

# Feed Line



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## Meet Our Members - Jane Doggett, KG4ZQK



Jane Doggett, KG4ZQK

Our Member of the Month for April is Jane Doggett, KG4ZQK. Jane is a Summerfield resident and was born in Portland Maine. She has lived in Guilford

County since she was three.

She has been licensed for two years and her favorite activity is the SETs. She was introduced to Ham Radio when her husband Clark, KG4HOM became interested.

Janes attends the GARA meetings and ARES sessions and she has also been to SkyWarn training.

Jane is a Case Manager for Workman's Compensation in Greensboro. She also serves on the Town Council for Summerfield. During the past administration, she served as mayor pro-tem.

Her hobbies include horse back riding, reading and gardening and of course Ham Radio.

She is married to Clark, KG4HOM and they have four children. Two have licenses, John, KI4BMS and Mary KG4ZQL.

## ARRL Executive Committee Readies Bandwidth Recommendations

NEWINGTON, CT, April 13, 2005--Acting on the premise that the amateur bands must flexibly and comfortably

accommodate present and future operating modes and technologies over the long haul, the ARRL Executive Committee has reached consensus on recommendations to the ARRL Board of Directors for a regulation-by-

bandwidth proposal. Meeting April 9 in Denver, the panel adopted recommendations that will form the basis of a draft ARRL petition to the FCC seeking to govern the usage of amateur spectrum by emission bandwidth rather than by mode. The proposals remain only EC recommendations at this point. Nothing will be filed with the FCC until the ARRL Board of Directors gives its go-ahead. Five of the 15 voting Directors sit on the EC. ARRL CEO David Sumner, K1ZZ, says a key principle underlying the League initiative is that the amateur community must shoulder the responsibility for resolving conflicts among potentially conflicting modes and not expect--or wait for--the FCC to impose its own solutions.



## Special Program Guest at Meeting April 25

The next meeting of the Greensboro Amateur Radio Association will be held at the Golden Corral Steak House off Wendover.

We have a special program guest at the this month's meeting. Robert Young, NC4ME, owner of Tarheel Antennas in Fuquay-Varina, NC, will be on hand to

present a program on his popular screwdriver antennas. He is hoping to have a few on display.

Dinner is slated to begin by 6:30 PM and the business meeting convenes at around 7:15.

Invite a friend to join us for this special guest.

*Cont., See ARRL on page 5*



# ***GARA Meeting Minutes***

The regular meeting of the Greensboro Amateur Radio Association was held at the Golden Corral Restaurant Monday evening March 28, 2005 at 7:15, with 23 members and three visitors present.

The meeting was called to order by Vice President John Doggett, KI4BMP, in the absence of Lee Wimbs, W1MBS, who was out sick. A moment of silence was held.

John noted the visitors

present and those mentioned sick were Madeline Bradley, KD4SVJ, who had back problems and was taken to the hospital. It was reported she was now home and doing much better.

There was no President's report. The Treasurer's report was given by Ernie Wall, NC4EW saying all was in order and monthly bills were paid. A financial report was given by Finance Chairman Al Allred, K4ZKQ. Al said renewals were coming in a bit better to date.

Secretarial report was given by Tom Forrest, saying all was well. Also he said articles were needed for the "Feed Line"

Engineering report was given by Arch, KT4AT. Work is continuing on the UHF repeaters. He said we still have "intermod" on the "15" repeater and that is causing some problems. He mentioned he has designed some filters that may help that problem. There was work to be done in the shack and grounding kits need to be installed for the feedlines. Also work was needed in the cabinets to accept the new UHF repeater.

Member-at-large Mark Robertson, KG4STP, said he'd like to see the club participate with the scouting programs. He suggested that perhaps contact with local schools would provide us with insight on how we can become

involved.

John said the club picnic would be held September 17 with a "Pig-Pickin'" at the Doggett farm in Summerfield. This will also include a Fox Hunt. Also, the Mt Mitchell trip is planned for October. Anyone with ideas for the trip should let John know.

ARES Coordinator Dave Collins, KE4IAF, said the city water festival would be April 6 and he still in need of volunteers.

The program for the evening was presented by Allan Kaplan, W1AEL. Allan is retired from Ten Tec of Sevierville, TN and still works with them on a consulting basis. The program topic was "What's the difference between a \$1500 transceiver and a \$3500 transceiver (apart from the obvious \$2 Kilobucks)?" Allan said he was not an official spokesman for the company and could not answer any questions about upcoming products. The PowerPoint presentation covered the differences of the transceivers and theory on how good transceivers are built. He also discussed DSP in the new transceivers along with features of the new units including software programming. After the talk he took questions from members. The program was greatly enjoyed by the group.

There being no further business, the meeting was adjourned at 9:15.

## **GARA OFFICERS**

### **President**

Lee Wimbs, W1MBS

### **Vice President**

John Doggett, KI4BMS

### **Secretary**

Tom Forrest, N4GVK

### **Treasurer**

Ernie Wall, NC4EW

### **Financial Officer**

Al Allred, K4ZKQ

### **Engineering**

J.B. "Arch" Archinard, KT4AT

### **Operations**

Roy Smith, N4BYU

### **Members At Large**

Clark Doggett, KG4HOM

Mark Robertson, KG4STP

### **Circulation**

Paul Shepherd, WA4LGX

### **Webmaster & News Letter Editor**

Tom Forrest, N4GVK

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## Engineering Report ..... by Arch, KT4AT, Engineering Chairman

VHF Machine: We are suffering a little setback on the 145.15 machine. As maybe some of you have heard, there is some crackling back, especially on weak signals.

It is low level intermod, and is generated somewhere between duplexer, feedline, antenna, and tower structure (could even be passive intermod generated somewhere on the tower top). The receiver is not involved, as it is observable with a spectrum analyzer connected on the RX port of the duplexer.

It is however linked to TX activity. It can be triggered at will by making the TX transmit, and having a mobile in the yard, transmitting high power on certain frequencies (which can be computed, but will remain unpublished here).

The TX involvement could be through the carrier itself at 145.15, or through one or more of

the various harmonics and spurs which exist in the output. Although all these harmonics and spurs pass FCC 100 times over, they are still high enough, at a level comparable to what the mobile mentioned above generates. Analyzing this situation with my intermod prediction software, approximately 800 frequencies can be computed, possibly generating a mix at 144.55 when combined with those spurs and harmonics. It takes ONE.

Filtering the output of the TX better, so those harmonics and spurs never reach the feedline reduces that 800 number down to 20. What is required is a bandpass, no-hole power filter. This is not a new idea, and has come up before with some PCRN machines. So, I decided to bite the bullet and design one. Needs to pass at least 100 Watts at VHF, continuous duty. At 100 Watts, the tuning cap on those high Q resonators sees in excess of 1 kV. A first attempt with 500 V commercial caps was met with utter miserable failure, those caps

breaking down at around 60 W through. The last revised design won't do that, and is coming soon on a repeater near you.

Another issue is the cabling on the duplexer and around the cabinet. It is currently using 9913 and PL259's. RF leaks may exist at the point where the plug meets the cable. We will revisit that.

I have also seen before duplexers picking up the RF field from the antenna, when the antenna is close. In the case of 15, the antenna is 300 feet above the machine, so this should not be a problem. We will shield the duplexer box anyhow. The last thing to review is grounding quality of PolyPhaser and feedline on tower leg.

UHF Machine: Due to the above, minimum progress has been made on the UHF side. With the soccer tournament coming, I thought that top priority should be VHF.

## GARA Board Meeting Minutes

The regular monthly board meeting of the Greensboro Amateur Radio Association was held at Benjamin Branch Library, Monday, April 11, at 7:30PM.

Those present included: Al Allred, K4ZKQ; Ernie Wall, NC4EW; Arch, KT4AT; Lee Wimbs, W1MBS; Clark Doggett, KG4HOM; John Doggett, KI4BMS; and Mark Robertson, KG4STP.

A discussion was held on the bill for tower work performed during the first part of the year

on the city tower. There seemed to be a difference between GARA and the tower company as to how many hours were committed to this project.

Discussed plans for the picnic on Saturday, September 18.

Also the board discussed plans on how to attract Boy Scouts who are interested in getting their ham license.

There being no further business, the meeting was adjourned.

### It's Not Too Late To Renew Your Membership



Membership renewals for 2005 are due and may be given to the Treasurer or mailed to GARA, P.O. Box 7054, Greensboro, NC 27417. Membership is \$24 for the calendar year and is used to directly support our two fine repeaters. Checks should be made payable to Greensboro Amateur Radio Association or simply GARA.

from Lee Wimbs, W1MBS, GARA President

## A Note from the President

*Lee, W1MBS*

How many times have we heard that statement? If we do not use the ham frequencies and the privileges, then they, the FCC, will take them away from us. Do we have any guarantees we can keep the frequencies if we use them? Consider FCC document 04-168 that went into effect February 7, 2005.

We, the commercial television broadcast business, use part of the 2GHz band to broadcast live news from our live trucks, and field units. When you see an ENG, electronic news gathering, vehicle at a sports event, or the scene of an accident, or just reporting the weather, that truck is transmitting back to the television studio on 2GHz. The channels, each 17 MHz wide, are frequency agile so in a market where there are more than one live event occurring, an individual channel can be used for each live truck.

This is a great system. I remember back in the early 70s how exciting this was. I remember standing on top of the Guilford building downtown Greensboro and installing the first microwave path to WFMY. And I also remember driving around Guilford county finding where the signal

## Use It Or Lose It...

was usable, and where it was not so good. To use the expression, can you hear me now.

A couple of months ago the FCC passed a document. Basically what happened was the cell company, Nextel, wanted more frequencies for their telephones. They wrote a check to the government, and the government told all the televisions that use ENG equipment in the 2GHz band, to move. So to make this simple to understand, if a company wants the frequency you are currently using, they can buy it from the government.

Every television station involved has to purchase new transmitting equipment, new receiving equipment, new control equipment, new LNAs, and the list continues. Consider the small items. The control cable that goes from the equipment in the truck, up the mast, to the antenna, does not have enough conductors for the new equipment. So even the transmission lines have to be replaced.

Now back to us hams. We have not received any promises from the FCC that we can keep our frequencies. We have no guarantees we can even keep our operating licenses. So what can we do? To be honest, not very much to keep our frequencies and privileges. Use the repeater, use that handheld, work as much DX as possible. Get involved as much as possible while we can still enjoy this great hobby.

next big business that had the funds wanted the same frequency as our GARA repeater? Enjoy Amateur radio today, we may not have it tomorrow.

## FCC Proposes Holding Cost For Vanity Calls

The FCC has proposed retaining the current \$20.80 Amateur radio vanity call sign regulatory fee for the 10-year license term. the fee went

from \$16.30 to \$20.80 last August. In a Notice of Proposed Rulemaking (NPRM), "Assessment and Collection of Regulatory for Fiscal Year 2005" (MD Docket 05-59) released February 15, the FCC says it's proposing to collect more than \$280 million in regulatory fees for the fiscal year 2005, as mandated by Congress "to recover the regulatory costs associated with the Commission's enforcement, policy and rulemaking, user information, and international activities."

The FCC anticipates 8000 vanity call sign applications during FY2005 -- up from 7800 applications in FY2004 -- and it expects to raise \$166,443 from vanity call sign fees.

For more information on vanity calls, visit the ARRL Web site <http://www.arrl.org/arrlvec/vanity.html>

What would you do if the *Via the ARRL Letter Online*



## ARRL from page 1

"We are in the early stages of a dramatic shift in amateur HF operating patterns, and it's impossible to predict where this shift may lead," Sumner said. "The FCC rules should not stand in the way of where technology takes us in our fulfillment of the bases and purposes of Amateur Radio." The initiative is aimed in part at encouraging new digital modes, but the primary emphasis is to avoid having to write a new rule every time a new mode bursts onto the scene. The League's proposals will establish a framework that creates an environment for change over the next decade--and perhaps longer, Sumner concluded.

The ARRL Board of Directors initiated work on the bandwidth approach in July 2002, and the League has sought members' comments on specific concepts twice since August of last year. The Board will consider the draft petition, now on the drawing board, at its July meeting.

The proposals the EC has recommended to the ARRL Board abandon the effort to have the FCC segregate digital and analog emissions by rule. As the EC sees it, the FCC rules should simply set out band segments in which amateurs may employ bandwidths of up to 3 kHz, leaving any further subdivision up to the amateur band planning process. The EC also acknowledged that band planning mechanisms will have to be improved for this approach to work well.

"Certainly there have to be mechanisms to minimize interference between analog and digital stations, since they cannot compatibly share the same

frequency," Sumner explained. "However, using the FCC rules to subdivide the amateur HF bands is the wrong approach. The FCC rules are too static and too difficult to change."

Resolving two issues that have been hanging fire, the EC's proposals would permit semi-automatic control (ie, with a control operator at the querying station) throughout the amateur HF bands. Sumner says that while this carries some risk of interference, the EC believes the amateur community can manage it more effectively through a combination of technology and respectful operating practices rather than by FCC rule. Additionally, automatic control would continue to be permitted at bandwidths of up to 3 kHz in narrow segments of some HF bands.

The EC made no change to its earlier recommendation that the rules continue to permit double-sideband, full-carrier AM and independent sideband (ISB) as specific exceptions to the 3 kHz bandwidth limit--with restrictions of 9 kHz and 6 kHz respectively--on all bands now allowing 'phone transmissions. (In ISB, or independent sideband, each sideband of a double-sideband signal carries information or data independent of the other.)

Sumner has discussed the subject of regulating by bandwidth in two "It Seems to Us . . ." QST editorials: "Regulation by Bandwidth" in the September 2004 issue, and "Narrowing the Bandwidth Issues" in the April 2005 issue.

FCC rules now permit RTTY and data emissions

throughout the HF CW subbands. "It is only through compliance with 'gentlemen's agreements' that RTTY and data signals are not heard in the parts of the band that are generally used for CW," Sumner notes. The ARRL would propose limiting bandwidth in the "CW subbands" to 200 Hz, which also will accommodate data modes such as PSK31 (see accompanying table and charts below for specific frequencies).

In addition, the League's proposal would set bandwidth limits of either 500 Hz or 3 kHz in the rest of the bands below 29 MHz. "Automatic control" segments would be limited to 3.620-3.635, 7.100-7.105, 10.140-10.150, 14.100-14.112, 21.150-21.160 and 28.120-28.189 MHz. The proposal would eliminate the 14.095-14.0995, 18.105-18.110, and 24.925-24.930 MHz automatic control segments. It would move the 15-meter segment up the band to conform to the lower part of the new 3-kHz bandwidth segment. The proposals would make no changes to 60 or 160 meters. Bandwidths of up to 3 kHz--with the special exception for AM and ISB--would be permitted on 160 meters.

"The objective is not to expand the phone bands to let robot stations run roughshod over the phone bands, or to effect any other immediate change in amateur operating practices," Sumner emphasized. For example, while the 3-kHz bandwidth segment of the 30-meter band theoretically could accommodate voice, this is prohibited by international band plan agreements because the band is so narrow. Additionally, the Amateur Service is secondary on

*Cont., See ARRL on page 7*

## Outsourcing Your Take Out At McDonalds

The next time you visit a McDonalds drive thru, your order may be taken hundreds of miles away at a call center. Sound a bit much? Read on.

Fourteen McDonalds in Oregon and southeastern Washington have been linked to

the call center operated by SEI-CCS Inc. a Fargo, N.D.-based company that works closely with McDonald's.

The call taker in Grand Forks enters your order into a computer and relays it back to the home restaurant, where it pops up on a screen in the kitchen.

Meanwhile, a digital camera photographs your car as you drive through. The photo pops up on a separate screen next to the order at the drive-through cashier's window to match the order with the car.

*from www.gadgetopia.com*

## Tech Tips . . . . .

### Solving the problem of "no stick" to adhesive tape

Ever had the problem with that microphone hanger with "hook & loop" attached by a small piece of adhesive tape material falling off the dashboard from the heat? You just can't get the adhesive tape to last in the heat of the car? It will always fall off again?

Here's a good tip to "help" the adhesive adhere to the surface in spite of the heat and last longer. It's an alcohol based solution called Benzoin Tincture. This is an alcohol solution of a plant extract (gum.) It's used in hospitals for patient dressings that will not stick. After applying to the surface where the tape is going, let it dry. When the alcohol evaporates, a resin is left behind, forming a tacky surface having the quality of enhanced adhesion. By cleaning the surface first with Benzoin Tincture, it will create a very good and sticky surface. Now when you apply the adhesive tape backing on that piece of "hook & loop" material, it will stay put.

Benzoin Tincture (or



tincture of Benzoin) can be obtained over-the-counter at most local drug stores. They may not have it in stock and will probably have to order it. A 2 ounce bottle cost \$8 from Eckerd's. Might sound like a lot, but this small bottle goes a long way.

Information for this "Tech Tip" came from Jon Seaver, N8SUA in his article posted in QST.

## Ham Happenings NEWS briefs

### Family Loss

GARA extends its sympathy to **Tom & Vashti Forrest, N4GVK, KA4DGS**, in the loss of Tom's father, J. Tom Forrest, on April 9, in Greenville, NC. Mr. Forrest was an avid short wave listener and enjoyed setting his clocks by WWV before the days of electronic timepieces.

### SkyWarn Training, April 27

A SkyWarn training class will be held Wednesday, April 27, in Gibsonville. The class is slated from 7 - 9 pm at the Gibsonville Fire Department training room. The fire department is located on Highway 100 at Piedmont Avenue, across from the First Baptist Church. For more information contact John Webb, WE4BB, 336-213-9342, or by e-mail at [we4bb@earthlink.net](mailto:we4bb@earthlink.net).

The session is open to the public, but seating is limited to 36.

**Send your items to the Feed Line newsletter Editor, Tom Forrest, N4GVK at [n4gvk@bellsouth.net](mailto:n4gvk@bellsouth.net).**

## ARRL from page 5

30 meters and must protect the primary fixed service from interference.

Sumner reminded those who might view the EC's approach as giving too much spectrum over to 3-kHz digital modes that there now is no effective bandwidth limit on HF digital operation. The existing bandwidth limit of 500 Hz applies only to automatically controlled stations in semi-automatic operation. "The band segments that will be limited to 200 Hz and 500 Hz respectively

provide greater protection to narrowband operations than exists today," he stressed.

The new proposals take into account the ARRL's prior "Novice refarming" petition to expand some HF 'phone bands, included in the FCC Notice of Proposed Rule Making in WT Docket 04-140.

Sumner points out that amateurs would not have to be able to measure the bandwidth of their signals. "The proposed bandwidths are more than sufficient for 'clean' signals using the traditional HF

modes," he said. "Measurement would only arise as a potential problem for those who try to push the edge of the envelope." The Amateur Radio Service has had regulation by bandwidth for certain data operations for many years, Sumner says, without any substantive debate over whether a particular signal was legal or not.

The EC recommendations are likely to generate considerable discussion between now and the July Board meeting. Frequently Asked Question on the EC recommendations are available on the ARRL Web site.

## Event Clips . . . .



Lee Price, KD4GCF, above, sets up a packet demonstration at the April ARES meeting. Lee gave a nice PowerPoint program on digital communications for ARES. He discussed all the modes of digital which included WinLink 2000.

At right, Allan Kaplan, W1AEL, gave a very detailed program at the March GARA meeting, on the topic was "What's the difference between a \$1500 transceiver and a \$3500 transceiver (apart from the obvious \$2 Kilobucks)? Allan is retired from Ten Tec of Sevierville, TN and still works with them on a consulting basis.



*Photos by Tom Forrest, N4GVK*



# Area Activities

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

## CLUB NETS:

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

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

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

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

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

## OTHER ACTIVITIES :

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

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

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

**MONDAYS & FRIDAYS** – at 11 AM, Greensboro Hams get together for lunch. On Monday they meet at various locations and on Friday lunch is at the K&W Cafeteria off South Holden Road. Talk-in is on the 145. 150, W4GSO repeater with a 100 Hz. tone. On Mondays, give a call to see where everyone is meeting.

**EVERY FRIDAY** – at 8 PM (approximately) Greensboro Hams get together for coffee at Starbucks in Quaker village Shopping center off W. Friendly Ave.

Greensboro Amateur Radio Association  
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Web:  
[www.w4gso.org](http://www.w4gso.org)

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