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Satellites Collide**

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Ch. 2, 8, 12 will hold off till June;
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The Greensboro Amateur Radio Association

Feed Line

Providing Amateur Radio news for the Triad



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Campaign Underway to Clarify Amateur Radio Exemption

NC Officials Consider Law Banning Cell Phone Use While Driving

by Tom Forrest, N4GVK

Feed Line Editor

Additional information by ARRL

Numerous bills are before lawmakers in various states concerning the usage of cell phones/texting while driving. Passage of such bills has been on the list for legislators since an increase of accidents involving cell phones and texting while driving.

In Colorado recently, Amateur Radio operators won a legislative victory on February 3 before the Transportation and Energy Committee of the Colorado House of Representatives. The committee heard testimony Wednesday on HB 09-1094 Concerning Wireless Telephone Prohibitions for Drivers. The bill would entirely prohibit the use of wireless telephones by drivers under the age of 18 years and would require the use of hands-free devices for most other drivers while operating a moving motor vehicle in motion within the state of Colorado.

While the bill provided exemptions for public safety personnel within the scope of their duties, and all users in the event of an emergency to contact public safety authorities, there was concern that enforcement authorities would fail to differentiate between Amateur Radio transceivers and traditional cellular or PCS telephones.

Concerned about the possible ambiguity, ARRL Colorado Section Manager Jeff Ryan, K0RM, and Colorado Section Public Information Coordinator Robert Wareham, N0ESQ, reviewed the proposed bill together and devised a plan to address concerns. "Jeff had already contacted Rep

Levy," Wareham said, "but she expressed hesitance to add any amendments for what she considered 'special interests.' Upon introduction, the bill was referred to the House Committee on Transportation and Energy. My local representative, Frank McNulty (R-43), was a member of that committee, so I gave him a call." According to Wareham, McNulty was unsupportive of the bill in general, but he agreed to introduce an amendment to clearly exempt Amateur Radio operators.

"I reminded Rep McNulty of a similar statute enacted in 2007 in the State of Washington. I thought he could use the Washington wording as a possible example to model his amendment. That statute expressly exempts Amateur Radio operators licensed by the FCC when operating mobile Amateur Radio stations." After almost two hours of testimony, it was time for the Committee to vote on the proposed amendments. "Rep McNulty introduced his amendment, the one exempting Amateur Radio from the bill, and that was seconded by the Committee Chair," Wareham said.

"The amendment added the following subsection to the proposed statute: 'This section does not restrict operation of an Amateur Radio station by a person who holds a valid Amateur Radio operator license issued by the Federal Communications Commission.'"

Back here in North Carolina, similar bills have been introduced before the North Carolina General Assembly, Senate Bill 12 and House Bill 68 (both of which can

be viewed on the GARA web site: www.w4gso.org).

There is a feeling among North Carolina Amateur Radio operators and leaders that similar wording, such as adopted in Colorado, should be used in the NC Bills. NC ARRL Section Manager Tim Slay, N4IB, said in an e-mail received by the Feed Line editor asking about North Carolina's clarification, "Yes we're on it. Our State Government Liaison has already sent letters to some of the senators and heard back from one who voiced his support for our position."

E-mails were sent to members of the NC House of Representatives recently to explain the usage of Amateur Radio.

"There has been a lack of defining certain

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NEXT MEETING February 23

The next meeting of the Greensboro Amateur Radio Assoc. will be February 23, at the Golden Corral Steak House, 4404 Landview Dr, Greensboro, NC 27407, off Wendover Ave. near Sam's Club. The program will be presented by Steve Marks, N4SCM, of Guilford County Emergency Services on an Emergency Management Overview

GARA Meeting Minutes



Regular Meeting Minutes January 26, 2009

The first regular meeting of GARA was held on 1/26/2009 at the Golden Corral restaurant on Landview drive beside Sam's Club.

The meeting was called to order at 7:15 PM with Chris, K4HC, asking everyone to identify themselves.

There was a brief business discussion; Ernie Wall, NC4EW, reminded us that dues are due. Jesse Lindley, N4BFD, said that both of the Repeaters are in good shape again.

Will Ravenel, AI4VE, asked for program ideas. Contact him at ai4ve@bellsouth.net Chris spoke about the condition of Charles Lyons, NT1J and Rick Mainhart, WB3EXR. Both are doing well. We also had some sad news that Mike Best, WD4DUG, has become a silent key and he will be missed.

Roy Smith, N4BYU presented a plaque to John Doggett, AJ4DV, for running the Sunday night net for four years. Alan Bradley KD4IUN spoke about the soccer tournaments.

Bob Davet W8JFQ said that ecolink is working good and reminded users to let

the repeater drop before resuming your qso.

Dan Yemiola AI8O said that the FCC has lost two people recently and that leaves no technically minded people that have any idea how a radio works making rules for us. He urged us all to write to the

president and congress about this. Jesse gave a program on HF Digital modes.

The meeting ended at 8:30 PM.

Respectfully submitted by secretary Greg Spencer, KG4UQV

From the President's Shack

by Chris Thompson, K4HC
GARA President

Boy, the days keep going faster and faster, even though daylight is increasing every day. This bodes well for time to do things after work, instead of it being dark before we even get home.

I haven't been working on any projects lately, just trying to get by. The loss of Ann's brother last month has brought to mind my mortality, and the mortality of my friends. We lost Michael Best, WD4DUG late last year; Charles Lyons NT1J suffered a stroke and is in rehab; Rick Mainhart, WB3EXR had an unexpected week in the hospital...all of this reminds me that our ham radio community is greater than the sum of it's parts (or enthusiasts).

By getting together and sharing ideas, we all tend to become better. This is one of the greatest benefits of our chosen hobby/service - by the very nature of communicating, the core essence of Amateur Radio, we all have the ability to improve ourselves. It's sometimes easy to lose sight of that in the day-to-day struggles we all face.

One of the long-time traditions within ham radio is that of the Elmer - a mentor,

who helps especially the new ham become a contributing member of our community. I have tried to do my part with this, with helping proctor test sessions, helping to teach a class, running the Technical Forum with Rick, and many other small things to "give back".

Every one of us can do something to help our fellow ham. Elmering is not simply getting the new ham on the air, or helping to raise an antenna - though these things certainly count. It is also Jesse, N4BFD and Roy, N4BYU (with others) who are helping one of our senior members get started and proficient using digital modes using a sound card interface. It is also the ham who keeps his jump-bag ready for a potential ARES activation, and helps his comrade consider what to put in HIS jump bag. We do a great job around here helping each other out. And it's something everyone can do, from the newest ham to the oldest ham.

Take a moment to reflect on what YOU can do to help out - and try to put it in action. Do it not for recognition, but because whatever help you can share, it will come back to you many times over. After all, we ALL need help now and again. Keep having fun, and stay safe.

The Greensboro Amateur Radio Association

President Chris Thompson, K4HC
Vice-President Willl Ravenel, AI4VE
Treasurer Ernie Wall, NC4EW
Secretary Greg Spencer, KG4UQV
Financial Al Allred, K4ZKQ

Engineering Chairman Jesse Lindley, N4BFD
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

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From page 1..Cell Phone Usage Law

services that use mobile communications. One, being that of Amateur Radio (Ham Radio.) Amateur Radio is a two-way communication and is not considered a full-duplex conversations as with cell phones," the e-mail stated.

"Ham radio operators are licensed by the FCC and a vital part of community service, especially in the time of disaster and non-disaster events. Our means of

communications are primarily mobile communications for these situations. Amateur Radio operators feel a further clarification would be in order." At this time, local ARRL and local liaisons are working with the NC General Assembly and state elected officials to resolve the wording of the NC proposed bills. It is important to have specific wording in the bill to clarify the status of Amateur Radio communications.

Crimp-on PL Connectors Offer Easier Installation

by Michael S. Higgins, K6AER
Via E-ham



Many hams have varying degrees of success when attempting to install the revered PL-259 solder on connector. Often these attempts end with melted coax and connector and a poor connection that will fail over time. I have installed thousands of these connectors and I must admit that when things go right I consider myself lucky.

Recently a crop of crimp on connectors and crimp tools have become available that have made the process much easier. These connectors greatly ease connector assembly and the tools are readily available to the average ham. Pricing on the connectors is about the same as a Teflon PL-259 and the connection and finished product is far superior. Some previous crimp on connectors crimped a solder on PL-259 and those connectors were poor at best. That is not the case with the RF Industries connectors. These connectors were designed from the ground up to be a crimp on connector.

Prep tools are available to prep the coax to the specified length so all that needs to be done is slip the new connector over the RG-8, RG-213 or LMR-400 coax and then crimp the end piece (Center Conductor) and the ferrule over the outer shield. The end result is a coax and connector that is superior to any solder on product. I know there are the old timers who scoff at a crimp on connector but in the cell phone industry we have found that crimp on connectors have a much lower failure rate than any field solder on connector. In addition the pull strength is

much higher because the coax crimp is a much stronger mechanical connection than soldering through four tiny holes found on the typical PL-259 connector body.

The end product looks like what you would expect from a commercial product. This is depicted in the photo below:

In tests I have found the pull strength of the "N" and PL-259 crimp on connectors to handle over 120 lbs of pull. I could not test to failure because I ran out of weights to put in the horse bucket attached to the connector via a female connector.

The next test was to sweep the lines via

my HP network analyzer. Just to keep things constant all the connectors were attached to LMR-400. At 900 MHz the Crimp on PL-259 had .1 dB more loss than the crimp on "N" connector. Not bad. The solder on connector had .23 dB of loss at 900 MHz when compared to the crimp on "N" connector. The cable lengths in each case were 24 inches. I know the conventional

wisdom is don't use PL-259's above 2 meters but I saw nothing on the analyzer that said this was true below 1 GHz. Now that doesn't preclude a bad connector design or poor female connectors on the radio unit but I saw no reason not to use the PL-259 crimp on at UHF.

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In each case the crimp on product uses a ferrule that crimps to not only the outer conductor shield but also to the plastic jacket. -- This method makes a connection with superior pull and flex strength.



Crimp-on connectors from previous page

The benchmark PL-259 solder in my connector assembly was a Teflon Amphenol unit. This is a \$3.00 connector and comparable in cost with a crimp on connector.

knife and have plenty of band-aids you may forgo the prep tool.

Typical time to assemble a connector is about one minute. This process is so simple that I stopped using solder on connectors for some time ago.



The RF industries crimpers with the .429 die set for LMR-400 size coax and the coax prep tool from Times Microwave.

Crimp tool cost is often what makes ham shy away from crimp on connectors. Some special crimp tools can cost well over \$400. This is not the case with all crimp tools. RF Industries makes a very economical unit that I have been using for over 8 years and it is holding up well. The crimp tool come in a plastic case that has cut outs for die sets to crimp a variety of connector types from miniature coax up to LMR-400.

A different prep tool is needed for the PL-259 connector due to the longer length needed for the center conductor. Although if you are handy with an exacto blade

You can buy the tools from a number of distributors. Part numbers and pricing from Tessco distributors is shown below. The pricing shown is for small quantities.

Note the crimp on PL-259 from Tessco is an RF Industries Part Number RFU-507-ST and is available also from Talley, Hutton and Electro-Comm distributors. These distributors also sell the crimp and prep tools.

Typical quantity cable prices for LMR-400 equivalent coax can range from \$214 for a 500 foot reel from JEFA Technology to \$360 for a 500 foot reel of Time Mirror LMR-400 from Tessco

Description	Tessco #	Price
Crimp on PL-259 - LMR-400, RG-8, RG-213	35985	\$ 2.47
Crimp on "N" - LMR-400, RG-8, RG-213	14515	\$ 3.35
Crimper set for large and small coax RG-8/RG-58	54250	\$ 99.00
Prep tool for LMR-400, RG-8, RG-213 for "N"	59664	\$ 71.00
Prep tool for LMR-400, RG-8, RG-213 for PL-259	68254	\$ 101.00

US DTV Transition Will Be Delayed To June

The transition from analog to all-digital telecasting in the United States will most likely be delayed some four months. In a heated debate by legislators Wednesday, February 4th, the House of representatives voted to push the cut-off date for analog TV from February 17th to June 12th. As previously reported, ham radio

operators were among groups targeted by the FCC to assist in making the public aware of the digital conversion and providing assistance to those who needed help. Hams nationwide have responded. Now they will have four more months to assist in the digital outreach campaign. (Published news reports)

Distress Beacons Change Frequency



This graphic gives an overview of how the Cospas-Sarsat system works. First, a beacon is activated due to grave or imminent danger (1). Next, the Cospas-Sarsat satellite systems receives

ARRL - As of February 1, the Cospas-Sarsat (Search and Rescue Satellite Aided Tracking) satellites are no longer monitoring distress beacons at 121.5 and 243 MHz. All mariners, aviators and individuals who use emergency beacons on those frequencies will need to switch to the newer, digital 406 MHz frequency if they want to be detected by the monitoring satellites. The National Oceanic and Atmospheric Administration (NOAA) claims that in 2008, beacons monitored by the Cospas-Sarsat worldwide system were responsible for almost 300 lives saved, including 203 people rescued in 65 in at-sea incidents and 12 people rescued in 7 aviation incidents.

"Over the years, many amateurs have played vital roles by monitoring frequencies that the satellites have stopped tracking," said ARRL Emergency Preparedness and Response Manager Dennis Dura, K2DCD. "While the switchover to 406 MHz just occurred, there is still 'older' equipment out in the world, so amateurs may want to continue monitoring, as they may save a person's life who doesn't have the latest gear, but is in distress and needs to be found."

Cospas-Sarsat provides a satellite based worldwide monitoring system that detects and locates distress signals transmitted by 406 MHz Emergency Locator Transmitters (ELTs, used in aviation), Emergency Position Indicating Radio Beacons (EPIRBs, used for maritime) and

Continued on Next Page >

Get Well ...

Get well wishes to **GARA member Charles Lyons, NT1J**, who recently suffered a stroke. Larry Pike, KI4PRT reports Charles is making good progress in speech and limb therapy and that doctors are optimistic about a full recovery. It will take time, however. He can speak with difficulty but sometimes it comes out nicely. He has his laptop computer and can do some things with it but is not on line at rehab. Next Saturday, the 14th, he will be brought home for a short trip. This will be a part of rehab in getting in and out of a vehicle. Our best to Charles for a speedy recovery

Also, to Doug. Johnson, K4OJP, who recently suffer ulcer problems. Doug is home and doing well.

FOR SALE

Antenna, Pwr. Supply & Meter
Antenna, dual band, power meter and Astron RS-20M power supply for sale. It's the one with two meters on the front. I can't find out how much they cost, so I don't know what to ask for it. Maybe you can help. It has been used very little.

Another item for sale is my Comet UHF/VHF SWR meter. I also won't be needing my dual-band antenna and the heavy-duty steel telescoping mast that it's attached which is for sale at \$100 Call Fred Blackman, W4FB, at 336-841-4338.

ICOM IC-720A \$150.00

HF cw/ssb transceiver: transmit 160m – 10m, 100 watts output; receive 0.1 MHz – 30 MHz. With matching ICOM IC-PS20 power supply and microphone, instruction manuals for transceiver and power supply.

This rig was tested on the air (40m cw qso with W9OTE) on January 15, 2009.

Heath HW-101 \$150.00

This is the classic, top-selling Heathkit transceiver. Complete with matching power supply, microphone, and speaker, along with the original instruction manual and extra tubes. (I last used this rig approximately 25 years ago. To make this classic transceiver operational, electrolytic capacitors should be replaced.) Contact Pete, W8LOG, at 336-852-8791 or at pkauber@triad.rr.com

Alinco 5watt vhf/uhf with high capacity battery, remote mike/speaker/controller;



charger, 1/4 wave mag mount, and vox operated head set. It is in good condition (enclosed .jpg). My interests lie elsewhere than ham radio. \$130 K4CJZ, Chuck, 887-9023.

Sympathy

Our condolences to Joan Blosser, in the death of her father, John Kilpatrick of Sweetwater, TN. Joan is the wife of **GARA member George Blosser, N4CPV**. Mr. Kilpatrick was 38 days short of his 100th birthday when he passed away February 6th.

A Family Affair

Jace Strandberg, W4JSJ, recently upgraded to a General license in December of 2008. Jace represents the third generation of active Hams in the Strandberg family. His father, John, and his grandfather, Charles, share the hobby.

A recent graduate of NC State University with honors in economics, Jace took up the hobby in June, 2008 when he earned his Technician's license with an original call sign of KJ4ETM. His father, John, was originally licensed in 1983 as KB4HKG. While he moved away from the hobby for awhile, he became licensed again in August 2007 as KI4YPC. A month later, he upgraded to his current call sign AJ4BT. John served recently as an officer and board member for GARA.

The Strandbergs' first Ham, Charles, has been licensed since 1939 when he was only 13, with the callsign W4JMI, an original assignment he continues to use today. He served as a Navy radio engineer during WWII on an LST in the Pacific theater. He is a graduate of Duke University with a degree in electrical engineering, and a career in electronics design and innovation.

With three active generations, the Strandbergs join a relatively exclusive group. Very few Ham families in Guilford County have the three-generation distinction.

Oops! Satellites Collide



For the first time ever, two large satellites have collided in Earth orbit. It happened on Tuesday, Feb. 10th, when Kosmos 2251 crashed into Iridium 33 approximately 800 km over northern Siberia. Both satellites were completely destroyed.

U.S. Strategic Command is tracking hundreds of satellite fragments. In the 48+ hours since the collision, the debris swarm has spread around both orbits. Experts characterize the distribution as a pair of "clumpy rings"; one ring traces the orbit

of Iridium 33, the other traces the orbit of Kosmos 2251.

This injection of debris substantially increases the population of space junk at altitudes near 800 km. Collisions are now more likely than ever. Fortunately, the International Space Station orbits Earth at a much lower altitude, 350 km, so it is in no immediate danger. The Hubble Space Telescope is not so safe at 610 km. In the days ahead, researchers will carefully study the make-up and dynamics of the debris cloud to estimate

Distress Beacons ...

Personal Locator Beacons (PLBs, used by individuals). The system includes space and ground segments that process the signals received from the beacon source and forwards the distress alert data to the appropriate Rescue Coordination Center (RCC) for action.

NOAA said that the 406 MHz emergency beacons have "superior

performance capabilities" as compared to the 121.5 and 243 MHz beacons, as they "transmit a stronger signal and are more accurate, verifiable and traceable," and that the 406 MHz distress signals can be "easily detected within a matter of minutes. Each 406 MHz beacon has a unique ID encoded within its signal. As long as the beacon has been registered (required by law), RCCs can quickly confirm that the distress is real, who they are looking for and where they should look.

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.

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 6:15 PM **The Guilford Amateur Society** holds their monthly meeting at Tex & Shirley's Restaurant in Friendly Shopping Center. Eat at 6:15 PM and the business meeting begins at 7 PM. Location changes from time-to-time. Watch for notices.

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

EVERY FRIDAY – at 8 PM (approximately) Greensboro Hams gather at Starbucks. Meet at Guilford College (winter) and Battleground Ave. (summer), location change coincides with the Day light Saving time change.

Technical Forum Sundays at 7:30 - 145.15 repeater

Greensboro Amateur Radio Association

P.O. Box 7054

Greensboro, NC 27417



Web:
www.w4gso.org

FIRST CLASS MAIL



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

MEMBERSHIP APPLICATION - RENEWAL / NEW - 2009

\$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: _____

(*please provide an e-mail address to which the Feed Line will be e-mailed and we can contact you)

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: _____

Ham Radio at Its Best

Join GARA for 2009

Ham Radio for the Triad

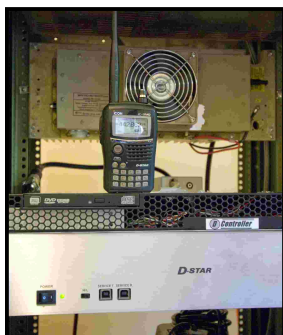
We are a diverse group of Amateur Radio operators providing public service for the Triad area.



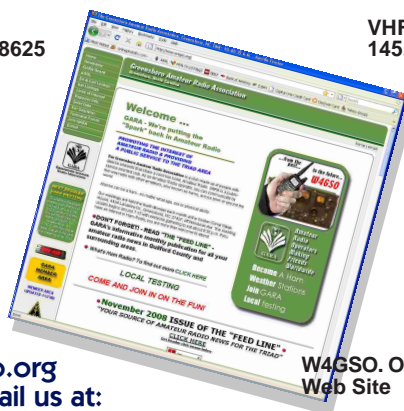
GARA repeaters are active and "buzzin" with all kinds of information. You're invited to join in. You got a question? - There's probably someone on the repeater with an answer!
These repeaters are open to everyone !

- **Once again we are planning a great 2009 for Amateur Radio in the Triad area.**
- **GARA has the ONLY club supported digital D-Star repeater in North Carolina. Also, EchoLink is now operational on the 145.15 VHF repeater**
- Get in on the fun! Come visit a meeting - Fourth Monday of each month. 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 information filled Triad area monthly news letter, and a top-notch weekly updated web site along with special member features.
- Radio broken? You have access to a loaner radio free of charge whenever your radio needs to go to the shop!

If you are a renewing member, we appreciate your continued support! If you are a new Ham and searching for an active Amateur Radio Club



D-Star UHF
Machine 442.8625



VHF Machine
145.150 Mhz.



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

W4GSO.ORG
Web Site

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