



North Fulton Amateur Radio League NFARL eNEWS

February 2019

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

www.nfarl.org



Georgia QSO Party - Get On The Air / John Tramontanis, N4TOL

The 58th running of the Georgia QSO Party (GQP) will take place on April 13-14 this year. The object of the GQP is for amateur radio operators outside of Georgia to make on the air contacts with stations located inside the state of Georgia, and for amateur operators in the state of Georgia to make contacts with all other hams both inside and outside the state of Georgia.

This is a great opportunity for Georgia stations to "Get On the Air". Have you been avoiding HF operation due to lack of activity and weak band conditions? Well, with some smattering of warmer weather during the past few weeks, the winds of spring (and the hopes of rising spring propagation) are teasing us. There have even been several "e-skip" openings on 10 meters, and recent reported wide open band activity on 20 meters. As solar cycle 24 is nearing its end, could cycle 25 be giving us a peek (or "peak") of what is to come?

So, if you haven't hit the power switch on that rig lately, you may be missing out on some fine HF activity. The GQP will provide a chance to feed your hunger for active bands by putting Georgia on the air. This is a great opportunity to "tune up" your station, antennas and software and allow you to "be the DX." You can practice "running," calling CQ and letting other stations come to you.

The members of the North Fulton Amateur Radio League have always been key participants in the GQP. All NFARL members are encouraged to participate in this year's event. The GQP will provide a chance to feed your hunger for active bands by putting Georgia on the air.

We will be discussing NFARL plans for the GQP in the coming weeks and providing details on how you can participate as part of the NFARL GQP team. Please see the webpage below for detailed info on the event.

<http://georgiasoparty.org/>

73,

John, N4TOL

The Georgia QSO Party



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".
- **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** - 7:30 PM.
Pre-meeting activities begin at 7:00PM.
Location: [Alpharetta Adult Activity Center at North Park](#)
13450 Cogburn Road, Alpharetta, GA 30004
- **Fourth Tuesday — NFARL Executive Team Meeting**
January 22, 2019, 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.
- **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.
This is a great opportunity for YL's to get on the radio with other YL's!
- **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.

US Islands Activations / Terry Joyner, W4YBV

On February 9th and 10th I activated two islands in Florida, Casey Key **FL 272-S** and Elk/Nokomis Boat ramp **FL 273-S** in South Florida.

Conditions were not the best, I started off on 20-M and then went to 40-M. I had a total of 49 contacts from the islands working 21 states and 3 countries using our club call NF4GA. On Sunday I teamed up with a Parks On The Air Station AD4XT Steve from Columbus, GA who was located in Providence State Park GA. He was on 7.260 and we worked together from an island and a park at the same time having a few pile ups. This was first time that I have worked with a park station and it was fun.

Well we have kicked off the US Island 25th Anniversary contest for the club so jump on an island soon.

If you are planning a trip to Florida this year it's a great place for islands. Florida has the most islands, 563 total islands. 205 of these are qualified islands while 61 have not yet been qualified. It now takes only 15 contacts for you to qualify a new island.

Please check out usislands.org for all the contest information.

Terry, W4YBV



Please help support NFARL eNews!

Your eNews team is calling for original articles from NFARL members for your newsletter.

Please always email your articles in MS Word or other original editable format to enews@nfarl.org and include your content as attachments. Please avoid sending pdf's unless it is for reference only and is accompanied by the originating document. Photos, charts, etc. can be included in your document or included as additional attachments.

The submission deadline is usually the second Monday of each month.

Thanks for supporting NFARL and your club newsletter!

January VHF Contest / John Kludt, K4SQC

Jim Worsham, W4KXY, a long time VHF Contester has been heard to say,

“The June VHF contest is about 6 meter sporadic E’s. The September VHF contest is about tropospheric propagation on 2m and up. And I am really not sure why we have a January contest.”

In January E’s are rare and tropo is even rarer. Most of the stations we usually work in the North east are frozen out of their mountain top, well hill top, locations. This January they were even frozen out at home with ice coated antennas and frozen rotators. Here is an interesting question for TechNet – why does ice increase the SWR of an antenna to the point that it is unusable?

This year’s January contest would have been no exception to the usual “slow contest” claim but for the digital modes of FT8, MSK144 and JT65. Much of the day, especially on 6m there was almost constant FT8 activity both for Q’s and grid multipliers. When the Q’s on FT8 started to wane and especially at night and in the wee hours of the morning there was MSK144. If you have never worked MSK144 it is a “fast mode” designed especially for meteor scatter. When a meteor hits the ionosphere it leaves behind a trail and you can bounce radio signals, pings, off those trails. The meteor scatter folks call the meteors “rocks” and the signals “pings.” And “pings” they are because a signal may only last a very few tens of milliseconds. Contacts can be made out to about 1,200 miles by using “rocks” and “pings.”

MSK144 is a little different than most of the other WSJT-X modes. Most of the other modes wait till the end of the period and then decode the entire message. MSK144 decodes what it is receiving real-time. If things are busy it takes a bit more computer to keep up with the flow of information. Sometimes you will see the same message several times in the same 15 second sequence as the signal bounces off multiple bits of trails in the course of a single pass. There is lots of meteor scatter activity on 6m and some on 2m.

Especially on 2m, 1.25m and 70cm this contest saw a favorable moon. That brought into play JT65 and moon bounce. We have talked about EME before. Certainly the digital modes have made EME much more accessible to the average ham. All good stuff.

Yes, we had some phone Q’s and a few CW Q’s but this really was a digital contest and maybe that is what the January contest is for. The advent of WSJT-X has certainly changed the face of VHF contesting and probably for the better as new people join the ranks. Every modern rig has 6m on it and there really is no reason not to get on. If 6m is open, it’s open and if it is closed a kw and huge beams won’t matter. And then there is the magic of FT8, MSK144 and JT65.

We will be running FT8 on 6m for Field Day this year. If January is any indication it will be a game changer for Field Day as well. As the 6m band captain I invite you to drop by and give it a try.

John, K4SQC

NFARL at Mill Springs Academy / Jim Stafford, W4QO

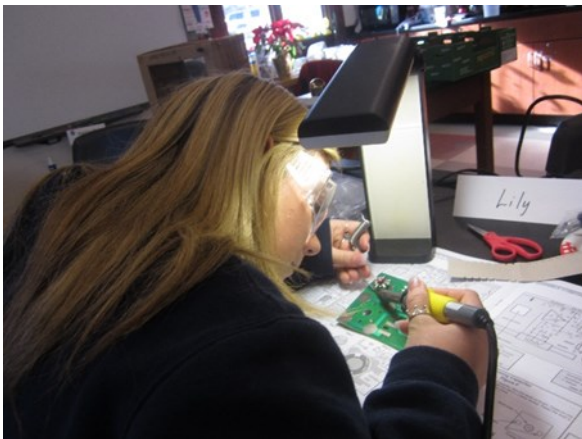
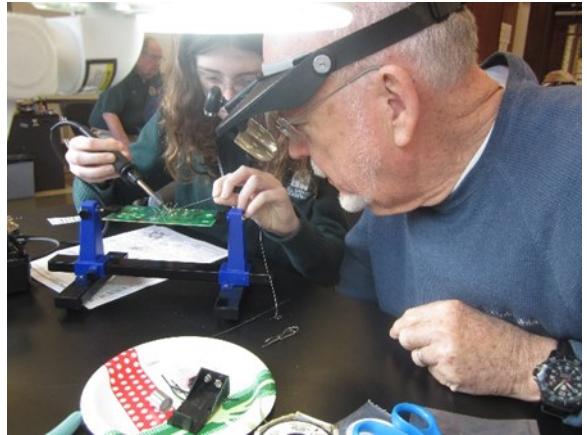
During the week of January 7, eight member of the club held an Electronics class for MSA.

This was part of the students' Winter Learning experience where they sign up for special interest week long classes. This was a bit of a repeat of a similar class we did 4 years ago. There were 7 students in the class which preceded a licensing class taught by Martha, W4MSA.

The "instructors" and their subject matter were:
Chuck, AE4CW – Electricity is Magnetic
Jim, W4QO – Circuits and Electricity
Garry, AK4NA - How radios work and more
Mike, AD4MC – Digital communications

Then on Thursday, Chuck, Jim, and Garry along with Grant, KK4PCR and Dana, KN4BEV, worked with students to build (yes, solder) their own AM radios purchased with money from HamJam funds. The kit was a good one – an Elenco AM-780K. It's about \$15 on Amazon. You should have seen the smiles as the radios came to life. All eventually worked after some trouble shooting by team leaders.

Friday brought – Jim, W4QO, on antennas, Wes, W3WL on propagation and John, K4SQC, on satellite communications.



If you are interested in helping or just keeping abreast of what I call EduComm activities, drop me a line w4qo@nfarl.org and you might help us at the next event – the Science Expo on March 23 at Piedmont Park in Atlanta. We do this as partners with other Atlanta area clubs ... check <http://atlantahams.com/>



Super Bowl VHF Listening for Ham's / Nathan Wood, K4NHW

With Super Bowl LIII in town, I just had to turn this into a radio event somehow. Then I heard about the USAF Thunderbirds arriving at Dobbins ARB for the flyover! I watched several videos and news stories of their preparation and practice runs for the event! Then I thought, "Wonder if I can monitor their radio traffic during the big event?!?!?" Although not exactly on ham radio bands, the equipment, preparation and lessons learned are for any amateur radio operator!

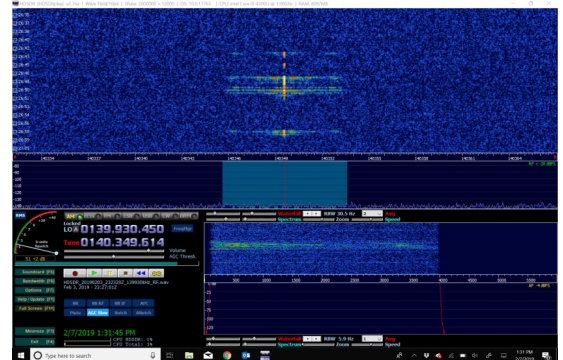
I knew the location and I knew the time. I did not know the frequency that they would be on. By the time that I got serious about this idea, they had already completed their trial runs and I had no chance to monitor for any "practice". I turned to the NFARL reflector and asked if anyone had any resources for the possible frequencies. I received several great responses with a variety of frequencies and ranges. I decided which range was going to be my best chance of capturing the audio and I set my SDR receiver up for the big day!

I used the SDRPlay RSP1 with HDSDR as the software. It is an amazing SDR that can monitor a 10MHz spectrum at once! It has an SMA connection on the side that I usually attach to an external antenna from the shack. For this project, I decided to go with a more portable antenna since I was planning to be outside and only 14 miles from the Mercedes Benz Stadium. I used a SMA to BNC adapter and then attached a 2m/440 antenna from an HT. This combination, alongside my surface pro tablet, got me portable! I set the software to cover as many of the "possible" frequencies as possible and waited.



While Gladys Knight was singing the National Anthem, I started to see the AM carrier toward the right side of my screen. Just after the pass was visible on TV, I started to hear some audio on the SDR. (With the spectrum recorded on my tablet, I was able to go back and replay the pass and dig out the audio that I originally didn't hear.) Below is link to the audio I caught, condensed down to about 18 seconds.

http://www.k4nhw.com/?attachment_id=463



Lessons learned...

Prepare as much and as early as you can! I missed several of their trial runs that would have given me a good idea of their frequencies and range of my antenna. Don't skimp on the antenna. As well as mine worked, anything else even with the modest of elevation would have been better than the "rubber duck" attached to the SDR. I even had a Discone sitting on the ground in the back yard. I guarantee that I would have gotten more/better audio if I had that guy mounted even 10-15 feet above ground. Directional would have been even better.

End result...

1. I captured audio directly from all 6 USAF Thunderbirds during the big event!
2. I had fun doing it!
3. And I learned from it for next time!

Till next time, 73's! de K4NHW!

Online Logging of Ham Radio contacts (QSOs) - Part 2a More About LoTW/ Islands Activations / Bob Hensey, K4VBM

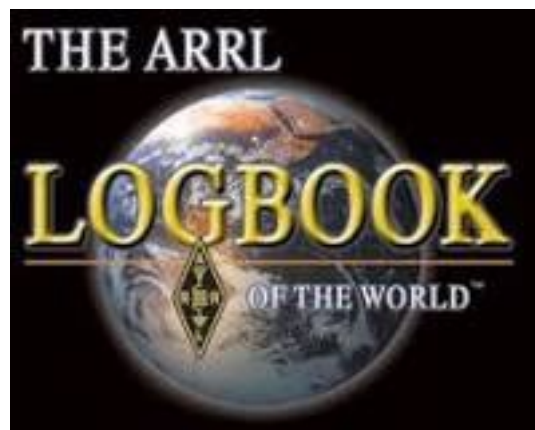
Hi again! Here is some more information that I hope you will find useful about Logbook of The World (LoTW), an online QSLing website provided by the ARRL.

I will assume that you have installed the TQSL application on your computer, applied for your call sign certificate, and received your postcard in the mail.

Note: You must have been issued a certificate before you can log on to the LoTW site.

Now that you have your postcard go to <https://lotw.arrl.org/lotw-help/getting-started/> and follow the instructions to set up your account and get your certificate. There is some really good use case scenarios at this site that is not included in this article.

Here are the additional basic set-up steps and use functions you will take to become an experienced LoTW user:

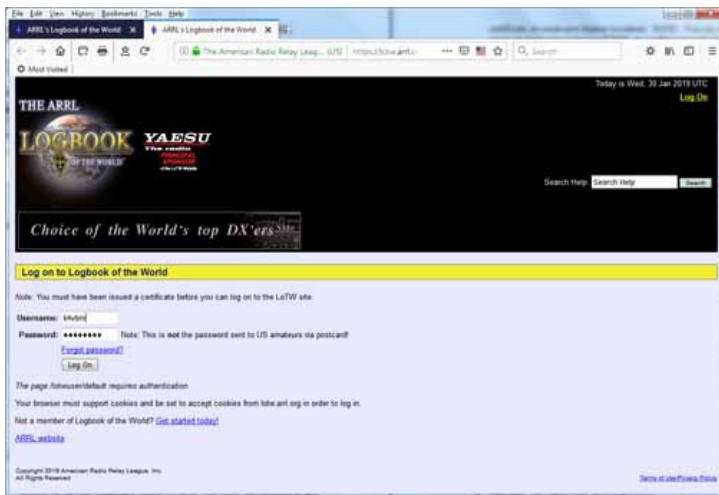


- 1. In TQSL: Adding Certificate, and Adding Station Location(s) To A Certificate** You will load the certificate from the email into TQSL, and then set up your initial station location including Grid Square, ITU Zone, CQ Zone, and possibly IOTA ID if you live on an island. Just so you know, a certificate can have more than one location associated with it, and since the FCC rules don't prohibit you from using your call sign anywhere in the US, you will add new locations for each QTH from which you operate (info such as a different Grid Square is important as it impacts LoTW awards for others).
- 2. In TQSL: Backing Up Certificates, Station Locations, and Preferences** I cannot stress enough that you back-up your Station Locations, Certificates, and Preferences used in TQSL. Under the "File" menu use the option "Backup Station Locations, Certificates, and Preferences..." which saves the data in a file named "*tqslconfig.tbk*". Make a copy of this file on a flash drive, or CD, or wherever and put it in a safe place. If something happens to your computer hard drive, you will be able to re-install TQSL (if necessary), and use this file to recover all call sign certificates, station locations, and TQSL app preferences that you had set before. Always make a new back-up whenever you get a new certificate, or create new Station Locations. NOTE: You can also use that file to create an exact same instance of TQSL on another computer for your use. (nice!)
- 3. In TQSL: Requesting Additional Certificates** For those of you who wish to sign /M when you are mobile or /P or /4 when you are operating portable, You need to use the option in the "Callsign Certificate" menu to "Request New Callsign Certificate...", and in a day or two you should get an email with the new certificate that you can load into TQS, and create associated Station Locations. I decided to use K4VBM/7 when I operate remote in Nevada, and K4VBM/4 when I operate portable in the 4th calling area.

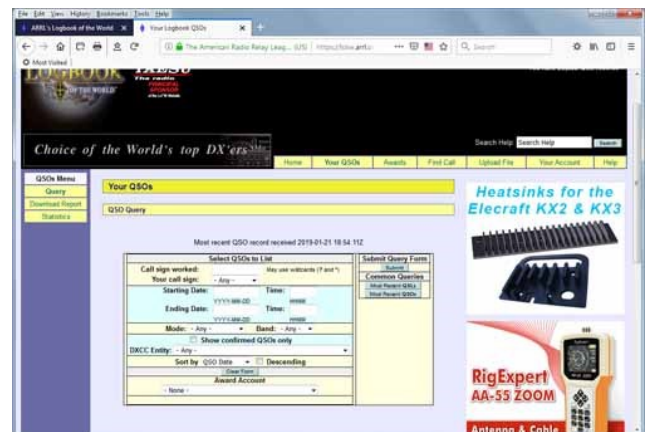
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4. **In TQSL: Uploading your logs** Here is where the fun starts. You collect your QSOs using some logging program and produce an .ADI file which you upload to LoTW using the TQSL function "Sign a log and upload it automatically to LoTW". You choose the file, the call sign, and the QTH (choose carefully because LoTW does NOT allow you to delete anything you have uploaded). TQSL checks validity of the QSOs in the file you choose, and will give you errors for any QSO that fails the validity checks. If that happens, you will need to correct your data, and try the upload again. TQSL also keeps a local store of QSOs that you have already uploaded and will tell you if you are trying to upload duplicates giving you the opportunity to exclude the duplicates, or just upload them all again. Try to upload regularly.
5. **ONLINE: Looking at your QSLs** Now it is time to login to your account on the LoTW website. The login page will look similar to what you see below:



Once logged in, the page changes and there will be a row of tabs across the bottom of the top section providing the functions you will use. Click on the one that reads "Your QSOs" which will reveal another page similar to this:



Inside the center box you can enter criteria or not to filter which QSOs to look at if desired, and then you click either the 'Most Recent QSOs' button to see everything you have uploaded matching the entered criteria or all of them if you entered no criteria displayed 25 at a time.

If you click the 'Most Recent QSLs', then you will display the QSOs that have been confirmed (i.e., your QSO partner uploaded a matching QSO record to yours) and these QSLs can be counted towards LoTW Awards. Have some fun trying out different queries using this function once you have uploaded some QSOs.

6. **ONLINE: Checking your Award Progress** The function to check your LoTW awards progress is accessed by clicking the 'Awards' tab. The resulting page allows you to choose which award category you want to view. 'Select DXCC Award Account' lists your progress chasing all the DX entities in the world for the various modes and bands. For DXCC awards, you need to achieve at least 100 confirmed contacts to earn the award for any mode or band.

'Select WAS Award Account' lists your progress chasing the 50 states in the US for the various

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modes and bands. For WAS awards, you need to have confirmed contacts with all 50 states to earn the award for any mode or band listed.

'Select VUCC Award Account' lists your progress chasing the various UHF/VHF awards. You need to earn 100 confirmed contacts to earn any of these awards.

Finally there are the CQ magazine's WPX and WAZ awards. For WPX awards, you need to accumulate different call sign prefixes (K4VBM would give you 'K4' prefix, and so on) in your confirmed QSOs. For WAZ awards, you need to accumulate all the different CQ Zones to earn awards. A map of DCQ Zones can be found here: <http://www.mapability.com/ei8ic/maps/cqzone.php>

7. **In TQSL: Renewing Callsign Certificates.** Yes, every call sign certificate that you are issued has an expiration date. You will need to renew it to continue to be able to upload your QSOs to LoTW. You can renew a certificate using the TQSL program pretty easily, and you will receive an email with the new certificate attached usually in a day or two. You don't have to wait for a certificate to expire to renew it, so a good practice would be to renew a week before the old one expires.

Take some time to investigate all these functions, and remember that whenever you upload your QSOs to LoTW, you are not only chasing your own awards, but you are helping your QSO partners earn awards. Try to do your LoTW uploads regularly.

There is a lot more detail about LoTW than can be fit in this short article, which is intentionally basic in nature. Don't be afraid to ask questions in our TechTalk net on Monday nights (see page #2) or on the email reflector. Hopefully you will get the answers you need. There are other LoTW functions like Applying for Awards, and How to apply received paper QSL cards towards LOTW credits or awards that are beyond the scope of this article.

Happy QSLing!

How to Make a Power Block / Garry Brass, AK4NA

I needed a power block to connect the four LiFePO4 battery bricks I bought from China. Each brick consists of four 3.3 Volt, 3.5 Amp Hour cells in series, with a circuit board in each brick to protect from over- or under-voltage or over-current conditions. I have four bricks for a total of 14 Ah at 13.2 Volts. I wanted to use Anderson PowerPoles™ for the connections but commercial power blocks are pretty expensive. This figure shows the selection available at the last Huntsville Ham Fest. Six port blocks were \$30 each!! So I decided to make my own. This is how I did it.



Anderson PowerPole pairs cost less than a dollar apiece. They have keystone shaped ridges and grooves on their sides and can be connected together using these shapes. The figure shows three separate PowerPole pairs and a set of three pairs (lower right) connected by their ridges and

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grooves. I always buy PowerPole "welded" pairs. If you use individual connectors, connect them in pairs first with maybe a drop of super glue.

To build the six-circuit power block make two sets of three PowerPole pairs connected with all of one color on one side (i.e., one side red and one side black.) Now cut six pieces of 12 or 14 gauge, bare, solid copper wire each two inches long. I used solid copper wire stripped from a piece of "12 gauge" household, three conductor wire from my junk box. My micrometer indicates that this wire, from the green ground conductor, is actually about 13 gauge. Crimp and/or solder on Anderson PowerPole contact fittings on each end with the hooked ends facing in opposite directions (actually these are only 1½" and I had to make new 2" ones).



Once these connecting wires are made, make sure that all the red connectors are on the same side and that the hooked ends of the contacts are facing the right directions to connect to the PowerPoles - then use them to connect the two triple PowerPole sections together back to back. Now cut another piece of "12 gauge" wire and solder the three ground-side connecting links together then solder another piece of wire to the three positive-side connecting links. Make sure these connectors don't touch. Now all the positive openings and all the negative ones are connected in parallel. For safety sake place a piece of insulating plastic (I cut mine from a gallon milk jug) between the positive and negative sides. For further insulation wrap the open center in black electrical tape or use a piece of one inch shrink tubing.



WARNING!!! This power block is not fused!

Batteries, even fairly small ones can deliver big current when shorted; fire and destruction may follow. Wired fuse holders costs less than a dollar and can safeguard your batteries and radios from a short. In the case of my LiPO4 batteries there is a protection board on each brick under the blue shrink wrap. Don't use this power block without protection.

I now have a six port power block, four ports for the four 13 Volt battery bricks, one for the power connection to my FT-817ND and one for charging. If you build a battery pack like this, make sure you use a charger meant for charging LiFePO4 batteries.

QTR?...A Brief Reprise / David Reynolds, G3ZPF ***(Submitted by Neil Foster, N4FN)***

In my article 'What Time is it (QTR?)' I mentioned that for a period of time the resistance to adopting GMT over Local Solar Time was so strong that clocks having two minute hands were produced, so you could see both at a glance.

'The Exchange' is a Grade 1 listed building, constructed in 1741 by John Wood the Elder, on Corn Street, near the junction with Broad Street in Bristol, England.

Originally referred to as The Royal Corn Exchange Building, because it was used as a corn and



general trade exchange, it is now used as offices and St Nicholas Market.

At first glance the front facade seems little different from other buildings of a similar age in the UK, but if you look closer at the clock you'll see that it has two minute hands. Amazing to see that such a clock has survived to the present day.

David G3ZPF
RAOTA President
www.raota.org



ISS SSTV Event / John Kludt, K4SQC

The weekend of February 8-10 saw an event hosted by ARISS, NASA and Roscom – the Russian Space Agency - to commemorate the 50th anniversary of the Apollo 8 mission to the moon. This was the first instance of a manned spacecraft leaving earth orbit, traveling to the moon, orbiting the moon and successfully returning to earth. The picture, Earthrise, taken by Astronaut William Anders has become the iconic emblem of that event.

To celebrate this achievement, a series of twelve images were transmitted from the International Space Station using Slow Scan Television (SSTV). For those of you not familiar with the mode, SSTV uses a series of tones to transmit an analog signal over the amateur radio bands within the standard voice bandwidth of 3KHz. One hears a series of tones and watches the image develop line-by-line. A newer innovation using digital technology also exists. For this experiment (in ISS terminology, most everything is an experiment) the older analog technology was used in a format called PD120.



EarthRise

There are many sections within the ISS. For this event the radio used was a Kenwood D-710E located in the Zvezda Service Module. This was the first fully Russian module flown and served as one of the early cornerstones in the construction of the ISS. There are three VHF/UHF antennas on the Service Module. These three antennas combined with the 25/50 watt capabilities of the Kenwood radio produced an SSTV signal that could easily be copied this weekend. This station (K4SQC) was able to detect SSTV signals at 2.5 degrees of elevation using an eggbeater antenna and mast mounted preamplifier. The receive radio was an Icom IC -910H rounded out with a Signalink USB.

SSTV can be found on all of the HF bands and several programs, some of which are freeware, are available to decode the SSTV signal. RxSSTV is a simple receive only program (<http://users.belgacom.net/hamradio/rxsstv.htm>). This program is based on the engine found in MMSSTV (<https://hamsoft.ca/pages/mmsstv.php>) that gives the user both transmit and receive capabilities. Commonly used HF frequencies can be found at (https://www.amateur-radio-wiki.net/index.php?title=SSTV_frequencies). For this ISS experiment the standard ISS downlink frequency of 145.800 MHz was used.

So, what did we see as the ISS flew over the QTH? Sometimes just a lot of noise but other times great pictures of historic events:



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In all, the twelve images were looped as the orbits progressed. The number of the image is in the lower right hand corner. These are images 5/12, 8/12 and 4/12. Image 4/12 of the Mars rover Curiosity apparently lost synch and became skewed in the middle of the transmission.

ARISS with the support of NASA, Roscom and the other space agencies involved in the program run these events a couple of times a year. Fifty watts 250 miles in the sky makes for a very easy to copy signal. If you didn't get a chance to capture any images this time we hope to see you "on the air" with the next ISS SSTV receive event.

John, K4SQC

So You Want to be a Ham / Jim Stafford, W4QO

I have tried to come up with a process that can be used at Science Expos, Maker Faires, and other events that the club members participate in whereby we can answer the question from visitors – OK, how do I sign up and what do I do next?

Unfortunately local ham classes come up rather infrequently so I've proposed we try a process whereby a person goes through a 4 step process to become a ham. Step one is the assignment of a NFARL mentor. Step two is acquisition of the ARRL license study guide. Step 3 is to go through the book and follow along on a video Youtube series. Step 4 is take the exam. But it is incumbent on the mentor to work closely with the "student" to set realistic goals and take the Technician exam on a certain date.

Elsewhere in this issue of eNEWS is the full page handout we would give to folks outlining this program. Actually, you could use this by giving a copy to your friends and/or family members who would like become a ham operator. We have a great mentoring program in the club and are always ready to help anyone. If you would like to help in this effort, send me an email at elmer@nfarl.org

Base Station Antenna at Home Depot / Bob Freeman, KI4SBL

What? Since when does the local big box store sell amateur radio antennas? We all know that Home Depot (HD) sells “parts” that can be used to **make** antennas, things like aluminum square and C-channel, fasteners, and the like. But having the HD become an antenna supplier comes as a surprise.

This all started while reading a posting on one of our sister club's reflector; there was a posting titled, “Antenna Like Diamond X200A for \$60.00.” This required some attention and further investigation. The posting is listed here for those interested: *(ed note: login may be required)*
<https://groups.io/g/GARS/topic/antenna-like-diamond-x200a/29619409?p=,,,20,0,0,0::recentpostdate%2Fsticky,,,20,2,0,29619409>

As it turns out, one can order the “Tram Amateur Dual-Band Base Antenna” from the HD on-line and have it shipped to a local store for pick-up. The listed price for the antenna is \$50.23 (plus tax). The HD page for the antenna follows: <https://www.homedepot.com/p/Tram-Amateur-Dual-Band-Base-Antenna-1480/300026057?MERCH=REC--PIPHorizontal1-rr--300026052--300026057--N>

Other antennas and related products are also offered on their site.

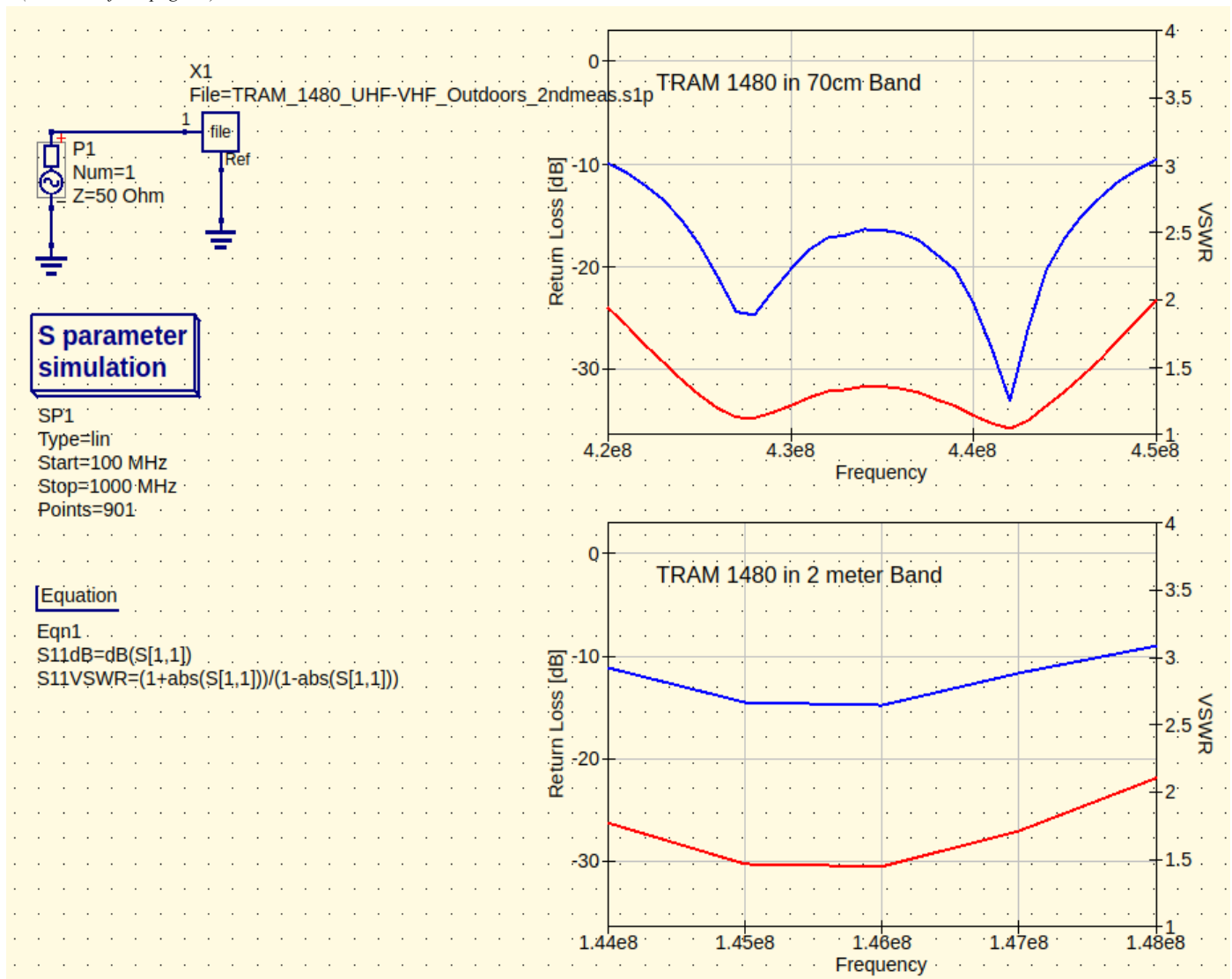
As it turns out, the antenna is nothing new and there are many reviews on eHam.net for the unit. The antenna, **TRAM Model 1480**, was purchased for installation at the QTH and measurements were made to verify performance – these are presented here for those interested. Antenna input impedance measurements were made using the DG8SAQ VNWA with the antenna mounted outdoors (using the included mounting hardware) on a tripod. Data from a broad frequency sweep of the antenna was then imported into the QUCS simulator for display. For reference, the specifications for the antenna (from the instruction sheet) are listed below:

GAIN	5dB (2m) or 8 dB 970cm) better than quarter wave antenna
VSWR	Less than 1.5:1
FREQUENCY RANGE	144-148 (2M) and 430 - 450 (70cm)
POLARIZATION	Vertical
IMPEDANCE	50 Ohm
CONFIGURATION	5/8 wave 2 element (2m) 5/8 wave 4 element (70cm)
POWER CAPACITY	200 Watts
CONNECTOR	UHF Female (SO-239)

The QUCS (qucs.sourceforge.net/) model and measured data are shown on the next page.

The measurement data show the VSWR failed to meet the 1.5:1 specification value over a part of the 430 - 450 MHz band (though it came quite close). And, similar results were found for the 144 – 148 MHz band. Now, measurement errors in RF systems are a fact of life and may include

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contributors from several factors, such as the environment, connector interfaces, connecting cables, equipment calibration, among others. In this case, tracking down those last few decibels will be saved for another exercise and measurement session to be done, perhaps, when the antenna is mounted in its final location.

As it stands, the antenna's performance in both frequency bands is deemed sufficient for use and would pose no risk to the transceiver equipment – especially, when a significant length of coaxial cable is routed between the transceiver and the antenna. Currently, the bottom line is: the performance of this economical dual-band base station antenna from Home Depot looks good and it will be an excellent addition to the radio station. Finally, we welcome HD as a new source of supply for antennas!

As always, if there are questions or comments, please e-mail or call the author.

Bob, KI4SBL
b.free@ieee.org



NFARL
North Fulton
Amateur Radio League

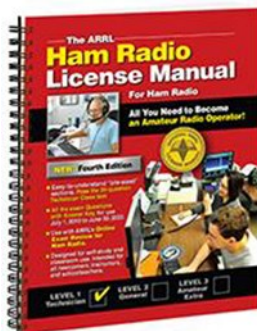


So you want to be a HAM? This is a one page guide to acquiring your ham radio license with help from the North Fulton Amateur Radio League (NFARL) – Roswell, Georgia Website: nfarl.org
Amateur (or ham) radio is a **very fascinating, fulfilling, and fun HOBBY**. In fact, it is more than a hobby. It is also considered a **SERVICE**. In ham radio, you can help your community in times of disaster. At the NFARL, we believe that the most fun occurs when you understand the basics behind ham radio.

Look at this video introducing amateur radio from our friends in England: <https://tinyurl.com/oxt7b2x>
Although obtaining a license is not difficult, it takes some time commitment on your part. We also believe you will enjoy the hobby the most when you are **associated with other amateur radio operators** at the local level. In fact, we'd like you to visit our website **nfarl.org** and attend one of our meetings.

One thing interested people always ask: Does it cost a lot? No. To get started, it costs about \$40. Radios can cost more but some start as low as \$30. A worldwide radio can be obtained for \$100 to \$200. The NFARL club has a radio loaner program for members and club dues are only \$30 per year.

Yes, you do have to obtain a **license to talk** or transmit on the radio. But you may listen without a license. People achieve their license at any age – **school kids to retirees**. To obtain your license from the US government (called the **FCC**), you need to pass a test. We'll help you prepare and do that.



Our program has 4 parts: 1) **Let us associate you with a MENTOR** (also called an ELMER), a person to help you as you study and learn. This mentor will meet with you either live or on the phone and will be a resource to answer questions and work to get you licensed and "on the air". To get started, send an email to elmer@nfarl.org. Include your phone number so they can chat with you and answer your questions. This is a very important step and highly recommended.

2) We recommend this study book – the **ARRL Ham Radio License Manual** which you can obtain at one of our meetings in Alpharetta or at our local radio store – Ham Radio Outlet on Buford Highway. <https://tinyurl.com/y7tbcedb> To buy? \$30 But our club also has loaner books. We suggest the spiral bound version.

3) A series of videos to watch. We suggest those by **Dave Casler, KE0OG**, from Colorado on YouTube. Do a search for KE0OG and notice he has a series of 38 short videos that follow the book we recommend. <https://tinyurl.com/ya78swyb> Dave has many other interesting amateur radio links.

4) Take the test at one of the NFARL (or other club) **Volunteer Examiner testing sessions**. The test costs \$15. The NFARL testing sessions occur once per month in Alpharetta. Tests are around ATL each week.

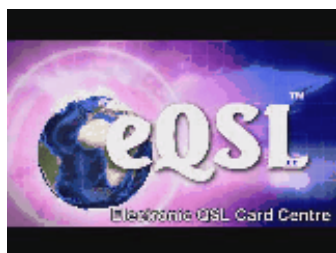
You may proceed as quickly as you wish but **it will require about 12 hours of study** to pass the test. You may take longer or shorter, based on your own pace. But here is our most important suggestion – **set yourself a time table** for taking the test. Your mentor will be happy to work with you in setting this target date and a schedule to reach that goal. Don't worry. The date can be very flexible but it will make your travel to ham radio a great experience and a great accomplishment.

Remember: If it was easy, everyone would be a ham already! But oh, the sense of pride and the friendships you will make around the world.

Online Logging of Ham Radio contacts (QSOs) - Part 2b

More About eQSL / Bob Hensey, K4VBM

Hi again! Here is some more information that I hope you will find useful about eQSL, another popular online QSLing website.



A major reason why eQSL is popular is that it allows you to create an electronic QSL card which is 'sent' to all your QSL partners -- so you can save a lot of postage cost over time by sending these electronic QSL cards instead of paper cards. Another cool feature is that even if you are not a licensed Amateur Radio Operator, you can register as a Short Wave Listener (SWL), and receive electronic QSLs cards from the stations that you hear. Many countries will not grant a ham license until you have first operated as a SWL and have collected a mandatory number of confirmations (not so in the US). eQSL has members from all over the world.

Let's touch on the important basic things to be aware of that you do on the eQSL website.

1. Completing Your Registration

During registration, you are presented webpages that collect information to be used as part of your account profile. URL: <https://www.eqsl.cc/QSLCard/RegisterValidated.cfm>

Initially, you input your call sign, choose the account type (Licensed Amateur), and the DXCC Country (USA) and click the Register button.

Callsign	<input type="text"/>
Type	<input checked="" type="radio"/> Licensed Amateur <input type="radio"/> SWL
DXCC Country:	<input type="text"/>
<input type="button" value="Register"/>	

Fill out the resulting page carefully – **BOLD** fields are required. (See example on next page). The type of station is normally 'Individual'. Enter a valid email address because your registration code will go there, along with any other communication from the eQSL website. The Start and End dates are very important and especially come into play for different operating locations (more on that later). Some fields CANNOT be changed by you later, so make sure you enter correct information: U.S. State, U.S. County, Grid Square, CQ Zone, ITU Zone, IOTA Number. This location information is used for Awards which is the reason you cannot change it. There are links on the page to help you determine the correct values.

Finally, choose your email preferences. Then click the 'Register' button, and wait for your registration code email which you will use to complete the registration.

Check the box next to each e-mail notification you would like to receive	
When someone sends me a new eQSL	<input checked="" type="checkbox"/>
General announcements about eQSL.cc	<input checked="" type="checkbox"/>
Only very important announcements about eQSL.cc	<input checked="" type="checkbox"/>
Notices from vendors of Ham Radio equipment	<input checked="" type="checkbox"/>
Notices from non-profit Ham Radio related organizations	<input checked="" type="checkbox"/>
<input type="button" value="Register"/>	

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BOLD items are required fields	
Type of Station	<input checked="" type="radio"/> Individual <input type="radio"/> Club Station (help) <input type="radio"/> Club Station Sole Operator (help) <input type="radio"/> Silent Key
Referred By (Optional)	<input type="text"/> What is this?
Your E-mail Address:	<input type="text"/> We need this to confirm your identity and to communicate with you in case of problems. At the bottom of this page you can control what e-mail we send you.
Information as it should appear on eQSL Card	
Callsign:	<input type="text"/> (Portable or mobile OK here)
Name on License:	<input type="text"/>
Street Address:	<input type="text"/>
City, State/Province, Zip/PostalCode:	<input type="text"/>
Country (postal):	<input type="text"/>
This account you are registering will cover QSOs from the Start Date to the End Date you select below. The dates you enter here help us distribute incoming eQSLs to the correct owner!	
Callsign Start Date	January ▾ 1 ▾ 1999 ▾ What is this?
Callsign End Date	December ▾ 31 ▾ 2020 ▾ What is this?
The following 4 lines of text will also be displayed on your eQSL. They can be used for rigs, antennas, awards, VP number, FISTS number, former callsigns, etc.	
Line 1:	<input type="text"/>
Line 2:	<input type="text"/>
Line 3:	<input type="text"/>
Line 4:	<input type="text"/>
QTH Information for Contests and Awards	
All eQSLs uploaded into this account must have been made from this QTH. For all others, you must create a new account for that QTH.	
DXCC Country:	USA
U.S. State	No State ▾
U.S. County	AK: 1st Judicial Dist ▾
Grid Square:	<input type="text"/> (Info) (Map) (Try WM7D.net)
CQ Zone	--Select One-- ▾ (Map/List) (Map) (List)
ITU Zone	--Select One-- ▾ (Map) (List)
IOTA Reference Number	<input type="text"/> (example: NA-026) (RSBG IOTA info)
10-10 Number	<input type="text"/>
BOLD items are required fields	

2. Apply for Authenticity Guaranteed (AG) Status

There are 3 ways to apply for AG. The easiest and fastest way is to use your LoTW account information if you have one. The 2nd fastest option is to upload an image of your official signed license for approval (e.g., take a picture of your official signed license with a smart phone). The final way is to request a postcard to be mailed to you, and you enter a code from the postcard once you receive it. Getting AG status is important, because if you don't then none of your QSOs will count towards awards for others. Similarly, if your QSO partner

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doesn't have AG status, then any QSOs with that partner won't count towards eQSL awards.

3. **Designing Your eQSL Card**

The webpage(s) provided to do this are not the easiest to figure out, but they do work OK once you do. If you pay for a higher membership, then there is the option to upload a custom image which you can design with your own tools. There is also an ongoing competition where all members can vote for their favorite eQSL cards.

4. **Uploading Your QSOs To Your Outbox**

Use the 'Upload ADIF' function to upload your ADI files from your logging program (some logging programs can upload directly to eQSL). The uploaded QSOs are checked for validity, and errors reported as well as duplicates that are skipped. You can always fix problems and re-upload. Also, eQSL lets you manually edit any uploaded QSO from a webpage (unlike LoTW) to fix mistakes.

5. **Checking Your Incoming Confirmations In Your Inbox/ Rejecting QSOs**

Your 'Inbox' folder contains all the recent QSOs uploaded by your QSO partners. If the system finds a match with one that you uploaded, it will automatically provide a link on this page so you can view the eQSL card sent to you. You can download these cards to store on your own computer if you like, or print the ones you may want to display. You will also receive QSOs in your Inbox that don't match any QSO in your Outbox – you will need to investigate these as to why they do not match. It could be something like the wrong UTC date and/or time, wrong band, wrong mode, or even the person copied the call sign wrong. If necessary, you can use the 'Reject QSO' feature and choose a reason to notify the other person why you rejected the QSO, and the system will automatically send an email to that person with the explanation.

6. **Your Archive and Reject Folders**

Your 'Archive' folder stores confirmed QSOs. You can access it to view eQSLs you have received at any time. It is a good idea to regularly move confirmed QSOs from your Inbox to your Archive because then it is much easier to find and deal with the non-matched ones. Your 'Reject' folder will contain any and all QSOs that you have ever 'rejected'.

7. **Checking your Award Progress**

Use the 'My Awards' function to check the status of all the different eQSL awards that you can earn. You do have to purchase minimally a Bronze membership to claim awards. There are many fun awards to chase like "Worked all Japan", DXCC, Worked All States, Grids, Prefixes, etc., and each award has its own criteria and number of QSOs needed to earn the award. Many awards can be achieved on multiple hands and modes. You can print out certificates to hang on your wall, or display an electronic image of each award certificate on a web page if you want. You can also purchase a nice plaque for each award for display. Many awards have higher levels of achievement you can earn.

8. **Adding An Attached Account**

This is a very important function if you have and use compound call signs like K4VBM/7 or K4VBM/M, or just operate from multiple QTHs. I cannot stress this function enough as to its importance. You need to create an Attached Account for every QTH location that you operate from for each call sign, and *the Start and End dates of an Attached Account cannot overlap*

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with another attached account for the same call sign. This is necessary because of how the eQSL database was originally set up to store QSO data, and is somewhat more cumbersome than what is done on LoTW. The system automatically uses QSOs across all your Attached Accounts to determine your eligibility for the various awards based on each award's rules. If you need help with this, the Volunteer Support staff is happy to help.

Take some time to investigate all these functions and others on the eQSL website, and remember that whenever you upload your QSOs to eQSL, you are not only chasing your own awards, but you are helping your QSO partners earn awards -- and of course saving postage costs. Try to do your eQSL uploads regularly.

There is a lot more detail about eQSL than can be fit into this short article, which is intentionally basic in nature. Don't be afraid to search the online eQSL Frequently Asked Questions (FAQs) or contact eQSL support volunteers for help – they are a helpful bunch! Hope this information helps you get started on eQSL and Happy QSLing!

CW SIG Underway / Jim Stafford, W4QO

CW SIG is a name for our Special Interest Group (SIG) we have for folks who are interested in learning CW or improving speed. This is not a class but a way to practice personally and achieve goals. We have 21 folks signed up this year. Not all will "make it through" but this is a really good opportunity to "do it"! Members of the SIG at this point are using CW PLAYER (a program from France) to help them progress. Tips and techniques were offered at a home meeting on January 21 at my QTH and on 2 weekly meetups on DISCORD (Monday and Friday at 7PM) where we use both voice and text to urge the members on. We also "get on the air" on Wednesday on "our" frequency of 7117 KHz.

If you are interested, you can join at any time. Take a look at ideas on my blog at w4qo.blogspot.com or on the nfarl.org under the CW SIG button. Basically, we encourage folks to use the order of learning in 4 groups – the first of which contain the letters in the word ESTONIA. OK, E is a dit! There, that's one letter; now only 25 to go! There are about 75 files of text you can download from the club's website into the folder of CW PLAYER. This will allow you to load in one of the files aimed at the level of progress you are making.

Ages of CW SIG participants range from early teens to those in their seventies. I have helped over 300 people learn or improve their CW skills. I'd like to help you. Just let me know how.



On CW, nobody knows you're a dog!

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North Fulton Amateur Radio League

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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	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

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