



North Fulton Amateur Radio League NFARL eNEWS

June 2018

***Over 40 Years Promoting
Service | Friendship | Education | Fun***

www.nfarl.org



NFARL Field Day is Here !

Field Day isn't coming soon, it's here!

When I took on the role of Field Day Chairman for the North Fulton Amateur Radio League's 2018 effort, I had a singular clear mandate: We must be in it to win it. With this charge I began to look at what it would take to be successful. As you saw in my presentation to the club last month, my belief is that we are going to need to get over 16,000 points to take the top spot. That is a 25% increase over our score from 2017, and a "modern era" (since 2012) high score for the 3A category. I have every confidence that if we meet some very achievable operational goals and collect all the available bonus points, we'll not only cross that 16K point threshold, but likely flirt with 17,000 points.

The problem with an ambitious goal like this is that I can't make it happen alone and I was concerned that I would have a difficult time getting enough help to pull off an event of this magnitude. Thankfully, I have been given assistance from "the usual suspects" as well as some new and new-ish members who are excited to be part of the biggest annual event this club undertakes.

There is always room for more help however, and I am confident that there will be many club members who "just show up". You are welcome to do this of course, especially on Friday morning, June 22nd around 08:00, but it would be nice to know you're coming so that we'll have a cool bottle of water for you. We also need help on Saturday morning at 08:00 and on Sunday afternoon at 2:00 PM when we tear everything down. Send me an [email](#) and let me know you will be there.



Scott Straw - KB4KBS
NFARL 2018 Field Day Chairman

We have a few overnight spots left for operators on both the Phone and CW stations and there are several opportunities for manning the 6-meter station on Sunday morning. We will have optimized antennas, well-equipped radios, and networked logging computers.

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Here are the three links you need:

CW: <https://www.signupgenius.com/go/30e0b45aaaf29a64-cwoperators>

PH: <https://www.signupgenius.com/go/30e0b45aaaf29a64-allmode>

6M: <https://www.signupgenius.com/go/30e0b45aaaf29a64-sixmeter1>

The GOTA station will have on-site sign-up sheets.

Even if you aren't operating, please come out and hang with us! The North Fulton Amateur Radio Emergency Services group will have a nice display and we are going to have a large tent with plenty of chairs available near the 6-meter and Satellite stations that is great for just shooting the breeze. Of course, there will be plenty of snacks and drinks under the pavilion all afternoon.

As always, we will have our annual family picnic dinner at 6:00 PM on Saturday evening June 23rd. Be sure to RSVP to FDFood@NFARL.org and let us know you will be joining us, and what covered dish you will bring to share. We'll have plenty of Barbecue, Burgers, and Hot Dogs for everyone who lets us know they are coming.

Field Day is not just a big thing, it is the biggest thing that NFARL does each year. **You need to be there.** If you have any questions or want to sign up to help, please send me a note. I can be reached at kb4kbs@nfarl.com.

June Meeting - Antenna Basics / John Tramontanis, N4TOL

We will have a presentation by a special guest, Hal Kennedy, N4GG, at the club meeting on June 19th. Hal will present on the topic of "Wire Antenna Basics".

Hal is a consultant for the electronics industry and writes for a variety of ARRL publications including QST, NCJ, The ARRL Handbook and The ARRL Antenna Book.

As a prominent contester and DXer, Hal operates his station from Woodstock, GA using various arrays of wire antennas, no towers or beams.

This presentation will cover some of the fundamentals of getting on the air with your first wire antenna, and tips for the experienced operator on refining their wire antenna systems.



Hal Kennedy, N4GG

Please be sure to join us on Tuesday, June 19th.

73, John Tramontanis N4TOL

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!
- **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 but Internet is not required to join the net. Check NFARL Nets [website](#) for more information and "how to".
- **Every Wednesday — Hungry Hams Lunch Bunch** - 11:15 AM
Meet with your fellow club members every Wednesday!
Slope's BBQ, 34 East Crossville Road, Roswell.
- **Every Thursday — YL OP Net** – 8:00 PM - 9:30 PM 145.47 MHz (-) PL 100
Check NFARL Nets [website](#) for "how to."
OM's (guys) are welcome to listen in to this YL net.
Great opportunity to get your YL's on the radio!
- **Every Saturday — Royal Order of the Olde Geezers (ROOG) Lodge No. 1**
9:00 AM - Reveille Café, 2960 Shallowford Road, Marietta (at Sandy Plains and Shallowford). Everyone is welcome: You don't have to be "old" or a "geezer" to join this breakfast get-together.
- **Second Saturday – VE Testing** - 10:00 AM
NFARL provides Amateur (Ham) Radio test sessions on the second Saturday of each month - Walk-ins are welcome, no appointment is necessary. All exam modules are offered at all sessions.
Location: [Alpharetta Adult Activity Center at North Park](#)
13450 Cogburn Road, Alpharetta, GA 30004
Please check our [website](#) for more information.
- **Second Tuesday — NFARES Meeting** - 7:00 PM - 9:00 PM
Fellowship Bible Church, 480 W. Crossville Road, Roswell.
Check [NFARES.org](#) for more information.
- **Third Tuesday — NFARL Club Meeting** - **June 19, 2018**, 7:30 PM.
Pre-meeting activities begin at 7:00PM.
Location: [Alpharetta Adult Activity Center at North Park](#)
13450 Cogburn Road, Alpharetta, GA 30004
Program: "Wire Antenna Basics" by Hal Kennedy N4GG
- **Fourth Tuesday – NFARL Executive Team Meeting**
June 26, 2018, 7:00 PM
Location: [Arbor Terrace at Crabapple](#)
12200 Crabapple Road, Alpharetta, GA 30004
Meetings are open to all NFARL members. Space is available on a first arrival basis. Please contact the [President](#) to ensure available space.

Georgia QSO Party NFARL Participation Sets Record Level !

The NFARL GQP Challenge - Objectives Attained

The club set 4 goals for the 2018 Georgia QSO Party and all were achieved.

1. We had a record number of participants and scores submitted for the 2018 GQP.
2. We represented the state of Georgia on the air quite well as evidenced by the huge scores posted by the special event 1x1 club stations on the air.
3. With all the NFARL members on the air, our station capabilities and operating skill capabilities were certainly tested and enhanced.
4. Based on the enthusiasm exuded by NFARL participants before and after the event, our primary goal of "Having Fun" was definitely achieved.

The NFARL Challenge awards are being processed and prepared for presentation at a future club meeting.

Below is a summary of the total NFARL club scores submitted for the past 5 years in the GQP:

2018 - 837,616

2017 - 699,682

2016 - 573,423

2015 - 511,831

2014 - 297,260

73 John Tramontanis N4TOL



The Georgia QSO Party



Working "EM" Grids & Logging 6 Meters / Jeff Otterson, N1KDO

Below is a display of the grids I have worked on 6 meters from my current Marietta QTH. I have been thinking in the back of my mind that it might be fun to try to get the SVHFS "Worked All EM" award (<http://svhfs.org/wp/awards/worked-all-of-em/>) -- clearly this is far more difficult than I thought, especially in light of my antenna situation.

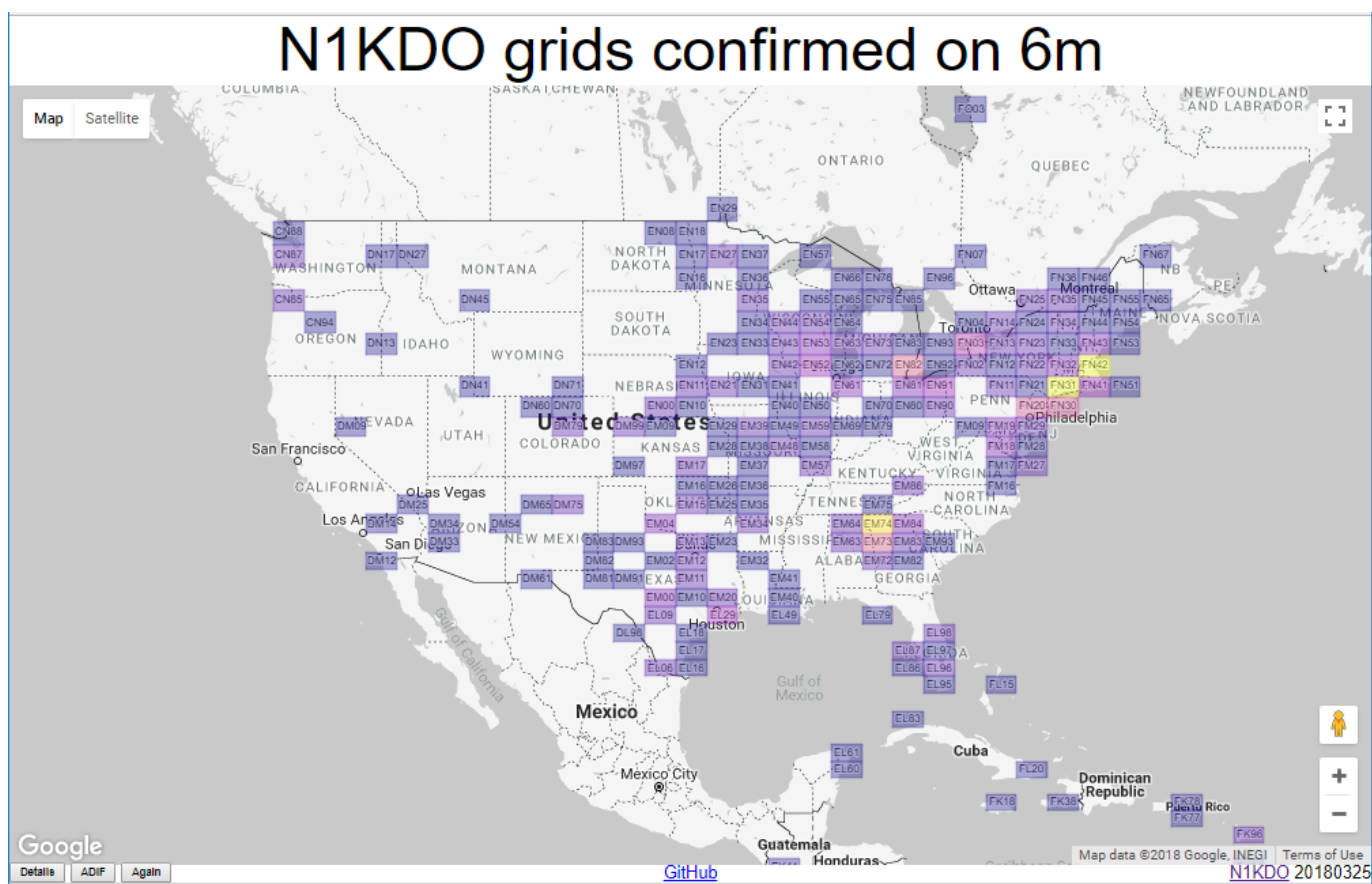
What I find interesting about this data is the empty ring around EM74. My uninformed analysis is that this is the "skip zone" where people are too far away for ground wave and not close enough for E-skip. I'd be interested in a better explanation if any of the VHF-ers have one.

The map is generated by a web page I wrote:

<https://www.n1kdo.com/lotw-gridmapper/GridMapper.html>

The colors on the grids are an attempt to make a "heat map" that shows how many contacts were made to each grid.

Jeff – N1KDO



HamJam Donates to ARISS Project / John Kludt, K4SQC

As you may have read in the most recent issue of QST, the International Space Station is out of electrical sockets! In preparation for flying the new D-710G radios to the ISS the ARISS program has had to design and build a new Multi-Voltage Power Supply (MVPS). The US and Russian segments of the ISS work on different voltage standards and the new power supply needs to work with both standards. Details can be found at <http://www.arrrl.org/news/ariss-moves-closer-to-launching-new-radio-system-to-space-station>.

The amateur radio equipment on the ISS is located in two places; namely the Columbus module in the US segment and the Service module in the Russian segment. These locations are basically at the opposite ends of a football field. The equipment in the Columbus module was most recently a 5 watt Ericsson HT. Unfortunately, that radio has failed. All contacts are currently being done using an older Kenwood D-710 in the Service module in the Russian segment. At the present time the astronauts are required to go to the Service Module to use that radio for ARISS contacts. It is a 50 watt radio and that makes a huge difference in readability for the schools. Kenwood has graciously modified to Space requirements several D-710 GA's and donated them to the ARISS program. ARISS now needs to come up with power supplies for these new, much needed radios.

One of the challenges the ARISS team faces is Space Certification. Everything that flies on the ISS must meet the same safety and flight certification requirements. To get a new piece of Amateur Radio equipment, a power supply for instance, on the ISS one does not simply go to a favorite radio store and pick something up and send it to NASA for the next launch. Special components must be used and the certification process is long and expensive.

One of the space certified parts of the new MVPS is the case for the power supply. HamJam was pleased to be able to donate \$1,000 to pay for two of these cases. An ARISS contact can have major impact on young people as it brings STEM concepts to life. The recent contact with Mill Springs Academy (MSA) was a local example of the impact on students, teachers, parents and amateur radio operators that such a contact can have. If you would like to personally donate to this most worthy cause, please go to <http://www.ariss.org/donate.html>.

In addition to the donation to the ARISS program, HamJam has donated funds to several other causes. Again this year funds were donated to the ARRL Teachers Institute (TI). We see TI as a "multiplier" donation. If we can better prepare just one teacher to bring amateur radio into the classroom, that teacher can impact many tens of young learners. This is a great way to make your HamJam dollars go further in support of youth related activities.

On a more local note HamJam donated funds to cover the backup antenna and preamp for the recently completed ARISS contact. With the successful completion of that event this antenna and preamp will be repurposed to establish an automated monitoring station for AO-85, AO-91 and AO-92 telemetry at MSA. As many of you may already know these three satellites carry experiments for Vanderbilt University. Vanderbilt is studying the effects of radiation in space on computer chips. This data, along with satellite health parameters are sent using Data Under Voice (DUV). This is an interesting technique that puts low speed data in the bandpass where sub audible tones are usually encoded. This information is then captured by ground stations and forwarded over the Internet to a central repository for analysis by the program investigators.

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Also carried by AO-92 is a Virginia Tech camera experiment using high speed data rates. The MSA monitoring station will also be capable of participating in that experiment. HamJam is pleased to be able to help Mill Springs Academy join this research network.

HamJam will be making other donations over the coming months. We want to thank the amateur radio community for your generous support for ever greater involvement with young people in the pursuit of the joy with Amateur Radio.

HamJam 2018 is scheduled for the second weekend Saturday in November and we hope to see you there.

Again, thank you for your generosity.

HamJam 2018 Speakers Announced / Jim Stafford, W4QO

The HamJam committee is proud to introduce the speakers for the November 10 program.

We have quite a line up this year which we believe you will certainly enjoy.

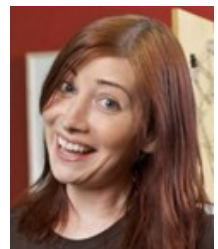
Dale Parfitt, W4OP, Glenville, NC, is the owner of PAR Electronics, Inc. and is the designer of the original end fed dipole series –End Fedz and the Omniangle line of horizontal omni VHF/UHF antennas. More info: www.parelectronics.com Dale will speak on Microwave Earth-Moon-Earth Communications.



Rick Boulis, N4HU, and **Tom Harrell, N4XP**, from right here in Georgia... home of many premier DXpedition teams, will speak on their role in the Baker Island DXpedition in mid-2018. Tom is the organizer and Rick is a participant in this summer's trip. They will share their story entitled "FT-8; Baker Island and Beyond."



Jeri Ellsworth, AI6TK, Palo Alto, CA is a self-taught electrical engineer who works in the space industry and is heavily involved in the Maker/Hacker movement. Check: www.jeriellsworth.com An acknowledged speaker, she will talk on "My Life in a High Tech World".



Your support of HamJam has been truly amazing through the years. And the causes you support are most appreciative.

Tickets for HamJam 2018 will be available this summer, so stay tuned!

Baker Island DXpedition and FT8 / John Kludt, K4SQC

Many of us are waiting with great expectations the advent of the Baker DXpedition KH1/KH7Z running from June 27th to July 6th.

In addition to the usual modes of CW, SSB and RTTY for the first time ever the Baker Island team will be running FT8 in DXpedition mode. As you may be aware HamJam 2018 will be featuring two speakers, Rick Boulis, N4HU and Tom Harrell, N4XP, who are on the Baker Island team. They also have been involved with Joe Taylor, K1JT, in developing the DXpedition version of the very popular FT8 mode.

To quickly review, FT8 is a highly structured mode designed for weak signal communications. Its weak signal capabilities come from the transformation of structured message into a very tight message with forward error correction applied and then sent as a block. The process is reversed on the receiving end. Given that the behind the scenes math involved in encoding/decoding FT8 does not work well, or at all, for free text messages. In a recent post, Joe Taylor, K1JT, (FT8 lead developer) encouraged folks who are interested in free text messaging to use PSK or Olivia, two well established and very useful free text digital modes. The good news is FT8 gives us powerful weak signal capabilities. To again quote Joe, "With 100 watts and a dipole you can work the world."

One of the objections to FT8 by the DX community has been that it is "too slow." It is hard to compete with an exchange that contains a call sign and a meaningless signal report. Ever heard a DXpedition station get or give less than a "59" of "599" depending on mode? FT8 DXpedition mode will allow the DXpedition station to conduct 5 QSO's at a time. During testing that produced sustained QSO rates of 300 per hour. We may see rates of 500 QSO's per hour. So how do they achieve this?

DXpedition mode introduces the concept of the "Fox" (the DXpedition station) and the "Hound" (the rest of us chasing the Fox). Each has a specific software defined role to play in the exchange. Toward that end there are some very specific requirements to use this event specific mode of FT8:

1. Your rig should support CAT control. Using DXpedition mode without CAT control is possible but rather awkward.
2. You must be using version 1.9.1 of the WSJT-X software. Older versions of the software will not work.
3. You must have loaded the designated frequencies for the DXpedition into the <Frequency> tab under <Setting>. For Baker Island these can be found at <http://baker2018.net/pages/plan.html>. Do not try to call the Baker Island team on the standard FT8 frequencies as they will not be there and you will only be generating QRM for regular FT8 users.
4. If you are new to FT8 make sure all of this is set up and working and you know how to use it before you join the fray.
5. Most importantly this is a time to break with ham tradition and RTM (Read The Manual) found at https://physics.princeton.edu/pulsar/k1jt/FT8_DXpedition_Mode.pdf. This is a very well thought out and complete manual that takes you step by step through the setup and operation of FT8 DXpedition mode.

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The opportunity being offered with FT8 Dxpedition mode by the Baker Island Team and the FT8 development team is huge. It should give those of us with less than a kilowatt plus and huge antennas a chance to play the game right along with everyone else. Given that this mode has never been used in "combat conditions" we all need to be patient and follow the prescribed operating procedures. This is not a time to get "creative."

An interesting feature for the Fox is the setting <MaxdB>. FT8 is a weak signal – not QRP but weak signal - mode and one of the things the Fox can do is set a filter to ignore signals with signal strength greater the "x" Many of us are used to the paradigm, "If I am not getting through crank up the power." Here the opposite may well apply, "If I am not getting through crank down the power."

This creates an interesting and as yet unknown operating dilemma: should I start low in power and go up or start high in power and go down?

If there is interest I would be willing to host a workshop at my QTH in Johns Creek on Thursday, June 21st at 1900 hrs local. The Thursday before Field Day I know but/and we are kind of out of time. Given that this is a first go for FT8 DXpedition mode there are no fixed answers but we can go over the manual and look at the screens needed to set thing up. If you are interested please drop me a line [here](#).

I hope to see you on the air and Best of Luck with snagging this one on FT8. And please be patient – you are helping to create a new tool in the DXpedition toolkit.

For more information on the Baker Island DXpedition go here: <http://baker2018.net/>



Contesting: The W4QO QRP Contest Team / Jim Stafford, W4QO

You may have seen the name used in the title in a few instances on the club reflector. Let me explain. The WQCT (W4QO QRP Contest Team) is simply a cute name for a process that we've initiated to promote contesting and entice new testers to observe, learn, and participate at a variety of levels. This is not a "serious" team in the usual sense. It is just a chance to get together, have fun and make a few contacts. I put out a call for visitors to my shack during the contest period. We've had visitors over the years and have had some pretty full contest efforts. But lately, we just invite any and all to come by at their (and my) convenience to talk ham radio, and again **have fun!**

Here are some examples (note that **all** contacts -both SSB and CW- were made at QRP levels):

1. GA QSO Party- April 14/15 – For this event, we had K4MPD KE4WYU KN4APC KN4KSD KN4KSE W4MSA as visitors/operators. They made contacts on SSB and I spent the other time that weekend on CW. We were able to discuss contest software, techniques such as Search/Pounce, and use of antennas/station accessories. KN4KSD (Diane) and KN4KSE (Colby) had been licensed less than 2 weeks when they "joined the team". They each made contacts and seemed to have a good time. All together we made 393 contacts.
2. FL QSO Party – April 28 – KE4WYU joined me to make some contacts in this event. Wayne made this return visit to the shack and we enjoyed the experience. We made 101 contacts and 10,175 points.
3. CQ WPX CW – May 26/27 – KN4MKM, W4CCH, and W8LLX joined me for this one. It was a little different in that it was a CW event. The participants were varied in CW skill from experienced to not so much. We were able to explain the CW "function buttons" used in CW contesting and also CW decoding software. This is a common technique for copying the exchange or verifying it. The CQ WPX requires the exchange of a serial number so each contact is different. We used an Android app called Morse Code which does a pretty good job of decoding via audio pickup.

Here are some comments from team members afterward:

W8LLX (Stew) - Thank you so much for allowing me to experience the possibilities in CW. I have a renewed commitment to spend a minimum of one hour per day immersed in CW that includes being on the air in a week! Thanks again. Side note: I spoke to Stew about joining SKCC to improve his CW. I note that as of this week Stew is member #18815!

W4CCH (Chris) -Thanks to Jim, W4QO, for inviting me to be on the W4QO Contest Team. While it may not have been a contest team by normal definitions, it certainly was helpful to me. In particular, it was neat to see the ebb and flow of assisted CW contesting. Though I wasn't exactly copying the 30+ WPM code in my head, it became more natural to pick out the handovers and know what to send when. Throw in the software logging and spotting aspects and it was fun. I scored nearly 10,000 points in a few minutes, though it helped that Jim had already racked up 160 multipliers. I'm now more encouraged to work on my code speed.

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The WPX has an interesting point I need to explain. Although we made 275 contacts for 142,000 points, I missed the deadline for submitting (which was only 5 days after the contest ended) so we didn't "enter". I am pointing out that you do not have to "enter" for the other stations to get credit. So this one turned out to be "just for fun" which is the important thing anyway, isn't it?

So why don't you "drop by" and join the W4QO QRP Contest Team for future events. Remember it's all about fun and learning something new. We might explore using different antennas, different radios, or different software. Watch the reflector for emails inviting YOU to become a member of the "fun" W4QO QRP Contest Team this summer. And if you want to enter a contest that I have not identified, just contact me (w4qo@nfarl.org) and we'll work something out, for sure!



Colby, KN4KSE and Diane, KN4KSD
operating in the GA QSO Party as N4F/W4QO.

Contact Us

President	Daryl Young K4RGK	President@nfarl.org
Vice President	John Tramontanis N4TOL	VicePresident@nfarl.org
Secretary	Martha Muir W4MSA	Secretary@nfarl.org
Treasurer	Fred Moore N4CLA	Treasurer@nfarl.org
Activities Chairman	Mark Coleman KJ4YM	Activities@nfarl.org
Membership Chairman and HamCram	Pavel Anni AC4PA	Membership@nfarl.org
Past President	Mark Schumann KK4FOF	PastPresident@nfarl.org
Mentors / Elmers	Chuck Catledge AE4CW	Elmers@nfarl.org
Field Day Chairman	Scott Straw KB4KBS	FieldDay@nfarl.org
Scout Coordinator	Jon Wittlin K4WIT	k4wit@nfarl.org
ARES Liaison and Community Relations	Jim Paine N4SEC	n4sec@nfarl.org
Repeater Operations	Mike Roden W5JR	Repeaters@nfarl.org
WebMaster	Bill Cobb K4YJJ	Webmaster@nfarl.org
NFARL eNews Publisher-Editor	Daryl Young K4RGK	k4rgk@nfarl.org

North Fulton Amateur Radio League

P.O. Box 1741
Roswell, GA 30077

nfarl.org

eNews can be located online at:

<https://www.nfarl.org/enews/eNewsIndex.html>

Club Repeaters

Frequency—Description	P.L. Tone	Location
145.470 (-) EchoLink Node 560686 NF4GA-R	100 Hz	Sweat Mountain
147.060 (+) Primary ARES Repeater	100 Hz	Roswell Water Tower
224.620 (-) Joint Venture with MATPARC	100 Hz	Sweat Mountain
443.150 (+)	No Tone	Roswell Water Tower
444.475 (+)	100 Hz	Sweat Mountain
927.0125 (-)	146.2 Hz	Sweat Mountain

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