

The Greensboro Amateur Radio Association

Feed Line

Providing Amateur Radio news for the Triad



Volume 17, No. 3

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Send Your Signal to the Gutter - On Purpose!

by Mike Sussman, N8NQP
Special to the Feed Line

After my recent license upgrade, I found myself wanting to be able to have more than just a mobile station. My dilemma was where I live. I am in a newer subdivision with restrictions on antennas. This does not mean that you can't have an antenna; it just means that you need to get a bit creative in your stealth installation. Now before anyone gets any grand ideas, you will probably not be busting lots of pileups and working a lot of rare dx, but you will be on the air, and having fun. (That's what it's all about right?)

Well, my dilemma was compounded by a lack of trees. I have 2 smaller trees on my lot, and this did not seem like the way to go. When looking around at different stealth antennas, I ran across this article at the link below www.sgcworld.com/raingutterinstall.html

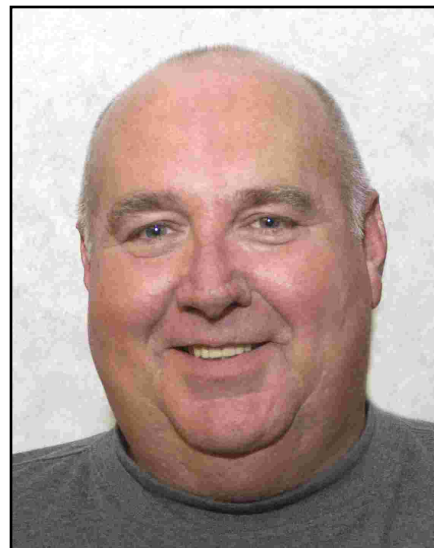
it seems that this antenna problem "might" be solved by loading up my rain gutters! Well a lot of folks were skeptical, and I have to admit it, I was too. But if I could get this to work, I would have a stealth antenna system keeping the neighbors happy. I had read a lot of mixed reviews on this type of antenna, but the factors that seemed to keep leaning towards a successful install was the use of a number of ground radials and the use of an antenna coupler. (Notice I did NOT say antenna tuner!)

Here is the difference:
"Antenna "couplers" are placed at the antenna and match conditions of the antenna to the feed line in a very precise manner. Antenna "tuners", on the other hand, are generally located at the transmitter output at the radio end of the coaxial feed line. Furthermore, antenna tuners placed at the transmitter allow substantial losses in feed lines to be corrected in order to "fool" a transmitter into working correctly. The losses are dissipated through heat or to ground. A coupler installed at the antenna eliminates these losses by providing a proper match of the antenna to the feed line." - Jack Ciaccia, WMØG

The reason for using a coupler was plain, I didn't want the radio to just see a good match and be happy, and I wanted that power to be effectively

Please turn to Page 5>

Meet Our Members



Dave Touvell, KN4ZO, is our member profile for March. Dave is a member of the GARA board as a Member-At-Large.

Dave was born in Cambridge, Ohio, and moved around to different locations, eventually finding North Carolina home in the mid 1980's.

He commented on how he got interested in Ham radio, "I have always been interested in electronics. First introduced to ham radio in the Boy Scouts. While I was attending the University of Kansas, some hams had set up a booth during the holiday season to send messages for the public. That got me interested again and

Please turn to Page 4>

NEXT MEETING March 24

The next meeting of the Greensboro Amateur Radio Assoc. will be March 24, at the Golden Corral Steak House, 4404 Landview Dr, Greensboro, NC 27407, off Wendover Ave., near Sam's Club.

The program will be a presentation of a "news reel" video "Voice of Victory" - a story of Hallicrafters during WWII.

GARA Meeting Minutes



Regular Meeting Minutes February 25, 2008

The February meeting of the Greensboro Amateur Radio Association was held on 2/25/08 at the Golden Corral Restaurant at 4404 Landview Dr. off Wendover Ave. near Sam's club.

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

The minutes were approved as posted in the Feedline.

There was no old business to discuss.

New business – Chris said that Al Allred, K4ZKQ, had talked to him about something that he had seen in the ARRL newsletter about removing the club business from the regular club meetings. Chris then brought the topic up for discussion and outlined his thoughts on the matter. Chris stated that the business would be discussed at the board meetings and any club member is welcome to come to the board meeting if they have something to discuss. All business discussed at the board meeting will be reported in the minutes of the board meeting published in the feedline.

Any time that there is pertinent business that the membership needs to know about it will be discussed at the regular meeting.

Bob Morris, W0EG, suggested doing a full meeting every six months. Engineering and technical topics will still be discussed at the regular meetings.

There was a motion to accept and the club voted on it, the motion passed.

Roy Smith, N4BYU, suggested a GARA



At the February Meeting - Lee Wimbs, W1MBS, of WFMY-TV, describes one of the converter boxes you will need to receive digital TV after 2/17/09.

logo hat, cup or toolbag that the club could sell at a small profit to help raise money. Chris stated that he had been looking at some hat distributors and getting prices. Chris said that another club he had been a member of held a 50/50 raffle as a way to raise money. Tom Forrest, N4GVK, donated a camera case and the club auctioned it off for \$5.00 to Jim Waynick, N4JLW. The money went into the club treasury.

Chris said that the general class he has been teaching would have their test session on Thursday night February 28th.

Carlton "O" Rork, N4DFA, said that people should use the voice recorder feature on the repeater to hear what they sound like. The operating codes and instructions can be found on the information sheet that was given to members when they joined GARA.

Bob Davet, W8JFQ want to put up an Eccolink node and link it to the 145.150 repeater. It was suggested that linking it to the 442.875 repeater would be a better choice due to control issues. The board will discuss this in more detail at the next board meeting.

John Strandberg, AJ4BT, introduced our

guest speaker Lee Wimbs, W1MBS. Lee a past president of GARA and is the Special Project leader at WFMY News 2. Lee presented a great program on the move to Digital television broadcasting that is now under way. Lee demonstrated the difference between analog and digital TV reception, outlined what will be necessary to receive the digital TV signals, and answered many questions. Lee passed out information flyers to everyone with details of how to request the Coupons for DTV converter boxes that are being issued by the National Telecommunications and Information Administration.

Lee then presented a short DVD entitled "Behind the scenes at WFMY NEWS 2." The meeting closed at 8:45 PM

Respectfully Submitted by
Greg Spencer KG4UQV

Board Meeting Minutes March 10, 2008

The meeting of the GARA Board of Directors was held on March 10, 2008 at the home of Bob Morris W0EG.

The meeting was called to order at 8:00 PM.

Board members present were Chris Thompson, K4HC; John Strandberg, AJ4BT; Ernie Wall, NC4EW; Clark Doggett, KG4HOM; Roy Smith N4BYU; Bob Morris, W0EG; Dave Touvell, KN4ZO and Greg Spencer, KG4UQV.

Old business- Status of inventory Bob said that the equipment inventory has not been done yet because he has been out of town. Bob said that it should be completed in the next few weeks.

New business- Roy spoke about two events that are coming up in the next two months. The club was contacted by e-mail by the Foster Friends of N.C. Regarding the two fundraising events, one is a Triathlon to be held at Belews Lake on April 19th. Also, a 26.2-mile marathon is to be held in Greensboro on May 3rd. GARA was asked if we would be interested in providing communications for both events. Roy made a motion to

Please turn to Page 7>

The Greensboro Amateur Radio Association

President Chris Thompson, K4HC
Vice-President John Strandberg, AJ4BT
Treasurer Ernie Wall, NC4EW
Secretary Greg Spencer, KG4UQV
Financial Al Allred, K4ZKQ
Engineering Chairman Bob Morris W0EG
Operations Roy Smith, N4BYU
Member at Large Clark Doggett, KG4HOM
Member at Large Dave Touvell, KN4ZO

Appointed Positions:
News letter editor and Webmaster:
Tom Forrest, N4GVK

"The Feed Line" is ©2008 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.

PRESIDENT'S CORNER

by Chris Thompson, K4HC
GARA President

Well, the Charlotte hamfest has just finished up as I'm writing this. The flea market was more sparse than in years past, but many people found what they were looking for, nonetheless.

Eleven new General class hams were upgraded from the training class, and at least a few of them are in process of setting up their own HF stations. It's always good to see the excitement generated from those coming into the hobby and upgrading their privileges. It helps me to break out of operating ruts and expand my personal horizons.

Please continue doing the great job you all do in welcoming new hams to the hobby, new hams to the area, and helping each other out.

The General Class License Course sponsored by GARA, with the cooperation of the Guilford County office of Emergency Management concluded on February 28th with a test session for the class attendees.

A great big thank you goes to Emergency Management for providing the classroom space. Their comfortable training room, with included presentation equipment, made an excellent venue.

While some attendees felt that additional study time was required, or were otherwise committed on the evening of the 28th, a total of eleven new General Class hams were successfully upgraded. Thanks to Glenda Nicholson, AG4NC and the W4VEC testing team!

Instructors Chris Thompson, K4HC and Rick Mainhart, WB3EXR spent each Tuesday and Thursday evening during the month of February providing organized training from the ARRL General Class study guide. A total of eighteen Technician class hams participated in the class, and uniform good comments and participation from the students kept the instructors both on their toes, and motivated to keep going.

Congratulations to: KD4EQZ, Gerald Donnelly; KG4OPX, Rob Erikson;

KD4IUN, Allen Bradley; KD4SVJ, Madeline Bradley; KG4IYH, Don Campbell; W3ANE, Wayne Herrick; KJ4ADX, Chan White; N4BLY, Sarah Davis; KF4ELD, Larry Sarvis; KI4YDR, Wayne Covington; and WB4OCG, Tom Lee.

Wisconsin Hams Assist Injured Driver

On Wednesday, February 27, Brian Sprecher, KC9LCC, of Prairie Du Sac, Wisconsin, received a radio call on the 147.150 Madison repeater requesting emergency help. Robert Stout, WB9ECK, of Monticello, Wisconsin, told Sprecher that a vehicle had gone off the road through a guard rail, stopping short of a creek.

The driver was injured and trapped in his vehicle and an ambulance was needed at the scene. Sprecher called the Dane County sheriff's office to relay the information.

Stout, via the repeater, kept Sprecher apprised of the driver's injuries; Sprecher, in turn, updated the sheriff's dispatch with the information.

Stout also remained at the scene providing aid until local police arrived. Sprecher relayed all information to the dispatcher until local authorities arrived and assumed control.

"It sounds like the guy drove off the road through a guard rail and may have not been found had it not been for WB9ECK. It was also unknown how long the driver had been over the embankment before being found. This could have been a lot worse had WB9ECK not become involved," Sprecher said.



NC QSO Party - Local Hams took part in the recent NC QSO Party at the Natural Science Center. They are, left to right, John Standberg, AJ4BT; Lee Price, KD4GCF and Greg Cahoon, KJ4AED at the mic. About 20 contacts were made during the afternoon. (Photo by Roy Smith, N4BYU.)

It's Not Too Late ...
Don't let this be your last news letter! If you haven't yet renewed, NOW is the time! You may use the enclosed form, or feel free to simply forward your dues of \$24 for the year to the address on the back.
Your support is much appreciated!

Get Well ...

Best wishes for **Darrin Peach, WD4DLP**, after having heart surgery. Darrin is now at home and doing better. He's even been in a few QSO's on the "15" repeater lately. If you hear Darrin on, welcome him back.

On Line Survey Tricks

Be aware of on line surveys when you're surfing the internet. Some even offer free items or software. As with anything like this, sometimes it can come with a price.

Here's the latest trick the internet magicians are trying. At the end of the survey watch closely for the "fine print" and offers. Pay special attention to the boxes you are asked to check. The trick here is "check this box if you DO NOT want to receive this (item description). This is an opposite response from what you are used to seeing, and most people will overlook the point of checking the box. A normal response that most users are expecting is "click this box if you WANT the item.

In some cases you can wind up with an order being placed and you receive an e-mail with "you phone bill will be charged \$14.95 per month for service."

It appears they know what they are doing, because at the end of their e-mail they give you a chance to cancel the order within five days. Here again, you



have to read the complete e-mail to see this, which is at the end. If you don't cancel, you're still stuck and will have to call and dispute the charge.

In conclusion - watch the fine print and take time to read all the lines on web sites very carefully. - *Tom Forrest/N4GVK*

Ham Web Sites

Several of what can best be described as ham radio clones of existing Internet services have sprung up in recent weeks. First up [www dot cqoogle dot com](http://www.dot.cqoogle.com) which calls itself a ham radio specific search engine.

It's really sharp at pulling up and grouping ham radio only information and is far better than its general purpose namesake. This one is a winner from the get-go.

Also now on-line is a ham radio dedicated video sharing site calling itself [www dot cqtube dot com](http://www.dot.cqtube.com). It's kind of like a youtube where hams can share videos. But that, in itself, may be why it has only a handful of videos uploaded to

it so far. It appears as if most hams who go to the trouble of producing a video are targeting those outside of the hobby and that's where the more general purpose youtube dot com truly excels.

Both [cqoogle](http://www.cqoogle.com) and [cqtube](http://www.cqtube.com) are registered to Justin Johnson, G0KSC in Essex, in the United Kingdom who also operates the eBay-like [www hambid dot com](http://www.hambid.com). Johnson identified as the Managing Director of Telco Consultants Limited. That company has already seen successful with online businesses such as its A1isp operation and now seems to be extending its business plan into Amateur Radio. (*ARNewslineT*)

Upcoming Events

- **April 6:** Down East Hamfest, Kinston - www.downeasthamfest.org
- **April 12:** Raleigh Hamfest - www.rars.org/hamfest
- **April 12:** State ARES meeting, Raleigh
- **April 19:** Catawba Valley Hamfest, Morganton - cvhamfest.com
- **May 10:** Rockingham County Hamfest, Reidsville - www.rcarc.com
- **May 16-18:** Dayton Hamvention
- **May 24:** DurHAMfest, Durham - www.dfma.org
- **May 25-31:** Hurricane Preparedness Week
- **June 7:** Atlanta Hamfest
- **June 14:** Winston-Salem Classic Hamfest - www.w4nc.org
- **June 28-29:** ARRL Field Day
- **July 12:** Salisbury Firecracker Hamfest

Touvell from page 1 ...

I got my Novice ticket (KA0HCQ)."

Dave was then licensed around 1980. His equipment consists of an Icom IC-735 into a G5RV and on the 20, 40, and 80 meter bands for right now. Dave said he liked 10 meters when it's open.

"During the last sunspot cycle, I had a Radio Shack 10M mobile rig in the car and really enjoyed it. Will probably do that again when the band opens up again," he said.

Under his favorite activities Dave said, "Field Day, along with DXing, working on WAS (Just need Montana & Alaska), ARES. Would rather "ragchew" on CW than SSB, but need to brush up on my

CW before attempting that again. Have made a few RTTY contacts, also. Used to be very active in Packet, would like to get back into digital modes. Also like to build small projects. I want to get more involved in traffic handling. Also APRS, SkyWarn, MARS, ARES."

Dave is employed as a Construction Administrator for Walter Robbs Callahan & Pierce Architects in Winston-Salem. He inspects projects to ensure they are being built according to the plans & specifications.

For his education Dave added, "Started college in Electrical Engineering, got hooked on programming the mainframe (FORTRAN & punch cards) and switched

to computer science. Never finished, though, but received a Master Carpenter certification some time ago."

Dave's other hobbies include collecting, restoring, and working with Apple II computers. He has a web site with Apple II information (www.apple2info.net) and he enjoys camping when the weather is warm enough. Dave also said he has been dabbling in genealogy.

He was married to Lisa, K4LAT, in 1999 and he has a step-daughter Laura (not a ham) who is attending her senior year at UNCG as an English major.

transferred. Just remember, a dummy load provides a GREAT match, but you won't talk far on it!

So, now I had a plan. I would load up the back gutters on the house. I purchased an Icom AH-4 (and they label it as a tuner, it is actually a coupler) an 8ft ground rod, and a spool of wire. One of the other factors in a successful guttertenna was the very short ground and coax runs to the coupler. I originally had intended to try to install the shack upstairs, but this wouldn't play well with the plan of short runs, so instead I chose

to make part of the family room the new shack. The AH-4 was mounted next to the gutter to be loaded up and I fed it with a small piece of ground strap from the top of the coupler to the gutter. (The wire that feeds the gutter should be as short as possible, as it becomes part of the antenna system.) The DC ground for the coupler was provided by the 8ft ground rod, while the RF ground was provided by the 15 ground radials.

Now the moment of truth. I fired up my IC-746pro and checked the match without the coupler on 20. I was getting about a 2:1 across the band. Not too

bad. Now to try the coupler. 1:1 ! Ok, so I can get it to match, but will it radiate?

Well, my logbook says yes! So far I have worked as far as the Czech Republic, Germany, and Copenhagen, and numerous stateside contacts. All this during the bottom of the cycle! What has been a pleasant surprise was not only the ability to tune up on 160m but I have chatted with a number of stateside stations on 160m with 59 signal reports.

In conclusion, if you are in a restricted neighborhood, don't think that you can't have HF, with a stealth antenna you can still have fun!



Gutter Set-up - The left photo shows the set-up of N8NQP's gutter antenna and the photo above is the back of his house with the gutter running the full length. The circle indicates the antenna coupler.

Photos by Mike Sussman, N8NQP

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. \$450. Call Dave, KN4ZO, at (336) 992-3202 or email kn4zo@arrl.net

APPLE POWER BOOK COMPUTER

Apple Power Book laptop computer, running OS 9.2, new hard drive. This is the Wall-Street version. Comes with many accessories and nice carry case on wheels. Additional memory and the battery still holds a charge. Has 10 baseT port (RJ45) and a wireless PCI card. Purchased new by original owner, non-smoking

environment. \$275 complete outfit. Call Tom, N4GVK, 294-6771 or e-mail n4gvk@bellsouth.net

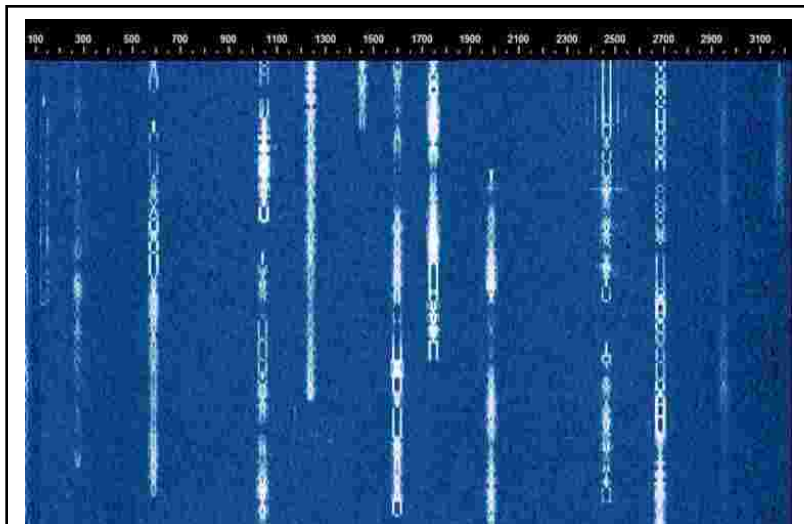
RADIOS - VHF

MOTOROLA MT1000 VHF - Portable radio with 16 channels, 5 Watts, good battery and new rapid charger, speaker mic, accessory, \$125. Computer programmable. Refurbished and new cases and excellent condition.

MOTOROLA SPECTRA VHF MOBILE - This radio is capable of 128 channels and 75 watts out. Great condition and used very little. \$295. For more information on these, call Tom, N4GVK, 294-6771 or e-mail n4gvk@bellsouth.net

On the Digital Scene

Tips for the PSK31 Digital Mode



An example of a Waterfall display. [photo by Frank Ravenswood, K2NCC]

by Frank Ravenswood, K2NCC
 evokefrank@gmail.com
 From ARRL

- Use the center of your waterfall (see definitions of italicized terms below) display. Testing will show that your transmit (TX) and receive (RX) will be strongest there. Don't blindly use a 1000 Hz tone or strictly follow the VFO "set it and forget it" concept. You can easily lose 20% or more of your power on each edge of your passband. Passband centering of the signal will give the best results of both RX and TX.

- There's no need to have the waterfall streaking bright red. Set your rig's volume to a low level (less than 25% of maximum) and adjust your waterfall and sound card levels for good contrast. Do not overdrive your sound card! Get the background noise and the transmit trace well defined and separate. Keep in mind that how your waterfall looks does not impact decoding, but it is harder to work it if you can't see it.

- Use UPPER CASE characters sparingly. Lower case text in PSK31 varicode transmits fewer bits of data. You'll increase transmit speed and improve the likelihood of proper decoding on the other end by using lower case text as much as possible. (For example, the difference between a lowercase "e" (11) and an uppercase "E" (1110111) is three times more bits.)

- Enable your RF attenuation and increase the volume. This can help keep a strong signal from wiping out the weaker ones. Attenuation will probably be around 20 dB, but by dropping the noise level, the signal readability may improve. AGC (Automatic Gain Control) does nothing for a weak signal; it only levels the louder ones.

- Use your digital mode's software, or a program like Spectrogram, to see what your noise level is with the radio off. This will give you an idea of how "clean" your sound card is. Typically, onboard (built-in) sound hardware (as found in most "mainstream" computers like Dell or HP) does not have a signal-to-noise ratio as good as an inexpensive (less than \$50) separate sound card. When purchasing a sound card, look for one with a signal-to-noise ratio over 100 dBA. [A-weighted decibels; a scale of sound "loudness" used in acoustics that simulates the response of human hearing. — Ed.] [Many onboard sound interfaces, while not optimum for high fidelity stereo sound, perform well for many amateur applications. For a technical review of various sound cards see J. Taylor, K1RFD, "Computer Sound Cards for Amateur Radio," QST, May 2007, pp 63 — 70. — Ed.]

- Consider dual monitors (most modern video cards have two jacks). This allows you to have the waterfall or spectrum

display on one screen and your logger, text window, etc on the other. It makes a huge difference in speed and ease-of-use when you don't have to swap between screens or use smaller windows for your contact.

- When transmitting, keep your ALC reading as close to zero as possible. This will help keep your signal clean and your IMD at an acceptable level (-20 dB or better is ideal). Your power output will drop, but there's no need to overload the transmit level. PSK31 uses an 80% duty cycle. Even with a full duty cycle rig, it still needs to dissipate heat! Besides, 20 W more makes little difference. Output of around 50 W is enough to work the world, and your fellow operators will appreciate the courtesy. Also be sure your voice processor is not enabled when using digital modes.

- Ask for an RSQ (readability, strength, quality) report. When in a contact, send just a tone and ask for your IMD and a report on how your trace looks. This will give you a better idea of what adjustments may be needed.

- There are hundreds of digital modes. To get started or to learn more about the most common ones, refer to the list of digital mode references at the end of this article.

Bonus Tip:

- Try 30 meters PSK31. It's a robust band, offering the best of 20 meters and 40 meters. Only digital modes and CW are permitted and contesting is not allowed. Be sure to operate within your privileges. PSK31 can typically be found around 10.140 MHz.

Definitions of Terms:

AGC (automatic gain control): The ability to reduce signal strength on-the-fly, giving you more level audio reception on stronger stations.

ALC (automatic level control): A voltage adjustment or reading, indicating your transmit signal levels. ALC is designed to control voice and carrier signal levels,

Please turn to Page 7>

PSK31 from page 6

not digital modes. Typically for digital modes, if the ALC meter moves, then the microphone gain is too high.

Signal-to-noise ratio (S/N): A comparison of the signal levels to the relative noise level. Ideally, a perfect signal would have no noise, but realistically, you'll want an S/N ratio well within the tolerances of the mode you're using. PSK31 tolerates about a 10 dB S/N ratio.

dB: a logarithmic unit of relative measurement that expresses the ratio of two levels.

Digital mode: Any method for conveying digital information using radio signals. Much like a computer modem, a digital feed is converted to analog, sent across a transmission medium, then reconverted back to a readable signal at the receiving station.

Duty cycle: The total time during a transmission period that the transmitter is delivering power to the antenna. When your radio is transmitting, there's an on/off process that takes place. Transmitting at a 100% duty cycle indicates that you are using 100% of your radio's power, 100% of the time. Better radios will allow this, while others will eventually fail under the pressure of such a load.

IMD (intermodulation distortion): The ratio, in dB, used to determine the quality of your transmission. Unwanted

modulation products or signals will reduce IMD levels. More power does not mean better copy!

Overdrive: Turning the volume of your radio up so high that you risk damage to the sound card, or cause signal "splatter." Similar to maintaining your ALC levels.

Passband: The range of frequencies that your transceiver can receive when on a single frequency; typically around 3000 Hz wide.

PSK (Phase Shift Keying): A form of modulation that shifts the phase of the transmit signal in order to carry more information. PSK31 is a digital mode, created in the 1990s by Peter Martinez, G3PLX, which has a 31.25 Hz bandwidth on your waterfall display.

RF (radio frequency) attenuation: A suppression of signals received. You'll often see a noise level reduction, with a minor sacrifice to the desired signal reception. Check your radio's manual on how to adjust it.

RSQ (Readability, Strength, Quality): Much like the familiar "RST" reports, using a 599-type reporting scheme. Instead of "Tone" (Morse code), use "Quality." 95%+ readable, with a very strong waterfall trace and a clean (no splatter) signal would warrant a 599 report.

Sound card: A piece of hardware in your computer that acts as an analog-to-digital or digital-to-analog converter of audio

frequency signals. A microphone input is often included.

VFO (variable frequency oscillator): An oscillator whose frequency is controlled by varying the value of either the capacitance or inductance of its tuned circuit. In analog transceivers the main tuning dial is used to adjust the VFO's tuned circuit capacitance or inductance and thereby the transceiver's operating frequency.

Varicode: A streamlined coding system that uses letter codes that are shorter than those of the ASCII or Baudot coding systems

Waterfall: A visual display of radio signals (and other sounds) found on the tuned frequency.

For More Information:

S. Ford, WB8IMY, The ARRL HF Digital Handbook, 4th edition. Available from your local ARRL dealer, or from the ARRL bookstore: www.arrl.org/shop
R. Prosch, DF3LZ, Technical Handbook for Radio Monitoring I
S. Brown, HB9DRV, Digital Master 780: Spectrogram and other software.

Frank Ravenswood, K2NCC, earned his Technician license in June 2005 at SeaPac Hamfest, Seaside, Oregon. His previous radio experience was in the Army (05D/98H, EW/SIGINT identifier). After leaving the Army he became a computer repair technician.

Board meetings from page 2

bring this to the club at the March regular meeting, John seconded and the motion carried.

Chris said the club was contacted by UNCG to do a presentation on ham radio. Al Allred, K4ZKQ, will talk and Dave Touvell, KN4ZO, will team up with Roy Smith, N4BYU, to help put together a power point presentation.

Ernie said that the bank account is in good shape. He said that we have had several new members that we would like to welcome to the club and some previous members that have not renewed yet.

Bob said that he would like to see a construction project. Chris said that he had

been talking to Rick Mainhart, W3EXR, about a USB based rig control cable that could be a good build project.

Roy spoke about looking for a program to answer the phone and play the newslines program on Sunday night during the net. We will also build a soundcard interface that will play a MP3 file.

Roy said that we should coordinate our schedules with ARES. The meeting closed at 9:07 PM

Do you know of someone that needs a ride to the GARA meetings?

If so, call, e-mail or leave a message on the repeater - We'll be glad to help you or a friend get there.
info@w4gso.org

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 with 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 info@w4gso.org or visit the web site and find more information there:

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.

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.

THURSDAY & FRIDAY – 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 and a Friday lunch bunch is at the K&W Cafeteria off South Holden Road. 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



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Greensboro, NC 27417
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MEMBERSHIP APPLICATION - RENEWAL / NEW - 2008

\$24 per year

(\$2 per month)

Please fill out the following information and mail the address above or hand deliver to the GARA treasurer. Your membership is appreciated!

Call: _____ Renewal? Yes () No ()

Name: _____ Spouse: _____

Address: _____

City: _____ State: _____ Zip: _____

E-mail Address: _____

News Letter requested by: Mail _____ E-mail _____

(For all new members, there will be a \$10 extra charge per year to receive the newsletter by US Mail.)

Phone number: _____

(please advise if this is unlisted and it will not be published on the club roster)

Note: Family memberships are available for persons living under the same roof or if a family member is a school student living away from home - no extra charge.

Is this a family membership? Yes () No ()

If ,Yes, family member name: _____

Call: _____

Don't let this be your last issue of the Feed Line. There are great things on the horizon for GARA! Please renew your membership if you haven't already done so. If you don't need this sheet, pass it along to someone else who might be interested.

Become Radio Active! Join GARA for 2008 Progressive & Active Ham Radio for The Triad

**We are a diverse group of Amateur
Radio operators providing public
service for the Triad area.**



**If you want to be part of an organization that "Gets It Done,"
join GARA. We are planning a great year for
Amateur Radio in the Triad area.**

If you are a renewing member, we appreciate your continued support!

- Get in on the fun! Come visit a meeting. If you decide to join, membership is only \$24 per year. Our yearly membership period begins January 1. Your membership supports two top-notch repeaters, a first-class area monthly news letter, and a frequently updated web site.
- Radio broken? As a GARA member, you have access to a loaner radio free of charge whenever yours needs to go to the shop!



By joining, you help support two repeaters 145.150 and 442.875. GARA is also the support repeaters for Guilford County ARES and one of the back-up repeaters for Triad SkyWarn.



145.150 left, 100 Hz. tone
442.875 right, 88.5 Hz. tone

**Visit us on the web at: www.w4gso.org
If you have any questions, please e-mail
us at info@w4gso.org**

Greensboro Amateur Radio Assoc. • P.O. Box 7054 • Greensboro, NC 27417