

North Fulton Amateur Radio League NFARL eNEWS

March 2023

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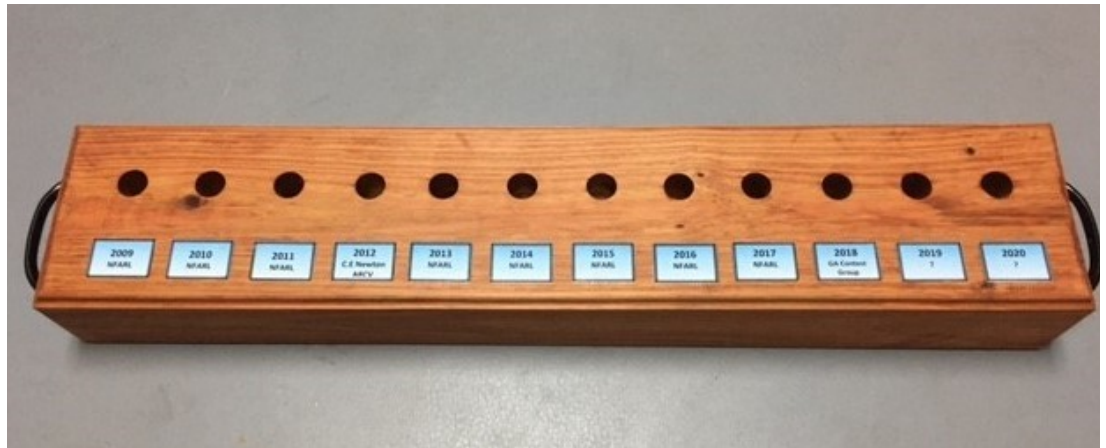
www.nfarl.org



Georgia QSO Party Time!

It is that that time of year again! Georgia QSO Party is coming! Join us on March 21, 2023 for our monthly club meeting. John Tramontanis N4TOL, will be providing us with detail information on the Georgia QSO Party for 2023. If you've always wanted to participate, but haven't felt you'd be able to do so, join us and listen to John as he describes how easy it is to do so. You can read more about the GA QSO Party in this this edition, beginning on page 10.

Here's a simple contest you can participate in; review the photograph below and be ready to participate in the "pop" quiz at the end of John's presentation. We'll be giving a special prize to the audience member who is able to answer the quiz question.



Besides the QSO Party presentation, we'll spend a few minutes at the opening of the meeting pointing out some detail features on the club website. These pointers will hopefully enable you to quickly access information pertaining to routine club operations and other matters relating to your membership. You can also give us feedback on what you think needs adjustment or should be added.

Here's the meeting information:

NFARL's March club meeting will take place on March 21st at Preston Ridge Community Center, 3655 Preston Ridge Road Suite 100, Alpharetta, GA 30005. The facility's doors will open at 7:00PM. Our meeting will begin at 7:30PM and should conclude by 9:00PM. Here's the Zoom link:

<https://us06web.zoom.us/j/86255827457?pwd=a1FHR3F1bDBqMUVuY3plMDDdFa2VMQT09>

Meeting ID: 862 5582 7457

Passcode: 584698

Find your local number: <https://us06web.zoom.us/j/kdQc8IE9oj>

President's Corner / Mike Riley, KN4OAK

So, do you think March Madness is limited one sport? Well, guess again! We have our own version of March Madness underway right now. There are many activities that are on member's calendars that stretch into the next 6 weeks. My calendar game is played daily, scrambling appointments and time slots in which to complete preparations for scheduled events. You can read about the ARISS Teacher's SPARK workshop below. It is just one of the ARISS related activities that NFARL is presently working on. We've got a team of members headed to Webb Bridge Middle School at the end of March to support another ARISS contact event coming up in May of this year. We've got the GA ARES POTA activation coming up on April 1 & 2. There's the joint US Islands / POTA event beginning April 15th. We're planning to participate in the US Islands 1-Day Getaway on May 13th at West Bank Park, Lake Lanier. We've got at least two more ARISS contact support events coming this year at schools in Gwinnett County and Cobb County. On top of that, there's our favorite annual event in June; ARRL Field Day.

Even though it looks like all we do is play radio at events like these, we are working to expand and re-invigorate programs that involve learning and skill building. If you'd be interested in working on a project to restart youth workshops before the monthly club meeting, or getting involved in a mentoring, skill building, license level training, CW or other related area, please contact any of the club officers and let them know. We're asking you to tell us what interests you as club members. This is the simplest way we can help ensure you get the most enjoyment from your NFARL membership.

In the meantime, we're going to keep the activity level up as high as we can practically manage. So join in where you can!

73,

Mike KN4OAK

Antenna Needs a New Home!! / Bob Carroll, W2WG

Dear NFARL:

My father-in-law (Bob Carroll, W2WG) was a ham radio operator and enthusiast for decades, but he has now given up the hobby. He has a large antenna in his yard that he now needs to have dismantled and taken away. I am helping him with this. I would love to be able to give it to someone who can use it rather than a metal recycler. Do you think anyone in your group might be interested? I am attaching a picture. The antenna is located in northeast Cobb County, not far from Woodstock and Roswell. Thank you!

Michael Hellerstein
VP Preclinical Development, Vaxxinity
michael@vaxxinity.com
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NFC Tags to track your stuff / Tony Santoro, WA3TRA

NFC – near field communications is a wireless communications standard. It's part of the RFID family and is used for everything such as badge readers, credit cards and package tracking. I'll be talking about a subset of stickers that can be used on equipment such as your radio, antennas, etc.

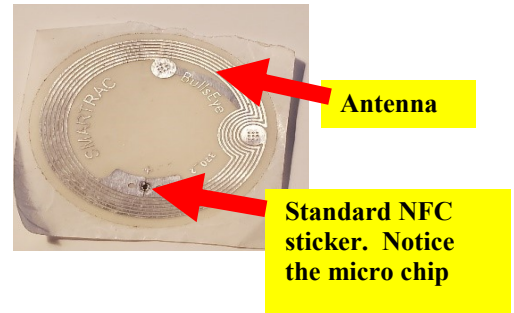
NFC is described as a limited distance communication tool. Most cell phones today are equipped to handle NFC tags. If you use your phone for credit card processing such as Apple Pay or Google Pay, then you already have the RF option enabled. Once enabled, just tap the tag with your phone to read it.

Power source: NFC tags are passive meaning they draw power from the reader such as your phone.

Storage: the chip on the tag can store anywhere from 93 bytes to 64KB depending on the type. Price varies depending on transfer speed and price. You get what you pay for.

I/O – some tags are read only, the ones I will show you can be re-written with the use of a phone app. I use NFC Tools on my Android phone.

Security: you have to be pretty close to a tag to read it so someone several feet away could not read it. The tags are also very sensitive to direction, so your phone has to be right on the tag to read it. However: any digital device can be hacked, so make sure the tag is password protected and no personal information is stored. Tags can be password encrypted.



NFC tag used on metal surfaces. Notice the black substrate backing.



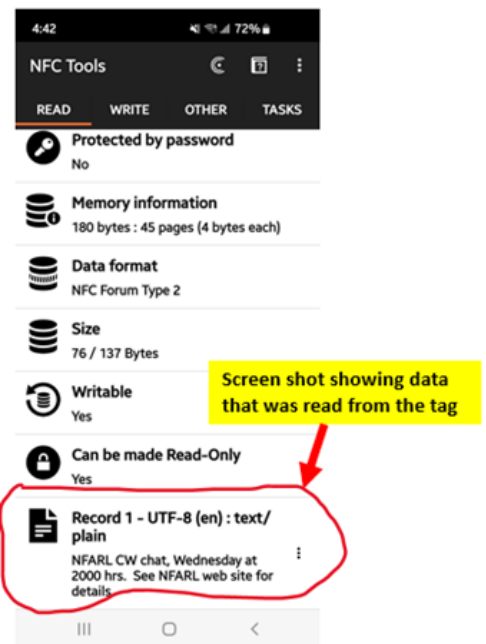
Cost – it varies, from 10 cents to over 30 cents per tag.

Types of surfaces: the tags are available to attach to many surfaces including metal. The metal tags include a thin backing material which isolates the tag from the metal surface.

There are many types of tags. Want to shop for tags: just search the internet for NFC tags they are everywhere.

Source: [What's an NFC Tag? | HowStuffWorks](#)

73s..



NFARL Teaches the Teachers at the ARISS Spark Interest Workshop

Members of NFARL helped 'teach the teachers' at the inaugural workshop for teachers who have an ARISS radio contact coming up or are going to apply for an ARISS contact in the current proposal window. Martha W4MSA was asked to arrange this workshop which was to be held in Georgia since three schools in Georgia were selected for ARISS contacts following the last proposal window.

Teachers from the Augusta Prep School in Augusta, Burrell Elementary School in Marietta, Webb Bridge Middle School in Alpharetta, Lilburn Elementary School in Lilburn attended the two day workshop. Also in attendance was a teacher from western North Carolina who has a contact scheduled for August and a teacher from northern South Carolina whose school is currently completing their proposal application.

The purpose of the workshop was to give the teachers hands on experience with the equipment provided in the new ARISS Radio Kit. The kits are designed to help schools with upcoming ARISS contacts increase the STEM activities at their schools. For the most part, the lessons included in the instruction guide are stand alone, fundamental science lessons however, they all relate to ham radio concepts such as waves, the electromagnetic spectrum, codes and ciphers, electrical circuits, and software defined radio. Each teacher was given a kit to take back to his/her school.

The workshop was held on March 11 and 12 at the Computer Museum of Atlanta, which, as one teacher exclaimed, was 'the perfect location for this workshop.' Teachers expanded out of the classroom into the grand hallway to complete some of the activities. The guest coordinator for the museum said that it was great to see such activity and interest in the hallway.

On Saturday, Wes W3WL 'edutained' the teachers with lessons about Tesla and gave them the opportunity to work with his Tesla coil. Wes, Mike KN4OAK and Steve KO4VW worked with the teachers as they learned to tap out their names and some words in CW using the CW key made using a SnapCircuits kit and then with some of the CPOs that Steve brought in. Some teachers had the opportunity to tap some code out using the NFARL Altoids tin CPO. The teachers had the choice to use the 'dichotomous tree' of dots and dashes method to learn the code or Jim W4QO's (SK) ESTONIA list. Jim's list proved quite popular.

Sunday was devoted to introducing the teachers to SDR. John N4IHV and Warren KD4Z came in to lead these lessons. The lessons were based on what was in the teacher instruction book which proved to need a lot of work before it is used again. With John's and Warren's guidance, the teachers were able to hook up the equipment and get a waterfall to appear on the monitors. They zoomed in for details and were able to hear some of the signals being sent. Time quickly came for the workshop to be over and the teachers wanted to stay longer and learn more. That is quite a testament to John and Warren!

Wes, Mike, Steve, John, and Warren did a fine job working with and encouraging the teachers and I thank them for all their efforts.

Continued on next page-

ARISS Spark Interest Workshop / continued from previous page

Snapshots from the ARISS Spark Workshop



Demonstrating a wave form



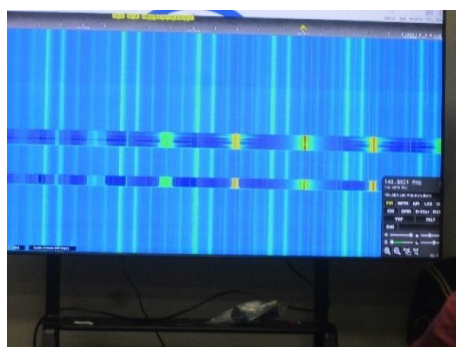
Wes W3WL, conversing with Rachel KO4HLC



Explaining the NFARL CPO Kit



Warren KD4Z, explains the SDR waterfall



Left: a shot of the SDR water-



Right: John N4IHV looks over the work



A few of the teachers participating in the workshop



End-

RF Exposure Take it Seriously

Those who emit RF radiation have FCC mandated RF exposure requirements to meet. The FCC's requirements specifically address "Amateur Radio," (us) and "Mobile and Portable Devices" (cell phones and wireless devices). My impression is that despite RF safety being widely written about within the ham community, we hams mostly ignore the requirements or don't know they exist.

The subject of RF safety is covered in the ARRL Handbook and six QST articles you can find in the QST archives. Have you read any of it? There are FCC-mandated RF safety questions in the question pool for licensing. If you recently passed one of the tests did you simply memorize the answers?

How to assess your station's RF safety:

On-line calculators make the task very easy. The calculator I like is the ARRL's:

<http://arrl.org/rf-exposure-calculator>

You don't need to know the FCC requirements, the calculators have them built in.

The ARRL calculator is shown in Figure 1. It's a single page. I have filled in the blanks for the 10 meter case here at N4GG/4. What I filled in is highlighted with red arrows; the assessment that came back is highlighted with green arrows.

Parameters

- Power at Antenna: (Need help with this?) 100 (watts)
- Mode duty cycle: Conversational SSB, heavy speech processing (duty cycle=50%)
- Transmit duty cycle: (time transmitting)
- You transmit for 1 minutes then receive for 1 minutes (and repeat).
- Antenna Gain (dBi): (Need help with this?) 3
- Operating Frequency (MHz): 28

Include Effects of Ground Reflections

If you would like to receive future announcements of any FCC news related to RF-exposure or the requirements for amateurs to evaluate their stations, you may **optionally** provide an email address.

Email Address: (optional)

Comments: (optional)

Calculate

Results for a controlled environment:

Maximum Allowed Power Density (mw/cm²): 1.1480

Minimum Safe Distance (feet): 3.0868

Minimum Safe Distance (meters): 0.9409

For an uncontrolled environment:

Maximum Allowed Power Density (mw/cm²): 0.2296

Minimum Safe Distance (feet): 6.9023

Minimum Safe Distance (meters): 2.1038

Print Results

Figure 1.— 10 meter case at N4GG/4

Continued on next page-

What I entered:

Power: 100 watts (My FTdx10)

Duty cycle: SSB (50% duty cycle) (from a pull down menu)

Transmit on/off time, 1 minute on, 1 minute off.

Antenna gain: 3 db (My Ham Stick antenna)

Frequency: 28 MHz

The calculator returned two numbers - the minimum safe distance from the antenna in a controlled environment and the minimum safe distance in an uncontrolled environment. For my station on 10 meters those are 3.1 and 6.9 feet.

A controlled environment is one where an individual understands RF exposure and has control over the emissions (you and your family). An uncontrolled environment includes everyone else, and that includes your immediate neighbors. Your neighbors may be aware you transmit, but they are in no position to assess their RF exposure and, of course, they have no control over that exposure.

That's it. There is no math required. You don't have to understand the underlying theory or the FCC's requirements - just fill in the blanks.

Here's your task:

Enter your various antenna, power level and band combinations and do the assessment. Are you and your neighbors far enough away from the antennas? If not, you are required by the FCC (and common sense) to take steps to become compliant. The fastest road to compliance is to reduce power and/or avoid pointing directional gain antennas toward people. Longer-term solutions include moving antennas or changing antenna type(s).



Table 1 shows the results of an analysis I did for 100 watt and 1000 watt stations using a 3 dB gain antenna, transmitting CW. The columns for 100 watts and frequencies from 3.5 to 50.1 MHz apply to my station here in Florida. I use Ham Stick antennas on every band. They are located on a second floor balcony approximately 7 feet from the operating desk. That's close! See Figure 2.

Mine might seem like an unusual case but I have seen pictures of POTA operations with rigs next to cars with mobile antennas. I've also seen my share of field day operations with dipoles and inverted vees immediately overhead.

Figure 2- N4GG/4 Operating desk to antenna

Continued on next page-

Around the Shack / Hal Kennedy, N4GG—continued from previous page

The worst case minimum safe distance for my station is 3.0 feet at 50.1 MHz. I operate in a controlled environment. The minimum safe distance for my neighbors is 6.6 feet. They live in an uncontrolled environment. This station meets both requirements.

What about increasing my power to 1000 watts? Well, the ham sticks would melt! If I replaced them with quarter-wave verticals that could handle the power, the minimum safe distance on six meters would be 9.4 feet for myself and 20.9 feet for my closest neighbor. I wouldn't meet either safe distance requirement. This station should run 100 watts or less on six meters.

Table 1
Minimum safe distance in feet
Controlled and Uncontrolled environments
3 dB antenna gain, CW (40% duty cycle)

<u>Frequency</u> (MHz)	<u>100 Watts</u>		<u>1000 Watts</u>	
	<u>Controlled</u>	<u>Uncontrolled</u>	<u>Controlled</u>	<u>Uncontrolled</u>
1.8	0.3	0.4	0.9	1.3
3.6	0.36	0.8	1.2	2.5
7.1	0.7	1.6	2.2	5.0
10.	1.0	2.2	3.1	7.0
14.1	1.4	3.1	4.4	9.8
18.1	1.8	4.0	5.6	12.6
21.1	2.1	4.7	6.6	14.7
24.9	2.5	5.5	7.8	17.4
28.3	2.8	6.3	8.8	19.7
50.1	3.0	6.6	9.4	20.9
144	3.0	6.6	9.4	20.9
432	2.5	5.5	8.0	17.4

Here is an example assessment of my Woodstock, GA station for six meters, running FT-8.

Power: 1,000 watts

Duty cycle: 100% (FM)

Transmit on/off times: 1 minute on, 1 minute off*

Antenna gain: 8.1 dB

Frequency: 50.313 MHz

Minimum safe distance for a controlled environment: 26.6 feet

Minimum safe distance for an uncontrolled environment: 59.5 feet

Continued on next page-

Around the Shack / Hal Kennedy, N4GG—continued from previous page

* The calculator won't accept on/off times shorter than one minute but this is okay. The FCC calculation methodology averages exposure for on/off times shorter than six minutes.

I hope you take this to heart. We are required to assess our stations and RF can be hazardous to your health.

Additional Reading

- "FCC OET Bulletin 65, Supplement B" This document describes how the requirements came into being and provides a detailed technical explanation of the equations used to calculate exposure.

https://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet65/oet65.pdf

FCC OET Bulletin 65 is a tough read. It's 84 pages, detailed and includes advanced math.

- The FCC document titled *Radio Frequency Safety*. It can be found here:

<https://www.fcc.gov/general/radio-frequency-safety-0>

IEEE C95.1-2019 *Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic and Electromagnetic Fields, 0 Hz to 300 GHz*

<https://ieeexplore.ieee.org/document/757105>

The ARRL Handbook, 99th Edition (2022), Chapter 28 *Safe Practices*

Note: Some older Handbook editions include this information.

QST Articles, see the ARRL QST on-line archives

73,

N4GG/4

End-

Joint activities are encouraged for the April 15-16 POTA /ISA event - Terry Joyner, W4YBV

The US Islands Awards Program (USI) and Parks on the Air (POTA) is announcing a joint activity weekend.

POTA's spring *Support Your Park* (SYP) April 15-16 will encourage POTA activations from US Islands.

Watch the POTA scheduled activation page, <https://pota.app/#/activations>, and the [USI calendar](#) for planned POTA/USI joint activations. You can visit the US Islands Awards Program site [here](#)

Terry W4YBV, for NS4Jay

The Georgia QSO Party



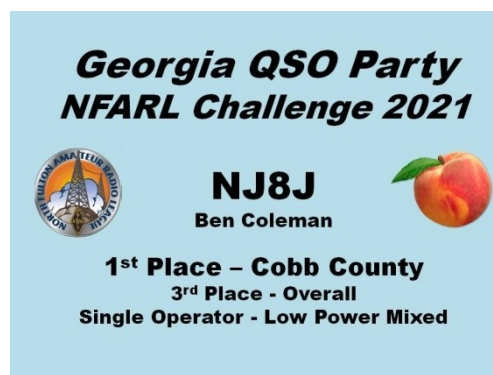
The Georgia QSO Party for 2023 will be held on April 8th and April 9th with the operating periods of 1800Z (2:00 pm EDT) Saturday until 0359Z (11:59 pm EDT) and Sunday and 1400Z (10:00 am EDT) to 2359Z. (7:59 pm EDT)

All NFARL members and friends are encouraged to participate in the GQP in 2023. This is your chance to "be the DX." It is a real opportunity to practice "running," calling CQ and letting other stations come to you. It is also a chance to test your station's effectiveness under contest conditions and help to improve your abilities as an operator.

Most importantly, it is a chance to have fun enjoying the activity generated to your call, as a Georgia station, in this event.

Please be sure to attend the NFARL meeting on Tuesday, March 21st. the meeting topic will be "Georgia QSO Party Preparation" - covering the basics, rules, and operating hints.

We would like to ask all NFARL members and friends, who will be operating in the Georgia QSO Party, to please submit your name and call sign to note your participation in this year's "Challenge". This way we can track and listen for the familiar calls in the contest, and also tally scores for the "NFARL Challenge" awards program. Certificates will be awarded in many categories for various achievements.



Georgia QSO Party—NFARL Challenge 2023/ continued from Page

Also, there will be 10 special event call sign stations on the air during the event (operated by NFARL members):

The stations will be:

N4N - N4F – N4A – N4R – N4L

K4N - K4F – K4A – K4R – K4L

Work 5 of these 10 in any combinations to spell NFARL,

Ns or Ks, SSB and/or CW, any band combo, and a special "Spell NFARL" Certificate will be awarded.

Contact all 10 stations for the coveted "Clean Sweep" award.

Work any one of these 1x1 calls to receive the special QSL card.



To be added to the NFARL QSO Party Challenge list, please email me with your name and call sign to n4tol@arrl.net. Updates to the list and the "Challenge" will be posted to the reflector going forward as new details emerge and new names are submitted. Please sign up and help encourage others to join the fun, and feel free to contact me with any questions.

Thank you - John N4TOL

For information and details about the GQP please visit:

<https://nfarl.org/ga-qso-party/> and <https://gaqsoparty.com/>

North Fulton Amateur Radio Emergency Services Update /

Bill Largin, KN4DLE

Publix Marathon

North Fulton ARES members were volunteers to help the Publix Marathon on Feb 25. More than 8500 runners took part in the full and half marathon races. NF ARES members along with ARES / Hams from around the North GA area provided communication for the race officials. The NF ARES operators supplied communication for the Aid / Watering Stations and the Pace cars and SAG vehicles. Also, the lead support motorcycle was maned by NF ARES member, Scott, KM4JXE.

- KO4STE Dale Todd
- K4OFV Jim Kempthorne
- KM4JXE Scott Wegener
- KN4DLE Bill Largin

The Publix Marathon is an excellent event and the Atlanta Radio Club does a great job coordinating all the different tasks. This event gives us an opportunity to serve the community and work with other operators from around North GA. All in all, it was a fun event and we look forward to taking part, again next year.

Monthly Meeting

The NF ARES group continues to enjoy our monthly meeting. In our March meeting, we continue to welcome new members while we work to streamline some of our processes. We also began a series of training sessions, looking at different aspects of ARES activities. This month Jim, W4IU, presented on portable radio operation. Jim started with a live demonstration in the parking lot. Jim built his portable stations on-site, demonstrating how we can make DX connections "across the pond". Later Jim moved inside to discuss more about portable operation, including having the right antenna and the best power source. All of this information is leading up to the Parks on the Air event coming up in April.

We hold meetings on the second Tuesday of each month from 7-9 PM. For more information, contact Bill KN4DLE at bill.largin@gmail.com.

ARES Radio Demo - Support for V/E Exams

NF ARES provided another DEMO session outside of the March Exam session. Our intent is to give each newly minted HAM a chance to get on the radio for the first time. ARES also gets to demonstrate some of the tools we use, including portable radio setup and the ability to send digital traffic using RF. Several of the exam takers stopped by to play radio and get on the air. We even had two HAMS show up just to see the process.

A big thank you to Jim, K4OFV who braved the cold to help at Slopes. Also, thanks to Mike, AD4MC, Grant, KK4PCR, and Sam, KO4BCO who traded voice and digital traffic OTA with the new and upgraded Hams.

Connect with the North Fulton ARES group via the NFARL website at <https://nfarl.org/nfares/> or on Groups.io at <https://groups.io/g/NFARES>

North Fulton ARES Activating Sweetwater Creek / Jim Kauffman, W4IU

As mentioned in the North Fulton ARES Update above, and in support of the Georgia ARES exercise, North Fulton ARES is planning to activate Sweetwater Creek State Park on April 1st, 2023.

Here's a brief overview of our plans:

- GA ARES is doing 50 POTA activations of GA state parks on April 1st and 2nd;
- NF ARES has committed to activating Sweetwater Creek Park on Saturday, April 1st.
- A pavilion has been rented for Saturday to provide shelter during the activation. It includes four tables, 120 VAC, water, and a grill. Restrooms are available a short walk away
- We will have several HF transceivers (80 through 6 meters) available throughout the day, or you can bring your own. Two or more HF antennas will need to be set up for this event, which is part of the 'exercise.'
- A schedule is provided for operators to choose the timeframe of operation.

Sweetwater Creek Park is located west of Atlanta in east Douglas County, just off Interstate 20. It is a Georgia State Park, consisting of 2500+ acres. You can read more about it here: <https://gastateparks.org/sweetwatercreek> before you let us know if you're planning to join us there. We ask that you consider providing me with some sign-up information if you plan to join. You can send me an email at james@kauffman.net with your name, your contact info, your party head-count, and your estimated time of arrival. You can also sign up to operate under my call, W4IU.

POTA operations using the W4IU call sign

Hour	IC-7100 FT-8	IC-9100 SSB	Other -1	Other-2
11:00 – 12:00*				
12:00 – 13:00				
13:00 – 14:00				
14:00 – 15:00				
15:00 – 16:00				

Indicate which hour(s) and radios you'd like to operate

Again, this is a plan to depart from...

Bring a friend that might be interested in ham radio. It will be a terrific way to introduce them to the hobby!

Order of events (+/- 3dB)

you must have a plan to depart from... :-)

- 09:00 Arrive or earlier....
- 09:30 Unload the gear onto 3 of the 4 tables
- 10:00 Set up two or more HF antennas
- 11:00 Set power supplies (120 vac / solar / battery) <- maybe
- 11:30 Set up radios
- 12:00 Get on the air
- 16:00 Takedown antennas and radios
- 17:00 Pack up vehicles
- 17:30 Depart

Antennas

- Two of the three listed HF antennas will be used (maybe all three):
 - 40- 6 m horizontal dipole – need masts setup to deploy the antenna
 - 80-10 m end-fed half-wave – one self-supporting tripod
 - 80-10 m magnetic loop – one self-supporting tripod
- At least one 2m antenna, possibly a 3-element Yagi for 2m activation
 - 42' vehicle-mounted mast
- Mast deployment will be a key part of the NF ARES activation – the goal is to establish *reliable* HF communication across the US (limited by propagation). *Antenna elevation is key!*

Location

Entrance Fee: 1-12 passenger vehicles \$5 per day

- **Located** in east Douglas County, 15 miles from downtown Atlanta.
- **Site:** Picnic Shelter 02
- **Site Type:** Picnic Shelter
- **Hours - Park** 7 a.m.–Dark



Congratulations! New & Upgrade Hams / Wes Lamboley, W3WL

Once again the Slope's BQ on '92 was the scene of license testing on Saturday, March 11. Five persons were successful in either getting their Tech or upgrading. As usual, it was a pleasure to meet them all, and short bios are unveiled below.

First was **Mary White**. She was in town from Augusta, Ga to attend a teacher's seminar on the new kit being provided by the Amateur Radio on the International Space Station (ARISS), which was being hosted by the Computer Museum of America and NFARL members. Mary's school will be having an ARISS experience soon, and that qualified her to attend the meeting, where about \$800.00 worth of an "educational" kit related to Amateur Radio was provided and discussed with each attending teacher. NFARL had the honor to host the very first session of the kit unveiling; 9 teachers on the list to experience an ARISS were in attendance. Mary got her Tech license and intends to get General ASAP.

Second to complete the test was **Bob Grieco-KO4GHK**. Bob got his General and is a regular listener of the 'Donny Show'. Bob has the start of a good General class shack, with the prime hardware being an Icom 7300. He is an EE and intends to get serious about HF.

Third on the list of successful candidates was **Mike Currier**. Mike got his Tech. Mike's grandfather, who was a ham, is Mike's inspiration. Mike works in IT, and is also a martial artist. He was on his fourth day of a major shoulder reconstruction job and will be taking it easy for at least 6 months. Mike confided in me that he "wants to go to his grave with every bone broken in his body". He and our son-in-law are cut from the same cloth and Cary also has had the same surgery and is 3 months into his rehab. Small world.

Next on the list was **Robert Achtenberg -KF4RJA**. Robert upgraded to Extra as he had some spare time during Covid to study. He is also a card-carrying member of NFARL-please do congratulate him at the next Club meeting.

Last on the list was new Tech **Chad Kirkendall**. Chad is the proud stay-at-home father of 4 kids and if he has his way they will all become hams. Chad has been interested in ham radio for a long time and he finally took the plunge. He blames testing on a mid-life crisis, but the real reason he wants to be a ham is to increase his capabilities as a survivalist. Chad found out about our Club while studying for his Tech exam and was directed to NFARL by the study program! At last - we are famous!

We owe a lot to Slope's for hosting the VE sessions -please do eat there early and often!



Mary White



Bob Grieco, KO4GHK



Mike Currier, KQ4GXE



Robert Achtenberg, KF4RJA



Chad Kirkendall,

Water Drop Dash 5K Assistance Needed! / Charles Turner, K0CZR

Hello Radio Operators,

March 25th is the date of the 2023 Water Drop 5K at the **Chattahoochee Nature Center**. We need radio operators to help with emergency communications in the event of a personal injury. We need to be at the nature center by 6:00 AM, which I realize is early, however we really need your help!

As before, the road will be shut down for the race, so we need to be in the parking lot before the start. We will have a short briefing in the parking lot before we dispatch to positions. You can also pick up the T shirts, your map, and your team sheet. Then you will proceed on down to the street and then on to your position on the map. The race should be over about 9:45 - 10:00 AM.

If you can help, please RSVP to me ASAP. We have to turn in a list with your T shirt size. Please let me know your size. We want to be sure to have a shirt for you as a memento of the event.

When you arrive at the Kingfisher parking lot, let the parking attendant know you are with the Radio Communications and proceed to the end of the parking lot and come left around the concrete barrier and come back past the round island. You should park in the grassy strip on the right.

The Frequency will be 145.290 Simplex during the race. Be sure to charge your handheld batteries the night before or carry a spare set of batteries. If you still have your Radio Volunteer badge from a previous event please wear it. Also watch the weather and dress appropriately. Should you have any questions, feel free to call Charles Turner, k0czt, 404-725-0395 any time. I hope we will see you at the races!!!

73, K0CZR

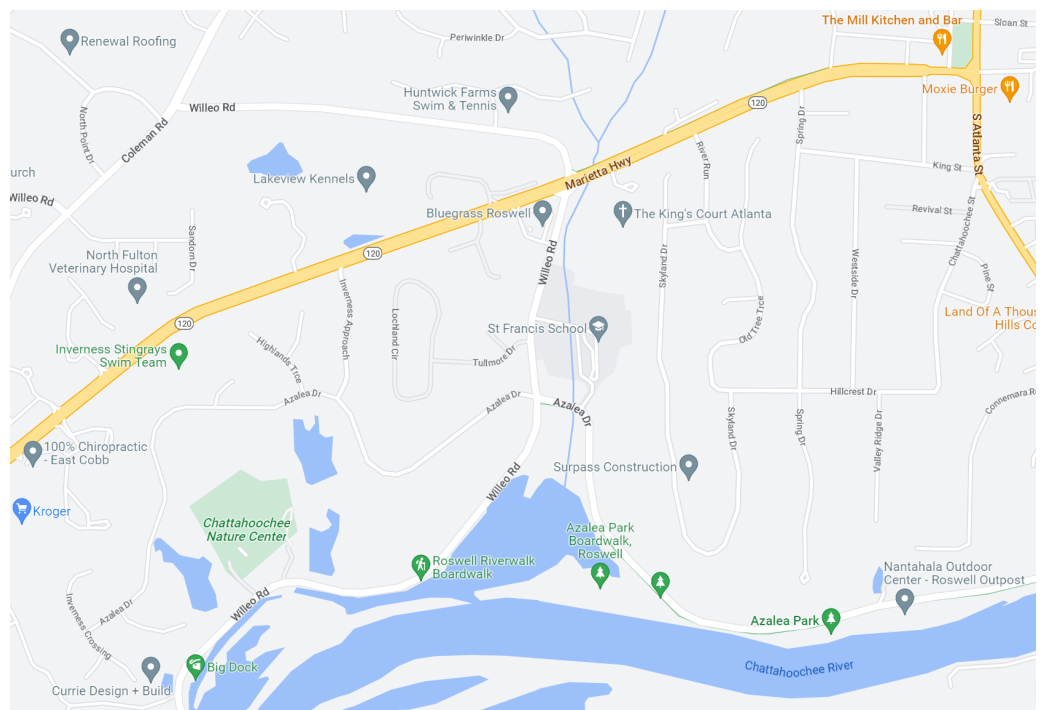
k0czt@bellsouth.net

<https://www.chattnaturecenter.org/special-events/water-drop-dash/>

770.992.2055

9135 WILLEO RD

ROSWELL, GA 30075



Extra Extra! / From the Extra Class Question Pool

New info for Technicians and Generals and a refresher for Extra Class Licensees!



E9

A03

What is the radiation resistance of an antenna?

- A. *The combined losses of the antenna elements and feed line*
- B. *The specific impedance of the antenna*
- C. *The value of a resistance that would dissipate the same amount of power as that radiated from an antenna*
- D. *The resistance in the atmosphere that an antenna must overcome to be able to radiate a signal*

See answer on the last page!

The new Amateur Extra-class license examination question pool, effective from July 1, 2020, through June 30, 2024, has been released and is available at the National Conference of Volunteer Coordinators (NCVEC) [website](#). Note the new Technician class license examination question pool is effective July 1, 2022.

Ian NV4C and his team hold license test sessions on the second Saturday of each month. For more information including upcoming test dates, [click here](#).

2-Day General License Ham Cram Class / Dave Bruse, W4DTR

GARS GENERAL LICENSE HAM CRAM CLASS

WHEN: Saturday 4/29/2023 and Sunday 4/30/2023; 8:00am to 4:00pm each day, exams start at 4:00pm Sunday (this is a **CLOSED** exam session, only open to registered students of the class).

WHERE: EAA 690 Hangar, Gwinnett County Airport – Briscoe Field, 690 Airport Rd, Lawrenceville, GA 30046

MORE INFO: To register for our 2-day HamCram Class, use our registration form on <http://gars.org>. Pre-registration is **REQUIRED**. No Walk-ins accepted. This fee is non-refundable. Our \$25 fee covers the class and lunch both days, and the exam fee for the exam given Sunday at 4:00pm. Lunch will be brought in to save time.

We will be using the Ham Radio School General License Study Guide for this class. You can purchase the study guide locally at Ham Radio Outlet in Doraville, or purchase the book online at HamRadioSchool.com. We encourage you to at least look over the material in a study book and take some practice tests. We will go over every question in the question pool during the class, but remember that the test will only be 35 multiple choice questions. If you get 26 out of the 35 questions correct, you will pass the test. We suggest that you take some practice tests prior to the class to familiarize yourself with the question format and some of the material. Go to our exam page for sample online tests towards the bottom.

QUESTIONS: Questions about the class or the exam session — click [here](#) to email the instructors.

73 - Dave, W4DTR


Contest Corner

These are some contests and events besides the "routine K1USN, CWops, and other organizational events" scheduled to occur the near future

Place your cursor in the row, then hover over the Contest Name row to select the hyperlink to access WA7BNM Contest Calendar on the web

Contest Name	Time & Date
+ SKCC Sprint	0000Z-0200Z, Mar 22
+ FOC QSO Party	0000Z-2359Z, Mar 25
+ Sasquatch Stomp	1900Z, Mar 31 to 0300Z, Apr 1
+ PODXS 070 Club PSK 31 Flavors Contest	1000Z, Apr 1 to 0400Z, Apr 2
+ Louisiana QSO Party	1400Z, Apr 1 to 0200Z, Apr 2
+ Mississippi QSO Party	1400Z, Apr 1 to 0200Z, Apr 2
+ Missouri QSO Party	1400Z, Apr 1 to 0400Z, Apr 2 and 1400Z-2000Z, Apr 2
+ Florida State Parks on the Air	1400Z-2200Z, Apr 1 and 1400Z-2200Z, Apr 2
+ ZL Sprint	0800Z-0829Z (CW), Apr 4 and 0830Z-0859Z (SSB), Apr 4
+ VHF-UHF FT8 Activity Contest	1700Z-2100Z, Apr 5
+ New Mexico QSO Party	1400Z, Apr 8 to 0200Z, Apr 9
+ Georgia QSO Party	1800Z, Apr 8 to 0359Z, Apr 9 and 1400Z-2359Z, Apr 9
+ Nebraska QSO Party	1300Z, Apr 15 to 0100Z, Apr 16 and 1300Z-2200Z, Apr 16
+ Texas State Parks on the Air	1400Z, Apr 15 to 0200Z, Apr 16 and 1400Z-2000Z, Apr 16
+ Michigan QSO Party	1600Z, Apr 15 to 0400Z, Apr 16
+ Ontario QSO Party	1800Z, Apr 15 to 0500Z, Apr 16 and 1200Z-1800Z, Apr 16
+ North Dakota QSO Party	1800Z, Apr 15 to 1800Z, Apr 16
+ Quebec QSO Party	1200Z-2000Z, Apr 16
+ ARRL Rookie Roundup, SSB	1800Z-2359Z, Apr 16

NFARL Upcoming Events and Dates

- **Every Sunday — NFARES net** - 8:30 PM - 147.06 MHz (+) PL 100
All licensed hams are welcome, you do not need to be an ARES member!
Check NFARES.org for more information.
 - **Every Monday — Tech Talk** - 8:30 PM - 145.47 MHz (-) PL 100
NFARL's flagship technical based "non check-in" net. The net is always better when using the web based chat room (Discord) but Internet is not required to join the net.
Check [NFARL Nets](#) for more information and "how to". Here's the link to the NFARL server on Discord web app <https://discord.gg/spr2a9D>
 - **Every Wednesday — Hungry Hams Lunch Bunch** - 11:15 AM
Location: Slope's BBQ, 34 East Crossville Road, Roswell, GA 30075 (770) 518-7000
 **SLOPE'S BBQ**
Dining Room is OPEN. Get Take Out if you can't stay!
 - **Every Thursday — YL Net** — 8:00 PM - 9:30 PM - 145.47 MHz (-) PL 100
Check NFARL Nets [website](#) for "how to." This is a great opportunity for YL's to get on the radio with other YL's! OM's (guys) are welcome to listen in to this YL net.
 - **Every Wednesday — CW CHAT** — 8:00 PM on ZOOM.
New meeting link and credentials:
<https://us06web.zoom.us/j/84722087419?wd=VIN2d0xvQVhKcDIUL0R4N1hQMTQ2UT09>
Meeting ID: 847 2208 7419; Passcode: CW-CHAT
- **Second Tuesday — NFARES Meeting - April 11, 2023** ***Now meeting in-person!***
Meeting location: The Church of Jesus Christ of Latter-day Saints, 500 Norcross St. Roswell, GA 30075. Enter using the "Family History Center" Door. ***See NFARL website for details & Zoom link.*** NFARES members receive Zoom invitation automatically.
- **Second Saturday – VE Testing - NFARL April 8, 2023 session:** 8:30 - 10:30AM
Slope's BBQ, 34 Crossville Road, Roswell, GA 30075. Seating will be limited to 20 - preregistration is required. [Registration is by email to Ian NV4C](#); registration opens 3/29/2023, 5:00 PM ET and closes 4/5/2023, 11:59 PM ET. [Click here for more information.](#)
- **Fourth Tuesday – NFARL Executive Team Meeting** - March 28, 2023, 7:00 PM.
Online meeting only — monitor website and NFARL Groups.io reflector for updates.
- **NFARL Club Meeting— Tuesday, March 21, 2023— 7:00 PM** Preston Ridge Community Center, 3655 Preston Ridge Road Suite 100, Alpharetta, GA 30005. The facility's doors will open at 7:00PM. Our meeting will begin at 7:30PM and should conclude by 9:00PM. Our meeting topic is: *Georgia QSO Party —NFARL Challenge 2023 — John Tramontanis, N4TOL* ***See NFARL website for details & Zoom link***
- **Georgia State Parks on the Air** April 1 @ 9:00 pm - Apr 2 @ 8:00 pm
Information at <https://gaparks.org/> and <https://www.facebook.com/events/568831084998544/?ref=newsfeed>
 - **GEORGIA QSO PARTY (GQP)** April 8th and April 9th, 1800Z (2:00 pm EDST) Saturday until 0359Z (11:59 pm EDST) & Sunday and 1400Z (10:00 am EDST) to 2359Z. (7:59 pm EDST).
See NFARL website for details.

Contact Us

President	Mike Riley KN4OAK	President@nfarl.org
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North Fulton Amateur Radio League

P.O. Box 1741
Roswell, GA 30077

nfarl.org

eNEWS can be located online at:
<https://nfarl.org/enews-index>

Club Repeaters

Frequency—Description	P.L. Tone	Location
145.470 (-) EchoLink Node 560686 NF4GA-R	100 Hz	Morgan Falls
147.060 (+) Primary ARES Repeater	100 Hz	Roswell Water Tower
* 224.620 (-) Joint Venture with MATPARC	100 Hz	TBD
443.150 (+)	100 Hz	Roswell Water Tower
444.475 (+)	100 Hz	Morgan Falls
* 927.0125 (-)	146.2 Hz	TBD

* Currently off the air

Club Call signs: NF4GA and K4JJ

Extra Extra answer: C (question E9A03)

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