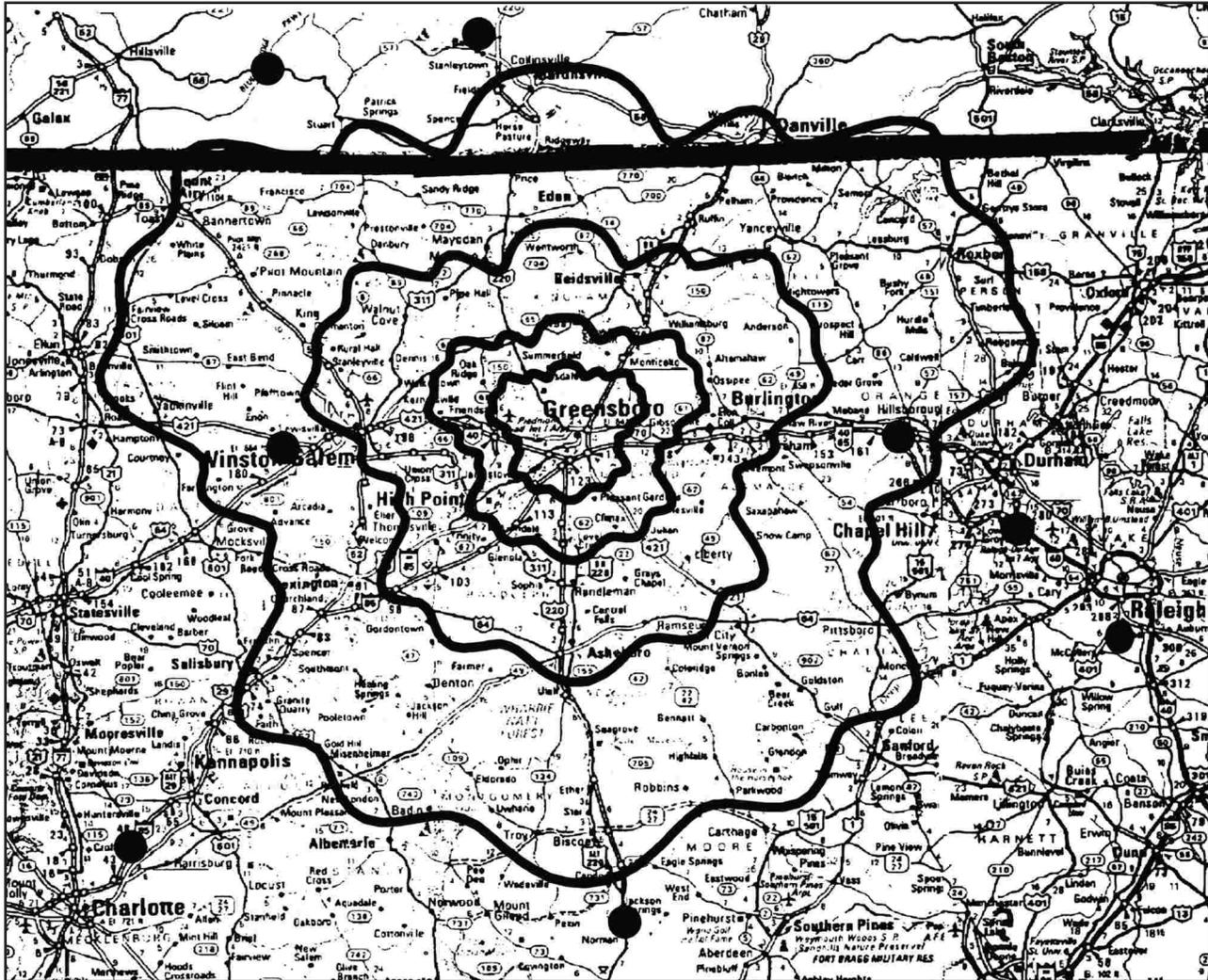
The law makes it a Class 3 misdemeanor for a person to use Citizens radio equipment that is not specifically authorized by the FCC. Gear such as export only and C-B sets easily modifiable for out of band operation would be two categories the law covers in addition to external power amps.

The measure known as North Carolina Article 15, Section 62-328 is very narrowly crafted so as to target only the users of illegal 11 meter gear.

It exempts anyone who operates two way radios under the authority of Title 47, Section 302a of the United States Code of Federal Regulations, which is just about anyone other than an 11 meter operator.

Now, heres the kicker. The law has been on the books since December of 2004 but it only became known in the ham radio community very recently. This was when its text was published in the latest issue of Repeater Journal magazine. (*Repeater Journal via AR News Line*)

UHF REPEATER COVERAGE AREA



The coverage contour curves shown above have been generated by computer. They take in account antenna pattern/gain, and height of both repeater and user antennas. They include the tower impact on this pattern. They model the machine, including feedline, duplexer and cavity loss, at a 12 dB SINAD repeater receiver input level, for 4 different user equipment types. They do not take in account local topology, assuming that the Earth is a perfect sphere.

All four contours predict the 90% coverage area, at 12 dB

SINAD quality. This is roughly equivalent to 25% noise. For commercial applications, this would be considered "poor", or "noisy" quality. In Amateur Service, we frequently use signals even worse than that, down to 6 dB SINAD (or 50% noise). The smallest contour in the center is for an HT, low power (0.3 W), rubber duckie. The bigger one next is for the same HT at high power (3 Watts). Next is a mobile low power (3 W), with a 5 dB gain antenna/feedline. The last biggest one is for the same mobile, at high power (30 W).

The black dots indicate contacts made on the machine so far at the edge of coverage Thanks to N4GVK, KG4STP, KI4BMS, KF4RMT, K4ITL for "checking it out". Coverage in Greensboro is low power HT pretty much everywhere (outdoors).

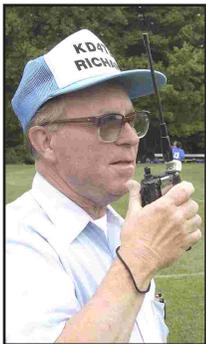
Do you know of an amateur in the area that's newsworthy? They do not have to be a member of GARA to be eligible. Send your items to the Feed Line newsletter Editor, Tom Forrest, N4GVK at n4gvk@bellsouth.net.

GARA Provides Communication For Soccer Tournament

By Allen Bradley, KD4IUN • Photos by Tom Forrest, N4GVK

Roy, N4BYU, called me Friday evening about 9:00 pm. He asked me to help out with a soccer tournament the next morning at 7:00. That was in 1992, just five months after getting licensed, and I have been volunteering for soccer tournaments ever since.

Greensboro Youth Soccer and GARA have a long history of working together. Morris, K4SNI, was involved with both organizations 26 years ago when



Richard Love, KD4TB, has assisted for 26 years

the first of what grew into the Wrangler / McDonalds Youth Soccer Classic. The list of radio



Bob Schwer, K3ZGA, talks with tournament site director Allison Browning.

operators who have helped out over the years reads like a Who's Who of Amateur Radio in Guilford County. Dale, WD4CVM, George Stentz, WA4OBR, and Richard, KD4TB who has worked all 26 Wranglers, and George Blosser, N4CPV who was net control for 10 years can all tell some amazing stories of the early days.

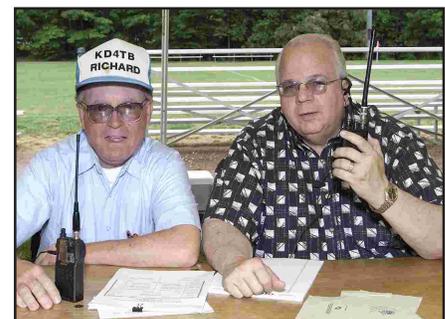
Somehow the following year I was assigned the task of coordinating the radio operators for the tournament. It is a job I have enjoyed ever since. The tournament quickly grew to where by 1995, we needed to host about 500 matches at 12 sites in two days. It took 35 hams to coordinate all of that. We could never have done it without the help of Madeline, KD4SVJ, and her scoring computer. Ann, N4AIG, took over as net control after George retired and between these two super ladies they do a terrific job of maintaining order on the net.

Since then GYSA has requested our help with two more annual tournaments. The Memorial Day Shootout is held on the Shelby weekend. The Challenge Clash is held the weekend before Thanksgiving. On the other hand, the tournaments have gotten smaller. The 26th annual Wrangler hosted 166 teams who played 285 matches on 22 fields. Since Bryan Park has grown to 19 fields we only had to staff Jaycee Park as the only remote site. I would like to thank the following hams for their help for this latest Wrangler: Madeline KD4SVJ, Ann N4AIG, Earle N4ERL, Ryan KD4TMD, Mary KG4ZQL, John KI4BMS, Clark



KG4HOM, Jane KG4ZQK, Richard KD4TB. Bob Schwer K3ZGA, Bob Mays KE4MOW, Greg KG4UQV, Roy N4BYU, and Arch KT4AT, who made sure our repeater worked perfectly all weekend.

Working a tournament is a fun way to sharpen your skills and maintain your emergency preparedness. Come out and join us next September 3rd and 4th, and/or November 19th and 20th. If you would like to assist, please see me at a club meeting or send me a note at kd4iun@arrl.net or allen@bradleydata.com.



Richard Love, KD4TB, left and Bob Schwer, K3ZGA, call in scores during the tournament



GARA Meeting Minutes

REGULAR MEETING 5/23/05

The regular monthly meeting of the Greensboro Amateur Radio Association was held at the Golden Corral Restaurant Monday evening May 23 at 7:15 PM with 25 members present.

The meeting was called to order by President Lee Wimbs, W1MBS. The minutes of the previous meeting were approved as printed in the "Feed Line."

There was no old business reported. Committee reports were presented. Vice President John Doggett encouraged everyone to plan for the picnic September 17 and make plans for the Mt. Mitchell trip in October. Treasurer Ernie Wall, NC4EW, reported all was fine. Al Allred, K4ZKQ, reported on the financial status, saying everything was on track and doing really well. Secretary Tom Forrest, N4GVK, had no report, except for needing articles for the newsletter.

Engineering Committee report was given by Arch, KT4AT. Arch said he had been working on the duplexers and found problems. The club's duplexers are 28 years old and the problems seem to be in several of the "cans" We are presently using Arch's duplexer on loan for the time being until a decision can be made on the GARA older duplexer. On the UHF side the machine will be installed on May 25 and will use the older ACC 96 controller.

Operations Chairman and repeater trustee Roy Smith, N4BYU, had no report. Members-at-large, Clark Doggett, KG4HOM had no report. Mark Robertson, KG4STP, was not

present.

Allen Bradley, KD4IUN, said he was on track for the yearly Wrangler/McDonald Soccer Tournament Memorial Day weekend May 26.

President Wimbs, once again spoke briefly about upcoming club activities, picnic on September 17 at 5:30 pm and Mt. Mitchell trip in October.

The program for the evening was given by Clark Doggett, KG4HOM. Clark was deployed as a pharmacist with SORT (Special Operations Response Team) from Winston-Salem, for 9-11. He spent a good deal of time in New York City. His program consisted of "Being prepared as a Ham." He said that local events such as soccer and other events allowing Ham Radio participation, were great training tools for the "real thing" He said after such an event, you can sit down and discuss where the problems were and make corrections. He also said that it's always a good idea to carry a list of your medications with you if you have to leave for event such as 9-11. The group thanked Clark for a nice presentation.

Respectfully submitted, Tom Forrest, N4GVK, Secretary

BOARD MEETING 6/13/05

The regular monthly board meeting of the Greensboro Amateur Radio Association was Monday, evening, June 13, at 7:30 PM.

Those present were Lee Wimbs, W1MBS, president; John Doggett, KI4BMS, vice president; Tom Forrest, N4GVK, secretary; Ernie Wall, NC4EW, treasurer; Al Allred,

K4ZKQ, financial; Arch, KT4AT, engineering chairman; Roy Smith, N4BYU, operations chairman/repeater trustee; and Clark Doggett, member-at-large. Not present was Mark Robertson, KG4STP, member-at-large.

Each officer gave a short report of their activities. Significant items for reporting were:

1) Tom Forrest, N4GVK, said the old Icom UHF repeater has been sold and the club received \$200. It was noted that the buyer was aware of the problems with the repeater and accepted it as-is with no warranty. He also noted he needed more input for newsletter.

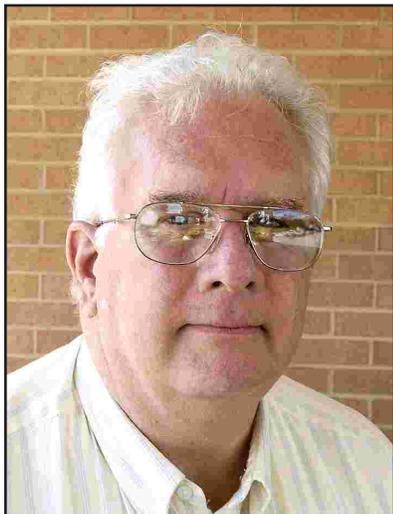
2) Arch spoke briefly about the duplexer situation with the club's old duplexers. It's not good. He's searching for another used duplexer and worst case would be the club purchasing a new set at a cost of about \$1,500. Research is continuing.

3) Arch discussed the installation of the new UHF repeater and it was doing better than expected. He also provided the board with a coverage map. Work is progressing on the second UHF repeater. Also investigating interference on the repeater. New ID's for the repeater are forthcoming.

4) Members were reminded of the upcoming events: picnic/fox hunt September 17. We need responses for a head count. Gather at about 5:30 and eating will begin about 6 – at the Doggett's QTH. Mt. Mitchell trip October 8 and a tail-gate party at tentatively at Hagan-Stone part in August. Possibly August 13.

Respectfully submitted, Tom Forrest, N4GVK, Secretary

Meet Our Members...this month Ernie Wall, NC4EW



Meet our club Treasurer, Ernie Wall, NC4EW. A Greensboro native, Ernie developed an interest in Ham radio by way of mid 50's magazines, including one featuring a sample novice test and a homebrew transmitter schematic with pictorial diagram. His interest was sharpened even more by BCB/SW SWLing using radios he had repaired.

Ernie was first licensed in 1965 as a novice (WN4APF); this was changed to WB4APF when he gained Technician status. He has upgraded twice more ^ to Advanced in 1978, and to Extra class in 1996.

His QSOs on HF are on an ICOM 756 PRO 2 with a Collins 30L1 amplifier and a homebrew 6-inch spaced ladder line feeding a dipole with a homebrew balanced line antenna tuner, a four element 20 meter beam (Hy-Gain), a homebrew three-element 15 meter beam and a 10 meter vertical. His beams are mounted on a 50-foot tower with the dipole heading off in a couple of different directions.

Ernie operates on VHF using ICOM and Kenwood single-

band 2 meter rigs for mobile and residential use. At home, he has a Ringo Ranger mounted on his 50-foot tower. For UHF purposes, he operates an ICOM ICQ-7A 300 milli-watt portable feeding a commercial antenna mounted on his tower for 70cm.

His favorite bands are 20/40 of course. He professes a special fondness for CW and Phone, and for casual DXing. He is a member of Sky Warn and ARES, and is a former Navy/Marine Corps MARS operator.

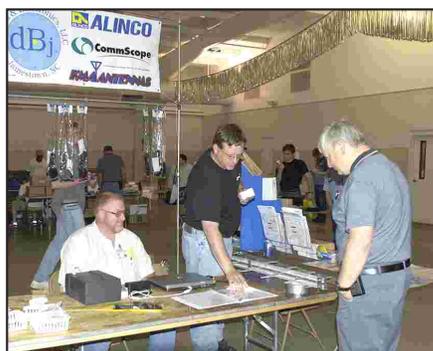
A graduate of Wingate College and UNC-CH, Ernie is retired from Guilford County Emergency Services after 33 years in telecommunications as a dispatcher. Ernie was among the first group of certified Paramedics licensed by NC. He was heavily

involved in the project to set up the first Paramedic telemetry system in the state, as well as Guilford County's 911 phone system and the 800 MHz trunked radio system.

Ernie, his wife Marcia, and son Jason, have lived in Oak Ridge for 27 years. He happily points out that Oak Ridge is the highest spot in the county -- just great for antennas! Ernie says that while Marcia has absolutely no interest in becoming a Ham operator, Jason (aged 22) is currently studying to test for a Technician,s license. In addition to Ham radio, Ernie really enjoys boating and fishing.

Ernie says, "I'm proud to be associated with a radio club whose members make themselves available to assist with community projects and events."

Winston-Salem Hamfest Photos, June 11, '05



Above, Pete Wilson, K4CAV, and Larry King, W4VEN, talk with Robert Young, NC4ME, of Tarheel Antennas; bottom left, Dub Bridges, KG4UFB, talks with Jamestown dealers, DJB Radio & Electronics. An outside shot of the flea market is at top left. (Photos by Tom Forrest, N4GVK)

Area Activities

FOURTH MONDAY – at 6:30 PM, the **Greensboro Amateur Radio Association** has their regular monthly meeting at the Golden Corral on Landview Dr., off W. Wendover Ave. Please plan to gather at 6:30 PM for dinner. The meeting is scheduled to start at 7:15 PM

CLUB NETS:

SUNDAYS – weekly at 9 PM, the **GARA News and Information Net**. This net features NewsLine and is on the 145.150, W4GSO repeater. Roy Smith, N4BYU is always looking for net controls. Contact him if you would like to help.

THURSDAYS – The **Guilford County ARES Net** meets on the 145.150 repeater (100 Hz. tone) at 9 PM.

TUESDAYS – at 8 PM, the **2 Meter SSB Net** meets on 144.225 Mhz. USB. Chris Thompson, K4HC is the net control station.

WEDNESDAYS – The **Guilford Amateur Society** holds their weekly net on the 145.250, W4GG repeater with an 88.5 Hz. tone. Jim Hightower, W4JLH is the net control.

TUESDAYS – at 8:30 PM **The Triad SkyWarn Net** meets on the 147.225, K4ITL repeater, no tone required.

OTHER ACTIVITIES :

FIRST MONDAY – The **Guilford County A.R.E.S.** monthly meeting is held at 1002 Meadowood St. off W. Wendover Ave, in the EMS building, beginning at 7 PM.

THIRD MONDAY – at 6 PM **The Guilford Amateur Society** holds their monthly meeting at the Golden Corral on Landview Dr., off W. Wendover Ave. Dinner at 6:30 PM and the business meeting is slated to begin and 7 PM.

SATURDAYS – at the K&W Cafeteria on Big Tree Way, hams get together for **Saturday Breakfast** at 7:30 AM. Talk-in is on the 145.150, W4GSO repeater, with 100 Hz. tone.

MONDAYS & FRIDAYS – at 11 AM, Greensboro Hams get together for lunch. On Monday they meet at various locations and on Friday lunch is at the K&W Cafeteria off South Holden Road. Talk-in is on the 145.150, W4GSO repeater with a 100 Hz. tone. On Mondays, give a call to see where everyone is meeting.

EVERY FRIDAY – at 8 PM (approximately) Greensboro Hams get together for coffee at Starbucks on Battleground Ave. (summer location till Daylight Savings time changes)

Greensboro Amateur Radio Association
P.O. Box 7054
Greensboro, NC 27417



Web:
www.w4gso.org

GARA OFFICERS

President

Lee Wimbs, W1MBS

Vice President

John Doggett, KI4BMS

Secretary

Tom Forrest, N4GVK

Treasurer

Ernie Wall, NC4EW

Financial Officer

Al Allred, K4ZKQ

Engineering

Arch, KT4AT

Operations

Roy Smith, N4BYU

Members At Large

Clark Doggett, KG4HOM

Mark Robertson, KG4STP

Circulation

Paul Shepherd, WA4LGX

Webmaster & News Letter Editor

Tom Forrest, N4GVK

FIRST CLASS MAIL

The Official Publication of GARA