



*North Fulton
Amateur Radio League
NFARL eNEWS
December 2016*

www.nfarl.org



HAPPY HOLIDAYS!

President's Letter

It was great to see so many members at the 2016 Holiday Party. Everyone that attended enjoyed an evening of delicious food, festive decorations and a chance to relax and reminisce with their fellow club members and family. A special thanks to Lori Young K4UPI and her elves for coordinating a fabulous evening.

As I reflect on 2016, it has been an exceptional year for NFARL!

Field Day 2016 - NFARL placed 1st place in the ARRL Field Day division 3A and 11th overall! This was 1st place nationally (2nd year in a row) in category 3A with over 300 entries!. This was the highest NFARL score ever! - every bonus point available was earned this year – 14,610 points! Anyone for a trifecta in 2017? At the Holiday Party, John Kludt, K4SQC was presented with an award for leading the field day efforts for the last two years! Lynn Kahn, N4MSK also received an award for leading the team (for as long as I can remember) that ensured the Field Day team and their families were well fed and hydrated!



Merit Badge class at Field Day - over 20 Boy Scouts earned Radio and Emergency Preparedness Merit Badges - classes were organized and taught by a number of NFARL instructors.

HamJam 2016 - The YESA (Youth, Education, Scholarship & Activities) team and our partners exceeded expectations with three world class speakers, over \$6000 in prizes resulting in over \$7,125 in gross proceeds to support youth activities and STEM (Science, Technology, Engineering and Math).

(Continued on page 2)

(Continued from page 1)

National Parks on the Air (NPOTA) Club Activation– Terry Joyner, W4YBV and Jim Paine, N4SEC lead the club activity using the club call sign for NPOTA. While the ARRL is tallying the final results, Terry and Jim presented the club with an award for the successful activation of Chattahoochee National Park – Allen House in August. Terry and Jim were presented with an award for their efforts at the Holiday Party. Stay tuned as they have another exciting club project for 2017!

GA QSO Party – About 35 members participated and we won the gavel for the 7th time!

N1KDO! NFARL club member Jeff Otterson, N1KDO received a QST Cover Plaque Award for his article entitled *A Field Portable Multi-Band Rotatable Dipole*. Congratulations to Jeff!

13 Colonies Contest - Club member Nathan Wood, K4NHW organized and led the GA effort on behalf of NFARL (again the GA organizer and QSL manager for this contest) and designed the GA QSL card. NFARL sent out over 700 Georgia QSLs.

North Atlanta Fox Hunt – NFARL participated in a multi club Fox Hunt sponsored by GARS that started on Holcomb Bridge Rd and ended at a park off the beaten path in South Forsyth county. NFARL's own Bob Freeman, KI4SBL and Pat Meyers, N4ZAX won the Fox Hunt Doppler assisted class!

Youth Activities – NFARL lead a number of successful youth activities including:

Girl Scout STEM – NFARL partnered with GARS for another successful Girl Scout STEM Expo at Gwinnett County Fairgrounds. Kathy Freeman, KI4SBK led our club efforts which included a number of interactive exhibits. Kathy has also be involved in developing the Girl Scout "ARRL Radio and Wireless Technology Patch" which was available at the event!

Boy Scouts – Jon Wittlin, K4WIT assisted by Neil Foster N4FN led NFARL Boy Scout Activities which include the Boy Scout Radio Merit badge at Field Day and Jamboree On The Air in October.

Makers Faire and Stone Mountain HamFest – The Maker's Faire booth was a collaboration of NFARL, GARS, Atlanta Radio Club and Alford Memorial Radio Club. NFARL's own Martha Muir, W4MSA assisted by Jim Stafford, W4QO hosted the Student Shack at Marker Faire and Stone Mountain HamFest. At Stone Mountain, Martha and Jim were assisted by Mike Cohen, AD4MC; Fred Ackley, KK4JYO; Pavel Anni, AC4PA; Cathy Freeman, KI4SBK; and MSA students and NFARL members James, KK4QHQ; Colin, KM4SZO; Audrey, KM4BUN; Edem, KM4PQG and former MSA students Alexa Shuster and Ben Groff. The Student Shack immersed the youth in an interactive learning experience featuring a variety of amateur radio and STEM activities including sending your name in CW, soldering a blinky LED project, RTTY station, digital station, a 2M station and a literature information station.

(Continued on page 3)

(Continued from page 2)

VE Testing and Amateur Support Activities – Ian Kahn, KM4IK and his VE team awarded 122 elements (new or upgraded licenses) and our Ham Cram team completed a Technician class with over 90% of the students passing!

Membership – NFARL’s membership remains healthy with over 300 members. In 2016, NFARL added 35 new members to our roster an increase of 5 members over 2015! NFARL is the 10th largest ARRL affiliated general purpose club in the country.

Ham Of The Year – At the Holiday Party, I had the honor to present Fred Moore, N4CLA the Ham of the Year award for his outstanding contributions. Fred has served NFARL since the club’s inception! While many members know Fred from the registration table at the NFARL meetings, many of his contributions have been behind the scenes including developing club budgets, handling the club finances, legal, printing and accounting for the HamJam tickets and attending the majority of the club events. What you may not know is he was instrumental in setting-up NFARL’s first repeaters, was a member of the NFARL 2.0 team that transformed and grew NFARL into the club it is today and he lead the team that moved NFARL repeaters on Sweet Mountain to a new location this year! Join me in congratulating and thanking Fred for all of his contributions!

As I said, 2016 has been an exceptional year for NFARL! The Executive Team and I are looking forward to a great 2017!

Seasons Greeting and Happy Holiday’s!

73’s!

Mark

Mark Schumann KK4FOF - NFARL President



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 "how to".
- **Every Wednesday — Hungry Hams Lunch Bunch** - 11:15 AM
Slope's BBQ, 34 East Crossville Road, Roswell.
- **Every Wednesday — Youth Net** - 7:00 PM - 145.47 MHz (-) PL 100
Contact Martha W4MSA if you are a student, teacher or educator
- **Every Thursday — YL Net** — 8:00 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 Tuesday — NFARES Meeting** - 7:00 PM - 9:00 PM
Fellowship Bible Church, 480 W. Crossville Road, Roswell.
Check [NFARES.net](#) for more information.
- **Third Tuesday — NFARL Club Meeting** - **January 17th, 2017**, 7:30 PM.
Pre-meeting activities begin at 7:00PM.
Location: [Alpharetta Adult Activity Center at North Park](#)
13450 Cogburn Road, Alpharetta, GA 30004
Watch for the January Edition of eNews for January program information.
This program will be presented by one of your club members and it's sure to have something for everyone!
- **Fourth Tuesday — NFARL Executive Team Meeting**
January 24th, 2017, 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.

SkyWarn Recognition / Tim Lemmon, WK4U

Starting back in December, 1999 (when I was listening with a portable HF radio topside on a cruise ship that weekend!), the National Weather Service & the ARRL created an annual event on HF radio called Skywarn Recognition Day. It usually falls on the 1st weekend each December. A simple and fun event to recognize our beneficial relationships with each other.

Have you listened to our local FM repeaters when we have severe weather? Many are linked to a ham station right here at the weather service office in Peachtree City. In fact, when severe weather is in our area, up to three forecasters work together in a large cubicle area with all their computers and video monitors. The ham station is right there with them in that same cubicle. With our radios, we get to hear updated weather information from the horse's mouth, and if needed, send current weather data directly to the forecasters from our area using the same linked repeater net.

Last Saturday I was lucky to spend the afternoon and operate WX4PTC on HF radio. We worked stations all over the country and Canada. Even W1AW as a bonus station. Skywarn Recognition Day is a 24 hour event where almost 100 weather stations (including Hawaii and Alaska) get on the air and work as many station as they can. We put WX4PTC on the air in "run" contest mode and in six hours made 371 contacts. Often we had 3+ hams calling us at the same time. Real fun working them and logging them as fast as we could. SRD isn't a real contest per se, so many of the operators are not in that mode. Even so, we averaged just over one new contact every minute. Everyone participating can earn a certificate based on the number of NWS stations they end up working. With just one contact, you earn a Cumulus certificate. Six contacts earn you a Towering Cumulus certificate. Get 80 or more and you earn the Category 5 Hurricane certificate :) Another fun reason to get on the air!

Next year we may include the D-Star station too. We'll need to find a group of operators to run that station. We're thinking of connecting to a major reflector (30C or 01C)? We also need more contest minded operators to "run" the HF station for maximum Q counts. Rig is a 100 watt Kenwood TS-590S into a DX Engineering multi-band dipole up about 30 feet. Nothing fancy, but we consistently received excellent signal reports from all over. I'm told this HF radio has been used to communicate with the NWS office in Birmingham Alabama when severe weather was headed our way.

If you are interested in helping with this event next December, let me know and I'll connect you with the coordinator. Either way, I hope many of you get on the air next December and try working as many NWS stations as you can! It's very easy and enjoyable.

Tim, WK4U

US ISLANDS FOR 2017 ! / Terry ,W4YBV

The US ISLANDS Awards Program has a new look for 2017 with a new Patch and a new Web Site at usislands.org

Please check it out.

I hope to start an official NFARL U.S. Island club team. We will need a lot of volunteers from the Club.

I hope to have a number of Club expeditions to a number of new islands in Georgia and Florida.

This will be a great chance for club members to get out of your shack and go on great trips in 2017.

We have Boats for Lakes and River islands expeditions in Georgia and Boats and Homes to stay at in Florida.

Also, a number of islands we can drive or walk on if you don't like boats.

I will be putting out more information after the first of the year.

Terry W4YBV



NOTICE NOTICE NOTICE

The NPOTA club contest ends on Dec. 31 2016.

Any NFARL club members who took part in the NPOTA program are eligible for CLUB CERTIFICATES and PRIZES to be awarded at the February 17, 2017 meeting.

If you were a park Chaser or a park Activator you must E-mail your scores to me no later than February 1, 2017 for counting to w4ybv@yahoo.com

Your scores will be verified by NPOTA/LOTW UNITS.

Winners will be contacted no later than February 10, 2017 and invited to our February 21st meeting to receive your certificates.

Good luck to all.

For more info please call Terry W4YBV 770-993-8502.

New NFARL Officers

Per the NFARL By-Laws the president appointed a nominating committee to present a slate of officers for the year 2017. At the October NFARL meeting the membership voted to accept the slate of officers as presented by the nominating committee.

The newly elected officers have assumed their positions as of the close of the holiday party on December 10, 2016. Please welcome our new officers for 2017 and plan to support them throughout the coming year.

Mark Schumann	KK4FOF	President
Daryl Young	K4RGK	Vice President
Lori Young	K4UPI	Secretary
Fred Moore	N4CLA	Treasurer
John Tramontanis	N4TOL	Activity Chairman
Pavel Anni	AC4PA	Membership Chairman
Bob Beeman	k4bb	Past President

NFARL 40th Anniversary !

The 40th year club Anniversary is coming up in 2017!

I would like to have our Club members think of how we can celebrate our Anniversary.

Please let our executive board know what you think about what we could do all next year.

Like a Special Event Station, Anniversary party, Anniversary Booth at ham fest , Special QSL's and so on.

So let's all think about it.

Terry W4YBV

In Praise of the Lowly Manual / John Kludt, K4SQC

So, there I am, working with the students at Mill Springs Academy. I think I was trying to get FLDigi working again after a computer crash. For those of you who have not been to the Mill Springs shack their main rig is a Yaesu FT-897. I needed to change or at least look at one of the settings on the radio. Now, I have an FT-817, actually two, one for satellite uplink and one for satellite downlink, and while the menus are similar they are not quite the same as the 897.

Me: "Does anyone know where the manual for the 897 is?"

A very, very long silence followed.

Student somewhat reluctantly and with a hint of embarrassment: "Dr. John, are you really a ham?"

Me, somewhat surprised at the question: "Well, gosh, I think so. Why?"

Student: "Because another ham we work with says that real hams never use manuals!"

Now I understand that in the days of a 6AG7 driving an 807 final that was probably true. Was for me. Once I somehow learned the desired grid current and the plate current it was easy to flip the meter switch to grid and adjust the drive tuning, then switch over to plate and "dip and load" to the required plate current. If really compulsive, I would flip back to the grid current just to make sure it was still set and then away I would go. By the way, that is how I managed to make contacts for over thirty years without an antenna tuner. You see, the pi-network output very common on the old tube rigs *was* an antenna tuner. Never used a balun, either, but that's another story.

I still have a Collins KWM2 that was a bit more difficult to remember how to tune unless I did it very often. It has a sequence to go through that involves a switch labeled along with other positions "tune" and "lock." I am forever forgetting the sequence of events. The concept is the same, tune the grid circuit, set the grid current, and then "dip and load" on the plate. How do I remember the sequence? My memory jogger is (drum roll) TM 11-5820-529-15 Section 2-3. It sits right next to the rig!

The last tube rig went out of production somewhere in the late 80's or early 90's. The modern transceiver (does anyone even make a 100 watt transmitter separate from a receiver anymore?) is a solid state wonder. Inherent in the architecture is "*the menu*." The menu is a powerful tool that allows the operator to customize an increasing number of parameters on the fly. It can also be a great source of confusion as I struggle to remember, how to get into the menu, once there, where a given function resides, how to change it, and then most important, how to save those changes.

I do use a couple of tricks to help me along. Most of my radios are by the same manufacturer

(Continued on page 9)

(Continued from page 8)

because, at least with Yaesu, the menus are similar. I also own a Kenwood HT and an ICOM IC-910H, both for satellite work. I know the Icom pretty well because it is an older rig with a simple menu structure. With the Kenwood TH-D72A I never leave home without the matching *Nifty Mini-Manual*. If you have never worked with one of these manuals they are small and spiral bound so they lay flat. I mean, quick, how do you enable the internal GPS unit? Look on page 13!

Many rigs don't come with manuals or they get lost. Either way, they are available for download online. Reading them online is okay for a one off setting but can be kind of difficult for day to day use. When I was working with a hospital information company the human factors folks told us that people comprehend better when the "book" is in the normal position, basically in the lap with the reader looking down. We actually modified the nursing stations back in the day so they had a glass top and the monitors resided vertically under the glass. There can also be a problem with screen real estate at times. My answer has been to download key manuals onto a thumb drive and take them to Office Depot and have them print them and spiral bind them. It costs maybe \$10 to \$15 but I now have a set of manuals that I can lay in my lap or on the table top while I am working on something. My manuals for Flex have gotten that treatment. Maybe not your cup of tea but it works well for me.



So what's the bottom line in all of this? Modern rigs are wonderfully powerful and also very complex pieces of equipment. Maybe you can get by with just turning them on and using the default settings but there is so much more there. And you did pay for it so why not use it? So keep those manuals handy and don't be afraid to use them. They are the keys to more enjoyment as we play modern radio.

"Hi, my name is John and I use manuals."

Mid Month Madness 2017

As we prepare to roll into the new year, the club's plan is to be more formal in activities that occur between meetings in 2017, aka "Mid Month Madness" (MMM). Note, however, that some of our "regular" activities such as TechFest will be considered an MMM.

Typically these activities are planned for the first Saturday of the month, but some may occur on different Saturdays of a month as schedules dictate. We have ideas for the entire year, but your suggestions are welcome for a MMM activity that could be held for about 2-3 hours on a Saturday morning - please forward your suggestions and ideas to us.

To add to the fun, we will be keeping track of those who participate in each MMM so they can be recognized for their efforts at the end of the year. The definition of "participating" will be covered in the promotion of the MMM event.

The January MMM will be the Gwinnett Amateur Radio Society (GARS) TechFest on January 14, 2017. GARS hosts this event, but many of the area clubs and interest groups participate by setting up tables and demonstrations explaining some aspect of ham radio or technology.



For many years, NFARL has sponsored a youth "build-a-thon" where students get to solder up a basic kit. We usually have about 20 – 25 youth completing their project. Also, some adults "sneak" in to learn soldering techniques. Our club again will be hosting a build-a-thon at the 2017 TechFest .

To qualify as a participant in this MMM, you must volunteer to "elmer" at one of the soldering stations where a youth will sit beside you. You will coach them in building their kit. Don't know how to solder? Well, they say the teacher learns more than the students, right? We'll show you how in about 5 minutes before the action begins. There will actually be two different kinds of kits. One will be a soldering practice kit. Each student will build ½ of the project, taking the kit home to finish. A student must be 12 or older, or already a licensed ham, to build this kit. We are focusing our efforts toward this group to build interest in ham radio. The other kit will be simpler such as an LED blinky along the lines of what has been built at the Maker Faire.

The February MMM will actually be held on January 28 from 10:30 AM to 1PM. Roger Shaddick, N7BU, will be the coordinator for this one. The title will be "**Putting on those Pesky RF and PowerPole connectors**". It will be held at the new East Roswell Library at 2301 Holcomb Bridge Rd. Stay tuned for further details in the January eNEWS.

73 John N4TOL and Jim W4QO

Scenes From Our NFARL Holiday Party 2016 !



Many, many more photos are available online.
Please Visit

NFARL.org !

Mill Springs

Earlier this month, Mike AD4MC and Fred KK4JYO went to Mill Springs to work with Martha's ACE students on digital radio communication. Unfortunately, a band concert for the 'high school' took the majority of the students in ACE out of class for this great lesson (though they are not in high school yet, they are in the band). This left Mike and Fred with a great student to teacher ratio of 2:2.

One big area of emphasis for Mike and Fred was the use of ham radio in emergency situations. They talked about their work, meetings, and practice with NFARES and Mike's work with the Sandy Springs Fire Department. Mike showed the students his new compact 'go kit.'



After a few statements about the general idea and requirements, Mike and Fred each worked with a student as they sent hi's, hello's, and silly comments back and forth to each other digitally. After working with their personal radio equipment, Mike and Fred took the students back to the MSA HF station to make some PSK-31 contacts on 20 meters. (By then the ACE students who were involved in the band concert were back and were able to enjoy this final portion of the lesson.)



The students were understandably enchanted by this digital magic. "This is cool!" was stated more than once. This was another great lesson generously brought to MSA by NFARL mentors. Thanks Mike. Thanks Fred.

Youngsters on the Air

What's with all those young British accents heard recently on the 145.470 repeater?

John Hislop G7OHO had arranged with Martha W4MSA to have students from the Wellesley School House talk to students at Mill Springs Academy using NFARL's Sweat Mountain repeater on the morning of December 9.

As part of a British "Youngsters on the Air" program and using the special call sign GB16YOTA, for nearly an hour students ranging in age from 8 to 13 exchanged questions concerning their ages, the weather, what classes they enjoyed, and what sports they enjoyed.

It turns out the temperatures on both sides of the conversation were about the same but what boggled the minds of Martha's students were the statements from the British students that the sun was setting there though it was only 3:30 or so in the afternoon. None the less, special smiles generated by this taste of ham magic were seen on faces on both sides of the Atlantic Ocean.

Why Won't This Darn Rotor Turn? / John Kludt, K4SQC

It seems my friend has a magnetic receive loop up on the roof. This particular antenna is very good at nulling out man-made noise if you can turn it to null out the noise source. This friend of mine had a Hygain G-800 rotor he was given "for free" so the antenna was up on the roof on that rotor. Overkill on the rotor? You bet! But the price was right. However, it just didn't seem to be working correctly. Being the youngest of the pair, I climbed up the tower next to the house and up on the roof to tighten everything down, check the cables, etc. etc. Looking good!

Back down the tower, into the shack, plug the cable into the controller, turn on the controller, hit the <CCW> switch – meter doesn't move. Maybe it is just a metering issue. So one of us inside, one of us outside, "Okay, hit it!" "Nope, nothing moving!" Interesting aside here – I just counted and I have 5 HT's of varying flavors sitting next to my workbench. Yet, for this project like so many other outside projects we chose to use the time honored amateur radio antenna project communication method – yell at each other!

Anyway, back to the main story. So back up the tower and not the roof. Plan was to remove the loop and take the rotor off the roof mounted tower and bring it down to the work bench and trouble shoot it. Must be a broken wire, something like that. The loop is about the size of a hula hoop (do I date myself?) and it came off in a snap. I unbolted the rotor and as I turned it to put it under my arm a stream of rust colored water ran out on the shingles. "Hum? Not good!"

Down in the shack we opened this little puppy up and what to our wondering eyes should appear? It wasn't 12 tiny reindeer.

Turns out Hygain rotors like most rotors are water resistant *if* they are mounted in the proper orientation. Water resistant, not water tight. Somewhere in the recent past of this particular unit it must have been mounted upside down which is definitely not to design spec. Now I suppose we could have stripped it all down and tried to fix it. But a trip to HRO for a new G-450, more than enough rotor for the loop, was a heck of a lot quicker and a probably no more expensive than trying to repair the original unit.



The antenna and rotor are back on the roof. The rotor is mounted right side up and all is working just like it is supposed to. The loop really does null out man made noise just like it is supposed to.

So maybe the moral to the story is most rotors have a right side up and an upside down and they really work better over the long haul if installed right side up.

We wish everyone a wonderful holiday season and a happy new year. We look forward to seeing everyone, doing great things together and working with all of you while having fun in 2017 !

-Your NFARL Executive Team

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Club Repeaters

Frequency—Description	P.L. Tone	Location
145.470 (-) EchoLink Node 56086 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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