



OUR 91TH YEAR!

Forsyth Amateur Radio Club, Inc. Newsletter

Founded December 30, 1930



MAY, 2021



FARC at WS Science Fair

Saturday April 17, 2021. The Winston-Salem Science Bridge was a free, outdoor, knowledge-based fair with booths set up on either side of the Long Branch Trail walking bridge located in



downtown Winston-Salem's Innovation Quarter. This strategic location symbolizes a bridging of ideas, resources, and opportunities between Winston-Salem's many science-related entities and the city's community. A portion of the bridge was lined with stands and booths offering a variety of

Continued on page 5

The Inevitability Of Change

by Harlan, W1HRC

Change is inevitable. Two dates that stand out where significant changes to how we live or function as a society are December 7, 1941, the date that will live in infamy and September 11, 2001, the second time America was attacked. The first date took us to war and brought on rationing and other changes in life. The second date brought significant changes in how we respond to emergencies and disasters.



W1HRC



One of the issues that became glaringly evident during the aftermath of 9-11 was that emergency responders all spoke "different languages" and had different procedures. Those procedures often conflicted and caused response delays or jurisdictional conflicts. Out of this the National Incident Management System was created and the Incident Command System was born.

Homeland Security Presidential Directive 5 mandated that all Federal departments and agencies adopt NIMS for their emergency management programs. From there, DHS/FEMA mandated that states and local governments do the same. The NC Office of Emergency Management has mandated that all OEM's and response partners within the state also adopt NIMS and operate within compliance with NIMS standards. Furthermore, the NC OEM adopted DHS AuxComm as the standard NIMS compliant program for auxiliary communications within the state.

Therefore as a response partner, Amateur Radio within the state has to change to meet this standard or cease to be a viable response partner and community asset. Join the May FARC meeting to hear about the Future of Emergency Communications.

May Program: The Future of Emergency Communications, by Harlan, W1HRC.
Second May Program: "Helpful Suggestions from AK4D to new Technician license holders and an introduction to programming radios using the Chirp program".

Forsyth Amateur Radio Club, Inc is a non-profit (IRS 501(c)3) North Carolina corporation for the promotion of Amateur Radio, and for the education and training of hams and the general public primarily in Forsyth County, North Carolina.

FARC was originally incorporated as the Winston-Salem Radio Club on December 31, 1930 and has been in operation ever since. We currently maintain a state-of-the-art ham station in the basement of the Red Cross, 690 Coliseum Dr., Winston-Salem, NC and also maintain two 2-meter repeaters, 146.64 (100 Hz tone) and 145.47 (100 Hz tone) and a 444.275 repeater (100 Hz tone).

FARC has a general membership meeting with a program on the 2nd Monday of every month at the Red Cross building, 690 Coliseum Drive in Winston-Salem. The club conducts its main business meeting (the Board Meeting) on the 3rd Monday generally at 66 Pizza on Stratford Rd just west of Hanes Mall Blvd. This is where most of the club's business is conducted and all attending members have a vote. All club members are strongly encouraged to attend the business meeting. For more information about FARC mail us at FARC, Inc., PO Box 11361, Winston-Salem, NC, 27116; call 336-930-W4NC(9462); or visit our web site at www.w4nc.com

Club email is to info <at> w4nc <dot> com *

Officers for 2021 are:

President: Sam Poindexter, NI4TG
Vice-President: Mason Matrazzo, KM4SII
Secretary: Stacey MacArthur, W1LLO
Treasurer: Kent Englebert, K4HKE
Newsletter Editor: Don Edwards, WS4NC
Auxcomm: Harlan Cobert, W1HRC
Tech and VEC Chairman: Dale Mierisch, WB9SZA
Hamfest Chairman: David Shoaf, KC4X
Field Day Chairman: Stacey MacArthur, W1LLO
House Chairman: Steve Patterson, WA3RTC
Webmaster: Terry Brown, AK4D
Hospitality: Ken Kayser, K2KXK & "Doc" Holiday,
WB4DOC

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We trade newsletters with other clubs, and many clubs are on our mailing list. If your club has a newsletter and would like to trade please send us a copy.

Submissions and inquiries please send to dedwards <at> dwepe <dot> com *

*The "funny" email addresses are to confuse the Spam bots. Spam shall be cause of the downfall of Western Civilization. Either that or the spork.



FCC Exams and FARC Membership

by, Dale Mierisch, WB9SZA
VEC Session Manager

FCC TEST ON SATURDAY,
Saturday May 8, 2021. IT IS
NEW LICENSE AND
UPGRADE TIME AGAIN.

Saturday, MAY 8, 2021, 1:00 to 3:30 pm EDST.
Location: Robinhood Baptist Church, 5422 Robinhood Rd, Winston-Salem, NC 27106.
Preregistration for this session is required. email wb9sza <at> triad <dot> rr <dot> com No walk-ins will be accepted.

Seating is limited to 12 Exam candidates. Please contact WB9SZA below promptly for info and to obtain an Exam Reservation.

Since safety is our number one priority, the following COVID 19 pandemic rules will be strictly applied:

- 1) A properly worn mask covering both your mouth and nose must be worn at all times. The mask should be multilayer fabric or paper surgical. You must provide your own mask.
- 2) Each Exam applicant and VE must bring their own pen, pencils and calculator.
- 3) Alcohol hand sanitizer and latex gloves will be provided, and their liberal use will be expected.
- 4) All applicants must preregister, and obtain an Exam reservation no later than 48 hours prior to the Exam session.
- 5) The tables are large, but no more than 3 VE's or Exam applicants will be seated at each table.
- 6) We will observe and maintain social distancing with exception for brief moments, when we collect and disburse documents.
- 7) Once the Exam session has started, Examinees must remain seated during the entire test
- 8) All applicants will be required to sign waivers (PDF format) attached to requested preregistration email, and submit those documents via email back to the VE session manager for approval no later than 48 hours prior to the exam, to obtain an Exam reservation.

Continued on the next page
Page 2

Standard test requirements are as follows: 1) Two forms of identification are required. A government photo ID, and one other ID. 2) A FCC Registration Number (FRN) number is required. Please see the website below: <https://www.fcc.gov/wireless/support/universal-licensing-system-uls-resources/getting-fcc-registration-number-frn> 3) If licensed, bring a copy of your existing (signed) license, and any CSCE (Certificate of Successful Completion of Exam) credits that may apply.

These copies will need to be attached to your FCC 605 form for processing. 4) To expedite the examination process, please complete NCVEC form 605 and the waivers, at home. Bring all forms with you on the day of examination. These forms will be attached to your FCC 605 form for processing. 5) Fee: \$12.00 CASH no checks. Thank you for your understanding as we strive to offer Exam sessions under restricted conditions during the pandemic.

Send an email to wb9szl <at> triad <dot> rr <dot> com to register. Other details on www.w4nc.com

LEXINGTON FCC TEST

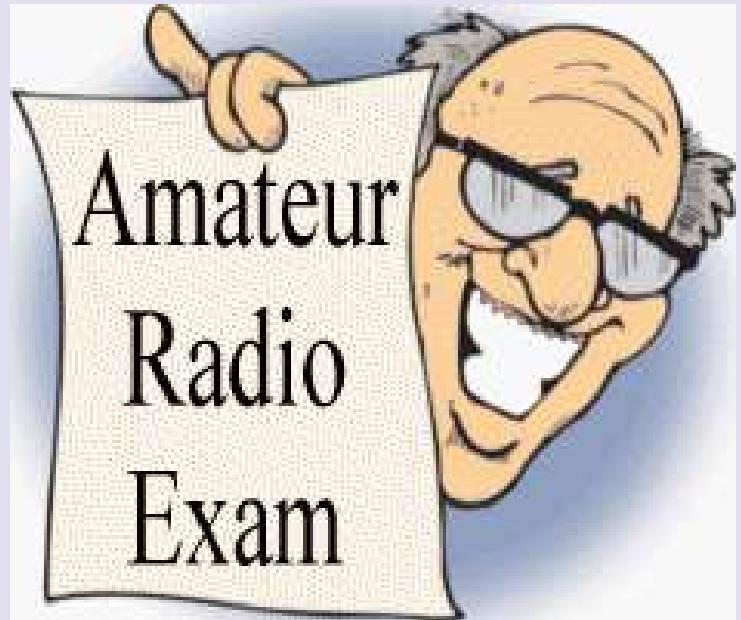
Date: Generally last Saturday, please email.
Scheduled Saturday, May 22 and June 19

Time: 9:00 am EDST.

Where: Finch Park, Lexington NC, Shelter #5. (15 Paul Beck Rd)

Preregistration for this session is required. Seating is limited. Contact KK4RR below promptly for info and reservation. Since safety is our number one priority, the following pandemic rules will be strictly applied.

- 1) A mask covering your mouth and nose must be worn at all times. The mask should be multilayer fabric or paper surgical. You must provide your own.
- 2) Each applicant and VE must bring their own pen and pencils.
- 3) Alcohol hand sanitizer and latex gloves will be provided, and their liberal use will be expected.
- 4) All applicants must preregister.



- 5) The tables are large, but no more than 2 VE's or test applicants will be seated at each park table.
- 6) We will maintain social distancing with exception for brief moments, when we collect and disburse documents.
- 7) All applicants will be required to sign the waiver attached to this email in PDF.

Standard test requirements are as follows:

- 1) Two forms of identification. A government photo ID, and one other.
- 2) FRN number is now required and must have FRN number before test session date.**
- 3) If licensed, bring a signed copy of your existing license, or any CSCE credits that may apply.
- 4) To expedite the examination process, please complete NCVEC form 605 and the waiver, at home. Bring both forms with you on the day of examination.
- 5) A good email address is now required as FCC now communicates by email.**
- 6) Fee: \$12.00 CASH no checks.

Contact Rick, KK4RR for forms.

73, Rick, KK4RR
Cell: 336-687-8001

GSO/HP VE testing

The High Point session is on the last Saturday of the month (except June, Nov, and Dec) at Hickory Chapel Wesleyan Church, 301 Hickory Chapel Road, High Point 27262. Reservations required. Please contact David Macchiarolo at AJ4TF@arrl.net. Testing starts at 10:00 AM

The Greensboro session is the second Saturday of each month (except for March) at Hinshaw United Methodist Church located at 4501 Gate City Blvd (aka High Point Road), Greensboro, NC 27407. Reservations required. Please contact David Macchiarolo at AJ4TF@arrl.net. Testing starts at 9:00 AM

For either session, you need to bring two forms of ID including a Photo ID and a photocopy of any previous licenses and/or CSCE's; if you are not licensed, you must bring printed evidence of an FCC Registration Number (FRN) to the session. The testing fee is \$12.00 payable by cash only, exact change only. Other dates and locations can be found on the W4VEC.ORG web site. Note that sessions are limited to 6 candidates or less, and are subject to change due to local, state, and federal guidelines on COVID-19. All participants are required to wear face coverings. Also note that due to demand, sessions fill quickly, usually a month or more ahead of time, so plan accordingly.

New Ham? New Upgrade? Live in Forsyth County? Or just want to join FARC?

For new hams, or upgrades, who have taken an exam, please complete the information on the FARC application (usually the next-to-last page of the Newsletter), if you have not already done so, for a free membership to the Forsyth Amateur Radio Club (FARC). Mark the form "New Ham - Exam date". Even if this is not an FARC exam session, since we are limited in exam offerings at this time. Once the form is completed, bring to the next club meeting, or please scan and email to secretary <at> w4nc <dot> com [and an email to newsletter <at> w4nc <dot> com].

Exams usually will be offered before the FARC meeting (2nd Monday at the Red Cross) and start at 6:30 PM in room 109 at the Red Cross building **once meetings start again**. You are encouraged to arrive

early at 6:20 PM Preregistration is required at info <at> w4nc <dot> com.

How to print a copy of your FCC License by Jim, KV4SJ

To access an official copy of your license:

1. Go to:
<https://wireless2.fcc.gov/UIsEntry/licManager/login.jsp>
2. Log in with your FRN and password. (Also has links to find or get your FRN.)
3. Click on "Download Electronic Authorizations" in the links on the left hand side.
4. Select your call sign in the box labeled "My Authorizations" and click on the Add button to copy it into the "Authorizations to Download" box.
5. Click on the Download button to download an official copy of your license in PDF format.

This is the official version you need for your wallet card and to display in your station. The reference copy does not satisfy the legal requirements.



HAM RADIO IS_ READY



When the stakes are high, skilled ham radio operators step up to help out and save lives. In hurricanes, severe flooding, earthquakes, or even a fire, ham radio gets information out when regular communications systems fail.

arrl.org/whats-hamradio

HAM RADIO IS_ DISCOVERY



ARRL
AMATEUR

Before science, there was, and still is, ham radio. Now we have radio. Now we have science. Ham radio is the technology that made science possible. So go ahead, soldering iron and make a receiver. You'll be surprised at how easy it is. Just follow the QR code, then use it.

arrl.org/ham-radio-is-discovery



145.47 (100) 146.64 (100) 444.275 (100)



W4NC

HAM RADIO IS_ OUT OF THIS WORLD



Talk to an astronaut on the International Space Station. Shoots a satellite across the northern lights, or the stars? It's all possible. Data can be sent via satellite, or if a radio wave is sent to Earth, it can travel through space and back at the speed of light.

arrl.org/ham-radio-is-out-of-this-world

Amateur Radio (ham radio) is both a hobby and a service that brings people, electronics, and communications together. People use ham radio to talk across town, around the world, and even into space, all without the Internet or telephones. It's fun, social, educational, and can be a lifeline during times of need.

To some, the term "Ham Radio" brings to mind large, outdated contraptions with dusty vacuum tubes and wires strung all about. However, like anything else, we try to keep up with the latest technology. There's always something new to learn and discover, and always new solutions to the same old problem of conveying information across distances.

How much does it cost? Ham radio is like fishing. You can catch a lot of fish with a cane pole, line, a cork, and a worm, or you can spend a lot of money on a big fishing boat and all the expensive gear that goes along with it. Many people use radios costing less than \$100, and you can build your own gear too! Price is not a barrier to entry. It really all depends on what you want to do.

Ham radio encompasses computers, building projects, hiking and camping, emergency communications, contests, making friends both at home and around the world, satellite communications, radio astronomy, collecting and restoring antique radios, and so much more! There are so many aspects to the hobby that the possibilities are endless!

Forsyth Amateur Radio Club has about 300 members of all ages, some as young as 6 and some as old as 90+. We have students, professionals such as doctors and lawyers, and people from all walks of life. But it starts with getting a license. Morse code is no longer required (but you can still learn!). How many tests have you taken when the questions were all published? It does require a little study, but it is not hard, and there is lots of help. But the license test is just the beginning – ham radio is a journey that continues through life-long learning.

Amateur radio has led to many young people going on to serious STEM careers. We welcome everyone – young or old – with an interest in technology or even just talking with new people all over the world. If you need a mentor (in ham-radio lingo: an Elmer), we'll find you one. For more information send an email to info@w4nc.com.

[Go to www.w4nc.com](http://www.w4nc.com) or email info@w4nc.com

FARC Poster it's 36 X 48 inches total.

specialties where STEM-oriented researchers, educators, and those who may not traditionally be considered part of the STEM community, were present to interact with and display Science in new and innovative ways. STEM booths, as well as art activities related to STEM were located along the trail, each featuring some of the unexpected and surprising ways that Science is present in our daily lives!

Stacey, W1LLO, Mason, KM4SII and Harold, N4HER set up a booth for FARC. Oh course, the bright shiny key was a center of attention. There were a lot of kids, mostly around the 10-12 year old range. There were some parents interested too.

The giant poster that was shown at the science fair is shown at the top of this page. The poster was done by WS4NC and W1LLO and can be used again (and again, and again . . .) The plan was to have something we could use for other events, and for all



HAM RADIO IS_ ADVENTURE



ARRL
AMATEUR

Whatever part of ham radio you like, you'll find other hams who share your interests all over the world. As far as I'm concerned, it's a place to meet great people who share your interests. Underlying relationships begin with the QR code.

arrl.org/ham-radio-is-adventure



Near there from anywhere. With a backpack radio and a solar panel, you can take your radio with you no matter where you are. Hiking, climbing, camping, you name it. Even if you don't have the Internet, you can stay in touch.

arrl.org/ham-radio-is-adventure

HAM RADIO IS_ THE GAME



There are lots of ways to play the ham radio game: make contact with all 50 states, connect with people from the world, put a radio in your car, or even get others are looking for; see how many stations you can work in a day, or even a week. The challenge is yours. Game on.

arrl.org/ham-radio-is-the-game



age groups. It will likely be posted on the wall outside the FARC shack.

As to the Science Fair event, all we can do is plant seeds. There were several youngsters interested and flyers were available. A station was set up (yes,



they ran FT-8, umppp!). While there Stacey took the opportunity to work Kenya.

The station was powered mostly by the solar cells, which are part of Stacey's new portable setup. The rig was Stacey's go box. Thanks to all who contributed to this successful effort. We only had a few weeks notice to pull this off.

The NC Science Festival 2021, a.k.a., The Winston-Salem Science Bridge, Bridging the community through science, technology, engineering, art, and mathematics activities. This year's booths were hosted by: The Wake Forest Brain Awareness Council; The Science Of Kaleideum; Mounts Robotics Center; Girls on Fire, Salem Academy; Piedmont Environmental Alliance; Forsyth Amateur Radio Club; MIXXER Makerspace and Lukesh Chemistry Lab.

The Science Bridge began at the 3rd street entrance to the Long Branch Trail where community members



were greeted. As guests walked through the fair, they were invited to partake in a series of activities, lessons, and crafts led by each STEM partner including a demonstration on helmet safety and activities such as: generating electricity on a bike, creating art using Sphero robots, learning about chemistry with color-changing reactions demonstrating how the body uses Vitamin C to neutralize free radicals, and sending messages via radio waves! Winston-Salem is saturated with STEM research, education, and innovation. By incorporating multiple community groups that exist at the intersection of Science and The Arts, The Science Bridge event created a uniquely comprehensive STEM fair that caters to all interests!



In the picture above is one that the Science Festival ran on their social media page showing one of FARC's youngest Extra Class hams operating at Field Day. This photo ran in the Newsletter a few years ago.

For more information about the NC Science Festival go to the web site:

<https://wakedowntown.wfu.edu/community/nc-science-festival-2021/>



Read This

Updated Radio Frequency Exposure Rules Become Effective on May 3

from ARRL,
04/12/2021

The FCC has announced that rule changes detailed in a lengthy 2019 Report and Order governing RF exposure standards go into effect on May 3, 2021. The new rules do not change existing RF exposure (RFE) limits but do require that stations in all services, including amateur radio, be evaluated against existing limits, unless they are exempted. For stations already in place, that evaluation must be completed by May 3, 2023. After May 3 of this year, any new station, or any existing station modified in a way that's likely to change its RFE profile — such as different antenna or placement or greater power — will need to conduct an evaluation by the date of activation or change.

"In the RF Report and Order, the Commission anticipated that few parties would have to conduct reevaluations under the new rules and that such evaluations will be relatively straightforward," the FCC said in an April 2 Public Notice. "It nevertheless adopted a 2-year period for parties to verify and ensure compliance under the new rules."

The Amateur Service is no longer categorically excluded from certain aspects of the rules, as amended, and licensees can no longer avoid performing an exposure assessment simply because they are transmitting below a given power level.

"For most amateurs, the major difference is the removal of the categorical exclusion for amateur radio, which means that ham station owners must determine if they either qualify for an exemption or must perform a routine environmental evaluation," said Greg Lapin, N9GL, chair of the ARRL RF Safety Committee and a member of the FCC Technological Advisory Council (TAC).

"Ham stations previously excluded from performing environmental evaluations will have until May 3, 2023,



to perform these. After May 3, 2021, any new stations or those modified in a way that affects RF exposure must comply before being put into service," Lapin said.

The December 2019 RF Report and Order changes the methods that many radio services use to determine and achieve compliance with FCC limits on human exposure to RF electromagnetic fields. The FCC also modified the process for determining whether a particular device or deployment is exempt from a more thorough analysis by replacing a service-specific list of transmitters, facilities, and operations for which evaluation is required with new streamlined formula-based criteria. The R&O also addressed how to perform evaluations where the exemption does not apply, and how to mitigate exposure.

Amateur radio licensees will have to determine whether any existing facilities previously excluded under the old rules now qualify for an exemption under the new rules. Most will, but some may not.

"For amateurs, the major difference is the removal of the categorical exclusion," Lapin said, "which means that every ham will be required to perform some sort of calculation, either to determine if they qualify for an exemption or must perform a full-fledged exposure assessment. For hams who previously performed exposure assessments on their stations, there is nothing more to do."

The ARRL Laboratory staff is available to help amateurs to make these determinations and, if needed, perform the necessary calculations to ensure their stations comply. ARRL Laboratory Manager Ed Hare, W1RFI, who helped prepare ARRL's RF Exposure and You book, explained it this way. "The FCC did not change any of the underlying rules applicable to amateur station evaluations," he said. "The sections of the book on how to perform routine station evaluations are still valid and usable, especially the many charts of common antennas at different heights." Hare said ARRL Lab staff also would be available to help amateurs understand the rules and evaluate their stations."

RF Exposure and You is available for free download from ARRL. ARRL also has an RF Safety page on its website.

The ARRL RF Safety Committee is working with the FCC to update the FCC's aids for following human exposure rules — OET Bulletin 65 and OET Bulletin 65 Supplement B for Radio Amateurs. In addition, ARRL is developing tools that all hams can use to perform exposure assessments.



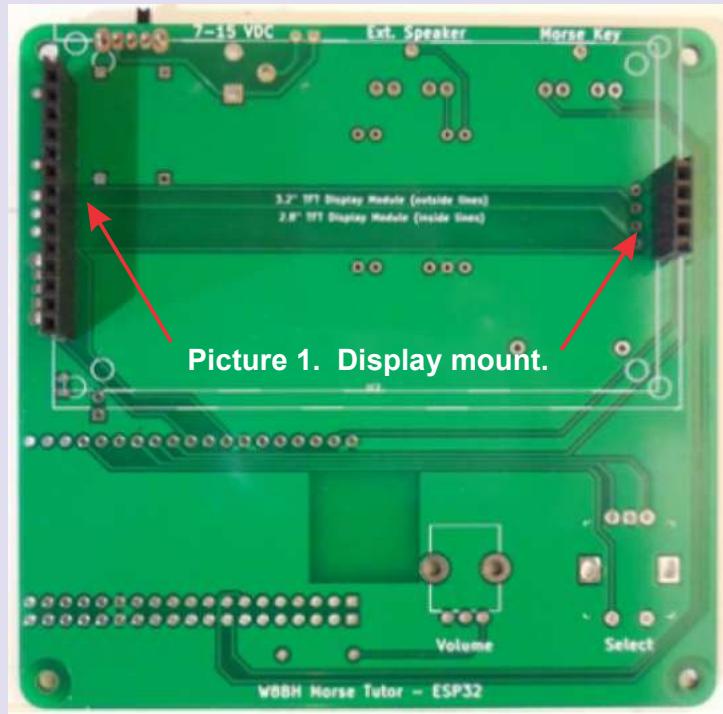
W8BH Morse Tutor

by Ken, KM4NFQ

This is ESP32 Rev 2B, Build Notes 20200117 by Ken, KM4NFQ. Several people on our Wednesday night FARC Shop Talk sessions have mentioned a CW reader project. [Ed. note: This would be an excellent club project and Ken's notes are really good, almost Heathkit quality. Better in some ways since we have photos rather than drawings.]

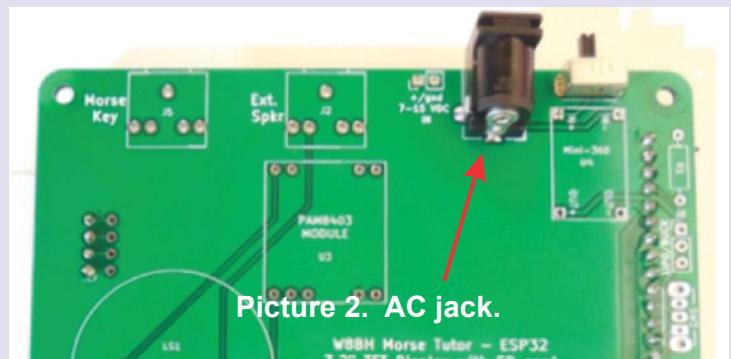
Step 0. Preparation.

I always wipe the PCB off with Rubbing Alcohol before I start. While the alcohol is evaporating, I double check that I have all the parts for the circuit. I am using ESP32-WROOM-32 boards that are already programmed, scavenged from ESP Rev 1 W8BH Morse Tutors.



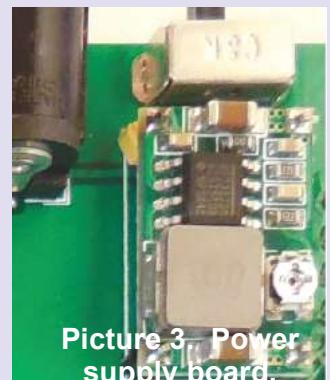
Step 1. Display Mount (see Picture 2, below left)

I have the 3.2 inch displays, so I soldered the four pin headers to the outside four holes on the PCB. The display goes on the front of the PCB.

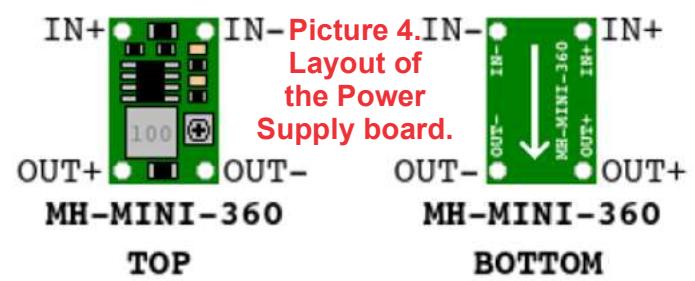


Step 2. AC Power Supply, picture 2 above.

The Barrel Jack and the Switch are soldered to the back of the PCB. The Switch goes towards the outside of the PCB.



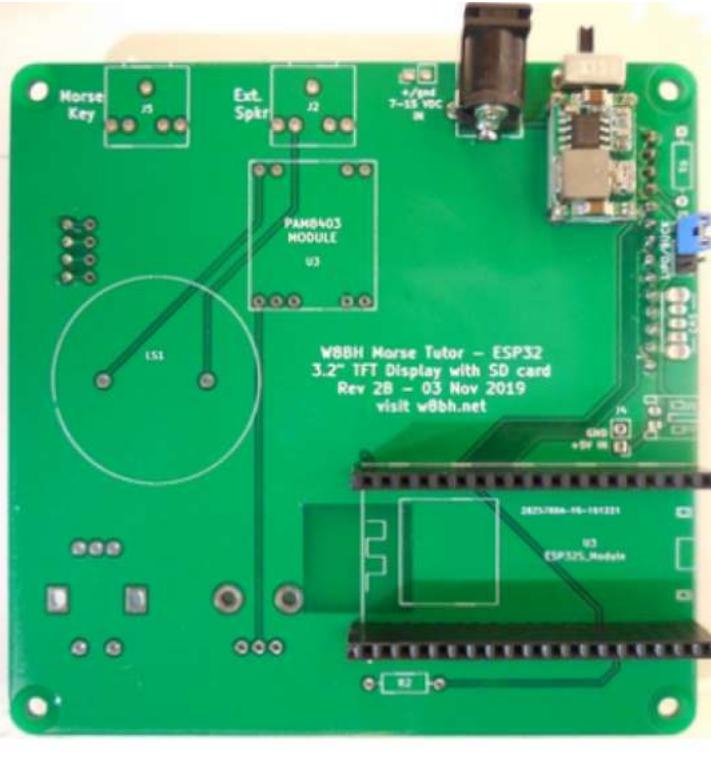
The MH-Mini-360 Buck Converter is soldered under the Switch using four 1x Male headers (see Picture 3, right). I was not paying attention and I soldered the short end of the pins facing up. The instructions say they should point down. I was able to check the voltage by attaching clips to the long pins on the other side of the PCB. I adjusted the voltage to 4.97V. The MH-Mini-360 has a fragile trim pot.



The 3-pin Male header is soldered on the PCB and a shunt is attached to the pins that are labeled BUCK. The circuit will not work without the shunt. I got a reading of 4.99V when I touched the positive DMM probe to the top hole of R1.



Continued on the next page



Step 3. Install the ESP32 Module

I use a jeweler's saw frame with a 2/0 blade to cut the Female headers. I use a pair of needle nose pliers to pull out the pin before I cut the header. My ESP32 modules already had the Male headers soldered.

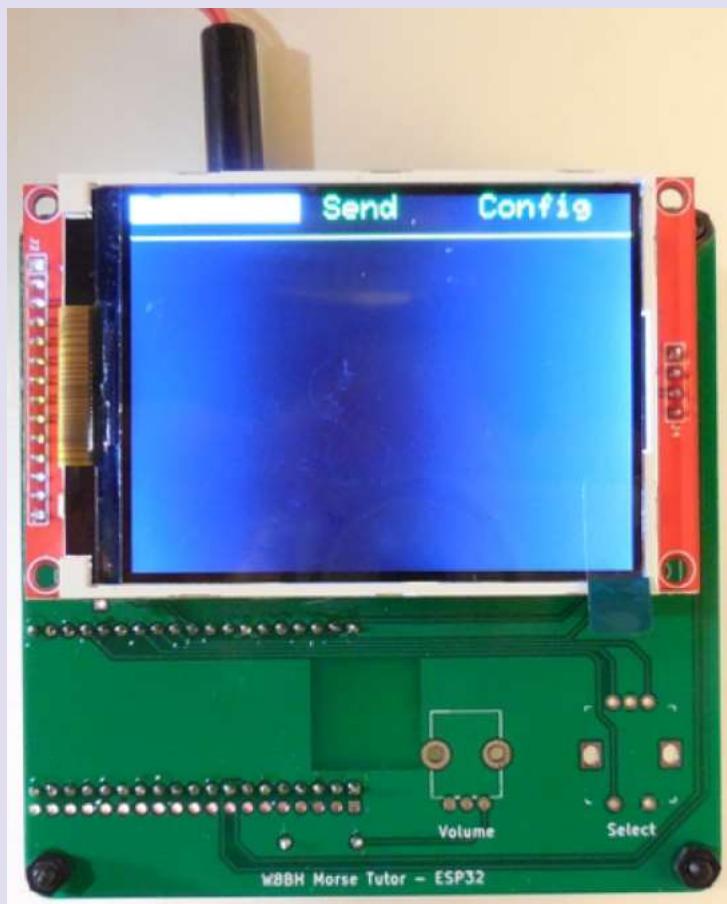
The ESP32 module is soldered to the back of the board. The silkscreen on the PCB shows the orientation of the module. The power LED on the module lit up and after a brief pause, the letter 'R' was blinked by the on-board LED.

~~Step 4. Install Resistors R1 and R2~~ R1 is right above the shunt.

~~R2 is right below the bottom header of the ESP32 module.~~

~~Step 5. Install the Display~~

My display had the 14-pin Male headers already soldered from the factory. I only had to solder the 4-pin Male headers. I did that soldering when I did Step 1 and used the display to align the Female headers on the PCB. The test was a success!



My ESP32 modules are already programmed and my Call Sign appears on the Splash Screen when the W8BH Morse Tutor boots up. My call sign is also used in the QSO feature.

Step 6. Install the Encoder, picture on the next page.

I installed the Rotary Encoder (with Switch) and tested it successfully. I only had to adjust the large pins on the

Continued on the next page



Step 7. Install the Audio Circuit

The Potentiometer goes right next to the Rotary Encode on the front of the PCB.

The PAM8403 Amp module has one 3-pin Male header, and three 2-pin Male headers. This module can only fit one way. These header pins go short side up. The top is soldered first. I put a piece of masking tape on the module to hold it to the PCB while I solder the pins on the other side. The display is removed to solder these pins, as well



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as the pins on the speaker and the jacks.

The speaker is soldered next to the Amp. The volume pot is adjusted, starting at zero, and going up as high as you can stand it (11?). The two jacks are soldered at the top of the board. I added knobs to the potentiometer and rotary encode, and this project was finished.

Links:

Bruce Hall, W8BH
<http://w8bh.net/>

Source code and Gerbers for the project:
<https://github.com/bhall66>

W8BH Morse Tutor at groups.io

<https://groups.io/g/w8bhMorseTutor>

YouTube video clip of my build:
<https://www.youtube.com/watch?v=-hPkAeXV-OM>

About the author:

KM4NFQ, earned his technician license in September, 2015, then upgraded to General in December, 2015. For an “appliance” radio he uses a Beofeng UV-5RA, but has other rigs. As an electronics hobbyist, and he enjoys tinkering with my Arduino and Raspberry Pi. He is interested in learning about QRP homebrew radio. The Morse Tutor is to help with learning with CW.

Ken worked in the welding trade for many years. and is currently retired. Happily married to Cathy, (KM4OCS), who is “the most wonderful woman in the world. She is my Best Friend Forever.”



Wednesday Nights

by Don, WS4NC

On Wednesday nights we have an informal session about whatever project that is being worked on. It is a night for project ideas, maybe some help with areas where we each need help. Or just a general chat or bull session. There have been lot of Arduino discussions, and Raspberry Pi discussions.

One topic which comes up from time-to-time, is one where I'll lump all of the ideas under the title Free Energy. I want to believe. I really, really, REALLY want to believe. But I've seen nothing that can pass a serious smell test. There have been multiple (shall I call them crazy?) ideas on the internet.

One that someone, (now an SK) in the club spent months on, and quite a bit of cash, a few years back, was using CDs with some copper wire glued on them as solar cells. While you may be able to glue some copper wire across a CD and take it out in the sun and see some voltage on a high-impedance voltmeter, that is probably just some stray AC pickup. I can't see any way that would produce anything useful in terms of energy, real energy as in work done over time. It worked about as well as you might expect—that is, not at all.

Another idea that pops up frequently is some variation on mixture of hydrogen and oxygen (HHO), or perhaps other gases. I don't doubt that someone can get funding for any number of stupendous outrageous ideas. Funding is not proof, unless it is proof of a quote by Benjamin Franklin about a fool and his money.

I once read something in the early days of the internet, that was crafted with great care and in the first 7 pages, fairly good science. It involved

hydrolysis of water into hydrogen and oxygen and then generating power. But on page 7, while I can't remember his exact wording, it proposed the idea that we can use the output to feed back to the hydrolysis unit and still get massive amounts of power out to run our cars on. And the world. He just needed a little investment to help refine his ideas.

That is perpetual energy, no matter how craftily it is phrased. And that idea violates either the first or the second law of thermodynamics. Or both. Ain't goin'a happen. The second law, in an oversimplification, says that entropy, that is disorder, increases over time. Have you seen my shop? In a fit of despair, upon arrival in my office one day (two buildings ago), I wrote the following equation on the wall:

$$dS = \frac{\delta Q}{T}$$

That is the 2nd law of thermodynamics. It says, in just plain English, that without an external source of energy, disorder increases. In this case, what was required was an input of my energy to clean and organize. I was then, and am now, running excessively low on such a source of energy. Almost negative even. And negative energy may be a valuable thing, as we'll see soon.

I have been asked my opinion about some of these spectacular internet ideas, but I am a skeptic. Sorry for the cold water. Show me the numbers and the science. I do want to believe. I really do want to run my car and my house on free energy. But unless I can spot some cash for solar panels, I'm stuck with Duke Energy and natural gas. And then there is the whole inconvenient return-on-investment thing. As in money spent vs money saved. Here is a quote from a really smart guy, who lived a long time ago, the brackets are mine.

"The seeker after truth is not one who studies the writings of the ancients [or the internet!] and, following his natural disposition, puts his trust in them, but rather the one who suspects his faith in them and questions what he gathers from them, the one who submits to argument and demonstration and not the sayings of human beings whose nature is fraught with all kinds of imperfection and deficiency [or of a desire for your money]. Thus the duty of the man who investigates the writings of scientists [or the internet], if learning the truth is his goal, is to make himself an enemy of all that he

Continued on the next page

reads, and, applying his mind to the core and margins of its content, attack it from every side. he should also suspect himself as he performs his critical examination of it, so that he may avoid falling into either prejudice or leniency." Ibn al-Haytham (~965 – ~1040, considered the father of modern optics.)



Back to the hydrogen and oxygen idea. HHO is really a perfectly balanced mixture of H₂ and O₂ gases, I'll want to stay VERY far away. If you know someone who has done this, **in any quantity**, run. Run far. Run fast. It's exothermic. The Hindenburg was pure H₂ and burned "relatively" slowly, only because it took time for enough atmospheric O₂ to mix in with the H₂. A mixture of the two (in proper stoichiometry, no less) will release all of the enthalpy of the reaction at once, with all of the gas expansion at once. A VERY big explosion, lots of heat and lots of PV (gas expansion) work, in a very short time. Your neighbors will hear it for miles. You may be deaf. Or dead.

Think of the space shuttle, that launched on the same idea, in a (just barely) controlled way. If all you do is burn the hairs off your arm, or your eyebrows (been there, done both) then you are lucky. Don't try this at home, I'm a professional and have a license to prove it. Yet I've done some spectacularly stupid things, including playing with HHO, on a small scale. However Energy In > Energy Out. Always. Releasing all that energy quickly is usually a **very** bad idea, often a **spectacularly** bad idea. A lot of these schemes, which just need a little more investment money, seems to be based on the HHO idea, even if they try to hide it.

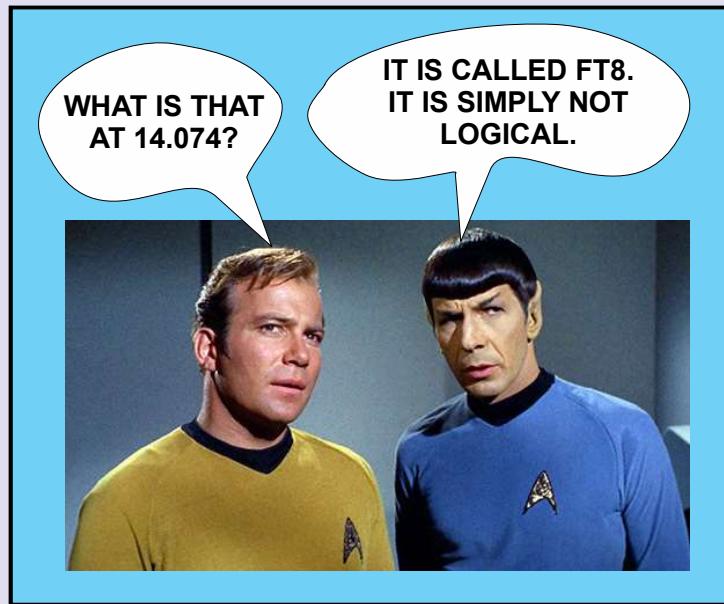
The youtube video that played the other Wednesday night for our amusement, sounded good, to an

unpolished ear, but I have heard better science quoted on Star Trek, where they at least try to predict future science. By the way, I'm looking for an artificial quantum singularity, if anyone has an extra. That's what the Romulans use to power their ships. I'll also settle for a few ounces of antimatter. If anyone is interested, physicist Miguel Alcubierre has worked out the equations for warp drive. Really. The math is above my pay grade, but people I respect say they should work. We just need a source of negative energy. Sounds like me in the mornings, but it hasn't taken me to Alpha Centauri yet.

And now another quote: *"I believe in evidence. I believe in observation, measurement, and reasoning, confirmed by independent observers. I'll believe anything, no matter how wild and ridiculous, if there is evidence for it. The wilder and more ridiculous something is, however, the firmer and more solid the evidence will have to be."* Isaac Asimov (1920 - 1992)

But for now, it really is fun to creep our minds out with ideas of free energy on Wednesday night. Or, preferably, Raspberry Pis or Arduinos. Or CW. Maybe even FT8. But don't expect me to endorse many free energy ideas. And save your money for a new radio.

Oh, and I wanted to let you know that you need to send me some money to renew the expiring warranty on your 1984 Yugo. I've been trying to reach you about that.



Ride Details

Date & Location September 25 - 26, 2021 Starting line: Tanglewood Park 4061 Commons Rd Clemmons, NC	Routes Routes from 20, 35, 55, 65 and 100 miles	Requirements Fundraising Minimum: \$300 Age Minimum: 12	Schedule 8:00 AM start time
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Tour-To-Tanglewood

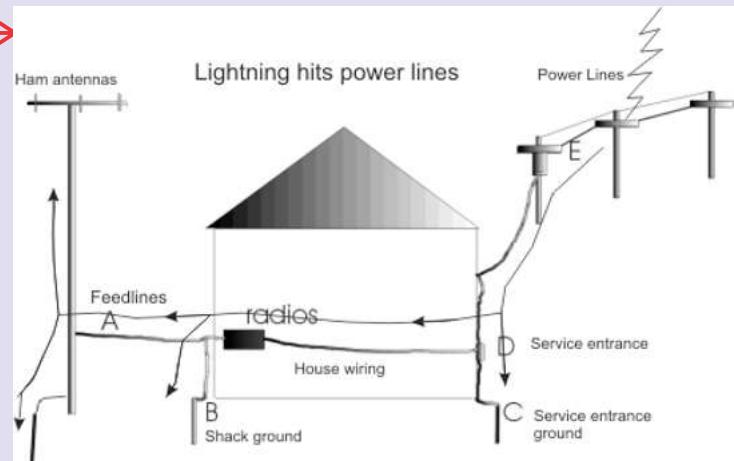
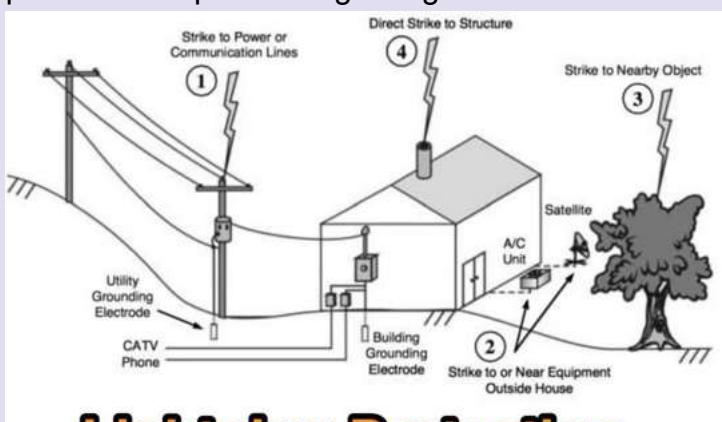
T2T is back on for this year. Put September 25 & 26 in your calendar. FARC and Forsyth County Auxcomm support T2T and it is one of the big operating events of the year.

Right now, much is in the planning stages, but more details will be in the next few months FARC Newsletters.



It's Spring - Lightning Season

Now is a good time to review how your station is protected for possible lightning strikes.



**OH DEAR!
I HOPE THAT
EARTH-SHATTERING
KABOOM WASN'T
MY RADIOS!**



**IT'S LIGHTNING
SEASON AGAIN.
DISCONNECT ANTENNAS
WHEN NOT IN USE!**

DX Operations for May, 2021

By Dick, W4PID

GENERAL

First off, I want to make sure that anybody that is interested in DX at all knows about the International DX Convention which is Saturday – Sunday, May 15/16. I mentioned it in the April column, because preregistration is required. If you have not registered, please go to <http://www.dxconvention.com/index.html> and get the paperwork over with so you can enjoy this on-line event. Michael, G7VJR, author of ClubLog.org will be presenting on the 15th at noon our time, 1600Z.



The schedule for events is located at <https://www.dxconvention.com/pages/program.htm>! There are multiple other presenters that will be fun to see. Michael's presentation will include a demonstration of the Club Log Satellite gateway for dxpedition teams, as well as the announcement of a new feature in Club Log !!



Club Log now has FARC at #122, up from our start at #125. This is an indicator of huge activity on the part of the FARC group. No doubt adding the C92 and the A25 expeditions were very helpful in this jump. Congratulations !

ACTIVITY

Ali, 6O1OO will be active from Somalia from April 25 to June 25. He has an excellent FT8 signal on 40m and also operates all modes from that location. He is the only licensed ham in the country when he's there, so take the opportunity to work him if you get a chance.



A fairly rare DX entity will be on the air either May or June, 2021. Fernando de Noronha, PX0N, off the coast of Brazil will be activated by PY2RMZ,



<https://www.dx-world.net/px0n-fernando-de-noronha/>

PU4MDO and others. I mention it early as it is worth planning for. The island counts as both DXCC and IOTA for those interested. I don't have any more data at this time, but expect the info to be more exact next month. They are using the PY0F contest station and should have a great signal.



DT8A has been very active, mostly on FT8 from South Shetland Islands. He is supposed to be at the research center there till the end of the year. I have



seen him on many bands, and he seems to just be there for a few minutes then back to work. The easiest way to catch him is to watch DXHeat and maybe even search on his call. His patterns are very random, but he does have a great signal here from time to time.



A new expedition is in the works in the South Pacific. 3D2ZK is on the air from Fiji at present, mostly on FT8, with a respectable signal in our area. Joanna will be headed to Conway Reef in a few weeks, as well as Rotuma and other IOTA selections as time progresses. I will post calls, etc as they come to light. She is part of the Rebel DX Group and is traveling with Dom, 3D2DOM AKA 3Z9DX. This is the same group that is planning an expedition to Bouvet during the first part of next year.



Minami Torishima will be active with the call JG8NQJ/JD1 from that rare IOTA/DXCC entity from March 10 thru sometime in May. This is a rare opportunity to catch someone active from this

location. He should be there till the first week of June or so.



<https://www.dx-world.net/zd8hz-ascension-island/>

ZD8HZ is QRT now, according to QRZ.com He had a great signal, and was very active for a 'spare time' expedition. <https://www.dx-world.net/zd8hz-ascension-island/>



Did I mention Bear Island ? JW/LB2PG will be active from there thru May of this year. Bear Island, another DXCC entity and IOTA score, is on Don, WS4NC's list of "you can't get there from here" places. There is usually some activity on the bands there from folks visiting in the summer for work assignments. However, nobody is there during the winter for good reason. *Continued on the next page*

Continued on the next page



<https://www.dx-world.net/vk9xx-christmas-island/>



Christmas Island (see Dec, 2020 FARC Newsletter, "Places you can't get to from here") will be active as a 'spare time' expedition as VK9XX. This is a DXCC entity and a fairly rare IOTA island as well. I find propagation to be weak between here and there but they are certainly workable, especially with some improved conditions. Look for them on 80, 40 and 30M from May 7 thru 25.



Islands On The Air



IOTA NEWS

Make plans for C6AHA on Bimini Island NA-048. This trip will occur between July 14 -21 if all plans hold true. This group will represent an easy new



IOTA for USA stations, and a somewhat rare DXCC for those in Asia and the Indian Ocean area. Since it is a DXCC trip as well, it will be set up as an expedition in the Club Log Expedition section, allowing easy tracking of the operation. Those involved are N4RRR, K4KSW,

Unfortunately the CY0C expedition has been put on hold thanks to Covid. The Canadian authorities are welcoming this group in 2022. See <https://www.dx-world.net/sable-island-dxpedition-2020/>

Along the same lines, any trips to St/ Pierre and Miquelon have also been cancelled.

I have found that the DXHeat website is good for spotting IOTA activations, and some of them slip up on you.



Keep an eye on the NG3K link below.. There will be many smaller expeditions over the next thirty days that are to places not so rare, but if you don't have them they are as good as North Korea to boost your scores.

The DX world of today is a very rapidly changing beast, and impossible to track with a monthly NL. The following links will take you to multiple sources of information concerning DX activities.

<https://www.ng3k.com/Misc/adxo.html>
<https://dx-world.net>
<https://dxnews.com>
<https://clublog.org/>
<https://dxheat.com/dxc/>
<https://dxwatch.com/>

73 DE W4PID



PBS – North Carolina Weekend



THE ASHEVILLE RADIO MUSEUM

Please Note that the museum will be closed until further notice following A-B Tech's updated COVID policy to protect students and outside guests. The museum will announce when this situation changes. Thank you for your understanding.

About The Asheville Radio Museum:

Founded in 2001, the Asheville Radio Museum provides visitors of all ages with a personalized learning experience about the technological, economic and cultural impact of radio. The museum houses more than 100 vintage amateur and commercial radios, representing the technology from its genesis through the mid 20th century. A registered non-profit corporation, the museum is located on the campus of Asheville-Buncombe Technical Community College. The museum offers small group tours and appointments outside of regular hours for out of town visitors. For more information, including directions and operating hours, please visit avlradiomuseum.org.

Contact:

Peter Abzug

828-365-8491

ashevilleradiomuseum@gmail.com

RADIO WAVE WIZARDRY! 

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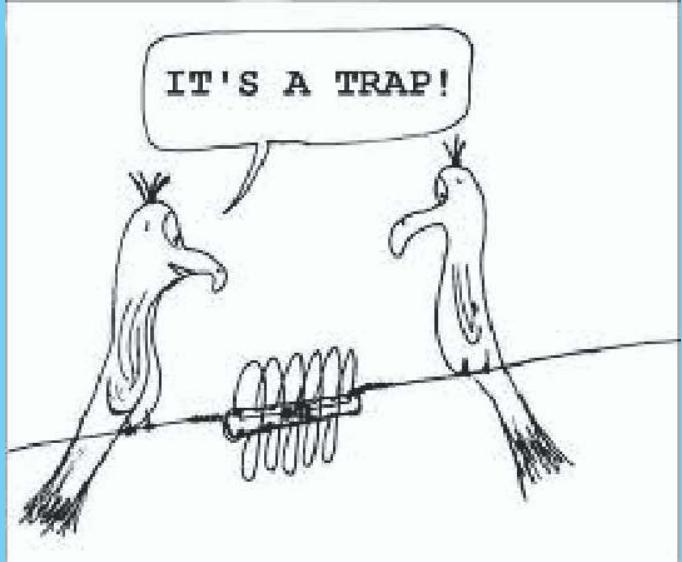
Click for a [Brief Video Tour](#), [2019 PBS Video](#),
[NPR Story](#), [Laurel Article](#) or [Museum Flyer](#)

Virtual Tour Using Your Smart Phone

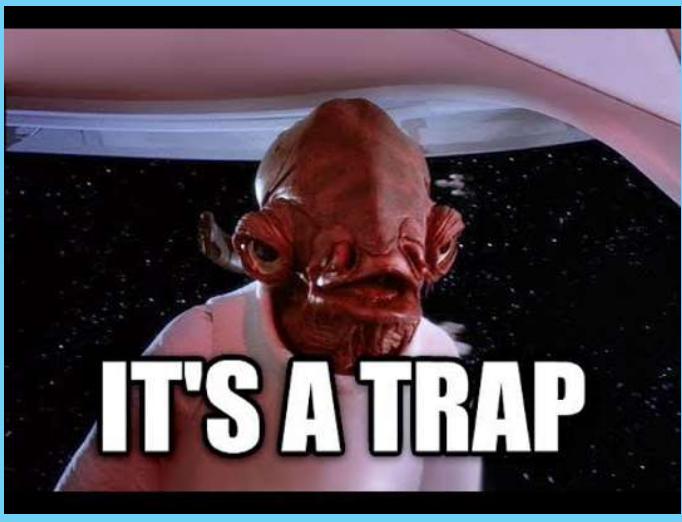
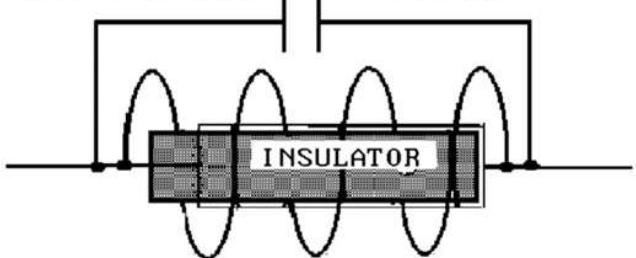
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 May, 2021

WATCH OUT FOR TRAPS!



TRAP FOR WIRE ANTENNAS



You Can't Get There From Here:

Geography Quiz? Everywhere?

by Don, WS4NC

April's Mystery Answers

I can tell only a few of you went to Radio Garden last month. I know because most who did emailed me or called. Yes, wasn't that fun? And still is. It runs in the background while I am doing the Newsletter.

Only Harold, N4HER, was bold enough to challenge this quiz. And he wouldn't put his answers in writing. Sigh.

1. Australia is wider than

- A. The moon
- B. Texas
- C. Russia
- D. Europe

Answer: A, B and D. Russia has 11 time zones, about 5600 miles. Australia is close to 2,500 miles across. The moon is just under 2160 miles in diameter. I can't really find a measurement on Europe as to width, but the total land mass is actually slightly larger than the US, but taller than wide.

2. Which is farther east?

- A. Los Angeles, CA
- B. Mesa, AZ
- C. Detroit, MI
- D. Atlanta, GA

C. Detroit, MI. Check a map. Obviously LA and Mesa are in the west so that leaves Detroit and Atlanta. You should have suspected Detroit since you were warned these would be tricky.

3. Which is the farthest north that palm trees grow?

- A. Ireland
- B. Canada
- C. Portugal
- D. Virginia

A. Ireland. Because of the Gulf Stream, Europe is warmer than it should otherwise be. Palm trees grow in Ireland to about 52 degrees north. Polar bears in Canada have a southern range almost as far south, about 55 degrees.

4. More than 50% of Canadians live south of

- A. Seattle, WA
- B. Toronto, Canada
- C. Ottawa, Canada
- D. Hampton, Canada

A. Seattle, WA. There's an awful lot of Canada north of this latitude, but it can be cold. Not to mention few roads.

5. Which has the highest population?

- A. Canada
 - B. Texas
 - C. Florida
 - D. California
- D. California.

6. Where did FedEx establish its major hub(s)?

- A. Memphis International Airport, TN
- B. Dulles International, Washington, DC
- C. Piedmont Triad International Airport, GSO, NC
- D. Anchorage International Airport, Alaska

A, C and D. I really wanted to make the answer D, because FedEx established its first international hub in Alaska because Anchorage is less than 10 hours from the most countries. But I couldn't think of a way to phrase the question without giving that away. And besides, GSO is also a hub.

7. Which country has the most lakes?

- A. Russia
- B. Canada
- C. Brazil
- D. Kazakhstan

B. Canada is #1. Russia is #2. And, amazingly to my mind, Kazakhstan is #9 on the list.

8. France shares its longest border with which country?

- A. Belgium
 - B. Portugal
 - C. Spain
 - D. Brazil
- B. Brazil. Kudos to Harold, N4HER for getting this.

Continued on the next page

Page 18

But he would only answer the questions over the phone, so it doesn't count! French Guiana has a border with Brazil that covers a lot of miles.

9. Which state is furthest east?

- A. Maine
- B. Florida
- C. Hawaii
- D. Alaska

D. Alaska. The Aleutian Islands cross the International Date line which separates East from West.

10. Which state is furthest west?

- A. California
- B. Hawaii
- C. Alaska
- D. Texas

C. Alaska. Again, the Aleutian Islands cross the International Date line which separates East from West.

11. Which state is furthest south?

- A. Texas
- B. Hawaii
- C. Florida
- D. Maine

B. Hawaii. Duh!

12. Which state is closest to Africa?

- A. Florida
- B. California
- C. Maine
- D. North Carolina

C. Maine. This is usually a surprise. It's a Great Circle thing.

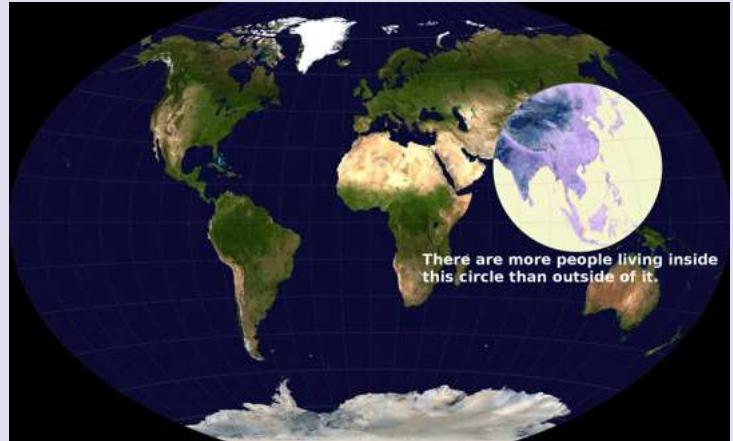
13. Which country is more north, south, east and west of Finland?

- A. Sweden
- B. Latvia
- C. Norway
- D. Russia

C. Norway is mostly west of Finland, which borders on Russia. But it also goes north, south, east and west of Finland. Check a map.

14. More than 50% of the world's populations lives within 2500 miles of:

- A. Berlin, Germany
- B. Kansas City, KS
- C. Beijing, China
- D. Myanmar



D. Mong Knet, Myanmar. The map is called the "Valeriepieris circle." If you want to get away from it all, Greenland is a good choice with a population of less than 0.1/square mile. Or if you like people, Manilia has 107,000 Filipinos per square mile. The Phillipines is on my bucket list to go there.

15. How far is it from the highest to the lowest point in the contiguous 48 US?

- A. 41 miles
- B. 85 miles
- C. 151 miles
- D. 352 miles

B. 85 airlines miles, I think it's about 109 if you are driving. Mt. Whitney, CA 14,505 FT AMSL to Death Valley, CA to Badwater Basin, Death Valley, CA, 282 ft BMSL. Your ears will pop. Several times.

16. The Atlantic entrance of the Panama Canal is more _____ from the Pacific entrance:

- A. North
- B. South
- C. East
- D. West

Continued on the next page



A. North and D. West. Yup it was a tricky question. Funny shaped country that connects Central and South America together.

17. Point Nemo is closest to which of the following:

- A. Africa
 - B. Asia
 - C. International Space Station
 - D. South America
- C. Point Nemo, is the farthest point from land as determined by NASA. It is in the South Atlantic and, when it passes over, the International Space Station is the closest that humanity gets to this point normally.

18. To get to North Korea from Norway by land you need to cross how many countries (fewest):

- A. One
 - B. Two
 - C. Three
 - D. Five
- A. Start in Finland and drive across Russia. It will be a long trip. Not sure about roads though.

19. Which is farther west?

- A. Los Angeles, CA
 - B. Reno, NV
 - C. Boise, ID
 - D. Phoenix, AZ
- B. Reno, Nevada is more westerly than LA. Weird, but California takes an eastward turn at the bottom.

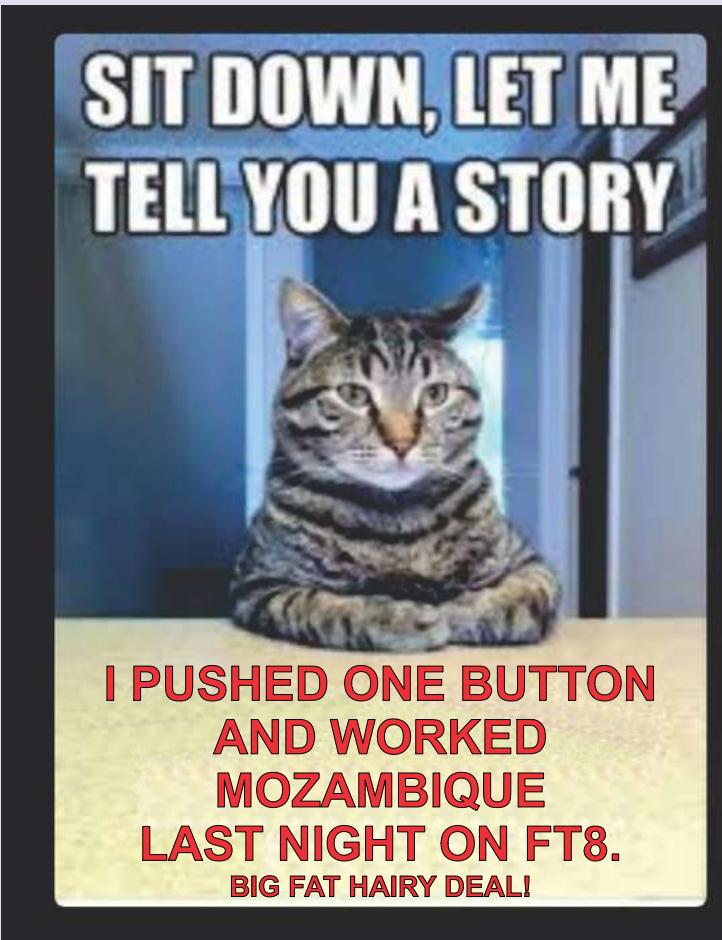
20. How far east does the Appalachian mountains go?

- A. France
- B. North Carolina
- C. Virginia
- D. Maine

A. France. Now this is a tricky one! The Appalachian Mountains are the oldest mountains on earth, having formed before the continents parted ways. There is a group of mountains in France which were originally part of the Appalachians. I understand they have a trail there too.

Double extra credit, very pedantic question: How far is it from the eastern most to the western most point in the USA?

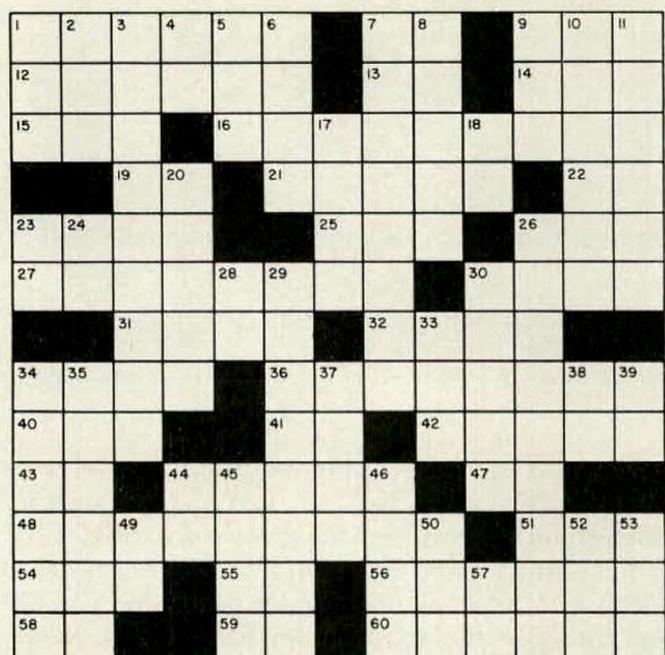
Semisopochnoi Island sits less than ten miles west of the 180-degree meridian that separates the Western Hemisphere from the Eastern Hemisphere. In other words, Semisopochnoi and the dozen or so Aleutian islands lying beyond it are so far west that they're actually east! Yeah, it's pedantic. Amatignak Island is the westernmost. The two islands are about 71 miles apart. And nobody lives on either island.



Clever Philological Quizzes

This is from a mid-1960s ham magazine.

May's mystery.



Max Winter K2PIJ
2444 Barker Avenue
New York 67, New York

Across:

- Colored thread used in wire insulation to aid in identification
- Abbreviation for radio bands at a higher frequency than broadcast
- Classified notices
- Vacuum tube having a specified number of electrons
- Greek letter having many electronic applications
- Type of coil winding
- A square of butter
- Clipping circuit in TV receivers
- The: (Spanish)
- Challenges
- Marine officer (abbr.)
- _____ fide
- Periods of time (abbr.)
- One side of a ship
- Slang for microwave coax circuit
- Physics term concerned with weight and acceleration
- Mimic
- Interjection
- Reclines
- Rhetorical comparison of negative and positive
- Numerical value of brown
- Continent (abbr.)
- Speaker parts
- Symbol for cerium
- Adjust the beam in a cathode-ray tube
- Continent (abbr.)
- Units of electromotive force
- Golfing equipment
- University degree
- Symbol for erbium
- Symbol for tellurium
- Compass direction
- Wheatstone circuit used to measure impedance

Down:

- Portion of a hill best suited for microwave tower
- Prominent electronic manufacturer
- Reduce the strength of an electrical impulse
- Symbol for cobalt
- Man's name (plural)
- Type of frequency meter
- Arrangement of two electrodes used in early type transmitters
- Paths for electric current
- Liable
- Type of tubes
- Method of arranging circuit parts
- Chess piece
- Like
- Sources of electric illumination
- Temperature constant for a liquid
- Electrical protective device (abbr.)
- Type of iron core
- Metal winding in some types of geiger tubes (abbr.)
- Type of transformer
- Sub-atomic particle
- Chemical elements in hydrocarbons
- Mounting device for tubes
- Interior
- Man's name
- Symbol for tellurium
- Q: abbreviation for Mister
- British State Department (abbr.)
- Heated enclosure for a quartz crystal
- Open impedance path between two conductors
- Unit of weight (abbr.)
- Spanish for Mr.
- Electronics expert (abbr.)
- Summer: French
- Symbol for bismuth

ANNUAL ARMED FORCES DAY CROSSBAND TEST (07-08 May 2021)

The Department of Defense will host this year's Armed Forces Day (AFD) Cross-Band Test, scheduled for May 7-8, 2021. This annual event is open to all licensed amateur radio operators, and will not impact any public or private communications. For more than 50 years, military and amateur stations have taken part in this event, which is only an exercise scenario, designed to include hobbyist and government radio operators alike.



The AFD Cross-Band Test is a unique opportunity to test two-way communications between military communicators and radio stations in the Amateur Radio Service (ARS), as authorized in 47 CFR 97.111. These tests provide opportunities and challenges for radio operators to demonstrate individual technical skills in a tightly-controlled exercise scenario that does not impact any public or private communications. Military stations will transmit on selected military frequencies and will announce the specific ARS frequencies monitored. All times are ZULU (Z), and all frequencies are Upper Side Band (USB) unless otherwise noted. The frequencies used for the test will not impact any public or private communications, and will not stray outside the confines of the exercise.

The following stations will be making two way radiotelephone contacts with stations in the ARS between the time periods listed on the frequencies listed in Kilohertz below.

AAZ/FT HUACHUCA, AZ
081500Z-082359Z 5,330.5 14,438.5 18,211.0

AAC/BARROW ARMY RESERVE CENTER, KY (USB + RTTY)
081300Z-082300Z 5,346.5 6,968.5 13,963.5

AAN/U.S. NORTHERN COMMAND, CO
081300Z-082300Z 6,970.5 14,550.5

AAU/HQ US ARMY GARRISON FORT KNOX, KY (USB + RTTY)
081400Z-081900Z 5,371.5 7,645.0 14,512.5 18,293.0 20,920.0

ABH/SCHOFIELD BARRACKS, HI
081500Z-082359Z 5,357.0 14,438.5 18,272.0 20,997.0

ADB/CAMP FOSTER, OKINAWA
081500Z-082359Z 14,487.0 20,994

AAM3D/DISACYBERSPACE OPERATIONS DIRECTORATE, FT MEADE, MD
071300Z-082100Z 5,403.5 7,421.5 13,993.5 18,254.0

ABM4B/HSC, HHBN, 82ND ABN DIV, FORT BRAGG, NC
081100Z-082300Z 5,371.5 7,431.5 13,910.5 18,281.5



WAR/PENTAGON WASHINGTON, DC (USB + CW + RTTY)
081200Z-082359Z 4,018.5 357.0 13,963.5 18,211.0 24,760.0

AIR/ANDREWS AFB
081200Z-082359Z 4,517.0 7,305.0 15,807.0 20,740.0

AFM4NPD/NAVAL SUPPORT ACTIVITY MID-SOUTH MILLINTON, TN
081200Z-080300Z 4,802.0 7,375.5 15,712.0

AGA2SY/HANCOCK FIELD, NY
081200Z-082359Z 4,575.0 7,540.0 13,993.0

AGA5SC/SCOTT AFB, IL
081400Z-082100Z 4,017.0 5,186.0 7,305.0

AGA5TR/TRAVIS AFB, CA
081600Z-080100Z 4,017.0 7,329.0 13,996.0 14,411.0

MARSRADIO/
081400Z-090100Z 4,557.0 7,460.0 (LSB) 14,606.0

MARSCOMM/
081400Z-090100Z 4,448.5 6,994.0 (LSB) 14,877.0

NEPM/USS IOWA BB 61 LOS ANGELES, CA (USB + CW)
081450Z-082359Z 6,903.5 14,463.5 18,293.0

NIIW/USS MIDWAY CV-41 SAN DIEGO, CA (USB)
071800Z-082359Z 4,013.5 5,371.5 7,493.5 14,383.5 18,293.0

NWVC/LST-325 EVANSVILLE, IN (USB + CW)
081200Z-090400Z 4,007.0 6,913.0 9988.5 13,974.0

NSS/US NAVAL ACADEMY ANNAPOLIS, MD (USB + CW)
081200Z-090400Z 4,038.5 5,330.5 7,533.5 9,447.0 14,487.0 17,545.0

NAF/NEWPORT NAVAL RADIO STATION MUSEUM NEWPORT, RI (USB + CW)
081200Z-090200Z 4,013.5 7,542.0 14,383.

An AFD message will be transmitted utilizing the Military Standard (MIL-STD) Serial PSK waveform (M110) followed by MIL-STD Wide Shift FSK (850 Hz RTTY) as described in MIL-STD 188-110A/B. Technical information regarding these waveforms is provided at:

<https://drive.google.com/drive/folders/1pYDj7kQbm-QAyY4RPtx0dOXKohjaEjq9?usp=sharing>

The AFD message will also be sent in Continuous Wave (CW) mode and Radio Teletype (RTTY) as indicated under the transmission times. The message will be transmitted on the following frequencies in Kilohertz and at the listed times:

Frequency (kHz)	1400Z	1420Z	1440Z	1500Z	1900Z CW RTTY	1920Z CW RTTY	1940Z RTTY	2000Z RTTY	2200Z CW RTTY	2220Z CW RTTY	2240Z CW RTTY	2330Z CW
5,346.50									AAC			NEPM
7,540.00	AAU	ABM4B	AAMED	AAC			AAC	ABM4B	AAN			NEPM
13,506.50	AAMED	WAR	AAN	AAZ	WAR		AAU	NIIW	AAZ	WAR		
17,443.00	AAMED	AAC	WAR	AAZ		WAR	ABM4B	NIIW	ABM4B		WAR	

For those who wish to document their contacts with a QSL card, go to <http://www.usarmymars.org/events> and complete the request form.

More info:

<http://www.dodmars.org/home/army-forces-day-2021>

WHAT IF STAR TREK HAD ZOMBIES?

ZombiesEatUs.com

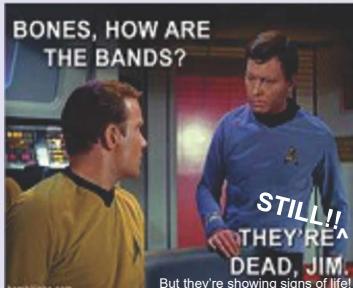


Or, at least showing signs of life!

by Don, WS4NC

I am starting to find signs of life on 20 meters CW! Yeah, I know with FT8 there are frequently a lot of stations there. I'm working on a plural noun for a group of FT8 signals. A murder, like in crows. Or calamity, cacophony, deafening. How about a rash? As in a rash of dermatologists?

But listening on 20 CW, late at night, I hear . . . things. And work some stations. It helps that my noise level has gone way down. Don't know why. Don't care, as long as the noise doesn't come back.



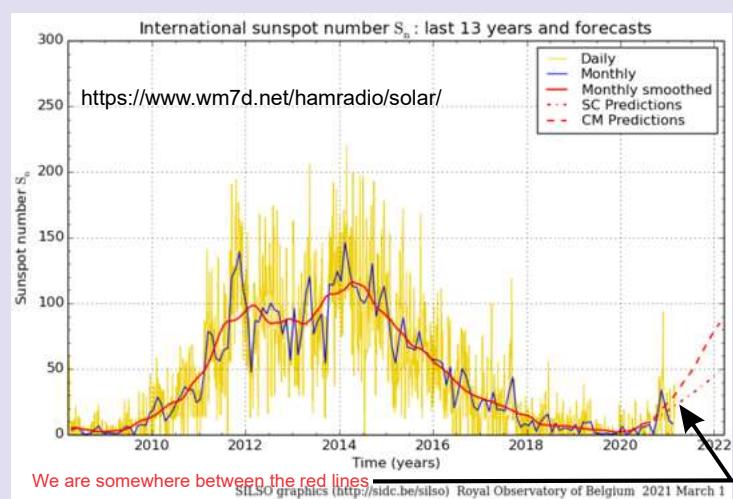
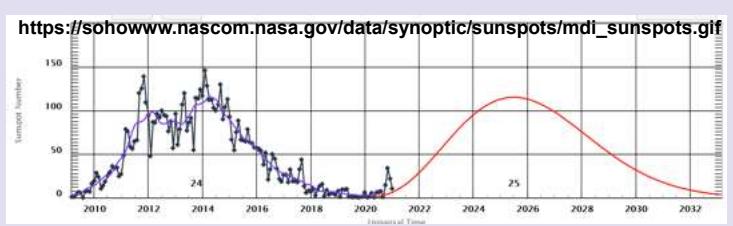
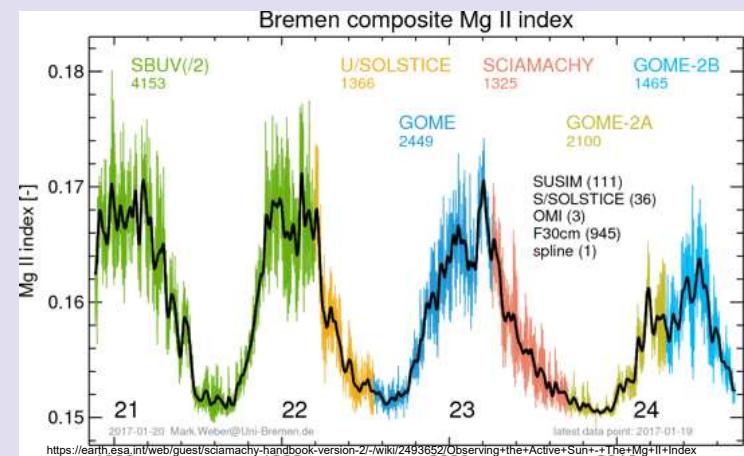
But when the band seems dead, careful listening will turn up some interesting DX. The radio runs on 20 CW at night when I'm working on the Newsletter. Leaving it on 14.025 or just a few kHz above the bottom of the band and a few stations pop up. Often strong enough to work. I've worked several South American, Caribbean and European stations that way. When the band seems to be dead. And around 7-8 PM local I have heard a few Japanese stations starting to pop up. Not strong enough to work yet, but I can tell they are there.

Now if I'll just go down to 40 meters there are a lot of DX CW stations there. Mostly European, Russia, and European stations. South American and Africa too. The Mideast and Asia seem absent too much.

We've been through the bottom of the longest HF drought in my memory. Used to hear DX signals all night on 20 meters, but 15 was my favorite band. Until recently 15 and 10 were almost always dead when I would check during the day. They did open, but not often when I could use the band.

We have had sunspots since April 14, and conditions are getting a little better, if only in fits and starts. Some are now saying the solar maximum may occur in 2024, rather than 2025.

Lo! And behold! On May 5, 15 and 10 meters were open. Late in the day! There are sunspots! And I'm listening to loads of CW stations on May 6 on 20 CW. And some on 15 CW. Goody!



Amateur Radio Credited with Rescue of Back-Country Hiker in Tennessee

ARRL, 04/28/2021

A back-country hiker was rescued from Great Smoky Mountains National Park with assistance from amateur radio after she became exhausted on the trail and possibly dehydrated. A member of the hiking group on the park's Little River Trail, Tim Luttrell, KA9EBJ, put out a call on the evening of April 11 via the W4KEV linked VHF repeater in Gatlinburg, Tennessee, requesting assistance in extricating the injured member. No cell phone service was available at the location, and Luttrell's signal was spotty at times, owing to the mountainous terrain.

Responding was David Manuel, W5DJR, who obtained more information and called 911, which routed the call to Great Smoky Mountains National Park Emergency Medical Service (GSMNP EMS). The national park EMS relayed through Manuel a request for the group to continue down the trail as far as possible to shorten the rescue time. Parties were asked to stand by.

A medic with the Park Service search-and-rescue team subsequently reached Manuel by telephone, who served to relay questions to Luttrell. Manuel contacted members of the hiker's family after Luttrell provided contact numbers. Manuel was asked to relay information for the family to arrange to meet in Cherokee, North Carolina, and be prepared to transport the distressed hiker's vehicle to her home. By this time, a couple of hours had passed. Manuel maintained occasional contact with Luttrell, who indicated that all was well but his battery was low and that he would power down the radio in between contact attempts to conserve power.

Manuel continued to monitor the repeater system and got a call from Luttrell indicating "all clear" shortly after 2 AM. Manuel later received a text indicating that the family members had connected with the distressed hiker and extended their thanks to all who had helped out.

Luttrell said afterward that Manuel "was calm, professional, and persistent but patient in obtaining information he needed through the challenges I was having with my radio." He allowed that without his spare battery pack and high-gain antenna, the incident may not have gone so well. A newer radio had been damaged in an earlier rescue effort, he told ARRL Tennessee Section Manager Dave Thomas, KM4NYI.

The injured hiker was hospitalized and required surgery and rehabilitation. Thomas told ARRL that he'd learned another hiker in the same group was close to hypothermia by the time they were rescued.

Thomas will recognize each of the radio amateurs involved in the rescue with a Certificate of Merit during the ARRL Tennessee State Convention in Knoxville on June 19.



KJ4IC From Sunny Florida

Bob, KJ4IC, recently moved from an apartment to a house in Bradenton, Florida. Rather than sneaking out an occasional small antenna, he now has a vertical up. Nice pictures! Congrats Bob.

Don

I hope you are doing well. I'm fine down here.

I can finally do some HF hamming. I got my free Hustler 4 BTV (which turned out to be mostly a 5 BTV, just missing a part which may or may not be needed for 80 meters.). I've got it ground mounted with 10 radials in the back yard. I ran in the WPX phone contest last weekend, just some search and pounce, and made 108 contacts on 5 bands. Even 10 and 15 were open to South America! I'd say it worked pretty well - I worked from Australia and New Zealand to Alaska, Brazil, California, Lithuania and France. It was a lot of fun getting on HF again.

I hope you have been able to get on. Maybe we can have an HF QSO.

A couple of pics are attached.

73,
Bob, KJ4IC



An elderly couple, both with dementia, used Morse code to break out of a Tennessee assisted living facility

by Sophia Ankel, *The Tenneesean*,
May 1, 2021

<https://www.tennessean.com/story/news/health/2021/04/30/couple-escapes-assisted-living-facility-military-morse-code-training/7166012002/>

[Editor's note: Marcia, NC4MT, sent this to me. Thank you Marcia. And Sam, KI4TG, and Stacey, W1LLO. Thanks all. And for what it's worth, if I ever get strapped to a bed and can't speak, please put a keyer in my hand and find someone who can copy code!]

An elderly couple was able to escape an assisted living facility in Tennessee by using Morse code. The couple learned the door code after listening to staff punch numbers into the electronic keypad. They both suffer from dementia and Alzheimer's Disease, health records show.

The elderly couple managed to escape an assisted living facility in Tennessee last month by using Morse code to crack an electronic keypad on a door, according to *The Tennessean*.

Documents from the Department of Health show that the elderly husband and wife, who have not been named, both suffer from dementia and Alzheimer's Disease.

The couple left staffers at the Elmcroft of Lebanon baffled after they went missing from the special care facility on March 2. A stranger eventually found them wandering along a nearby road 30 minutes later, *The Tennessean* reported.

The man told staffers he was able to decipher the door code because he "previously worked with Morse code in the military", *The Tennessean* reported. He said the couple listened closely to the sounds the electronic keypad made when staffers were using it which allowed them to eventually open the door themselves.

Elmcroft of Lebanon has since been given a \$2,000 fine as a result of the couple's getaway. "The safety of our residents is the top priority at our senior living

community. We are thankful both residents were returned to the community safely," the assisted living facility said in a statement according to *The Tennessean*. "We reported the situation to the state and their family immediately after it happened and fully cooperated with the state during its review," the statement said.

The facility said it has since changed all its exit codes.

President's Column

by Sam, NI4TG

I would like to give A HUGE THANKS.....to each of you.....who took a few minutes to fill out the Club Survey.

We had over 80 responses, and feel that we were successful in soliciting how you feel about the Club. We are still evaluating detailed results, but will be giving

a presentation; first to the Board, and then the Club. So we hear you. Change is coming!



NI4TG

Effort and planning continue in the background which will give us an exciting year. We will be having a large auction when we again meet in person. Transceivers, meters, books, power supplies, tuners, test equipment, switches, and other interesting items are being prepared for bids. Start saving your FARC bucks. VE session testing is back. Stacey, Mason, and Harold represented the Club at a recent Science Fair. The CW group is making contacts. Preparations are underway for an outdoor Field Day event. Precautions will be taken and things certainly may look different, but we will be operating from Hobby Park unless the State dictates otherwise. Attendance is voluntary and you can still participate from home. This is a personal decision, but it will be great to have W4NC back on the air.

I encourage you to continue to stay close to those nearest to you, reach out and interact with others to make new friends, and not dwell on the never ending negative bombardment from news outlets. Most people are good, hams are the best.

'73, hope to see you on the air, Sam

ZOOM SHOCKA LOCKA

FARC Zoom Meeting ID Numbers

For the foreseeable future FARC is meeting by Zoom. You do not have to have a paid Zoom account to participate, but it is best if you download the Zoom app on your computer. You don't even have to have a camera and a mic, unless you want to be seen or heard. The password for all meetings is the club call, lower case.

Meeting ID numbers:

The Monthly FARC meeting is on 2nd Mondays, 7:30 PM: 294 418 122

The FARC board meeting is on 3rd Mondays, 7:30 PM: 721 645 099

Every Wednesday FARC has an informal Tech Talk: 549 621 524

Auxcomm Net 8:30 PM Thursdays on 145.47 repeater, has a Zoom training on 3rd Thursdays, 8:00 PM Zoom ID: 897-9792-5844

Project Group (not totally an FARC group, but mostly), 3rd Tues, (new time!) 7:30 PM: 707 610 249

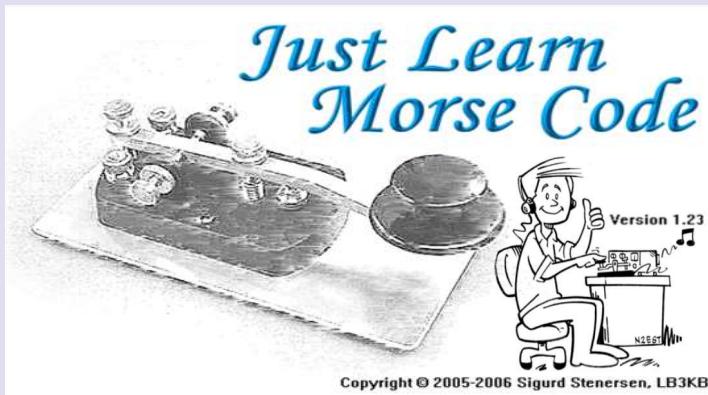
FARC CW Group, Fridays, 7:30 PM: 813-3696-1876

Welcome to New FARC Members

This month we have added the following new members, or subscribers to the Newsletter: James "Trip" Winslow, KO4PUP (Congrats on the new callsign and getting your General); David Rodwell, WB0QOA; Nicole Cullison (eagerly awaiting a testing session!); Last month: Ron Knighton, awaiting call; Mike Dayberry, awaiting call; Chris, KN4VOB; Joe Waugh, KO4MDE; Hunter Wilkins, awaiting call; Susan, WA4AKB; David, K4DR; Bill, N8CQD; Dan High, awaiting call; Bung, KO4LAK and Scott Newland, awaiting call - need an email address. I am afraid we may have had several enquires that slipped past us. If you are not on this list and want to be send an email to info <at> w4nc <dot> com and CC to dedwards <at> dwepe <dot> com.

I told my teenage niece to get me a phone book. She laughed and said, "Oh, uncle, you are so old! Here, just use my I-phone." So I slammed her I-phone against the wall and smashed that spider!





Yup, still pushing CW, by Don, WS4NC

The Friday night FARC Zoom meeting was originally set to encourage new CW operators. While the attendees vary, we have had Dick, W4PID; Bobby, AA9AD; Harold, N4HER; David Shoaf, KC4X; Don, WS4NC; Marcia, NC4MT; Bruce, AD4ET; Nicole Cullison; John, KM4HVB; Stacey MacArthur, W1LLO; Michael, K4OLD; Gary, WA4VMC and probably a few others.

It is not too late to join us, or just learn CW on your own. A number of members have gone on to operate CW in various contests and even rag chew some. Yes, computers help and we don't consider them cheating. After all most stations in the contests could not run at the speeds they do without computers. It is even possible to know almost no code at all and run in many contests.

At the June meeting there will be a shortened version of the original CW presentation. If you want to learn CW it isn't hard for most people but you actually have to practice. If you want to learn there are many software packages, but for consistency we suggest "Just Learn Morse" (Google that). There are other packages that offer a lot of bells and whistles, but you don't need the distraction until you have learned letters and numbers. There are many programs out there but this stresses both the Koch and Farnsworth methods of learning and concentrates just on learning the letters, number and prosigns. When you are first learning you don't need the distractions of QRM, QRN, multiple stations, fading and some other options that other programs offer. We needed to standardize on one program and this is one of the best.

There are two goals here - one is obviously to help

you learn CW. You will find that contacts are actually easier in CW. The second goal is for FARC, we want to pull up our scores at Field Day and CW contacts are worth so much more than phone. We have some seriously good CW operators, but we are constantly outclassed by another group in NC, who has a lot of really good CW operators and they all run at Field Day (FD), and almost all CW. We usually score in the top ten (or so) FD stations in the entire country, and yet they beat us, almost every year. I will not mention the town but it does have the word "ham" in the name. How about helping yourself and us here? For almost everyone CW is not really that hard to learn with just a little effort.

If you have the letters and the numbers and want to be challenged download the program rufzXP. But don't blame me if you end up beating your computer to death. rufz forces you to speed up when you are copying perfectly and slows down when you aren't. It will beat you. All it does is send callsigns. It was designed by the devil himself, and is the standard by which world-wide CW challenges are held.

Now go be assimilated like a good drone.



But speaking of CW

...

I was tickled to be John, KM4HVB's first CW contact. We did this on a Friday night CW Zoom session, but even though we could see each other, we worked CW on 20 meters. The picture is a screen capture of John while we were working. I think he had to get his tongue in the right spot he was concentrating so hard. But it was an official contact complete with 5NNs and all that.

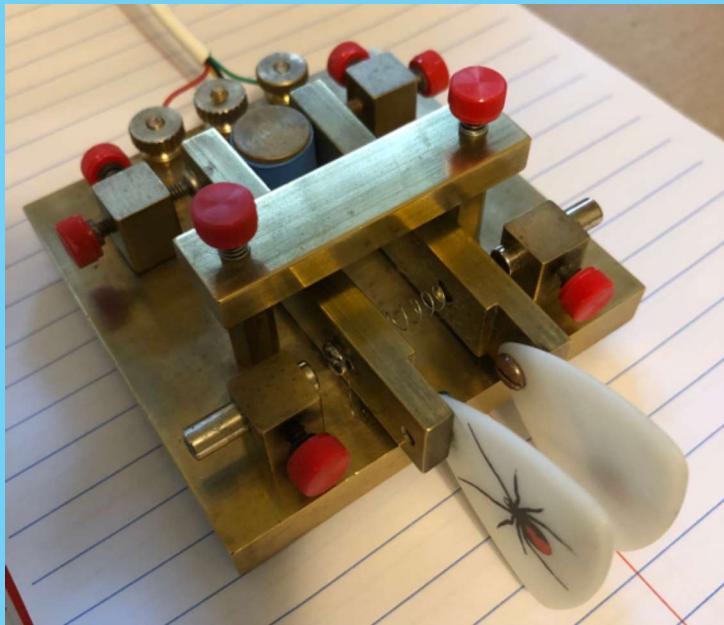
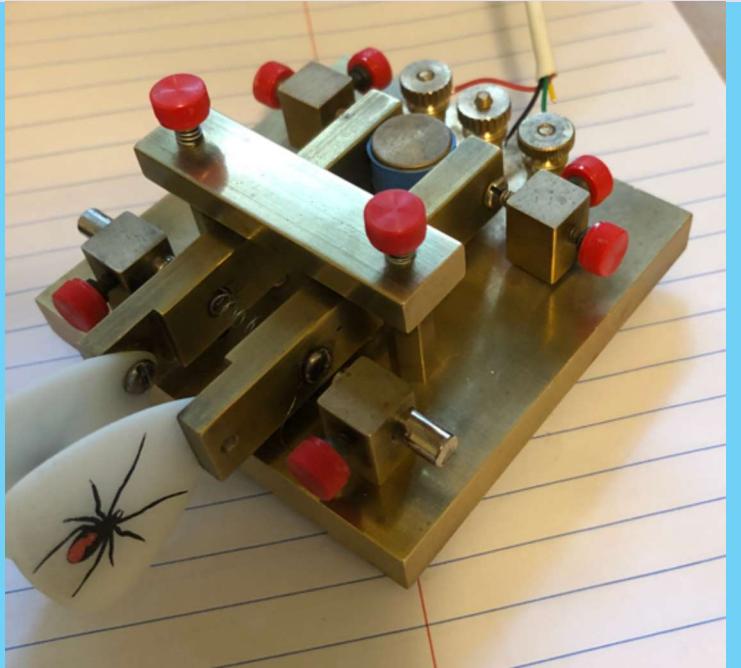


You can do this too! Just practice a little.



New member, David Rodwell,
WB0QOA

"I've got this solid brass magnetic iambic key all polished up. I want to sell it to get a single paddle. It looks and works great. It's a custom build. I bought it from the guy who made it...I can't find him on the web. It's a dandy...it's just that it's iambic." David advises that this elegant and one of a kind paddle is for sale. Contact him: [david <at> davidrodwell
<dot> com](mailto:david@davidrodwell.com) 336-995-8863





Late 1930s Amateur Radio Station Reproduction Donated to Asheville Radio Museum

by Peter Abzug, N3TIP

ASHEVILLE, N.C. – April 7, 2021 – The Asheville Radio Museum, home to North Carolina's premier teaching museum and collection of historic radios, is pleased to announce that Richard "Rick" Rogers of Baton Rouge, Louisiana, gifted the museum a hand-built working replica of a late 1930s amateur radio station that includes a regenerative radio receiver and a home-brewed 10-watt transmitter. Rogers based the receiver's design on a 74-year-old article in QST, an American Radio Relay League publication. He built the station in 2013 using readily available parts from various sources.

"I've been a ham since I was 14," said Rogers, whose amateur radio call sign is K5RCR. "As I grew into the hobby during the 1960s, I was curious to find out what it was like for a ham of modest means during the height of the depression to build and operate a simple station. It was a very eye-opening experience as the construction required a lot of hard work and long hours!"

To construct his receiver, Rogers, a former Louisiana State University Professor of Electrophysiology, referenced a February 1947 QST article, "The Old Stand-By: A Four-Tube Regenerative Receiver" (p.42), for schematics and guidance. He also slightly modified the design to make the receiver more user-friendly. "Regenerative receivers are notorious for being unstable and very tricky to tune," said Rogers. "This can cause howls of audio oscillation that can be brutal to the operator, especially when listening through earphones of the period."

In addition to the receiver, Rogers built a power supply and a two-tube, 10-watt crystal-controlled



transmitter replica common around 1939. He presented all items to the museum in early April, during which Rogers demonstrated the station for museum staff members.

"Rick's donation to our museum fills a unique void in our collection," said Stuart Smolkin, Asheville Radio Museum's secretary and curator. "Before finished manufactured radio equipment became ubiquitous, it was normal for ham radio operators to home-build viable stations for their use. Because of Rick, we have an example of such a station, which we'll showcase and use to educate visitors. We thank him very much for his generosity!"

Gift Includes a Hand-Built Receiver Based on 1947 QST Article.

Please note: Due to COVID restrictions, the museum may be closed during regular hours. Please check our website for current information or to request a private tour for up to four visitors.

About The Asheville Radio Museum:

Founded in 2001, the Asheville Radio Museum provides visitors of all ages with a personalized learning experience about the economic and cultural impact of radio technology like enabling cell phones, GPS, Bluetooth, and more. The museum holds more than 100 vintage amateur and commercial radios from the early to the mid-20th century. The not-for-profit, free admittance museum is located on the campus of Asheville-Buncombe Technical Community College. Information on open hours and private tours by appointment is available at avlradiomuseum.org.



FT8

by Don, WS4NC

OK, I know some of you are clutching your chest to see me write this. But FT8 is OK. If you really want to work a lot of countries, with minimal antennas, and especially minimal effort, this is your mode.

There are a lot of programs that add to the enjoyment, but are not necessary to just get started. You will need some method of connecting the audio to your computer, and for keying the rig by the computer. And you will need to download WSJT-X. But it all starts with downloading WSJT-X from <https://physics.princeton.edu/pulsar/k1jt/wsjtx.html>

Yes, I've given FT8 a little bit of a hard time (have you seen my cartoons?) Maybe that is because I want to work some other modes (like CW!) but it seems like everybody is on FT8.



If you are having some trouble or are new to ham radio, and not sure how to get FT8 running, join us on Wednesday nights via Zoom. That is the main reason we hold the Wednesday night Zoom session, is to help newbies (and we are all newbies in one form or another), and we can help with any other project you are working on. It's all good.

Getting the full suite of programs working for FT8, and other digital modes, can be challenging. It isn't

just hooking up an radio to an antenna, but it isn't hard. No matter what Homer has to say about it in the cartoon here.

But once you get it working, the world is your oyster. One recent Wednesday night I tuned to 60 meters, never worked the band before. Mainly I left 60 meters alone because you must be perfectly within the channel since it is shared with military and government users. But apparently channel 3 (5357 kHz) is the FT8 frequency, but also shared with other modes. I didn't mean to, really I didn't, but I accidentally clicked on the FT8 screen when I moved my mouse. Instantly I had someone calling me. And then it was like dipping your toe into pirana invested waters. I never called CQ, but I had a



hungry school of piranhas calling **me**. Before I knew it I had worked 16 stations, mostly in Europe, but one African (Ghana), which is always a goodie. Lots of European stations, some US and some Central and South America. And they were chasing me!

Try it, if you haven't. And if you need help, check in to one of Wednesday evening Zoom sessions. We'll help get you going. That is why we are there. But try and work some other modes too (just for me, please?).

Now, Stacey, Harold and David quit clutching your pearls (or your chest). I just promoted FT8. The cat with "let me tell you a story" on page 30 was inspired by my working Mozambique, a really rare country. All I did was hit one key and it was in the log. You really can do this. It is not hard work. It is a really great mode at any power level, but can really shine at QRP and limited antennas.

But I'm still going to razz on it some. Or maybe a lot. So there. THBBFT!



Mary Arlene Koontz, N4ARQ-SK

Mary Arlene Koontz Hedrick, age 85 of Tyro, passed away Sunday, April 11, 2021 after a period of declining health.

A funeral service will be held at 2pm on Tuesday, April 13, 2021 in the Davidson Funeral Home Chapel in Lexington officiated by the Revs. Elliott Sams and Ben Jordan and will be livestreamed at www.facebook.com/davidsonfuneralhome. Burial will follow at Forest Hill Memorial Park. All covid related precautions and restrictions will be practiced.

The family will receive friends from 1 pm until 2 pm prior to the service.

Arlene was born on December 24, 1935 in Davidson County to Emanuel Whitson and Sarah Jane Elverson Koontz. She retired from Western Electric/AT&T after 27 years of service. She was also an amateur Ham operator with her husband, with call sign N4ARQ. She enjoyed knitting, crafts, and gardening, but mostly traveling with her husband to all of the 50 states in their motor home. She spent a lot of time canning food for her family, was caregiver for several family members, and always had a passion for doing what she could for others. She was preceded in death by her parents; husband, Ernest, to whom she was married for 67 years, who passed away May 18, 2020; daughter Gaile and husband Joe Tiller; brothers, Robert, Jack, Melvin, Gray, Walter (Abbie) Koontz; sisters, Pauline Lomax, Mildred Snider, Edna Morgan and infant sister, Florence Koontz.

Left to cherish her memory are her loving daughters, Jeane Sams (Danny), Rita Thorne (Gerald), both of Lexington and Debbie Owens (Michael) of Rutherfordton, NC and sister, Carole Burkhart (Gary) of Lexington. She was blessed by 9 grandchildren and 27 great-grandchildren, many nieces and nephews whom she loved dearly, sisters-in-law, Betty Shoaf (Leroy), Opal Jordan (Ben) of Canon, GA and brother-in-law, Leroy Hedrick (Kathy).

In lieu of flowers, memorials may be made to Davidson County Rescue Squad, P.O. Box 122, Lexington, NC 27293 or to the donor's choice.

The family would like to thank family members, neighbors and friends who called and came by to visit with her.

<https://www.davidsonfuneralhome.net/obituary/mary-hedrick>



Richardson, Colleen Roudabush

XYL-N4HER

June 20, 1946 - April 11, 2021

Colleen Roudabush Richardson passed away April 11, 2021. A family service will be held at a later date.

She was born June 20, 1946 to the late Agnes Davis and William Orlo Roudabush.

Colleen is survived by her husband, **Harold Richardson**; sisters-in-

laws, Kathryn Moore, Barbara Daugherty and Christine Matthews; cousins, Addison Davis, Melissa Ives, Vernon Davis, Lane Lauder, Drew Davis, Starr Davis, Ernie Roudabush, Harold Wyant, Iva Boyer, Lois Ickes, Sharon Crist, Bernie Eicher, Blaine Eicher, Randy Eicher, Elaine Corle and Pati Welch.



Colleen graduated from Appalachian State University and received her Master's in Counseling from Wake Forest University. She worked as a counselor at Forsyth Technical Community College for many years providing much needed career development assistance to many students. Prior to her career at FTCC, she worked at the Forsyth County Department of Social Services helping people to become foster parents.

She was an avid reader of the Winston-Salem Journal, reviewing it page by page daily. Colleen loved to travel and visit historic neighborhoods. She especially enjoyed touring the older homes.

In lieu of flowers, please consider making memorial donations in her name to the Second Harvest Food Bank of Northwest NC, 3655 Reed St. Winston-Salem, NC 27107 or to your local food bank.

Published by Winston-Salem Journal on Apr. 18, 2021.



ARRL to Extend Field Day Rule Waivers from 2020, Add Class D and E Power Limit

02/10/2021

From ARRL

[Editor's note: In case you haven't noticed FARC takes Field Day seriously. Usually we try to score within the top 10 of all scores in the US. We will have that as our goal again this year. We usually run 9A from Hobby Park. 2020 changed things and we went with the flow. We are hoping that we can move back to Hobby Park and are making those plans, subject to change, but we are hoping for Hobby Park. We may do a mixed operation, we may do from the Red Cross and Hobby Park, we may have to work from home, but our hope is for Hobby Park. What follows is the latest from ARRL.]

The COVID-19 pandemic-modified ARRL Field Day rules from 2020 will continue this June with the addition of a power limit imposed on Class D (Home Stations) and Class E (Home Stations-Emergency Power) participants. The news from the ARRL Board's Programs and Services Committee comes as many clubs and groups are starting preparations for Field Day in earnest. Field Day 2021 will take place June 26–27.

"This early decision should alleviate any hesitancy that radio clubs and individual Field Day participants may have with their planning for the event," said ARRL Contest Program Manager Paul Bourque, N1SFE.

For Field Day 2021:

Class D stations may work all other Field Day stations, including other Class D stations, for points. This year, however, Class D and Class E stations will be limited to 150 W PEP output.

An aggregate club score will be published — just as it was done last year. The aggregate score will be a sum of all individual entries that attributed their score to that of a specific club.

ARRL Field Day is one of the biggest events on the amateur radio calendar. Last summer, a record 10,213 entries were received.

"With the greater flexibility afforded by the rules waivers, individuals and groups will still be able to participate in Field Day, while still staying within any public health recommendations and/or requirements," Bourque said.

The preferred method of submitting entries after Field Day is via the web applet. The ARRL Field Day rules include instructions on how to submit entries, which must be submitted or postmarked by Tuesday, July 27, 2021.

The ARRL Field Day web page contains for complete rules and entry forms, as well as any updated information as it becomes available.

Now back to your regularly scheduled Newsletter and I'll bring you a photo from FARC (well, then we were WSARC) Field Day 1956. We were on the front page of the WS Sunday Journal and our guest was Barbra Vogler, Ms. Winston-Salem, 1956. I am trying to identify the young man in the photo. It is a Hallicrafters S-38C receiver, BTW. Ray Purdom and Wayne Ashworth both corrected me on the radio! Thanks.



Photo courtesy of WS Journal and Digital Forsyth

Titanic Back in NC News

https://m.facebook.com/story.php?story_fbid=1974933642656783&id=484266561723506

On April 14th, 1912 in North Carolina history, sitting out on Hatteras Island, built in 1901, is a building called the Hatteras Weather Bureau Station, designed for the US Weather Bureau. Over the next 15 years, the US Weather Bureau will morph into the National Weather Service.

At Hatteras, the Weather Service has what is, in effect, a monitoring station on the ocean. It provides data on weather conditions in the Atlantic Ocean from a fixed location that was further out into the sea than any other place on the east coast. To transmit its data, the station has a powerful state of the art wireless transmitter/receiver.

On April 14, 1912, it is a quiet night at the lonely Hatteras Station. Only the wireless operator is on duty, the wireless is manned 24-hours a day. It is 11:25 in the evening that the wireless operator suddenly begins to chatter in Morse. The wireless operator bends to record the message:

CQD CQD CQD CQD CQD CQD Have struck an iceberg. We are badly damaged. Titanic position 41 degrees 44 minutes north 50 degree 20 minutes west.

Hatteras is the only United States station to hear RMS Titanic very first distress call. If Hatteras did indeed forward the message, that fact is lost to history. It is more



likely that the operator assumes that much nearer stations have also heard the call and are responding.

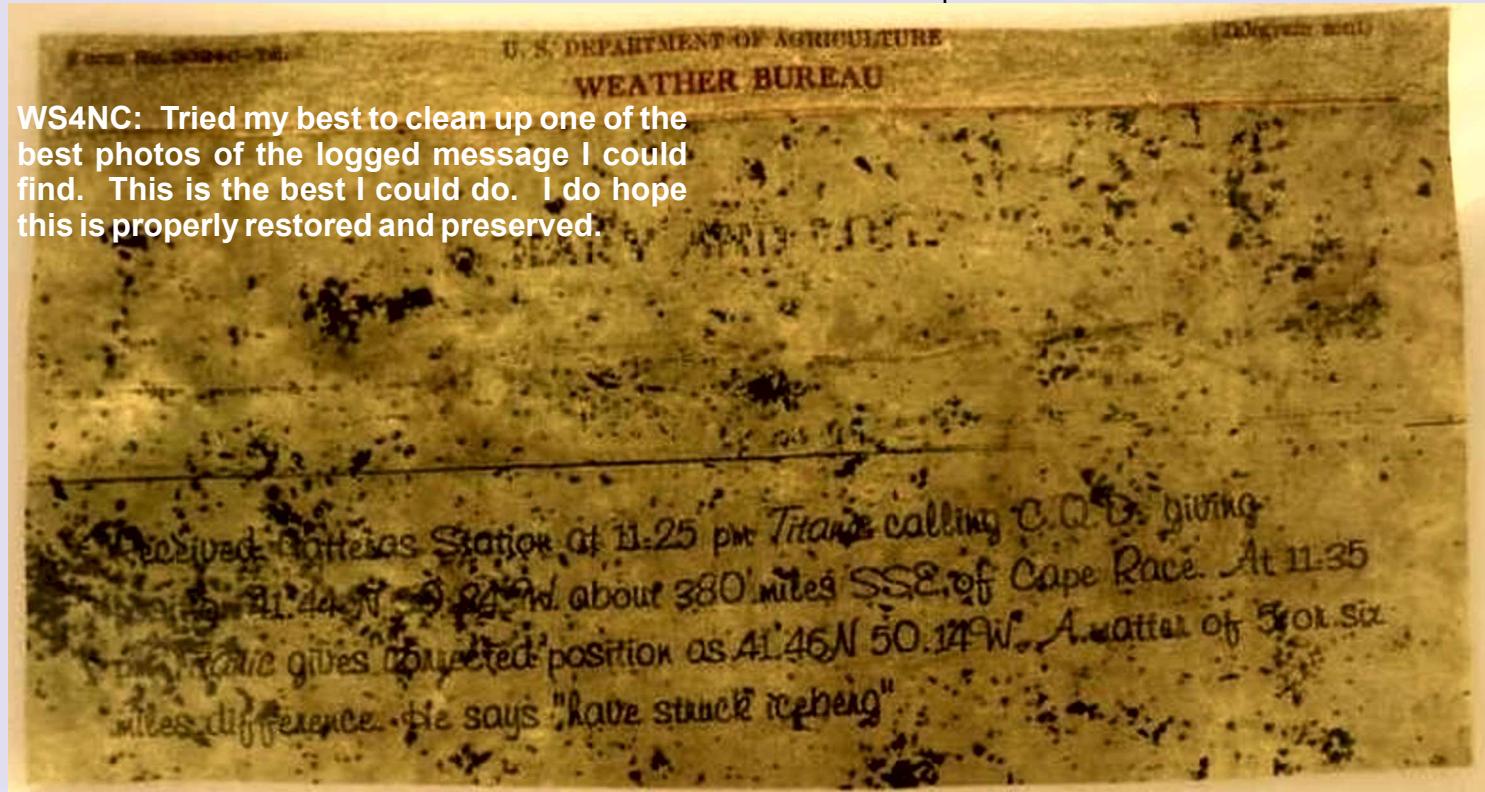
The operator duly records the call in the Station's Log. However, because of Hatteras' isolation, the importance of the message is lost. In time the entry is forgotten. As with all sufficiently obsolete and unneeded paper in the building on Hatteras Island, the pages of the log are eventually pulled out, rolled up, and stuck between the wall of the Station for insulation.

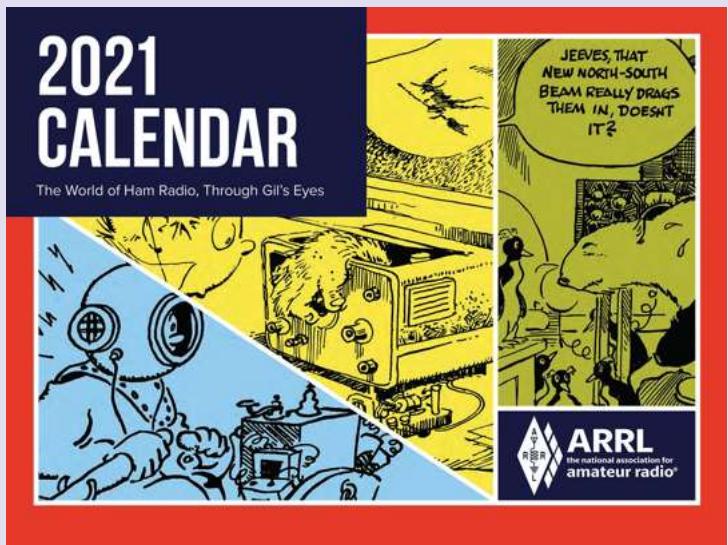
It isn't until 91 years later in 2005 when the National Park Service begins a restoration project on the old Weather Station that the pages of the Log, and Titanic's desperate call for help, are rediscovered buried within the wall.

Kevin E. Spencer, Author, North Carolina Expatriates

Pictures: Hatteras Weather Station, Hatteras Island; Hatteras Weather Station Wireless Log, April 14th, 1912.

[This was brought to Newsletter attention by NI4TG, Thanks Sam.]





The ARRL Calendar is available from the League, picture above is from 2021 calendar, it is full of vintage Gil cartoons.

Calendar of Upcoming Ham Events

Hamfests, Special Events, Contests, Club meetings, etc.

By Don WS4NC

If you are interested in contests see WA7BNM contest site. Here I'll only list the biggies, or something we are trying to promote.

Wednesdays FARC Tech Talk 7:30 PM Zoom 549 621 524

Fridays FARC (mostly) CW meeting 7:30 PM Zoom 813 3696 1876

May 8 FARC FCC tests, Robinhood Rd Bap Church, see page 2

May 10 FARC General Meeting 7:30 PM Zoom 294 418 122

May 15 Johnson ARS Picnic

May 15 - 16 -- The International DX Convention (online)

May 17 FARC Business Meeting 7:30 PM Zoom 721 645 099

May 20 - 22 -- Dayton Hamvention (online)

May 29 - 30, CQ WW WPX Contest, CW



Continued top of next column

May 29 National Hurricane Center's Annual WX4NHC Station Test

June 5 -- ARRL Northwestern Division Convention (SEA-PAC; online)

July 10-11 IARU HF World Championship

Jun 12-14 ARRL June VHF contest

August 13 - 15 -- QSO Today Virtual Ham Expo (online)

Jun 19 Knoxville Hamfest Canceled.
<http://www.w4bbb.org/knoxville-hamfest>

Jun 19 Knoxville Hamfest Canceled.
<http://www.w4bbb.org/knoxville-hamfest>

Jun 19 ARRL Kids Day

June 26-27 Field Day

July 3 Salisbury Fire-Cracker Hamfest CANCELED

July 10-11 IARU HF World Championship

August 21 - 22 -- ARRL Southeastern Division Convention (Huntsville Hamfest), Huntsville, Alabama

Aug 24, 2021 - Waynesville (WCARS) Hamfest, Waynesville, NC, Western Carolina Amateur Radio Society,
<http://www.wcars.org/wcarshamfest.htm>

Sep 3-5, Shelby Hamfest, ARRL North Carolina Section Convention, Cleveland County Fairgrounds, Shelby, NC,
<http://www.shelbyhamfest.org>

10/16/2021 - W4NC FallFest, Winston-Salem,, NC, Forsyth Amateur Radio Club, Robinhood Road Baptist Church (TBD!), <http://W4NC.com>

Jun 12-14 ARRL June VHF contest

NETS

Thursdays: 8:30 PM Forsyth County Auxcomm net on 145.47 MHZ. 3rd Thursdays are training programs on Zoom at 8:00PM.

Thursdays: 9:00 PM 2 Meter SSB on 144.200 MHz
Continued on next page

Continued top of next column

Nets, continued

Sundays: 8:30 PM 6 meter SSB net on 50.155 MHz

Tar Heel Emergency Communications Net on 3923 kHz Nightly 1930.

South Carolina/North Carolina National Traffic System CW Nets

3.571 2000 hours, slow speed (5-8 wpm) Carolinas Slow Net
3.573 1900 hours, high speed (20wpm), *Nets continued on page 34*
3.573 2200 hours, slow speed (12-14 wpm),

The Ten-Tec Legacy CW slow net and CW fast net operate on 7.060 MHz on Sundays from noon until 2:00 pm EST.

The Ten-Tec Legacy SSB nets operate on:

3.927 MHz on Saturday morning from 6:00 am until 9:30 am
7.195 MHz on Sunday afternoon from 1:30 pm until 3:30 pm
Any radio type is welcome. Netlogger is the preferred check-in method but CQ calls are made for those that don't have access to Netlogger. More information can be found at www.groups.io (search for Ten-Tec Legacy nets).

Some other contests:

Contest Calendar: All the rules.

<https://www.contestcalendar.com/weeklycont.php>

Many Hamfests have been canceled due to Covid19, check websites for latest information.

NEARBY HAM CLUBS AND MEETINGS:

Please see www.w4nc.com for more up-to-date information

SOME MEETINGS MAY NOT BE HELD DUE TO THE NATIONAL EMERGENCY. WE WILL POST WHAT INFORMATION WE HAVE. THESE ARE THE NORMAL STANDING DATES AND INFORMATION.

Wednesdays at 7:30 PM FARC Tech Talk, a Zoom meeting, ID: 549 621 524 Password: club call lower case letters. An informal project group for help, discussions and "war stories".

Quarterly QCWA Meeting usually April, June, September and December. See the website for details. Locations varies. ALL members and guests are welcome! Wearing your Ham badge is encouraged. Always a good program. QCWA Chapter 126 Weekly Net: 3.853 +/- MHZ, 8:45AM each Saturday morning. Next Meeting: Next Meeting: The next Piedmont Chapter 126 meeting will be held on Saturday, March 20, 2021 at 11AM on Zoom. ALL members and guests are welcome! Zoom data will be emailed prior to the meeting. See <https://www.qsl.net/qcwa126/> for more details.

1st Mondays High Point Amateur Radio Club HPARC High Point Amateur Radio Club meets the first Monday of each month at the J&S Cafe, 5835 Samet Dr, High Point, NC 27265, and (for now) via the Zoom teleconference program. The meeting usually begins at 6:00 PM with many members gathering for a meal around 5:30 PM. For updates, please make sure you check our club newsletter, which can be found on the club website at <https://www.w4ua.org/newsletter.htm> (Updated 12/20/20 Thanks to David AJ4TF)

Last Saturday: The High Point FCC Testing session is on the last Saturday of the month (except June, Nov, and Dec) at Hickory Chapel Wesleyan Church, 301 Hickory Chapel Road, High Point 27260. Current status: we have resumed limited testing, no more than 6 candidates, pre-registration is required. Reservations required 3 days in advance. You need to bring two forms of ID including a Photo ID and a photocopy of any previous licenses and/or CSCE's. The testing fee is \$12.00 payable by cash only. Other dates and locations can be found on the W4VEC.ORG web site. Please contact David Macchiarolo at AJ4TF@arrl.net. Testing starts at 10:00 AM (Updated 8/9/20 Thanks to David AJ4TF)

2nd Saturdays GSO/HP VE Testing Current status: we have resumed limited testing, no more than 6 candidates, pre-registration is required. The Greensboro session is the last Saturday of each month (except for March) at Hinshaw United Methodist Church located at 4501 High Point Road, Greensboro, NC 27407. Please contact David Macchiarolo by e-mail at AJ4TF@arrl.net Testing starts at 9:00 AM. You need to bring two forms of ID including a Photo ID and a photocopy of any previous licenses and/or CSCE's. The testing fee is \$12.00 payable by cash only. Other dates and locations can be found on the W4VEC.ORG web site. (Updated 8/9/20 Thanks to David AJ4TF)

1st Tuesdays Durham FM Association: IN-PERSON MEETING STATUS UNKNOWN Meets for Dinner (optional) at 6:00pm and the business meeting and program at 7:00pm. We are meeting at Bullock's BBQ, on 3330 Quebec Drive in Durham. For more info on each meeting, check <http://www.dfma.org/>

1st Tuesdays Davie County Amateur Radio Club: The last information I have is that this club is no longer active. Several SKs and a small ham population have made it hard.

2nd Mondays: The Orange County Radio Amateurs meet at 1900 at the Orange Count EOC in Hillsborough. **IN-PERSON MEETING STATUS UNKNOWN**

2nd Tuesdays: Raleigh Amateur Radio Society General Meeting. Via Zoom. See www.rars.org for more details. [updated 8/9/20]

2nd Mondays Forsyth Amateur Radio Club, Inc. Held on Zoom on-line, no in-person meeting. Meeting starts at 7:30 FCC exams are suspending also until further notice, but usually offered starting at 6:20 PM sharp. Zoom ID: 294 418 122 Password: club call lower case letters

2nd Mondays Rowan Amateur Radio Society at the Rowan County Rescue Squad Building at 1140 Julian Road. The Rowan Amateur Radio Society has started combined meetings (in person and Zoom) on the second Mondays for the rest of the year. Zoom Particulars are meeting IID 898 9111 4288 and Passcode 957500 Also the Firecracker HamFest has been canceled for this year. Programs may include equipment demonstrations, movies, guest speakers, or just open discussions on radio. We look forward to seeing you at the next meeting. <http://www.rowanars.org/> (updated 2/14/21 by Ralph, WB4AQK)

3rd Mondays Forsyth Amateur Radio Club, Inc. Business Meeting. ONLY ON ZOOM UNTIL FURTHER NOTICE Open to all FARC members and interested visitors. Normally at 66 Pizza, on Stratford Rd just past Hanes mall Blvd and behind Village Tavern, but currently on Zoom. At 66 Pizza we start arriving for dinner about 5:30-ish, the meeting is at 7:30.

3rd Mondays(?) Guildford Amateur Society IN-PERSON MEETING STATUS UNKNOWN usually held at Sarah's Kabob Shop on 5340 W. Market Street in Greensboro, 27409, at 6:00 PM to eat, 7:00 PM to meet. Verify the dates at <http://www.w4gg.org/> (updated 8/13/19 by Ken, KW4UC)



3rd Tuesdays: The Winston-Salem Project Group, locations varies, now on Zoom. Goto www.almondtree.com for details.

3rd Tuesdays: Mars Hill, The High Appalachian Mountain Amateur Radio Society (HAMARS) meets on the third Tuesday of every month at 7 p.m. The meetings, typically inside Day Hall on the campus of Mars Hill University, have been moved online due to COVID-19. Current Hams and those interested in becoming an amateur radio operator are welcome. Each meeting addresses a basic or more advanced communications topic. Also weekly net: The net meets at 7:00 PM each Tuesday (except the third Tuesday) on 3810 KHz LSB. We simulcast over Zoom for those with no HF access. <https://www.hamars.club/>

4th Mondays(?): Guildford Amateur Radio Association Eat IN-PERSON MEETING STATUS UNKNOWN at 6:30pm and the meeting is at 7:15pm. Sara's Kabob Shop on 5340 W. Market Street in Greensboro 27409. Verify the dates at <http://www.w4gso.org/> (updated 8/13/19 by Ken, KW4UC)

2nd Saturdays: Tri-County Amateur Radio Club, SUSPENDED UNTIL FURTHER NOTICE Thomasville: 2nd Saturday at Loflin's Rest. 108 Randolph St., Thomasville. 8:30 to meet and eat. Check NC4AR.org for any last minute changes in time or venue. (Updated 2/28/2020 by John, W8LWX)

Last Mondays: Stokes County Amateur Radio Society SCARS IN - P E R S O N M E E T I N G S T A T U S U N K N O W N <http://k4stk.com/index.html>

Knightlites QRP Club IN-PERSON MEETING STATUS UNKNOWN <http://www.knightlites.org/> Usually meets in Cary. Spread the word. See website for details.

Briarpatch Amateur Radio Club - IN-PERSON MEETING STATUS UNKNOWN Next club meeting is ? ; the meeting will be held at TCRH. Meetings and FCC Test Sessions Test sessions are held at the Twin County Regional Hospital in Galax, VA unless otherwise announced. <http://galaxbarc.tripod.com> (This has not been updated for a while.)

Last Mondays: Lexington, NC Healing Springs Mountain VHF Society (except Nov. and Dec., usually first Mondays in Dec.) Currently Speedy's BBQ, 1317 Winston Rd, Lexington, NC 27295 Meeting is at 6:30, come early for supper. (Updated 12/9/2020 by Bill, W4EXT)

FCC Posts Email Address Reminder On ULS Landing

The FCC is encouraging users of the Universal Licensing Service (ULS) to have an email address on file with the FCC.



The FCC has not yet established the date by which an email address will be required on all applications. ARRL VEC already has begun including email addresses on FCC applications for as many applicants as possible. - via arrl.org 12/21/2020

It might be smart for everyone to check out their listing in the FCC Universal Licensing System to make sure your email address is up to date, or to add one if necessary. The login page is here:
<https://wireless2.fcc.gov/UlsEntry/licManager/login.jsp> . Adding or editing your email address will not be subject to the new \$35 fee.



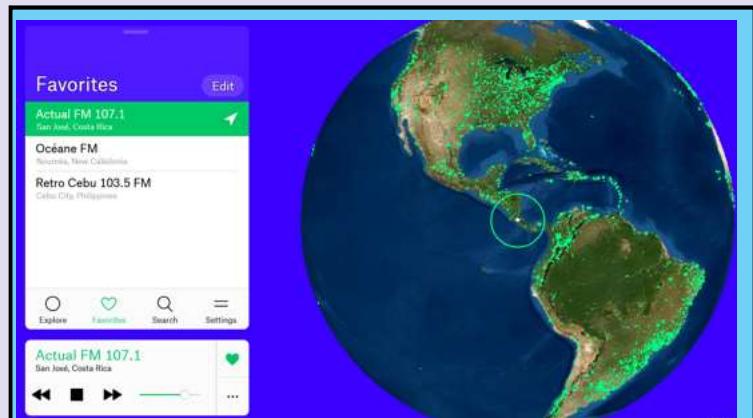
May, 2021

LMS Special Event - March 2021



Last Man Standing

Didn't find out about this in time to get it in the Newsletter in the last couple of months. But that didn't stop several FARC members from participating in it. Above is Harold, N4HER's QSL I know Stacey and David, KC4X also worked many of the stations..



Radio Garden

I ran this last month in the Newsletter. But I love it so much I'm going to push it again. Several people took the hint and tried it. It is a hit. Not really ham radio, but it is broadcast radio. Listen to just about any radio station in the world. Right now I am listening to the best oldies station I have every found, in San José, Costa Rica of all places. *Actual FM 107.1* Yes the announcements are in Spanish but the music is 1960s US top 40. Just go to your browser window and type radio.garden That will take you there. Travel the world and don't leave home. You really need to try this. You'll figure it out.



W4NC Web Page

The W4NC web page continues to be updated and now has the video link for the last FARC meeting on it. Terry, AK4D, continues to put a lot of effort in this and makes it a beautiful, and very useful, webpage. UPDATE: YOU CAN NOW PAY YOUR DUES BY PAYPAL! Please go check it out: www.w4nc.com

League of Mad Scientists

*Helping each other
and the public,
beginner to advanced.*

Trade, Trivia, Current Events
Lectures, Discussion, Games

Forsyth Public Library
Lewisville Branch
4th Saturday 10a-12n



Mathematics, Physics, Robotics
Computers, Radio, Electronics
Science History, Auto Repair

<http://loms.micomputerscience.tech/>



League of Mad Scientists!

The next League of Mad Scientists is meeting via Zoom. URL, message ID, and password will be on the website before Saturday morning. Program is TBD. Have an technical question, interesting fact, or just discuss recent techie-ness? Join us.
[https://loms.micomputerscience.tech/](http://loms.micomputerscience.tech/)

Thank you, Dr. Robert J. Meier, AA9AU



FARC 90th Anniversary

December 31, 2020 FARC turned 90 years old. We had planned to make all of 2020 and 2021 a 90th year celebration. Right now due to the CoVid-19 emergency things are on hold - although if someone would like, you can run W4NC/90 if you ask, or we might be able to make arrangements for the W4NC RemoteHams.



Since everything got put on hold we are rethinking this. A number of events were planned to help us celebrate. This included multiple on-air events throughout the year, plus our Hams @ Home (FARC Members operating W4NC/90 from home stations) mini-events with our members. An 11X17 certificate is planned but exactly how that is going to happen isn't known right now.

Likely we are going to make Field Day the big event this year. But if anyone has any ideas, let's hear them.



APRIL 2021 GENERAL MEETING

PRESENTATION BY

STEVE PATTERSON
WA3RTC



AUXILIARY RADIO CONTROL



March FARC Program

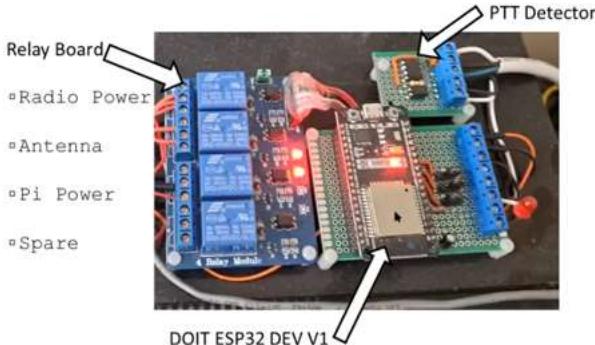
A big thank you to Steve, WA3RTC for his program last month Auxillary Control of a Remote Radio Station. The program is available on the



W4NC web site by a link to you tube. If you missed it, the video can be accessed by going to www.w4nc.com and clicking on the "Info from and Video from Past Meetings" tab on the left. This was a well received program and a lot of members asked about seeing the video before we got it posted. Great job, Steve.

Below are a group of screen captures from the presentation. It starts about 25 mintus into the meeting on w4nc.com.

AuxCtl Hardware



Remote Radio Station & why you would want to have one

- Can't get a signal out from my location
 - In a RF Hole
 - HOA
- Can't get to my rig
 - It is a shack with no AC and the weather is ...
 - I am often away from the radio
 - It is upstairs and I am down (too lazy to walk up)

So, I got one (based on a Raspberry Pi)

AuxCtl views



AuxCtl in front of the two antenna switches



AuxCtl setting on top of IC746 radio.
The RigPi control is shown below radio

Hardware Requirements

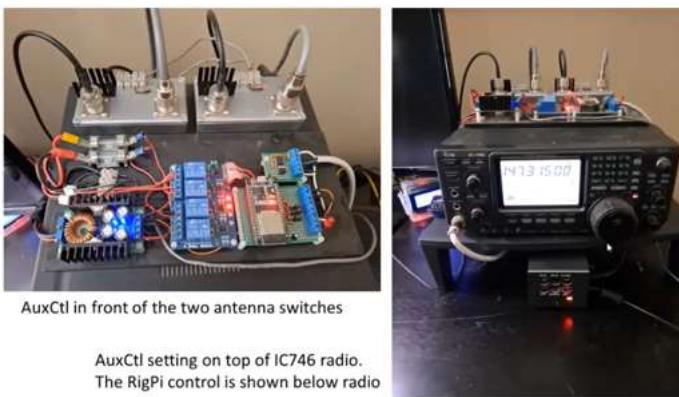
- **Simple to program troubleshoot**
 - Experience with Arduino and new Espressif ESP32 uses Arduino IDE (integrated development environment)
- **Accessible remotely**
 - ESP32 has built in WIFI with a Web Server Library with detailed server projects from Random Nerd Tutorials
- **Inexpensive** (we are Hams)
 - At time of build the DOIT ESP32 DEV V1 board was available for less than \$6 from China and under \$10 from Amazon (Don't forget to use SMILE and list FARC for your charity)
- **Reliable**
 - Several reliability issues were found and overcome and the unit has been running for 8 months with no failures observed

Software - Logic

- **MAIN Function:** shut down transmitter if PTT detected for more than 2.9 minutes
- **Access of AuxCtl via a web browser**
- **Continue to operate** when the internet fails
- **Auto reset** of the AuxCtl if its software locks
- **Min damage** of transmitting with antenna switched off (operator fails sometimes)
- Other: **Loss of WIFI** auto reconnect and ESP32 reset before **rollover of timer** every 49.7 days

Continued on next page

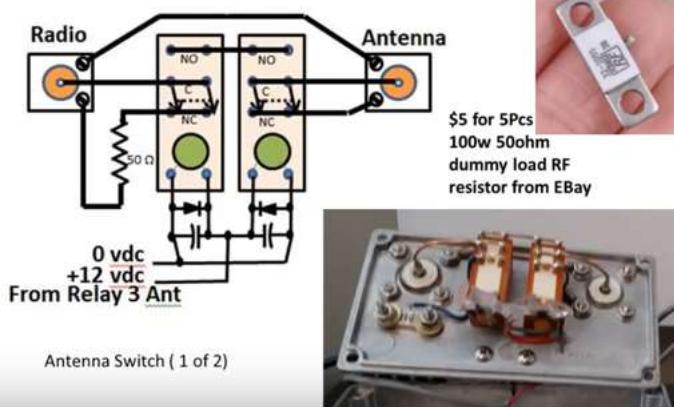
AuxCtl views



AuxCtl in front of the two antenna switches

AuxCtl setting on top of IC746 radio.
The RigPi control is shown below radio

AuxCtl views



Antenna Switch (1 of 2)

AuxCtl views

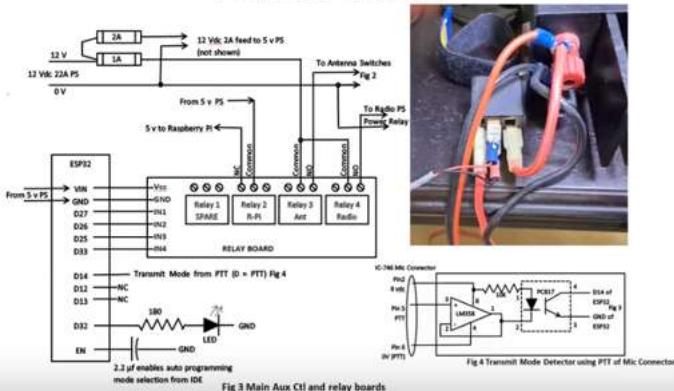


Fig 3 Main Aux Ctl and relay board



Presented April 12th, 2021 by Ken Kayser, K2KXX

Presented April 12th, 2021 by Ken Kayser, K2KXX

A Win-Win-Win Project

Software Network

- The key network tasks took place in my local router and the setting up of a dynamic domain name service.
 - ESP32 is given a fixed IP address using its mac address
 - AuxCtl network port programmatically set to :8888
 - My router configured to forward web:12345 request to port :8888 of the ESP32 static IP (demo.ddns.net:12345)
 - To be able to access the AuxCtl from the internet, my local WAN IP address is maintained by <https://www.noip.com/>. This is a free service I used to set up the name demo.ddns.net
 - My router was configured to automatically update noip.com of changes to my WAN (internet) IP

Software Network

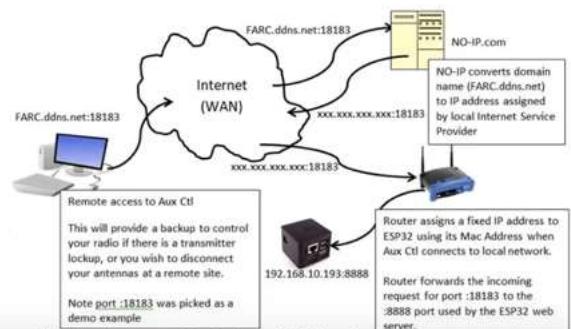


Fig 6 Remote Access of Control using the internet

Auxiliary Radio Control (AuxCtl)

More details (software flow chart & ESP32 code) can be found on the Project Group's website:

<http://www.almondtree.com/> General Links
from box labeled "The Project List"

Then Click “run”  button for:
“ESP32 Aux Ctl of remote radio station”

Want more information? Well go to w4nc.com or to Steve's link above.

Amazon Smile



THE WORLD IS A CAT



PLAYING WITH AUSTRALIA

NO THEY HAVEN'T BEEN SAYING
THE WORLD IS FLAT.
THEY'VE BEEN SAYING
THE WORLD IS A CAT!

All Planned FARC Programs:

(Dates are subject to change)

June, 2021 FARC Field Day plans and possibly a short program.

Other items on our list are, but dates and presenters TBD:

1. NCPacket?
2. Flex Radio?
3. A 160-meter Vertical?
4. Don, WS4NC, EBS System History?
5. C6AGU by Dick, W4PID?
6. Remote ham radio by Raspberry Pi?
7. DX Engineering, topic TBD

All of these are subject to change depending on FARC's, presenters schedules and whatever future challenges the future holds.

The main FARC in-person meeting night (2nd Mondays) is suspended until further notice but it will be held by Zoom video-conferencing. The meeting is normally the Second Monday night at the Red Cross Building on Coliseum Drive with the meeting starting at 7:30 PM (7:29:56.5 PM this month!). FCC testing is usually available (suspended right now), please preregister at info <at> w4nc <dot> com when exams start back. Examinees should plan on arriving at 6:15 PM.

The FARC Business Meeting is now on Zoom on the third Monday of the month. Email dedwards <at> dwepe <dot> com if you want to be added to the list. It is open to all. Normally it is held at 66 Pizza on Stratford Rd just west of Hanes Mall Blvd. The meeting starts around 7:30 pm. When live, we usually arrive a little earlier (~5:30 for some of us) and order dinner. Looking forward to when we can do that again. All are welcome.



May, 2021

FARC Newsletter

Page 40



Waynesville (WCARS) Hamfest

July 24th, 2021

Ruth Berner, WA4VT,
WCARS Hamfest Chair

Same location, same hours, same setup Friday afternoon for the Saturday hamfest. Get it on your calendar. We'll be sending out more information including vendor registration forms as details get firmed up.

If you are one of our regulars we SO look forward to seeing you again. If you haven't given us a try before, this could be a great year to start, since lots of folks will be eager to get back out to their favorite events.

We'll be doing our best to attract not only our old friends but all the new hams who've gotten licensed and have yet to experience the fun and fellowship of a hamfest.

[Ed. note: Last information I have is that this event is still on for 2021. Check <http://www.wcars.org/>]



Other Ham Radio Newsletters

As Newsletter editor I'm on a lot of other club newsletter lists. Below are the ones I can dig out right now, but I've noticed a sharp drop-off lately. This is a short list, in some cases there isn't a newsletter, just a web site. I'll add more in the future. Any club that would like to added to the list just send me an email dedwards <at> dwepe <dot> com If you can't figure out why I list email addresses like this, you'll probably haven't been introduced to spam yet. Some clubs have their newsletters (and meetings) as club members only. I encourage all clubs to make their newsletters and meetings open. It is healthy for the club and for ham radio in general. We have been picking up members almost monthly from our open Newsletter and meetings.

Alamance ARC, Burlington
<http://www.k4eg.com/>

Azalea Coast ARC, Wilmington
<http://www.ac4rc.org/>

Brightleaf Amateur Radio Club (Greenville, NC)
<https://w4amc.com/ham-chatter/>

Durham FM Association
<https://www.dfma.org/dfmaTL.html>

Forsyth Amateur Radio Club (Duh!)
<http://www.w4nc.com/newsletters.htm>

Franklin County ARC
<http://www.fcarc.net/>

Gaston County ARC
<http://gcars.org/>

Greensboro ARA
<https://www.w4gso.org/news/>

High Point ARC
<http://www.w4ua.org/newsletter.htm>

Orange County Radio Amateurs
http://ncocra.org/WordPress_v1/

Potomac Valley Amateur Radio Club (Contesting)
http://pvrc.org/Newsletters/2021_02.pdf
http://pvrc.org/Newsletters/2021_01.pdf

Raleigh Amateur Radio Society

<https://www.rars.org/exciters/2021/RARSExciter04-2021.pdf>
<https://www.rars.org/exciters/2021/RARSExciter05-2021.pdf>

Rowan Amateur Radio Society

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

ARRL

Always check www.arrl.org for news. Other ARRL newsletters require a League membership. I need to do a great shout-out to Marv, WA4NC for his excellent NC Section Newsletter. Join ARRL.

DFG Around the US:

Kent County Amateur Radio Club, Delaware
<http://k3ars.org/kars/>

Broward ARC, Florida
<https://browardarc.org/>

North Fulton ARC, Georgia
<https://nfarl.org/>
<https://nfarl.us13.list-manage.com/track/click?u=b717f3acfbed2d1bb056deb70&id=16fee26ad3&e=3965068522>

Add me to Newsletter email List

Some emails accidentally got lost when I transitioned the Newsletter list to Mail Chimp. If you are inside Forsyth County and have a ham license please join the club. If you are outside FC (or you don't have a ham license) and want to be added send me an email with FARC Newsletter in the Subject and in the body of the email include your email address, name and call so I can easily paste it into the list. Current subscribers are approaching 600. Send to dedwards <at> dwepe <dot> com

Minutes of the Forsyth Amateur Radio Club Meeting 12 April 2020

By Stacey MacArthur, W1LLO
Secretary, Forsyth Amateur Radio Club

1. Call to Order and Welcome: The 12 April 2021 meeting of the Forsyth Amateur Radio Club was called to order by President Sam Poindexter (NI4TG) at 1930 hours. The meeting was held on Zoom video conferencing software due to the COVID-19 pandemic. Sam welcomed all attendees, approximately 46, for joining us this evening.



W1LLO

2. Treasurer's Report: Kent Englebert (WS4Z) gave a brief treasurers report. Our balance in the bank is \$5,073.61. No major expenses expected. Minor expenses for marketing materials.

3. Repeater Report: Dale Mierisch (WB9SZL) gave the testing and repeater report. The outdoor in-person testing on Saturday, May 8th has been confirmed. The exam session will be from 1pm to 3:30pm at the Robinhood Baptist Church. Because of the limited capacity there will be no walk-ins. More information on the location and how to sign up on the w4nc.com website. Still some clean up to do from the ice storm including fallen trees and a broken fence. Multiple trips up to the .47 repeater location for maintenance, thank you to David KC4X and Mike W4MAV for assisting.

4. Auxcomm/Ares: Harlan Cobert (W1HRC) presented the Auxcomm report. There have been some big changes concerning the future of emergency communications in the state of North Carolina. The Auxcomm presentation has been slated for the May general meeting and will go over some of these changes. Auxcomm and amateur radio has traditionally been a secondary resource in emergency communications.

Beginning the first of April, Auxcomm is now considered a primary asset and will be deployed alongside first communications response units. Tour to Tanglewood is planned to happen as normal this year, so please keep this in mind. As always, volunteers are needed for this event.

5. Announcements: Sam (NI4TG) took a moment to recognize guests and new members. The finance committee has completed an inventory of all club equipment. If anyone has anything at home that belongs to the club, please contact an officer. The board of directors has approved a membership survey to gauge interests in activities and satisfaction with the club as well as looking for comments or suggestions. "We want this club to be great, and we want to include everybody." The survey will go out via e-mail tomorrow the 13th of April.

6. Amazon Smile: Ken Kayser (K2KXK) gave a short presentation on the Amazon Smile program. Many people shop on Amazon and this is an easy way for the club to get extra funding. The program is now available on the smartphone app as well. A copy of Ken's presentation is available on the w4nc.com website.

7. Program: This month's program was by Steve Patterson (WA4RTC) on Auxiliary Radio Control.

8. Adjournment of Meeting: A motion was made and seconded. Meeting was adjourned at 2030 local time.

9. Partial List of Meeting Attendees: Below is a partial list of FARC meeting attendees.

Don Edwards WS4NC, Stacey MacArthur W1LLO, Sam Poindexter NI4TG, Harold Richardson N4HER, Steve Patterson WA3RTC, Harlan Cobert W1HRC, David Shoaf KC4X, Terry Brown AK4D, Bob McClellan W3AVB, Mary McClellan KM4WPO, Ken Kayser K2KXK, John Canup KM4HVB, Doug Spriggs W4DCS, Terry Good W3NPS, Jerry Minor K4GW, Richard Hall K7RLH, Andy Brinkley NC4AB, Marcia Thompson NC4MT, Bruce Thompson AD4ET, Doc Holliday WB4DOC, Judson Davis KG4OHQ, Bill Seward W4EXT, Steve Iltis

Continued on the next page **Page 42**

KM4OCR, Nick Hunter W4NPH, David Nicholson N2AWE, Jim Atkins W4UX, Richard Huebner W0RCY, Gary Miller WA4VMC, Michael Pope K4OLD, Carl Brown N4PAA, Joe Waugh KO4MDE, Kent Englebert WS4Z, Bruce Bailiff WB4QCM, Dale Mierisch WB9SZL, Mark Scott K4MV, Bob Gusek NC4RG, David Ramsey W4OIL, Geoff Rudy KK4MOV, Van Key KC4WSK, John Vilburn WH6JV, Jim Meek KN4UOP, David Griffith WA4MKK, Steven Mierisch KG4JWU, Mark Stone KO4NOS, Nicole Cullison, and Glenn Chamberlin.

FCC Issues Enforcement Advisory: Radio Users Again Reminded Not to Use Radios in Crimes

QST de W1AW

FCC Issues Enforcement Advisory: Radio Users Again Reminded Not to Use Radios in Crimes

On April 20, the FCC's Enforcement Bureau issued a new Enforcement Advisory, repeating the admonishments contained in a January Advisory that no licensee or user of the Amateur or Personal Radio Services may use any radio equipment in connection with unlawful activities of any nature.

The Enforcement Advisory can be found online in PDF format at,
<https://docs.fcc.gov/public/attachments/DA-21-453A1.pdf>.

The Commission specifically cautioned that individuals found to have used radios in connection with any illegal activity are "subject to severe penalties, including significant fines, seizure of the offending equipment, and in some cases, criminal prosecution."

In addition, licensees should be aware that illegal operation in any service or band, including completely outside the amateur allocations, could potentially disqualify a person from holding any FCC license in any service, not just the Amateur Service.

Any amateur observing a suspicious infraction that might be of illegal or criminal nature should report it to their local law enforcement office or the FBI.

Minutes of the Forsyth Amateur Radio Club Business Meeting – 19 April 2021

*By Stacey MacArthur, W1LLO
Secretary, Forsyth Amateur Radio Club*

1. Call to Order and Welcome: The monthly Board of Directors Business Meeting, Forsyth Amateur Radio Club, was called to order by President Sam Poindexter (NI4TG) at 1930 hours. The meeting was held on Zoom video conferencing software due to the COVID-19 pandemic.

2. Meeting Attendees: The 19 meeting attendees were, Don Edwards WS4NC, Sam Poindexter NI4TG, Harold Richardson N4HER, Stephen Patterson WA3RTC, Terry Brown AK4D, Stacey MacArthur W1LLO, Michael Pope K4OLD, Kent Englebert WS4Z, David Shoaf KC4X, Jerry Minor K4GW, Harlan Cobert W1HRC, Mason Matrazzo KM4SII, Steven Mierisch KG4JWU, Dale Mierisch WB9SZL, Van Key KC4WSK, Geoff Rudy KK4MOV, Bob Gusek NC4RG, Gary Miller WA4VMC, and Joe Waugh KO4MDE.

3. Announcements: Still no word on when in-person meetings can resume. Don Edwards (WS4NC) will follow up with Red Cross personnel for more information. Terry Brown (AK4D) has placed information on the website about the new RF exposure evaluations required by the FCC taking effect early May. Club antenna systems to be evaluated for RF exposure soon. A portion of every general meeting for topics geared towards the beginner is being discussed.

4. Inventory: The finance committee has completed an inventory of all club assets. Insurance is due for renewal in June and this inventory will be used to calculate coverage. An auction will be scheduled to liquidate unneeded items as soon as in-person meetings resume. If anyone would like a copy of the inventory, please contact an officer.

5. Member Survey: The survey to the club membership went out on Tuesday. The results will be analyzed at the next finance committee meeting and presented at the board meeting in May.

6. Science Bridge: The NC Science Festival Science Bridge was held this past Saturday the 17th on Long Branch Trail in Winston-Salem. This was a children's event that emphasizes STEM fields. Mason Matrazzo (KM4SII) Harold Richardson (N4HER) and Stacey

Continued on the next page

MacArthur (W1LLO) represented the Forsyth Amateur Radio Club. The demonstrations displayed were a morse code straight key for children to tap out their names, a solar powered station in a box highlighting HF digital modes, and a TARPN packet station to send messages across the event space. This is part of an ongoing effort to spark interest in young people for amateur radio.

7. Testing and Repeater Report: Dale Mierisch (WB9SZL) presented the testing and report. The outdoor in-person testing on Saturday, May 8th has been confirmed. There are an adequate number of VEs and 2 sign-ups so far. The exam session will be from 1pm to 3:30pm at the Robinhood Baptist Church. Multiple trips to the .47 repeater site have been made over the past month for inspection and adjustments. Improved audio has been reported. Still some clean up to do from the ice storm including fallen trees and a broken fence. The new battery has been installed in the backup generator. Interference nearby keying the repeater with an unintentional 100hz tone. Work to eliminate this interference is ongoing.

8. Auxcomm: The May general meeting will be "The future of emergency communications in North Carolina" by Harlan Cobert (W1HRC). There are many changes happening regarding amateur radios role in state run Emcomm. Auxcomm is showing decreased participation on the Thursday night nets. The possibility of changing the time to accommodate more people was discussed. Zoom training the 3rd Thursday at 8:00pm. Tour to Tanglewood is going on as scheduled. Please keep this in mind, volunteers are needed.

9. Adjournment of Meeting: The meeting was adjourned at 2035 hours.



He claimed he was a DXer



..but he only operates on
FT8

Yup, I'm still ripping on FT8. So work some CW already!



OK, maybe that was a little direct. But now that I have your attention, FARC has three main sources of revenue. There are dues of course. But those don't pay all of our expenses. If you haven't paid your dues this year, well now might be a good time. See the next to the last page of any Newsletter, or go to the web site. Secondly, there are the hamfests we hold. But due to Covid19 we have canceled two of those. Thirdly we have donations. Forsyth Amateur Radio Club, Inc. is an IRS 501(c)3 corporation and donations are tax deductible, for large donations our treasurer is happy to send you a letter of receipt. In spite of all the troubles we have been getting by, but getting by has meant putting some things off which FARC needs to have when we get back together. And for both dues and for donations we take PayPal. Isn't that painless? As the commercial used to say, "Thank you for your support!"

WINSTON-SALEM HAMFEST

ARRL SANCTIONED
FORSYTH AMATEUR RADIO CLUB, INC



HAM FESTIVAL!

OCTOBER 16, 2021



**Right now the location
is
to be determined.**

**But the date is confirmed
and plans are on
for a big
~~Hootenanny!~~
HAMenanny!**

See W4NC.com for additional details.

Saturday, October 16, 2021



Forsyth Amateur Radio Club Membership Form

New Member Modification Or Renewal

Call Sign/Class (N2CQAK)	First Name	Last Name	Memberships
			<input type="checkbox"/> ARRL ²
Address	City		<input type="checkbox"/> ARES/Auxcomm ⁴
State	Zip	Date of Birth	E-Mail ⁵
Home Phone	Mobile Phone	Work Phone	
Emergency Contact		Emergency Contact Phone Number(s)	
Family Member ³	Call Sign		
Family Member ³	Call Sign	Newsletter Delivery ¹ E-Mail <input type="checkbox"/> U.S. Mail <input type="checkbox"/>	
Special Interests			
CW SSB Digital SSTV ATV D-Star System Fusion DMR	Satellite EME Microwave LM Wave Contesting QRP DX Fox Hunt	Kit Building Antenna Building Test Equipment Microcomputers AuxComm - ARES SWL Nets Vagabond Net S.T.E.M. Discussion	Dues \$25 Donations (Appreciated) Total
Yearly dues are due January			
*Please be sure your e-mail address is correct. The FARC Newsletter is normally sent via e-mail due to increasing postage costs. Mailings to postal addresses for special circumstances is upon special request.			
² We track ARRL membership as we are required to maintain a percentage to retain our ARRL certification.			
³ If you are an ARES/Auxcomm member, or would like to become one, please indicate and fill out the appropriate form.			
⁴ Family members residing in the same household may also become members at no additional cost. Please indicate the members on this form, as well as filling out an additional form for each family member.			
Complete and return all forms with applicable payment to the mailing address below, or to an officer at the next club meeting.			
Forsyth Amateur Radio Club, Inc. PO Box 11361 Winston-Salem, NC 27116 http://www.w4nc.com		GOTO W4NC.COM    	Date Rcvd _____ Rev. 03/2021

Seen this form before?

If you haven't filled out one of these recently, we need to update our records. We are working on getting a form that can be filled out on line, but until then how about filling a new copy (see the next-to-the-last page) and either emailing it to Stacey, W1LLO or give her a copy at the next FARC meeting. Harlan would also like an updated AuxComm form (**updated April, 2021**). And while you are at it ...



AUXCOMM

EMERGENCY COMMUNICATIONS

FORSYTH COUNTY AUXCOMM

by Harlan Cobert, W1HRC

Forsyth County AuxComm Coordinator

This AUXCOM column will be updated greatly next month!

FORSYTH COUNTY AUXCOMM TRAINING NET



The net is conducted every Thursday evening at 2030 hours local time except the third Thursday of the month. On third Thursdays, commencing at 2000 hours local time, in lieu of the net we conduct a Zoom training session.

Zoom 897-9792-5884, password club call lower case. Support the Thursday night AuxComm training net.

The Net is conducted on the W4NC 145.470 + (T100) repeater and is used for E-Comm training and practice for emergency / disaster response and public service communications. All amateurs are invited and encouraged to participate in this net. Our backup repeaters are the K4GW 147.315 + (T100) repeater and the W4NC 146.640 + (T100). All repeaters cover the Forsyth County Area.

For forms and more information go to www.w4nc.com and check the AuxComm links on the left of the page.

Auxcomm Net roster 4-29-2021: W1LLO, W1HRC, KG4JWU, N2AWE, WS4NC, KM4HVB, KF4HHG, WB4QCM, KV4SJ, KC4WSK, KK4ZHL, K4OLD.

Continued on next page



NOTE: AuxComm members do not self-deploy.

FORSYTH COUNTY AUXCOMM - UPDATE

Everyone hates change and tends to resist it. However change is inevitable and in relation to emergency response, emergency communications and public service events, change is necessary. When solid state radios and transceivers first came on the amateur scene, there were some that pushed back however most found these to be not only more reliable but easier to use. The radios were just a

simple to use as the tube sets. However as the manufacturers put more and more features in to the radios we use, they became more complex, required more training (even if were training ourselves with the manual) and require us to stay familiar with their operations in order to operate them. When WJST and the FT-4/8 programs came out, many amateurs were quick to adopt these new programs and change they brought. The same can be said about Remote Hams, DMR, Echolink and may other changes in amateur radio. Emergency Communications is no different nor should it be. Our approach to the changes in Emergency and Public Service changes should be met with no less enthusiasm than any of the above changes that occurred within amateur radio. To do so, lessens the meaning and impact of amateur radio in our communities and only weakens ham radio as a whole.

On paper, we have one of the strongest and best trained group of Emergency Communicators in the state. However we would be very hard pressed to demonstrate that in reality based upon the most recent net and zoom training participation levels. Our net participation has dropped from an average of 21 participants pre-pandemic to less than 10 check-ins for February 2021. The zoom training sessions started with 16 – 18 participants per session, the most current one on WinLink had 6 which included myself and the instructor. That's right SIX!

Recently the State of NC held a zoom meeting with all AuxComm Coordinators in the state. During this meeting the State-Wide Interoperability Coordinator, who oversees emergency

communications response for NC Emergency Management made the following statement:

"North Carolina Emergency Management considers AuxComm personnel within the state to be professional communicators, on par with public safety dispatchers and other public safety communications professionals."

That is huge! But are YOU deserving of this statement? Do you have the requisite training and skills? If you are not participating in the AuxComm nets, exercises, and training then I will strongly suggest to you that you do not. Just having an amateur license is no longer enough. Why?

Emergency response has changed over the years and with it, procedures, processes and training standards. After the terrorist attacks of 9-11 2001, the federal government mandated that state emergency management agencies, emergency response agencies and their support organizations adopt the NIMS (ICS) Standards. That required agencies and organizations to change how they did business. It has not been easy and some went and continue to go kicking and screaming all the way.

The adage: Lead, Follow or Get Out of The Way comes to mind.

LEADERS are the organizations that are forward looking, or at least can see the hand-writing on the wall and initiate the processes, procedures and training BEFORE it becomes mandated.

FOLLOWERS are those organizations that wait until it becomes mandated then set up the processes, procedures and training hoping they can accomplish the implementation before any mandated drop-dead date. This leads to rushing and errors.

GET OUT OF THE WAY organizations are those that, even after something is mandated, drag their feet, try to find ways around it, or just ignored it in favor of their own way of doing things until they finally become irrelevant and forgotten.

In numerous states and counties (including in NC), some amateur radio groups have fallen into the latter group and become irrelevant in regards to Emergency / Public Service Communications response. The problem with becoming irrelevant is

More AUXCOMM next page

that when you try to return to the fold or become relevant again is simply that public safety managers have long memories. They will remember that your group refused to become compliant, became unusable to them and in their eyes you will be considered unreliable. It can take generations to undo that damage.

Thankfully North Carolina and Forsyth County have taken lead roles in the inclusion of Amateur Radio into their Emergency / Public Service Communications planning. However for us as an Emergency / Public Service Communications organization to remain relevant, we must follow their lead, which means completing mandated training, holding recurrent training and exercises. If we don't we will rapidly become irrelevant and no longer useful to our communities for Emergency / Public Service Communications needs.

Forsyth County AuxComm is an Emergency / Public Service Communications response organization. We provide both emergency communications response as well as public service communications operations for a variety of served partners. In the olden days, to participate in either you only had to have an amateur radio license. After 9-11, with the implementation of the Incident Command System (NIMS), while mandated for state EM agencies, it was only recommended and encouraged for others. As time progressed it became mandated in many areas including NC for all first response organizations. As such we had to adapt and start training our personnel to this standard. For the most part, a large portion of understood the change and took the training. However as previously stated, change is inevitable and times have changed again.

(Que whining, crying, complaining, gnashing of teeth)

Amateur Radio has traditionally been a **secondary** support communications resource, used only as a last resort "when all else fails". The cold hard truth of the matter is simply that mentality is old school and no longer relevant to today's emergency response and public service environment. Especially within North Carolina where Amateur Radio is no longer a secondary support communications resource but is now considered a **PRIMARY EMERGENCY COMMUNICATIONS PROVIDER**.

That's right ... you read that correctly. The NC SWIC added to his professionalism statement made during the March zoom meeting that:

"In North Carolina, no longer is amateur radio (AuxComm) a secondary communications resource. It is now considered a primary communications asset and will be deployed with other first response communications assets."

That is an important and significant change! North Carolina is leading the US in placing Amateur Radio into a primary role. If we want to stay relevant, then we must standup and meet the standard that NC Emergency Management has set or become instantly irrelevant.

"But I only do public service events such as MS Tour to Tanglewood and similar events."

Tour to Tanglewood is, as all our Public Service events are used, as a training and exercise event. This is where we practice what we have learned in training. Where we test our readiness, our procedures, our processes and evaluate how prepared we are for the "real thing". In the past, just having an amateur radio license was enough. However even these events are becoming more ICS structured and interfacing amateur radio operators more and more with public safety personnel. During these events these agencies use the ICS structure and expect us to interface with that structure. In addition, we are using more and more state assets to support these activities and therefore the state expects us to meet their standards. For example, you cannot be handed a state VIPER radio for an event if you are not trained to the standards NC EM mandates. Furthermore, NCEM has used NC AuxComm in many planned events over the past several years such as the DNC and RNC conventions and other public service type events. For use to be that asset, our personnel must meet the training standards.

Bottom line is simply this. Either we step up, adopt and implement the training, participate as members in nets, training and exercises or will become rapidly irrelevant. We cannot succeed with only 8 or 10 trained and qualified personnel. The choice ours: individually and jointly to make. Relevancy or Irrelevancy

Continued next page



TRAINING

It's all about KSA! Knowledge, Skills and Abilities. Do you have them for Emergency Communications response?

Do you have the training that provides you the KSA you need to participate in Emergency Communications within the Incident Command System structure used by the State of North Carolina and Forsyth County?

Without this training, without the KSA your usefulness for Emergency Communications response is extremely limited. I hear from amateurs all the time telling me "I don't want to take the time to take the training, but when things happen you can count on me to be there to help". The reality is, when that time comes, unless you are trained, my hands are tied and by state mandate, I can't use you. Why you ask? Simple, you do not have the KSA required. Also because you do not meet the minimum training requirements, you cannot be included in a mission / tasking assignment (number) which provides insurance coverage for you while deployed / activated. And lastly because in reality, you would not understand what is going on, how to complete required documentation or communicate using proper E-Comm procedures. Emergencies are NOT the time for training.

Professionals train until they do not get it wrong. Amateurs train until they get it right.

We are PROFESSIONALS.

NCEM REQUIRED TRAINING

The NCEM has mandated certain training for all AuxComm personnel within the state. This training consists of the following:

1. ICS Courses: IS-100, IS-200, IS-700 and IS-800. All courses must be the most current course for continued qualification. These are on-line self-paced courses. (See FEMA Courses below for more information.)
2. Operational Security (OPSEC): This is a NEW (soon to be) requirement. The course is on-line self-paced and takes about 45 minutes to complete. (See OPSEC Training below.)

FORSYTH COUNTY AUXCOMM TRAINING

1. BASIC E-COMM 101: Required for all AuxComm personnel who will be assigned to operate in the county EOC, Command Post or deployed elsewhere within the state. (See BASIC E-COMM 101 below for more information)
2. EOC-NCS: Required for all AuxComm personnel who will be assigned as Communications Team Leads for any deployment. Prerequisites: Basic E-Comm 101, IS-100, IS-200, IS-700 and IS-800. (See EOC-NCS below for more information.)
3. SKYWARN: Required for all AuxComm personnel. (See SKYWARN below for more information.)
4. WebEOC: This course is required and available only for those personnel who will be serving as Communications Team Leads. (See WebEOC Training below for more information.)

More AUXCOMM next page



NORTH CAROLINA TRAINING EXERCISE RESPONSE MANAGEMENT SYSTEM (NCTERMS)

Various course available to AuxComm members, like ICS-300, are listed in and can be registered for in NCTERMS. Goggle NCTERMS for more information. terms.ncem.org/TRS/ should take you to the front page where you can register and look at the courses that are available. Most courses will be available, some are restricted.

FEMA ICS ON-LINE COURSES

FEMA has hundreds of emergency preparedness and response related courses all FREE and on-line. Taking them will increase your knowledge and your abilities for AuxComm activations.

NCEM requires that ALL personnel involved in any aspect of emergency or disaster response (including AuxComm) maintain the basic four ICS courses at the most current level. Therefore if you took ICS 100, 200, 700 or 800 years ago (before 2018) and your certificate does not show the most current alpha designation as shown below, you need to retake the course. The courses are quick and easy to take on-line.

ALL Forsyth AuxComm personnel are therefore required to have completed these courses and maintain them to the most current revision. If we do not have sufficient qualified members then we will not be able to effectively serve our community in times of emergency / disaster or public service events.

MOST CURRENT ICS COURSES ARE:

ICS-100c
ICS-200c
ICS-700b
ICS-800d

Once you complete the courses, please forward a notify auxcomm <at> w4nc <dot> com. You do NOT have to forward your certificates, however a copy of your NC TERMS transcript that shows completion of the courses is requested.

BASIC EMCOMM 101 AND EOC NCS COURSES

Basic EMCOMM 101 and Emergency Operations Center/Net Control Station EOC/NCS are currently offered virtually on an as needed basis. Minimum number of students is 6 per class. Notify any AuxComm staff member that you need to course and once we have 6 needing it, one will be set up. You do not have to register in NC TERMS for this training.

NOTE: NC AuxComm and NC EM have mandated that we provide them with 2 weeks prior notice for training events such as these courses as well as certain other activities. It is anticipated that we will be asked to open these courses for other amateurs within the state to participate in. Should that occur, NCTERMS registration may then become required.

SKYWARN

To obtain critical weather information, the National Weather Service (NWS) established SKYWARN® with partner organizations. SKYWARN® is a volunteer program with between



350,000 and 400,000 trained severe weather spotters. These volunteers help keep their local communities safe by providing timely and accurate reports of severe weather to the National Weather Service.

ALL Forsyth County AuxComm personnel are required to take this training bi-annually and you may take it on-line at:

https://www.meted.ucar.edu/training_course.php?id=23/

Spotter certification is good for 2 years; at the end of 2 years, you will need to renew your certification.

For more details about these classes, please visit <https://www.weather.gov/rah/skywarn>

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WebEOC – Forsyth County EM

This course is required for all Forsyth County AuxComm personnel who will serve as Communications Team Leads within the EOC, Command Posts or other locations requiring a Communications Team. The course is a 4-hour (virtual or in-person) course conducted by Forsyth County Emergency Management on an as needed basis. Courses are typically offered M-F between 0900-1700. Registration in NCTERMS is required and completion of the basic ICS course is highly recommended prior to the course. Check NCTERMS for dates and times of offered courses. Approval by the Forsyth County AuxComm Coordinator is required.

ICS-300 INTERMEDIATE ICS FOR EXPANDING INCIDENTS – (OPTIONAL)

This course is recommended by the Winston Salem/Forsyth County Emergency Management for those AuxComm personnel who will be acting in a Communications Team Lead position. The course is currently being offered virtually and is normally scheduled for a five day period (M-F 0830-1300) and is provided locally by Emergency Management several times annually. Personnel desiring to take this course must register for it via NCTERMS at: <https://terms.ncem.org/TRS/>. Course Prerequisites: Must have completed the most current (alpha version) of ICS-100, ICS-200, ICS-700, and ICS-800. Once in-person classes can resume, the course will be offered as an all day, 3-day course.

ADDITIONAL RELATED AUXCOMM TRAINING – (OPTIONAL)

All other classes are canceled due to the national emergency, until further notice.



May, 2021

2021 – THE YEAR OF THE EXERCISE(S)

This year we will be conducting MORE exercises and for them and you to be successful we need your participation. If you think that you are well versed in the procedures, SOP's and so forth then now is your time to shine! Practice makes perfect it is said. Our skills are PERISHABLE! All because you know how to rag chew, do FT8, CW or just have a good time on the radio does not mean you are ready to respond to emergency / public service communications needs. Ask yourself these questions:

- 1) Do you know how to properly prepare and transmit ICS-213 and ARRL Message traffic by voice?
- 2) Are you set up on Winlink and able to send messages?
- 3) Do you know the Forsyth County AuxComm SOP for members and Net Controllers?
- 4) Do you know how AuxComm functions within the Incident Command Structure?
- 5) Do you know the proper prowords to use?
- 6) Do you know what is expected for deployment?
- 7) Do you think that if you are not deployable that you are not useful and don't need to know these things?

You can find answers to all these questions during our nets, Zoom meetings and exercises.



WINLINK TRAINING

Because of pending changes by NC Emergency Management, the Zoom AuxComm Winlink training by Dave, N2AWE is being put on hold for now. You are encouraged to download and become familiar with Winlink however.

FEMA as well as North Carolina now require AuxComm personnel to be trained in the use of Winlink. All you need to enjoy the class is a computer and internet access.

FORSYTH COUNTY AUXCOMM STAFF

AuxComm does not operate solely with one person. It takes a team of people dedicated to making the program work. Currently we have five staff personnel however we are seeking others to fill specific roles.

COMMAND STAFF

AuxComm Coordinator: W1HRC Harlan
Deputy AuxComm Coordinator: WA4NOT Jim
Deputy AuxComm Coordinator - Public Information: WS4NC Don

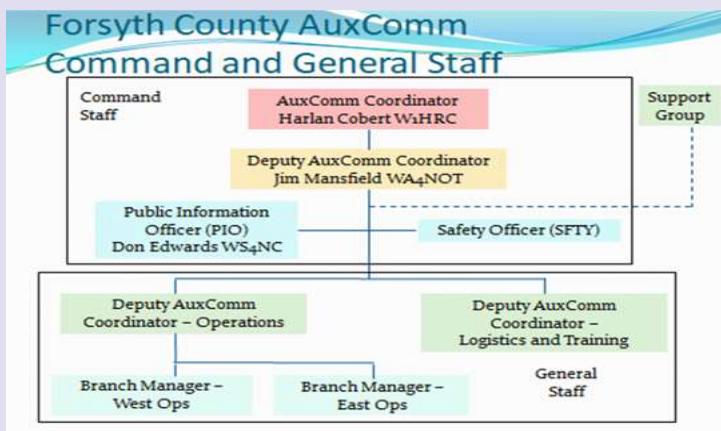
GENERAL STAFF

Deputy AuxComm Coordinator – East Operations: W1LLO Stacey
Deputy AuxComm Coordinator – West Operations: N2AWE Dave

SUPPORT STAFF

Deputy AuxComm Coordinator - Technical Services: WB9SXL Dale
Deputy AuxComm Coordinator - Training: OPEN

If you are interested in filling one of these staff positions please let any staff member know. You may also email your desire to serve to auxcomm <at> w4nc <dot> com.



AUXCOMM DOCUMENTATION

Some important downloads for AuxComm are available and can be downloaded by going to www.w4nc.com and clicking the AuxComm tabs. The documents include general preparedness, ICS forms completion, station safety and other pertinent information. The ICS forms are not hard, but they are confusing the first time you see them. That is why there is a Zoom training session on the third

Thursday of the month covering how to fill out these documents and how they are used as well as other E-Comm related training. It would be a good idea to have a notebook made of these documents and ICS forms in your go bag. Individual documents and applicable ICS forms are available from the FARC AuxComm site. A complete book of ICS forms with instructions can be found at:

<https://training.fema.gov/emiweb/is/icsresource/assets/nims%20ics%20forms%20booklet.pdf>

AUXCOMM STICKERS AND PATCHES ARE AVAILABLE

We now have the official Forsyth County AuxComm emblem in a 3" patch and sticker available for sale. The patches cost \$3.00 and stickers are \$1.00 each.



These items will be available for purchase at any FARC Club meeting and select activities. Cash is preferred and exact payment is appreciated. See Harlan (W1HRC) for these items.

More AUXCOMM next page



WHAT IS AUXCOMM???

AuxComm is the DHS National Incident Management System (NIMS) compliant program adopted by North Carolina Emergency Management (NCEM) for all amateur radio emergency / public service communications within the state. While AuxComm stands for Auxiliary Communications, within the state of North Carolina AuxComm is considered a Primary Communications Asset.

Within the state, NC AuxComm, with the full support of NCEM, is tasked with forming at the county level, county AuxComm groups led by an appointed and qualified volunteer AuxComm Coordinator. An Amateur Radio Operator license is required for AuxComm membership as well as completing required training and active participation in nets and exercises.

To apply to be member, complete an AuxComm registration form listing contact information and band / mode capabilities. This form is available from the AuxComm Coordinator and the last page of this newsletter. There are no fees or dues; nor is club membership required.

All hams may participate by volunteering their time and the use of their radio equipment for AuxComm activities. Members of Forsyth County AuxComm are required to have completed at least the basic four ICS courses as well as the local E-Comm 101 course. Almost all of AuxComm activities use VHF / UHF FM, so hams with any class of license can participate.

Locally, AuxComm is sponsored by the Forsyth Amateur Radio Club which allows the use of the club's repeaters and some of the club's equipment for AuxComm activities.

Our primary emergency / disaster service partners are Winston – Salem / Forsyth Emergency Management and American Red Cross. We participate in training exercises with them, and in communications emergencies are normally activated to assist in their responses. Trained AuxComm members can be asked to assist in a variety of roles during emergencies or disasters from operating an amateur radio to provide communications from a shelter to the EOC to operating radios on the state VIPER system.

The major public service event for Forsyth County AuxComm is the annual, two-day Tour to Tanglewood Bike MS event. Hams are stationed at rest areas and in event support vehicles to provide point-to-point communications as well as field transportation to participants.

WHAT HAPPENED TO ARES?

ARES is the ARRL term for Amateur Radio Emergency Service and is still in use throughout many areas of the country. However the issue with ARES is that is not a NIMS Compliant program in regards to ICS structure and processes. **Here in North Carolina, State Emergency Management has mandated that all entities involved in emergency / disaster response be NIMS compliant as well as have ICS based training and certification processes. Therefore NCEM has adopted the AuxComm program as stated in the section above. AuxComm is NIMS compliant and is the accepted Emergency Communications program for Amateur Radio within the state.**

OPERATIONS SECURITY (OPSEC) TRAINING

It is anticipated that the NCEM will soon mandate Operations Security (OPSEC) training. Due to the sensitive nature of operations and information that is generated during emergency/disaster operations as well as planned public service events, having AuxComm personnel familiar with OPSEC awareness and procedures just makes good sense. Additionally this same training can be applied in your everyday life when it comes to your computer activities and others. The training is free and provided on-line by the Center for Development of Security Excellence, Defense Counterintelligence and Security Agency and will be the platform used for this training. The course takes between 30-45 minutes to complete. Forsyth County AuxComm personnel are encouraged to complete this training at their earliest convenience. To course may be accessed here: <https://securityawareness.usalearning.gov/opsec/index.htm>

NOTE: The course supports Chrome and Edge. Other browser platforms may encounter issues within the course and particularly when printing the completion certificate at the end. It is recommended that everyone do a screen capture shot of the "successful completion" page BEFORE printing your certificate. In the event that you have issues printing your certificate, this screen shot will suffice as proof of completion.



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If you want to sell something please write your own ad (funny helps) and list your call sign along with either your email or your phone number. I'll run it in the next two Newsletters. I can include small pictures. Please let me know if it sells so I can remove it - it will drop after two months. There was a suggestion that donations be solicited for this. Any offers? Send your ad to dedwards <at> dwepe <dot> com. I'll start it off.

HAM GEAR FOR SALE

Astron RS-20A Power supply, cosmetic and electrically perfect. This is the one without meters. The classic beast of a standard ham power supply. Very good clean condition. \$50.00. Please buy it before my water drops mix in with the surplus transformers for scrap. Don, WS4NC dedwards <at> dwepe <dot> com



SOLD



HP 8559A Spectrum Analyzer 10 MHZ to 21 GHz, great condition. Includes the 182T display. Last went to HP about 8-10 years ago for calibration. On the display is 0dBm 1.5 GHz signal with 100 kHz FM modulation (the bright spot is an artifact of the camera due to the sweep). I am the second owner of this unit. \$650. Trade for ham gear? Pick up only. Don, WS4NC dedwards <at> dwepe <dot> com



HP 8657D 100 kHz to 1030 MHZ CW, AM, FM, Pulse and pi/4 QPSK modulation. Great condition, last NIST calibrated about 8 years ago, but still dead on accurate. This has been my shop spare generator for about 5 years now. I need to thin the herd. This is a serious quality generator. I am the second owner of this instrument. \$650. Trade for ham gear? Pick up only. Don, WS4NC dedwards <at> dwepe <dot> com

HELP WANTED

YOUR AD Why isn't it here? Be witty - or I'll help. Send email to dedwards <at> dwepe <dot> com [10/2019]

FOR SALE

440 Repeater System: Two Icom IC-F200 radios in a N5YIZ case/ with Samlex 25a power supply, Duplexers are Chinese built 100w units. Controller is the TalkTone model RT-FDR1. Asking \$800 or best offer. May consider parting out the system. Contact Andy via email: derswede@icloud.com

FOR SALE (selected from other Raleigh's March & April newsletters)

From Tom, N4TL: I like my Yaesu FTdx101D so much I upgraded to the FTdx101MP. The D is now for sale., serial number 9G030181. No scratches or marks, works fine. The serial number shows the MFG date May 2019, third run, number 181. I made 5646 contacts with this radio and I like it so much I bought a FTdx101MP. The current selling price of a Yaesu FTdx101D is \$3,099.95. 73 Tom N4TL, I am asking \$2,595 for the radio, email or cell 919-740-0329, n4tl2 <at> yahoo <dot> com

From Bob, W2IKN: I have a Heath SB-220 HF Amplifier that could use a new home. rss312 <at> att <dot> net

From Chuck, K4HF: Heath HM-102 HF SWR/Pwr Meter, excel condx - \$25 RL Drake TV-1000 Low Pass Filter - \$10 RL Drake TV-300 HP High Pass Filter - \$10 Yaesu FT-50R Dual Band H/T, w/drop in chgr, spkr mike, mobile 1/4w antenna - \$95 Uniden 9000XLT Scanner w/GRE UHF GRE Converter - \$95 Kenwood TS520 100 Watt HF Transceiver with matching VFO, Spkr, Ant Tuner and MC-50 Base Mike. Excellent Condx - Pkg \$395. Tcvr only \$220 Contact me by E Mail, preferred, or (919) 872-6555 Thanks, Chuck k4hf <at> arrl <dot> net

ELECRAFT K3 and P3 LIKE NEW USED LESS THAN 50 HOURS Posted February 27th, 2021 by: W2GLA Contact: w2gla@arrl.net ELECRAFT K3/P3 ALL FACTORY ASSEMBLED SERIAL NUMBER 8963. USED LESS THAN 50 HOURS, CONDITION: EXCELLENT INCLUDES THE FOLLOWING: K3/100F, KAT3-F, KXV3A-F, KFL3A-2.8 .2.7SWA, KFL3A-2.1K-F, KRX3A-F SECOND RECEIVER, KFL3A-2.8 .2.7SWA, KFL3A-2.1K-F, P3-F PANADAPTER-SERIAL NUMBER 3717, P3SVGA, KUSB, E74023 FACTORY BOOK, LARGE, The Elecraft K3&P3 by Fred Caddy- Supplemental Book, IF Buffer Gain Modification, K3 12VDC OUT CURRENT MODI-FICATION, ALSO: HEIL GOLD ELITE #2583 MICROPHONE/HEIL CB-1 MIC BASE W/PTT #1376. ALL INTERCONNECTION CABLES. MUST SELL, MOVING TO CC&R-NO HAM RADIO. PRICE \$2995 PLUS SHIPPING OR LOCAL P/U IN WAKE FOREST,NC. PLEASE CALL FOR MORE DETAILS: 919 556-5506 (from Raleigh ARS Newsletter)

More Classified on the next page

MORE GOODIES FOR SALE FROM RALEIGH
See our sister club's website for more
<https://www.rars.org/classifieds.php>

Lafayette HA-460 AM SIX METER RIG

Lafayette HA-460 AM six meter transceiver. Posted March 27th, 2021 by: N4TL Contact: n4tl2@yahoo.com Lafayette, HA-460, 6 Meter transceiver from 1967. Tuned Nuvistor front end, 20 watts DC input using a 2E26 tube, about 15 watts out. Dual Conversion receiver. Dual built in power supply 12 volts DC, 117VAC. Includes matching microphone and a crystal for 50.400 MHz There is a local net in Raleigh every Monday night at 7Pm on that frequency. Works fine and I have used it on the net for over a year. \$125.00 73 Tom N4TL

Yaesu VR-500 Receiver Handheld receiver

Receives 100 kHz to 1300 Mhz Modes: CW, SSB (LSB/USB), AM, FMW and FMN Battery powered HT (2 AA). With original manual, antenna, lanyard and box. Does have some minor "missing pixels" near the right and left sides of the LCD. This is report-edly repairable, with instructions on the web. \$40 cash. ka9qjt@hotmail.com Brian Email, or Text/Call 919-609-4664

ICOM IC-92AD DUALBAND D-Star Handheld

ICOM IC-92AD Dualband D-Star Handheld Posted March 16th, 2021 by: K4HF Contact: k4hf@arrl.net
ICOM IC-92AD 5 Watt 2M/440 MHz H/T with Digital Voice (D-Star). With three good rechargeable batteries, BC-177 Quick Charger and HM-186LS Spkr mike. In orig box, as new. \$275. Contact me by e mail, preferred, or (919) 872-6555, Thanks, Chuck

HEATH HR 1680 hf rx. 80-10m, K-Wood TS-130S, Yaesu FRG-7, FT-221R

\$125. Kenwood TS-130s HF transciever 100w 275. YAESU FRG-7 gen cov rx. complete cap rep. and dual led mod done. 250. Yaesu ft-221r 2meter multimode 150. all above working fine, looks exc. trades welcome email gfrski1948@yahoo.com or call 919-665-0833 tnx john wb4ufo

Raleigh in-Person Amateur Radio Exams, First Saturday on month

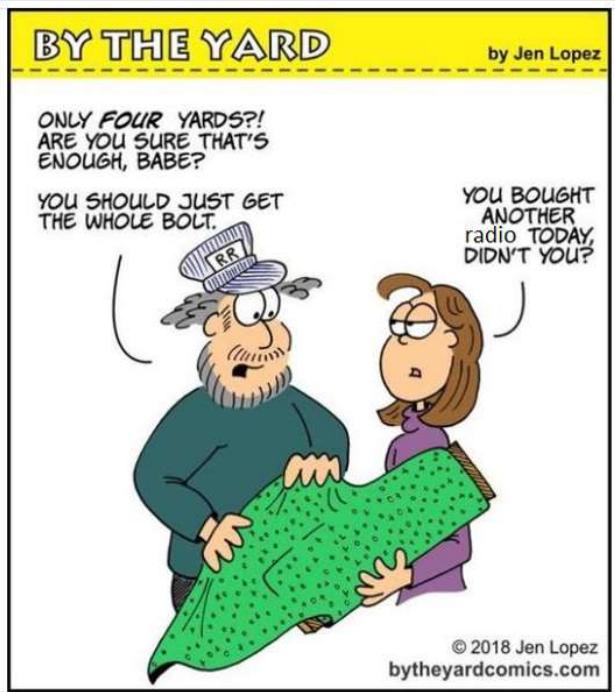
In-Person Amateur Radio Exams in Raleigh Posted March 10th, 2021 by: N4MQU Contact: MarkGibson6822@gmail.com Five County VE Team conducts No Charge in-person Amateur Radio Exams in Raleigh, NC On the First Saturday of every month except in July. It will be on the second Saturday. Our next exam is April 3 in Raleigh. Registration required at <http://www.fivecountyhre.org/fcvet/>.

HELP WANTED

THIS SPACE FOR YOUR GEAR TO SELL. OR TO LOOK FOR THAT RARE PIECE OF RADIO GEAR. NOT HARD TO WRITE, I'LL HELP AND IT IS FREE. SO DO IT! SUUUUCH A DEEEEAAL!

Kenwood 480SAT

Rig is in good condition. Comes with 500HZ CW filter. No TCXO. Never really needed it in this radio. Was installed in my company truck while working. Have manual and schematics. No original box. Unit also has MARS mod. Works great. Contact: w4auv@bellsouth.net Asking \$575.



These are stock photos, not the actual rigs,
this is to give you an idea of
what each rig looks like.



IC-92AD



Photos are not to scale,
especially your new license



Mooresville Had a Hamfest

WS4NC Photos: <https://drive.google.com/drive/folders/1Gn2Ip7P0TKRrYrf2l0g4qR7rFmF5ZeS>

There was a hamfest the past month in Mooresville, Harold, Stacey and I drove down. First hamfest for me in over a year. I took lots of photos, but I cheated and stole these pictures from an email that Brian, KN4R's sent me. [WS4NC]

<http://www.virhistory.com/ham/mooresville-2021.htm>





NORTH CAROLINA SECTION MANAGER MARV, WA4NC

[Editor's note: Normally I don't run Marv's entire bi-weekly Newsletter, since I assume that most of you get it. I may post certain items that are of particular interest to Forsyth County hams from time-to-time. FARC supports the ARRL, and the job that Marv does in particular. If you are not an ARRL member, please consider joining. This is probably 2-weeks old. If you want the newer one, then join ARRL! Marv does a great job getting out the news for NC hams and we appreciate it.]

Greetings from the High Country

By Marv, WA4NC
NC Section Manager

FCC MATTERS

For many years, the FCC has established RF exposure limits for transmitting devices under the Commission's



jurisdiction. As a practical matter, relatively few stations are required to exclude humans from close proximity to high power transmitters. TV and FM radio stations may have to reduce their transmit power while tower crews are fixing strobe lights or making antenna repairs. Sometimes the RF field is so strong that the stations have to go off the air for the tower crews. I have seen video of a man climbing the mast atop the Empire State Building at 3 a.m. in order to minimize revenue loss when five tv stations and six FM stations have to be shut down because the RF exposure levels are exceeded.

Last week, the Commission announced that updated rules will go into effect on May 3, 2021. According to the ARRL, the new rules do not set new standards but no longer categorically exempt amateur radio licensees from calculating the RF exposure associated with their antennas. No later than May 3, 2023, licensees should have completed the needed calculations. Because amateur

transmitters generally do not operate at very high power levels, and because humans are not typically in close proximity to antennas while radiating a signal, it is unlikely that the typical ham will have to create an exclusion zone near their antennas while transmitting.

The FCC has prepared guidance documents which implement the rules. ARRL's RF Safety Committee is also developing instructions to help amateur operators complete the required assessment.

Note that although the assessments for existing transmitters must be completed by May 3, 2023, any new station or a station that is modified in a way to affects its exposure limits must come into compliance beginning on May 3, 2021. Information on this topic can be found at:

<http://www.arrl.org/news/updated-radio-frequency-exposure-rules-become-effective-on-may-3>

On other matters, there has been no action by the FCC on the following:

- a. Voice and data privileges for Novice and Technician operators on 80 and 40 meters
- b. Repeal of the obsolete baud rate rule for amateur data transmissions so that Pactor 4 can be used on amateur frequencies.
- c. The ARRL proposal to establish sub-bands on HF for wide and narrow band data transmissions

In another matter, on March 12, 2021 the **FCC has announced that five Chinese electronics manufacturers pose a threat to US National Security**. The Commission acted under the authority contained in a 2019 law that requires the FCC to identify equipment and services "that have been found to pose an unacceptable risk to U.S. National Security". The companies are:

Huawei Technologies Company
ZTE Corporation
Hytera Communications Corporation
Hangzhou Hikvision Digital Technology Company
Zhejiang Dahua Technology Company

One effect of the designation is to prohibit public agencies using Federal funds to purchase equipment manufactured by these companies.

NC SECTION Manager's RPT Continued on next page

More information about this matter can be found at:
<https://docs.fcc.gov/public/attachments/DOC-370755A1.pdf>

Finally, in another matter, the FCC has urged members of the public to use the **FCC Speed Test App to measure their broadband data speeds**. While the test will give you information on the speed with which you can download and upload data, the App will also allow the FCC to get a better understanding of which areas have poor internet access. Current maps showing broadband coverage apparently treat an entire census tract as having coverage if any part of the tract has coverage. The app will give the FCC more granular information while still protecting the privacy of those who use the app. More information can be found at <https://docs.fcc.gov/public/attachments/DOC-371522A1.pdf>.

ARRL MATTERS

a. **IT issues persist at ARRL HQ.** Apparently, an undetermined number of email messages to and from ARRL HQ have been lost in cyberspace. Some messages that I sent to persons with arrl addresses were apparently lost.

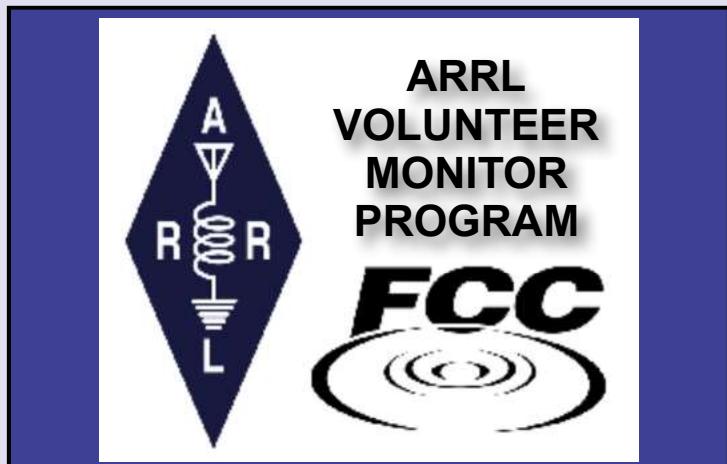
Anyone who writes to me at my ARRL address should expect to get an acknowledgment of your email within 24 hours. If you don't hear from me within 24 hours, with at least an acknowledgment that you sent me a message and I will get back to you as soon as possible, please leave a voice mail on my home phone 828-355-9766.

b. Dave Minster, NA2AA, the new ARRL CEO, has made it a priority to replace and combine the several separate IT systems at ARRL HQ so that a single inquiry will show membership history, ARRL Awards, LOTW entries, ARES Connect and email exchanged with ARRL staff.

One can hope that ARRL avoids some of the challenges that the Defense Department has faced in trying to develop and deploy a common aircraft that meet the separate needs of the Army, Air Force, and Navy as well as NATO allies for agility, dependability and the ability to be defended. Sometimes simple and separate works better than developing one system that is to carry out many functions.

c. In another matter, CEO David Minster plans to have the **ARRL Learning Program convert content from QST and use it to produce video programs** for hams who are more adept in picking up content visually than by reading text. Look for the pace of ARRL content development in the ARRL Learning Program to increase significantly. ARRL has had a contract with a content consultant since 2019 and its own staff that has been criticized for its slow rollout of program content.

d. In the near term, the ARRL Learning Program will offer a program on Finding and Fixing RF Interference on April 20 at 1 pm EDT. The program will be offered by Paul Cianciolo of the ARRL Lab staff. On May 6, at 3:30 pm EDT, Mike Ritz, Northwestern Division Director, will offer a seminar on HF Noise Mitigation. Information on these seminars can be found at <http://www.arrl.org/arrl-learning-network>.



e. Your attention is drawn to the March 2021 **Volunteer Monitor program** report prepared by Riley Hollingsworth, K4ZDH. The report focuses on VM program activities last month aimed at bringing into compliance operators who either unintentionally or by design operate outside the FCC rules. The Volunteer Monitor program is clearly among the best programs operated by the ARRL and has minimal cost relative to other programs operated by the League. Go to <http://www.arrl.org/news/march-2021-volunteer-monitor-program-report> to read Riley's latest report.

f. ARRL is encouraging US hams to support the International Amateur Radio Union's World Amateur Radio Day which will be held on April 18. The purpose of the event is to increase fellowship among radio amateur operators around the world. Look for

NC SECTION Manager's RPT Continued on next page



contacts on HF on this coming Sunday. Information can be found at <https://www.iaru.org/on-the-air/world-amateur-radio-day/>.

g. Field Day rules adopted in 2020 will remain for this year. Class D (Home) stations and Class E (Home-on emergency power) may communicate with all other stations but are limited to 150 watts PEP output. Go to <http://www.arrl.org/field-day> for information about Field Day.

HAMFEST MATTERS

a. Vienna Winterfest, April 24

Normally a large in-person hamfest that draws crowds from around the Washington DC area, the Vienna Winterfest this year will be done virtually and is free. The Vienna Wireless Society has been recognized this year for their extraordinary efforts and was designated as the Club of the Year by the Dayton Hamvention.

There will be numerous forum sessions that fall into three broad categories:

I. Radio Boot Camp - Helping the Newbie Ham Get Started

ii. Hot Topics – including ARRL Matters (with presentations by Bud Hippisley, W2RU, and Bill Morine, N2COP)

iii. ARES and Auxcomm (including ARRL Emergency Management Director Paul Gilbert, KE5ZW and John Peterson, National Auxcomm Manager, N4KEA)

Information about the Vienna Winterfest programs is found at <http://bit.ly/VaSecConvSchedule>

b. WCARS (Waynesville) Hamfest – July 24 Held in a beautiful mountain setting near Waynesville and Lake Junaluska, the Waynesville Hamfest apparently will be the first hamfest held in North Carolina in 2021. The hamfest is approximately 1/3 the size of the Raleigh and Charlotte hamfests but brings out a great bunch of hams who enjoy seeing each other. I have attended the Waynesville Hamfest seven times in the past and always look forward to going. Information can be found at <http://wcars.org/hamfest-annual/docs/hfnotice.pdf>

NC EM MATTERS

There will be a statewide Hurricane drill on April 28 in which a variety of counties will participate. Many personnel remain tied up while also continuing to respond to the COVID-19 Pandemic and vaccination operations.

INTERESTING MISCELLANEOUS MATTERS

a. A group of DownEast hams (in Pamlico County) launched a balloon on Monday, April 12. At 10 a.m. on Tuesday morning, the balloon had travelled about 20% of the distance across the Atlantic Ocean, headed east toward Europe or Africa, wherever the winds aloft take it. The balloon, NC4ES-2, is now out over the Atlantic Ocean at 43,000 feet. At 1 p.m. Tuesday, it appeared to be about midway between Ocracoke and Portugal. The balloon can be tracked at <https://aprs.fi/#!mt=roadmap&z=11&call=a%2FNC4ES-2&timerange=3600&tail=3600>.

Congrats go out to Matt (WU2V) and Lor (W3QA) for drawing attention to amateur radio, ballooning and APRS with this venture.

b. This past weekend I spent a lot of time watching the Comm Academy 2021 which has put on annually by a group in the Pacific Northwest. This year, the event was held virtually. There were several very interesting presentations that are worth your time.

I. Bonding and Grounding , done by Ward Silver, was very interest focused on best practices for bonding HF radio equipment, towers, antennas and related equipment in your shack and car. An hour spent watching the video could save you weeks of headaches due to a nearby lighting strike or damage to vehicle computers. Go to <https://www.youtube.com/watch?v=ycrHJdzY3B4&t=75s> .

ii. The Holiday Farm Fire caused a wide area loss of internet and phone service when fire burned over 23 miles of fiber optic cable and a telephone central office. This session covered how a group of ham IT geeks improvised a solution using Ubiquiti microwave links to bring internet into the isolated community where all normal communications were destroyed.

This was a very interesting video which should get some of us thinking about how we could devise solutions on the fly to problems we never expected to encounter. Cell sites on Wheels (COWS) were often overloaded due to limited satellite bandwidth. Burner phones sometimes would not work with one or other Cellco portable towers. What does a community do when the telco central office is destroyed and cannot be replaced for six months? Even when temporary facilities were put in service, they were frequently overloaded as people wanted to return to their normal habits and connect to Netflix.

There are a number of lessons to be learned here. Go to
<https://www.youtube.com/watch?v=sYKutRRrr8Y&t=129s>

ii. Scott Currie, NS7C, gave an interesting discussion on how Winlink, DMR and other digital modes are being used in the Pacific Northwest when the Internet fails. Go to
<https://www.youtube.com/watch?v=fmUSwVsFFkQ>

There were several other presentations as well that focused on a common question which is, "how do we recover when normal communications are disrupted?"

Taken as a group, the video sessions were eye-opening. Several dealt with situations which were so large and devastating that even Tech Giants like ATT and Verizon were hard pressed to provide or restore service in a couple of days.

EmComm experts will be well advised to consider some of the challenges that had to be overcome. And, things invariably went better for groups that had already been working together and were trusted partners with the Emergency Management community.

I continue to be surprised in talking to SM's and SEC's across the country who have no idea of who their state emergency management leaders and complain that EM fails to include them in their plans. Mike Harris, Deputy SWIC in Tennessee, said, "during bad times, we work with folks we work with in good times." Too often hams fail to develop relationships with EM and then wonder why they are not called upon in emergencies.

DX OPERATIONS AND AWARD QUESTS APPEAR TO BE CHANGING

Take a look at the chart set out below which was prepared from data gathered by Clublog.org. The chart shows a sea change in the reliance on FT8 and other digital models is making DX contacts.

Some will attribute this to change to poor propagation due to the sun spot cycle but it is also clear that a lot of log entries are now being generated by operators who fire up their computer and transceiver and watch the computer exchange signals with other FT8 operators. When conditions improve, will the trend away from operators using traditional modes to call CQ and exchanging signal reports continue?

TRAFFIC NET REPORT

Dave Roy, W4DNA, Section Traffic Manager has submitted this report on net activity for March 2021.

W4DNA - NC Section Net Report - MARCH 2021

NET	NMGR	QNI	LISTED	PASSED	TIME	SESSION	TFC %
SECTION NETS							
CN	KC4PGN	449	123	119	531	62	96.75%
CSN	KV4WN	134	23	22	590	31	95.65%
NCEN	W4DNA	544	140	132	684	31	94.29%
NCMN	W3OJO	326	95	90	444	31	94.74%
THEN	AE4MF	397	0	0	554	25	#DIV/0!
LOCAL NETS							
CWTN	N4CNX	629	97	97	710	31	100.00%
ENCTN	W4DNA	94	36	36	219	31	100.00%
PCTN	W4TTO	302	81	80	363	31	98.77%
TOTAL		2875	595	576	4095	273	96.81%

Limitations on the ARRL email system make it difficult to send out an Excel file but the entire report prepared by Dave is posted each month at www.ncarri.org. I regret that an oversight on my part led to the February report being omitted from the previous Section Newsletter.

CLOSING COMMENT

April 1 marked the one year anniversary for my becoming the NC Section Manager. During my first year of service, the following activities occurred:

- a. Prepared and distributed 27 Section Manager newsletters.
- b. Participated in-person at one club meeting and participated in sixteen virtual club meetings
- c. Participated in two quarterly meetings with club presidents and program chairs that were organized by Affiliated Club Coordinator Tim Slay, N4IB, to improve communications between clubs.
- d. Repeatedly urged clubs and members to invite hams to join the ARRL. ARRL membership in the North Carolina Sections has grown by 4.6% to 4,593 members between April 2020 and April 2021.
- e. Continued to work on increasing participation in the Tarheel Emergency Net which largely had grown fallow to a lack of net control stations to call the net.
- f. Appointed Mike Fagan, AE4MF, to serve as Net Manager for the Tarheel Emergency Net, filling a position that remained vacant for approximately four years.
- g. Renewed the appointments of several North Carolina Section Field Organization staff:
 - i. Tom Brown, N4TAB, NC Section Emergency Coordinator
 - ii. Tim Slay, N4IB, Affiliated Club Coordinator
 - iii. Danny Hampton, K4ITL, Section Technical Coordinator
 - iv. Dave Roy, W4DNA, Section Traffic Manager
 - v. Chuck DeCourt, W3WZN, State Government Liaison
 - vi. Dave Price, K4KDP, Section Youth Coordinator
- h. Based on input from Dave Roy, W4DNA, five persons were appointed as Net Managers for the National Traffic System nets in North Carolina.
- i. Participated in approximately 30 biweekly EmComm meetings held by NC Emergency Management.
- j. Using my PiStar hotspot, on most weekdays, I checked into the Tennessee Emergency Management Agency DMR net in order to become better acquainted with my neighbors on the other side of the mountains that form the NC-Tennessee state border.
- k. Participated along with the WV, SC and VA Section Managers in two virtual meetings held in March and April with Roanoke Division Director Bud Hippisley and Vice Director Bill Morine.
- l. Received and processed silent key notices for 62 hams with requests for their names to be listed in QST. No doubt, there were additional hams who died in the past year but I did not know of them and was unable to request their listing in QST.
- m. Participated in or saved for later viewing 85 RATPAC hour-long videos on a variety of topics that were prepared by other Section Managers and Section Emergency Coordinators. These videos are available for use by your clubs as program content during meetings.
- n. Nominated two North Carolina hams for recognition for their superior efforts in behalf of amateur radio. Tom Brown, N4TAB, received the Vic Clark Service Award given by the Roanoke Division of the ARRL. Another ham is up for an award for his excellence in teaching amateur radio classes.
- o. Observed that subscriptions to the NC Section Manager newsletters have increased by 200 during the past year and now are sent to 3222 subscribers. If you know of anyone having a problem getting these newsletters, drop me a line and I will help getting them subscribed.
- p. Worked closely with Susan Langley Jones, WA4AKB, to get the NCARRL newsletters posted on the web and available to hams who are not members of the ARRL or who do not wish to receive email from the ARRL.

In this second year of my term as Section Manager, I hope to make additional appointments so the NC Section is more inclusive. When the COVID restrictions are lowered, I plan to make a trip Down East to get to know hams down there as well as I know the hams in the west. Hamfests are going to come back and I hope to see many of you there.

73, Marv, WA4NC
Boone, NC
wa4nc@arrl.net

Smile.Amazon.Com

Don't forget to order on Smile when you order. Every bit helps since we had to cancel October hamfest. and April is not certain.

Every little bit counts

When millions of supporters shop at AmazonSmile, charitable donations quickly add up.



Amazon Smile Program

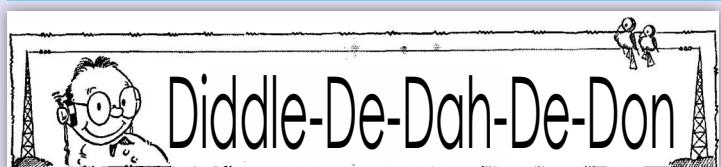
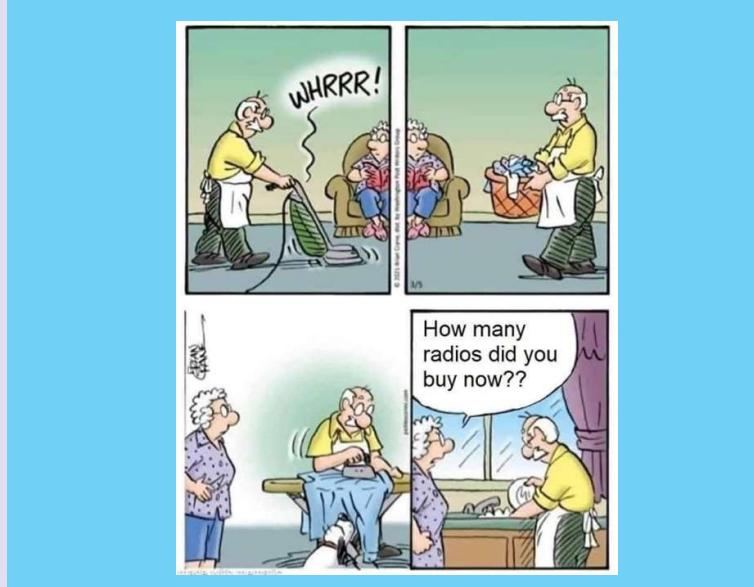
Do you buy stuff from Amazon? If you do there is a way for FARC to earn a little money here. Go to the Amazon Smile link below and register and select Forsyth Amateur Radio Club, Inc. Amazon will donate 0.5% of your purchases to FARC. It costs you nothing more, but it benefits the club. Anything you order has to be ordered from the Amazon Smile link – if, after you register, you forget to order through the smile program it will usually remind you. Again it costs you nothing more. Amazon is supporting legal 501c(3) organizations through this program. Thanks Amazon and thanks to Raja, KB6MTH for pointing this out.

<https://smile.amazon.com/>

Amazon Smile iPhone

by Stacey, W1LLO

AmazonSmile is now supported on the iPhone Amazon app! If you make most of your purchases through your phone, you now have the option to automatically have Amazon donate a small percentage of your purchase price to the Forsyth Amateur Radio Club. Simply go to 'Settings' then 'AmazonSmile' and follow the instructions to turn it on. Please note, you will have to occasionally repeat this process every so often to keep your AmazonSmile charity selection activated. When you're done, you'll know it's activated when you see 'AmazonSmile' in the app header! Thank you for supporting the Forsyth Amateur Radio Club!



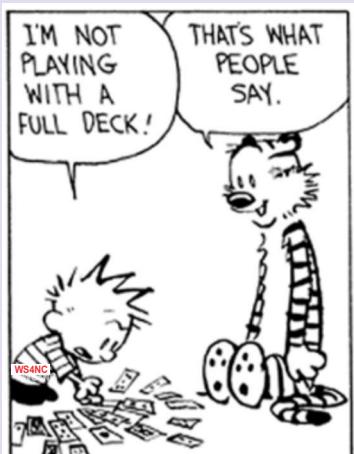
That's All Folks . . .

by Don, WS4NC

Still pushing CW. There is a planned short program on learning CW for the June meeting, but most of the program will be about Field Day.

You know, if someone wanted to take over the Dates and Events column, I wouldn't fight you for it

(hint, hint). And write something! You'll be (locally) famous! .



Uh, did I mention pay your dues?

Thanks to contributors this month, especially Dick, W4PID for his DX column; to Ken for his Morse Trainer article, to everyone at the Asheville Radio Museum, to Kent for all his work as Treasurer; to Sam, for looking after all of this; to Stacey, W1LLO, for the minutes and for some funnies; Harlan, W1HRC, for Auxcomm; Jerry Minor, W4GW, for some graphics; Terry, AK4D for some funnies and to all who make FARC such a smooth running organization. Looking forward to our next meeting.

dit dit



Forsyth Amateur Radio Club Membership Form

New Member Modification Or Renewal

Call Sign/Class (N,T,G,A,E)	First Name	Last Name	Memberships																																																						
			ARRL ² <input type="checkbox"/>																																																						
			ARES/Auxcomm ³ <input type="checkbox"/>																																																						
Address	City																																																								
State	Zip	Date of Birth	E-Mail ¹																																																						
Home Phone	Mobile Phone		Work Phone																																																						
Emergency Contact	Emergency Contact Phone Number(s)																																																								
Family Member ⁴	Call Sign		Newsletter Delivery ¹																																																						
Family Member ⁴	Call Sign		E-Mail <input type="checkbox"/> U.S. Mail <input type="checkbox"/>																																																						
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Yearly Fees are Due January Dues \$25 _____ Donations (Appreciated!) _____ Total _____																																																									

¹Please be sure your e-mail address is correct. The FARC Newsletter is normally sent via e-mail due to increasing postage costs. Mailings to postal addresses for special circumstances is upon special request.

²We track ARRL membership as we are required to maintain a percentage to retain our ARRL certification.

³If you are an ARES/Auxcomm member, or would like to become one, please indicate and fill out the appropriate form.

⁴Family members residing in the same household may also become members at no additional cost. Please indicate the members on this form, as well as filling out an additional form for each family member.

Complete and return all forms with applicable payment to the mailing address below, or to an officer at the next club meeting.

GOTO W4NC.COM

Forsyth Amateur Radio Club, Inc.
PO Box 11361
Winston-Salem, NC 27116

<http://www.w4nc.com>



Date Rcvd _____

Rev. 03 2021



**Forsyth County
AUXCOMM
Registration Form**

Form FCA 100

Revision: Reissue

Date: 1 April 2021

Name:	
Call Sign:	
Mailing Address:	
City, State, ZIP code:	
e-mail address(es):	
Home phone number:	
Work phone number:	
Cell phone number:	
License Class:	

Check bands and modes that you can operate:

MODE	HF	6 meters	2 meters	222 MHz	440 MHz	Others	
SSB							
CW							
FM							
WinLink							
DATA MODE							
Other modes (specify below)							
Mobile Operation							

Check current training Certifications:

ICS 100 ICS 200 ICS 700 ICS 800 SKYWARN (Date) _____

AuxComm Other: _____

Can your home station be operated without commercial power? Yes No

Signature_____ Date _____

Forsyth County AuxComm
(Previous Editions Are Obsolete And May Not Be Used)



May, 2021

FARC Newsletter

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