



NFARL eNEWS

October 2015

www.nfarl.org

eNEWS is "what's happening" in **North Fulton** and surrounding area! Check out each item and mark your calendar. Go to arrl.org for national news, but here is this month's **North Fulton ARL eNEWS**.



Summary of Upcoming Events and Dates

- **Every Sunday – NFARES net** - 8:30 PM - 147.06 MHz (+) PL 100
- **Every Monday – Tech Net** - 8:30 PM - 145.47 MHz (-) PL 100 - Check NFARL Nets [website](#) for "how to."
- **Every Wednesday – Hungry Hams Lunch Bunch** - 11:15 AM - Slope's BBQ, 34 East Crossville Road, Roswell.
- **Every Thursday – YL Net** – 8:00 PM - 145.47 MHz (-) PL 100 - Check NFARL Nets [website](#) for "how to."
- **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). Everybody's welcomed: You don't have to be "old" or a "geezer" to join this breakfast get-together.
- **Third Tuesday – NFARL Club Meeting – October 20th**, 7:30 PM
Alpharetta Adult Activity Center, 13450 Cogburn Road, Alpharetta.
Meeting begins at 7:30 PM. Pre-meeting activity starts at around 7:00PM.
Location: [Alpharetta Adult Activity Center at North Park](#)
13450 Cogburn Road, Alpharetta, GA 30004 [map](#)
Talk-in: 145.47+ (PL 100)
Meeting Topic: "Unique Uses for Computers in Ham Radio". The presentation will be made by Aaron Melton KK4LOV and Warren Merkel KD4Z.
- **Fourth Tuesday – NFARL Executive Team Meeting – October 27th** , 7:00 PM
Brookdale Roswell (formerly Chambrel at Roswell) Adult Living Center,
1000 Applewood Drive, Roswell, GA

Meetings are open to NFARL club members.

Coming Events

November 2015

- **Third Tuesday – NFARL Club Meeting**
 - **November 14th – [HAMJAM](#)**
-

October Meeting / Scott Straw KB4KBS

The October meeting will feature three presenters each of whom will discuss a different and unique computer that they use as part of their Ham Radio hobby.

- **Aaron Melton, KK4LOV**

Aaron Melton, KK4LOV, will bring a Raspberry Pi that he uses in his Ham radio shack. This is a pico-computer that you can buy for \$35.00. It will take some accessories like a power supply and a case, but it still should be a sub-\$100 investment for a fully function computer that can use the Windows 10 Operating system. Aaron will talk about what it takes to make it work and what "off-the-shelf" software or easily programmed applications for Ham Radio could run on a Pi. In the process, he will talk about how easily a Pi could make a SOTA effort easier without adding a lot of weight - CAT, JT65, DX spotting, logging, etc.

- **Warren Merkel, KD4Z**

Finally Warren Merkel, KD4Z, will talk about another pico computer, the Arduino. Although it is very similar to the Raspberry Pi it has unique differences that make it more appealing for certain projects. An Arduino is easily obtained for much less than \$50, starting at \$12-\$15 locally, and as low as \$7 directly from China! It can be easily programmed or loaded with pre-made programs that will make it a functional utility device or a stand-alone computer. Warren will describe some interesting and fun ways to automate your shack with the Arduino.

Warren KD4Z, could easily be described as a "Maker" long before the current tech-savvy Maker community came into the spotlight. He has been creating electronic gizmos since first introduced to a Radio Shack "50-in-1 Project" kit in the late sixties. Warren became interested in Amateur Radio due to a ham living across the street, but was side tracked on getting a license while pursuing a degree in Electrical Engineering. First licensed as a Novice in 1993 with the call sign KD4ZDD, Warren upgraded quickly to Amateur Extra, and was then able to shorten his call sign by two letters. Warren enjoys building and testing antennas, operating on the HF bands and higher, plus maintains a wide coverage area UHF repeater in Orlando, FL.

Technology in the Ham Shack is changing and evolving rapidly. With computers you can do things better, faster, and more efficiently. With a Flex Radio, you can make your radio do or be whatever you want it to be. With a Raspberry Pi or an Arduino (and a little time and effort), you can cost effectively add some nice accessories to your shack as well. This will be a meeting you won't want to miss!

Proposed Slate of Officers for 2016 / Neil Foster N4FN

Per the NFARL By-Laws the president will appoint a nominating committee to present a slate of officers for the year 2016 at the October meeting.

Nominations can also be made from the floor. The newly elected officers will assume their positions after the close of the holiday party.

Proposed Slate of Officers for 2016

President: Mark Schumann KK4FOF
Vice President: Mike Birmingham K4LJG
Secretary: Lori Young K4UPI
Treasurer: Fred Moore N4CLA
Activities: Bill Weathers K4WSW
Membership: Pavel Anni AC4PA

The nominating committee for our 2016 slate of officers consisted of Martha Muir W4MSA, Mark Schumann KK4FOF, Jim Paine N4SEC, and Neil Foster N4FN.

Mark Schumann - KK4FOF (President)

I have had a lifelong interest in radio. As a child, he enjoyed SWL on his grandfather's Zenith console radio and later building a Heathkit Mohawk receiver. As a paramedic, I used radios, pagers and scanners for public safety communication. Joining the hobby later in life, I was first licensed in 2011 as KK4FOF and quickly upgraded to General in 2012 to pursue my passion of chasing DX on HF. I also enjoy designing and building antennas and digital communications. I have been active in NFARL since January 2012. I believe in giving back to the hobby and have been GOTA co-captain for the last three years, participated in Ham Cram's, JOTA, ARES SET and am currently serving as the NFARL Membership Chairman. I have worked in high tech sales for the last 20 years and in various sales leadership roles. I live in Roswell, GA with my wife and two daughters.

Mike Birmingham - K4LJG (Vice-President)

Mike is a retired Delta Air Lines pilot. He was briefly exposed to ham radio as a youth. But, his aspirations to become a pilot took all his free time.

He became a ham in August of 2012. He joined the NFARL and immediately became interested in ARES. He is now the EC of the NFARL ARES group. In 2014, he served as secretary of the club and has remained active in the executive committee. Although he has enjoyed many of the digital modes as well as SSB, CW is fast becoming his favorite mode. He enjoys getting outside and "doing" ham radio QRP with fellow hams. He remains committed to the future of NFARL and ham radio.

Lori Young - K4UPI (Secretary)

Lori is a Registered Nurse residing in Roswell, Georgia. She received her BSN degree in Nursing from Georgia State University and earned her certification in Case Management. In addition to her 29 year nursing career, Lori is a local artist in the Georgia area. For many years she exhibited and sold her artwork in a gallery in Historic Roswell and was one of eight Georgia artists selected by HGTV to highlight her art on the television show "That's Clever".

Lori received her technician license following her 2013 Field Day experience. Ham radio offered fun, excitement and challenge and it soon became a hobby she pursued. She earned her general license in 2014 and is a member of the ARRL, North Fulton Amateur Radio League, YLRL, AMSAT and SEDXC. Lori is alternate net control for the NFARL Thursday night YL net and net control once per month. She participates in several events such as the SET, Field Day satellite station, STEM Expo and the Atlanta Science Festival Exploration Expo. She enjoys DX, contesting, satellite tracking and most of all the friendships that are made through ham radio.

Fred Moore – N4CLA (Treasurer)

I was born 1941, first acquired my Novice call KN8NXX in 1958, Served 4 years in the USAF 1961 – 1965 during the Bay of Pigs, Went to work for IBM in 1967 and retired in 1992. During my tenure with IBM I moved to Roswell in 1977 and installed the first NFARL repeater on 145.47 MHz at the water tower located at Woodstock and Minhinette in 1978. Later on we acquired the 147.06 frequency then moved 145.47 repeater to Sweat Mountain and installed a 147.06 repeater back on the water tower. I have served in the capacity of President, Vice President, Repeater Manager and Treasurer of NFARL since my move to Roswell in 1977 and have served as Treasurer for NFARL most of that time.

I have been married to my beautiful bride Catherine for 34 years, we have 3 children Tracy Lynn 47 years old with 2 children, Amanda Catherine 38 years old with 2 children, and Fred L (Buddy) IV 32 years old with 2 children. After my tenure with IBM a friend and I started a small company manufacturing repeater controllers using an IBM PC as the base for the controller. We then went into business surveying Commercial TV and

FM broadcast towers in an airplane providing the Chief engineers an over terrain color plot of their signal.

In 2004 I went into the missionary field for 10 years in Nigeria, D.R Congo, Cameroon, Ethiopia, Kenya, Bangladesh, and Thailand and continued to serve as the NFARL Treasurer during that time.

My current mission in life is raising one of my grandchildren, Gabriel who is now 6 1/2 years old and in the 1st grade.

Bill Weathers - K4WSW (Activities)

Amateur Extra Class and Volunteer Examiner, first licensed in April 2011

Active with NFARL since May 2011, summarized highlights below:

- Field Day GOTA Captain 2012-15
- NFARL Membership Chairman 2013-14
- NFARL Ham of the Year 2012
- Georgia Operating Team for 13 Colonies 2013-15

Ham interests include chasing DX, operating HF remote/mobile and off-the-grid power sources.

Professionally, have been in the IT Sales and Services industry for 30 years; other hobbies include tennis, basketball and wildlife management.

Pavel Anni - AC4PA (Membership)

I first became interested in radio and electronics when my parents gave me a radio receiver kit on my 12th birthday. It won't be an overstatement to say that it defined the rest of my life. Because of that I became a ham at the age of 14, because of that I chose engineering college and engineering career later. Ham radio helped me to expand my horizon and discover the world without borders (remember, that was in late 70s - early 80s in Soviet Union!). My engineering career helped me to join Sun Microsystems, the best company I have ever worked for. Sun helped me to move with my family to the United States in 2008. For the first two years we lived in Boston, MA, but then moved to Alpharetta--in search for better weather :-).

It took me a while to discover that less than a mile from my new house in Alpharetta there is a ham radio club--NFARL. I decided to revive my childhood hobby and on my 48th birthday I came to North Park Activity Center and passed both Technician and General tests. I studied hard for another month and passed my Extra test in January 2013. Since then I'm known as AC4PA.

My main ham radio interests are: QRP (both operating and building), CW (my goal is to pass 20 wpm test to prove that I'm a "real" Extra ham), field operations (including SOTA). Also I'm excited when I have an opportunity to work with young hams in Mill Spring Academy. I think it's the best way to build our future generations of engineers.

President's Corner / Bob Beeman k4bb



I have been to the mountain top on Sweat Mountain to view the NFARL repeater installations with Mike, W5JR, and Fred, N4CLA. I have seen many radio equipment installations in my career, but the NFARL repeater building is one of the neatest and best organized of any ham radio installation. Mike, Fred, and all the others who over the years have built and maintained this installation have done a superlative job. Thanks to our tech team, headed by Mike Roden, W5JR, for the great job he does.

This brings to mind some opinions, questions, and comments heard on the subject of repeaters.

“Repeaters, can’t live without them!”

“We don’t need no stinkin’ repeaters”

“Why would we want a DStar repeater?”

The club infrastructure has grown over the years as technology has changed, and prices have decreased for radio equipment. Some of this equipment is almost forty years old. We have to consider updating our technology as equipment becomes obsolete due to parts availability or regulatory change.

We have a team searching for additional repeater sites right now. A DStar repeater is in the plans if we can secure the kind of site we need. We have members in the club, myself included, that have DStar radios and would like a local site. There has been some controversy over how many repeaters we have, and what digital standard to use if we add a digital repeater.

I have my ideas, and others have opinions, too. How do I envision all these repeaters, and their future?

- Retain all existing narrow band FM machines. If and when they become obsolete we can make appropriate decisions to replace them or not.
- Add a digital repeater system. This is the future. DStar currently has the largest installed base with a loyal following.
- In the event that we have to vacate a repeater site, we will need alternatives. The DStar site would be one of those alternative sites. I believe we need to position the club with a diversity of sites, just like we have a diversity of repeaters.

The big question is, “What do NFARL members want?” The Executive Board would like to hear your opinions. You can email any of the officers, and your opinions will be shared and discussed at some future date. Our job is to make sure we are ready for the future, and your input is key.

At the October meeting new NFARL officers will be elected. The nominating committee is presenting a slate of excellent candidates. I will not stand for election for next year. Nominations will be taken from the floor, so think about our club and how you would like to see it run.

One of the biggest and best ham radio events in the Atlanta area is HamJam. It is our event and will be on November 14, 2015 at the Metropolitan Club in Alpharetta. The YESA team tells me that thousands of dollars in prizes will be raffled off. The more tickets you buy the better chance you have of walking away with one of those prizes that mere hamfests call grand-prizes.

Put December 19, 2015 on your calendar for our annual holiday dinner. We had a great time last year, and Bob Citronberg, KI4GHT will again work his magic on the menu.

73,

Bob Beeman - k4bb

President

North Fulton Amateur Radio League

Events / John Tramontanis N4TOL

The Stone Mountain Hamfest will be held on November 7-8 in Lawrenceville. NFARL will be represented with a club booth. All are welcome to visit our table, socialize with friends, and promote our fine club to the hamfest attendees. This is the largest event of its kind in the Atlanta area. For more info, please go to: <http://www.stonemountainhamfest.com/>

Be sure to mark December 19th on your calendars for the 2015 NFARL Holiday Party. Details to come.

HAMJAM 2015 / Wes Lamboley W3WL

Here is an update for HJ this year – our 7th!

Three great speakers will make presentations: Jamie Dupree, Mike Corey, and Glen Popiel (see www.hamjam.info for details on these guys!)

Lots of prizes – 32 and counting! First prize is a Kenwood TS590SG, second is an Icom IC 7100; third is a \$1000 gift certificate toward anything Elecraft makes. See the current prize list at www.hamjam.info/Raffle/RafflePrizes.html.

Please note that FLEX Radio has donated two certificates for \$ off on their products. If you are planning to buy a FLEX soon you may want one of the certificates. These certificates will not be included in the raffle as prizes, but will be auctioned separately at HamJam.

A subscription to CQ magazine will be given to the club with the most attendees!

A door prize – a hardback ARRL handbook – will be awarded to one lucky attendee. No purchase necessary -- just show up and be in the pool!

Did I mention that admission is FREE?

Raffle tickets will be sold for the prizes and you can buy them on line through our Mart (www.nfarl.org/mart/HamJam-2015-Raffle-Tickets)

All net proceeds from HamJam go for youth education, scholarships, materials, and activities ONLY!

For all the latest see our HamJam page at www.hamjam.info.

Maker Faire 2015 – Wrap Up / Jim Stafford, W4QO

As in 2014, a number of local ham clubs worked together to present ham radio at the Atlanta Maker Faire this year. Each club contributed some seed money and volunteers to host several thousand visitors at the Faire. While it was not the best of weather, there was very little rain in downtown Decatur for Saturday and Sunday, Oct. 3 & 4. The clubs involved were GARS, Alford, Atlanta, and NFARL (funded with HamJam income from last year!) I would guess that there were altogether 40 volunteers from these clubs (and others such as the Mill Springs Academy RC and NoGA QRP at least).

The ham exhibit was composed of 4 canopies all tied together and weighted down. One of the photos shows the view from outside. Now the ham exhibit was only one of perhaps 300 booths on a wide range of subjects all related to MAKING things! There was drone racing, body armor displays, Arduino computers by the score, woodworking

(Home Depot had perhaps the largest exhibit with numerous hands on activities). At the amateur radio exhibit, we featured these modules – Morse Code, Special Event station, a digital ARES station, a satellite communications display, and ta dah... a section where visitors could actually MAKE something – a small LED multicolor blinking circuit (soldered no less)!

We helped folks (many as young as 5 years old) solder up over 250 of the circuits. But one unique feature of our exhibit was our "Ham on the Street" rover team. Here's how it worked A team of 2 (mostly young hams from MSA) carried an FT-817 with a LONG microphone (not ham looking at all) around while one of the team members carried a sign that read "Care to say HELLO on ham radio?" This looked like a broadcast team but those who said "hello" were surprised to hear someone in our tent at special event station W4Y talk back to them using their name and other details. The lucky participants were then directed to our main exhibit where they were given a personalized QSL card. We had well over 100 visitors to the tent using this technique.

In addition to the various modules at our exhibit, there was an information table with upcoming events such as the NFARL HamJam (Nov. 14) and the NFARL HamCram (Dec. 5) which were highlighted along with activities from other clubs. This small collaboration of clubs has a website: atlantahams.com which you should check out. You might find something of interest as well! In the end, we can all say... this was a good time and perhaps we'll get some new hams from it!



Although little rain, the fact that we had a dry spot probably garnered us some visitors wanting stay dry!

Our ROVER TEAM - Megan, KM4HFY, and Trey, KK4QJB, put a guest "on the air".



• EDITORIAL •

APPROXIMATELY every so often an anguished member writes in to ask us how we can dare to apply the term *ham* to radio amateurs. Not because it is undignified, for we're not much on false dignity in amateur radio, particularly within our own family, but because, says our correspondent, everybody knows that a *ham* means a punk, a lid, a poor performer, a person not fully familiar with his vegetables. Why throw asparagus upon ourselves, our inquirers ask.

Now we arise to remark that if we felt for one moment that that was a correct interpretation of the meaning of *ham*, it would be a thoroughly hated word at the very top of our Index Expurgatorius. We'd have a town ordinance in West Hartford prohibiting its utterance and we'd pay a bounty to *QST*'s proof-readers to run down the despised term. But as a matter of fact we're quite convinced that the appellation is an honorable one, one over which we need have no qualms whatever.

Somebody's dictionary suggests that *ham* is derived from *hamfatter*, which was a word used in a popular refrain of many years ago. Just what the significance was is not now clear. Then there are many people who believe that the word comes from the theatrical field, being derived from "Hamlet" — because the *ham actor* was forever strutting the boards and reciting from "Hamlet." For ourselves, we find a much more convincing account in an article on the etymology of the language of sports, by William Henry Nugent, appearing in *The American Mercury* several years ago. Mr. Nugent establishes that the United States learned its first lessons in sports journalism and sports slang from the British Isles, where early writers invented a special style and vocabulary that are still in use. *Ham*, says he, "began as an abbreviation of *amateur* to *am*, which the cockney foot-racers and pugilists of the 70's pronounced *b'am*."

The moment one glimpses that *ham* is derived directly from *amateur*, much is apparent that before escaped recognition. One has only to consider, for instance, the way the word *amateur* is abused. Webster says that an amateur is "one who is attached to or cultivates a particular pursuit, study, or science from taste, without pursuing it professionally"; there is no implication of lack of skill. Yet how often have we heard people say, speaking of many things besides radio, "Pooh, he's only an amateur!" They are wrong, dear friends, as sure as you're born, and they've merely displayed the depths of their ignorance. We accept no such connotation with respect to *amateur*; neither do we with respect to *ham*, and for the identic reason.

The word came to us in amateur radio from the wire telegraphing fraternity, where a beginning operator was known as a *ham operator*. That our wire brethren, in professional scorn, employed it to mean a poor operator does not make that application correct; the misuse is, in fact, blood brother to the even more common distortion of *amateur*. If we borrowed the term from them we took it in its proper sense, and emphatically left behind any stigma of the opprobrious. There is, we repeat, nothing in the derivation of either *amateur* or *ham* to imply a lack of skill, but rather the contrary.

Hams we are, then, and proud of it!

K. B. W.

TWENTY Thoughts for New Hams / W4QO Jim Stafford Continued...

9. Have HOAs? Use 27 gauge wire from the Wireman or put one in your attic – they work. Or simply put out your antenna during night when no one's looking! If you must buy, do not pay more than \$75! Or put a mobile HF antenna on your car, park in driveway, run coax into house. **Disconnect before driving!**

10. Don't worry about antenna patterns; a dipole works pretty much equally in all directions! Cross oriented dipoles are a waste of time unless your antennas are 75' in the air. Then only marginally.

11. Borrow an HF rig from the club's inventory (you did join NFARL didn't you?) until you buy one.

12. Shouting on 2M FM does not improve your signal. In fact, if you are noisy into repeater, talk softer.

SOTA Portable Power / K4KPK, Kevin Kleinfelter

A power source is a requirement for any successful activation. In this month's column we'll look at some popular options for powering SOTA activations. Although the occasional activator will use a kilowatt amp, this article will focus on power for QRP portable rigs.



Step Away From the Car Sir

SOTA rules state:

- *Operations must not be in, or in the close vicinity of, a motor vehicle.*
- *All equipment must be operated from a portable power source (batteries, solar cells, etc).*

Consequently, most activators carry some kind of battery.

For some activators, a walk across a parking lot is an expedition. Others sniff with disdain at anything less than 5 miles with 2000' of elevation gain. If you're lugging your gear across a parking lot, you could haul your car battery across the lot in your grandchild's wagon; if you're trekking up Denali, grams count!

The Heavy End

Many hams have a SLAB (Sealed Lead Acid Battery) for field day. This is the technology used in your car battery. You can *use* your car battery, but it is big and heavy and you need to be sure not to discharge it so far that you can't start your car.

Gel cells are a common alternative to SLAB. For activator use, they are similar to SLAB, except they need not be kept "sunny side up." They may require special chargers. The removal of the right-side-up requirement is helpful, but they are heavy enough that you won't often carry one on the trail.

- Down-side: High weight-to-power ratio.
- Up-side: Simple technology; inexpensive.

Low-tech, Middle-weight

Disposable alkaline batteries are a popular choice. If you put enough of them in series and/or parallel, and you can meet most any power requirement. Some portable rigs include a battery holder for AA cells.

- Down-side: Expensive over time; disposal of used cells.
- Up-side: You can buy them anywhere; low-tech; reliable.

Disposable lithium cells are a similar alternative. They're a little lighter, more expensive, and have slightly different discharge characteristics. Since they retain their charge for up to a decade, they make a good backup power source. I often carry a set of 8 AA lithium cells as a "plan-B" power source.

For my first two years as an activator, I used rechargeable NiMh (Nickel-metal Hydride) cells. These have a similar form factor to disposable alkaline cells. They are rechargeable 100s of times and do not exhibit the 'memory effect' of NiCad. They must be charged in a NiMh-compatible charger. Some varieties won't hold a charge for more than a week or two, but there are long-life varieties that will hold a charge for a year or so.

- Down-side: Slightly lower voltage than alkalines.
- Up-side: Simple charging protocol; inexpensive.

I use a KX3. It is designed to operate at 5 watts with 8 internal NiMh cells, but it will operate at 12 watts if I feed it 14-15 volts. This requires 11 NiMh cells, so I made an [custom external battery holder](#).

High-tech, Lightweight

The cool kids are all using rechargeable lithium batteries. These pack a tremendous amount of power into a small, lightweight package. These are very popular with gram counters. Some of these are physically about the size of an AA cell, but since they are 3 volts, please don't put them into a device designed for AA batteries!

There are several variants of lithium batteries, with unique characteristics. Collectively, they are known as "lithium ion." The most popular varieties are Li-Po (lithium polymer) and LiFePO₄ (lithium iron phosphate). (LiFePO₄ are also referred to as 'LiFePo' or 'LFP'.) They require special chargers -- each variety requires a different charging protocol. Don't mix and match!

Up-side (all varieties):

- Low weight-to-power ratio.
- Low volume-to-power ratio.
- Ability to deliver high current.

Down-side (Li-Po):

- Power-to-cost ratio is expensive.
- Easy to ruin with over-charge or over-discharge.
- Short-circuit may lead to fire.
- Crush/penetration hazard.
- Concern over excessive fire risk.

Down-side (LiFePO₄):

- Power-to-cost ratio is expensive.
- Easy to ruin with over-charge or over-discharge.
- Short-circuit can lead to fire.

Li-Po and LiFePO₄ are popular with RC helicopter pilots, due to their light weight and ability to deliver an 'insanely high' current. If you short them, expect a fire. With a low internal resistance, they'll dump all that power into the short in very short order.

The chemistry of LiFePO₄ make them substantially less likely to combust than Li-Po. If you short them, the high heat from all that power is still a risk, but these are much safer than Li-Po.

Note that the cells in a lithium ion battery pack should be managed individually. Each cell will have slightly different capacity. Over-discharging *any* cell may ruin the battery. Over-charging *any* cell may ruin the battery or create a fire hazard. You will need a battery pack and a charger that support 'balanced' charging. This will allow the charger to charge each cell individually, rather than charging the battery as a whole.

Low-tech, Extremely Lightweight

If you want to go really lightweight, consider operating at lower power. Less power intrinsically means less weight. Consider the Mountain Topper (a.k.a MTR, a.k.a. AT-Sprint) radios designed by Steve Weber (KD1JV). These are sometimes [sold assembled by LNR](#), occasionally offered in kit form via a [Yahoo mailing list](#), and turn up on eBay from time to time.

These will operate for many, many QSOs on a [standard 9-volt battery](#). A single alkaline 9-volt battery is reportedly good for more than an hour of activating.

Down-side:

- Must learn CW.
- About 3 watts maximum output.

Up-side:

- Lightest option.
- Simple, low-tech reliability.

Wrap-up

- Start with what you have. If you can get it to the summit, it is good enough to get started.
- If you've got nothing suitable, AA NiMH cells are a good start. It is robust technology. You can combine cells with a [power wand](#) or mix real cells with dummy cells in a commercial battery holder to provide the desired power.
- To get maximum power for minimum weight, use LiFePO4.
- If you want absolute minimum weight, get one of KD1JV's radios and use a 9-volt disposable lithium battery.

See you on the summits!

73 DE K4KPK / Kevin

Where can I find out more?

- Wikipedia on balanced charging: https://en.wikipedia.org/wiki/Battery_balancing
- WB4SON blog on LiFePO4: <http://wb4son.com/wpblog/?p=481>
- Official site: <http://sotadata.org.uk/>
- Mailing list: <https://groups.yahoo.com/groups/summits>
- K4KPK's site: <http://k4kpk.com/content/sota-menu>
- Email me (K4KPK). My email address is available via <http://www.qrz.com/db/K4KPK>.

Bio

K4KPK, Kevin Kleinfelter is Georgia's first SOTA Mountain Goat. He has completed more than 150 activations.

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Emergency Preparedness

Why Bother?

By Tim Romashko

Why should I bother to stock up on the food, water and medicine that I regularly use when I can run down to Kroger or Publix and get what I need, when I need it? Here is why: In an age where “Just in time” deliveries are the new normal, stores no longer stock large inventories. The “just in time” delivery model works well for merchants of all sorts. It helps them keep just enough inventory on the shelf for the next few days. They know that in a few days, they will get another delivery and the cycle starts all over again.

The problem with keeping just a few days inventory is when a delivery interruption occurs. We have seen this a few times in Atlanta when we get an unexpected ice storm. There is nothing like an ice storm to make the roads impassable and close our favorite stores. This will throw all sorts of folks into a panic when they can no longer run out to buy tonight’s dinner. Even if the stores remain open, the shelves will be empty within hours and we are back in the same situation - waiting until the next deliveries arrive.

The Federal Emergency Management Agency (FEMA) has recommended for years that each household keep three days of food, water and medications at home in case of just such an emergency. Today, FEMA recommends 14 days of everything you may need to stay at home and survive. How many of us actually have 14 days of what we normally eat at home in the freezer, refrigerator or pantry? Not having enough food, drinking water and medicine can be a life threatening event if an emergency happens in our neighborhood.

Emergency preparedness is not a one-time thing or box we check because we thought about it ONCE! Being prepared is an on-going process that requires careful thought and planning. It does no good to stock up on a bunch of food and water only to forget about it. After a while, the food and water will degrade to the point of being useless. The food will spoil or get freezer burned, the water will get stale at first then will grow mold. Stocking food and water is great but that inventory needs to be rotated to maintain freshness. This is where the planning comes into play. Buying dehydrated food can greatly prolong the food storage but this requires water and cooking ability to heat the water and make the food edible.

With a little thought you can figure out how much your

family eats each day. Take that times 14 and you have a good starting point for food. Remember that you may lose electricity and thus your freezer and fridge. Your normal supply of tap water may stop or be contaminated as well. Each person needs a minimum of one gallon of water per day for drinking, meal prep and bathing. Do the math, water needs add up quickly.

Many people who actually do plan for a food and water storage completely forget about the prescriptions they take every day. A daily vitamin is no big deal if you miss that for a few days. Try missing your blood pressure meds or insulin. This can be a problem in hours for some of us. Medicines also degrade with time and temperature. Storing medicine must be done carefully and supplies must be rotated with each new purchase. A few medical professionals I know recommend a 30-day supply of your meds or longer if they are not common.

All this discussion assumes you are staying at home. We call that “sheltering in place”. There is a whole other set of problems if you need to get out of the house rapidly. This emergency exit requires a “go bag” for each member of the family, including pets. We discuss both the shelter in place and Go Bag concepts in our emergency preparedness classes.

So, when it comes to emergency preparedness, why bother? Because this could mean the difference between having the food, water and meds you need to survive or scrambling to make it through the next few days. If you think this can’t happen in your neighborhood, just read the headlines in the newspaper. This happens every week someplace in America. Flood, storm, gas leak, fire, power outages etc., you could be out of a place to live on very short notice and be forced to leave with nothing more than the clothes on your back.

Be safe, plan ahead and live well. We have just scratched the surface.

Tim has been teaching for more than 25 years. He has taught electronics, SCUBA diving, CPR, First Aid and is now teaching firearms and emergency prep classes in the Atlanta area. Tim has been a traffic signal professional for the past 30 years and has degrees in Computer Systems and Law Enforcement.

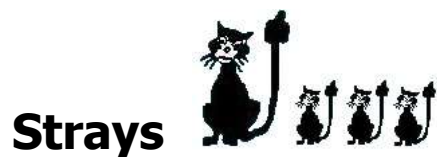


About Tim Romashko:



Tim has been teaching for more than 25 years. He has taught electronics, SCUBA diving, CPR, First Aid and is now teaching firearms and emergency prep classes in the Atlanta area. Tim has been a traffic signal professional for the past 34 years and has degrees in Computer Systems and Law Enforcement. Tim is an Extra class ham radio operator. You can e-mail the author at K4RA@arrl.net.

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Additional photos from all events in the **NFARL eNEWS** can be found on <https://www.facebook.com/groups/NFARL/>

Thank You Letter to NFARL / Fred Moore N4CLA



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October 1, 2015

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Thank you for your generous contribution of \$2,000 to sponsor a seat allowing a teacher or educator to participate in the ARRL Teachers Institute program.

Your gift supports participation in intensive, four-day professional development workshops that offer world-class training to educators to bring radio science, wireless communications, electronics and technology lessons into their classrooms. Upon completion of this extraordinary course, teachers return to their schools filled to the brim with better knowledge, resources and – most importantly – a renewed enthusiasm to pass along their lessons to their students.

This past summer, 34 teachers received certification through the ARRL Teachers Institute program – and many also studied and received their Technician License during that time as well. At the end of the week, it was exciting to see the educators controlling their robots via packet control and making first contacts!

Upon completion of her Institute, one teacher told us, "I have gained many new insights on how to use electronics, robotics and wireless technology in my curriculum. I believe that my students will be fascinated by this technology. It will give many of them the "gee-whiz" moment that could spark a lifelong interest."

The Teachers Institute program is funded entirely by generous contributions by ARRL members. Thank you for inspiring our teachers – and our young people – with the wonder of radio science and technology!

Sincerely,
73,

David Sumner, K1ZZ
Chief Executive Officer

Read more about ARRL Teachers Institutes at www.arrl.org/teachers-institute-on-wireless-technology.
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