It's hard to believe that it was 10 years ago this month in October, 2006 that "Narful" decided to hitch up its figurative belt and basically start over. Let's go back to 1975. NFARL was founded by members Terry Joiner, W4YBV, and Danny Turner, WA4BRO and for 30 years, NFARL was an active club with over 200 members at one point. Those were the days when ham radio was valuable because you could make phone calls over the repeater – AutoPatch. But as time passed NFARL struggled to remain viable and at one point, it relied on Todd McGinnis, KB4KAY, to be president through about 5 years in the early part of this millennium. Thank God that Todd was able to "hold things together" for that period. Also, involved in the first 30 years were Fred, N4CLA, Doug Drye, KD4NC, Steve Mays, KS4KJ, Bob Beeman, k4bb, John Smith, K3GO, Wey Walker, K8EAB, Scott Straw, KB4KBS, Mike Del Posso, KR4TG and Cliff Segar, KD4GT (past president now in TN) to name a few that I remember. This was in addition to Danny and Terry, who by the way is still an active member and a champion for US Islands Award and NPOTA for the club.

But by 2006, the club was down to 56 members with only about 6-10 attending monthly dinner "meetings". Rarely was there a speaker at Ryan's, Southern Skillet, or Sonny's BBQ. We didn't even hold a Field Day that year due to lack of interest! At the August 2006 meeting, the question was bandied about "What should we do with the nominal sum in the club treasury if the club were to disband?" A number of us at the meeting voiced that maybe we should try "one (Continued on page 2)
more time.” Asked who would attempt such a thing were Steve, KC4YBO (now AB4TT), Walt, KJ4HE (now W0RON), Fred N4CLA, and me. We met and decided to invite Susan Swiderski, AF4FO, the GA Section ARRL manager to the September meeting to help us! She suggested several things but probably the most important was “Start acting like a club and do NOT hold your meeting where you eat”. Seems like a simple enough idea, so we tried it for the October meeting with Robin Cutshaw, AA4RC on WinLink, and by inviting club friend Bob Allphin, K4UEE, to speak in November about the Dxpedition he had lead to the island of PETER I, having just returned a few weeks earlier. We had about 25 at the meeting behind the Fire House on Webb bridge road! We were on our way and held a Christmas party hosted by Fred, N4CLA and Cathy at their home.

Well, you can read more about “the rest is history” at http://nfarl.org/about/aboutUs.html or at an article by Ian KM4IK and I …. http://nfarl.org/phoenix/index.html

I did not mean to leave anyone out of the tremendously great early history. These things that stick in my mind for NFARL 2.0…..
- Great Field Days culminating in 1st place Category 3A nationally in 2015.
- Dayton Hamvention “Club of the Year” 2010, the inaugural offering of this award nationally.
- Years of great programs with very interesting speakers from “outside and inside the club”.
- HamJam – a different kind of club fund raising activity – now in its 8th year.
- Having a series of great club leadership/ presidents – W4AX, through KK4FOF.
- Restoration and an enlargement of the club repeater system with EchoLink and much more.
- A strong ARES group associated with NFARL brought to life by Tom, W4UOC.
- Many club activities such as Mid Month Madness, HamFests, to the field QRP outings, etc.
- Support of schools, ARRL Education, and STEM through YESA SIG from HamJam funds.
- My personal – the greatly increased number of friends I have made in the past 10 years. Thx!

There are many great photos and articles on our website (thanks to K4YJJ) covering the recent 10 years. Thanks to all of you for making NFARL 2.0 what it is today. If you have more or different recollections of our past why not send in an article to editor@nfarl.org for future publication.

To celebrate this milestone, why not wear GREEN shirts to the club meeting this month? Green was adopted early on for NFARL 2.0. Wear club shirts, FD shirts, and any shirt … as long as it's GREEN!

Jim, W4QO
NFARL Upcoming Events and Dates

- **Every Sunday — NFARES net** - 8:30 PM - 147.06 MHz (+) PL 100
  All licensed Hams are welcome, you do not need to be an ARES member!

- **Every Monday — Tech Talk** - 8:30 PM - 145.47 MHz (-) PL 100
  NFARL’s flagship technical based “non check in” net. The net is always better when using the web based chat room but Internet is not required to join the net. Check NFARL Nets [website](#) for “how to”.

- **Every Wednesday — Hungry Hams Lunch Bunch** - 11:15 AM
  Slope’s BBQ, 34 East Crossville Road, Roswell.

- **Every Wednesday — Youth Net** - 7:00 PM - 145.47 MHz (-) PL 100
  Contact Martha W4MSA if you are a student, teacher or educator

- **Every Thursday — YL Net** – 8:00 PM - 145.47 MHz (-) PL 100
  Check NFARL Nets [website](#) for “how to.”
  OM’s (guys) are welcome to listen in to this YL net. Great opportunity to get your YL’s on the radio!

- **Every Saturday — Royal Order of the Olde Geezers (ROOG) Lodge No. 1**
  9:00 AM - Reveille Café, 2960 Shallowford Road, Marietta (at Sandy Plains and Shallowford). Everyone is welcome: You don’t have to be “old” or a “geezer” to join this breakfast get-together.

- **Second Tuesday — NFARES Meeting** - 7:00 PM - 9:00 PM
  Fellowship Bible Church, 480 W. Crossville Road, Roswell. Check [NFARES.net](#) for more information.

- **Third Tuesday — NFARL Club Meeting** - **October 18th**, 7:30 PM.
  Pre-meeting activities begin at 7:00PM.
  Location: [Alpharetta Adult Activity Center at North Park](#)
  13450 Cogburn Road, Alpharetta, GA  30004
  **This month’s program:** “*Stone Mountain Holiday Present*” The story of RF Interference caused by holiday lighting on the mountain Presented by Barry Kanne, W4TGA

- **Fourth Tuesday — NFARL Executive Team Meeting**
  October 25th, 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.
President’s Letter / Mark Schuman, KK4FOF

Have you reviewed the NFARL activities for the remainder of the year? NFARL is an organization on the go and the next three months are going to be busy. NFARL has over 300 members and our participation in these activities and other activities is contingent on club members volunteering to assist our team captains! Upcoming events include:

**JOTA and Merit Badge University** – October 15th – Jon K4WIT Captain – k4wit@nfarl.org

**Girl Scout Stem Expo** – October 22nd – Cathy Freeman- KI4SBK - nmchilefan@yahoo.com

**Stone Mountain HamFest** November 5th and 6th NFARL Booth
Daryl Young K4RGK – k4rgk@nfarl.org & Mark Schumann – KK4FOF kk4fof@nfarl.org

**Technician HamCram** at Mill Springs – December 3rd – Sign-up on NFARL MART
Mark Schumann – KK4FOF kk4fof@nfarl.org

**General HamCram** – Q1 2017 – Mark Schumann – KK4FOF kk4fof@nfarl.org

We will be circulating a sign-up sheet at the October meeting so please support NFARL by signing up for a shift at one or all of these events!

Our premier event of the year, HamJam is on November 19th at the Metropolitan Club on Windward Parkway (www.hamjam.info). The YESA team (Youth Education Scholarship and Activities) has informed the executive board that we have three great speakers and thousands of dollars in prizes will be raffled! Raffle tickets can be purchased on the NFARL Mart, at the October club meeting, at Hungry Hams, at the Stone Mountain HamFest and from some NFARL club officers and members! Proceeds of the event are used by YESA to support youth activities including scholarships, education and materials! Remember the more tickets you buy the better your chances are of winning a great prize!

NFARL will also elect officers for 2017 at the October meeting! The nominating committee of John Kludt – K4SQC, Bill Cobb – K4YJJ and Bill Weathers – K4WSW presented a slate of candidates at the September club meeting. At the October meeting nominations will be taken from the floor and a vote will be taken by the membership. Remember, only current members in good standing who attend the October meeting can vote.

December 10th is NFARL’s annual Holiday Party. Lori Young - K4UPI has been working overtime to finalize a fantastic catered Holiday dinner that will have something for everyone! We are close to finalizing the arrangements and plan to present the menu and party details at the October meeting!

October is the last club meeting for 2016 so I look forward to seeing everyone dressed in club green at the meeting!

73, Mark - KK4FOF - NFARL President
NFARL RECEIVES ARRL AWARD / Terry, W4YBV & Jim, N4SEC

At our next club meeting Jim N4SEC and I will be presenting the ARRL FIVE STAR ACTIVATOR Award to our club!

We received this NPOTA award for our Special Event Station that we put on the air back on Aug. 20th at Allenbrook, part or the Chattahoochee River National Park System.

For this Special recognition we needed to have five exceptional outreach programs during the park activation throughout the event and we did. By having Youth/Scouting involvement, Satellite Contact, Battery Powered, Social Media, and “Share The Mike”.

Everyone that took part in this event please come up and have a photo with us at the club meeting on Tuesday night!

{Many thanks to Terry and Jim for their extraordinary efforts and work towards this award for the club. Luckily, word has it, they had lots of fun “working”. –Ed}
When considering antenna designs, it makes sense to consult club members for their ideas. In this case I credit both Jim Stafford, W4QO and Walt Woron, W0RON for this wire antenna design.

For a QRP field portable antenna, Walt says he uses a forty-meter quarter-wave end-fed wire launched into handy trees, with a counterpoise laying on the ground. Jim has recommended a fifty-one foot end-fed wire with a seventeen foot counterpoise which should cover most HF band provided a nine-to-one balun and an antenna tuner are used at the feed point. Jim's configuration sounds pretty much like Walt's.

When sketched out on paper, both antennas look like an Off Center Fed Dipole (OCFD). This OCFD is a 25%/75% (1/8 wave - 3/8 wave) version of an Off-Center Fed Dipole dimensioned to a total length of one-half wave at forty-meters. I built Jim's 17/51 foot version with a home-brew 9:1 balun at the feed point.

Building the antenna was no problem having almost a full 500 ft. reel of Home Depot #14 stranded wire in the garage for just such occasions and some ceramic insulators bought at the last HamFest. The center insulator was recycled from an antenna I used at a Tybee Lighthouse expedition several years ago, and the 9:1 balun is from a home-brew project.

I used my MFJ-225 graphic analyzer to make traces of the VSWR and antenna impedance from 1.0 MHz to 30.0 MHz. As you can see the HF bands of interest are all below a 5:1 VSWR except 20 meters which measured about 6:1. Forty-meters is around 3:1 VSWR with the best performance at fifteen meters. The minimum VSWR is less than 1.5:1 at a little over 4.0 MHz.

The antenna impedances are low in several points across the measured 30 MHz. The impedance scale on the right of the graph shows that the values run from a very low four or five ohms, up to over 250 ohms just above the 30 meter band.

(Continued on page 7)
These impedances are what the analyzer or transmitter sees. The actual impedance values are those seen by the 9:1 balun and are nine times higher on the antenna side of the balun. For example, if this chart is showing 150 ohms at a frequency, the antenna feed point impedance is actually around 1350 ohms. That's why we use baluns to help in matching the impedances. All HF bands are achievable with my Kenwood TS-2000 and its built-in tuner. The antenna seems to work fine. I made a CW contact on 17 meters with ZF1DX, a station in the Cayman Islands. The operator of ZF1DX is Verne Fowler, W8BLA, a former NFARL member.

Now, the task is to build a permanent version of the antenna.

**Announcement of NFARL 2017 Board Member Nominees**

Our NFARL By-Laws require the slate of nominees for the 2017 NFARL board of Directors to be announced in eNews, the official monthly newsletter for the North Fulton Amateur Radio League.

At the next meeting, on October 20th, 2016, the floor will open to accept additional nominations and voting on all offices will take place.

The 2016 nominating committee (see President’s message in this edition) has submitted their recommendations for the 2017 NFARL Board of Directors. The nominees are:

- **President** - Mark Schumann, KK4FOF
- **Vice President** - Daryl Young, K4RGK
- **Secretary** - Lori Young, K4UPI
- **Membership Chairman** - Pavel Anni, AC4PA
- **Treasurer** - Fred Moore, N4CLA
- **Activities Chairman** - John Tramontanis, N4TOL and Jim Stafford, W4QO

We are always talking about getting members involved with the club. This is a great place to start! Be certain you are present at the next NFARL club meeting on October 20th and participate in the voting process!

The new slate of officers, as elected at the October 20th meeting, will take their positions after the NFARL holiday party on December 10th.
W/VE Island QSO Party / Terry Joyner, W4YBV

Once again our club proved how competitive we are in W/VE Land in our first 2016 Island QSO party contest. We took 2nd place. On Saturday, August 27, club members Grant - KK4PCR, Ed - N2NED, Paul - N4XQM, Jim - N4SEC, Terry - W4YBV made our island expedition team.

We all met up around 8:30 a.m. on U.S. Island #031L Pine Island on Lake Lanier for the contest. Our island station consisted of a YAESU 857-D and 20-M/40-M mobile hamsticks. Unfortunately 1st place went to the Amateur Radio Transmitting Society, Inc. in Louisville, Kentucky. They were located on Embry Island on U.S. Island #27R on the Ohio River 12 miles north of Louisville with a score of 11,605 points.

Our club took 2nd place with a score of 6314 points. Some of the other clubs we beat out were the Suwanee River Amateur Radio Club on North Key in Florida with 3876 points, Meriden Amateur Radio Club on Fireworks Island on the Quinnipiac River in CT. with 2016 points, Mid Atlantic Island Crew on Ten Foot Island on the Potomac River in VA. with 3076 points.

At the end of the day we made 110 contacts with a total of 11 U.S. Islands, 24 states and Canada, including DX stations in the Azores, Romania, Croatia, France, Czech Republic, Italy, Poland, Germany, Brazil, and Bulgaria.

I want to thank our great island team for all their help in making this a successful outing. I am looking forward to many other U.S. Island awards program activities, like activating some 20 new islands in GA and FL, a one day island get a-way in May 2017 and the Island QSO party in August 2017.

I hope to have a number of club members on our US Island team in 2017 Please come join in the fun (no boat needed)
People are all the time coming up to me … Daryl!  How can I help!  Daryl, I want to get involved!  Daryl, how can I assist my club!  Daryl, please let me participate!!

Slap-slap, wake up Daryl—you were dreaming again !!  Okay so I was dreaming, but it could happen!  Help make my dream come true, get involved in the wonderful opportunities your club has for you in the next few weeks.

**Girl Scout Stem Expo** – October 22nd – Cathy needs more volunteers and will be posting on the reflector.  Contact Cathy KI4SBK

**Stone Mountain HamFest**—Nov 5th & 6th—Wouldn’t it be nice if there were so many folks running around in green NFARL apparel that everyone knew NFARL was there?  Let’s start a tradition!  Contact me or Mark, KK4FOF.

**Stone Mountain Student Shack**—Nov 5th—Martha can use more assistants and logistical help with this ever growing and very popular student activity at the Stone Mountain HamFest.  Contact Martha, W4MSA.

**Stone Mountain HamFest—NFARL Booth**—Nov 5th & 6th—We need your help representing the club to potential new members.  What do you like about NFARL?  Come help us answer Hams’ questions as they drop by our booth and exclaim “What is NFARL?”  Contact me or Mark, KK4FOF.

**HamJam**—Nov 19th—Contact John K4SQC to see how you can help

**Technician HamCram** at Mill Springs – December 3rd – Sign-up on NFARL MART

Mark Schumann – KK4FOF kk4fof@nfarl.org

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**NPOTA & US Islands Road Trip / Terry Joyner, W4YBV**

NFARL will be activating Three National Parks and US Islands.

On Tuesday October 25th our NPOTA team members Terry W4YBV and Jim N4SEC and possible others will start out on a three day road trip to the Georgia coast.  First we will be stopping on Cockspur Island, US Island Number Ga. 029S at Fort Pulaski National Park Number MN33.  Tuesday afternoon we will stop at Saint Simons Island, US Island Number Ga 006S at Fort Frederica National Park Number MN29.

On Wednesday Oct,26 we will be on Cumberland Island National Park Number SS06S ,US Island Number GA002S (all day).

We will be on 20-M around 14.260 and 40-M around 7.260 and will be using our club call NF4GA.  Please look for us on our trip, we hope to work as many club members as we can.  If we have a rained or stormed out day we will move every thing forward one day.

Hope to work you!

Terry W4YBV
Now that fall is about to set in, we all need to be aware of fire dangers inside our homes. Before we go any further, have you changed your smoke detector batteries yet this fall? If not, please do. Your smoke detectors may be wired to the power in the house. If so, no need to change batteries. You still should have at least one battery power smoke detector just in case the power is out and a fire breaks out. One smoke detector per level and the garage is recommended. Smoke detector batteries should be changed twice a year. Daylight savings time changes are a good time to change batteries in smoke detectors. Don’t rely on the annoying low battery chirp.

Now that we can detect a fire if it starts, what’s next? Every home should be equipped with fire extinguishers. If a fire breaks out, you need to be able to put it out quickly. Calling the fire department is good but if you sit and wait for them to arrive, the fire can be much larger by the time they get there.

No matter how close the fire department is to your home, you need to know how to put out a small fire. To do this, you need to understand a few things about fire extinguishers. Water used to be a common solution for fires. The trouble is that if you spray water on an electrical fire, you will make things worse! Fire extinguishers are divided into four classes. Class A models are designed to put out ordinary combustibles, including wood and paper. Class B units are for use on flammable liquids, including grease and oil. Class C extinguishers are for electrical fires, and Class Ds are for flammable metals. I hope you do not have any flammable metals around the house so Class D extinguishers are more for commercial use. Class ABC is now the general purpose version and works for all common household fires. If you are only going to have one type of extinguisher, get Class ABC units. As you may suspect, Class ABC are good for extinguishing everything from wood and paper to electrical fires.

The size of extinguisher you need depends on the size fire you are trying to put out. In the kitchen, a 3 to 5 lb. extinguisher is probably enough. If you have a large kitchen you may opt for several smaller extinguishers on opposite sides of the kitchen to snuff that pesky grease fire. In the garage you need at least a 5 lb. unit and maybe more like 10 lbs. In the garage we have gasoline, a difficult material to put out once it gets going. With chain saws, weed whip, lawn mower and possibly a generator all burning gas, we need to have a fire extinguisher handy just in case a fire starts in the garage. In my case, the garage is under the living room. If a fire starts in the garage it will only take a minute or two and the living room will be on fire. You are not going to extinguish a fire of that size by yourself.

Make sure you have enough fire extinguishers in the areas where a fire may get started. Have the extinguisher near the exit so you can get to it on the way out. Everyone in the house needs to know how to use the fire extinguishers as well. Read and follow the instructions on the extinguisher, do not be a hero. Get the fire out if you can and call the fire department. Call the fire department even if you think you got the fire out! The fire may restart. This is especially true if it is an electrical fire. Never assume the fire is out and you are safe.

(Continued on page 11)
If the fire is outside the house, you can normally use the garden hose to put the fire out. Do NOT use the garden hose on electrical fires. My brother once had me drive his pickup truck to help him move. I parked the truck in the driveway of the new house and went inside. A few minutes later I heard a pop. I looked out the window and saw flames coming from under the hood of the truck. The fuel line sprang a leak and dripped on the hot exhaust manifold and started a fire. The pop I heard was the battery bursting due to the heat. I ran outside with 2 fire extinguishers and used them both. They had little effect on the gasoline that was now on fire under the hood. I popped the hood and grabbed the garden hose and stared spraying. By this time the flames were coming up through the defroster vents inside the cab. Several frantic minutes of spraying the engine and interior calmed the flames only to see the fire department roll up and look disappointed that the fire was already out. The truck was a total loss.

Make sure your family knows how to use the fire extinguishers! Even more important is that everyone knows how to get out of the house in the event of a fire or other emergency. Your safety is far more important than any of your belongings inside the house.

Be safe, plan ahead and live well.
Tim

NFARL 2.0 Look Back
2010 HamVention Club of the Year
Amateur Radio was well represented at the Atlanta Maker Faire held in downtown Decatur on October 1 and 2. For the third year in a row, NFARL joined GARS, the Alford Memorial RC, and the Atlanta RC, all coordinated by Norm WA4ZXV, in organizing an eye-catching booth that allowed our guests to get some tastes of what we do for fun.

For the past two years, the Maker Faire was held on the streets of Decatur. This year, however, the streets were not available due to massive construction projects. The Amateur Radio booth was shifted to the Decatur High School football field along with 50 or more other booths. Other booths and events were spread out in a nearby parking lot and a city park. Faire organizers estimated around 100 booths were set up to present various aspects of ‘making’ to the 20,000 to 30,000 guests who attended the event. Robots large and small, humanoid or vehicular in shape, could be seen at many booths. There was a series of drone wars, or rather, drone races, some of which ended with spectacular crashes. At the other end of the technology spectrum, blacksmiths wowed the crowd with their skills. Care to take a blacksmithing class?

In keeping with the nature of the two day event, one of the signs hanging in our booth proclaimed that hams were the “Original Makers.” Jim W4QO reinforced this idea by helping our guests solder together the parts necessary to make a small blinky toy. Helping him with the project were Cathy KI4SBK, Bob NZ2Z, Newt N4EWI, Chuck KK4TKJ, Cody WX4WCS, Val WD4DXI, and Mill Springs students James KM4QHQ, Colin KM4SZO, Alexa, and Ben.

Jim also set up the W4Y Special Event station and manned it at various times throughout the weekend. (It was so much fun seeing Jim involved in so many activities!) At a couple points, we had teams of students carry an HT around the Faire and ask attendees if they’d ‘like to say hello on ham radio.’ Most notably, Audrey KM4BUN and Edem KM4PQG wandered around the Faire for hours with the radio and sign. Guests who spoke on the radio were encouraged to come by the booth to get a QSL card. (BTW, Edem earned her license at the NFARL Ham Cram last December.)

Mike AD4MC and Fred KK4JYO tirelessly fascinated guests by allowing them to send and receive digital radio messages. Mike was in the booth; Fred was a couple of blocks away in a parking lot. The sign above this station reminded guests that hams sent the first texts – without using a cellphone or the Internet. Signs indicating how Amateur Radio operators help out in emergencies were also on display in this section of the booth.

Adjacent to Mike were Steve N4TTY’s beautiful, magical, and massive teletype machines. Their perpetual clacking and clanging drew an equally perpetual stream of guests into our booth to investigate the source of these unusual noises. Steve and Nick N0NCQ helped guests type in a message that would be punched out on a strip of ticker tape, a novel souvenir for sure. They also generated smiles on our guests’ faces by allowing them to interact with and control Steve’s giant and half century old teletype machine with their cell phones. One young visitor came back to Steve’s station at least eight times on Saturday. Talk about fascinated!

(Continued on page 13)
That young man was encouraged to join us at the Student Shack at the upcoming Stone Mountain HamFest, telling him that Steve and his machines would be there, too. Such information and encouragement was the job of those of us at the literature station. Many, many visitors indicated that they were glad to see Amateur Radio represented at the Maker Faire. Several said that their father (or grandfather) had been a ham and it looked like fun. They asked for information about how they could become a ham. We gladly shared information about the Atlanta Hams website (atlantahams.com) which provides 1-2-3 information about how to prepare for a license exam, where and when one could take a license exam and information about ham clubs across northern Georgia. A list of “Upcoming Activities” in the ham community provided our guests information about where they could further get involved in our great hobby. The primary workers at the literature station were Dave W4DTR, Pam WB1AKQ, Norm WA4ZXV, and Martha W4MSA.

At the other end of the booth, Pavel AC4PA, Alan KW4MO, Ryan AG4RP, Jim N4BFR and others challenged our guests to spell their names out in CW. Many guests, young and older, proudly carried away a certificate indicating their success with this challenge. (Alan dressed to remind guests of the CW vs. texting challenge on the Jay Leno show with the telegraph operator’s eye-shading cap and sleeve garters.)

The days were long but passed quickly. The early mornings were cool but the afternoons grew hot on the field. Guests were at our booth from before the official opening both days. We had guests from other STEM/electronic focused booths wanting to learn more about what we had to offer. We helped put many guests on the path to joining us in this hobby. Four clubs acting as one - thanks to everyone who helped at our booth. Another great ham adventure was enjoyed by all.

A young guest successfully completes his blinky. Photo by W4QO. (Jim got mother’s permission to use this photo.)

Audrey KM4BUN and Edem KM4PQG asking folks to get on the radio. (Photo by Audrey’s Dad W4SDR, who also gave permission to print the photo.)
Scenes from Maker Faire 2016, our very busy booth. (Photos: W4MSA)
NFARL Leads the Way at ST. Mtn. / Martha Muir, W4MSA

Once again, members of NFARL will be working with students from all over the metro Atlanta area to help them further develop their interests in Amateur Radio and Wireless Technology in the Student Shack of the Stone Mountain HamFest. The Student Shack will be in full operation from 9 AM to 4 PM on Saturday, November 5 only.

Organized by Jim W4QO and Martha W4MSA, the Student Shack taps the diverse talents of NFARL members such as Jay KC4JD, Mike AD4MC, Pavel AC4PA, Chuck AE4CW, and Cathy KI4SBK along with HamFest chair Steve N4TTY while they share their enthusiasm with students from Mill Springs Academy, McConnell Middle School, Russell Elementary, various home school students, and probably more.

The Student Shack has totally replaced the Youth Lounge of old. Rather than a time wasting, passive babysitting space for young folks, it is a dynamic, interactive, educational place for young folks with an interest in Amateur Radio. The Student Shack will allow students in various academic settings to have ‘eyeball QSOs’ with their peers from other schools.

As indicated in the November issue of QST magazine there will be a live special event station where students will have the opportunity to talk with hams from all over the planet who may be trying to make contact with us. The HF frequency will be 7.285 MHz Mike AD4MC will be operating a second special event station using his digital magic on 14.070 MHz.

Jim QO will be demonstrating the variety of things one can do with an Arduino at one session in the Student Shack. One of those things will be a special counter to keep up with and display the number of visitors we have to the Student Shack as well as the number of contacts made at the special events stations.

(Continued on page 16)
Jay will take the students around on a tour of the boneyard and Exhibit Hall. Last year, his tour convinced the jaded students that the boneyard is like a scavenger hunt for valuable and rare treasures – not just a junkyard of broken and dusty trash (which is what one of my students reported after his first visit to a HamFest).

Pavel will be doing a session teaching an introductory lesson in CW. Cathy will be leading the students to make various projects with some Snap Circuits kits. Both of these sessions were very popular with the students last year; many spent spare time practicing the lessons taught in both of those sessions after the official lessons were over. Steve will have his beautiful and massive TTY machines there to tantalize the students. His behemoths are always a hit with students. Jim and Chuck will lead the students as they attempt to build some crystal radios. Given the diversity of backgrounds to do such things plus the limited time to get this done, this will be a challenge indeed.

The grand finale will occur at 3 PM. Students will be coming around to recruit veteran hams to compete in the “Are You Smarter Than a Technician?” game. This game will have three preliminary rounds in which 10 players will compete to answer the most questions correctly. The top 10 scorers in those preliminary rounds will play in the final round to find the ultimate winner. That person will win a prize as will the school (or other group) that recruited that player. Please consider saying ‘yes’ if a student comes up and tries to recruit you for the game.

Activities like those offered in the Student Shack, at the Maker Faire, at Mill Springs Academy and other schools are possible due to the YESA sponsored EduCom at NFARL. Thank you for all your support of these efforts.

If you would like to help with one or more of the scheduled Student Shack activities, we’d welcome your help. Please email Martha at mmuir@millsprings.org.
## Student Shack Schedule—November 5, 2016
### Stone Mountain HamFest

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity 1</th>
<th>Mentor</th>
<th>Activity 2</th>
<th>Mentor</th>
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<tbody>
<tr>
<td>9:00 AM – 10:00 AM</td>
<td>Tour of boneyard and Exhibit Hall</td>
<td>Jay KC4JD</td>
<td>TTY and Digital</td>
<td>Steve N4TTY</td>
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<td></td>
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<td>Mike AD4MC</td>
</tr>
<tr>
<td>10:00 AM – 11:00 AM</td>
<td>Build crystal radio</td>
<td>Jim W4QO &amp; Chuck AE4CW</td>
<td>TTY and Digital</td>
<td>Steve N4TTY</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>Mike AD4MC</td>
</tr>
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<td>Special Event Station W4Y</td>
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<tr>
<td>11:00 AM – noon</td>
<td>Intro CW lessons</td>
<td>Pavel AC4PA</td>
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<td>Special Event Station W4Y</td>
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<tr>
<td>Noon – 1 PM</td>
<td>Lunch with mentors</td>
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<td>Special Event Station W4Y</td>
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<tr>
<td>1 PM – 2 PM</td>
<td>Arduino</td>
<td>Jim and MSA students</td>
<td>Finish crystal radio</td>
<td>Chuck</td>
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<td>Special Event Station W4Y</td>
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<tr>
<td>2 PM – 3 PM</td>
<td>Snap Circuits</td>
<td>Cathy KI4SBK</td>
<td>TTY and Digital</td>
<td>Steve N4TTY</td>
</tr>
<tr>
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<td>Mike AD4MC</td>
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<td>Special Event Station W4Y</td>
</tr>
<tr>
<td>3 PM – 4 PM</td>
<td>Are You Smarter Than a Technician?</td>
<td>Martha W4MSA, Jim</td>
<td>Musical chairs w/o chairs, w/o music</td>
<td></td>
</tr>
</tbody>
</table>

![Image of students](image-url)  

Zach—Martha—Grace
## Contact Us

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Email</th>
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<tbody>
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</tr>
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<td>Daryl Young, K4RGK</td>
<td><a href="mailto:k4rgk@nfarl.org">k4rgk@nfarl.org</a></td>
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Club Repeaters

<table>
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<tr>
<th>Frequency—Description</th>
<th>P.L. Tone</th>
<th>Location</th>
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</thead>
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<tr>
<td>145.470 (-)</td>
<td>100 Hz</td>
<td>Sweat Mountain</td>
</tr>
<tr>
<td>EchoLink Node 56086</td>
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<tr>
<td>NF4GA-R</td>
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<tr>
<td>147.060 (+)</td>
<td>100 Hz</td>
<td>Roswell Water Tower</td>
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<tr>
<td>Primary ARES Repeater</td>
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<tr>
<td>224.620 (-)</td>
<td>100 Hz</td>
<td>Sweat Mountain</td>
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<tr>
<td>Joint Venture with MATPARC</td>
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<tr>
<td>443.150 (+)</td>
<td>No Tone</td>
<td>Roswell Water Tower</td>
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<tr>
<td>444.475 (+)</td>
<td>100 Hz</td>
<td>Sweat Mountain</td>
</tr>
<tr>
<td>927.0125 (-)</td>
<td>146.2 Hz</td>
<td>Sweat Mountain</td>
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