



*North Fulton  
Amateur Radio League  
NFARL eNEWS*

*April 2020*

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

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***President's Corner / John Norris, N4IHV***

***Projects Are Us***

Hams are famous for having a list of projects or thoughts of some. We read QST or CQ and find things we want to build or learn more about. With the diversion of work and other life duties our time is limited. We are now in a time, because of Covid-19, when we are looking for things to accomplish. What better than to review our project list that has been accumulating? More usually goes on than comes off.

Now, it is time to find new projects to add to the list because it is empty. Yes, I just realized I had fallen asleep on the sofa and was dreaming! The list goes on filled with no reductions.

Got out the list that was just waiting to be reduced. The question now becomes, which one do I choose? I realize now that I have at least 30 days at home due to the new restrictions. Things are looking up because I have a plan. I believe I will start with item #3 on the list. I look at my files and have the schematic and parts list. I will look at my parts stash and let the action start. Realization sets in when I determine there are 3 missing parts and delivery will take at least 30 days. Go back to the list and pick my second choice, #7. I know I have saved all of the articles, parts lists and schematics in another folder. Four hours pass and I finally find the folder. It is time to get organized. I am in the shack and my cell phone rings. It is the wife. She needs my help with something. I head out and lay the folder down on my way to the house. Get to the house and the XYL needs me to help in the yard for a little while. Four hours pass and now darkness has set in. Time for dinner. It is too late now to start the project so I will begin in the morning.

I am up early, eat breakfast and head to the shack. Where did I lay that folder? I remember having it my hand when I left the shack to help my wife. Retraced my steps as I recalled and searched all places I thought it could be. No luck at all. Back to the list and choose #5. Call my Ham buddies and discuss this project. Should be easier than I thought. Project #5 it will be. The XYL calls and wants the hose put back up from the yard work we did yesterday. I leave the shack, coil the hose and take it to the garage. What do I find at the hose rack? Project #7 folder right where I left it. I am now committed to project #5 and #7 just goes back on the list. Let the work begin!

As you know by now, life is just a list that we start and stop or lose and find, as we travel through. I love being a ham because I realize no boredom during this pandemic or any other time. It is good to see our country pull together during this difficult time. Hopefully we will all get back to our regular routine in the near future.

Sincerely,

John Norris, NFARL President

N4IHV

## ***Name This Ham***

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### ***How well do you know your fellow members of NFARL?***

Name this ham.

This NFARL member (have I given it away already?) has been licensed since 1955, a time when the earth was still cooling. Rumors have it that his first car, the one he drove to high school, was an Apatosaurus and that in his math classes, Roman numerals were simply called 'numbers.' (Hail, Caesar! was the only cheer allowed at his school.)

Now retired, this ham spent many years working Rockwell/Boeing.

Not only has this man served as president of NFARL, he has also been president of the Aviation Radio Club in Columbus, OH, and the SouthEast DX Club.

This great man has traveled all over North America and around the world for work and pleasure, often with his lovely wife, Bev. He relishes the people he gets to meet on his journeys. When not physically travelling, he ventures near and far with the great books that he reads.

This gentleman shares his knowledge and enthusiasm for all things STEM with Boy Scouts and various groups of young people (which, from his perspective, could describe many of us). He has been involved in many Atlanta Science Festivals and Maker Faires, bringing his enthusiasm of ham radio to visitors young and old. He is a strong supporter of ARRL and counts several of the folks working there as personal friends.

This friend of all of us is well known for his wealth of humorous stories, clever puns, and jokes. Beware of his wry grin, a whopper of a story is coming your way.

Who is this great member of NFARL who frequently claims to be 'living the dream?' Confirm your answer on page 12 of this newsletter.

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## ***NFARL April Club Meeting Info / Jim Kauffman, W4IU***

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Please join us next Tuesday, April 21, 2020 at 7:30 PM online via Zoom for the NFARL monthly club meeting. We will have two topics that are sure to resonate with our membership: Chuck Catledge, AE4CW, and Mike Roden, W5JR, will provide an informative discussion about "Multiple Transmitters in Close Proximity". In addition, Doug McAlexander, N4HNN, will provide an enthralling presentation regarding Summits On The Air (SOTA) Activities. We hope you will join us for these interesting topics.

If you are new to Zoom and are unfamiliar with it use, we will open the on-line program starting at 7:00 to help get you set up. The link for the meeting is here:

<https://zoom.us/j/96005123276?pwd=QVRxcE50MmtsZDVib1BUWmZ5anBxUT09>

Due to hacking activities, the pass code will be sent out before the meeting under separate cover, via email.

73- Jim, W4IU

## ***April 2020 Volunteer Examiner Update / Ian Kahn, N4VC***

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As everyone reads this, we will be coming up on the first part of Governor Kemp's extension of his shelter-in-place and state of emergency orders. In light of the ongoing COVID-19 crisis, I want to give everyone an update on our exam session status.

On Friday, March 13, the City of Alpharetta ordered all public buildings and facilities closed until further notice, due to the risk of spreading COVID-19. This resulted in cancellation of the March exam session, scheduled for Saturday, March 14. Further, on April 1, Governor Kemp issued an executive order, declaring a Public Health State of Emergency and ordering shelter-in-place until Monday, April 13. This resulted in cancellation of the exam session scheduled for Saturday, April 11. As of Thursday, April 9, Governor Kemp extended this order until May 13. Unfortunately, this will result in cancellation of the May exam session, scheduled for May 9. I will continue monitoring this situation closely, and update everyone as I have new information.

Over the last few weeks, several people reached out to me and asked about the possibility of remote testing sessions. At this time, the Anchorage ARC and Greater LA Amateur Radio Group (GLAARG) VECs are experimenting with remote testing capabilities. Representatives of GLAARG posted videos on YouTube, shared via Reddit ([https://www.reddit.com/r/amateurradio/comments/fvtck0/online\\_us\\_ham\\_radio\\_exams\\_coming\\_soon\\_but\\_please/](https://www.reddit.com/r/amateurradio/comments/fvtck0/online_us_ham_radio_exams_coming_soon_but_please/)) and YouTube ([https://www.youtube.com/watch?v=m\\_6TW2iOfEQ&feature=youtu.be](https://www.youtube.com/watch?v=m_6TW2iOfEQ&feature=youtu.be)) stating that they are close to having a system ready, but are not there yet. The ARRL VEC, through which members of the NFARL VE team are certified, stated in its VE Newsletter, sent April 2, that remote testing is not a technology/capability currently being investigated.

I've also been asked about the possibility of online testing. FCC Part 97.509 specifies that at least 3 volunteer examiners must be present to oversee an exam session. Given current online testing facility configuration and capabilities, it is not possible, in our current situation, to meet that requirement. So, online testing is not currently viable.

Rest assured, we will resume testing as soon as shelter-in-place orders are lifted and we feel it is reasonable and safe to do so. Once testing resumes, I may investigate the possibility of doubling up on exam sessions, holding two per month, for several months. I want to thank everyone for their patience while we wait out the current health crisis. We are all eager to get back to holding test sessions, just as candidates are eager to test.

If you have any questions about the current situation regarding exam sessions, or have questions about the Volunteer Examiner program and how you can be a part of it, please feel free to contact me.

73 de,

Ian, NV4C

NFARL Volunteer Examiner Liaison

## ***Things to Do While Under "House Arrest" / John Kludt, K4SQC***

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My daughter calls "shelter in place" "house arrest." She would very much rather be back to work than home with Mom and Dad. Especially when Dad is always in the basement. And, yes, that is where the hamshack is located and I do confess that even before the COVID-19 mess started I spent a lot of time there.

I decided that one of the things I would do to occupy my time is go for Worked All States on as many bands as possible. I know for some of you that sounds trivial, but then for 50 years now I have been a "100 watts or less and wire" kind of guy. And we have moved a lot so with every move I got to start over on WAS. My HF antenna farm such as it is consisting of a 70 foot wire up a pine tree in the corner of the yard with an SGC tuner at the base and 36 radials of whatever length would fit in the grass and flower beds. I have two 130 foot radials, three ten foot radials and the rest are whatever fit. One should never let the perfect be the enemy of the good enough or the best you can do.

I also have a 75 meter, a 17 now 15 meter dipole and a 10 meter double bazooka in the attic. How did I ever get a 75 meter dipole in the attic of a standard Georgia four over four? I read somewhere that most of the radiation from a dipole comes from the middle 30% or so. So that antenna is a "Z" with feet. The feedpoint is in the middle of the attic. It then runs kitty corner to the edge of the roof line. From there in opposite directions it runs the width of the house. What didn't fit then folds back along the edge of roof line toward the center. Works great with an SWR of 1.2:1 on 3860 KHz – the frequency of the Saturday morning QCWA net (0900 ET 3860 KHz, LSB – join us!)

My most recent effort resulted in WAS on 160 meters. I already had 80 m, 40 m, 30 m, and 20 m completed but I only had 21 states on 17 meters. So 17 meters became my next logical target. While the vertical worked great for Alaska and Hawaii it was pretty tough to work Alabama. Something about takeoff angles and being vertical when everyone else is horizontal for the close in states. That's when I added the 17 meter dipole in the attic. Not sure but I am guessing with all the heating and cooling stuff, electrical wiring, etc. it is near NVIS. A tip I got from the National Contest Journal has paid off over the years. There was an article by a gentleman who runs a KW on all bands with attic antennas. We will skip the discussion on RF exposure safety limits! Anyway, what I remember is his advice that "when it comes to attic antennas put away your modeling software and get out your antenna analyzer." The SWR was 1.4:1 and that was good enough for me.

I will confess to not being a mode purist. The goal is to get them in the logbook. CW, SSB, FT8 – whatever works for me for that contact, I will use it. They are all tools and I see no reason to say, "Well I only use a hammer on all of my construction projects." Makes sawing a board in two rather difficult! To each his or her own – it is after all a hobby. I am happy to say that two weeks ago I finally got Alabama on FT8 about sunset. Yeah! 17 meters WAS complete!

I need five more states on 15m. So up to the attic with my antenna analyzer and my wire cutters. That 17 meter antenna is now resonant on the lower end of 15 with an SWR of 1.2:1. So the hunt begins! Then onto 10 where I need 6 states. Not sure what I'll do about 12 m as I just have spent no time there. But for now, 15 and then 10. It's been a great journey with medium power and wire antennas. Let you know when I finish this quest.

## ***Strays? / Jim Stafford, W4QO***

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*The term STRAY is from QSTs of perhaps 40 to 70 years ago and they were small news items used basically as fillers for the white space at the end of articles to "fill up space".*

I found them interesting. Look for some in eNEWS from around NFARL and also from old QSTs. Now here's the first one of many, I hope:

**STRAY: (February 1956 QST)** Mosley Electronics of St. Louis, Mo, announces publication of the Mosley QSO Index, a handy volume designed to aid amateurs in recording calls and operators' identification, for use particularly during contests, when time is at a premium. The new book is complete with a full index of names. **(Ed. Note: This sounds like some kind of logbook. Now we just use N3FJP on our station computer!)**

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## ***West Bank Park Closed / Mike Riley, KN4OAK***

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### ***NFARL U.S. Islands 1 Day Get Away Event Jeopardized***

April 9, 2020 we received official notice from [Recreation.gov](http://Recreation.gov) that "A location closure has been issued for WEST BANK PARK SHELTERS (GA) from Thu, Apr 9, 2020 - Sun, May 17, 2020 due to Public Safety Concerns." Along with message came notice that our fee paid for use of the site on May 9, 2020 was being refunded. Recreation.gov is the online service the U.S. Army Corp of Engineers and 11 other Federal Participating Partners use to manage reservations and related information. While the current COVID-19 situation wasn't directly stated as the underlying cause for closure, information on the website implied it was.

Our upcoming **NFARL / U.S. Islands One Day Get Away and Birthday Celebration Picnic** is scheduled for May 9, 2020. West Bank Park on Lake Lanier was selected as the target event site given the fantastic turnout and satisfaction had during the 2018 outing. Bad weather during the winter of 2018 resulted in West Bank Park being closed in 2019. That circumstance drove NFARL to run the 2019 U.S. Islands 1 Day Get Away event from Indian Island in Stone Mountain Park. Wet weather and access fees put a damper on participation but a good event still resulted. We were looking forward to returning to West Bank Park in 2020.

Presently we are not aware of any date or event changes that may be under consideration by the U.S. Islands organization in regard to the 2020 event. The State of Georgia will likely still be under a shelter in place order on May 9, 2020. Additionally COVID-19 will still be present, whether public isolation orders have been lifted or not. Given this current situation, NFARL is considering options for holding the event and complying with health & safety recommendations and COVID-19 operating guidelines. Alternatives under consideration include, but are not limited to; cancellation, operation at an available accessible state park island using social distancing practices, or holding a NFARL based U.S. Islands style operating event at a later date this year. Membership's input to these alternatives under consideration would be greatly welcomed. Please send your comments and ideas to [KN4OAK@NFARL.org](mailto:KN4OAK@NFARL.org) before April 26, 2020, or bring them to the virtual NFARL Club meeting on April 21, 2020. We'll use this information along with a current status of the COVID-19 situation to help form a final decision on the May 9, 2020 event before May 2, 2020.

Thanks in advance for your understanding and consideration in this matter. By working through this process, this will also help ensure we're planning effectively for ARRL Field Day 2020 taking place at the end of June.

73,

Mike Riley, KN4OAK

2020 NFARL Activities Chairman



## ***What you need to know***

I started my [Ham Radio In Action](#) YouTube channel in July 2019. Since my first video, I have learned a lot, made some mistakes, made some money and had a bunch of fun. Before you start writing, filming, editing and posting there are some things you should probably know.

Define what your channel is going to be about. You need to create a brand for your channel and try to stick to the brand as much as possible. To do this you need to watch lots of videos that have similar content to what you want to produce. See what those creators are doing, and figure out how you are going to attract and build audience by doing something similar, different or in a different style. In my case I found there are lots of ham radio how-to videos, several creators talking about the hobby, and plenty of product review videos. Some of my favorites were people doing ham radio, not just talking about it. I decided I was going to focus my videos on doing ham radio stuff and let other creators describe and detail the how.

Once you know what your channel is going to be about, you need to think about content. Try to come up with as many ideas as you can that would fit your channel's brand. Consider where you would shoot your videos, how often and if things like family, work or weather could limit your production time. Outlining, scripting, shooting, and editing one of my ten-minute videos can take up to five hours. You need to be creative and have lots of video ideas before you shot that first video.

Production values matter. High quality video, lighting, sound, presenting and editing really matter a lot. YouTube viewers have very short attention spans and if you don't engage them quickly, they click on the next video in under a minute. I shot my first videos on an iPhone, which worked OK, but I should have used a lapel microphone. If you can invest in good gear, it makes a difference. For editing I use a free software called Shotcut. I had no previous video editing experience but learned Shotcut quickly watching videos and experimenting.

The YouTube algorithm decides your fate. YouTube wants people to watch and keep watching. They track what you watch and what you like and use a sophisticated algorithm to determine which are the best videos to offer you next. You are offered a bunch of thumbnail images and titles to choose from. Getting YouTube to offer up your video is key to success. Make sure your thumbnails and titles grab attention and scream "click me". The YouTube algorithm promotes videos more that have lots of "likes", shares and comments. That is the reason every YouTube creator begs you to hit the like button, comment and subscribe.

You need a thick skin. Putting yourself on a platform like YouTube, that lets people comment anonymously, can be tough to handle. People comment on my looks, weight, presentation style and much, much more. I can report or delete any comment, and usually delete those that are just personal attacks. I tend to leave ones that criticize the content or object to my opinions. On the plus side, it's great when someone comments that I've inspired them to get their license or try something new in the hobby.

You can earn money, even with a smaller channel. Once you get your first 1000 subscribers and people watch 4000 hours of your videos, you can start making money off the ads YouTube plays before, during and after your videos. The ad revenue really depends on how many people view your videos and their demographics like country, age, and gender. My channel has a pretty focused demographic, being mostly older men with about half living in the USA. Due to this I usually earn between \$5.00 – \$6.00 per 1000 views. In addition to YouTube ads, I also am in the Amazon Associates program. I offer Amazon links to the products I use in the videos and when people click those links and buy things on Amazon, I earn a small commission which is usually about equal to the ad revenue. There are other ways to earn from your videos, like selling merchandise, Patreon, and Corporate sponsorships. If you do popular review videos, you will likely get free stuff from manufacturers. I have gotten some free ham gear in exchange for promoting a company and gear in my video (e.g., [xggcomms.com](#)).

I have really enjoyed learned new skills and sharing this great hobby with YouTube. If you have questions, please feel free to email [mailcleary@gmail.com](mailto:mailcleary@gmail.com). Be sure to like and subscribe!  
[www.youtube.com/hamradioinaction](http://www.youtube.com/hamradioinaction)

## ***STRAY / (MARCH 1956 QST)***

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Believed to be among the youngest hams in the United States is eight-year-old Elizabeth Dec, KN6MTQ, of San Bruno, California. Elizabeth received her ticket recently and at that time was given her own rig by her father, Russell Deck, W9JVI. **But wait!** Checking into the **New South Net on Sunday (28.410 3:30PM)** the past couple weeks is **eight-year-old Noah Reed**, KX4NMC, of Woodstock. He's collecting his TEN-TEN numbers now and should have his own soon.

## ***Building a Reliable, Portable EmComm System / Jim Kauffman, W4IU***

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I have employed a series of components to build a communication system to enable me to use Amateur Radio under unexpected circumstances, as well as allowing me to support the Amateur Radio Emergency Services (ARES) over an extended period. I've annotated some considerations in pulling together specific components to make a system that is greater than the sum of its parts.

### POWER SYSTEM

A reliable power source is a necessity to ensure that one can get on the air when needed. Most of us don't think about power until it goes out, then we scramble to find flashlights, batteries, etc. Unfortunately, when we lose power, we often remark, "I should have charged the batteries." The point is that we are seldom ready to handle an extensive power outage or effectively deal with an urgent situation that requires us to go off-grid for a lengthy period of time.

To that end, a reliable source of power is a must for any communication system. My system, in its current state, consists of solar panels and a large capacity battery, but will soon include a portable generator to increase the system's reliability.

### GENERATOR

There are many relatively inexpensive gas-powered generators on the market, but not all generators are right for amateur radio use. You want a generator that provides the necessary amount of power but does not introduce electrical noise into its output. A few generators have a built-in inverter to produce a clean sinusoidal wave output. There are also plenty of generators whose output is rife with harmonic distortions. Those distortions raise havoc with computers and ham radios. Make sure you read the generator's specification regarding harmonic distortion when considering a generator for amateur use; the lower the harmonic distortion the better.

Among the plethora of generators on the market, there are a select few that are easy to carry, easy to start, are quiet, have a clean electrical output, and are very reliable. These usually fall into the 1 to the 3-kilowatt range. They certainly don't have enough power to run a household HVAC system but will power your radio, keep some lights on, charge batteries, and maybe keep the refrigerator running. Some allow for parallel operation—two units; twice the available power. Note: never operate a generator inside a confined space. The exhaust is poisonous (CO & CO<sub>2</sub>) and can kill. Make sure that you follow all the manufacturers' instructions when operating a portable generator.

### SOLAR PANELS

The primary source of electrical power for my system comes from solar panels. I currently have two 100w panels that I can connect in series or parallel using Anderson PowerPole connectors. 200 watts of free electrical power is more than enough to operate my radio system, charge batteries, and run an LED light. The solar panels feed a 20A MPPT charge controller that regulates the voltage and current going to the battery. The solar panels can generate up to 22 volts, so a charge controller is required to prevent damage from overcharging the battery. Moreover, the controller ensures that the correct charging sequence is applied to extend the life of the cells.

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## ***Building a Reliable, Portable EmComm System***

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The solar panels do best when they are orthogonal to the incident solar radiation. Amazon sells simple brackets that enable the user to adjust the solar panel's angle to optimize the energy output. In Georgia, I use three angles: 0, 30, and 60 degrees. Summer operations call for setting the panels flat on the ground (0 degrees). Spring and fall require the 30-degree setting to optimize power output, while 60 is needed in the winter to achieve similar results.

Generators and solar panels can provide substantial amounts of power, but their output falls under the "use it or lose it" category. As long as the generator is running or the sun is shining, I have power. So, the next part of a power system equation comes into play: the battery.

### **BATTERY**

There are a large number of battery types to store electrical energy. Their performance, cost, and reliability vary wildly. Deep cycle, lead-acid, cells are usually a good choice for amateur operation. They have good power density and are capable of slightly further discharged levels than a standard automotive battery. However, there is a point beyond which additional discharge dramatically affects the battery's long term performance for the worse. Usually, that is at the point where half the battery's capacity has been depleted.

Batteries do not come with an installed state-of-charge-meter. Cell voltage and the acid's specific gravity can inform us about the state of charge. Still, not many of us have the test equipment to measure specific gravity, and we must guess what the voltage-to-charge ratio is for the particular battery type. It is depressing to find out your battery is severely sulfated or has an internal short when you need it the most.

An additional inconvenience associated with lead-acid batteries is that they can't sit idle for an extended period without degradation. If the cell jar cracks, they can leak highly caustic and dangerous acid. Also, while charging, lead-acid batteries give off hydrogen, which is highly flammable. Gel-cells do a better job with the electrolyte, but they still suffer the same maladies of a typical lead-acid battery. However, a good quality battery tender can help you get the most out of a lead-acid battery (somewhere I remember hearing: "buy cheap, buy twice.")

Oh, and one more thing, lead-acid batteries are heavy! The more capacity you add, the more the system weighs. Weight is an essential consideration for portability.

Lithium-ion (LiFePO<sub>4</sub>) batteries, on the other hand, have a much larger capacity relative to their weight; and they can be discharged significantly further than a typical lead-acid battery. They can also sit idle for extended periods (6 months to a year) and only lose a few percentage points of charge without suffering degradation. But they should not be charged when the temperature is less than 32°F, but that, fortunately, is not a typical problem in Georgia.

The battery I use in my system is a 100Ah, 12v, unit that weighs in at a svelte 35 lbs. That is half of what a similarly rated lead-acid battery weight. But, to obtain the same performance from a lead-acid battery, I would need a 200 Ah battery that weighs in at a hefty of 140 lbs.

The downside of lithium-ion batteries is mainly their cost. Big lithium batteries are expensive! As technology improves, prices are likely to come down. Another issue with lithium batteries is the possibility of a spectacular fire, more so with cells of unknown origin.

That said, the cost is relative, meaning that although the price of a LiFePO<sub>4</sub> battery is high, the amount of cycles these batteries provide is also considerable. A cycle is taking a fully charged battery to its low limit, and charging it back to full capacity. Now, remember that a lithium battery can be discharged further than a lead-acid, so the total amp-hours per cycle is larger. The typical lifespan of lead-acid batteries is about 300 cycles. The average lifespan of a lithium battery is 1000 cycles (3x improvement), in addition to more amp-hours per cycle. So, while costly, LiFePO<sub>4</sub> cells are cost-effective.

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## ***Building a Reliable, Portable EmComm System***

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High-quality batteries combined with low stress (low discharge current as opposed to heavy discharge, and slow charging rate vs. maximum) can increase the number of cycles to a reported 3000 to 5000 cycles. I'll most likely end up getting a new battery not because it is at end-of-life, but because in 10 years, battery technology is likely to be far superior to existing technology. Typically, all my lead-acid batteries have been retired in 3 years or less.

As I said earlier, portability is a crucial feature when it comes to taking the system where the service is needed. A medium-size toolbox with wheels houses the solar charge controller, distribution block, battery, and a 120 VAC inverter. The battery has a 45A Anderson PowerPole

quick disconnect from the home system so I can rapidly take the battery box to where I need without getting a hernia. A PowerPole distribution block with automotive-style fuses is also part of my kit. It allows me to connect the power sources to a variety of radios, inverters, etc. as needed.

### **RADIO SYSTEM**

The radio I use for ARES activities is a Kenwood TM-V71A dual-band VHF/VHF, VHF/UHF, UHF/UHF, with cross-band repeater capability with CW identification to stay compliant with the FCC. It is permanently mounted in my vehicle but permits me to extend the range of a distant repeater to cover areas where ARES activities are taking place with spotty repeater coverage. The solar panels and battery system (and soon a portable generator) provide the necessary power to sustain continuous ARES operations for extended time periods.

Using a relatively inexpensive laptop as a dedicated radio computer, a user can provide digital communications support using FLDIGI with the MT63-2KL protocol. The protocol's ability to pass acoustically coupled information in a noisy environment is impressive. The beauty of this protocol is its simplicity. For example, a user can transmit a message from an acoustically coupled computer to a hand-held radio. The HT sends the signal to the vehicle radio (TM-V71A) on one band and re-transmits it to a distant station or repeater on another band. The reciprocal path allows the user to receive digital transmissions at the remote location.

### **ANTENNA SYSTEM**

A good radio is little more than a paperweight without a proper antenna. For emergency communications, one wants an antenna that gets the job done but has the necessary portability to be set up quickly. To this end, I use a portable push-up pole and tripod system that enables me to elevate a vertical dual-band antenna to about 18 feet above the ground.

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## ***Building a Reliable, Portable EmComm System***

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Good quality coax connects the antenna to the NMO mount on top of my vehicle. I found a nifty adaptor that connects an NMO thread to a PL-239.

I also take along an 18v power drill with appropriate bits, so I can quickly secure the antenna to the mast with stainless steel hose clamps. If the coverage need is known ahead of time, I can combine two small Yagi antennas on the same pole; one for each band, oriented to maximize communication coverage. A splitter feeds the appropriate antenna.

### **OVERALL SYSTEM PERFORMANCE**

The communication system easily fits in the back of my vehicle. For now, the heaviest component is the power box, but it is manageable, even more so with the wheels and its extended handle. That might change once the portable generator arrives. Upon arriving at the destination, within 15 minutes or so, I can set up the solar panels, attach the antenna to the mast, raise the pole, and connect it to the NMO mount. Once it is up and running, the system can support sustained cross-band radio communications at a remote location for extended time periods.

73,  
Jim, W4IU

N4SEC and W4IU using 18 foot mast during the 2019 Red Cross CommEx.

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## ***STRAY / NFARL CW CHAT –***

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Thursday nights at 8PM on ZOOM. Jim, W4QO, is hosting a ZOOM meeting every week for those wishing to learn CW, do more with CW, figure out what key to use for CW, and generally answer CW questions. Join him each week. Watch the nfarl groups.io for details.

## ***The Georgia QSO Party is in the Books - Submit Your Scores!!!***



The Georgia QSO Party is over. Although a one day event this year, there was lots of action packed into the 12 hour window!! The bands were alive and buzzing with activity and it was great to hear stories from so many club members on the air.

Now the fun continues (or as some would say, "the job is never finished until the paperwork is done").

If you participated in the GQP, please remember there are two score submissions that we need you to make.

- 1). Submit your Cabrillo file to the GQP noting "**North Fulton Amateur Radio League**" in the "Club Name" field as your affiliated club. There are excellent instructions on their webpage <http://georgiasoparty.org> under the "rules" tab on how to do this.

***The deadline is "no later than two weeks" after the GQP weekend - April 26th.***

You can submit your entry directly on the [Georgia QSO Party Log Submission page](#) on the GQP webpage. Please send in your scores to the GQP. Regardless of how large or small your score is - they all count, and NFARL will get credit for total points and number of submissions.

- 2). Submit your scores for the internal "NFARL GQP Challenge" in order to have your scores entered into the NFARL GQP festivities and possibly earn a coveted NFARL GQP Award.

The best way to do this is to download the spreadsheet form from the club website at <http://nfarl.org>. Click on the activities link in the left column and go to "Georgia QSO Party", or use the file link below. Then, fill out the data needed, and e-mail the file to [n4tol@arrl.net](mailto:n4tol@arrl.net).

[www.nfarl.org/GA\\_QSO\\_Party/GQP\\_submissions-2020.xls](http://www.nfarl.org/GA_QSO_Party/GQP_submissions-2020.xls)

If you have any difficulty with the download, please contact me and I will e-mail you a usable form, no problem.

We are setting the "NFARL Challenge" ***deadline as May 1<sup>st</sup>*** for the internal NFARL GQP submission. Last year, club members were recognized for key accomplishments in select categories and the highly coveted NFARL GQP certificates were awarded to many operators.

So be sure to submit your scores to be eligible for a NFARL award.

**Important** - This summary spreadsheet is for internal club score keeping only -- results contained in it will not be sent to the GQP log manager for club credit. You must submit your entire log in Cabrillo format to the Georgia QSO Party, noting North Fulton Amateur Radio League as your club, for both you, and the club to receive credit for your score.

Thank you for participating in the GQP and for getting NFARL on the air!!!

If you have any questions, feel free to email me. I will be more than happy to assist you.

**73— John, N4TOL** [n4tol@arrl.net](mailto:n4tol@arrl.net)

## ***Planning for ARRL Field Day 2020 / Mike Riley, KN4OAK***

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### ***COVID-19 Just adds a Twist***

ARRL's website describes the Field Day Objective as "To contact as many stations as possible on the 160, 80, 40, 20,15 and 10 Meter HF bands, as well as all bands 50 MHz and above, and to learn to operate in abnormal situations in less than optimal conditions." Well, COVID-19 and the social behaviors and government recommendations and responses associated with it certainly might qualify as "less than optimal". So, how is NFARL approaching participation in Field Day 2020?

First of all, we're moving forward with guarded optimism that the coronavirus / COVID-19 situation will have evolved to the point where we are able to operate using the proven practices NFARL has developed during the past decade. This means we're going to plan for a weekend event on June 26, 27, and 28, 2020 using the format deployed in 2019. However, there's a slight twist. No one can predict the COVID-19 situation evolves to a state that guarantees this will hold true with a high degree of certainty.

To this point, we're looking into alternative actions that could be used to mitigate operational restrictions imposed as a result of COVID-19. You can expect to hear more on these alternatives in the next two weeks. However, if you would like to offer ideas or concerns in the meantime, please do so by emailing them to me at KN4OAK@NFARL.ORG, or any other NFARL Club Officer. Factors to consider include how the contest classification and scoring might be impacted, social distancing and implications to stations operation, shelter from weather elements, etc. It is likely we will plan along several operations alternatives until we have enough clarity to settle on an approach we actually undertake. So stay tuned. More is to come as information is obtained and processed. We look forward to your volunteered support as roles and responsibilities develop.

73,

Mike Riley, KN4OAK



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### ***Name This Ham / From Page 2 above***

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***"Living the Dream" — Wes Lamboley, W3WL***

## ***Extra Extra! / From the Extra Class Question Pool***

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



### ***E3A04***

*What do Hepburn maps predict?*

- A. Sporadic E propagation
- B. Locations of auroral reflecting zones
- C. Likelihood of rain-scatter along cold or warm fronts
- D. Probability of tropospheric propagation

*See answer on the last page!*

Studying for your Amateur Extra-class license?  
The [current question pool](#) is effective through June 30, 2020.

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

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

## ***Contest Corner***

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- **Michigan QSO Party** — 1600Z, Apr 18 to 0400Z, Apr 19
- **ARRL Rookie Roundup, SSB** — 1800Z-2359Z, Apr 19
- **Florida QSO Party** — 1600Z, Apr 25 to 0159Z, Apr 26 and 1200Z-2159Z, Apr 26
- **Indiana QSO Party** — 1500Z, May 2 to 0300Z, May 3
- **Delaware QSO Party** — 1700Z, May 2 to 2359Z, May 3
- **New England QSO Party** — 2000Z, May 2 to 0500Z, May 3 and 1300Z-2400Z, May 3
- **Hamvention QSO Party** — 1200Z-2400Z, May 16

## ***NFARL Upcoming Events and Dates***

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- **Tuesday, April 21, 2020– NFARL Club Meeting– *Online Meeting via Zoom***  
Join us at \_\_:\_\_ PM via Zoom. This Month’s main topic is\_\_\_\_\_. Please use the Zoom invite information posted on the NFARL Groups IO reflector to join us. [https:.....](https://...)
- **Every Sunday — NFARES net** - 8:30 PM - 147.06 MHz (+) PL 100  
All licensed hams are welcome, you do not need to be an ARES member!  
Check [NFARES.org](http://NFARES.org) for more information.
- **Every Monday — Tech Talk** - 8:30 PM - 145.47 MHz (-) PL 100  
NFARL’s flagship technical based “non check-in” net. The net is always better when using the web based chat room but Internet is not required to join the net.  
Check NFARL Nets [website](http://website) for more information and “how to”.
- **Every Wednesday — Hungry Hams Lunch Bunch** - 11:15 AM  
Location: Slope’s BBQ, 34 East Crossville Road, Roswell, GA 30075  
(770) 518-7000 *Call to verify operations*  
***Take out orders only during COVID-19 Restrictions.***  

- **Every Thursday — YL OP Net** – 8:00 PM - 9:30 PM - 145.47 MHz (-) PL 100  
Check NFARL Nets [website](http://website) for “how to.” This is a great opportunity for YL’s to get on the radio with other YL’s! OM’s (guys) are welcome to listen in to this YL net.
- **Every Saturday — Royal Order of the Olde Geezers Breakfast** - 9 AM  
Location: Reveille Café, 2960 Shallowford Road, Marietta, GA 30066  
(770) 971-6800 *Call to verify operations*  
***Take out orders only during COVID-19 Restrictions.***
- **Second Tuesday — NFARES Meeting** - May 12, 2020 ***Online meetings only until COVID-19 Restrictions Lifted.*** Check [NFARES.org](http://NFARES.org) for more information.
- **Second Saturday – VE Testing** - ***April & May test sessions are cancelled due to COVID-19 Restrictions.*** For more information please see our [website](http://website).
- **Third Tuesday — NFARL Club Meeting** - May 19, 2020, 7:30 PM  
***Online meetings only until COVID-19 Restrictions Lifted***  
— monitor website and NFARL GroupsIO reflector for updates.
- **Fourth Tuesday – NFARL Executive Team Meeting** - May 26, 2020, 7:00 PM  
***Online meetings only until COVID-19 Restrictions Lifted***  
— monitor website and NFARL GroupsIO reflector for updates.
- **May 9, 2020– NFARL / US Islands 1 Day Get Away** –*West Bank Park closed. Event tentative: pending decision and location*
- **June 27-28, 2020 – Field Day!**

## Contact Us

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President	John Norris N4IHV	<a href="mailto:President@nfarl.org">President@nfarl.org</a>
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eNews Team	Help Wanted!!	<a href="mailto:enews@nfarl.org">enews@nfarl.org</a>

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## North Fulton Amateur Radio League

P.O. Box 1741  
Roswell, GA 30077

[nfarl.org](http://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

\* Currently off the air

**Club Call signs: NF4GA and K4JJ**

**Extra Extra answer: D (question E3A04)**

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