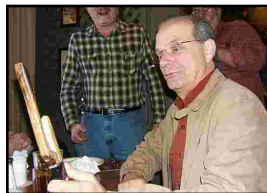**Hamfest has new Home Page 6**

Riley Hollingsworth, K4ZDH, of the FCC Enforcement Bureau visits local Hams
Read about it on
Page 4

Hams provide communications for Triathlon Page 7

Computer to Radio Interface for Icom and Yaesu

by Rick Mainhart, WB3EXR
Special to the Feed Line

Chris Thompson, K4HC has a way of asking you things he knows you can accomplish, and in a way that you don't even think to say "no, I've got too much to do already". I think you know where this is going …

Anyway, after a (gentle) arm twisting by your club president, I found myself agreeing to designing and building a serial port to TTL converter. This converter will allow direct rig control using your computer and a free program. Chris also sent me a couple of different schematics for interfaces others had built, just to get me started. His intention was to have this as a group build, rather than just ordering the completed interface.

I took a look at the different interfaces, and wanted to make the interface port-

NEXT MEETING
April 28

The next meeting of the Greensboro Amateur Radio Assoc. will be April 28, at the Golden Corral Steak House, 4404 Landview Dr, Greensboro, NC 27407, off Wendover Ave., near Sam's Club.
The guest speaker will be Guilford County Sheriff B.J. Barnes, who will speak on the status of communicatioins in Guilford County.

powered, to cut down on the number of wires and/or wall warts needed. After some thought, I realized how few computers now come with a serial port. I decided that I ought to investigate adding a USB interface. It was during my search for a suitable interface IC that I found a complete, port-powered USB solution.

Future Technology Devices International Ltd. (FTDI) offers a complete line of USB interface ICs and complete assemblies, as well as royalty-free device drivers for Windows 98, 98SE, ME 2000, Server 2003, XP, Vista/Longhorn, XP 64-Bit, XP Embedded, C.E.Net 4.2 & 5.0, Mac OS 8/9, OS-X, and Linux 2.4 and greater.

I quickly decided that their TTL-232R USB-to-TTL interface cable was a simple solution with little more to do than remove their connector and install a 1/8" phone plug. This cable is available from Mouser Electronics (www.mouser.com) as (626-DLP-TTL232R, $20.00 each). I also ordered some nice 1/8" (3.5mm) stereo phone plugs with a metal shell and a metal spring strain relief at the same time (171-PA3291-2-E, $1.46 each).

What I received was a typical USB 'A' connector and 1.8 meter cable with a 6-position header (0.100" pitch). My needs were for data only to an Icom transceiver, so I cut the connector off and wired a 1/8" stereo phone plug as follows:

For the Icom CI-V interface:
Black wire to the phone plug sleeve, and Orange and Yellow wires to the phone plug tip.

For the Yaesu CAT interface: Black wire to GND (pin 9), Orange (Tx Data) to radio RX Data (Pin 4), Yellow (Rx Data) to radio TX Data (Pin 5).
(Order Mouser P/N 806-KMDAX-8P, $1.79 each.)

Rick Mainhart, WB3EXR

For Kenwood radios, you will need Clear To Send (CTS) and Request to Send (RTS) as well. Most interface schematics show CTS, RTS, RXD and TXD buffered by opto-isolators. Fortunately, the TTL-232R has both CTS and RTS, and gives the user the ability to invert any or all of the signals as needed (requires your downloading the application MPROG Version 2.8A or later). The TTL-232R also has a high drive output option that will provide up to 50 mA. The TTL-232R also provides 5 VDC for opto-isolator power. I have not wired or tested this configuration; if you need assistance, feel free to contact me.

Since RTS is available on the interface (except if wired for Kenwood), you may wish to wire it to your transceiver as a push-to-talk (PTT) line. I suggest using an N-channel mosfet transistor or even an opto-isolator. I chose not to wire in PTT from my interface; I plan on building a separate PSK-31 interface with integral

Radio interface from page 1

VOX (voice operated switch) … but that's another article.

To wire an opto-isolator such as the Toshiba TLP-372 (Mouser p/n 757-TLP372(F), $0.90 each), connect the + (anode) terminal to RTS, connect the – (cathode) terminal to ground via a 500 ohm resistor, setting the maximum forward bias current to 10 mA. Connect the opto-isolator collector to your PTT line and the emitter to PTT ground. You will need to invert RTS to key the transceiver when RTS is asserted; you want the default (power on) mode to be transmitter NOT keyed!

If you feel you do not need the isolation, you can take a power Mosfet such as the ST Microelectronics STP16NF06L (60 volts, 16 amp, TO-220 package, Mouser p/n 511-STP16NF06L, $0.51 each) and connect the gate to the RTS line through a 5 ohm resistor. Connect the interface ground (black) to the Mosfet source. Connect the transceiver PTT line to the drain and the PTT ground to the source (along with the interface ground). Be sure to invert RTS so that the default (non-asserted) output is 0, ensuring the radio is not keyed when the interface is first plugged into the computer.

I used Mouser Electronics as the parts source for all the components discussed above simply because Mouser stocks the

Completed cable assembly

TTL-232R, and have no minimum purchase requirements. I have found that purchasing new parts is often cheaper and more reliable than hunting for those so-called "surplus bargains". All too often, I am finding the surplus parts are equal to or higher than new parts, and have a limited supply.
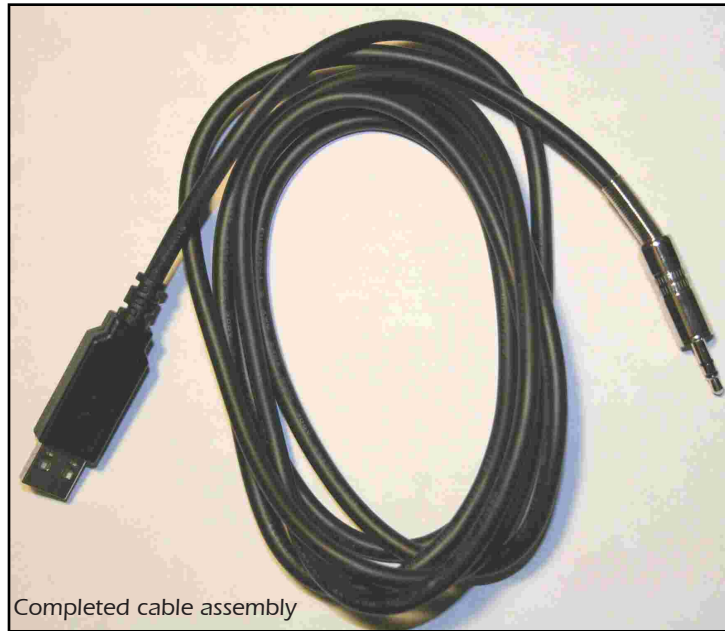
How does it work?

First, download the device driver from the FTDI website (see below) - you will want the VCP or Virtual Comm Port driver for your particular operating system.

http://www.ftdichip.com/Drivers/VCP.htm

Wire your adapter as discussed above, and install it and the driver per your operating system instructions. Once the adapter is connected, you can test it using hyperterminal or other simple communications program. Connect to the appropriate comm port and if you have wired for Icom, initiate the call and start typing. If you've wired for Yaesu or Kenwood, you will need to jumper TX Data and RX Data before initiating the call and typing. You should see your typed characters echoed on the computer display. If this works, remove any jumpers, close the communications terminal program and unplug the USB adapter from your computer. With your transceiver shut off, plug the interface into the transceiver. Plug the USB port back into the computer, then turn the transceiver on.

Open your transceiver control software (such as Ham Radio Deluxe) and configure for your transceiver and establish communications. You are now ready to play. Stay tuned for Chris' article on computer rig control.
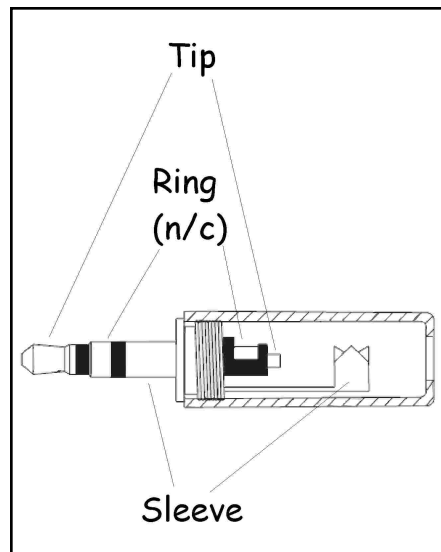
Tip
Ring (n/c)
Sleeve

Close-up of plug above and wiring diagram to the left.

GARA Meeting Minutes

Regular Meeting Minutes
March 24, 2008

The regular monthly meeting of the Greensboro Amateur Radio Association was held on Monday March 24 at the Golden Corral Restaurant at 4404 Landview Dr. near Wendover and I-40.

President Chris Thompson, K4HC, called the meeting to order at 7:15 PM.

Chris then started a lively discussion with Roy Smith N4BYU to try and iron out exactly what the terms were concerning Roy's offer he made in January about paying all or part of the general upgrade test fee. Alan Bradley, KD4IUN, said that in the spirit of Roy's offer he would like to donate $5.00 to the club treasury.

Larry Pike, KI4PRT, donated a 56K modem to be auctioned off but there were no takers.

Chris asked about approval of the minutes from last two meetings. The minutes were approved as published.

Chris reminded everyone that we would no longer discuss the majority of business at the regular club meetings. Chris then asked the board if there was any business to discuss. Roy said that the club has been asked to provide communications for a triathlon to be held at Belews Lake on April 19. Ten to fourteen volunteers will be needed. Roy said he has five so far and he would like to have about 10 more volunteers. The time volunteers will be needed is from 7AM until 11AM. Lunch and drinks will be provided and volunteers will get a tee shirt. Contact Roy Smith N4BYU at n4byu@arrl.net if you can help.

There is also a marathon to be held in downtown Greensboro on May 3rd. But this date conflicts with the Triad Highland Games, which ARES helps with communications so we will not have the requested number of people available to do the marathon.

Vice president John Strandberg, AJ4BT, asked for any ideas for programs. Contact John at aj4bt@arrl.net if you have any ideas. Clark Doggett, KG4HOM, has invited everyone to the Bar-b-Que. picnic in "Doggettville" on September 20th.

Chris said the Echolink node Bob Davit, W8JFQ, is working on, could be done on either the 145.15 or the 442.875 repeater. It will probably be done on the 145.15 machine.

Bob said that it would be a good idea to add a letter to the controller access code to remove any possibility of someone accidentally getting into the repeater controller.

Alan Bradley, KD4IUN, asked for volunteers to work the soccer tournament on Memorial Day weekend. Alan said he would like to see some new faces in addition to the regulars. Contact Allen at kd4iun@arrl.net /

ARES coordinator John Doggett, AJ4DV, said that ARES has a few events coming up,

On Wednesday April 9th. The Water Festival at Bryan Park contact Dave Collins, KE4IAF, at ke4iaf@earthlink.net . Next is the March of Dimes walk on April 26th. At Center Park in Greensboro. Contact John Doggett, at aj4dv@arrl.net, also the Triad Highland Games on May 3rd. About 20 operators will be needed. Contact John at aj4dv@arrl.net .

The last event will be Field Day, which will be held at Summerfield Park this year on June 28&29. John said the plans are to run 3-A this year with a PSK-31 station in addition to two HF stations. Moses Cone is scheduled to bring out their mobile hospital and their communications van, also they are also trying to schedule a blood drive at the park that weekend.

John Stranberg, AJ4BT, introduced Tom Forrest, N4GVK, who presented a video on the Hallicrafters HT-4 amateur transmitter which was slightly modified to survive mobile use and was redesignated the SCR-299 for military use.

Tom then presented a short video that he put together about Field day last year. The meeting closed at 8:30 PM.

FOR SALE

KENWOOD TS-430s with matching PS-430 Power Supply and MC-80 Desk Mic. Covers 160 through 10 meters including the WARC bands. AM, SSB, and CW. (FM with optional board). General coverage receive from 150 kHz to 30 MHz. All solid state. MC-80 desk mic has up/down tuning buttons, locking PTT switch and built-in preamp with adjustable level. Good condition, works great but some scuffs & scratches. Copies of manuals included. $400. Call Dave, KN4ZO, at (336) 992-3202 or email kn4zo@arrl.net

Kenwood TH-K2 Handi-Talkie in like new condition and with 2 antennas, the original one and a Diamond RH519, that I will sell for $90... it has all the accessories that it came with, the original box and the User's Guide. E-Mail is jecchile@yahoo.com Phone number: 854-5088 (Anytime except between 11pm and 8:00 am)

About 6-7 years of QST. Maybe more. All in excellent condition. Trying to make room for other things. Just dont use them and they are taking up space. No charge for them but would like to donate them to a young individual excited about ham radio. No picking or choosing. Take entire lot. Bring their own boxes and transportation. John Shea, N4DSP, 336-684-9253, cell; 336-565-0271, home.

Kenwood TH-F6a tri-bander (220mhz, 440mhz, and 2m)- Has had hardly any use - works great - not a scratch on it. Sell for $280. Original box, all paperwork, supplied accessories and charge cord. One owner. Holds an amazing charge! Already programmed with lots of the local repeaters and surrounding areas, etc. Anyone interested, please have them email at Rudy Langley, kg4hct@aol.com, or call 253-2421 and leave me a message.

Riley Hollingsworth, K4ZDH, Stops In Greensboro for Brunch

Presented With a Token of His Visit -

An Autographed "Wouff-Hong"

See Page 5 for further information

Ham Happenings *NEWS* briefs

"The Wouff-Hong is amateur radio's most sacred symbol and stands for the enforcement of law and order in amateur operation."

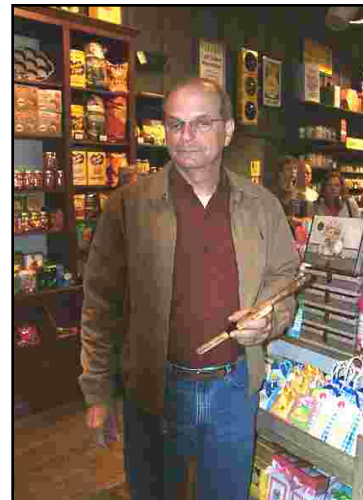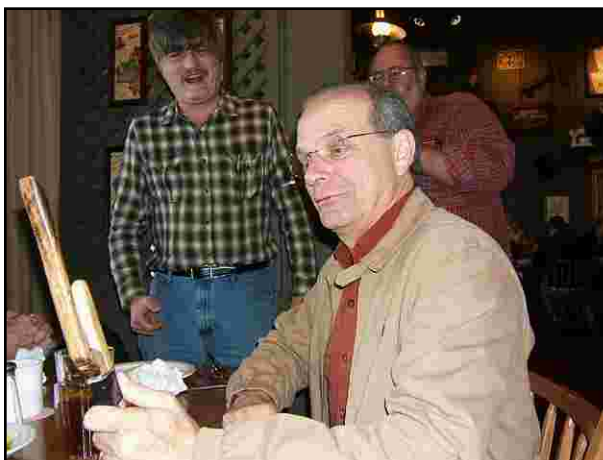**The Radio Amateur's Handbook, 1930, p. 11**

The Cracker Barrell on I-85 at exit 124, on Sunday April 6, was "THE" place to be if you were one of the local Greensboro Hams. Mike Best, WD4DUG, tossed out an invitation to Riley Hollingsworth, K4ZDH, Chief Enforcement Officer for the FCC, to stop by Greensboro on his way back from the South Carolina SSB Celebration the previous Saturday. A luncheon was scheduled for Sunday at 11 at the Cracker Barrell.

The group presented Riley, K4ZDH (who looks like Jack Nicholson), with his own personal, autographed :"Wouff Hong" (more on this later). Everyone had a great time and with Riley leaving with a lot of good "Greensboro" memories. As a note: Riley received his law degree from Wake Forest University Law School in the 70's.

Thanks to Mike Best, WD4DUG and Roy Smith, N4BYU for the great photo coverage.

Riley Hollingsworth, K4ZDH, received his "Wouff Hong" from Mike Best, WD4DUG, background. Other photos of the group are below.

OK, So What's a "Wouff Hong?"

It's part of Amateur Radio Legend

From the ARRL Web Site

Every amateur should know and tremble at the history and origins of this fearsome instrument for the punishment of amateurs who cultivate bad operating habits and who nourish and culture their meaner instincts on the air.

It was invented--or at any rate, discovered-by "The Old Man" himself, just as amateurs were getting back on the air after World War One. "The Old Man" (who later turned out to be Hiram Percy Maxim, W1AW, co-founder and first president of ARRL) first heard the Wouff Hong described amid the howls and garble of QRM as he tuned across a band filled with signals which exemplified all the rotten operating practices then available to amateurs, considering the state of the art as they knew it. As amateur technology and ingenuity have advanced, we have discovered many new and improved techniques of rotten operating, but we're ahead of our story.

As The Old Man heard it, the Wouff Hong was being used on some hapless offender so effectively that he investigated.

After further effort, "T.O.M." was able to locate and identify a Wouff Hong. He wrote a number of QST articles about contemporary rotten operating practices and the use of the Wouff Hong to discipline the offenders.

Early in 1919, The Old Man wrote in QST "I am sending you a specimen of a real live Wouff Hong which came to light out here . . . Keep it in the editorial sanctum where you can lay hands on it quickly in an emergency." The "specimen of a real live Wouff Hong" was presented to a meeting of the ARRL Board and QST reported later that "each face noticeably blanched when the awful Wouff Hong was . . . laid upon the table." The Board voted that the Wouff Hong be framed and hung in the office of the Secretary of the League and there it remains to this day, a sobering influence on every visitor to League Headquarters who has ever swooshed a carrier across a crowded band.

The Old Man never prescribed the exact manner in which the Wouff Hong was to be used, but amateurs need only a little imagination to surmise how painful punishments were inflicted on those who stoop to liddish behavior on the air.

For more information on the Wouff Hong legend, do a "Google" search.

Fox Hunting ...another "Hunt" March 22

There were three teams of two and one single team. The teams were Mike, N4MJK and Wayne, W3ANE; John, AJ4BT and Jessie N4BFD, also Dub N4DUB and Terrell, KI4GIC. Additionally there Mark KG4STP, a single team. We started a little after ten after eating doughnuts and coffee provided by Clark, KG4HOM. Roy, N4BYU, showed up to watch and harass. (HiHi). The fox was Tom, KF4JZD, who was sitting at lake Higgins marina. Mark was the first to show up at the marina but Mike and Wayne were the first to find him after driving by him twice. We then went to the park in Summerfield to look over locations for antennas. The "Fox Hunt" was over by about 11. I would like to thank everyone for their part and participation.

- John Doggett, AJ4DV, Guilford County EC

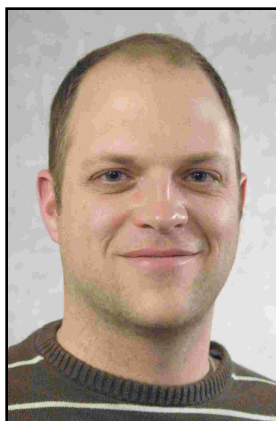*Photos by Terrell Brown, KI4GIC*

Meet Our Members

Many of the local Ham community have transferred into the area from other parts of the country. Jesse Lindley, N4BFD, stands out as a true Greensboro native. Jesse's dad (Dave, W4TR) is a licensed Ham from a young age. Consequently, Jesse can't remember a time when Ham radio wasn't a part of his home life. He's been licensed for 12 years, himself.

Jesse enjoys using a Kenwood TS-830s, a Yeasu FT-857D, and also a FlexRadio SDR1000 on HF. His Icom IC-2000 serves as a VHF fixed station, while an FT780r provides mobile access. He also uses a Puxing PX-777 handheld for a 2-meter portable. He is considering putting up a couple of low band vertical antennae. In the meantime, he has a G5RV for HF and a JPOLE for VHF.

Jesse Lindley, N4BFD

Locally, Jesse likes foxhunts – says they "seem to be great fun." He finds himself working digital modes on HF with SSB rag chew on 80 meters at night when the band is in decent shape. Current conditions have him working 20 meters during daylight hours and 40/80 meters at night. He really tries to work several contacts on digital modes each day, and has managed to make a lot of friends on 80 meters. Jesse is a member of the local ARES group, and has an interest in joining MARS, as well.

Having spent two years at Guilford Technical Community College as a liberal arts major, Jesse is employed by Techtronic Industries, a manufacturer of several well known power tools. In addition to Ham radio, he enjoys target shooting and firearms, as well as remote controlled airplanes and helicopters.
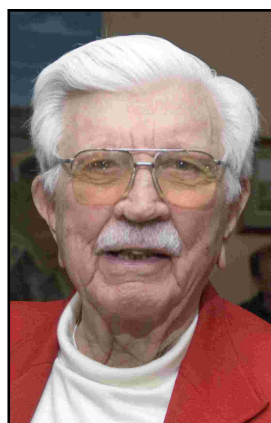
Jesse tells us, "I have enjoyed meeting a lot of people since I have joined GARA, and I have certainly enjoyed the club meetings and activities. It is nice to see amateurs have such a strong local presence."

Shelby Hamfest Has A New Home - In an e-mail April 20th to "Feed Line," Robby Hamrick, WA4RH, Shelby Hamfest Chairman, states this year's hamfest will be at Biggerstaff Park in Dallas, NC, on Labor Day weekend August 30, and 31. For further information, you can visit their web site at www.shelbyhamfest.com

Mitsubishi Unveils New Laserview TV Technology

During the weekend of April 5th, Mitsubishi took the opportunity of the Dealer Line Show held at Huntington Beach, California, to show off their new line of Laservue TV sets. This is a show designed for consumer electronics manufacturers to show off their latest products to consumer electronics retail dealers.

The new line boasts a laser-based rear projection concept that is approximately 1/3rd less in depth than older rear projection sets. These sets were displayed in a side by side comparison with LCD and Plasma models in order to show off the superior color rendition provided by the new laser-based engine. It was said that the vivid colors seemed to shoot out of the screen!

It made the colors on the LCD and Plasma sets look washed out and dull.

The picture image was said to be vibrant without looking over-blown. The picture looked similar to that produced by the tiny in size OLED technology but with the capability of producing superb color.

The models shown were not production models and Mitsubishi would not discuss the model's to come actual screen size. Although they will not be as thin as an LCD or Plasma set, they will be 1/3rd less in front to rear depth measurement.

The laser-based engine was not defined in how it produced the resultant frontal screen image. It would be interesting to learn more about this factor from a point of longevity and power consumption view. Viewing angle capability will likely be of concern, as it has been in older rear projection sets, however, a brighter image may make it less a problem. *Thanks to Don Harris, W4BUZ for this story*

Weldon Fields, W4AJT, Upgrades to Extra at 93

Weldon Fields, W4AJT

Effective March 17, Weldon Fields, W4AJT, of Greensboro, became an Extra Class Ham at age 93! A very special and hearty congrats to Weldon for this achievement. We wish him many more sunspot cycles to enjoy all the new frequencies. Weldon has contributed much to the amateur community over his years as a Ham. If this isn't a first , it's close. Weldon has been continuously licensed since 1930.

Hams Provide Communications for Belews Lake Triathlon

Area Hams assisted with communications during the Saturday April 19th Belews Lake Triathlon at Carolina Marina. Roy Smith, N4BYU (right) coordinated the event. Radio operators taking part in the event were, John, AJ4DV; Jesse, N4BFD; Rob, KG4OPX; Will, AI4VE; Tom, KF4JZD; John, AJ4BT; Chan, KJ4ADX; Bob, N0EG and Dave, KN4ZO. *Photos by John Doggett & Roy Smith*

Above Tom, KF4JZD; Greg, KG4UQV and Dave, KN4ZO. Top rioght and bottom right, participants in the event along the course.

Take Advantage of our FREE Radio Loaner Program From GARA
... Many have already!

If you are a new Ham or a GARA member needing a radio repaired or has a broken radio, GARA offers a **FREE radio loaner program**. The loaner is an HT with 16 pre-programmed frequencies of all the local repeaters. Please let us know if you'd like to take advantage of this FREE service. Contact via e-mail to info@w4gso.org Visit the web site and find more information there:
www.w4gso.org

GARA Members Speak At UNC-G Class

GARA members Al Allred, K4ZKQ and Roy Smith, N4BYU were invited by Professor Jack Bonney, of UNCG, to speak at a class "The History of Radio: Media Culture" on April 2. In an e-mail describing the class, Professor Bonney said one of the aspects and "cultures" discussed during the class was Ham radio.

According to Roy, the talk included a description of the public service aspect of Ham radio, along with a demonstration of the repeater using a Handi-talkie. The talk lasted about an hour. Thanks to Roy and Al for representing GARA and the Ham community.

Area Activities

FOURTH MONDAY – at 6:30 PM, the **Greensboro Amateur Radio Association** have their regular monthly meeting at the Golden Corral, 4404 Landview Dr, Greensboro, NC 27407, off Wendover Ave, near Sam's Club. 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. (Not operational present time)

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.

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 6:30 PM **The Guilford Amateur Society** holds their monthly meeting at the Greensboro Police Western Sub Station at 300 Swing Rd in the community room. Refreshments at 6:30 PM and the business meeting begins at 7 PM.

THURSDAY – at 11:15 AM, Greensboro Hams get together for lunch. Thursday lunch group is meeting at the K&W Cafeteria, 300 Forum VI Mall at Friendly Shopping Center. Talk-in is on the 145. 150, W4GSO repeater with a 100 Hz. tone.

EVERY FRIDAY – at 8 PM (approximately) Greensboro Hams get together for coffee at Guilford College (summer location till Daylight Savings time changes)

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

Web:
www.w4gso.org

FIRST CLASS MAIL

June 28 - 29, 2008

The Official Publication of GARA