



The Greensboro Amateur Radio Association

Feed Line

Providing Amateur Radio news for the Triad



Brian Wilson, NX4U, Editor

www.w4gso.org

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GARA's Elections

by Thomas Bertolino, KB1P

On January 26, 2015, Nomination Committee's slate was elected by acclamation.

The new officers are:

President: **Tom Bertolino - KB1P**
 Vice President: **Cameron Conover - AJ4TW**
 Treasurer: **Todd Smith - AK4TS**
 Finance Committee Chairperson: **Scott Toth, KV4UP**
 Secretary: **Greg Spencer - KG4UQV**
 Engineering Committee Chairperson: **Jesse Lindley - K4AX**
 Operations Committee Chairperson: **Roy Smith - N4BYU**
 Member at Large: **David Bond - KK4VCG**
 Member at Large: **Patrick Moore - K2CPR**

Tom Bertolino presented the nomination committee's slate and opened the meeting for nominations. Bob Mays, KE4MOW, made a motion that the nominations be close and accept the nominations as presented by the nominating committee and appoint those officers by acclamation. The motion was second by Roger Joyner, W4AYO. The motion carried.

This Month's Program

Our February Meeting will be held on Monday, February 23rd at 7:15 pm in Captain Bills Seafood & Steakhouse located at 6108 West Market Street in Greensboro. Come early have dinner and catch up on the latest club info, gossip, and connect faces to call signs.

The presentation topic for this month is North Carolina QSO Party (NCQP) by Marty Young, W4MY. Marty is the Chairman of the North Carolina QSO Committee. NCQP is scheduled to start March 1st at 10:00 am EST (1500 UTC) and ends 10 hours later at 8:00 pm. Marty will discuss NCQP in general and this year's bonus point changes. This should be an interesting presentation.

Some reminders:

- GARA's 2015 membership is due by March 1, 2015. You can pay your dues at any meeting. GARA now accepts credit cards, checks, or cash.
- N4G Special Event Station (March 14-15) needs operators. If you are interested, please contact David Macchiarolo, AJ4TF. His email address is aj4tf@arrl.net.
- GARA has new name badges. If you do not have your, you can get your name badge at any meeting.
- If your ARRL membership is up soon or you want to join ARRL, you can do it through GARA. Renewal/ Join forms are available at this meeting.

NEXT MEETING Monday, February 23

The next meeting of the Greensboro Amateur Radio Association will be Monday, February 23rd, at Captain Bill's Seafood & Steakhouse, 6108 West Market Street, Greensboro, NC 27409, between Guilford College Road and Swing Road. The program for this month's meeting is North Carolina QSO Party (NCQP) by Marty Young, W4MY.

GARA Meeting Minutes

Regular Meeting Minutes January, 2014

The Greensboro Amateur Radio Association held their monthly meeting on January 26, 2015, at Captain Bills Seafood Restaurant located at 6108 West Market Street in Greensboro. Tom Bertolino, KB1P, called the meeting to order at 7:15pm.

Chris Thompson K4HC, who came in as #28 in the world in ARRL's Centennial Challenge made presentations of his "5B-K4HC award" to the three hams that supported him in the challenge. They were Jesse Lindley, K4AX; John Strandberg, W4DX; and Cameron Conover, AJ4TW. Cameron was the only one present to accept the award.

Tom showed a slide with three new GARA members: Peter Lunt, W4PEL; Glen Sellmer, KM4FXQ; and Jeffery Frank, WF4CSA. Then asked that everyone identify themselves.

CLUB BUSINESS and OFFICER REPORTS

Cameron Conover, AJ4TW, reported progress is being made on the new web site.

Todd Smith, AK4TS, stated members can now pay dues at meeting by credit cards, check or cash.

Roy Smith, N4BYU, gave VE Exam information and talked about repeater use and answering calls from new hams or hams passing through the area using the repeater.

David Macchiarolo, AJ4TF, talked about Special Event Station N4G, and asked for operators for the event.

Officer Elections - There was a quorum present. Tom presented the nomination committees slate:

President: Tom Bertolino – KB1P

Vice President: Cameron Conover - AJ4TW

Treasurer: Todd Smith – AK4TS

Finance committee chairperson: Scott Toth – KV4UP

Secretary: Greg Spencer – KG4UQV

Engineering committee chairperson: Jesse Lindley – K4AX

Operations committee chairperson: Roy Smith – N4BYU

Member at large: David Bond: - KK4VCG

Member at large: Patrick Moore – K2CPR

Tom then opened the meeting for other nominations. Bob Mays, KE4MOW, made a motion that we close nominations and accept the nominations as presented by the nominating committee and appoint those officers by acclamation. The motion was seconded by Roger Joyner, W4AYO, the motion carried.

Ed Miller, AD4YB, gave the presentation on "Marine communications." He explained some of the rules which govern marine communications along with fines for violating the rules. He also covered the marine bands and showed some of the radios used in marine communications.

The meeting was adjourned at 8:45pm.

Minutes taken by David Bond, KK4VCG, and transcribed by Tom Bertolino, KB1P.



The Greensboro Amateur Radio Association

President Thomas Bertolino, KB1P
Vice-President Cameron Conover, AJ4TW
Treasurer Todd Smith, AK4TS
Secretary Greg Spencer, KG4UQV
Financial Scott Toth, KV4UP
Engineering Chair Jesse Lindley, K4AX
Operations Chair Roy Smith, N4BYU
Member-at-Large David Bond, KK4VCG
Member-at-Large Patrick Moore, K2CPR
Appointed Position:
Public Information Officer
Betty Williams, KC2BFN
Webmaster & Newsletter Editor
Brian Wilson, NX4U

The Feed Line is ©2014 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.

Board Meeting Minutes - February, 2015

The GARA board of directors held their monthly meeting on February 6th 2015 at Captain Bills. The members present were; Tom Bertolino, KB1P; Cameron Conover, AJ4TW; Patrick Moore, K2CPR; Scott Toth, KV4UP; Todd Smith, AK4TS; Roy Smith, N4BYU; Jesse Lindley, K4AX; and Greg Spencer, KG4UQV. Betty Williams, KC2BFN, and Ritchie Spong, KB3YHO, were visiting.

Tom called the meeting to order at 7:00pm.

The board discussed the duties of the board members and Tom asked David Bond to be the backup for Secretary Greg Spencer. David agreed.

Cameron said that he has programs lined up for several months. Cameron also said he had been in touch with some of the people involved with the DMR repeater that is located at the same site as our repeaters concerning internet access sharing.

Greg had nothing to report.

Todd said that he is trying to coordinate when he can meet Craig Bondy, N8STA, to take possession of the treasury materials. Todd said we also need to get the books audited. We discussed the PayPal account balance and when to transfer funds.

Jesse spoke about possible antenna issues that we are having with the 145.150 repeater. Jesse will get prices on a new antenna versus having a new phasing harness made for the existing antenna. We discussed the AR news line program and ways to play the file when the call in service goes away.

The board discussed the Technical Forum

Tom said the board will start working on Field Day plans soon, and the N4G Special Event Station is on track.

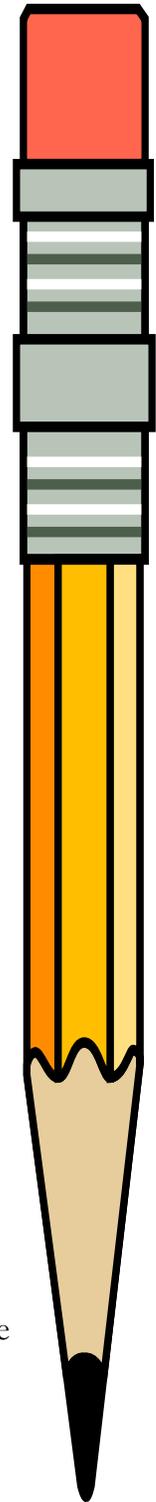
New business

The board discussed a change in board meeting days. Patrick made a motion to meet every other month starting in March. After some discussion it was decided to table this for a while and Patrick withdrew his motion.

Ritchie gave us an update on the website progress and issues with shared hosting. Ritchie offered to host our website along with one of his that will increase the available band width for our site over what we have now. Cameron made a motion to accept Ritchie's offer to host the site, Jesse seconded, and the motion carried with one abstention. Cameron made a motion to grant Ritchie a years membership in exchange for his work on the website, Jesse seconded, and the motion carried with one opposed.

The meeting ended at 8:05pm.

Respectfully submitted by Greg Spencer, KG4UQV, GARA Secretary.



From the President's Shack

March kicks off GARA's event schedule with the N4G Special Event Station. This event celebrates the 234th anniversary of the Battle of Guilford Courthouse, and will be the 4th year that David Macchiarolo, AJ4TF, has run this event with the help of GARA members. (If you are not familiar with this event, David has put together an excellent web site which explains the history of the battle, and how the special event station will operate. The site address is <http://n4g-gch.org/>.)

The N4G Special Event is scheduled to be held at Guilford Courthouse National Military Park on Saturday and Sunday, March 14th and 15th with setup on Friday afternoon the 13th and teardown on Sunday afternoon.

This is an excellent event for new Techs and other hams who want to get/gain experience on the HF bands. The point of contact for this event is David Macchiarolo, AJ4TF. He is looking for help to setup, teardown and radio operators. If you are interested in helping out with this event you can contact David. His email address is aj4tf@arrl.net

The next scheduled event is GARA's annual picnic, May 16th. This year we are holding the picnic at Hagan Stone Park, shelter 5. I was notified by the Greensboro's park department that there is a possibility shelter 5 may not be ready to use in May. There is a construction project adjacent to the shelter 5, and the shelter is being used as a storage area. In that case we will use shelter 6 which is next to shelter 5. Shelter 6 does not have as many picnic tables as shelter 5. If we have to use shelter 6, you might be asked to bring your own folding chair.



The last event, field day, is scheduled for June 27th - 28th. Past field days GARA supported ARES which ran the event. This year GARA will be running field day. GARA's board will be setting up a field day committee which will plan, coordinate, and run field day. We are looking for members that can help with planning this event. If you are interested in helping out with field day please let me or any board member know.

The last planned event this year is GARA's open house. The event is normally schedule in October. As the event gets closer GARA will be asking for exhibit ideas and volunteers to help run this event.

An update, GARA's new web site is scheduled to be on line in April. We are asking for photos and videos of GARA events to use on the new web site. If have any photos or videos you want to share with the club you can email them to Cameron Conover, AJ4TW, the web site committee chairman. His email address is shiftlink@gmail.com.

I would like thank the outgoing board members for their dedication to the club, and welcome the new board members and challenge them to help improve the club.

Tom Bertolino, KB1P
President, GARA

Congratulations! You Passed!

Every month on the second Saturday, except in March when it is the third Saturday, W4VEC holds a testing session for those who live in the area. This provides an opportunity for individuals to be able to test for their amateur radio license or upgrade. Thanks to Roy Smith, N4BYU, and a group of volunteers, each month there are new or upgraded hams in our area.

In January, there were two (2) who passed their test(s), and earned either their Technician, General or Extra class license.

Next month's testing session will be on March 21st at Hinshaw United Methodist Church, 4501 High Point Road, Greensboro, 27407, at 9am. While walk-ins are welcome contacting the lead VE is preferred. Please contact Roy Smith at (336) 312-0647 or by email at n4byu@arrl.net

If you cannot make it to this test session, W4VEC holds a second test every month in this area. Test sessions are held at 10am on the last Saturday of each month at the Red Cross High Point Chapter, 815 Phillips Ave., High Point, NC 277262. Walk-ins are welcome. Contact information is Bob Williams, KB4TWG, email robwilliams@northstate.net, phone (cell), 336-812-5500.

Photos Courtesy of Tom Bertolino, KB1P, and/or Roy Smith, N4BYU



*Paul Plante - KM4HXV
Passed Tech*



*Richard Cavanaugh - KM4HYJ
Passed Tech*

Reminder - NC QSO Party

The 2015 North Carolina QSO Party is coming fast with only 7 weeks until March 1!

It will take place on March 1, from 10:00 am to 8:00 pm. We are looking forward to a fun and exciting event! There will be 6 bonuses this year; NI4BK, W4DW, K4CIA, NC4QP, and the counties of Person and Surry, with award credit for working all 6!

As the clubs manager for the NCQP committee, I encourage your club to post the call-sign your club will use, your location, and any special plans, modes, expeditions, etc. to the NCQP website, or reply to clubs@ncqsoparty.org. If you have plans for an ARES group, please send an email to Dwayne Ayers at n4mio@triad.rr.com.

You can find links to Marty W4MY's presentation to South Wake ARC from their January 5 meeting. Marty is available to give the presentation to your club. If interested, please contact Marty at w4my@reagan.com to plan a visit.

Thank you to all who are sponsoring awards! There are a couple of awards still available for sponsorship. Please send an email to awards@ncqsoparty.org for information.

The 2015 North Carolina QSO Party will be a fun and exciting event. We look forward to hearing your plans and working you on March 1. Thank you for your support and participation!

Joanne, AK4RJ, North Carolina QSO Party Clubs Manager

FCC "Paperless" Amateur Radio License

Starting February 17, the FCC no longer will routinely issue paper license documents to Amateur Radio applicants and licensees. The Commission has maintained for some time now that the official Amateur Radio license authorization is the electronic record that exists in its Universal Licensing System (ULS), although the FCC has continued to print and mail hard copy licenses. In mid-December the FCC adopted final procedures to provide access to official electronic authorizations, as it had proposed in WT Docket 14-161 as part of its "process reform" initiatives.

Under the new procedures, licensees will access their current official authorization ("Active" status only) via the ULS License Manager. The FCC will continue to provide paper license documents to all licensees who notify the Commission that they prefer to receive one. Licensees also will be able to print out an official authorization - as well as an unofficial "reference copy" - from the ULS License Manager.

"We find this electronic process will improve efficiency by simplifying access to official authorizations in ULS, shortening the time period between grant of an application and access to the official authorization, and reducing regulatory costs," the FCC Wireless Telecommunications Bureau (WTB) said. According to the WTB, the new procedures will save at least \$304,000 a year, including the cost of staff resources.

In comments filed November 5, the ARRL had strongly recommended that the FCC "give serious consideration to continuing a default provision for sending an initial paper license document to new licensees in the Amateur Radio Service, along with detailed, simple instructions for how to make the elections set forth in the notice relative to future modified or renewed licenses."

The ARRL and other Amateur Radio commenters also worried that unless a license document is printed on distinctive paper stock, its authenticity could be questioned in such situations as obtaining vanity call sign license plates. To address this, the FCC said the watermark "Official Copy" will be printed on each page of an official authorization that a licensee prints out from the ULS.

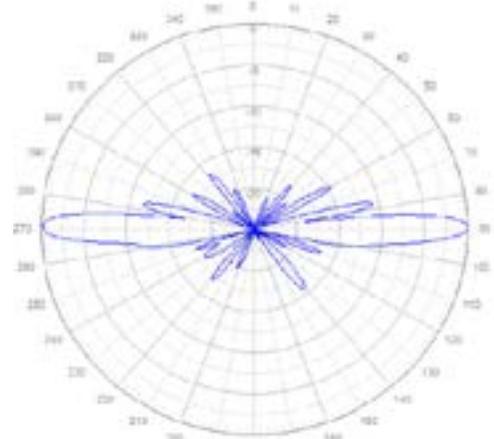
For more information, see <http://www.arrl.org/news/fcc-paperless-amateur-radio-license-policy-goes-into-effect-on-february-17>

February Engineering Update

From Jesse Lindley, K4AX

I am once again happy to be serving on the GARA. board again this year, but in a new position as Engineering Chairman. I'd also like to thank David Macchiarolo for serving the last four years; he did a great job and spent a lot of time and effort behind the scenes keeping things running smoothly with both repeater systems and documenting changes and procedures that will really help my job of doing the same in the future. David has offered to help if I need it, and I know I'll be calling on him in the future.

In December, the feed line and antennas were inspected and some issues were found. Both antennas are Decibel Products, folded dipole arrays. The dipoles are phased to attain gain that is mostly focused right on the horizon. The individual elements are connected via a phasing harness, and there is a possibility that due to age and weather, these need to be replaced. The inspection revealed a taped connection that has failed, the straps that holding the harness to the UHF antenna are breaking off, the mounting hardware that is used to secure the antennas to tower is corroded, and the UHF antenna appears to not be straight. The engineering committee will be looking at these issues and coming up with a plan to get them serviced soon.



Also on February 12th, when the power was off during a test of the backup generator, one of our UPS units failed to restore power back when the main power was back online. The backup batteries to the repeater controller drained, and it appears the voice playback files, that are stored in volatile memory on our twenty-year old controller, were lost. I'll flash the files back when the UPS batteries are replaced, so our repeater will have its voice back.

Jesse Lindley, K4AX@arrl.net

73, from the GARA Engineering Committee!

Fundraiser Dinner for Greg Spencer, March 7th

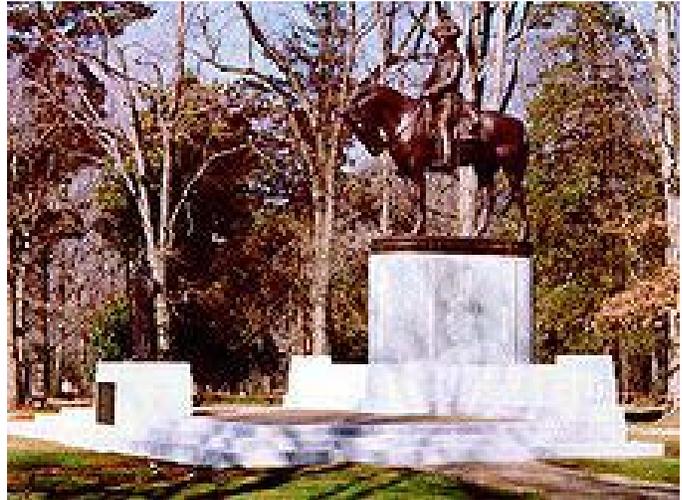
Jim Waynick, N4JLW, has asked this information be relayed to the members of GARA with the added information. Jim is now making available a number of individual seats for this fundraiser. If you are interested in attending the price per seat is \$15.00. If you have any questions or want to purchase at seat, you can call Jim at 336-549-4140.

2015 N4G Special Event Station

From David Macchiarolo, AJ4TF

We have the call sign, and we have the permit from the National Park Service! We'll be listed in the March issue of QST! All we need now is YOU!

The planning for the 2015 edition of the N4G Special Event Station, commemorating the 234th anniversary of the Battle of Guilford Courthouse, is well under way. We'll be in the same place as the last three years, behind the Colonial Heritage Center in Tannenbaum Park, at the southeast corner of Battleground Ave and New Garden Road in Greensboro. We will set up on Friday March 13th 2015, and operate Saturday and Sunday, March 14th and 15th. Of course this is the same weekend as the annual reenactment of the Battle of Guilford Courthouse, which is the historical event that our special event station is celebrating.



We're planning on having our typical two HF positions and a VHF/UHF/D-Star position as usual, but we might try some CW and digital modes this year in addition to the regular phone contacts.

What we need most right now are OPERATORS. If you've never worked the HF bands, even if you don't currently have HF privileges, you can come out and try it out... we'll have control operators available so EVERYONE will be able to make some DX contacts, be involved in a historical event, and have some fun! Don't be shy... we make it easy, with a written script; even a beginner can make some good contacts.

Last year, Ken KK4GSM and Linda KK4LHH warmed up the airwaves, along with their granddaughter Katrina, and made dozens of contacts! I sat Katrina down in front of a radio, and gave her a few minutes of coaching. Within a short time, she had made 20 contacts by herself. Katrina said "My sister said this would be boring, I can't wait to tell her she was wrong!"



Mark your calendars for March 14-15, 2015 and come out and participate. We really need operators that can sit and work not just for a few minutes, but a few hours. And, if you're a night owl, then this is for you... we plan to operate continuously from Saturday morning, through the night, until Sunday afternoon.

If you have any questions, or preference for a time that you would like to operate, then let me know at aj4tf@arrl.net

See you soon! David, AJ4TF

W5KUB.COM

New Webcast

Amateur Radio Roundtable

You are invited to Amateur Radio Roundtable, a new series of W5KUB.com live weekly webcasts. The webcast will be Tuesday nights at 8:00 PM Central Time (0200 UTC Wednesdays) at W5KUB.COM.

Amateur Radio Roundtable is an informal discussion of all aspects of ham radio with the intent of allowing viewers to watch this live webcast or be a guest via Skype or Google Hangout. A question and answer session with viewers will follow each topic.

The show covers all aspects of ham radio; such as, balloon launches, Satellite, go-kits, emergency communications, SDR, digital modes, DXing, home brewing, and much more. This week's guests include Arnie Shatz, N6HC, who has been a team member of many great DExpeditions; Eric William sharing the prototype of a Cubesat that he is building; and SM4VPZ, a special guest from Sweden.

- To watch Amateur Radio Roundtable: Go to w5kub.com, click on Live Events and sign in. If you have a W5KUB account, use your User Name and Password. If you don't have a W5KUB account, sign in with a call or name without a password.

- During the last half of the roundtable, every viewer is invited to make a virtual appearance on the show. Guests will need a Google+ account, microphone, and camera. A link allowing you to join will be provided during the show. This part of the show is very informal; you can just pop in to say hello, or stay a while and join in on a wide range of topics. Google Hangout will allow up to 10 people at a time.

We need your help with programming. If you have a specific subject that you would like to present in a future show, send an email to tom@W5KUB.com.

Join us for fun and interesting ham radio programming. We'll see you on the webcast!
Tom Medlin, W5KUB

Calendar of Events

- Feb 23 GARA General Meeting (Captain Bill's Seafood & Steakhouse, Greensboro)
- Feb 28 VE Session (Red Cross Building, High Point)
- Mar 9 GARA Board Meeting
- Mar 13 Charlotte Hamfest (N C Section Convention, Concord, NC) www.charlottehamfest.org
- Mar 14-15 N4G at Guilford Courthouse National Military Park (GCNMP), Greensboro
- Mar 21 VE Session (Hinshaw United Methodist Church, Greensboro)
- Mar 23 GARA General Meeting (Captain Bill's Seafood & Steakhouse, Greensboro)
- Mar 28 25th Annual Down East Hamfest (L CC Gymnasium, 231 Highway 58 South Kinston, NC)
- Mar 28 VE Session (Red Cross Building, High Point)
- Apr 4 NC State Convention (43rd Annual RARS Fest Raleigh, NC) www.rars.org/rarsfest
- Apr 11 VE Session (Hinshaw United Methodist Church, Greensboro)
- Apr 13 GARA Board Meeting
- Apr 18 Catawba Valley Hamfest (Morganton, NC) www.cvhamfest.com
- Apr 25 VE Session (Red Cross Building, High Point)
- Apr 27 GARA General Meeting (Captain Bill's Seafood & Steakhouse, Greensboro)
- May 9 VE Session (Hinshaw United Methodist Church, Greensboro)
- May 11 GARA Board Meeting
- May 16 GARA Picnic, Hagan Stone Park, Shelter #5
- May 25 GARA General Meeting (Captain Bill's Seafood & Steakhouse, Greensboro)
- May 30 VE Session (Red Cross Building, High Point)
- Jun 8 GARA Board Meeting
- Jun 13 VE Session (Hinshaw United Methodist Church, Greensboro)
- Jun 13 Winston-Salem Hamfest (Summit School, 2100 Reynolda Rd) www.w4nc.com
- Jun 22 GARA General Meeting (Captain Bill's Seafood & Steakhouse, Greensboro)
- Jun 27-28 Field Day
- Jun 27 VE Session (Red Cross Building, High Point)
- Jun 7 30th Annual Firecracker Hamfest (Salisbury, NC) www.rowanars.org
- Jul 11 VE Session (Hinshaw United Methodist Church, Greensboro)
- Jul 18 Mid-Summer SWAPFEST (Harold Ritter Park, Cary, NC) www.qsl.net/n4nc
- Jul 25 VE Session (Red Cross Building, High Point)
- Jul 25 WCARS Hamfest (Haywood County Fairgrounds, Waynesville, NC) www.wcars.org
- Jul 27 GARA General Meeting (Captain Bill's Seafood & Steakhouse, Greensboro)

This purpose of this calendar to provide information on events in and around our area that might be of interest to our readers. As you might expect, there are many more events (public service, hamfests, flea markets, etc.) taking place in North Carolina and around the Greater Greensboro Area. If you know of an event that would be of interest to our readers, please contact Tom, KB1P at kb1p@arrl.net.

Area Happenings

FOURTH MONDAY – at 6:30pm, the Greensboro Amateur Radio Association have their regular monthly meeting at Captain Bill's Seafood & Steakhouse, 6108 West Market St., Greensboro, NC 27409. Please plan to gather at 6:30pm for dinner. The meeting is scheduled to start at 7:15pm

CLUB NETS:

SUNDAYS – at 7:30pm, the **Technical Forum** on the 145.150;

- at 9pm, 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.

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

TUESDAYS – at 9pm, the **D-STAR Net** meets on 442.8625 (W4GSO B and Reflector 54C)

WEDNESDAYS – at 8:30pm, **The Guilford Amateur Society Rag Chew Net** holds their weekly net on the 145.250, W4GG repeater with an 88.5 Hz. tone. Jim Hightower, W4JLH is the net control.

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

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 7pm.

THIRD MONDAY – at 6:15pm **The Guilford Amateur Society** holds their monthly meeting at Tex & Shirley's Restaurant in Friendly Shopping Center. Eat at 6:15pm and the business meeting begins at 7pm.

THURSDAY – at 11:15am, 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 8pm (approximately) Greensboro Hams get together for coffee at Starbucks at Edney Ridge Rd.

The W4VEC Testing Schedule

Feb. to July, 2015

Mar. 21, 2015

Apr. 11, 2015

May 9, 2015

Jun. 13, 2015

July 11, 2015

Aug. 8, 2015

Location: Hinshaw United Methodist Church, 4501 High Point Road, Greensboro, NC 27407,

Time: 9:00am

Contact: Roy Smith

Phone: (336) 312-0647

E-mail: n4byu@arrl.net

GARA REPEATERS

145.150 MHz - offset, 100 Hz. tone

442.8625 MHz. + offset, Digital D-Star



Greensboro Amateur Radio Association

P.O. Box 7054

Greensboro, NC 27417

www.w4gso.org

FIRST CLASS MAIL

The Official Publication of GARA