

Hams Strive to End Antenna Bans

Empower Amateur Radio Operators to Help by Moderating Neighborhood Antenna Prohibitions

by Don Schellhardt, KI4PMG Special to the Feed Line

During Hurricane Katrina, the president of the United States wanted to confer with the mayor of New Orleans. However, all centralized communications systems, including military ones, were down.

The solution? Volunteer amateur radio operators, also known as "hams," relayed the messages. Being decentralized, often with independent power supplies, hams initially were the only people who could get messages through.

Hams typically have been the first to report from disaster areas. Then they have remained on the air even after infrastructure collapses have silenced others.

Now, a small but nationwide group of hams has formed Hams For Action. Founded on July 10, the advocacy group strives to assure that hams will retain their historic capacity to provide emergency communications "when all else fails."

HFA's first step was mailing an information package to every board member of the American Radio Relay League, which speaks for the ham community in general. HFA's second step was filing a Petition for Rulemaking with the FCC, seeking partial and conditional overrides of bans on ham antennas by homeowners' associations (HOAs), restrictive covenants and landlords.

Economics Professor Ron Cheung of Florida State University, in an analysis of HOAs, reports that at least 50 percent of all new housing in America is controlled by HOAs. Unfortunately, nearly all of the HOAs ban all ham antennas.

Similar prohibitions by landlords add to the impact.

Self-imposed disconnections

Most HOAs, covenants and landlords do not regulate external ham antennas they ban them completely. Even small, unobtrusive antennas are forbidden.

These total antenna bans function as total prohibitions against ham radio. They deny to neighborhoods any coverage by the one emergency communications system that works "when all else fails."

The impact is not geographically uniform. Although HOAs are spreading, they are still most common in the newer suburbs of larger urban areas. Apartments are still most common in more developed portions of urban areas. Because hams generally have found that apartments bar them from installing any outdoor antennas, the combined effect of the two restrictive forces is to impair ham radio most pervasively in and around large urban areas — the same places that are the likeliest targets for terrorism.

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When: December 14th, 2006 (Thursday) Note of the day change. **Time:** 7:00 p.m.

Where: Bonnie Kay's Seafood Restaurant, 222 Spur Road, Greensboro

Gary Hastings, KE4IAN, will again provide the musical entertainment. He says he has something different planned for us this year which everyone will surely enjoy. We hope Jim and Aletha Sheets will also be in attendance for additional seasonal music for all.

Directions: Randleman Road south of Greensboro. Go past the South Elm Street intersection; next road to left is Spur Road, at the flashing caution light. Bonnie Kay's is about 1/4 mile on right.

Please bring canned goods which will be donated to the Greensboro Urban Ministry.



The next meeting of the Greensboro Amateur Radio Assoc. will be November 27, 2006 at the Golden Corral Steak House off Wendover Ave., in Greensboro. This will be our annual election night. See page 2 for a list of those nominated for officers. Bring you pencil - we don't have fancy voting machines. (hihi)ARRL Section Manager Tim Slay, N4IB, will make a presentation about ARRL activities. There is no December news letter.

Ham Happenings NEWS briefs

Tom Forrest, N4GVK, editor of the Feed Line, was recently featured in the High Point Enterprise. Tom, who is a veteran newspaper photojournalist, photographed the November 14,1970 football action between East Carolina Univ. and Marshall Univ. This was to be the last games played by the Marshall football team. Shortly before the plane was to land in West Virginia, it crashed at 7:37 pm, killing all on board. Tom still retains his press pass used in that game along with the original Associated Press photos sent that tragic night.

Area Hams, SK

Yancey Stone Cecil, KD4WG, died October 23, at his home in High Point.He was a former officer with the High Point Amateur Radio Club and chief engineer with radio station WHPE and also radio station WNOS when it first aired.

Phillip Edward Wylie, N4DTJ ex KG4QHO, 53, of Greensboro, passed away on Saturday, October 28, 2006, after a long illness.

Our sympathy is extended to the families of these amateurs.

In other family news

Get well to Breanna Collins, 14, daughter of Dave Collins, KE4IAF. Breanna was recently injured when she fell from a horse. She suffered a cracked skull. Dave reports she's doing much better, but still undergoing some testing.

We also want to remember Marion Allred, XYL of Al Allred, K4ZKO, who is healing from surgery.

Additional best wishes to Pegi Mauldin, N4JBM, who is undergoing chemotherapy for breast cancer. Pegi is XYL of Bill Maldin, WG4R.

Also on the "get well list" is Gloria Thompson, K4GWT, mother of Chris Thompson, K4HC, who recently had heart surgery and is at Moses Cone. Chris' father Walt Thompson is K4WCT.

Weldon Fields, W4AJT, had surgery November 8, to remove a tumor from his kidney. Last reported he was in Wesley-Long Hospital and doing well.

GARA Board Meeting

November 12, 2006

The following Board members were present: John Doggett, KI4BMS; Arch, KT4AT; "Al" Allred, K4ZKQ; Roy Smith, N4BYU; Rudy Langley, KG4HCT and Tom Forrest, N4GVK. One visitor, Chris Thompson, K4HC.

Reports:

John welcomed everyone to the meeting and thanked the board for their work for 2006. John opened a discussion about the direction of GARA and ways we can improve our attendance at meetings. A made his engineering report about fall lengthy discussion was held with all tweaks to the UHF repeater and he gave members offering ideas and opinions for an update on the D-Star system. A more the coming year. Part of the discussion detailed report is printed in the November included ways of making improvements Feed Line. to the meetings and meeting locations and setting goals for the club in order to attract new and younger members.

report stating all was OK.



"The Feed Line" is ©2006 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 necessarialy 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.

http://www.w4gso.org

Send Us Your Stories

If you know of someone that is sick, an interesting story about a local Ham, or a Ham that has recently become a Silent Key, please let us know so we can include this in our monthly column or maybe a feature story. Send your infomration to the Feed Line Editor TomForrest. N4GVK. n4gvk@bellsouth.net

N4GVK. Tom said the web site had was recently noted in the SERA Journal by NC column editor Mike Lewis, WA4KE, "GARA recently upgraded their website and I must say, it was very well done." The news letter was gradually growing in size and the "Meet the Member" column will return in January.

Rudy, KG4HCT gave the vice president's with continuing comments about the club's direction for 2007.

Engineering Chairman Arch, KT4AT,

Trustee and Operations Chairman Roy Smith made comments about once again creating membership packets for members. Finance Chairman Al, K4ZKQ, gave his There was some discussion and further planning would be considered.

GARA Meeting Minutes



Regular Meeting October 23, 2006

The The regular meeting of the Greensboro Amateur Radio Association

was held Monday evening October 23, 2006 at the Guilford County EMS facility located on Meadowwood St.

President John Doggett, KI4BMS, called the meeting to order.

The minutes of the previous meeting were approved as printed in the "Feed Line."

John also requested three people to serve as the nominating committee to select a slate of offices for the upcoming election. Charles Lyons, NT1J; Larry Pike, KI4PRT and Greg Spencer, KG4UQV said they would serve.

Allen Bradley said he needed volunteers for the Challenge Clash Soccer Tournament November 18th & 19th. He had some people already, but still needed some more.

Tom Forrest, webmaster/secretary, reported all was fine, Guilford College. and he still needs input for the newsletter and web site.

N 4 G V K, Coffee: Fridays, 8:00 pm at Starbucks

The program for the evening was on "Haz-Mat" and was presented by



Steve Marks, KE4FCW. of the Guilford Co. Office of Emergency Management, explains the county's "Haz-Mat" response unit to GARA members.

The president announced the following The meeting adjourned 8:10p.m. events:

Lunches: Mondays, 11:00 at Jake's Diner, and Fridays, 11:00 at the K&W Cafeteria on Holden Road;

Steve Marks, KE4FCW. of the Guilford Co. Office of Emergency Management. Steve, along with fellow "Haz-Mat" team member Jon Matlock, KE4IAM, demonstrated the Guilford County "Haz-Mat" unit, showing members some of the equipment and suits used during a "Haz-Mat" emergency. Steve also reviewed the Emergency Response Guidebook and explaining to members what to look out for as amateur radio operators, during a "Haz-Mat" emergency. The members thanked Steve and John for a

great presentation.

Respectfully submitted,

Tom Forest, N4GVK, Secretary



Steve Marks, KE4FCW. of the Guilford Co. Office of Emergency Management, shows some of the equipment used in a "Haz-Mat" situation.

Renew you membership in GARA for 2007 Join in on the fun



Rudy Langley, KG4HCT holds up one of the "Haz-Mat" suits.



by Engineering Chairman Arch, KT4AT

Fall Repeater Tweaking & Digital Update

is scheduled for November 11th. This time it will include (a) a minor program change for 145.15, (b) updating of the autodialer also on 15, (c) a clock reset for 15 using NTP (Internet time transfer protocol), and (d) a receiver tweak for 442.875. As monitored remotely, the performance of 145.15 did not change significantly since last tweak, in last April. This machine will be therefore left alone. UHF is a different story. The machine currently in use was first turned on ever in last April. Receive sensitivity has decreased a little bit, and will be corrected.

On the digital front, work continued on detailed evaluation and adaptation to a dual mode machine (D-Star/FM), on the transmit side. First, as the Icom programming software allows only frequency control of the machine, a monthlong effort was dedicated to writing a (the low power programming software which would give control also of output power, as this is required for a dual mode machine. On the transmit side, this software is complete. This software provides for recovery of initial factory values programmed, so those values can be reloaded later on if need be. The software also provides for calibration values of a number of parameters, also machine-specific, which are saved in a file. The software provides for read and write to the RP4000 of frequency, with checks for band boundaries and channel step, high power level, and low power level, both in Watts. Finally, the software provides read-only, display of machine type, country of intended use, Icom firmware in use in the machine and its checksum, temperature of the PA module in degree C, and power supply voltage applied to the machine, in Volts. This software runs under Windows 98 and above, and connects to the RP4000 through the built-in USB port. This software will be extended to the receive side later on.

In the course of doing the above, a new

he fall equinox repeater tweak problem appeared with that transmitter. Connecting the Mastr2 100 W PA to the output of the RP4000, on low power, through a Pasternack 10 dB, 5 W attenuator, things seemed to be fine, as we had repeated voice. Then, it was involves changing the power control loop

noticed that the call-signs, and the repeater ID were longer n o displayed on the receiving HT.

Troubleshooting this revealed that the RP4000 TX has a large overshoot at transmit start. W h е n programmed for 2.2 Watts output factory value), this TX goes first as high as 16 Watts for the first 4 t o 5 milliseconds. Then decreases to less than 100 mW for the following 5 milliseconds. And repeats that

cycle, with smaller extremes, until it stabilizes at 2.2 Watts, approximately 20 ms later. This is typical of a power control loop which has a very under-damped response. Connecting the Mastr2 PA makes it worse, because during the time it is below 100 mW, the Mastr2 does not have enough input power, and shuts down altogether, transmitting nothing at all. And, looking at the outgoing bitstream, it happens to be that synchronization bits are sent during that time. The net result is that the receiving station does not achieve synchronization with the repeater on the entire radio header, and therefore cannot decode the call-signs present in this radio header. Voice still works fine

because the AMBE vocoders have their own synchronization, and the first AMBE frame is transmitted way later.

Fixing the root cause of this issue

response, which I will leave to Icom to do. In the meantime, a bandaid was devised to get around this problem. It consists in delaying the bitstream by enough time so that the synchronization bits are sent when the TX has reached its stable power zone. This concept was tested, and found working just fine. Callsigns are back. A control box was planned to be designed anyway, to provide Digital TX enable/disable capability (for the dual mode machine, and also to provide remote shutdown). The delay above will be incorporated in this box, whose design is complete, and has reached board layout.

November, 2006



since last tweak, in last April, therefore did not need tuning.





Guilford County ARES Had Busy Year For 2006

by Dave Collins KE4IAF

Emergency Coordinator Guilford County ARES

GUILFORD COUNTY Another year has already passed. Although Guilford County ARES wasn't activated by Guilford Emergency Management this from the Federal Emergency Management year we were involved in a lot of events in which communications were needed. It took me awhile to go back through my memory to remember all of these events but we did quite a bit.

Of the events we worked this year, the MS walk, Triad Highland Games, Greensboro Water Resource Commission's Water Festival, Greater Greensboro Crop Walk and Operation Guardian Angel This exercise's scenario was an air plane crash that was simulated at PTI and ARES members were sent to various locations to provide communications for the Red Cross. In addition to these communication events we also hosted our annual Field Day at Hagan Stone Park in Pleasant Garden and had our annual Simulated Emergency Test this November. All these communication events went very well and even without our being activated we had a busy year. We have a very dedicated group here in Guilford County, which is one of the best groups in the state.

Some new items in ARES came to the forefront this year. One being the NIMS system. The National Incident Management System, Nims for short, is a system in which all events as small as car accidents all the way to an event as tragic as those that occurred on 9/11 has a system you social security number and that you in which the command is broken down in

a very organized way. With this being have no felony convictions in the past implemented in Guilford County as well as through the country we needed to become familiar with this system. We were asked to take online courses, and our group did. We received certificates Agency and the knowledge that we gained



from these courses make us better communicators for when in an Emergency Management environment we will have a better

understanding of how to fill the needs as communicators.

The latest item that has come to my attention is that the American Red Cross is requiring all volunteers to have background checks that are provided free from the Red Cross. There are a lot of mixed feelings on this. After speaking with EM here in Guilford County, it will not be a requirement for our group to go through these background checks since we are activated by Emergency Management and then deployed to the Red Cross or wherever communications are needed.

Now on the other hand, any added credibility that we can obtain is always suggested. Since the Red Cross pays for these background checks I think it is a good idea to go ahead and submit yourself for this check. All it involves is verifying

seven years. It is a very simple process. If you are deployed to another part of the state then this background check might very well be a requirement. I realize keeping your social security number private in these times is very crucial.

This is a secure website in which you submit your data, so you can, as I did fill this form out and in a couple of days the background check will be done and that's it. In this day and time any documentation that you can obtain to verify your credibility is a good thing. The FEMA documentation and the background checks only emphasize that the Amateur Radio Emergency Service is a very dedicated group of volunteers that provide their communication skill and equipment to further assist in times of need to our community and country.

I would like to thank all of the members of GARA and GAS, which make up the majority of our group. I would like to thank the Greensboro Amateur Radio Association for the use of the 145.15 for our weekly nets and the communication events that we have operated in this year and for many years. The repeater has always worked very well and during these communication events, The GARA members have always been very courteous in keeping the frequency clear during the times we have the need to use the machine.

Hope everyone has a great Holiday Season and if there are any questions always feel free to contact me at ke4iaf@arrl.net

ARISS "Contingency Network" Impresses NASA



docking, NASA called on a special -- although little-known -- Amateur Radio team to stand by

if needed. Amateur Radio on the International Space Station (ARISS) Ops Team "ISS Ham Contingency Network" volunteers around the world immediately swung into action. Within 15 minutes of

ARRL - When Russian flight controllers receiving the call from Johnson Space encountered difficulties Center, Kenneth Ransom, N5VHO, during a recent reported the ISS Ham Contingency International Space Network was ready to provide any Station cargo rocket necessary communication support.

> "The ARISS teamwork was very effective," ARISS Secretary-Treasurer Rosalie White, K1STO said. "Its members learned a great deal, and they impressed NASA with how quickly the system was brought up."

During the October 26 Progress

docking, NASA says, Russian flight controllers were unable to confirm whether an automated antenna on the rocket had retracted as commanded. If still extended, the antenna could have interfered with the final latching of the supply ship to the ISS. To avoid disturbing the softly docked cargo ship and to aid the crew with docking maneuvers, the ISS orientation was allowed to drift freely.

During free-drift mode, however, the Tracking and Data Relay Satellite System Please turn to page 6 ->

...ISS from Page 5

(TDRSS) -- which handles communication between the crew and Mission Control in Houston -- can be lost. That's because the station's solar arrays may not directly face the sun, causing a drop in onboard power.

Awakened at 2 AM, ARISS Australian team member Tony Hutchison, VK5ZAI. put out a blind call on VHF to the ISS crew, although no answer was needed at that point.

NASA had asked for such Amateur Radio assistance since the initial crew came aboard the ISS in November 2000. Ransom says that by remaining available to ensure solid communication while

Mission Control staff dealt with the docking issue, the ISS Ham Contingency Network provided Mission Control with an additional layer of scurity.

Once the antenna retraction problem was resolved, the contingency network stood down, but NASA's request and the ensuing ham radio activity did serve as a valuable drill, ARISS said.

NASA says Expedition 14 Commander The call-up marked the first time that Mike Lopez-Alegria, KE5GTK, and flight engineers Mikhail Tyurin, RZ3FT, and Thomas Reiter, DF4TR, opened the hatch to the supply ship October 27 to unload supplies.



http://www.w4qso.org

FCC Update

FCC Makes Changes to Ham Rules

WASHINGTON The FCC is making changes to the amateur radio service rules that it believes will allow licensees to use the spectrum more efficiently and operate with fewer restrictions.

The commission said it amended Part 97 Amateur Radio Service rules to do the following: revise the operating privileges of operators to allow more spectrum in four authorized amateur service HF bands to be used for voice communications: permit auxiliary stations to transmit on additional amateur bands; allow amateur stations to transmit spread-spectrum communications on the 1.25 meter band; and permit amateur stations to retransmit communications from the International Space Station.

Also it permits amateur service licensees to designate the amateur radio club to receive their call sign "in memoriam."

The commission also now prohibits an applicant from filing more than one application for a specific vanity call sign; eliminates certain restrictions on equipment manufacturers; permit ham stations operating in and around Alaska more flexibility in providing emergency communications; and removes certain restrictions in the license exam system that it said are no longer necessary.

This just in...

R&O In WT-Docket 04-140 Effective December 15

An early Christmas present from the FCC. This with word that the final rulemaking in its latest round of restructuring as outlined in WT Docket 04-140 was published in the Federal Register on Wednesday, November 15th. This makes 12:01 a.m. Eastern Standard Time on Friday, December 15th the effective date for these rule changes to come into effect. The full Report and Order as printed in the Federal Register is at:

http://a257.g.akamaitech.net/7/257/2422 /01jan20061800/edocket.access.gp o.gov/2006/pdf/E6-19189.pdf

... from page 1, Hams Strive to End Antenna Bans

A shortage of new recruits

Ham antenna bans are not demographically uniform, either. Because they most frequently affect newer owneroccupied housing, as well as rental housing, their impact falls with greatest force upon younger Americans.

This makes it difficult for currently licensed hams to "replace themselves." How many potential school age recruits are failing to participate because they cannot erect a ham antenna in the home of their parent(s)? Indeed, how many middle-aged adults are failing to participate because they cannot practice their craft at home?

The clock is ticking. Most hams, we believe, are over 55, which means an above average percentage of them are likely to "depart the planet" during the next 30 years. Ironically, during this period, we may need even more hams than we have today.

The chances of a man-made disaster, such as a terrorist atomic bomb, are rising. Meanwhile, at least one mega-geological disaster, within the next few decades, is almost certain.

Among other experts, Dr. Mary Lou Zoback of the U.S. Geological Survey in Menlo Park, Calif., warns that the socalled "Big One" in Southern California is overdue and another "Big One" in Northern California is probable in the next 20 years. Dr. Brian Atwater of the USGS in Seattle has joined other experts in research that demonstrates that the offshore Cascadia Subduction Zone in the Pacific Northwest, periodically generates 9.0 earthquakes and tsunamis powerful enough to damage Japan. The latter research has recently been popularized in the John Nance novel "Saving Cascadia."

History of federal inaction

During the 1990s, ARRL and others sought action by the FCC to override amateur antenna bans. The FCC said "No."

In 2002, with encouragement from ARRL, Rep. Steven Israel, D-N.Y., introduced legislation that required all HOAs and/or covenants to provide "reasonable accommodation" of ham

antennas. An identical bill followed in the next session of Congress. For the bill in this session, H.R. 3876, Rep. Mike Ross, D-Ark., joined Rep. Israel as a primary sponsor.

Support peaked at 37 sponsors in 2004. By 2006, this number dropped to 11. A companion bill was not introduced in the Senate.

HFA's board members concluded that ARRL was not advocating the legislation actively enough, and/or the bill itself did not do enough to ease the possible concerns of HOAs and landlords. HFA addressed the first possibility by contacting ARRL. Then HFA presented a new, more moderate approach to antenna bans in its FCC petition.

H.R. 3876 overrides antenna bans on behalf of all hams. It appears to assume, implicitly, that all amateur radio operators have a right to transmit.

The HFA proposal limits overrides to hams who have been trained and certified as emergency communicators. We ask the FCC, or, if necessary, Congress, to embrace a privilege to transmit, one that is earned by gaining a verified capability to provide emergency communications and perhaps, in the future, other services to the public.

H.R. 3876 requires HOAs and/or covenants to provide "reasonable accommodation" of ham antennas. However, it leaves "reasonable accommodation" to be defined through case-by-case litigation.

HFA attempts to establish a middle ground of compromise in advance. For example:

For single-family homes and town homes, HFA's proposal creates a "rebuttable presumption" in favor of exterior ham antennas whose height is 20 feet or less. Condominium and apartment antennas are limited to 3 feet in height.

The other side of the coin, of course, is a rebuttable presumption against ham antennas that exceed that height. Because such presumptions are "rebuttable," hams and/or HOAs can still go to court by showing special circumstances that challenge the presumption. However, going to court is optional, not inescapable.

H.R. 3876 overrides only bans imposed by HOAs and/or covenants. HFA's proposal adds an override for bans by landlords.

Moderating HOA/covenant bans, while tremendously important, still leaves many areas unprotected. In New York City, for example, increases in ham radio activity will be marginal unless landlord bans are also moderated.

What next?

Three players will decide what happens next:

• The FCC. If it grants HFA's petition, or a reasonable variation, HFA may declare victory and disband.

• ARRL. If the FCC does not respond favorably, hams must again turn to Congress. In the next session, will ARRL press for a more moderate and marketable version of H.R. 3876? Will it press for any antenna ban legislation at all? Evasion or inaction by ARRL will invite lobbying by HFA.

• Hams themselves. Are enough amateur radio operators willing to support additional action by HFA? Board members have financed HFA so far, but to do more we will need help. Hams can press ARRL to act more vigorously, or they can join HFA, or they can do both. Those amateur radio operators who don't do either shouldn't complain about antenna bans.

For a copy of HFA's petition, e-mail me at pioneerpath@hotmail.com or read HFA's July 25 comments in FCC Docket 06-119 concerning Hurricane Katrina.

Don Schellhardt, KI4PMG, is president of Hams For Action. He is a government relations attorney and a writer.

This commentary appeared in Radio World newspaper, Nov. 6, 2006 and is reprinted with permission.

GOT NEWS? Send info, photos and stories to Tom Forrest, N4GVK, via e-mail to n4gvk@bellsouth.net. Get "Radio Active"

Area Activities

FOURTH MONDAY – at 6:30 PM, the Greensboro Amateur Radio Association have 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 6:30 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.

MONDAYS & FRIDAYS - at 11 AM, Greensboro Hams get together for lunch. On Monday they meet at Jake's Diner at Wendover and Big Tree Way 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.

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

Greensboro Amateur Radio Association

P.O. Box 7054



Web: www.w4gso.org



President John Doggett, KI4BMS Vice President Rudy Langley, KG4HCT Secretary Tom Forrest, N4GVK Treasurer Ernie Wall, NC4EW **Financial Officer** Al Allred, K4ZKQ Engineering Arch, KT4AT Operations Roy Smith, N4BYU Member At Large Clark Doggett, KG4HOM Webmaster & News Letter Editor Tom Forrest, N4GVK



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\$24 per year (\$2 per month)

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

Call:	_ Renewal? Yes () No ()
Name:	Spouse:
Address:	
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News Letter requested by:	Mail E-mail
Phone number:	
Note: Family memberships are avail member is a school student living av	able for persons living under the same roof or if a family way from home - no extra charge.
Is this a family membershi	ip? Yes () No ()
If ,Yes, family member nan	ne:

Call:



The Greensboro Amateur Radio Association P.O. Box 7054 Greensboro, NC 27417 www.w4gso.org

> GARA member Ernie Wall, NC4EW, helps new-comer, twelve-year-old Kelli Joyce, make contacts during the 2005 "Field Day" activities. Kelli went on to get her license and is now KI4LRS.



Not a "Ham" yet ? It's easy ...

Ham radio is a fun and exciting hobby. Ham operators provide communications during times of disaster, assisting public service organizations world-wide.

If you're not an Amateur Radio operator and would like to join the hobby, take a minute to look at our club's web site:

http://www.w4gso.org/becomeham.html

Here you will find a link to download a nice study guide - FREE -

"Amateur Radio No-Code Technician License Examination Study Guide and Workbook"

This is a very nice guide to assist you in obtaining your license.

From this link you can also download a copy of our club brochure and see the testing schedules for the area.

If you have any questions you may phone a representative of our club, Roy Smith, N4BYU, at 674-6131, with any questions you may have. You may also e-mail us at info@w4gso.org.



Tom Forrest, N4GVK | GARA Steve Marks, KE4FCW. of the Guilford Co. Office of Emergency Management, explains the county's "Haz-Mat" response unit to GARA members.

Informative programs ... Photo at left from our October meeting

Get in on the fun! Come visit a meeting and if you decide to join, it's only \$24 per year. Our yearly membership period begins January 1. Your membership supports two top-notch repeaters, a area news-packed 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 yous need to go to the shop!



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

GARA is a public-service oriented club.