



The Greensboro Amateur Radio Association

# Feed Line

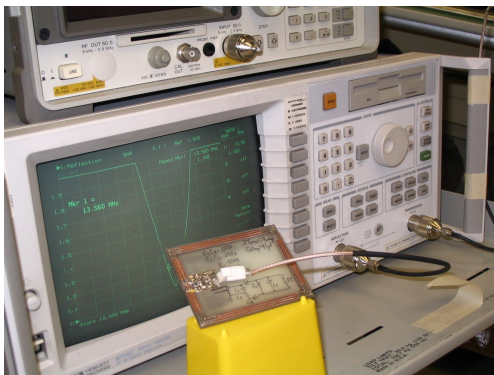
Providing Amateur Radio news for the Triad



Julia Toth, Editor

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

## This Month's Program



I became fascinated with antennas in a UHF/ Microwave course many years before being licensed as KC4YLQ in 1991 (now N4RWS). I've been privileged to work in areas that continued to pique my interest having spent nine years with Bell Labs. While there I had the honor to work in a 60 man department which included Phillip Smith just prior to his retirement. Needless to say I felt an obligation to learn to use his brainchild, the Smith Chart. Thank goodness for the tutorials which were in the back of the "old" RCA tube manuals, I read the examples till the pages fell out. My last

40 years of employment was with Gilbarco here in Greensboro. While there I helped develop antennas for RFID and was involved in frequencies from 136KHz and into the GigaHertz range.

For my program I'm bringing some antennas I've built over the years either to actually use or simply modeled to satisfy a curiosity. I hope to provide some comments about a few designs that might help others avoid a few pitfalls and get them to a design that works best for them.

Roger Stout, N4RWS

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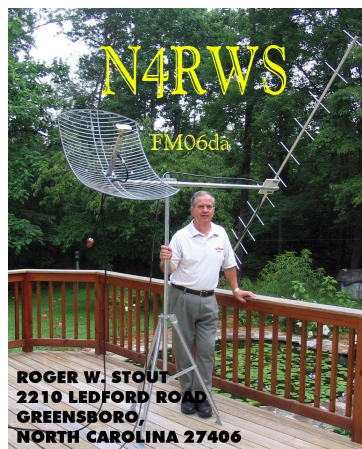
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### NEXT MEETING January 27, 2020

The next meeting of the Greensboro Amateur Radio Association will be held at Sarah's Kabob Shop in Greensboro.

**MEETING TOPIC:**  
**Antenna Design with  
N4RWS**

# Winter Field Day Is this Weekend

Winter Field Day (WFD) is almost here. Setup will begin at 2 PM Friday the 24th, and we start operating 2 PM Saturday and finish 2 PM Sunday, followed by tear down. The location is Hagan Stone park, group campsite 1. We seem to be ready, and it looks like we will have a good turn out. The current plan is to operate one HF station. We will use batteries/solar power (weather permitting), and will have a backup generator if we need it. Please come by to help out Friday afternoon, or stop by Saturday or Sunday to operate, or just say hello. I and several others plan to stay over Friday and Saturday nights. I hope to see you there!

Dave  
AC4A

## *From the Winter Field Day Association...*

<https://www.winterfieldday.com/>



Winter Field Day Association (WFDA) is a dedicated group of Amateur Radio Operators who believe that emergency communications in a winter environment is just as important as the preparations and practice that is done each summer but with some additional unique operational concerns.

We believe, as do those entities of ARRL Organizations like ARES & RACES, that maintaining your operational skills should not be limited to fair weather scenarios. The addition of Winter Field Day will enhance those already important skills of those who generously volunteer their time and equipment to these organizations. This is why WFD is open to all licensed amateur radio operators worldwide.

Disasters are unpredictable by nature and can strike when you least expect them. WFDA's goal is to help enhance your skills and ready you for all environmental conditions found in the US and Canada during the spring, summer, fall and winter. Preparedness is the key to a professional and timely response during any event and this is what local and state authorities are expecting when they reach out to the emergency service groups that offer their services.

If you are serious about emergency communications as we are, we welcome you to join us for our yearly event. We are sure you will find this event a pleasant change and challenge to that of a normal summertime field day.

# GARA Board Meeting Minutes

Meeting began at 7:00pm on Monday, January 13 @ Nazareth Bread

Attending: Matt, Jesse, John, Dave and Scott

- Dave needs to be added to bank accounts, PayPal, info email account, membership roster
- PO Box key will be transferred to Dave
- Winter Field Day- we are in good shape
- Engineering: Scott purchased the backup modem and Raspberry Pi; Matt added a newer laptop at the repeater site; Scott moved to pay to get broken DR-1X repaired by Yaesu, and Matt seconded. Motion carried unanimously.
- John suggested continuing to sell donated equipment to raise funds for the club and will help with this process
- GARA is considering hosting an antenna building event- check into using church fellowship hall on March 14 or 21- j-pole or HF dipole; perhaps pair with a repeater site tour
- Dave made a motion to adjourn at 7:45pm, Matt seconded.

Respectfully submitted,  
Scott Toth, ND4L

## GARA Meeting Minutes

GARA General Meeting

November 2020

7:15pm

Sarah's Kabob Shop, Market Street, Greensboro

Board Elections and Dave McLin, AC4A discussed Winter Field Day

Meeting ended at 8:00pm

### 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 WD4IHY 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...

### AM Rally 2020 Gets Under Way on February 1

<http://www.arrl.org/news/am-rally-2020-gets-under-way-on-february-1>



**01/15/2020-** The fourth annual AM Rally operating event will take place February 1 – 3 (UTC). The annual AM Rally encourages all operators to explore amateur radio's original voice mode by showcasing the various types of AM equipment in use today, ranging from early vacuum-tube rigs to the newest SDR-based transceivers.

"Both new and experienced ops are discovering that AM can sound quite good, enhancing the enjoyment of contacts," said Clark Burgard, N1BCG, an enthusiastic promoter of the event. "The AM Rally provides

a great reason to give it a try."

The AM Rally is open to all radio amateurs capable of running full-carrier, amplitude modulation (standard AM) using any type of radio equipment – modern, vintage, tube, solid-state, software-defined, military, boat anchor, broadcast, homebrew, or commercially manufactured – are encouraged to join in the AM fun on 160, 80, 40, 20, 15, 10, and 6 meters.

Details are on the AM Rally website or contact Burgard via email. The AM Rally is sponsored by ARRL, Radio Engineering Associates, and iNetRadio.

### ARRL On the Air Podcast Premieres on January 16

<http://www.arrl.org/news/arrl-on-the-air-podcast-premieres-on-january-16>

**01/14/2020-** ARRL's new On the Air podcast for those just getting started on their amateur radio journey, will debut this Thursday, January 16, with a new podcast posted each month. The podcast is a companion to the new bimonthly On the Air magazine, which is already on its way to member subscribers. On the Air magazine editor Becky Schoenfeld, W1BXY, will be the host of the new podcast. Both the podcast and the magazine are aimed at offering new and beginner-to-intermediate-level radio amateurs a fresh approach to exploring radio communication.

Listeners can find the On the Air podcast at Blubrry, Apple iTunes (or by using your iPhone or iPad podcast app (search for On the Air), and Stitcher (or through the free Stitcher app for iOS, Kindle, or Android devices). Episodes will be archived on the ARRL website.

Each On the Air podcast will take a deeper dive into the articles and issues raised in the magazine, including advice and insight on topics covering the range of amateur radio interests and activities: radio technology, operating, equipment, project building, and emergency communication.

Supplementing On the Air will be a new Facebook page for those who share a love of radio communication and are looking to learn and explore more about their interests.

The biweekly Eclectic Tech podcast for experienced radio amateurs will launch on February 13. Hosted by QST Editor Steve Ford, WB8IMY, Eclectic Tech will highlight topics involving amateur and non-amateur technology, offer brief interviews with individuals involved in projects of interest to amateurs, and include practical information of immediate benefit to today's hams. Eclectic Tech will be available via iTunes and Stitcher.

The ARRL Mags apps including QST and On the Air are now live on Apple iTunes and Google Play. The digital edition of On the Air magazine is now live and linked from the On the Air page on the ARRL website.

## From the President's Shack

Happy New Year! 2020 is here and things are moving as quickly as ever. I am excited about what this new year will bring, especially in our hobby. The newly-elected board has some great events in mind, and Carl will be working diligently to bring us timely and relevant presentations to our monthly meetings. But first things first: a number of you haven't taken the time to renew your membership yet. GARA membership spans each calendar year, so we would like to have our members renew as close to the beginning of the year as possible. We have intentionally kept membership dues at \$24.00 per year to make our association accessible to everyone, so hopefully that's not a barrier to your renewal. I hope that you find value in your investment in our club and will take the time to renew now. The easiest way is to go to <https://www.w4gso.org/join> and complete the short form in the middle of the page. Please know that we will clear the membership roll in March and will only send the Feed Line to current members as of that time.

We have had people request a feature on our website for quite some time, and I'm happy to report that it is now available. Many of you would like to be able to look at our current member list and have access to members' contact information. Our website now has a page that shows that, but it is only available to our members. You can go to <https://www.w4gso.org/membership-list> (or navigate to it under the "About" heading in the top menu bar). Once you're there, you will need a password to get to the list, and the password is "GreensboroHamRadio!" Please don't share that outside of GARA as we want to respect our members' privacy, but hopefully this will be helpful to you. Please be aware that the list that's there now is only those who have renewed for calendar year 2020. The list is updated often, so you should see yourself there soon after renewing.

I hope that I'll see you at Winter Field Day this weekend, but if not, I also hope to see you at Sarah's Kabob Shop on Monday evening for a great start to the year.

73,  
Scott Toth, ND4L  
GARA President

### *From ARRL...*

#### **ARRL Events App is Available for Apple iOS and Android Devices**

<http://www.arrl.org/news/arrl-events-app-is-available-for-apple-ios-and-android-devices>



**01/21/2020**

The ARRL Events app is available to use with Apple iOS and Android devices. A web-browser version, optimized for most browsers and other types of mobile devices, is also available. ARRL Events will be featured at Orlando HamCation 2020, February 7–9, which has been sanctioned as the 2020 ARRL Northern Florida Section Convention.

## Vice President's Message

It is a privilege to serve the GARA Club as your Vice President for this calendar year. My primary responsibility is to bring programs to our monthly club meetings that are informational, instructional, and promote club activities. I have a lot of ideas for the coming months: HF, FM, Fusion (C4FM), D-STAR, DMR, and other operating modes; homebrew antenna projects, mobile radio installations, Go-Box/Emergency Preparedness, GARA Hangouts, GARA Library of Radio Programming Software, and TV Cord Cutting; ARRL Winter Field Day (Jan 25-26), Field Day (June 27-28), BSA Jamboree-on-the-Air (Oct 16-18); and rejuvenating the Greensboro Hamfest. These are my interests and passions for Ham Radio, but what are your interests? Please come to our January 27 meeting and come prepared to share your ideas and interests for programs for the coming year. We also need you to present your interests with other members of the club. It can be a demonstration, hands-on workshop, interactive program, and/or discussion. I hope you will share your interests and talents with the club.

73,  
Carl Fenske, KC4WGA

## Engineering Report

Work continues on repairing/replacing the equipment that was damaged a few months ago by the lightning strike, as well as building backup repeater systems. The backup DR-1X has been modified, the web enabled power switch has been RMA'd, and a backup STM32-DVM system has been built. Next will be shipping the damaged DR-1X in for repair.

I hope to see you at Winter Field Day!

73,  
Matt Trull, KX4GG

## Treasurer's Report

This month I am coordinating with Scott to take over the treasurer position. I look forward to serving in this position this year.

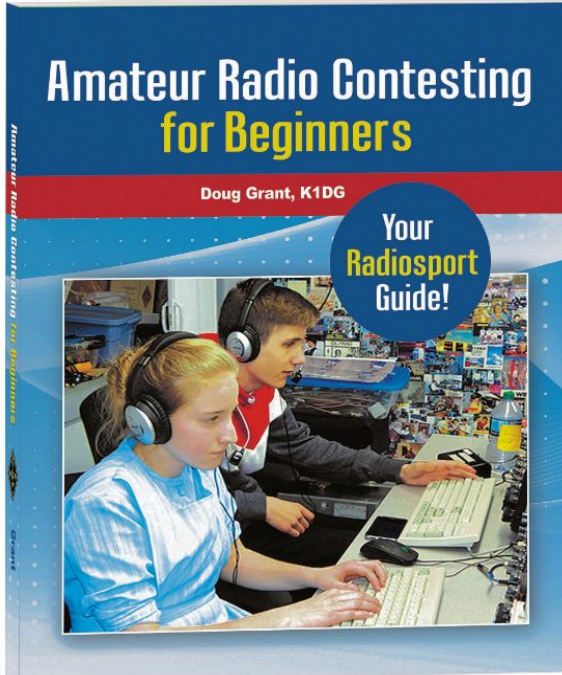
73,  
Dave McLin, AC4A



## From ARRL...

### New Book from ARRL: Amateur Radio Contesting for Beginners

<http://www.arrl.org/news/new-book-from-arrl-amateur-radio-contesting-for-beginners>



01/17/2020

Contesting is one of the most exciting aspects of amateur radio — and for some, it's their primary ham radio activity. Amateur Radio Contesting for Beginners by contesting veteran Doug Grant, K1DG, offers practical information and ideas that will help you to get started in contesting — “radiosport” — or to build your skills, if you're already active.

Contesting tests station capability and operator skill, and it really is a sport, with a typical objective of contacting as many stations and multipliers — ARRL Sections, states, grids, or DXCC entities, for example — within the contest period.

“Doug Grant has written the ideal guide for anyone interested in contesting,” said QST Editor Steve Ford, WB8IMY.

Grant's book explains what equipment you need, typical contest formats, details of some more popular events, operating techniques, how to submit an entry, and how to improve your scores. No matter how modest your station or experience, you can compete, too!

A couple of events over the January 18–19 weekend to get you started include the ARRL January VHF Contest (CW, phone, and digital) and the North American QSO Party, SSB. See the ARRL Contest Calendar for information on other events.

Amateur Radio Contesting for Beginners is available from the ARRL Store or your ARRL Dealer. (ARRL Item no. 1243, ISBN: 978-1-62595-124-3, \$27.95 retail, special ARRL Member Price \$24.95). Call 860-594-0355 or, toll-free in the US, 888-277-5289. It's also available as an e-book for the Amazon Kindle.

For more information about ARRL-sponsored contests, including rules and results, and to view the contest photo gallery visit the ARRL Contests page.

## VE Testing

Every month, W4VEC holds testing sessions 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 David Macchiarolo, AJ4TF, and his team of volunteer examiners for taking time out of their busy schedules each month to help new or upgraded hams in our area.

In Greensboro, testing sessions are scheduled on the second Saturday of the month, except in March when it is the third Saturday. The next testing session in Greensboro will be on February 8th at Hinshaw United Methodist Church, 4501 Gate City Blvd., Greensboro 27407, at 9 a.m. While walk-ins are welcome, contacting the lead VE is preferred. Please contact David Macchiarolo, AJ4TF, email [aj4tf@arrrl.net](mailto:aj4tf@arrrl.net), cell (336) 420-9424.

In High Point, testing sessions are scheduled on the last Saturday of the month. The next testing session in High Point will be on January 25th at Hickory Chapel Wesleyan Church, 301 Hickory Chapel Road (off MLK Jr. Drive), High Point 27262 at 10 a.m. **Pre-registration is required. Contact David Macchiarolo, AJ4TF, (336) 420-9424 at least two days prior to the session.** David's email: [aj4tf@arrrl.net](mailto:aj4tf@arrrl.net).

## Look Who Passed

### Greensboro VE Session - December 14, 2019



Jeffrey A. Stacy, KO4ANC  
Greensboro, NC  
Earned Technician



## Special Burlington VE Session - January 11, 2020



Josh Alleman, KO4AYN  
Mebane, NC  
Earned Technician

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

#### **Barry Shelley, N1VXY, to Become ARRL Interim CEO**

<http://www.arrl.org/news/barry-shelley-n1vxy-to-become-arrrl-interim-ceo>



**01/19/2020**

At its meeting this weekend, the ARRL Board of Directors did not elect Howard Michel, WB2ITX, as the ARRL Chief Executive Officer. Beginning Monday, January 20, Barry Shelley, N1VXY, will become interim CEO. Mr. Shelley was ARRL's Chief Financial Officer for 28 years and CEO during 2018 before his retirement. The board has created a search committee to select the next CEO. More details on this and other matters which took place at the board meeting will be released shortly.

## From ARRL...

### ARES Volunteers Establish “Plan B” Communication Network in Puerto Rico

<http://www.arrl.org/news/ares-volunteers-establish-plan-b-communication-network-in-puerto-rico>



**01/21/2020**

Amateur Radio Emergency Service (ARES®) volunteers in Puerto Rico continued over the weekend to report for daily duty at an American Red Cross (ARC) distribution center in Mayagüez and at ARC Headquarters in San Juan. The two sites are at the ready to provide a “Plan B” communication backbone in the event the seismic situation worsens. A magnitude 6.4 earthquake struck southwestern Puerto Rico on January 7, fast on the heels of a magnitude 5.8 tremor the day before, damaging homes in Guayanilla, Peñuelas, Yauco, and Guánica.

ARRL Puerto Rico Section Manager Oscar Resto, KP4RF, told ARRL this week that the situation is relatively “calm and quiet” for now and starting on January 22, volunteers would begin monitoring from their homes or vehicles, permitting most, including Resto himself, to get back to their jobs and homes.

ARES volunteers had been deployed to an ARC distribution center in Yauco, but that part of the operation was shifted to Mayagüez over the weekend, because it was considered safer there. An ARRL-provided VHF/UHF radio and antenna have been set up at the Mayagüez facility. Resto said a second operating position is being added at the San Juan ARC Headquarters site.

Resto said Red Cross officials know that they can rely on Amateur Radio, if the situation calls for it, but for now, commercial communications are fully operational, although aftershocks from the January 7 quake persist. “In case the situation escalates, the ARES team will immediately mobilize at the ARC sites and establish communication (VHF/UHF or HF) as required,” Resto said.

Last week, the Red Cross had requested assistance from the ARES volunteers as well as volunteers from the CB radio and GMRS communities, to identify undeclared refugee camps and to report on close or damaged roadways and bridges. Resto said the ARES volunteers “did a marvelous job” that earned praise from Red Cross officials.

Resto said about two dozen volunteers have made themselves available in the Mayagüez area. In the event they’re needed, Resto said, he has seven or eight HF radios and 15 VHF/UHF transceivers left over from the Hurricane Maria emergency response. He said the HF equipment has been safely stowed for use in case of another major earthquake, when they might be needed.

He was expecting additional antennas and feed lines provided through ARRL’s Ham Aid program to show up this week.

# Calendar of Events

Jan. 25	VE Session (Hickory Chapel Wesleyan Church, High Point)
Jan. 27	GARA General Meeting (Sarah's Kabob Shop, Greensboro)
Feb. 8	VE Session (Hinshaw United Methodist Church, Greensboro)
Feb 24	GARA General Meeting (Sarah's Kabob Shop, Greensboro)
Feb. 29	VE Session (Hickory Chapel Wesleyan Church, High Point)
Mar. 1	GARA NC QSO Party Events
Mar. 13	Charlotte Hamfest ( <a href="http://www.charlottehamfest.org">http://www.charlottehamfest.org</a> Concord, NC)
Mar. 23	GARA General Meeting (Sarah's Kabob Shop, Greensboro)
Mar. 28	VE Session (Hickory Chapel Wesleyan Church, High Point)
Apr. 11	VE Session (Hinshaw United Methodist Church, Greensboro)
Apr. 11	Raleigh Hamfest ( <a href="http://rarsfest.org">http://rarsfest.org</a> )
Apr. 27	GARA General Meeting (Sarah's Kabob Shop, Greensboro)

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



Frostfest is the largest winter amateur radio conference in the Mid-Atlantic! Join us on Saturday, February 1, 2020 to see the latest gear, learn about the latest technologies, and to meet up with radio friends new and old at the can't-miss show of the season!

Be sure to join us in the forums room upstairs to hear from our featured speakers, Rich Moseson, editor of CQ Magazine; and space weather expert Dr. Tamitha Skov!

This year's VE testing will be performed by the WA3J VEC Team. All exams are FREE OF CHARGE, and will be administered starting at 11AM upstairs.

Working toward an ARRL or CQ Magazine award? Be sure to bring your QSL cards to the show – we will have card checkers for both programs available to assist you! The Sterling Park QSL Bureau will also be on hand.

Frostfest has been named the 2020 ARRL Virginia State Convention!

The Frostfest team would like to welcome our new friends from HamCommunity.com, a new online forum for amateur radio discussion and collaboration. You can find them online at HamCommunity.com, and meet them face-to-face at Frostfest! Welcome!

Please visit [www.frostfest.com](http://www.frostfest.com) for more details.

## 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.

### 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 Newline. 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 Feb.-Apr. 2020

Feb. 8  
No GSO Test this March  
Apr. 11

9:00 a.m.  
Hinshaw United Methodist Church  
4501 Gate City Blvd.  
Greensboro, NC

Contact:  
David Macchiarolo  
(336) 420-9424  
aj4tf@arrl.net

## 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***