



N4LNR

AUGUST 2017

News & Views

P. O. Box 3276
Lenoir, NC 28645



Serving Amateur Radio
In Caldwell County

Next LARC Meeting
Thursday, August 10
7:00 PM
Gamewell Fire Dept.
2806 Morganton Blvd SW
Lenoir

LARC Weekly Net
Friday, 9:00 PM
146.625 Minus 94.8
Alt 147.330

Caldwell ARES Net
Sunday, 9:00 PM
147.330 Plus 141.3

DMR Digital Net
Tuesday 8:00 PM
Lenoir Local DMR

Charlotte Skywarn LARC August Meeting

The August LARC meeting will feature special guests from Charlotte Skywarn and Piedmont Spotter Group. Come learn how these organizations support extreme weather events in our area.



A brief meeting will follow the program, including a discussion of the Catawba Valley Hamfest and the Special Events station and lessons learned.



President's Comments

John Crowe AG4ZL



This month has been very hard for some of us. Our thoughts and prayers go out to everyone who was affected by the Old Shuford Mills fire, particularly our friends at the Foothills Community Workshop. For some of us, it hit very close to home. So let's please keep these folks in our thought's and prayers and provide assistance in helping their recovery.

The 20th Annual Catawba Valley Hamfest is right around the corner. We will be hosting Special Event station W4R, operating HF, CW, SSTV and Digital. Volunteers are needed to set up and to operate.

Who likes Slow Scan TV? Good news, the Lenoir Amateur Radio Club is going to reschedule this program for the October meeting. We will demonstrate how to set up your station, and how much fun it is to send pictures to stations all over the world. I will be putting on a live on the air demonstration on 20 meters so I invite everyone to come on by October 12th, 2017.

This month's program is going to be a great one with special guests -- Rick McClure KE4TEP Charlotte Regional Skywarn Emergency Coordinator and Greg Huffman W4GCH Charlotte Regional Skywarn Assistant Emergency Coordinator and Net Manager for the Piedmont Spotter Group (See pictures below). These gentlemen are the cream of the crop when it comes to procedure and emergency weather communications. I invite everyone to come out to this month's meeting. I hope to see everyone there!

7 3 John AG4ZL



Rick McClure KE4TEP



Gregg Huffman W4GCH



LARC Saddened By FCW Loss

“Our Thoughts Are With You”

*FCW's R5 Ham Antenna is its Sole Survivor
Perched Proudly on its Beam!*

On July 21 at around 7 PM, the building housing the Foothills Community Workshop, the hacker space/maker space for the NC Foothills, was totally destroyed by fire. FCW was an amazing place--woodworking, metal working, laser 3D printing, computer classes, ham radio, an extensive model railroad system, antique computer collection, library, robots and the list goes on of what they did there! FCW and LARC had a close working relationship through liaison Michelle Suddreth KD4YTU. She saw the value of the interface of amateur radio and hacker space/maker space activities and worked tirelessly to teach radio license classes and bring more local hams into the hobby. Western Piedmont Amateur Radio Club had been holding its monthly meeting at FCW.

Apparently, the fire started in a rear corner of the building and spread up the building's backside before spreading forward and destroying FCW. In addition to FCW, there were 4 businesses, 3 residential apartments, and 250 storage units in the building. LARC lost all its stored donated radio related equipment as well. Fortunately, it appears that nobody was injured in the fire.

FCW is down for a while--the early consensus of the FCW Board is that they will rebuild and, like the Phoenix, “rise from the ashes”. Exact details will be worked out over the next few weeks. In the meantime, donations of money and equipment will be accepted. FCW is a 501(c)(3) non-profit organization. *The Mission of the Foothills Community Workshop is to promote Science, Technology, Engineering, Math (STEM) and Art by providing space, expertise, machinery, and tools to allow persons to learn new skills, teach skills to others, and build projects.* Learn more about Foothills Community Workshop and see the amazing pictures and video flyover of the fire at www.fcwhack.com



CQ-CQ W4R ~ 20th Anniversary

Catawba Valley Hamfest ~ Morganton NC ~ Calling CQ

The Lenoir Amateur Radio Club, along with McDowell ARC, Western Piedmont ARC and Western Piedmont Community College, will sponsor the Catawba Valley Hamfest on August 5, 8:00 AM Until, at the Burke County Fairgrounds 145 Bost Rd., Morganton. The Club will operate W4R, a Special Events Station commemorating the 20th Anniversary of the Hamfest. Sadly, many of the area hams, which made the Catawba Valley Hamfest a reality 20 years ago, are now silent keys. Come out and celebrate their hard work and to keep the Hamfest alive for the future.



While the Hamfest is somewhat smaller in recent years, the sponsoring clubs continue to find ways to attract attendance. This year, in addition to the 3 top prizes, they will be giving away a radio every hour.

The Catawba Valley Hamfest is unique in that the clubs help vendors' setup/breakdown their displays and equipment. The clubs also provide a free dinner for the vendors and club members on Friday night. So make plans to come enjoy a great BBQ dinner and get an early look at the wares!

Volunteers to work the Special Events Station are needed, so come on by and "sit a spell" and work some radio!

CALDWELL COUNTY SEVERE WEATHER NET ON FACEBOOK

This weather net is the brainchild of John Crowe AG4ZL, president of LARC. Its purpose is to pass severe weather information in Caldwell & Burke counties. It also provides the opportunity for "followers" to post severe weather reports via Facebook.

During a weather event, the net will operate on 147.330 plus 141.3 PL. To become a follower, click on LIKE on the Facebook page.

ASHEVILLE RADIO MUSEUM TOUR SET FOR SEPTEMBER 23

The special tour of the [Asheville Radio Museum](#) is set for September 23 at 1:00 PM. Prior to the tour, the group will meet for lunch at a nearby Asheville restaurant.

Members of LARC and other area clubs are invited. If you plan to attend the tour, please email hrmaddox@nettally.com and indicate if you will also be at the lunch so that a count can be given to both the restaurant and the Museum.

Back to the Ham Radio Future: The One That Almost Got Away

Gerry WA6POZ has been a long time ham and has logs from the 1960s to 1995. Recently, he entered the key parts of those records into the Logbook of the World (LOTW), not really hoping for anything. In particular, in the days before he began to actively chase DX, he had contacted an FT9FX in August 1985, which are the Kerguelen Islands (See below). Having not gotten a QSL card and thinking little would happen, he nonetheless entered the contact in LOTW. Wonder of wonder, a few days later, he got a message that confirmed the contact.

As it turns out Kerguelen Islands is the Number 11 most wanted location, which is understandable since 2005 was the last time anyone had worked the island. For Gerry, this was number 323 of confirmed contacts with DX stations, which is only 16 away from the 339 he needs for DCXX. Congratulations Gerry, persistence pays off.

So where, you ask, are the Kerguelen Islands? Wikipedia says that the Kerguelen Islands are in the southern Indian Ocean and are a French possession, having been discovered by France in 1772. There are no indigenous inhabitants, but it has a population of 45 research scientists, engineers, biologists, and the stray DXpedition. There are no native animals, but cats, sheep, and the ever-present rats have been introduced and share the land with the humans. For obvious reasons after looking at the maps, the islands are also known as the Desolation Islands. They are among the most isolated places on Earth, located more than 2,051 miles from Madagascar, the nearest populated location. There are no airports on the islands, so all travel

The climate is raw and chilly with frequent high winds throughout the year. Kerguelen's climate is oceanic, cold and extremely windswept. The average annual temperature is 40.8 degrees with an annual range of around 11 degrees. The warmest months of the year include January and February, with average temperatures between 46.0 and 46.8 degrees. The coldest month of year is August with an average temperature of 35.8 degrees. The surrounding seas are generally rough and they remain ice-free year-round.

The islands inspired the 2008 song "The Loneliest Place on the Map" by singer/songwriter Al Stewart (You remember it, of course.)

So, the next time you want to get away from it all, keep the Kerguelen Islands in mind.



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CERT/REACT Training Classes

Shirley Kanode, Caldwell County CERT/REACT

Each month free training is available to anyone who has attended the CERT Basic Class. We meet on the fourth Thursday of each month, 6:00-8:00 pm, in the EOC in the Caldwell County Health and Human Services Building. You are not required to be a REACT member to attend.



Our June class was about traffic management. Our members may be asked to provide traffic assistance at a training exercise or emergency calls when there are lane restrictions. Three of our members did so at the Collettsville training fire in June including LARC member Mark Barrera.

The July class included hands-on training on firefighter rehab. Almost half of all firefighter deaths occur because of heart attacks, strokes, or other serious problems resulting from the environmental and physical stress of their jobs. One way to prevent those deaths and injuries is to provide close monitoring of vital signs, rehydration, cooling (or heating), and rest at prescribed intervals.



Some of our members currently provide firefighter rehab. In class we learned about the gear firefighters use as demonstrated by one of our members, Sabrina Laws, and how to assist a firefighter in removing their gear. Rosemary and Michaela Hall demonstrated how to measure blood oxygen levels, pulse rate, blood pressure, and blood glucose levels, and documentation.

On August 24, a review of triage methods and principles will be covered including a practice exercise. With proper training, CERT members will be an asset if there is a mass casualty event.



September 9 will be a community event as part of Emergency Preparedness Month. We will demonstrate and display family emergency kits, go bags, first aid kits, and vehicle emergency kits. The time and place are to be determined.

CERT Basic Training Class is being planned for October. Please watch for further announcements.

<https://caldwellcountycet.com/>

<https://www.facebook.com/CaldwellCountyCert>

<https://www.facebook.com/caldwellcountyreact/>

Tower Building 101: Preparing For Tower Base Pour

By Dick Blumenstein K0CAT

I built a wood jig that to hold all 6 tower base anchor bolts precisely in position, so that when the bolts are embedded in concrete, they will not move or cant and (hopefully) the tower base will slip onto the 1" anchor bolts effortlessly (wish-wish).

The jig is mainly comprised of two pieces of OSB board (or plywood). I clamped together the 2 pieces of OSB board and laid the tower base on top and traced the location of the anchor boltholes.



Next, I drilled out the 2 pieces of board trying to keep the drill exactly vertical so the holes in the lower board would still be in line with the holes in the top board. The boards were then separated using 1.5" spacers and 2 "outrigger" boards were added. The whole jig and anchor bolts will be suspended over the center of the hole on the concrete form (more on that later).

Three pairs of anchor bolts were bolted onto the jig so that the bolts stick up out of the concrete about 6" when the concrete cures. The picture to the right shows the jig upside down. I will be attaching bronze ground clamps on each galvanized anchor bolt, separated from the bolt with a stainless shim and conductive grease to minimize corrosion (more on that and the "ufer" ground next month). The concrete will come up to the bottom of the 2 outrigger boards almost touching the nuts you see in the picture on the right.



We had hired a company (Artistic Landscape Design) to build a set of steps down a hillside and to make a patio with a firepit. They said that they needed soil fill for the patio and thought that the soil from the tower foundation hole was just the ticket so that they would not need to have soil delivered. Little did they realize how challenging it would be to dig a very precise hole vertically plumb!

Charlie Tomberlin, the owner, and his helper, Brandon, showed up with an excavator to dig out the 5' x 5' x 8.5' deep hole that was required. They had previously dug holes as deep or deeper, but not with the required precision on the size that was required. Hence, they asked me to make a tool that would help them dig the hole so that it wouldn't skew.

I quickly ginned up a PVC frame the 5'x5' size of the hole, but I made it only 3' high. I positioned the frame on the lawn exactly where the hole was to be dug and at the orientation needed so that the tower, when mounted, would lie over precisely at the right place on the lawn. I then spray painted the outline on the grass for the construction crew to dig.

The first few feet were pretty easy as Charlie could see the bucket, but once he got deep enough, his helper Brandon had to give him hand signals on where to dig.

At about 6' down they started to encounter shale that took more digging time. Finally, the crew had to climb in and finish/shave the hole by hand. It took about 2 days to dig the hole and tweak its shape. Brandon (at the bottom of the hole in the picture on the next page) asked that if he found any gold down there, would it be his as he spent the most time in the hole digging to China!





Once the hole was completed, we hoisted the rebar cage up where it was stored by the side of the house and brought it around near the foundation hole. Here's Charlie and Brandon (with the safety hat) adjusting the cage on the excavator.



The cage was vertically righted and lifted into the air where we clamped on the concrete block assemblies that had been prepared last month onto the cage lower corners.

The cage was lifted in its entirety and lowered into the foundation hole and centered -- easy to say, but time consuming and tricky.



At that point, a lot of adjustment was required to center the cage in its hole and make sure it was relatively level. When we finally decided it was right, we shook hands with the construction crew and they left.

I was left to my own devices with the help of my nephew, Evan, who thankfully was visiting from Denver. Evan volunteered to do the nasty “bottom-of-the hole” work for his poor old uncle!

Here’s what Evan saw looking up from inside the cage at the bottom of the hole before we lifted the ladder out to leave him to do finish work at the bottom.

Evan made some adjustments to the blocks to tweak the leveling of the cage, drove a metal spike into the soil in the empty hole of each concrete block, removed the nylon webbing that had helped support the concrete block and then filled the empty hole up with concrete to further stabilize the rebar cage structure.



Ro K4HRM came over to help us put the concrete form into the ground at the proper height and leveling. Even though she jokes about her “HRM” callsign -- Her Royal Majesty -- Ro gets right into the action and digs away with the rest of us. Thanks, Ro!

Here's Evan digging the concrete form outrigger leg trench while also pondering Brandon's “gold” request! No gold, unfortunately, but “golden praise” from his uncle for helping him out.



At this point, we congratulated ourselves as we thought the trenching was complete – little did we know what was ahead!

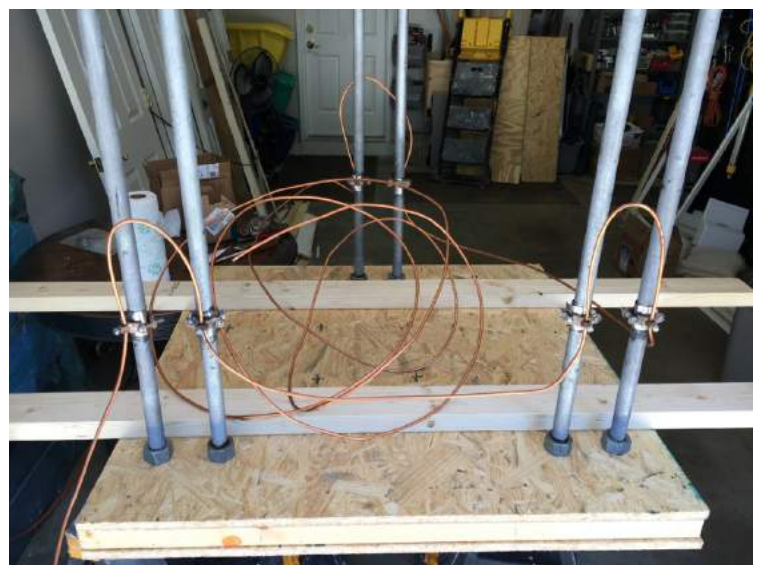
We grabbed the concrete form and placed it into position.

It took a lot more digging and adjusting until we finally had the form in its final position. Whew!



Evan once again climbed down into the hole to fetch out all the extraneous soil that had fallen down while we were positioning the concrete form. When he came out, he remarked at how bright the earth's surface was compared to the bottom of the hole!

Just in time, the stainless steel shim stock arrived that we needed to isolate the bronze ground clamps from the galvanized anchor bolts to minimize galvanic corrosion. We installed the ground clamps on each anchor bolt with shim stock and anti-corrosion paste and connected all the anchor bolts together with a #2 copper wire. I left 20 feet of wire dangling in the center which will go down into the foundation to help implement a "Ufer" ground system, and allowing an extra length of wire to attach to a couple of points on the rebar cage.



Thinking about the concrete form, I realized that, even though we had polyurethaned it, the concrete is going to go into every sunken nail head hole in the form and make it very difficult to pull the form out once the concrete is cured. So we stapled some 6-mil poly sheeting to the inside of the concrete form.

Since the rebar is designed to come so close to the top surface of the pad, we were a little worried about rust breaking through the top of the pad, so we sprayed the top 6 inches or so of the cage with premium galvanizing spray which has a larger amount of zinc in it (I am going to use this paint on the tower itself).



Finally, we placed the completed anchor bolt assembly jig on top of the concrete form and leveled it out. The concrete form itself is not level from right to left to allow it to drain water, but the bolt assembly must be vertically plum and level.



To the left is a picture looking down into the foundation hole with the extra 20 feet of copper wire dangling. The wire will be held off the bottom of the floor with a string so that when the concrete is pumped in, it won't push the copper all the way down, preventing a moisture path back up the wire.

In preparing for the next steps after the concrete pour, Marty KM4IOU graciously came over with a ground resistance meter to measure the ground at my ham shack entrance and house power entrance ground rods. They were over 600 ohms and 160 ohms, respectfully; way too high for an effective lightning ground system. Marty conferenced me with his boss who has 20 "Marty's" running all around North Carolina providing maintenance support on mountaintop towers. He concurred with what I had to do, which is to bring the ground resistance below 1 ohm.

Next month: Pouring the concrete, and starting to work on the lightning ground rod system.

To be continued...

Weapons, Safety and Personal Responsibility

Carrying weapons on ARES deployments. Here is the official statement released March 31, 2014 and superseding any prior communication on the subject.

"Anyone seeking permission to carry weapons during an ARES deployment is to be advised that the ARRL cannot give such permission. Neither does the ARRL prohibit legal weapons, but the ARRL accepts no responsibility or liability for injury or damages to anyone as the result of possession of a weapon by an ARES volunteer. The responsibility or liability for injury or damages to anyone as a result of an individual's possession of a weapon remains with the individual. ARES volunteers must obey all federal, state, and local laws while on deployment. When supporting a served agency, ARES volunteers must also adhere to the policies of the served agency. The ARRL does not expect volunteers to participate in a dangerous activity or to place themselves in what they perceive to be a dangerous or unsafe environment. Volunteers should avoid or cease participating in any ARRL activity or deployment under circumstances which make them uncomfortable."

LARC N4LNR Repeater Temporarily Off The Air

The LARC repeater will put in service in 1986. While it has had several upgrades over the 30 years, the electrical power line running up the mountain has not been upgraded.

Recently, the repeater has been having issues with tripping circuit breakers and, upon testing; it appears that underground wiring is damaged.

Materials are being determined and work to replace the wiring will begin soon. Volunteers to help with this task should contact James N4NIN. We all enjoy the repeater, so let's turn out to get this project done!



Upcoming Hamfests: Mark Your Calendar

August 12 19th Annual Cape Fear Amateur Radio Society Swapfest, Cape Fear Amateur Radio Society, Fayetteville, NC, <http://www.cfarsnc.org>

September 1-3 61st Annual Shelby Hamfest/ARRL North Carolina State Convention, Shelby Amateur Radio Club, Shelby, NC <http://www.shelbyhamfest.org>



LARC on HamRadioNow. Gary Pearce KN4AQ HamRadioNow joined NC Section Manager Karl Bowman W4CHX for a tour of 10 Field Day 2017 operations in western North Carolina. In between the site visits, they operated as 1C mobile.

Go to www.hamradionow.tv click on Episode 334: Field Day Tour. LARC begins at 48.26 minutes.

LARC 2017 Officers



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Suggestions and articles are appreciated.**