



The Greensboro Amateur Radio Association

# Feed Line

Providing Amateur Radio News for the Triad



Julia Toth, Editor

[www.w4gso.org](http://www.w4gso.org)[info@w4gso.org](mailto:info@w4gso.org)

## This Month's Program

We will again be conducting this month's GARA meeting using Google Meet, and since we will not meet on the 145.150 repeater, there will be no need to check into the net. The login credentials are provided in this edition of the Feed Line.

Our program this month will be about Summits and Parks on the Air and will be presented by Yakov Rokhlin, a GARA Club and board member. Summits on the Air (SOTA) is an award program for radio amateurs and shortwave listeners that encourages portable operation in mountainous areas. Activators are Ham radio operators who ascend to the summits and Chasers are those who operate from their home/mobile locations and Short Wave Listeners.

Parks on the Air (POTA) encourages portable amateur radio operations that promote emergency awareness and communications from national and state parks. The Activator is an amateur radio operator located in a park and the Hunter is a person trying to contact the activator and is synonymous with chaser. Both programs encourage amateur radio operators to develop their skills while fostering collegiality and demonstrating the hobby to the public. Please let a board member know if you would be interested in participating in a SOTA/POTA club activity.

Respectfully,  
Carl Fenske, KC4WGA

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### Monthly Meeting

Monday, October 26 at 7:15pm

Join us via Google Meet to hear about Summits on the Air and Parks on the Air, presented by Yakov Rokhlin, KN4RBN

To join, go to [meet.google.com](https://meet.google.com/jmy-gpuw-dob) and type in code: **jmy-gpuw-dob**

# GARA Meeting Minutes

**Started at 7:15pm on Monday, September 28, 2020**

- Board Check-Ins
- Board Reports
  - Scott, ND4L - interested in becoming a board member?
  - Carl, KC4WGA
  - David, AC4A - treasury report
  - Matt, KX4GG - repeater up
  - Jesse, K4AX
- General Check-Ins
  - KQ3H, Tommie Lauer
  - W4AYO, Roger Joyner
  - N2LGH, Dan Williams
  - W4JLH, Jim Hightower
  - KA4JAH, Keith Thomas
  - KU4GP, Phil Simmons
  - W4VU, Dave Parks
- Presentation on Single Sideband and its history by Keith Thomas, KA4JAH
- Comments about the Single Sideband by GARA Members

**Ended at 8:00pm**

# GARA Board Meeting Minutes

**October 12, 2020**

- Next month: reelecting board committee.
- Update new GARA members spreadsheet.
- Prorate membership annual dues.
- SOTA/POTA 30-minute presentation by Yakov Rokhlin KN4RBN.
- Update Website.

# From the President's Shack

Leaves, leaves, leaves! It's the time of the year when I spend hours upon hours cleaning up leaves in my yard. My house is in the middle of a wooded lot which is quite beautiful and really comfortable most of the year, but having many trees means having many leaves. Thankfully I enjoy being outside, so working on leaf duty isn't the worst thing in the world. Besides that, having many trees makes for pretty good (and high!) VHF/UHF and HF antenna locations. I've just recently re-hung a new wire HF antenna and have really enjoyed making some voice QSOs along with FT8 work. I've even confirmed four new countries lately! I didn't know how much I'd miss HF until I didn't have it. I hope you've been able to enjoy amateur radio recently too.

One of the things that makes our club great is the knowledge of its members. We have a lot of people from many different walks of life who have varying interests in ham radio. That normally means that I can find the answers to almost any question I have, which is fantastic. I love to learn, and I love that there are so many people to learn from. That's also why I enjoy our general meetings so much; I always learn something and the presenters provide useful and interesting information. I hope you'll take advantage of that and join us in our Google Meeting on Monday!

One thing to remember is that GARA can only go as far as its members want it to go. The board sets the direction and facilitates activities, but the members really drive the direction and speed that we go. With that in mind, every board position (including mine!) is up for grabs at our November general meeting. If you're interested in a position, or if you're just open to the idea, please let me know. I'd be happy to have a conversation with you to explain what each position is and give you an idea of the type of commitment it would take. Please consider being part of the GARA leadership team; we are always open to new ideas and love fresh perspectives!

See you Monday!

Best,  
Scott, ND4L

## The Greensboro Amateur Radio Association

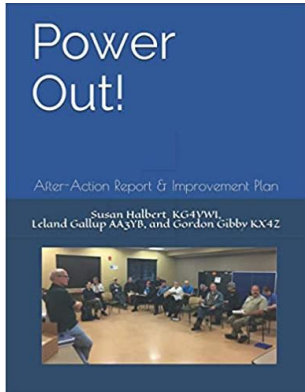
**President** Scott Toth ND4L | **Vice President** Carl Fenske KC4WGA | **Treasurer** Dave McLin AC4A | **Secretary** Yakov Rokhlin KN4RBN  
**Financial Committee Chair** John Strandberg W4DX | **Engineering Chair** Matt Trull KX4GG | **Operations Chair** Open  
**Members-at-Large** Drew Paschal WB4IHY and Jesse Lindley K4AX  
**Appointed Positions: Public Information Officer/Newsletter Editor** Julia Toth

*The Feed Line* is ©2020 by the Greensboro Amateur Radio Association and published monthly. Our address is P.O. Box 39829, Greensboro, NC 27438. 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.

## From ARRL...

### Florida ARES Group Publishes After-Action Book

<http://www.arrl.org/news/florida-ares-group-publishes-after-action-book>



**10/16/2020**

A new paperback aimed at the Amateur Radio Emergency Service Community, *Power Out! After-Action Report and Improvement Plan* by Susan Halbert, KG4VWI; Leland Gallup, AA3YB, and Gordon Gibby, KX4Z, is available on Amazon. The \$5.99 paperback chronicles the after-action report of a fun and whimsical deployment exercise conducted by the Alachua County (Florida) ARES® group.

"We have actually published over a dozen different books, some of them educational and some of them after-action reports," Gibby said.

The narrative describes an interoperability effort with local fire and rescue personnel that led to a better understanding of these professionals. The exercise revealed many weaknesses in the volunteer group's response, which were subsequently addressed, leading to an even stronger team. The report is presented in HSEEP format.

"Amazon handles all of the printing and distribution," Gibby explained. "This is a fantastic way for clubs to produce educational material, and I've tried to teach several people how to do it. It's a labor of love to provide more professional literature for amateur radio emergency communication efforts."

## Engineering Report

Our recently purchased GE Mastr III amplifier for the 2m repeater seems to be operational again and will be put back into service soon. Reflowing the solder joints for the transistors seems to have done the trick. We are making plans to add some additional cooling capacity to the amplifier by way of a couple muffin fans. This amp should be put back online sometime in the near future. For the time being the 2m repeater is running off the internal PA. The Henry amplifier for the 70cm repeater seems to be working well. I have received word of Echolink being difficult to connect to on the first try, and I would welcome any feedback from those of you who use it. We eventually plan to interface an Echolink computer directly with the 2m repeater controller at the site rather than using an RF link but still have some work to do. Our goal is to put in place a more flexible system that will give us some additional capabilities, but we also do not want to implement a solution with core functionality issues.

73,  
Matt Trull KX4GG

# Treasurer's Report

The treasurer's report will be presented at the General Meeting on Monday, October 26 at 7:15pm.

## *From ARRL...*

### **Multiple Balloons Carrying Ham Radio Payloads Launched**

<http://www.arrl.org/news/multiple-balloons-carrying-ham-radio-payloads-launched>



**10/14/2020**

Eleven schools across the US launched helium-filled balloons carrying amateur radio payloads on October 9. The Smithsonian Air and Space Museum live-streamed the multiple launches. The balloons are trackable via ham radio on APRS (either 144.39 MHz FM or 144.34 MHz FM).

The lighter-than-air vehicles were intended to head east around the globe, although there's no accounting for upper air currents. Altitudes were expected to be in the 20,000 – 25,000 foot range, with the balloons taking a few days to

cross the Atlantic Ocean.

Some of the balloons are already out over the Atlantic, and one, the KS1LAS-1 balloon, launched from Washington, was reported over the Mediterranean on October 14, moving at a speedy 69 MPH at an altitude of some 40,400 feet.

The K4NVA-1 balloon launched from Northern Virginia was reported on October 11 just east of St. Johns, Newfoundland, at just over 23,100 feet, moving at 62 MPH. Others are still over North America and/or not heading in the intended direction. The NW3DC-1 and NW3DC-2 balloons, sent up from Washington, DC, were last reported on launch day close together just off Maryland's Eastern Shore.

## **Don't forget!**

**Your 2021 GARA membership can be renewed at [www.w4gso.org/join](http://www.w4gso.org/join) before the end of the year. If you joined GARA in October, November or December of 2020, your 2021 dues are already covered.**

## GARA Merchandise



Interested in buying GARA-themed merchandise?

Visit the GARA shop at:

<https://shop.spreadshirt.com/gara>

A portion of every sale is donated back to the club.



## GARA Monthly Program Survey



**Let Us Know  
What You  
Think!**

In an effort to serve our membership better, we would like to get your input into which presentations and programs you'd like to see. Please complete the form at

<https://www.w4gso.org/news/gara-monthly-program-survey/>  
to let us know!

## From ARRL...

### 2021 Edition of The ARRL Handbook and New Microcontroller Projects Book Available

<http://www.arrl.org/news/2021-edition-of-the-arrrl-handbook-and-new-microcontroller-projects-book-available>



**10/14/2020**

It's here! The ARRL Handbook for Radio Communications for 2021 — your complete guide to radio experimentation, discovery, and innovation — now is available. The Handbook is written by radio amateurs for everyone who has a desire to advance the pursuit of wireless technology. It's available in three formats: Traditional softcover, a six-volume, shrink-wrapped book set (box not included), and eBook digital editions.

The 2021 Handbook features new projects and tools, including an FET-controlled power switch, transmitting tube tester, 432-MHz utility Yagi, off-center-fed dipoles, a loop for 30 and 40 meters,

RF sniffer construction, RFI loop antenna, and more. This invaluable resource offers new material on the behavior of RF chokes; circuits for PIN-diode RF switching; adding SDR panadaptors to older radios; digital modes FT4, FT8, and MSK144; care and feeding of power grid tubes; new feed line chokes for receive and transmit; ac power connector types and wiring, and more.

The Handbook Six-Volume Book Set, ARRL Item No. 1403, ISBN 978-1-62595-140-3, is \$59.95 retail. The Handbook Softcover Book, ARRL Item No. 1397, ISBN 978-1-62595-139-7, is \$49.95 retail. Order from the ARRL Store, from your ARRL Dealer, or call (860) 594-0355 or, toll-free in the US, (888) 277-5289.

A new bookshelf resource, Microcontroller Projects for Amateur Radio by Jack Purdum, W8TEE, and Albert Peter, AC8GY, has all the information you need to build fascinating projects using the Arduino, STM32 ("Blue Pill"), ESP32, and Teensy 4.0 microcontrollers.

Some practical, hands-on projects featured include a Morse code tutor, CW messenger, mini dummy load, and "double-double" magnetic loop antenna.

Microcontroller Projects for Amateur Radio is available from the ARRL Store or your ARRL Dealer. (ARRL Item no. 1284, ISBN: 978-1-62595-128-4, \$39.95 retail, special ARRL Member Price \$34.95). Call 860-594-0355 or, toll-free in the US, 888-277-5289.

## ***From ARRL...***

### **FCC Headquarters Relocates**

<http://www.arrl.org/news/fcc-headquarters-relocates>



**10/19/2020**

FCC Headquarters has moved. The new address is 45 L St. NE, Washington, DC 20554. The change is effective immediately. The FCC announced plans to move last spring, but the transition was delayed by the COVID-19 pandemic.

The FCC, like many federal agencies, has its own zip code, so there will be no disruption in mail delivery sent by USPS to the former address. The FCC still prohibits the delivery of hand-carried documents, and all COVID-19 restrictions or instructions regarding access to FCC facilities remain in place at the new location.

“The FCC continues to balance its efforts to be accessible to the public with the need for heightened security and health and safety measures and encourages the use of the Commission’s Electronic Comment Filing System (ECFS) to facilitate the filing of applications and other documents when possible,” the FCC said in an October 15 Public Notice.

Due to the pandemic, the move was accomplished by professional movers without the presence of any employees, all of whom had been working from home. An attempt was made during the summer to let employees back into headquarters for a day to pack up their offices and remove personal belongings, but that plan had to be scrapped after several employees tested positive for COVID-19.

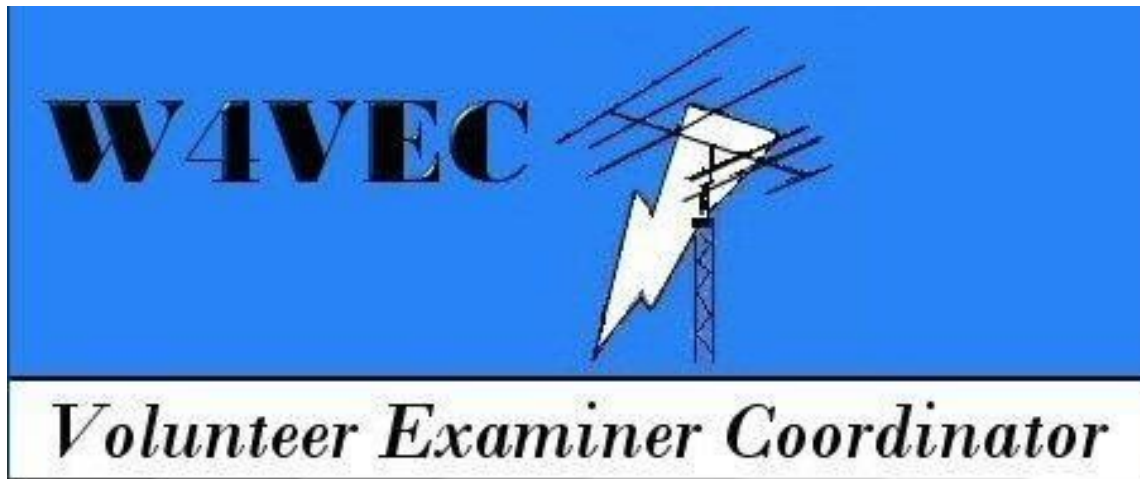
Most FCC staff continue to work from home and are not expected to be physically present in their new offices before next June.

In anticipation of the planned move, the FCC last spring also announced the adoption of a new FCC seal. The redesign is the product of an agency-wide contest that solicited proposals from employees and contractors. The revised design incorporates several elements: communications technologies; four stars on the outer seal border, drawing from the legacy of the predecessor Federal Radio Commission (FRC) seal, retaining the three-wire dipole supported by two towers; 18 stars on the shield, recognizing the current number of bureaus and offices; and the eagle and shield, identifying the FCC as a federal government agency.

Official use of the new seal was to begin following completion of the FCC’s move from The Portals to its new location on L Street NE.

# VE Testing

When you're ready to take your exam, the local volunteer examiner organization, W4VEC, offers local (Greensboro and High Point) testing every month most months on Saturday mornings. See this link for detailed schedules and information: <http://www.w4vec.org/ar.html>



In Greensboro, exams are held the 2nd Saturday of each month (except March) at Hinshaw United Methodist Church, 4501 Gate City Blvd (High Point Road) Greensboro, NC at 9:00 AM. For more information contact: David Macchiarolo AJ4TF at [aj4tf@arrl.net](mailto:aj4tf@arrl.net), 336-420-9424. Walk-ins allowed; but pre-registration is preferred.

In High Point, exams are held on the last Saturday of the month (except June, November, and December) at Hickory Chapel Wesleyan Church, 301 Hickory Chapel Road, High Point, NC, at 10:00am. Pre-registration is required at least 3 days before the exam date. For more information contact: David Macchiarolo AJ4TF at [aj4tf@arrl.net](mailto:aj4tf@arrl.net), 336-420-9424.

**Please continue to check the W4VEC website for updates.** <http://www.w4vec.org>

**\*FCC Extra Class Question Pool was revised as of July 1, 2020\***

Download or print Question Pools at <http://www.arrl.org/question-pools>  
For free exam practice, visit <http://www.arrl.org/exam-practice>

Upgrading?:

<http://www.arrl.org/upgrading-to-a-general-license>  
<http://www.arrl.org/upgrading-to-an-extra-license>

# New Hams

## High Point- September 26, 2020

Chandler, Wayne A.  
K04ANQ  
Gibsonville, NC  
Earned General

Crete, Randall J.  
Sarasota, FL  
Earned General

Langley, Kurt L.  
Pinehurst, NC  
Earned General

Wheeler, Jessica C.  
Elon, NC  
Earned Technician

Williams, Timothy A.  
High Point, NC  
Earned Technician

## Greensboro- October 10, 2020

Harper, Edward D.  
King NC  
Earned General

Langley, Ricky L.  
K14FKJ  
Mebane, NC  
Earned Extra

Noda, Albert K.  
K04GTY  
Winston-Salem, NC  
Earned General

Trent, Kerry D.  
Greensboro, NC  
Earned Technician

## ***From ARRL...***

### **ARISS to Celebrate 20 Years of Ham Radio on the International Space Station**

<http://www.arrl.org/news/ariss-to-celebrate-20-years-of-ham-radio-on-the-international-space-station>



**10/5/2020**

Amateur Radio on the International Space Station (ARISS) will soon celebrate 20 years of continuous ham radio operations on the International Space Station (ISS). NASA is commemorating the milestone with a newly produced infographic highlighting the educational contacts via amateur radio between astronaut crew members aboard the ISS and students. Over its 20 years, ARISS has supported nearly 1,400 scheduled ham radio contacts with schools, student groups, and other organizations.

Planning for ARISS began in 1996 as a cooperative venture among national amateur radio and amateur satellite societies, with support from their respective space agencies. The ARISS ham radio gear actually arrived on the station before the Expedition 1 crew, headed by Commander Bill Shepherd, KD5GSL. The FCC issued ham radio call sign NA1SS for ISS operations. After Expedition 1 arrived on station, some initial tests with ARISS ham radio ground stations and individual hams confirmed the ham gear was working properly. The first ARISS school contact was made with students at Luther Burbank Elementary School in Illinois on December 21, 2000, with Shepherd at the helm of NA1SS on the ISS, and ARISS operations team mentor Charlie Sufana, AJ9N, guiding the operation on the ground.

NASA produced a video of students talking with astronaut Chris Cassidy, KF5KDR, during an ARISS contact in May 2020.

Before and during scheduled ham radio contacts, students, educators, parents, and communities learn about space and related technologies, and radio communication using amateur radio. ARISS has inspired thousands of students, promoting exploration through educational experiences spanning science, technology, engineering, the arts, and mathematics.

ARISS relies on a large network of amateur radio operator volunteers, many associated with radio clubs in the communities where students and groups participating in the contact reside. ARISS volunteers support satellite ground stations, serve as technical mentors, and provide additional help in the areas of education, community outreach, and public relations.

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While student-to-astronaut radio contacts are a primary objective for ARISS, the capability has also inspired further experimentation for amateur radio in space and evaluation of new technologies. In September, ARISS announced that the initial element of its next-generation ham radio system had been installed in the ISS Columbus module. The new radio system replaces equipment originally certified for spaceflight in mid-2000. The onboard ham station also provides a contingency communications system for the ISS crew. Several astronauts have also enjoyed using NA1SS to make casual contacts with – and delighting – earthbound members of the ham radio community.

In the US, ARISS sponsors include ARRL, AMSAT, and NASA, the ISS National Lab-Space Station Explorers, and NASA's Space Communications and Navigation program. Global organizing partners include International Amateur Radio Union (IARU) member-societies as well as AMSAT organizations, and space agencies in Canada, Europe, Russia, Japan, and elsewhere.

The next proposal window for US schools and educational organizations to host an amateur radio contact with a crew member on board the ISS opened on October 1 for contacts that would take place from July through December 2021.

Like many educators who have coordinated ARISS radio contacts for their students, teacher Rita Wright, KC9CDL, an ARRL member, described the first ARISS school contact as inspirational and having a lasting impact on their community. Five months after their contact, nearly 500 students greeted Bill Shepherd when he visited Luther Burbank School. Wright said it was "like tossing a pebble into a stream."

"The ripple effects are still occurring, and I suspect will continue to occur for a long time," she said. "We have a young staff, and witnessing these events has inspired some to look for other interdisciplinary projects. They are beginning their dream. Many of our students are looking forward to careers associated with the space industry."

## For Sale!

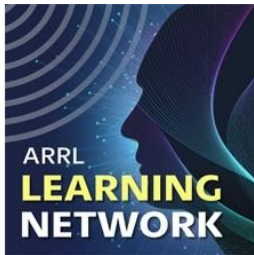
GARA is selling gear that was donated by local hams. All proceeds go into the club's general account to be used for club activities. Click the link below to see all of the gear we have for sale!  
[https://drive.google.com/file/d/1h8foiMA6fguciv-NBI4qXOIAmtoHNIbD/view?usp=drive\\_web](https://drive.google.com/file/d/1h8foiMA6fguciv-NBI4qXOIAmtoHNIbD/view?usp=drive_web)

# Calendar of Events

Please check Hamfest websites for possible cancellations.  
Info about ARRL contests can be found on <http://www.arrl.org/contest-calendar>

Oct. 26	GARA General Meeting on Google Meet
Oct. 31	VE Testing, High Point, Hickory Chapel Wesleyan Church
Nov. 7-9	ARRL Nov. Sweepstakes - CW
Nov. 14	VE Testing, Greensboro, Hinshaw Memorial United Methodist Church
Nov. 21-23	ARRL Nov. Sweepstakes - Phone
Nov. 23	GARA General Meeting on Google Meet (Elections)
Nov. 28-29	ARRL EME 50 to 1296 MHz Contest
Dec 4-6	ARRL 160 Meter Contest
Dec. 12	VE Testing, Greensboro, Hinshaw Memorial United Methodist Church
Dec. 12-13	ARRL 10 Meter Contest
Dec. 20	ARRL Rookie Roundup Contest - CW
Dec.	No GARA General Meeting in December

The purpose of this calendar is 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 the Board of Directors at [info@w4gso.org](mailto:info@w4gso.org).



The ARRL Learning Network is a webinar series featuring live online presentations from member-volunteers who want to help you become more active, involved, and engaged in ham radio. For a schedule of upcoming Webinars for ARRL members or to access recordings of previous Webinars, please visit <http://www.arrl.org/arrl-learning-network>

## FEEDLINE

**FOURTH MONDAY** – at 6:30 p.m., the Greensboro Amateur Radio Association has a regular monthly meeting at Sarah's Kabob Shop, 5340 W. Market., Greensboro, NC 27409. Please plan to gather at 6:30 p.m. for dinner. The meeting is scheduled to start at 7:15 p.m. **(Due to COVID-19, October's meeting will be held via Google Meet @ <https://meet.google.com/jmy-gpuw-dob>)**

### CLUB NETS:

**SUNDAYS** – at 8:30 p.m., the GARA Sunday evening net. This features a rag chew followed by News and Information including Amateur Radio Newsline. It is on the 145.150, W4GSO repeater. Scott Toth, ND4L is always looking for net controls.

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

**TUESDAYS** – at 9 p.m., the D-Star Net meets on 442.8625 (W4GSO B and Reflector 54C)

**WEDNESDAYS** – at 8:45 p.m., The Guilford Amateur Society Rag Chew Net holds their weekly net on the 145.250 W4GG repeater. Jim Hightower, W4JLH is the net control.

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

### OTHER ACTIVITIES:

**FIRST MONDAY** – The Guilford County ARES monthly meeting is held at 1002 Meadowood St. off W. Wendover Ave, in the EMS building, beginning at 7 p.m.

**THIRD MONDAY** – The Guilford Amateur Society is currently looking for a new venue for their meetings. When found, that information will be posted here.

**THURSDAY** – at 11:15 a.m., 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 p.m. (approximately) Greensboro Hams get together for coffee at Starbucks at Edney Ridge Rd.

## The GSO W4VEC Testing Schedule 2020

**November 14**

**December 12**

**Check the W4VEC website  
for updates.**

<http://www.w4vec.org>

## GARA REPEATERS

145.150 MHz - offset, 100 Hz tone, FM and Fusion

442.8625 MHz + offset, D-Star and Fusion



**Greensboro Amateur Radio Association**

P.O. Box 39829

Greensboro, NC 27438

[www.w4gso.org](http://www.w4gso.org)

## FIRST CLASS MAIL

***The Official Publication of GARA***