QST NFL

Newsletter for the Northern Florida Section

Come join the FUN!

Volume 12 Issue 4 | www.arrl-nfl.org | **April 2025**

From the Shack of the Section Manager

Scott Roberts, KK4ECR (kk4ecr@gmail.com)

As we look forward to a vibrant month for amateur radio enthusiasts in the Northern Florida Section, it's time to rally together for two pivotal events that underscore the essence and value of our hobby. The ARRL Annual Simulated Emergency Test (SET) is scheduled for April 12, and the World Amateur Radio Day, with its special theme "Amateur Radio Open House," follows on April 18. Let's delve into the details of these events and reflect on how they celebrate and empower our community.

Upcoming Events

Florida Annual Simulated Emergency Test (SET) - April 12

This year, Florida's dedicated SET allows amateur radio operators to participate in a state-specific emergency communication drill. Unlike the nationwide SET in October, this special April test is crafted to assess and strengthen our localized skills in emergency scenarios. It's an opportunity for members to flex their preparedness muscles and hone crucial skills, embodying the essence of, "A successful ARES® program relies on planning, training, exercising, and 'muscle memory.'" Active participation not only bolsters our capabilities but also reaffirms our readiness to serve when called upon.

World Amateur Radio Day & Amateur Radio Open House - April 18

Celebrate the spirit of amateur radio globally as we open our doors to the public on April 18. This year's theme, "Amateur Radio Open House," invites the community to discover the wonders of amateur radio and its pivotal role in emergencies. Originated by the International Amateur Radio Union (IARU) in 1925, this day marks the establishment of IARU and celebrates our shared passion with fellow operators worldwide. As the saying goes, "Radio Amateurs are ambassadors of goodwill and friendship," reflecting our commitment to connecting communities and promoting global understanding.

The importance of amateur radio cannot be overstated, especially in crisis situations where traditional communication may fail. Our readiness ensures we stand as a reliable pillar of support to community services. Engaging in these events not only enhances personal expertise but also strengthens our camaraderie as a collective force for public service.

We urge all members to actively participate and make these events memorable. Whether it's through the drill of the SET or the outreach on World Amateur Radio Day, your involvement propels the mission of amateur radio—serving our neighbors and bridging distances.

Join us, share the knowledge, and lend a hand in making Northern Florida a well-connected community through the resilient power of amateur radio. Let's continue to inspire each other, knowing that our hobby enriches lives and builds lasting bridges within our communities.

VISIT YOUR CLUB

I'd love to be able to visit every club in our section. As hard as that may be to do in person, virtual visits can be much easier to schedule for some. If you would like me to visit your club in person or virtually, and speak, please email me so we can schedule it – kk4ecr@arrl.org.

More on the Amateur Radio Open House / World Amateur Radio Day

World Amateur Radio Day is celebrated annually **on April 18,** commemorating the formation of the International Amateur Radio Union (IARU) on that date in 1925. The IARU was established in Paris, France, by dedicated amateur radio operators from around the globe who recognized the need for a collective voice to represent the interests of the amateur radio community internationally.

Continued on next page...

Origin and Purpose

The formation of the IARU was propelled by the rapid growth and experimentation in amateur radio during the early 20th century. As radio technology advanced, amateur radio operators played a vital role in the development and dissemination of wireless communication. The IARU was created to unite these operators and advocate for their needs, including securing frequency allocations and promoting amateur radio worldwide.

Celebrations and Themes

World Amateur Radio Day is an occasion for amateur radio operators to come together and raise awareness about the contributions of amateur radio to society. Each year, the IARU chooses a theme to highlight specific aspects of amateur radio and its role in emergency communications, technological advancement, and global friendship. The themes serve to focus activities and events organized by radio clubs and other groups within the amateur radio community.

Activities and Global Reach

On this day, amateur radio clubs and enthusiasts around the world organize events and activities, such as open houses, special on-air events, and community outreach programs. These efforts aim to educate the public about amateur radio, its significance in emergency situations, and its overall impact on technological innovation and international goodwill.
Through these celebrations, World Amateur Radio Day underscores the enduring importance of amateur radio operators in fostering communication and community building. It is a chance for amateur radio operators to share their passion and achievements, enriching the global network of radio enthusiasts.

To register your location for WARD or to find a location go to https://www.arrl.org/open-house

Win a Dream Station with the Latest Gear from Icom

ARRL Club News

Members who join — or renew — their ARRL membership any time from January 3 through December 31, 2025, are automatically entered into the ARRL Sweepstakes to win a dream station from Icom. If you're not an ARRL member, you can join today! If you are already a member or Life Member, there are even more ways to automatically earn entries. See how by clicking here!

Field Day Is Just Around the Corner

ARRL Club News

ARRL Field Day is the most popular on-the-air event held annually in the US and Canada. During the fourth weekend of June, more than 31,000 radio amateurs gather with their clubs, groups, or friends to operate from remote locations.

We welcome the public to come learn more about ham radio! Use our Field Day Locator to search for a Field Day site near you. Find more information and the latest rules and guidelines, visit **https://www.arrl.org/field-day**.

From the Section Emergency Coordinator

Arc Thames, W4CPD

From the Section Emergency Coordinator

Just a reminder that on Saturday April 12, 2025 starting at 0900 ET/0800 CT. Communications teams interested in participating should visit floridaemergency.net/exercise for full details and team signup. This is an excellent opportunity for your communications team at your county to test their communications to and from the State EOC. I am working on a method for individual operators to participate via Winlink so please check back on the above website in the coming weeks.

Monthly Radiogram Challenge

Want to practice using the national traffic system (NTS)? instructions on using the NTS on our website at arrl-nfl.org/nts/ For the month of April, please send me (W4CPD located in Pace, FL) a radiogram via the NTS with your answer to this question "What's your biggest fear leading up to hurricane season?"

New Amateur Radio Operators

On Saturday March 29, the training & testing team from Santa Rosa County was invited to teach an abbreviated version of the ham radio technician class at the State EOC. Yes, I know that's way too short of a time to learn what's needed to pass the test much less operate a radio but that was the time we were provided. We had 8 students total and 3 of them passed their tech exam, including on of the Florida Division of Emergency Management's Meteorologists. We plan to continue building the licenses as much as we can and will offer future class again.

I'm very proud of my team in Santa Rosa County. Over the last 4 months, we've licensed right at 50 new ham radio technicians. Many of our students have been first responders and law enforcement officers. If you aren't offering classes in your local community, I encourage you to explore offering testing and classes.

Website updates

If you find information that is out of date on the section website (arrl-nfl.org), please fill out the online form and one of the team will take care of it as soon as possible.

Monthly EC Reports

Out of the 33 appointed ARES Emergency Coordinators we have in the section, we only received monthly reports for 16 last month. If you're an EC and are having trouble submitting your reports, please reach out to me. This information is so critical to knowing who of our teams are still out there and also hearing about the incredible work that's being done. Last month ARES volunteers provided over 825 hours of service to our communities. Thanks to the following counties for providing their reports: Alachua, Bay, Citrus, Duval, Gilchrist, Leon, Madison, Marion, Orange, St. Johns, Santa Rosa, Sumter, Suwanee, Volusia, Walton, Washington

NFL Officials

Section Manager
Scott Roberts KK4ECR

Assistant Section Managers
Kevin Bess KK4BFN
Helen Straughn WC4FSU
DJ Stewart KI4ZER
Joe Bassett, W1WCN

Section Emergency Coordinator
Arc Thames W4CPD

Section Public Info Coordinator
Jim Bledsoe, KI4KEA

Section Technical Coordinator
Frank Haas KB4T

Section Affiliated Club Coordinator

Section Traffic Manager
Helen Straughn WC4FSU

Section Official Observer Coordinator
Robert Leasko WB8PAF

Section State Government Liaison
Darrell Brock N4GOA

NFL Committees

Webmaster, www.arrl-nfl.org
Kari McClure, NW4R

Newsletter, *QST NFL*
Earl McDow, K4ZSW

QST NFL *is a monthly publication of the ARRL Northern Florida Section.* ***QST NFL*** is intended for wide distribution within the NFL Section, including club Leaders and all licensed Amateurs in Florida. A current issue of this publication can be found at the ARRL Southeastern Division web site, Northern Florida Section. www.***ARRL-NFL.org*** Opinions expressed by contributors are their own, and may not express the positions of the ARRL.

Submissions may be made to the editor: Earl McDow earl.mcdow@gmail.com.

All submissions are subject to editing prior to publication.

Looking for Something?

Gordon Gibby, KX4Z, has taken the time to index the articles from all the 2021 issues of ***QST NFL***!
https://arrl-nfl.org/wp-content/uploads/2021/12/2021QSTNFLIndex.pdf

What's Inside…

NFL Section Member of the Month!

We are always accepting nominations for the NFL Section Member of the Month. To submit a nomination, please email Section Manager Scott Roberts at kk4ecr@gmail.com. Include the nominee's name, call sign, county, reason for the nomination, and a photo of the nominee. Arc and I will review the nominations and contact you with any questions

Digital Library of Amateur Radio & Communications

Marty Brown, N4GL

Digital Library of Amateur Radio & Communications is now archiving ***QST NFL*** issues. DLARC is a project of the Internet Archive (the not-for-profit online library best known for The Wayback Machine.) DLARC is growing to be a massive online library of the past and present of ham radio and related communications. It is funded by a grant from Amateur Radio Digital Communications. You can see what we have so far at https://archive.org/details/dlarc .

Three years of QST NFL are now online, and I am working with the curator, Kaye Savetz, K6KJN, to eventually get all the issues that I have edited since 2014. DLARC can also scan paper issues. So if you have any stashed in your attic, let me know.

FCC Initiates Broad Inquiry on Rules to Delete or Amend

In a Public Notice titled "In Re: Delete, Delete, Delete," issued on March 12, 2025, the FCC is soliciting public input on any FCC rules in any service that members of the public believe should be deleted or modified "for the purpose of alleviating unnecessary regulatory burdens." This is the latest in a series of similar proceedings going back to 1996, when the Communications Act was amended to require the FCC to periodically review its rules.

ARRL, through its Executive Committee and FCC Counsel, is conducting a review of the provisions in Part 97 and other related rules that apply to radio amateurs. ARRL is also soliciting feedback from its members. Rules identified as outmoded, obsolete, or that for other reasons should be repealed or modified, will be included in ARRL's filing to be submitted no later than the FCC deadline of April 11, 2025. The deadline for filing reply comments is April 28, 2025.

It is expected that the Commission will incorporate suggestions that it decides worthy of its consideration in a future Notice of Proposed Rulemaking (NPRM) that could be issued later this year. There will then be an opportunity for public comment on the specific rules that the Commission proposes for deletion or modification.

A PDF of the FCC Public Notice is available here: https://docs.fcc.gov/public/attachments/DA-25-219A1.pdf.

Call for QST Articles for the July 2025 Special Issue on EmComm

Every July, QST, the membership journal of ARRL, publishes a special issue with an EmComm focus. This issue is a perfect opportunity for your ARES group to share your experiences doing exercises and drills, as well as participating in responses, so other groups will benefit from your experience. Here's what QST is looking for:

- 1,200 to 1,800 words--Tell the story of your participation in an exercise or response with a "how-to" angle. For example, if your club designed an exercise, talk about the rationale that led to the choice of the exercise scenario and parameters.
- 2-5 high-resolution images–Include captions that explain what's happening in the photos, the names and call signs of any hams pictured, and the name (and call sign, if applicable) of the person who took each photo.

Send the manuscript and photos to qst@arrl.org by May 1.

The SARNet is UP in Gainesville!

Shannon Boal K4GLM, GARS VP, Repeater Trustee

The SARNet link to the K4GNV repeater is, after exhaustive efforts by Joe P, Randy P, Pat L, and others on the air. Unfortunately, reports of signals fading/garbling after a few minutes operation prompted a careful review of it's operation.

The Gainesville Amateur Radio Society undertook a test effort with about twenty Hams, to measure and observe equipment performance at multiple locations. We tested at the Alachua county Emergency Operation Center, the Department of Transportation Spring Hill tower site (I-75 & NW 39th Ave, GNV), the city of Waldo Emergency Operation Center, the GARS repeater site and many locations thru-out Alachua County. We tested input, output, thru-put and everything we could think of. We used handhelds, mobiles, base stations, analyzers and service monitors to obtain data, then noted and logged it. We compared and discussed our findings.

Test results were excellent for DOT Spring Hill installation. Signals were clear and clean at the GARS repeater site and the many mobile and fixed stations used in the test. A bad mobile antenna, though unrelated, was found in WB2SVB's vehicle….Vague suspicion suggests testing in rainy weather at the Alachua county Emergency Operation center.

In addition to Hurricane preparedness, we developed skills as we built our team. I am grateful for the excellence and zeal of:

Joe Folsom KK6BS, Larry Rovak WB2SVB, Pete Winters W4GHP, Pete Garfinkle KQ4TWJ, Jim Carr KC4MHH, Jon Simonds KC4NWK, David Huckstep W4JIR, Leland Gallop AA3YB, Randy Pierce AG4UU, Joe Poersche WB4HIS, Pat Lightcap K4NRD, Barry Nason KD0QIX, Reid Tillery K9RFT and Gordon Gibby KX4Z. plus the six people I have forgotten!

Why I joined HAM Radio:

Brett Wallace NH2KW

The quick answer is; because I want to be able to communicate when no other method is available.

In the military I was in a job where we had to become proficient with tactical communication. I remember that we always hated setting up the inverted V. The question was, “Why bother with this when we have SATCOM?” Fortunately, the experienced trainers made sure we always had HF. There was no guarantee the satellite will always be available, which, on occasion, turned out to be correct. Sometimes the “Bird” we were assigned was just below the horizon or there were obstacles in the way. Even though I never needed HF in Iraq or Afghanistan (or anywhere else), we always had it available and trained with it.

When I retired after 23 years of service, I became the emergency manager of U.S. Naval Hospital Guam for 5 years. One of my duties was to conduct mass casualty scenarios for the hospital twice a year. A new commanding officer took over; I made sure we had a very comprehensive exercise that not only showcased the skills of our medical staff, but how we were intimately integrated into the community healthcare system and the government Office of Civil Defense/Homeland Security (OCD/HS). During the critique of the exercise in the hotwash, the Commander said, “Great exercise Mr. Wallace, but where’s the HAM radio.” I told her I knew where they were, but nobody used them. During the next six months I connected with the local HAM radio club, the Guam-Marianas Amateur Radio Club, AH2G. We had volunteers come to our hospital and the one other hospital on the island where we could communicate with the Emergency Operations Center (EOC). The other hospital didn’t let the HAM guys in and I knew that there was no way these guys would be allowed on the military installation during any emergency we might need them for. So, during the next six months, I earned my Amateur license. I incorporated HAM radio into every exercise thereafter; at least a COMMCHECK with the EOC. Fortunately, the Director for Communications at Guam OCD/HS has his Extra license and was very involved with the local HAM radio club. He spent a great deal of time mentoring me and helping me integrate HAM radio into government responses. Concurrently, the local club was elated that they got to be part of a government led exercise. They hadn’t been utilized since a typhoon about 20 years ago when they helped by sending Radiograms; connecting family members across the Pacific. Guam gets hit with devastating typhoons on an annual basis. The island is connected to the rest of the world by submarine cables, which fail. The chances of needing HF comms seemed, in my mind, quite high. The island was connected with VHF repeaters, but the chance of losing them in a typhoon was probable. I witnessed first hand the bureaucracy/leadership fight against Amateur radio. I don’t believe that after I left the island in 2018 that they’re still utilizing HAM radio, which shows how personality driven it can be.

When we moved to Gainesville in 2018, I joined ARRL and found a HAM radio club that specialized in EMCOMM. I now serve at the emergency shelters when activated by the Alachua County EOC. As for me, I don’t consider HAM radio to be a hobby. It’s not that I love talking on the radio, it’s the ability to do so when no other means is available that drives me.

Why I joined HAM Radio:

Bob Lightner, W4GJ

I attended a Boy Scout Camp in Sebring, Florida in the Summer of 1961. One of the Camp Counsellors was Steve Fried, WA4AMC (SK). He had a VHF/HF station set up at the camp and was teaching Morse Code for us kids who wanted to earn our First Class rank. He also sent radiograms all over the U.S. and I found the hobby fascinating. Instead of going canoeing, doing pottery, swimming, etc. I kept coming back for more HAM Radio! Steve asked me if I wanted to get my own HAM license. I said yes, so he gave me an ARRL license manual and told me to study. When it was time for me to take my Novice license, he ordered the test and administered it to me. I passed and became WN4JOM in 1962.

WA4AMC and Me at Summer Camp

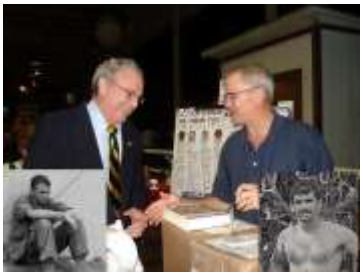
HAM Radio got me into the Signal Corps via ROTC. After Summer Camp and earning my Commission as a 2nd Lieutenant, I went to Signal School in Ft. Monmouth NJ. From there I was shipped to the former RVN to serve as a 9620 (Signal Intelligence Officer) in Long Binh. I served one tour, mostly keeping the MARS stations operational throughout the country. Upon returning to the World, I taught Military Science classes at the University of Florida until I left the Army.

From there, I took a job at Martin Marietta working on Defense Department equipment and then on to Santa Fe Community College where I built and managed their TV Studios. I was laid off after 37 years at the College and missed being around students. I took on a part time job as a substitute teacher for the Alachua County Schools and started a HAM Radio Club at W.T. Loften High School (K4WTL)

Old Station

K4GOP

Army QSL Card



Me and Ollie

TV Studio

Loften High School

Bob Lightner, W4GJ

Isabella #1 Phone Operator

Isabella #2 CW Operator

Come one, come all to the FREE GARS Annual Ham Radio Tailgate!

Saturday, April 12th, from 8am to 2pm join us at the Gainesville Amateur Radio Society (GARS) FREE-FREE-FREE Ham Radio Tailgate. This outdoor event is open to anyone with Amateur Radio Equipment to sell-buy-trade. There is no admission fee to either display or browse. Also, we will be offering tickets (for a $20 donation each) for a drawing for 2 prizes: a $1000 and a $500 gift certificate for either Publix or DX Engineering: A maximum of 200 tickets will be sold!

This is a great chance to meet, greet, shop, sell and learn about Amateur radio. If the idea of Ham radio interests you, come out and see what it's all about.

G.A.R.S. Ham

Radio Tailgate

BUY—SELL—TRADE--TALK

Saturday, April 12, 2025

8am- 2pm

WHERE

Trinity United Methodist Church, Gainesville FL

4000 NW 53rd Ave, 32653

FREE ADMISSION

OUTDOORS-

Bring your own display and chairs

$1000 VALUE RAFFLE

$20 donation –
Only 200 tickets to be sold: benefits local Repeater Repair Fund

MORE INFO

See:
www.GARS.club
website and our Facebook page

GAINESVILLE AMATUER RADIO SOCIETY

Come learn about Ham Radio- We can help you learn and try!

MOBILE HAMFEST

Saturday May 17, 2025, 8 AM – 2 PM

Greater Gulf State Fairgrounds

1035 Cody Rd North, Mobile, AL 36608
Corner of Cody Road and Zeigler Blvd.

Beautiful 21,000 sq. ft. facility! Drive up to your tables during setup Friday.

ARRL sanctioned event. ARRL Card Checker will be available.

Set up Friday, May 16th 12pm.

ADMISSION $7.00 per person
Tables $10.00 each

Door Prize tickets are $1 or 6 for $5

Door prize drawings hourly! Each admission includes one free door prize ticket.

TESTING at 8:00 am "until" SATURDAY by the NF4J South Alabama VE Team.

Grand Prize tickets are $5 each, 6 for $25. Grand Prizes to be Awarded at 2pm Saturday:

1st Prize: Yaesu FT-710 Field Edition
2nd Prize: Chelegance MC-750 Portable HF Vertical Antenna System (perfect for POTA).
3rd Prize: Chelegance NanoVNA-F V2

Info: call or text Dave Huber at 251-802-6588 or email Rod Mollise W4NNF@arrl.net

Continued on next page...

MOBILE HAMFEST

8:00 am – 2 pm Saturday, May 17th, 2025

(Setup up Friday May 16th 12pm – 3pm)

Greater Gulf State Fairgrounds

1035 Cody Rd North, Mobile, AL 36608

HAMFEST PACKAGE DEAL!

1 Table	$10.00
1 Hamfest Admission	$7.00
6 Grand Prize Tickets	$25.00
6 Door Prize Tickets	$5.00
Total	**$47.00**
Special Package Price:	***$35.00***

Your tickets will be available at the front desk under your name/call the day of the show. **You must fill out your own tickets and place them in the raffle barrels. For further information contact Dave Huber KK4JJM, 251-802-6588, or Rod Mollise W4NNF@arrl.net**

Grand Prizes:

1. **Yaesu FT-710 Field**
2. **Chelegance MC-750 Portable Vertical Antenna System**
3. **Chelegance NanoVNA V2**

The Mobile Hamfest, sponsored by the Mobile Amateur Radio Club, is an ARRL-approved event.

Here's my $35.00 for one Package Deal to include a table at the famous Mobile Hamfest on April 27, 2024, one admission, 6 Grand Prize Tickets, and 6 Door Prize Tickets!

Name _____ **Call** _____

Address _____ **Email (optional)** _____

Please Include Your Check and Send this Form to:
MARC Mobile Hamfest Package Deal
PO Box 81791, Mobile, Al. 36689

You may also pay for your package deal via PayPal: https://www.paypal.com/paypalme/W4IAX

Sportsman Paradise Amateur Radio Club Hamfest—April 5th

Ken Fields W4KEF

Our Hamfest is just around the corner, coming up on April 5th, 10am - 2pm at the Wakulla County Community Center, 318 Shadeville Road in Crawfordville. The event is held outside under the shade trees (with indoor restroom access).

It's free to set up your tailgate and it's free to attend!

Make sure you enter the drawing for prizes too.

THE 2025 MOBILE HAMFEST IS ALMOST HERE – May 17th

Rod Mollise, W4NNF, President, Mobile Amateur Radio Club

Greetings from the Mobile Amateur Radio Club and **the Mobile Hamfest in Mobile, Alabama!** We've been holding our event for many years, but there have been some big changes to this ARRL sanctioned Hamfest recently. Since moving to our new home at the **Greater Gulf State Fairgrounds in Mobile** three years ago, we've experienced amazing growth. The 2024 Mobile Hamfest was a record breaker—our biggest year since the Hamfest began in 1952. The Greater Gulf State Fairgrounds facility features an expansive building, beautiful rooms for talks, and RV hookups for dealers and attendees.

Due to those danged "circumstances beyond our control," we had to move our Hamfest to a May date this year. Anyhow, **we'd love to have you and your membership join us on Saturday, 17 May**. We have some great prizes lined up, and there'll be plenty of other fun besides. I would very much appreciate it if you would share the attached fliers with your club members.

Club Gets It Going at Northern Florida's Tour de Felasco

Barbara Matthews, KO4TWZ

For the second year in a row, the Gainesville (Florida) Amateur Radio Society (GARS) teamed up with hosts of the Tour de Felasco, a large mountain bicycle event set in a remote location without usable cell service and no guaranteed access to repeaters. The tour benefits care and preservation of the bike trails. The Tour is not a race, but rather an endurance event of 50 or 62 miles through a challenging series of trails comparable to the difficulty level of a hilly century (100 mile) road bicycle route. It tests bike skills and endurance with rolling hills, short climbs, sinkholes, creek crossings, and log bridges.

It never crosses a paved road, and this is where ham radio comes in. Members of GARS spent hours planning and setting up an off-grid net control station, as well as three other stations along the rough and unpolished trails. Michael Martell, KK4KRZ, recapped operations at Rest Stop #2: "The station gear we used for 146.550 MHz simplex operation was a battery power supply, an HT with mic in a cup holder, and a 2-meter, 30-watt amplifier. This was connected to a roll up J-pole antenna about 25 feet up in a pine tree. We used a separate HT to connect with the 146.820 MHz repeater (in a separate cup holder; cup holders are handy)."

GARS event coordinator Kenith Miller, KF4ULO, said that "Communications went smoothly this year; we were able to handle all communications on simplex after throwing a couple of antennas in nearby trees." It was a safe event, with no reported major injuries. Several times the operators helped vector support staff to stranded riders or others who had to retire early (due to issues such as leg cramps). The day started with temperatures in the low 50s, but as the race went on it got colder and skies got grayer. The wind became particularly biting. "By the end of the day, everyone was looking forward to going home and getting warm," said Miller. "The sponsors of the event, the Friends of Felasco, were very happy to have GARS participate in the event and are counting on us to assist again next year." GARS provides something they cannot get otherwise: communication. It is amateur radio doing what it should: providing service while increasing skill sets and having a great time doing it! GARS encourages other clubs to seek out similar opportunities.

ARES® Editorial: On Recruitment

Gordon Gibby, KX4Z

Our group has higher general ham radio operators' participation in public service/training than many. In order to have an ARES group serving the county, you must have a certain level of altruistic--willing to serve others--hams in the county and group. It can't be everyone just sitting at home depending on an ever-diminishing group "down at the EOC" serving them. It has to be a two-way street. There has to be a sharing of responsibilities. Otherwise, eventually, there won't be anyone "down at the EOC" to get your call.

Part of that is being willing to join in and be part of the group, the "team," sharing the responsibilities. Over the years, we have had the expected number of hams moving in and out of activity. But there has to be a supply of more hams moving into activity with the group, learning how things work, understanding and serving at the EOC, deploying to shelters, being involved in our training, and exercises such as the ARRL SET, and Winter and ARRL Field Days.

You have to be "trainable"--willing to learn. Most of the problems in groups stem from difficulties in personal interaction--we have to work at getting along and all these activities are part of that. Time working shoulder to shoulder with others is how you get to be understanding of their strengths and weaknesses, which we all have. You must be flexible: "Semper Gumby" is an old saying in the ARES community.

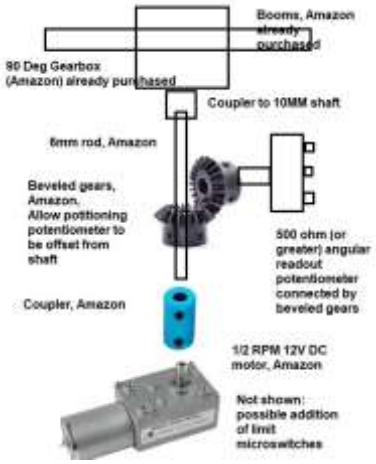
Exercises like the Field Days, the annual Simulated Emergency Test and others are chances to get out of the house, and into a group. It can't be all loners--you don't build public service strengths with loners. All of us have tendencies to just want to be on our own--but that means there won't be anyone at this or that shelter, or at the EOC, etc. Our group always has plenty of empty spots and slots for activity: lots of places for people to plug in, ask for help, get some mentoring, join in the fray! We have all kinds of people in our group, with all kinds of different ways of serving (which we appreciate) --but in the end, we have to have a team.

And this is how you keep a volunteer public service group going. So, what will be your decision? Join in, or shrink back? The hams in the community basically decide where ham radio "goes" in public service. The professionals simply look to see if we have volunteers in the needed slots. If we don't--they don't see us as useful. That's obvious and fair. Now it's up to you.--

Work Toward Inexpensive Satellite Elevation Rotator

by Gordon Gibby KX4Z

Working toward an inexpensive, fun, amateur satellite ground station involves some significant VHF/UHF antenna systems. Setting aside the issue of circular polarization (to deal with satellite & ionospheric rotation of signals) for the moment, the first issue is ability to aim antennas at the rapidly moving satellite target.
on the rotating output of the bottom (azimuth) rotator. In fact, you can separate the two and spin the elevation rotator with a mast, if desired! Most homebrew systems that I've seen work basically the same way: elevation rotator mounted on the rotating output of the bottom azimuth rotator.



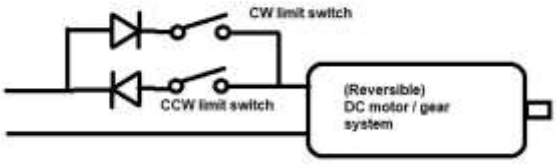
Because relatively light-weight VHF/UHF antennas suffice for "beginner-level" satellite work, the elevation rotator doesn't need to be very beefy. I worked on building a simple homebrew rotator that can be easily mounted on a platform above a Yaesu G450DC rotator that I have available.

The key part for success on this is a **90 degree gearbox** that turns a single solid output 10mm shaft. This inexpensive part seems plenty strong enough to elevate simple VHF/UHF Yagi's. The entire system can be mounted on a 2x6 piece of lumber that gets affixed to a circular base driven by a short pole going to the output of the azimuth rotator. To prevent the gearbox from itself rotating (defeating the purpose) I used two simple angle brackets to position it on the 2x6 rotator backboard, drilling a couple of holes in the top to pass machine screws.

A **DC rotator motor** using a high speed DC motor extensively geared down yields impressive torque at only 0.5-0.6 revolutions/minute. For tracking a 10-minute satellite pass, this is quite sufficient.

Two additional features are required for a working rotator: (a) **angular measurement** and (b) **limit switches** to protect against mechanical damage if control goes awry. (Using diodes, two separate DC paths can be provided so that:

a. Angular measurement turns out to be easy -- use **beveled gears** to offset an ordinary potentiometer and the same output that a Yaesu or other rotator usually provides is easy!
b. Limit switches can be similarly provided by mounting microswitches on each side of the vertical shaft, and activate them by a pin inserted in the vertical shaft. Diodes route the current properly to the right limit switch, allowing the system to "recover" by backing up.

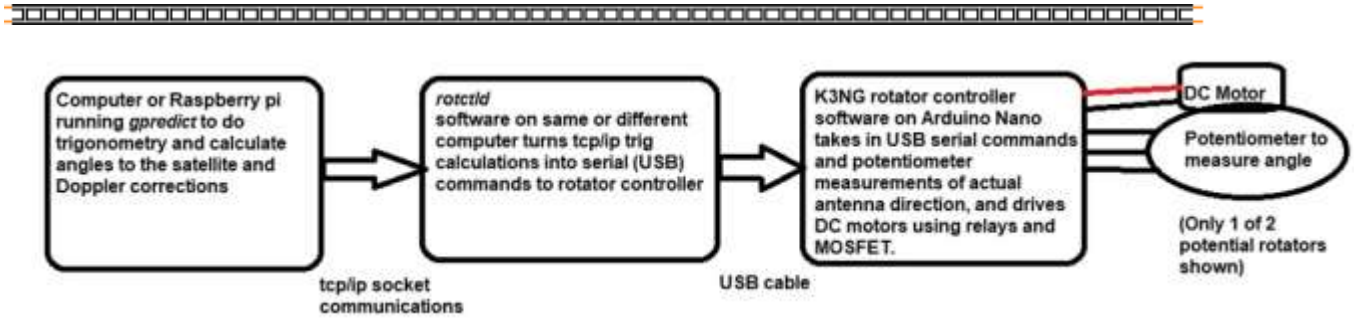


Aluminum rods that appear suitable for support of lightweight Yagi's were found that slip or press-fit over the stainless 10mm output shafts of the 90 degree gear box. If they aren't a solid fit, a hole can be drilled and pinned with a cotter pin.

A simple elevation rotator (not for continuous outdoor use, of course!) doesn't look that difficult at all!

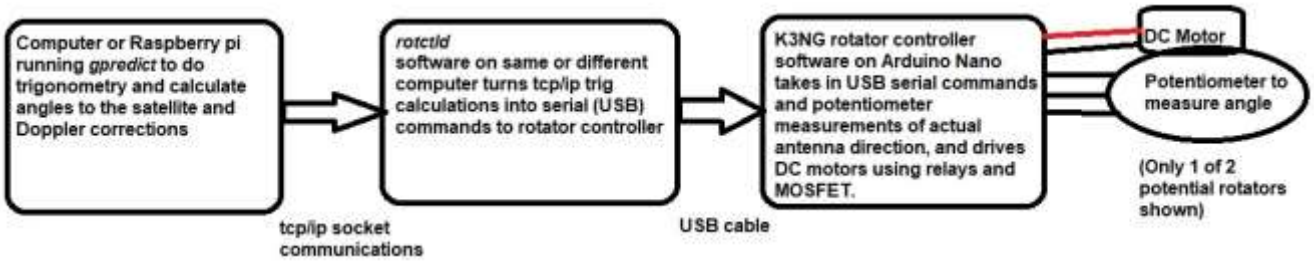
Continued on next page...

No.	Item	Resource
1	90° gear box $28	https://www.amazon.com/dp/B0C64XM1NG
2	Aluminum output shafts 6mm ID, 12mm OD, 400mm length (15.7 inches) $8/ea	https://www.amazon.com/dp/B0D2W6FBQT
3	6mm to 10mm coupler $7.19/2	https://www.amazon.com/dp/B0CH9NLX19
	90° beveled gears to offset potentiometer $14/set	https://www.amazon.com/dp/B09VFJNPQD?th=1 (Available in different diameters; be sure to order proper diameter for your rod)
5	6mm to 6mm coupler $8.97/set	https://www.amazon.com/dp/B07QPJLQNH?th=1
6	Slow output speed geared motor (6mm output shaft is typical) Approx $17	Similar motors are available in various voltages -- select the one for your desired design. https://www.amazon.com/dp/B074J1486P?th=1
7	Limit microswitches	Select from various styles to fit your design
	Total approx $90	



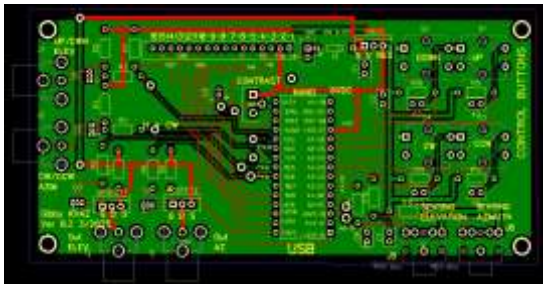
Creating Printed Circuit Board for K3NG Rotator Control

by Gordon KX4Z



Getting one- or two-axis control of lightweight VHF/UHF Yagi's or other antennas to do satellite or International Space Station comms actually doesn't seem that difficult. This is a potential way to interest high school students by showing what fun and challenging things they can accomplish using amateur radio. While simple push-button walkie-talkies may not get their interest -- hearing the space station might!

And it is cheap! ***gpredict*** and ***rotcld*** (and ***rigctld***) software are all free and availble both for Windows and for Raspberry Pi. The K3NG Rotator Controller software is free, also! Rotators can be found used or even constructed. There are commercially available controllers that automate almost all of this (such as this one: http://www.csntechnologies.net/sat) -- but it can be even more fun and certainly beneficial to younger students, to "roll your own."



Using free software to lay out printed circuit boards, and heavily using previous Alachua County printed circuit board designs (for the WINKEYER EMULATOR and a simple direct conversion radio) I am well on the way to making a cheap PCB using a $5 Arduino Nano to bridge from the USB-cable outputs of rotctld ("rotator control daemon") and produce DC-motor outputs and inputs to read the angle-measuring 500-ohm potentiometer.

The circuit uses the built-in USB connector on the Arduino Nano to grab serial command input. This portion is already tested and works perfectly, using a standard Yaesu control language. The angle potentiometer output is measured by an analog (A/D converter) input on the Nano. One digital output drives a simple relay board to set the direction the DC motor will turn, and a second output (possibly pulse-width modulated) turns on the power to the DC motor. After that the software just keep turning the motor until the desired angle is reached. An LCD display tracks what is happening -- and there are manual buttons to allow you to move the antenna by yourself, also! Not complicated at all!

This is a great combination of simple ROBOTICS and amateur radio to establish and maintain contact with any satellite or even the International Space Station. Ham clubs can leverage this into a training program for high school students!

Okaloosa County

DJ Stewart, KI4ZER

Recently there has been an upswing in people of all ages obtaining their Amateur Radio License! This is a great sign that we continue to flourish and share the positiveness of the Amateur Radio Hobby! Whether it is just communicating on the air, seeking far or near contacts, participating in gatherings or community events, Amateur Radio is a viable social hobby which is inclusive to all! The article below was written as a guide and is referenced often. While it is not all inclusive, it is a great summary of the options out there for the ability to obtain your ham license. Moreover, this is an account what exists to do it online! This is important for time-limited individuals, or those that cannot travel easily. Take a read, get inspired, spread the word! The next Ham radio operator will benefit and grow our ranks to allow for more prosperity, encourage fellowship, and bolster our continued dedication to all communication!

The notion that you are never too old for ham radio is supported by several factors:
Engagement Across Ages: Ham radio attracts people of all ages. While there is concern about the hobby's aging population, with many operators in their sixties, there are also younger enthusiasts entering the field. For example, at the 2019 World Scout Jamboree, over 3,000 Scouts participated in amateur radio activities, and some even obtained their licenses during the event.
Accessibility and Learning: The hobby is accessible to anyone interested in electronics and communication. Modern technology, such as software-defined radios (SDRs), makes it easier for newcomers to engage with ham radio. A 17-year-old, for instance, used an SDR to receive weather satellites and later obtained his license.

Personal Growth and Challenge: Ham radio offers a lifelong learning experience. A 76-year-old retired physicist and electrical engineer recently obtained his Extra Class license, highlighting the appeal of ham radio as a challenging and rewarding hobby for people of any age.

Community and Support: The ham radio community is supportive, with many clubs and mentors available to help newcomers. This support system encourages people to join and stay engaged with the hobby regardless of age.
Ham radio is a hobby that is enjoyed by anyone, regardless of age. It offers a combination of technical challenge, community engagement, and personal growth that appeals to people across different life stages.

Here are some of the best online amateur radio study guides and resources for preparing for your license exams:

Comprehensive Study Guides:

Ham Radio Prep Offers study materials for all three license levels (Technician, General, and Amateur Extra). Covers every FCC question pool and provides instant feedback on practice tests. Available in book, course, and mobile app formats.

ARRL Ham Radio License Manual.
A comprehensive guide covering basic electronics to advanced operating techniques. Suitable for self-study and classroom use both in-person and online.

Gordon West Radio School. Provides study guides for all license levels, known for their clarity and effectiveness.

Online Study Platforms:
Ham Test Online Integrates study materials with question drills using actual exam questions. Tracks progress and focus on weak areas.

HamStudy.org Offers cutting-edge study tools with practice tests for various amateur radio licenses. Available as mobile apps for iOS and Android.

HamExam.org Provides practice exams to help prepare for the license tests.

Hamradioschool.com Teaches Ham radio concepts while preparing you for the exam with an easy-to-understand approach which prepares you for getting on the air.
Free Resources:

KB6NU No-Nonsense Study Guides. Offers free PDF versions for Technician and General Class licenses. Updated to cover the latest question pools.

YouTube Videos:

Ham Radio Crash Course:
This channel offers a variety of videos aimed at beginners, including live streams and tutorials on getting started with amateur radio. It covers topics in a way that is easy to understand for those new to the hobby.

Ham Radio Made Simple:
This series is particularly useful for beginners. It covers the basics of ham radio, including UHF/VHF bands, repeaters, and equipment options. The series is divided into parts, with the first two focusing on the Technician license and the latter parts on the General license.

Ham Radio 2.0:
This channel provides comprehensive courses and lectures, including a Technician Class course. It is designed for those looking to obtain their first ham radio license or renew an expired one.

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HamStudy.org and Crash Course Playlists:

While these resources are more focused on memorization, they can be useful for practice tests and flashcard-style learning. However, if you are looking for more in-depth understanding, you might want to supplement with other video lectures.

Other Channels and Videos:

There are numerous other channels and videos on YouTube that cover specific topics like antennas, repeaters, and technical aspects of amateur radio. You can search for these topics to find more detailed explanations.

For a comprehensive learning experience, combining these resources with hands-on practice and joining online communities can be beneficial.

These resources provide a mix of interactive practice tests, comprehensive manuals, and free study materials to help you prepare effectively for your amateur radio license exams.

Online amateur radio testing is a convenient option for obtaining a ham radio license, especially for those who cannot access in-person testing locations.

How Online Testing Works:

Volunteer Exam Coordinators (VECs): Online exams are administered by VECs approved by the FCC. These organizations use platforms like Zoom for remote testing and may require a webcam and a qualified proctor depending on their specific requirements. Preparation: Before taking the exam, candidates must register with the FCC to obtain a Federal Registration Number (FRN) and should ensure they are well-prepared, as a passing score of 74% is required.

Popular Online Testing Options:

PARC VE Testing: Known for pioneering online exams with the ARRL, PARC offers a seamless experience with experienced examiners across the U.S.

Greater Los Angeles Amateur Radio Group (GLAARG): Offers remote tests with positive feedback from users, using Zoom for efficient testing sessions.

New England Amateur Radio (NEAR): Provides a proctor-free process like GLAARG, with a focus on smooth testing experiences.

Anchorage Alaska VEC: Offers online exams with flexible scheduling, beneficial for those working non-traditional hours.

Amateur Radio Testing Group (N1ART): Conducts online exams via Zoom and offers testing for all license levels.

Ham Radio Online Testing: Uses Zoom and Exam Tools for online testing, emphasizing ease and convenience.

Finding an Online Exam Session

ARRL Website: The American Radio Relay League provides resources to find both online and in-person exam sessions. You can search for online sessions directly on their website.

HamStudy.org: Offers a platform to find and register for exam sessions with various VECs.

When setting up a webcam for Zoom, particularly for online amateur radio testing, there are several requirements and considerations to ensure a smooth and effective experience:

Webcam Requirements:

Resolution and Frame Rate: A high-resolution webcam (1080p or higher) with a frame rate of 30 fps or more is recommended for clear video quality.

Field of View (FOV): A wider FOV (around 120°) can be beneficial if multiple participants are involved, but for individual use, a narrower FOV may suffice.

Low-Light Performance: Ensure the webcam performs well in low-light conditions to maintain video quality.

Automatic Focus: Look for webcams with automatic focus for easier setup and better image quality.

Zoom Setup Requirements:
Computer or Device: Use a Windows or Apple computer, or an iOS/Android device with speakers and a microphone. A webcam is recommended but not always required.

Internet Connection: Ensure a stable internet connection with sufficient bandwidth. For group video calls, 1.5 Mbps upload and download speeds are recommended.

Software Compatibility: Ensure the webcam is compatible with Zoom and your operating system.

Additional Tips:

Camera Positioning: Mount the webcam at a height that allows participants to see you directly, avoiding the appearance of looking down.
Audio Quality: Consider using external microphones for better audio quality, especially if the built-in microphone is insufficient. For online amateur radio testing, these requirements help ensure that both the proctor and the candidate can communicate clearly and effectively.

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Thank you to all who attended the 55th Playground Amateur Radio Club's Hamfest! Members, affiliates, participants, vendors, patrons, guests, and volunteers are essential in continuing to provide for the joy and excitement in radio experimentation! We cannot engage with the community the way we do without your support and dedication! Are you curious as to how to host a Tailgate or Hamfest? Read the guide here but more importantly, get involved with the Hamfest Committee at any organization that hosts them! They are always looking for volunteers and offer free training and eagerly encourage participation while sharing key roles out front and behind the scenes! These events are truly a team effort!

Are you looking for quality in your Amateur Radio Clubs and wanting to participate with organizations that are member driven?! The mentors and Elmers in the entire are of the Northwest Florida Panhandle are warm, welcoming, and ready to assist you on your journey no matter your level of interest! If you are looking for a an organization near you be sure to utilize the information at NWFLHamRadio.Net as a starting point to reach out to the organizations listed! You will not be disappointed!

What's Happenin' In Alachua County!!

by Gordon :Gibby KX4Z

Grand Send-Off for Eric

Well, we started off the month on a bittersweet note, as **Eric Pleace KO4ZSD** ("Zed," not "Zulu" he prefers) and his wife elected to sell their Florida home and move to the truly Frozen North up in Mass. They found a great little home up there and had little trouble selling their wonderful abode down here in warm sunny Florida. So we set up a send-off party at a Sonny's restaurant and I think we had 22 show up! That's a testimony to just how great a fellow Eric is and how much he has done for everyone in both The Gainesville Amateur Radio Society (GARS) and in NFARC/ARES(R). Eric has been one of our stalwarts at Wednesday local/state/federal net exercises, a strong helper at our NFARC Field Days and did wonderful web-page work for GARS. And further he has tolerated some of our Neanderthal political views and provided a friendly counterpoint in discussions!

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We gave Eric a Grand Send-Off!

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We will miss them, but we had a wonderful celebration party -- with presents! **Earl McDow K4ZSW** created yet another of his electrically operated, pneumatically powered, **potato-cannons** for getting lines through trees -- what a beauty! Those things easily go well past 60 feet, and Earl's are far easier to aim and deploy than the manual-valve versions. The group also mustered a healthy Gift Card to DX Engineering, enough to buy a good FM radio and even an antenna if he wishes. Many more happy QSO's to you, Eric!

On-Going Training

Started the month off with a TechNite very pragmatic zoom talk on "Standing Wave Ratio" -- https://www.nf4rc.club/how-to-docs/tech-nite-compendium/technite-march-2025-swr/ Then at our March NFARC/ARES(R) meeting, we had two featured presentations -- **Ron Lewis KN4ZUJ** brought his new 5W hand-held HF QRP transceiver -- a Chinese knock-off of the amazing uSDX created by PE1NNZ and DL2MAN (https://www.amazon.com/transceiver-5-Band-Multimode-Assembled-PE1NNZ/dp/B0BJ247SNL). This amazing design uses an incredibly efficient Class E switching power amplifier-- literally creating RF by being switched on/off by a digital logic chip! Ron is a master at working Eastern Europe on SSB on the higher bands, with simple vertical antennas from any POTA location. He shared some of his great fun with his new radio.

I brought in the partially-finished homebrew satellite-antenna elevator rotator and did a quick overview of how you find target satellites using free gpredict and then control both Doppler correction and rotator positioning with free or low-cost systems. During Field Day, we don't really have much chance for satellite QSOs against far-better equipped stations, but learning about these systems may give us more ways to attract youngsters to the wonders of amateur radio. There are still opportunities for schools to talk to the astronauts!

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And speaking of training -- **Reid Tillery K9RFT** continues to be the "Energizer Bunny" of conducting license class after license class over in the far eastern reaches of Alachua County -- and has agreed to supervise one in Gainesville as well, Fall 2025! He has been accumulating more and more new licensees and introducing them to community service training for disaster communications -- ***go Reid***!

Mini Swap Shop

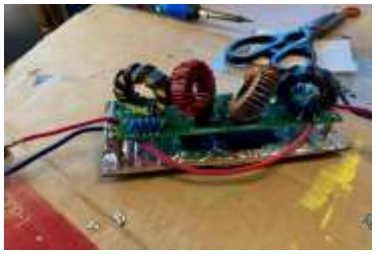
Taking a cue from the Section Manager's great ideas for club meetings, we spiced up our March meeting -- started out with a swap-shop for those arriving early. **David Huckstep W4JIR** let go of two great antennas for literally pennies on the dollar, and I got a bunch of stuff over to "new owners" free, that previously piled up in my bonus room. *This was very well received, and we'll do it again!*

How to do FIELD DAY?

Loften K4WTL
ECOMM Trailer

We've been working out how/whether we can help out the aspiring new amateur radio operators at local Loften Magnet School -- students enrolled in a public-service academy and already with lots of ham radio contesting under their belt. (They often better than we are!)

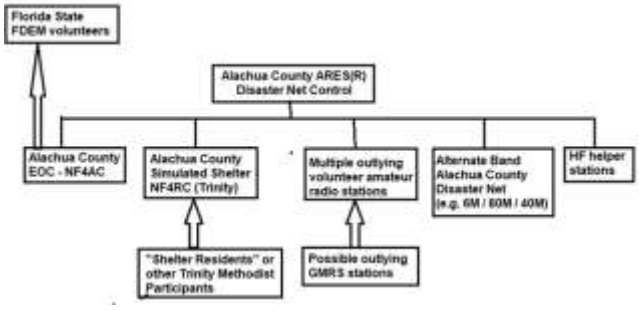
https://www.arrl.org/Groups/view/w-travis-loften-high-school-arc/type:club Frank discussions are trying to work out **chaperon and license class issues** when dealing with minors and the limited time our elderly volunteers can provide. **Bob Lightner W4GJ** has introduced us to the 9th grade current President of their ham club and we know of at least 3-4 students interested in a license class. We will see where this goes! We expect to be operating back at our "old" Emergency Operations Center, because the "new" one won't be finished for another year or so...



We are currently working to solve some thorny interference between our 10m and 15m taps on our 6-band antenna multiplexer system, still dealing with having only ONE coaxial cable to HF antennas at the old facility. **Manish Sahni KZ4KC** helped out tremendously at the start of March as we built new 40m and 20m VA6AM Cauer-topology bandpass filters. Next will be inspection of our existing 15m filter (which isn't adequately stopping 10m energy) and building additional 15m and 10m filters. We found the filters actually have lower loss than simple relay-diversion systems. Amazing filter designs!

Northern Florida Section Simulated Emergency Test

Arc Thames has come up with another great SET! I hurriedly put together an Incident Action Plan before our March meeting -- but our crew is really expanding it! **Earl Sloan KI4OXD** pointed out issues discovered in previous exercises. **Brett Wallace NH2KW** volunteered to be the VHF Net Control. The GARS Tailgate is unfortunately the same day, same time-frame.....so we decided to just use their Tailgate as a simulated SHELTER and put up a canopy and take simulated "Health and Welfare" traffic using a special form we have to work with the public.



Reid Tillery K9RFT is activating his entire east-Alachua County crew to pass traffic and send in Field Situation Reports. We're trying to use the structured Winlink Field Situation Report that automatically shows up on a GIS Map -- but it is lengthy and not everyone knows how to do Winlink directly to the EOC on peer-to-peer 144.990 VARA. Brett helpfully pointed out how the Army deals with "line-oriented" situation reports, and so we immediately adopted his abbreviated style.

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The Gainesville SARNET outlet is now functional, though **Shannon Boal K4GLM** and others excellent work.. We expect the EOC to be connecting to Tallahassee via SHARES HF voice, Amateur HF voice, and via HF Winlink. We also have ALE capabilities but that seems less used currently.

EXPLANATION (Do Not Transmit)	HEADER (please transmit)	DATA (Please transmit)	COMMENT (Do Not Transmit)
	Precedence	(Routine, Priority, Immediate, Flash)	
	Date & Time		Please indicate "local" or "UTC"
	Task		(may indicate "none" or "blank")
	FROM		Your name, callsign
	TO		e.g. "Alachua County EOC"
	INFO:		persons copied on this information
Emergent / Life Safety Need	1		YES or NO
City, County, State (Territory)	2		Provide city, county, state
Latitude / Longitude	3		consider providing your GRID-SQUARE if you do not know your LAT/LON
POTS landlines functioning?	4A		YES, NO, or Unknown
VOIP landlines functioning	4B		YES, NO or Unknown
Cell phone voice calls functioning?	5A		YES, NO, or Unknown

Then we expect a local VHF net handling "shelter" connections and also dealing with multiple individual operators throughout the County -- and also handling relayed information from community GMRS volunteers.

At our April TechNite (Thursday 7PM, April 3rd, at https://us02web.zoom.us/j/89530741792 we will go over the entire Incident Action Plan:

https://www.nf4rc.club/florida-2025-nfl-section-simulated-emergency-test/

Setting up at the GARS Tailgate allows our members to participate in both events, and all the while we'll be demonstrating and explaining what's happening to visitors

Alachua County NFARC/ARES(R): web page: https://www.nf4rc.club/
Groups.io Forum: https://groups.io/g/NF4RC

New Backup Repeater Coming for Alachua County

Gordon Gibby, KX4Z

We had a big surprise during one of the recent hurricanes -- power went out at our best repeater! Our ARES(R) group does "ok" on simplex, but we quickly tested the use of the (UF) Gator Amateur Radio Club 146.910 W4DFU repeater (https://w4dfu.github.io/) and it worked FINE to reach all of our shelters, and its owners were fine with us switching to it for the hurricane. (Thanks!)

One of our other "big 3" repeaters in Gainesville from the very supportive GARS club (https://gars.club/) has switched to DMR, which limits the number of potential users; not as good for disaster service. So then it was pointed out that the County had a tower on top of their County Administration Building and potentially unused antennas there.... and the building has backup power!

The Alachua County Sheriff's radio team was kind enough to provide a tour and helpful guidance and we were soon on the roof of the 5-story building on some of the highest ground in the county. (Thanks, guys!) While no one is willing to pay for a required tower-climber, with a short ladder we can get an antenna at about the 10-foot mark, and using a 17-foot high-gain collinear antenna, we should have a winner for disaster purposes. Our previous testing at even a bit less than this height showed very acceptable coverage of the county.

Jim Carr KC4MHH is graciously providing duplexer & analog repeater; our ARES(R) team was given some coax, and we are chipping in to get the antenna and get it mounted. And this is a good educational tool for our group as well. Jim is a huge resource for just about ALL of the repeater efforts in town. He is also the provider for our magnificent NF4RC-7 (144.990) 500+-foot VARA digipeater.

As with most "county-owned sites," the mantra is to build it right the first time, because they are NOT going to be interested in a bunch of repeat visits! All of our efforts are "backup." So far it is quite rare that we are called into prime services -- and we're glad that is true! As long as we are "backup" if something fails during a disaster, rather than pull resources to fix our "backup" systems, we just switch to an alternate and avoid "DRAMA" from the county's perspective. Just like most other hams, I like to "tinker" with my gear -- but when we put equipment on a county-owned tower/roof, we just have to leave it there!

When it is all done and frequencies are figured out, we'll get it announced on on our ICS-205 (which is contained within our Communications Plan: https://www.nf4rc.club/comms-plan-2/

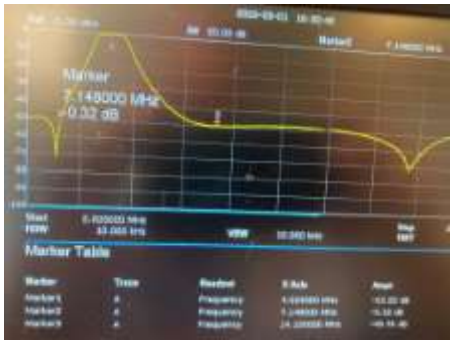
Alachua County ARES(R) / North Florida Amateur Radio Club (support club): https://www.nf4rc.club/

Fun Building High-Performance BandPass HF Filters

by Gordon Gibby KX4Z

Manish Sanhi KZ4KC and I got together on the first Saturday in March and worked on building two VA6AM bandpass filter kits. (See: https://va6am.com/2019/04/10/low-power-bpfs/ To get pricing for KITS, you have to email Pavel, as these are not normally available via retail outlets.) Jim Carr KC4MHH was over delivering a satellite radio, and he helped out also! We were doing quite well.... until I realized I didn't have the #18 or #16 enameled magnet wire we needed! Oops! However, we made the best of it, using ad hoc scavenged wire or suitable hook-up wire, so we could at least get something built until the real wire arrived.

RESULTS: We were astonished to end up with quite workable band pass filters with insertion losses of 0.36 and 0.50 dB on 40m and 20m and rejections of next-nearest ham band in the range of >50dB -- even with slender wire! (These are *close*, but not quite as good as Pavel says we can achieve with this design.)



We built these the very SIMPLEST way possible from VA6AM kits, which were around $65 American (his prices are in Canadian, but PayPal handled all the conversions). We attached SO-239's with short pieces of #16 wires, and used brass standoffs, "mounting" on a bit of packing-box cardboard covered with aluminum A/C duct-tape as the "shield." Important to know that Pavel's boards do NOT have a continuous ground from one end to the other! He depends on the metal box for that -- so we added a #16 wire on each side of the board, from one end to the other to guarantee ground continuity for our quick-builds.

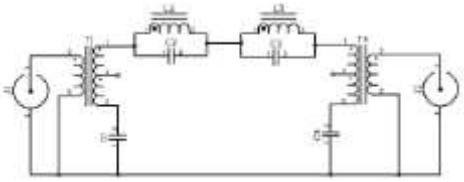
Gerontologist Dr. Mannish Sanhi KZ4KC helped built and tune VA6AM bandpass filters

EXTENDED BACKGROUND

Our current Emergency Operations Center radio backup room has only one coaxial cable for HF antennas -- snaked some 300 feet through the building, up to the roof, and then over to our wire antennas placed FAR from the building's noise-maker computers/power systems. Can you spell L-O-S-S-Y? With only ONE coaxial cable, our ARES/NFARC group had to learn a lot about antenna multiplexers and bandpass filters in order to place multiple transmitters/receivers not only in near proximity -- but even literally on the SAME coax cable. For Field Day or multi-band HF disaster comms, we aren't just using antennas that are "too close together" -- we are literally using the SAME antenna!

Many Field Day groups use bandpass filters to help keep their various band-stations comfortably coexisting. We HAVE to use them, to increase the total separation provided by our antenna multiplexer (about 30+ dB by itself), so that with the addition of the bandpass filters, we get beyond 70dB isolation between our transceivers. Some of our bandpass filters are borrowed, or were made using less-sharp Butterworth filters as we went along the trail of learning filters.

Pavel's Filters



Pavel, VA6AM, uses a Cauer filter topology. On each end of his filters is a step-up or step-down transformer with trifilar windings, so the internals of his filters operate at 200 ohms, reducing the loss effects of the series resistance of toroid windings. He uses a resonant circuit as part of the transformers, tuned to the desired passband, to further add selectivity. In his kits, he has already done ALL of that for you and tuned them! Next, in series connecting the input and output of the filter, are two parallel-tuned LC filters. (L2/C2 and L3/C3). You build those. One is resonant at approximately 1/2 the passband frequency (usually the next lower ham band) and so rejects that potentially interfering transmitter. The other is resonant at a much higher frequency, typically 4x the passband. At the desired passband, the lower-tuned filter presents capacitive reactance, and the upper-tuned filter looks inductive -- and *they combine to make a series-tuned filter* at the desired passband, with little loss. Adjusting his filters is merely moving the turns closer or farther to bring the insertion loss down to a minimum. This is how Pavel achieves such astonishingly low insertion losses (typically tiny fractions of a dB) -- while also delivering rejection of next-higher or next lower ham band in the range of 50+ dB (Pavel quotes 60dB).

Making Inexpensive High-Output Mics for the sBitx/uBitx Series

by Gordon Gibby KX4Z

Hams are always talking about microphones, and thinking about improving their collection of microphones. Although the last mic that I got with a used sBitx works and sounds quite nice, I hear lots of users looking for other microphones. And everyone loses a microphone from time to time, or has a cable or connector fail. So like everyone else, I've wanted a spare mic or two, and have figured out ways to make them inexpensively with good fidelity.

Need a High Output Mic

The sBitx/uBitx series tend to require relatively high microphone sensitivity (high output electrical level) for adequate modulation. The sBitx even helpfully displays an "oscilloscope" view of your microphone level, making it easy to detect under- or over-modulation. Many microphones are made with electret elements of varying sensitivity. This results in a reduced sensitivity to external noise and radio frequency interference. However, some of the commonly available cartridges have an output as low as -55dB, where 0dB represents 1 volt per 1 Pascal of air pressure. With that low level of signal, modulation on most of the sBitx/uBitx series will be extremely low. I prefer to use mic cartridges with output specifications in the range of -30dB to -25dB, which means far, far higher output voltage with a normal voice.

The mic cartridge I'm currently using is a 7mm cartridge CMEJ-0733-25-L070 with wires already attached, that has -25 dB output -- plenty for these transceivers. Made by Same Sky, formerly known as CUI devices. At DigiKey: https://www.digikey.com/en/products/detail/same-sky-formerly-cui-devices/CMEJ-0733-25-L070/10253454; at Mouser: https://www.mouser.com/ProductDetail/Same-Sky/CMEJ-0733-25-L070?qs=PzGy0jfpSMu9Pds4lnypRw%3D%3D

How Electrets Work

These mic elements include a permanently charged capacitor driving a high impedance JFET amplifier. As sound pressure deforms the capacitor, the voltage resulting from the fixed charge will vary, creating the audio electrical signal, which is amplified by the JFET. They need a "bias" voltage of a few volts to operate the JFET amplifier, typically specified from 1-10VDC. If your sBitx transceiver is putting out a full 12V on the mic terminals, fed by 10K RD21, you may want to put a resistor of any value from 27K down to 10K in parallel with your electret cartridge and that will drop the DC voltage a bit.

Recent Building

This morning I tested four Same Sky cartridges and all of them produced a nice signal when monitoring with a separate receiver. Then I replaced the element in a stock external Baofeng microphone with the Same Sky cartridge, after drilling an extra audio hole in the center of the microphone recess. Placing a bit of tissue paper behind the cartridge, I held it in place by securing the small Baofeng microphone printed circuit board.

The red (+) and black (-) wires from the cartridge get soldered to the appropriate connections on the board, and the Baofeng LED removed. It worked great!

I've used this same cartridge to rebuild inexpensive Hamfest-acquired desk top microphones with good success....and far less expensive than current commercially available units!

With the appropriate connector, there is no reason such home-made microphones wouldn't work with other transceivers, such as Icoms and Yaesu's. Just expect to possibly turn down the mic gain to adjust for their higher output! They may not have the carefully tailored output spectrum of a very expensive mic, but many radios allow adjustment of transmitted bass, mid-range and treble, and these are certainly inexpensive compared to commercially available

MERT

Marion County Sheriff's Office
Division of Emergency Management

COMMUNICATIONS UPDATE

April 2025

MERT's primary role is to support all open Evacuation Shelters throughout Marion County during declared Emergency events. We also support EOC and emergency personnel along with Community Emergency Response Teams (CERT) with voice, image and data communications resources.
"*Call MERT… When all else fails*!"

MERT Monthly Meeting

The next meeting is on
May 17th @ 10:00 am.
All Amateur Radio Operators are Welcomed!
Meetings conducted in Jan, Mar, May, Jul, Sep, & Nov

Annual EMCOMM Preparations have Begun!

Each new year, MERT members begin taking steps toward preparing ourselves, and our resources, for the start of the hurricane season beginning June 1st. Many of the steps are simple and are mostly refresher classes on procedures and basic activities. Some require simple revisions or upgrades to align with current directives, objectives and procedures. However, others are more detailed, critical and important elements verifying the radios, antennas and other equipment is stocked, inspected and fully tested.

One of the most important elements is the **shelter tests** confirming the status and quality of MERT's resources at the schools. With each years passing, these systems age and become more susceptible to problems, issues and even failure, especially as a result of being in operation for the last 15-years. I am especially appreciative for all the members supporting this critical inspection & testing activity. Thank you! (Report on this years' findings follow.)

And then… there are years where a few curve balls are thrown where we combine our knowledge and experience to adopt and adapt to new situation(s). This year, we happily embraced that experience with supporting a significant upgrade in the OCF HF support tower provided by Director Preston Bowlin. The new tower is fully hurricane rated and replaces a small galvanized pole previously used (and bent) from years of service. This is another major step improving the survivability and ultimate reliability of our operations when it is most important… ***during hurricane weather***. Our sincere thanks to Director Bowlin for his unwavering support in our Goals and providing the resources needed for our success!

To all members, thank you for your support in meeting our Goals *per the SOG[1]:*

" The goals of the MERT program are:

1. *To create a solid network of communications operators within Marion County for use during any incident or event emergency.*
2. *To support Emergency Management with the skills and equipment of the communications operators.*
3. *To enhance support communications throughout Marion County at Shelters.*

Members. We need your active support to achieve our EMCOMM objectives. Thank you for participating in weekly meetings, the weekly radio nets and Winlink Challenge.
Very best regards to all!

HRCook

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Shelter Test Report

Ray Woody (WB6FKJ), Shelter Manager

Our activities were spearheaded by our new Shelter Manager, Ray Woody (WB6FKJ) who did a fantastic job in planning, organizing and overseeing the tests. I know we all compliment Ray for his detailed and thorough plans which guided everyone to conduct and complete the testing focusing on the most important and relevant technical aspects needing testing.

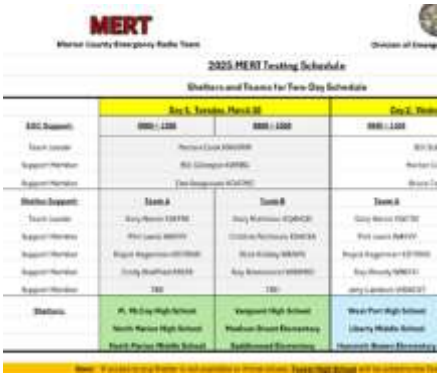
Testing Summary (Does not include all test results and findings.)

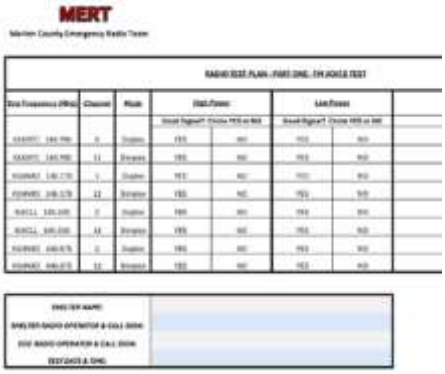
- Forest High School – Not Operational – Cable/antenna tests failed
- West Port High School – Not Supportable - MERT systems functional but roof leak creating a electrocution hazard
- KG4NXO repeater (70 cm) – County wide reception not possible after Sheriff Tower rehab in late-2024
- School Wi-Fi Access – MCPS blocking access for Winlink digital message communications

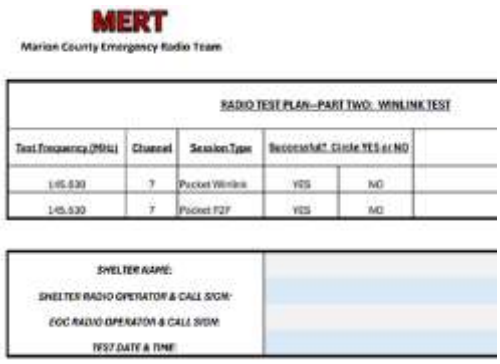
As the antenna and cabling systems are approx. 15-years old, these annual tests become more important to complete and we thank the Marion County School District for their
support allowing our testing. We also look forward to working with the school district in addressing this years' findings to bring all shelters up to operational and supportable status. Our thanks also to the Division of Emergency Management Director and staff for their support!

MERT acknowledges the following members for their extremely valuable knowledge, time and energy in conducting this year's shelter tests:

EOC	Team Alpha	Team Bravo
Bill Gillespie KW5BG	**Gary Neron KS4TSX**	**Gary Nicholas KQ4HQD**
Bill Sobel K1WLS	**Phil Lewis W4EVV**	**Cristine Nicholas KG4CEA**
Dee Seagraves KO4TMZ	**Royce Hagerman KD7SNN**	**Nick Kiddey W4NFK**
Bruce Twiss KI4NFA	**Ray Woody WB6FKJ**	**Ray Sherwood WA9MID**







This year's forms created by Ray Woody (Shelter Manager) provided members a clear and concise guide to the expanded comm. testing conducted by members and an organized method of documenting the results.

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With this years expanded radio and digital comm's testing, the shelter test teams had a <u>creative and valuable</u> resource identifying the direction and distance to the two MERT repeater locations in Marion County. We acknowledge Gary Nicholas (KQ4HQD) who crafted the idea and Ray Woody (WB6FKJ) for his teamwork showing the distances to the tower locations!

<u>SHERIFF'S APPRECIATION Dinner</u>

Reminder – <u>This Friday, April 4th, is the Annual Sheriff's Dinner</u> at the World Equestrian Center. <u>Doors open at 5:00 PM.</u> Look for Harlan who will do his best to have two tables with the MERT logo allowing members to sit together.

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MERT moves to Bimonthly Meetings and Newsletters

MERT, like many volunteer organizations, continues to experience a shrinking membership base who actively support and participate in its goals and objectives. Since the world COVID pandemic, our group of **active volunteers** is 1/3 the level during the 2010's.

While amateur radio has 700,000 licensed operators in the U.S., ARRL reports 151,000 members (average age of 68-years) which challenges some volunteer groups (like MERT) who requires active participation, ongoing training and energetic support in keeping its systems functional for EMCOMM operations.

While amateur radio is an exciting hobby having hundreds of different activities and paths to enjoy - including **MERT's significant contributions** to the safety of emergency shelter residents during declared activations - fewer volunteers are willing to dedicate the time and training necessary to become or remain qualified to help.

You can help by sharing with your friends the enjoyment you receive by being a ham and invite them to a meeting. We will do our best to make them feel welcomed and comfortable!

In the meantime, to keep future meetings relevant, interesting and enjoyable, monthly meetings and newsletters will move to a bimonthly schedule (meetings held every other month in January, March, May, July, September and November). We look forward to your attendance and all suggestions for discussion topics of interest to you!

Great News - Repeater KK4DFC Upgraded!

We have wonderful news from Phil Lewis (who is our new D-Star Repeater Manager) that he has successfully upgraded from the 20-year-old Gen. 1 repeater and upgraded from the 20-year-old Gen. 1 repeater and 10-year-old PC to a new ICOM Gen. 3 model and new PC. Both pieces of new hardware were provided with Director Preston Bowlin's major support by the Division of Emergency Management. Another part of the "upgrade challenge" was a completely new Operating Software (OS) upgrade which had some "kinks" requiring time to work out.

Phil Lewis (WB4EVV) D-Star Repeater Manager

KK4DFC (146.790 MHz) is the primary **MERT** repeater dedicated to supporting all shelter operations throughout Marion County and is located at the Baseline Transfer Station with the antenna at 300 feet AGL.

Phil shares he has a couple items pending requiring follow up including a new repeater "ID Announcements" system he is researching. Please thank Phil for his **many hours** of detailed attention and perseverance in completing this major reliability upgrade for MERT!

What is D-Star? D-STAR repeaters are a digital amateur radio system supporting voice, data and image communications and especially well-suited for **EMCOMM** operations. Here are some key points about D-STAR repeaters:

- D-STAR repeater systems include a repeater controller, digital voice repeater, digital data repeater and an Internet gateway PC.
- D-STAR can connect with and link to other repeater sites worldwide using the Internet. In D-Star terminology, repeaters now called "Digital Regenerative Nodes" or "Regens".
- MERT uses D-Star to significantly reduce transmissions from "bad actors" during emergencies causing harmful interference.

D-Star Repeater Manager Phil Lewis leads the way on the KK4DFC repeater upgrade. Thanks also to Hayden Kauffman (N2HAY) for his valuable assistance.

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L1) The 15-year-old lift pole needed help. (L2) A view of the old lift pole shows the OCF transformer was permanently mounted preventing easy maintenance access. Center – The new hurricane rated tower was designed using pullies for accessing the existing (and future) HF antenna hardware at any time. (R1) County employee installing the new hardware. (R2) Finished!

MERT sincerely thanks Preston Bowlin for his support in providing a new, hurricane rated, tower supporting our OCF HF antenna. This is a significant upgrade in the reliability of the HF antenna critical during EMCOMM operations.
A special thanks to Matt Celeri with the County who transferred and installed the new hardware!

2025 Florida AUXCOMM Exercise - April 12th

This year's introduction… *"Florida is under siege as a Cyberstorm unfolds a devastating outbreak of tornadoes wreaks havoc across the state, crippling infrastructure and overwhelming emergency services."*

On Saturday, April 12th from 9 to 12 noon, everyone is invited to participate in the State-wide **EMCOMM** Exercise. MERT supports your participation from your home station or at the EOC. For MERT members participating… please consider yourself a **Shelter Operator** and be prepared to respond to all conditions and events as such during the Exercise.

Sign up at:
Marion County FL Amateur Radio Emergency Service Website: **https://aresmcfl.org/**

CERT County-wide Training Drill – April 19th

MERT is looking for 5 members to volunteer in providing radio support services to the 4 CERT Teams and as the MERT IC in the EOC on Saturday, April 19th from 8 am till 1 PM.

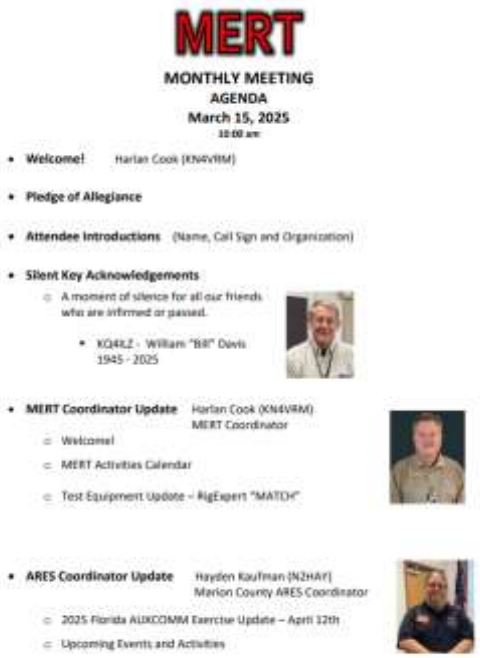
MERT operators will be imbedded with each team and assist them with reporting events and activities as they would do at their own communities during a county-wide activation. Please email KG4NXO@marionso.com if you would like to participate. (Volunteer list needed by April 9th.)

Continued on next page...

Skywarn Class – April 23rd

There will be a Skywarn Class at the EOC on the April 23rd from 6 – 8 PM. The Class is free. Visit: https://alertmarion.com/ to sign up.

Bi-Monthly Meeting


MERT

MONTHLY MEETING
AGENDA
March 15, 2025
10:00 am

- **Welcome!** Harlan Cook (KN4VRM)
- **Pledge of Allegiance**
- **Attendee Introductions** (Name, Call Sign and Organization)
- **Silent Key Acknowledgements**
  - A moment of silence for all our friends who are infirmed or passed.
    - KQ4ILZ - William "Bill" Davis 1945 - 2025
- **MERT Coordinator Update** Harlan Cook (KN4VRM) MERT Coordinator
  - Welcome!
  - MERT Activities Calendar
  - Test Equipment Update – RigExpert "MATCH"
- **ARES Coordinator Update** Hayden Kaufman (N2HAY) Marion County ARES Coordinator
  - 2025 Florida AUXCOMM Exercise Update – April 12th
  - Upcoming Events and Activities


- **HEC Update** Gary Nicholas HEC Member (KQ4HQD)
  - 2025 Hospital Emergency Team Exercise & Update
  - AUXCOMM Training Class Update
- **Shelter Testing Plan Update** Ray Woody MERT Member (WB6FKJ)
  - 2025 Shelter Test Activities & Plan
- **CERT Activities Update** Randy Williams (WD8MGZ) CERT Liaison
  - 2025 CERT Exercise – April 19th
    - 5 MERT Members needed to support CERT Event
- **Attendee's Suggestions, Questions & Answers**
  - ALL Recommendations for the Good of our Organizations is invited

MERT thanks these individuals for their very interesting presentations at the March meeting:

Hayden Kaufman - 2025 Florida AUXCOMM Exercise

Gary Nicholas - 2025 Hospital Emergency Team Exercise & AUXCOMM Training Class Update

Ray Woody - 2025 Shelter Test Activities & Plan

Silent Key Acknowledgement
William "Bill" Davis
1945 – 2025
KQ4ILZ(SK)

Interested in learning more about MERT? Visit https://kg4nxo.com/

FCC Testing Information

Daytona Beach Amateur Radio Assn (DBARA)
- Monthly, third Monday, 5:30 PM, prior to meeting
- Lehman Building, Embry-Riddle Aeronautical University
- Registration Required
- Info: https://dbara.org/testing/

Hog County Amateur Radio Association, Bushnell FL
- First Saturday, 11:00 AM
- Cross Connection Church, 1451 West County Road 476, Bushnell, FL 33513
- Info: sumterVE@gmail.com

Lake ARA, Leesburg FL
- Monthly on the 3rd Saturday, prior to meeting. (Except December)
- 8:00 AM
- LARA Clubhouse (11146 Springdale Ave, Leesburg – off of CR 473)
- For more information and registration, contact: Dave Templeton N4NG, 386-804-2806 n4ng@icloud.com in advance of the meeting.

Lake Monroe ARS FCC Testing, Sanford FL (LMARS)
- Third Saturday of every month
- Seminole County Sheriff's Office, 100 Eslinger Way, 1st Floor, Sanford, FL
- Registration Required
- For more information and registration, contact Bob Cumming, W2BZY, 407-333-0690 or w2bzy@cfl.rr.com

Milton Amateur Radio Club, Milton FL
- Check date at miltonarc.org
- Walk-in
- Bagdad United Methodist Church
- Info: Chuck, N4QEP, merlinman3@yahoo.com

Orlando Amateur Radio Club
- First Wednesday
- 5:30 PM, Walk-ins allowed
- ARRL/VEC
- William Beardall Senior Center 800 S Delaney Ave Orlando FL 32801.
- Info: testing@OARC.org Robert Cumming, 407-333-0690

Santa Rosa County FL ARES® Testing (Walk-in)
- Information and dates can be found at srcares.org

Testing information is subject to change. Check with the testing venue to confirm the testing session and requirements.

Seminole County
- Every month on the third Saturday
- 9:15 AM
- Seminole County Sheriff's Office off SR 17-92, on 100 Eslinger Way in Sanford, FL
- Info: Bob Cumming, W2BZY, w2bzy@cfl.rr.com

Silver Springs Radio Club, Ocala FL (SSRC)
- Go to http://k4gso.us/class/ to signup for classes
- Go to http://k4gso.us/test-signup/ for testing. Testing is held on the 2nd Tuesday of odd months at 7 PM.
- Note http://k4gso.us/ncvec605/ is requested to be filled out before you show for testing. It is best to download the form and open it as a PDF so you can fill in the blanks.

Suwannee ARC, Live Oak, FL
- Last Saturday of the month
- Suwannee Regional Library
- Contact Gerald Guy, geraldlguy@gmail.com

Tallahassee Amateur Radio Society (TARS)
The Tallahassee Amateur Radio Society (TARS) has begun limited License testing. Please refer to the following for the updated testing dates and requirements for individuals wishing to take exams. https://www.k4tlh.org/getting-started/license-testing

West Volusia Amateur Radio Society
- Second Saturday of each odd numbered month
- 6:00 AM
- St. Johns Lodge #37, 2557 N. Spring Garden Ave, Deland FL
- Info: https://westvars.org/testing

Gainesville Amateur Radio Society
- 1st Saturday of even numbered months
- Tech day two weeks after testing
- https://gars.club/Testing.html

Statewide Digital Radio Resources

Did you know we have designated ARES® DSAR Reflectors & a DMR Talk group?

- **DSTAR Reflector 046**
  - REF046A – Florida Statewide
  - REF046B – NFL ARES®
  - REF046C – NWS Mobile, AL SKYWARN
- **DMR Florida State ARES® TG 31127**

Feel free to link your local repeaters to help create a digital repeater network through the state!