QST NFL

Newsletter for the Northern Florida Section

Come join the FUN!

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From the Shack of the Section Manager

Scott Roberts, KK4ECR (kk4ecr@gmail.com)

Spring into Action: Lessons from April and What's Ahead in May for the Northern Florida Section

Spring is in the air—and so is the unmistakable buzz of activity across the Northern Florida Section! With April's events fresh in our minds and May's opportunities already knocking at the door, now is the perfect time to reflect, reset, and reengage with everything this amazing hobby offers. Whether you're brand new to amateur radio or you've been spinning the dial for decades, there's something this season for every operator.

💥 April Highlights: Growth, Grit, and Getting On the Air

April was a powerhouse month for our section. Operators from across the region showed up strong for the **Florida Statewide Hurricane Exercise**, sharpening our emergency response skills and ensuring we're ready for whatever Mother Nature sends our way. The dedication and professionalism on display were a shining example of why amateur radio remains an essential part of community resilience.

Local clubs continued to thrive, with engaging meetings, hands-on workshops, and several successful **VE testing sessions** that welcomed newly licensed hams into the fold—welcome aboard! The spirit of mentorship was alive and well, and it's been incredible to see Elmers stepping up to help newer operators find their footing on the bands.

We also had some unforgettable **public service events**, where amateur radio proved its worth in real-time. Whether supporting races, festivals, or emergency drills, our hams were there—on the mic, in the field, and making a difference.

🔭 May Preview: Momentum, Mentorship, and Mission Readiness

Now, let's look forward.

May is all about preparation and participation. First up, we mark **National Hurricane Preparedness Week (May 5–11)**. This is a critical time to inspect your gear, update your go-bags, and confirm your ability to support ARES and served agencies. If you haven't tested your station lately—now's the time!

We'll also be hosting our next **ARRL Northern Florida Section Town Hall Zoom Meeting**. The date will be sent out by email and posted on the ARRL NFL Section website. This is your chance to connect directly with section leadership, ask questions, offer ideas, and get real-time updates on upcoming projects. Don't miss this opportunity to help shape the future of our section.

And of course, May is **Field Day prep month!** Clubs across the section will be ramping up their plans, scouting locations, testing antennas, and training operators. Whether you're a logging wizard, a portable power guru, or just looking to join a local team for the first time—there's a place for you on the Field Day roster.

✅ Get Involved: Your Ham Radio Journey Matters

No matter where you are on your amateur radio journey, your participation makes a difference. The strength of our section lies in the diversity of its operators—young and old, casual and committed, techies and talkers alike.

So, let May be your month to try something new:

- Join a net you've never checked into before.
- Attend a club meeting or Zoom Town Hall.
- Mentor a new ham—or reach out to find a mentor.

Start preparing for hurricane season… before it starts preparing for you!

Together, we're not just making contacts—we're building community, skill, and service.

Scott Roberts, KK4ECR
ARRL Northern Florida Section Manager
"Serving with Purpose. Operating with Passion."

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.

From the Section Emergency Coordinator

Arc Thames, W4CPD

On Saturday April 12 we conducted a statewide communications exercise in cooperation with the Florida Division of Emergency Management to provide an opportunity for agencies to test their communications capabilities to and from the State EOC (Emergency Operations Center.)

We had over 24 counties that had signed up to participate. While the primary goal is communications testing, we also use it to train volunteers that operate the radio room at the SEOC during an activation. We sincerely thank the staff at FDEM for opening their doors and allowing us the opportunity to test the equipment and communications ahead of hurricane season.

Overall, Winlink was the clear winner for communicating to and from the SEOC. HF propagation was not on our side on 40 meters so communications were tough to and from some parts of the state. During the exercise, we simulated an outage of the statewide repeater network SARNET so that left only HF & Winlink to communicate. We encouraged counties to also test their simplex capabilities to each other during the exercise so that if their HF capabilities were unavailable, they could potentially have someone else relay in for them.

If time permits, I plan on having another period in which HF communications can be tested to and from the state on various operating bands either ahead of or in early hurricane season to provide one more opportunity for counties to test their communications on HF.

Please remember that floridaemergency.net is where all activation information for an exercise or real-world event will be posted. Winlink has a section called "Catalogs" that you can request information to be sent to you from Winlink. We have a text file hosted on the floridaemergency.net website that Winlink has the capability to go "pull" and deliver to you as a Winlink message. During an exercise or an activation, this file will contain relevant ICS-205 information and any other relevant information to the activation a county or agency may need to know. The purpose behind this was so that if we ever did end up in an "oh crap" situation and you couldn't reach the internet you could use Winlink to retrieve your activation information. The step by step instructions are located on the floridaemergency.net website - https://floridaemergency.net/wp-content/uploads/FLAUX_201_WinlinkBulletin.pdf

Training and exercises are a critical part of what we do to stay prepared. If you're not having regular training or exercises with your local team, I encourage you to. While technology continues to evolve, at the end of the day, amateur radio is still the best way to provide auxiliary communications when traditional methods have failed.

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 May, please send me (W4CPD located in Pace, FL) a radiogram via the NTS with your answer to this question "What is your first step in hurricane preparedness?"

New Amateur Radio Operators

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.

Continued on next page...

Monthly EC Reports

Out of the 34 appointed ARES Emergency Coordinators we have in the section, we only received monthly reports for 19 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 1,374 hours of service to our communities. Thanks to the following counties for providing their reports: Alachua, Bay, Citrus, Duval, Gilchrist, Hernando, Leon Madison, Marion, Orange, St. Johns, Santa Rosa, Seminole, Sumter, Suwanee, Volusia, Walton, Wakulla, Washington

	Number	Person-Hrs
8. Exercises this month:	28	28.00
9. Training events this month:	26	423.90
10. Public service events this month:	2	85.00
11. Community service events this month:	3	86.00
12. Emergency events this month:	3	66.00
13. SKYWARN events this month:	8	78.80
14. Meetings this month:	19	332.30
15. Unclassified events this month:	45	274.00

Call signs of DECs/ECs reporting:
K4BHP, K4BJS, K4SOP, KC4NVU, KD4EZW, KD4IMA, KF4ZZ, KM4BTW, KM4QQO, KO4KUS, KO4YDL, KX4LEO, N2HAY, N4JTK, N9EE, W4KEF, W4UFL, WA4MN, WE4MJ

Cyberstorm S.E.T

ARES Letter

The 2025 Florida statewide AUXCOMM exercise was conducted on Saturday, April 12 — see the Florida AUXCOMM site. The scenario: Florida was under siege as Cyberstorm unfolded — a devastating outbreak of tornadoes crippled infrastructure, overwhelming emergency services. A coordinated cyberattack then hits, taking down internet and cellular networks statewide. See next month's issue for a summary of the after-action report.

Florida Statewide AUXCOMM Exercise Cyberstorm players Randy Hare, KQ4NRK, front, and Darren DeMarino, KO4DLN, at the "shelter" and "Point of Distribution," Fort White Community Center, Columbia County, Northern Florida [Rick Palm, K1CE, photo]

NFL Officials

Section Manager
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Kevin Bess KK4BFN
Helen Straughn WC4FSU
DJ Stewart KI4ZER
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Section Emergency Coordinator
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Section Public Info Coordinator
Jim Bledsoe, KI4KEA

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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

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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

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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.

A Visit to ARRL Headquarters

James Kvochick K8JK

I had been a licensed amateur radio operator and an ARRL member for a long time before my first visit to American Radio Relay League headquarters. OK, so it's not like going to other hot destinations, but it gives you a perspective on your ARRL.

This is the photograph you often see when folks are writing or speaking about league headquarters:

Will revisit this in a moment. Across the parking lot, nestled behind this iconic building, is the operating facilities of the ARRL:

This facility has a rich history, even housing printing equipment at one time for league publications. Of course, building often go through many changes as the needs of their tenants bring on many new requirements.

If these walls had their own voices:

If you are planning to visit ARRL headquarters, be sure to visit the planning guide on the website for more information. A bit of planning can enhance your experience.

With assistance from a guide, you'll see the famous ARRL lab, where many products are tested and evaluated, along with a well-organized display of many pieces of gear you may even have in your shack today (most of this equipment has been donated to the ARRL).

You might even catch a glimpse at the large stacks of QSL cards that the ARRL ships from their QSL Bureau:

And maybe even see some of the folks who make this happen! Depending on the time of your visit, it's possible to run into many of these folks as you wind through the facility:

David Minster
NA2AA, CEO

Mike Walters, W8ZY Field Services Manager

Bart Jahnke W9JJ, Radiosport Manager

Continued on next page...

Bob Inderbitzen, NQ1R Public

Maria Somma, AB1FM VEC Manager

Becky Schoenfeld, W1BXY
Editorial Director

And many more folks who spend time at HQ as either volunteers or staff members.

No visit is complete without at least a peak at the original W1AW station, housed in the iconic building:

Inside you'll find many interesting artifacts of what was state of the art in radio gear from decades gone by, along with the equipment used to send ARRL bulletins and other over the air messages:

Also, if time and resources permit, you can operate from W1AW at one of 4 operating positions:

In my opinion, it's worth your time to schedule a visit at ARRL headquarters. Again, for the best experience, follow the documentation on the ARRL website. Even if this is just one stop on a larger trip, it's hard to not be impressed with everything there.

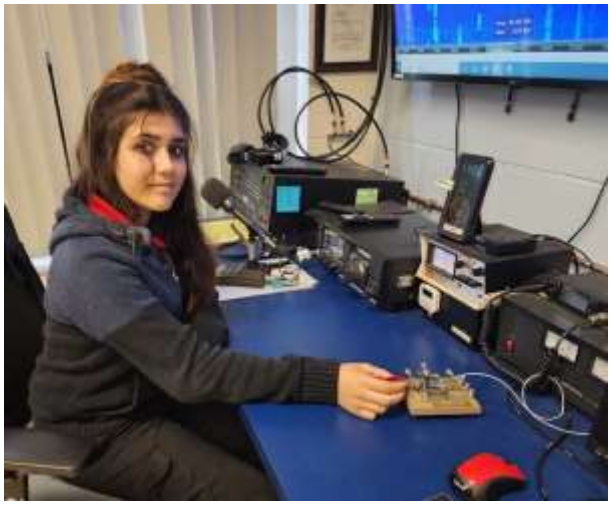
I'm looking forward to hearing about your experiences at ARRL HQ!

Loften High School—FL QSO Party Results

Bob Lightner W4GJ

Students at W.T. Loften High School [K4WTL] just concluded 14 hours of on-air operation for this year's Florida QSO Party, sponsored by the Florida Contest Group. We operated CW only and made 808 contacts earning 1,616 QSO Points. We had 63 multipliers and a total of: 101,808 total points. We hope to win the "**Highest Scoring Florida School**" plaque again this year.

Ella



Bella

Total Contacts by Band and Mode:

Band	CW	Phone	Dig	Total	%
40	203	0	0	203	25
20	295	0	0	295	37
15	299	0	0	299	37
10	11	0	0	11	1
Total	808	0	0	808	100

Score Statistics

Total Contacts	808
Total QSO Points	1,616
Total Multipliers	63
Total Score	101,808

Doing the math:

808 contacts. EIGHT HUNDRED AND EIGHT CW contacts in 14 hours!

That is 57 contacts PER HOUR.

That is just shy of 1 contact PER MINUTE for 14 hours.

Incredible performance. These are the First Responders you want to rescue you if needed.

Gangbuster APRIL In Alachua County!

April was just an incredibly FUN-FILLED month for Alachua County ARES(R)/NFARC participants --

- TechNite - planning for the S.E.T.
- April Meeting - Planning Field Day & student operators?
- New Repeater goes IN!
- Simulated Emergency Test & Hotwash

Lab'N'Lunch to build 6 meter & 2meter antennas

Crazy, Chaotic Simulated Emergency Test

We had a fantastic S.E.T. with a ton of participation. It unfortunately collided with the GARS Tailgate but we all worked together and made the best of it -- and it turned out well for everyone!

I was able to make it to the start of the Tailgate and dropped off three big boxes of "free" electronics to comply with Nancy's requests that I slim down the bonus room -- and almost everything disappeared! (Hooray!) (They must have had a great Tailgate!)

Brett Wallace NH2KW and his entire family were setting up the most ASTONISHING Net Control Post and General Education Lounge you've ever seen, complete with canopy, booth, and tent for Radio Ops! ***Wow, was he ever PREPARED!!***

His military exploits have left him with a ton of resourcefulness. Jeff Capehart handled a message-sign-in table in the central area.

I headed to the EOC to help out beleaguered Leland Gallup AA3YB and Mannish Sanhi KZ4KC, who were being pummeled by INJECTS. Meanwhile *almost the whole county seemed to be checking into our VHF Net* -- probably thanks to Reid Tillery K9RFT and all his Technician courses -- and we sustained **MULTIPLE (real) Solar Flares** which came close to wiping out HF comms -- Despite the intense D-layer ionization, we moved all kinds of traffic, addressed simulated catastrophes, fistfights, hungry shelter residents, you name it! Net Control was helped by Susan Halbert KG4VWI and they put up a valiant effort to stem the tide of absolute CHAOS -- what an exciting 3 hours! We had fantastic comments at the Sunday evening hotwash. Full Writeup in standard format is already in the works -- this is probably our most adventurous S.E.T ever!

NEW REPEATER

Ever wanted to climb a 12-foot ladder on the top of a 5-story building **in 20-knot winds**, perched against a 100-foot tower, working on bolts with multiple wrenches while trying to hold on for dear life.... and *stay there for hours*?? Yep, we have just that sort of CRAZY in our group, David Huckstep W4JIR. Jim Carr KC2NWK put together the duplexer and repeater, while Leland Gallup AA3YB, myself and David manhandled the creation of an antenna mount on the side of a tower interspersed with mighty gusts of wind. Tim from the Alachua County Sheriff's radio shop was a huge, huge help!! This took forever it seemed and required the obligatory **emergency trip to the hardware store** when the fittings were too big! We got a 17-foot antenna mounted on a Unistrut-based side-arm and it isn't going to budge!

Oops! The duplexer just isn't quite right and Jim is going to have to get Alachua County Sheriff Radio Room personnel who so kindly helped us out immensely on the first trip, to get him back up there for a tweak. Then we hope to have a fully UPS- and generator-backed up repeater added to the mighty repeaters of the Alachua County area. More on this to come!

Continued on next page...

Filters, Filters Filters!

We only have ONE hf coaxial cable at our EOC, so in order to run multi-station Field Day (or disaster response) we use a kit-built 6-port Antenna Multiplexer and a slew of VA6AM band pass filters to provide 70-db isolation between transmitters and receivers **literally plugged into to the SAME transmission line**. We had a few "*undesired reductions in isolation*" during Winter Field Day (read: total wipe out of the 15-meter station....) , so we've built even MORE filters. Last month we got additional 40-meter and 20-meter filters; this month we built additional an additional 15-meter and 10-meter filter and started installing.

At the same time, we've started replacing cheaper phenolic-insulation SO-239 bulkhead connectors that don't seem to grasp the PL259 center pin reliably. They are being replaced with Teflon-insulated SO-239's that have a better-constructed receptacle for the center pin.

FIELD DAY PLANNING

Boy, oh boy, Earl Sloan KI4OXD is descending into the maelstrom, since he agreed to head up our 2025 summer Field Day! He's reviewing our AARIP from last year: https://www.nf4rc.club/historical-exercises/2024-field-day-aarip/ We currently have so many things cooking -- and *undecided* -- that this is a gargantuan task. EOC station, trailer station, solar power, generators, tower trailer, new coax lines....how can we make this even harder? Well, one of the ideas is to hold a **3-week long nightly Zoom Technician License Course** for the Loften Magnet School students that Bob Lightner W4GJ has attracted and shepherded, with newcomers who need LICENSES. Put the course right after school gets out and ending just before Field Day. We'll use the same https://www.hamradioschool.com/ materials that Reid Tillery K9RFT has proven so effective. And we can open it up to many others as well since it is primarily ZOOM. Schedule here: https://qsl.net/nf4rc/CALENDAR.html We already have instructors set up for most nights!! This is going to be a winner! **And then can we involve these youngsters in Field Day?**

Oh my, in this day and age, what a can of worms it is to try and involve youngsters in a community activity!! You have to take all kinds of precautions to prevent any appearance of "grooming" or predation... The general rule is to always have TWO ADULTS present any time a minor is involved. The ham radio club at Loften Magnet School has their own "ecomm" trailer fully equipped with a radio station and air conditioning, generator and pneumatically operated mast and 3-element beam -- and the hardest part is observing all the precautions! Bob Lightner W4GJ has taken care of all the radio gear!

ZOOM TECHNICIAN LICENSE CLASS
BEGINNING JUNE 4
7PM - 8:30 MOST WEEK NIGHTS
FULL SCHEDULE: https://qsl.net/nf4rc/CALENDAR.html

Thank goodness we have people like **Scoutmaster Ron Lewis KN4ZUJ** in our midst! And as a high school teacher I've been through all this training too. We've come up with a document to send home to the parents of these magnet school students who come from all over the county -- explaining we have to schedule their students and have the parent present throughout, for safety. We'll provide the radio coach where needed for students without licenses or without licenses that include HF. This is a huge amount of effort but we think it might be worth it to benefit youngsters. After all, the latest numbers of ham radio don't really show any ***growth*** right? Actual numbers show dropping by 34,271 Dec 2021-Dec 2024; 4% drop over 4 years.... https://sites.google.com/site/amateurradiodata/home

Satellite Rotator System--working!

I've gotten my homebrew 2-axis satellite rotator system and homebrew controller in fairly good working condition! (Construction articles coming.) Still haven't transmitted yet, but now I can hear FM and SSB satellites. The poor-man's preamp worked great! The Yagi's are doing fine. The little 1/2 RPM toy geared motor gave up the ghost (stripped gear) -- but replacing it with a 2" linear actuator was a huge home run! The linear actuator has its own limiter switches built in and it is BEEFY. Handles elevation easily of both Yagi's through the 90° gear box. Working out the bugs in my understanding of complicated K3NG Arduino code. Purchased **Sat32PC (https://www.amsat.org/product/satpc32-by-electronic-download/**) and bingo! Doppler control of the ICOM 820H suddenly worked. Looks like the combination of poor-man preamp + Ukrainian transverter + sBitx will also work, but not certain yet (and the sBitx can't do FM yet.drat!). The Icom 820H looks like a winner. More to come on this. Considering this as a CROWD DEMO at Field Day.

Fun-Filled April Lab'N'Lunch

Gordon Gibby KX4Z

We finished off the month with an incredible antenna-building **Lab'N'Lunch**. Building things is a key distinction of the Amateur Radio Service. Part 97.1 indicates building technical skills in the population is a key goal, so Amateurs are fairly unique in being allowed to build and repair their own gear. You can't do that in most other radio services without a special license.

Last year we tested 6-meter and 2-meter simplex and found that 6-meter SSB has a significant advantage over FM in covering our entire county. Likely because SSB signal detection has a significant advantage (in the 10-db range) over FM detection. And more and more hams have access to 6-meters as better transistors and MOSFETs have brought this band to popular HF transceivers.

So we came up with a PVC-based 6-meter "drooping dipole" design using a 45° elbow and a way to disassemble it so the antenna just becomes two "sticks" in a bundle, easy to transport on a deployment. We put together a "kit" and had detailed instructions and garnered SEVEN enthusiastic builders for our April Lab'N'Lunch.

Mannish KZ4KC wanted to build a 2-meter Yagi, so we leveraged arrow blanks provided by Craig White KO4ZRZ and whipped up a 4-element Yagi that can be taken apart easily for transport in his tiny BMW sports car! A modification to this design: https://www.arrl.org/files/file/QST/This Month in QST/2024/06 jun 24/06-2024 Reisert(1).pdf The arrows have inserts threaded for 8-32 machine screws. Using threaded rods allows them to combine to make the 2-meter parasitic elements easily. I had a lot more trouble with 6.5 mm arrow blanks I got from Amazon. Their inserts were too loose and I had to propane-torch weld them for securement. That works too, but Craig's worked much better. This is going to make adding the second "plane" to my satellite antennas even easier.

The 6-meter drooping dipoles were a huge hit!! Everyone was able to easily build them and then we hung them from the 2nd floor banister to trim and tune. We'll have a construction article next month -- this is a great club project.

A fun and productive learning experience had by all.

Alachua County Hams Host Thrilling 24-Hour Radio Showdown with High-Tech Twists!

Gordon Gibby KX4Z with Jeff Capehart W4UFL AI Assist

We're trying something new this year. We're exploring how AI can help us with making our Media Release more appealing to the general public.

Here is the prompt given GROK (our AI Tool) for our standard press release document:

"Help me rewrite this media release to make this event appear more fun and exciting for the average person and so that news media would be willing to help do a story before the event."

GROK's response:

It's not a finished product yet but check back next month to see Ai's take on our Field Day Media Release. Our first draft kicked it up a knoch

FREE ZOOM TECHNICIAN LICENSE CLASS - JUNE

Provided by Alachua County NFARC Club

USING https://www.hamradioschool.com/ MATERIALS

Zoom Schedule: https://qsl.net/nf4rc/CALENDAR.html (includes the zoom link)

This course goes through 13 nightly sessions -- a quality course!

All participants requested to purchase the online course from ham radio school to gain access to additional study materials.

See: https://courses.hamradioschool.com/courses/tech-course

Our volunteer instructors from the North Florida Amateur Radio Club don't charge anything.

You can get a hard-copy text (a possible alternative to the online course) at: https://hamradioschool.square.site/

(The book is excellent.)

GET YOUR HAM RADIO LICENSE!

WHOLESOME HOBBY FOR YOUNG AND OLD ALIKE.

License renewable every 10 years for life.

Quarter Century Wireless Association

Ken Simpson, W8EK Chapter 62 President

Dennis, N4KPI; Leon, K4GWQ; Randy, N4AYS; Sue, N8AJU; Ken, W8EK; Charlie, W1DOH; Larry, W9SX; Doug, W3HH;

Ocala, Florida, Chapter 62, of The Quarter Century Wireless Association held its regular meeting on August 24, at the China Lee Restaurant Buffet on East Silver Springs Blvd at 12:30 PM.

Leon, K4GWQ, talked about the North Carolina Voice of America station becoming silent.

What happens to its antennas remains unknown at the present time.

The upcoming Florida QSO Party, scheduled for the upcoming weekend was also discussed.

Chapter 62 will meet on Thursday, June 26 at China Lee at 12:30 PM.
All are invited to attend.

Chapter 62 also holds a net at 9 AM every Saturday morning on 3940 KHz. Please join us.

New Gainesville VHF FM Repeater Born!

by Gordon Gibby KX4Z

During one of the recent hurricanes our primary and long-faithful K4GNV 146.280 Gainesville Amateur Radio Society (GARS) repeater lost power -- and our deployed ARES(R) team had to scramble to maintain comms during tropical storm/hurricane winds. That got us thinking about more backups -- and Jim Carr KC4MHH helped out the GARS folks with some replacement tower/equipment options as their antenna had taken a "hit" also.

Well, then we became aware that there was "space" (but not an antenna) available on a tower atop the Alachua County Admin Building downtown, on high ground and on top of a 5-story building! **And a building with backup generator power, too!** We were offered the chance to install a repeater there, and we jumped at it! Jim Carr KC4MHH was hugely instrumental, providing at no cost an older analog VHF FM repeater and duplex cavities.

This is "new" for most of us (even though we're already an ARRL Special Service Club for all of our digital assets provided the community) and we had a lot of *idealistic* thoughts. Wanting extremely high gain, we purchased a 17-foot dual-band collinear antenna. The county won't allow "climbing" of the tower so we had to just use a ladder and we thought we could install it several feet offset using a strut system similar to what we used at Beatty Tower years before. Lots of idealism! (It would have been much, much easier, just to put in an 8- or 10-foot antenna.)

Came the installation day and Murphy was definitely in attendance! Tim (Alachua County Radio Shop), myself, Jim Carr KC4MHH, Leland Gallup AA3YB and Dave Huckstep W4JIR had no idea what awaited us up on that roof.... The 12-gauge Unistrut's from Lowe's had (thankfully) been cut to 6-1/2 feet long, but standing on that 5-story roof with the wind whipping at 20mph gusts, interest in creating huge torque on the tower by mounting a 17-foot antenna WAY off the side **evaporated like spilled Coke on a Miami sidewalk** in August! Then we found the pipe-clamps were ALL too large and would not grip either the tower or the antenna mount. A quick emergency trip to Lowes got almost every possible remaining size clamp -- and the 1" clamps worked! But then the N-connector on the LMR-400 coax (yes, we know what the galvanic issues are.) ***fell apart***. Oops! (We were NOT the people who had installed it.) Glad that happened BEFORE we mounted the antenna. Jim Carr rapidly reinstalled new connectors (the one on the other side came apart, also). We also had problems mounting the antenna support brackets on the Unistrut's -- new bolts/washers solved that also.

Brave David Huckstep W4JIR climbed the ladder (zip-tied to the tower for safety) and started the process of mounting the first Unistrut -- and discovered that is MUCH harder on the top of a ladder in 20mph winds. Everything is harder "up there!" He got the 2nd horizontal strut up -- and then had huge difficulties getting the bottom antenna sleeve to align into the support brackets, because the *Unistrut's kept moving*. Finally the sleeve went in -- but deeper than we wanted.

Next Dave had to man-handle the 17-foot antenna by its lower end to get it to slip into the sleeve -- against the 20mp gusts -- and my heart almost stopped a time or two watching! When he finally succeeded (without destroying the coax) -- the "radials" were preventing the installation of the securement bolt because the sleeve was deeper(Lower) in the brackets than desired. That resulted in another 15 minutes of very very scary juggling with the 17-foot antenna unsecured, as Dave tried to wiggle the sleeve just a little higher. Hooray, before they had to cart me off to the ER he succeeded without falling off the ladder!!

Now the securement bolt installed, Dave had to wiggle both unistruts AND antenna out away from the tower, without anything "coming apart." The wind had really gotten everyone's attention, so visions of 5 feet offset vanished and we settled for about 3 feet at best. Hooray, we could get Dave OFF THAT LADDER!!

The thing works!! *Well...sorta!* We aren't yet getting the receiver performance we expect, so we suspect the duplexer got slightly out of tune during transport -- plan is for Jim to get back in there later this month and re-tune to avoid desensing.

When you're working with a government facility, you can't just waltz on up there any time you want. It has to be arranged, and people have schedules, and vacations -- you just have to be PATIENT. Relationships! Jim Carr has built those relationships over many years, and has time working with many of these government groups, also.

Even when we get everything perfectly adjusted, it probably won't have the range of the K4GNV 146.820 magnificent repeater at 300-500 feet, **but it has power backup** which is very important to our mission, and Dave was able to hit it all the way from Jonesville. This is going to be a huge help to our backup comms in Alachua County.

Frequency (so far) KC4MHH 145.120 - 600kHz Tone 123.0 These may change.

Building a "Poor-Man's" Amateur Radio Satellite Ground Station
Part I: Introduction

Gordon Gibby KX4Z

The goal of this multi-part series is to **build up an inexpensive working amateur radio satellite ground station** -- not to "buy" one. In decades gone by, many hams built their entire stations, including all their radios, from scratch. It is beyond many of us (who have other hobbies and vocations and obligations in life) to solder together complete vhf/uhf transceivers. However, it is **well within our grasp** to piece together many parts of ham radio stations from parts or second-hand or inexpensive equipment, and still get workable performance -- and the learning that accompanies this accomplishes part of the goals expressed in Part 97.1 for the Amateur Radio Service.

How I Got Interested

Our local ham radio group was having a tough time in the satellite arena in summer or winter Field Day. Yet one of our crew managed an AX.25 connection to the Russian digipeater aboard the International Space Station with nothing more than our EOC VHF packet/VARA digital station! That got me thinking: "How much more could we advance with a bit more knowledge and equipment building on our own?"

It seems that success in this field requires

1. Somewhat directional/high-gain VHF and UHF antennas (or omni-directional antennas and very high-gain preamplifiers!);
2. Filter separation between the two bands, to allow full duplex operation and protect receiver front-ends,
3. Some means of aiming the antennas that is driven by mathematical models of satellite position, and
4. Full-duplex (simultaneous receive and transmit) radio gear.

And Then:

1. Computerized (automated) Doppler correction of frequency control and
2. Sufficient receiver sensitivity (or low enough noise figure) to dig these incoming signals out.

Radio Signal Path Budget

Basu (VU2NSB) explains many factors affecting the received signal and calculates that reasonable received signal level are indeed possible from a low power satellite 1000 km above the ground station (https://vu2nsb.com/radio-propagation/space-radio-propagation/). This is really possible with ordinary radios!

Commercially Available Antennas/Radios

VHF and UHF directional antennas are plentiful commercially, but can also be built at home with simple tools. Second-hand transceivers, or HF transceivers with transverters and suitable preamplifier appear to be sufficient for the radio gear.

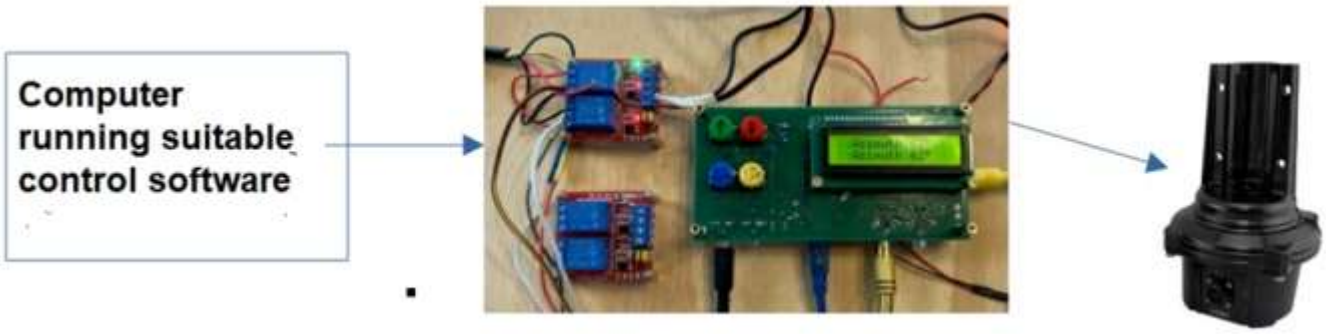
Commercially Available Rotation Systems

While one-off communications can be accomplished with hand-aimed antennas, my goal was for a repeatably successful system, so mechanical aiming is necessary. There are popular off-the-shelf dual-axis rotator systems available (e.g. Yaesu G-5500) and commercial control systems (e.g. the quite pricey Yaesu G232B interface, or the more reasonably priced S.A.T. control by CSN Technologies http://www.csntechnologies.net/sat) but even simpler and homebrew-capable systems are well-developed, particularly the K3NG Arduino-base dual-axis controller.

The method of prior years to achieve computer-control rotators looked somewhat like this:

Continued on next page...

However, the homebrew-capable Arduino-based controller reduces it to this for general purposes:



This allows low- or zero-cost satellite aiming software to be utilized with very inexpensive rotator systems -- even homebrewed rotators made from powerful linear actuators, and simple attached potentiometers for angular measurement. So I decided to go that route instead of the "off-the-shelf" purchase route.

Future parts of this multi-part series will tackle

- Building the rotator controller system, using a printed circuit board I've created;
- Assembling physical rotators and potentially building your own elevation system (to avoid the $700 G5500 expense);
- Fabricating 2-meter and 70cm directional antennas;
- Radio equipment, sensitivity testing and improvement with an inexpensive GaAs preamp;
- Duplexer filtering; and hopefully
- Finding and connecting with currently available satellites.

We start off with a table explaining satellite ground station software that I've used:

No.	Name	Function	Available at: Training at:
1	***gpredict*** (There are many similar programs available)	Displays chosen satellite courses and footprints; does calculations to predict Doppler, arrival of signal, loss of signal etc. Available for both Linux (raspberry pi) and Windows	Files: https://sourceforge.net/projects/gpredict/files/ Excellent manual: https://sites.science.oregonstate.edu/~hetheriw/whiki/psp/main/base/files/gpredict-user-manual-1.3.pdf

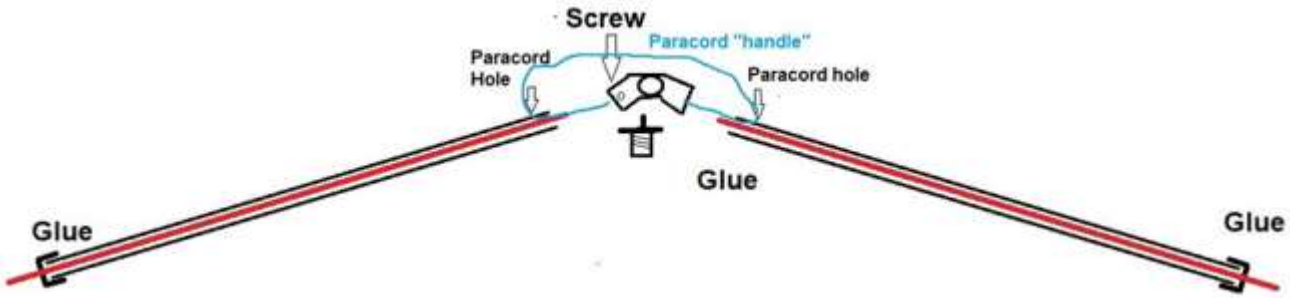
Continued on next page...

No.	Name	Function	Available at: Training at:
2	***rigctld*** (part of hamlib) (Keyboard user version: rigctl)	Interfaces with a variety of radios to command Doppler corrections and/or uplink/downlink frequencies. Available for both Linux (raspberry pi) and Windows. Part of the hamlib series, rigctld has workable provisions for controlling two separate radios (one transmit, one receive) and this is a viable option. Unfortunately, rigctld doesn't work well to provide full-duplex Doppler correction to the Main/Sub ICOM 820H that I used. Available modules don't appear to properly handle the "main/sub" dual-frequencies. For controlling a single duplex Icom transceiver, the AMSAT-provided **Sat32PC** software appears superior, even if slightly dated.	Comes in a package: https://sourceforge.net/projects/hamlib/files/hamlib/ Includes both rigctl files and rotctl files; multiple versions available for different operating systems. Man pages widely available. For example: https://www.mankier.com/1/rigctld
3	***rotctld*** (part of hamlib) (Keyboard user version: rotctl)	Interfaces with several different rotator computer control languages. (Doesn't actually turn the motors on or off or read the angles, just tells downstream system the angle to go to). I preferred using the G-232B language, which the K3NG Arduino-based controller (subject of a future article) happily accepts. Available for Linux (Rpi) and Windows.	Comes in the same package as ***rigctld*** Man pages widely available. For example: https://manpages.ubuntu.com/manpages/trusty/man1/rotctl.1.html
4	**Sat32PC**	This tried-and-true software package by amateur DK1TB (available on the AMSAT web page) has worked to control BOTH TX and RX frequencies of my IC-820H without problems. It also provides rotator control, 1- or 2-axis. The rotator control works with an amazing number of rotator systems, but isn't quite as "elegant" as the system inside gpredict. This package is only available for Windows PC computers.	Download the program and then send in your payment ($45/$50) to get the registration key. https://www.amsat.org/product/satpc32-by-electronic-download/

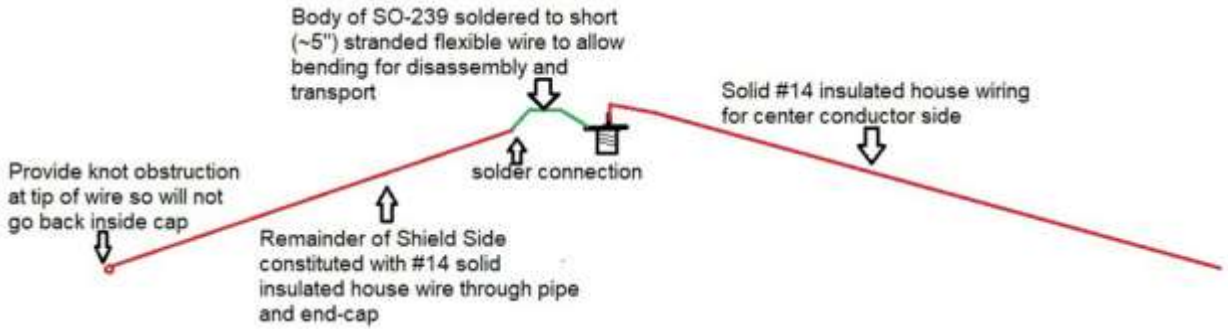
6-Meter Drooping Dipole Manufacture April 2025

Gordon Gibby Kx4Z

Diagram of Overall Construction:



Detail Diagram of Wiring



1	Prepare the side PVC pipes	Cut two pieces of 1/2" PVC to 46" in length for the sides of the drooping dipole Drill 3/16-1/4" holes about 3 inches from the ends that will be the center, to allow passage of a paracord loop.
2	Prepare the SO-239 connector.	Solder approx. 5" length of stranded flexible wire to the shield portion of SO-239 bulkhead connector. Heat up just an edge or tip of the SO-239 with a suitable soldering iron and lay pre-tinned 1/4" wire tip flat against it for strong connection. Difficult to heat entire connector, so work only on an edge.
3	Cut holes in the elbow connect-or for the SO-239.	Cut a 5/8" dia. hole in one side of the PVC 45° elbow to admit the SO-239This is best done with a "flat blade" spade bit that *doesn't* have sharp points at the edges. It is very difficult to do this with a normal drill bit because the pitch on the bit will dig into the PVC Working slowly with a straight spade bit will succeed. Drill at least 2 holes to admit the #6 sheet metal screws that will later se-cure the bulkhead connector, using either a 1/8" (.125) or slightly smaller drill bit. Drill one hole to admit the shield-wire, 1/8" or slightly larger.

Continued on next page...

4	Cut the wires for the two elements of the dipole	Use #14 solid (easier to slide down the PVC tube) Formula for a dipole is approximately $468/f_{MHz}$ in feet for total length, and half that for each side. For 50 MHz, each side should be approximately 4.68 feet, or 4- 3/4 feet roughly. Cut two pieces of wire slightly longer, approx 4feet 10 inches.
5.	Connect to SO-239 connector	Solder one wire to the center pin, adding either electrical tape or heat shrink tubing to insulate the connection. Drill a hole as needed to pass the 5" piece of stranded soldered to the bulkhead connector to pass inside the 45 degree elbow, and solder a splice to the remaining #14 solid wire. Cut the total length to approx. 4 feet 10 inches.
6	Install the SO-239	Feed the center wires through the 5/8" hole. Secure the SO-239 with 2 #6x3/8" or #6 x 1/2" metal screws (stainless if you plan to leave it outside)
7	Drill holes in end caps	Drill a suitable hole through the center of two end-caps. Approximately 1/8" - 3/16" should pass insulated #14, which has a dia. of 0.105" wire
6	Run center-pin wire	Run the center-pin wire through a prepared length of PVC pipe of length 46" , and through one of the drilled caps. Press fit the pipe into the elbow and the cap onto the pipe
7.	Run a paracord handle	Run paracord into the side hole on one pipe, through the elbow and out the side hole on the other pipe -- tie the two ends together with a "pig's tail" or square knot, to secure
8	Run "shield" wire	Run the other wire through a prepared length of PVC pipe of length 46", and through the other drilled cap. Press fit the pipe into the elbow and the cap onto the pipe
9	Trim the antenna length	Suspend the antenna in reasonably free space away from metal objects and at least 6 feet off the ground. Adjust the length of the wires sticking out of the end caps for desired resonance. Adjust the pipe lengths if necessary. You need a bit of slack in the wire on the side you wish to leave unglued. Put a single "pig's tail" knot at the END of the wire, outside the end cap, so that the wire can move as you pull the pipe out of the elbow for transport. On the fixed side, you can put a pig's tail knot near the exit hole to keep the wire from moving inside and bunching up.
10	Secure the PVC	If you wish to make it transportable, glue one side completely but keep the pipe-to-45^{o} elbow unglued on the other, and insert a #6x1/2" screw to allow it to be made temporarily secured.

County ARES News

J. Gordon "Gordie" Beattie, Jr., W2TTT

Overview

Well we had quite a month during April getting ourselves "tuned up" for the Simulated Emergency Test (SET) and the 2025 Hurricane season! Our attendance in Section and Statewide nets was a bit light, but we had our weekly Suwannee County ARES Net on Sunday evenings at 8:00 pm ET on the 145.27 MHz (Tone: 123.0 Hz, -600 kHz) W2TTT repeater. We made up for our daytime "misses" by being prepared for the SET and the upcoming 2025 Hurricane season!

SET and Hurricane Season Prep

Computers and radios had their software updated and various modes of Winlink operation were tested to develop and refresh "muscle memory" in how to perform various functions. We tried exchanging email over the air and over the Internet in both directions. We then tested peer-to-peer over the air and sending a text message to a cell phone via Winlink. Of course checking your audio levels and control parameters and saving them electronically or on paper is an important part of your preparations, so make sure that you take the time. It will save you heartache under pressure.

Making sure that you have the current Winlink email and VARA modem software is a starting point. There are support files for propagation and forms and if you haven't done it yet, PAY for the VARA license. The licensed version of VARA ups your speed substantially and also enables the digipeating in VARA FM. Further, if you have multiple computers running the VARA modem software, make sure that you copy your license file to the other computers.

We also did a bit of checking on our HF, VHF and UHF antennas and ran some tests of their operation and coverage. This was done at the KK4RQY EOC station and in the stations of Mike KM4BTW, Joe KI4TRR, Mark KN4FRM, Nancy N2FWI and Gordon W2TTT.

The "Distributed EOC" and "Buddy Stations"

The SET went very well because we had a plan and executed on it. Even with a limited number of operators were able to demonstrate that having a "Distributed EOC" with "buddy station(s)" directly supporting the EOC station was doable and more effective. With a limited number of available operators, we focused on a variant of what has happened here for several recent hurricanes. Because of the limited wind rating of our EOC, the Emergency Management staff is often relocated to a local school where none of the well-prepared backup communications facilities are available. Under these conditions, if there was a cyber attack, we would depend on VHF-UHF voice or possibly packet radio to get traffic in and out of the relocated/temporary EOC.

This operations model requires a planned effort to access and possibly deploy a buddy station. We had planned for this and have included backup radios and antennas for HF-VHF-UHF in the EOC and for "buddy stations" in our preparations.

Buddy Station Benefits

We noted that one or more buddy stations allowed our operators to operate on multiple frequencies in the same band at the same time without interference. Further, buddy stations could be more effective than even the normal EOC station due to the availability of better equipment, space for antennas and improved access to those with whom we must communicate.

We were able to handle all the injects by relaying the messages or situational information by VHF voice on battery-backed up repeaters or simplex to a buddy station. These were then converted into Winlink messages as appropriate. We were also able to establish contact with adjacent counties on VHF simplex.

More training in advance or at meetings on the Winlink Catalog retrieval process and other "boutique" actions. It turned out to be rather quite simple, but with a limited staff, we had dismissed the idea of trying it.

Continued on next page...

Thoughts For Future SETs

In future exercises, we would love to see an inject for each of the participating counties to coordinate a local/regional traffic channel move via SARNET while preserving order on SARNET. There are times when HF doesn't work and a repeater or simplex path needed to support a local issue needs to be coordinated. Testing how to arrange for the change efficiently while giving priority (or not) to traffic for or from the State EOC would be enlightening as traffic precedence management on a multi-level user platform is often an issue on SARNET.

In a future drill or SET, we would like a POTA-like exercise scenario where the EOC is out of commission. Then a real or simulated alternative is stood up in a POTA-like station mode. It would contain at least one HF and one or more VHF-UHF radios. This station would then be supported by one or more home, portable or mobile stations in a distributed EOC "buddy station" operation configuration.

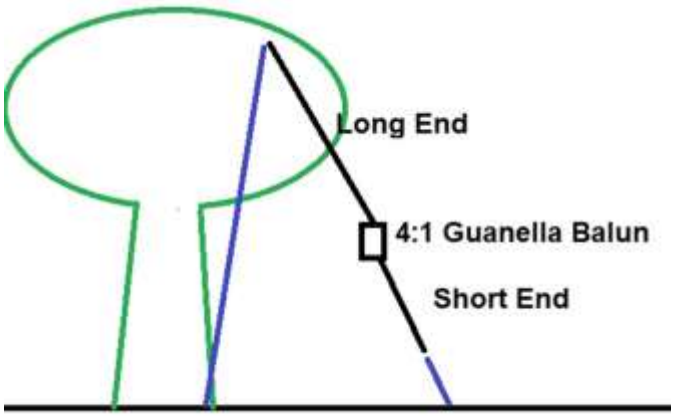
Summary

Overall we were quite proud of our performance during the SET. We moved twenty-one pieces of traffic mostly driven by injects of thirteen messages as some were originated in the EOC as a voice message that had to be formatted and relayed via Winlink. We also were able to have FM Simplex contacts and traffic flows with stations in Madison County. All traffic was

Center Fed Sloper Dipole with Guanella Balum

Gordon Gibby KX4Z

Our NFARC Alachua County volunteer crew has home-brewed multiple HF wire antennas in our ongoing Field Day efforts; these also make readily-deployable HF antennas for our group. One of my favorites is the 65-foot off-center-fed sloper dipole, with an extremely low-loss built-in 4:1 Guanella Balun. Hanging this (long end UP) from a tree and sloping it such that the terminus of the shorter end is still 5-10 feet off the ground gives less signal loss in Florida low-conductivity soil, and a slight directivity toward the ground end. So we hang it to point NW for Field Day. If another suitable support (read: *tree)* is available, we sometimes separately support the Balun.



ARRL Field Day is Coming

Field Day is less than 2 months away, and if your club is not already planning for it, now is the time to start. Field Day is the largest event for hams in America each year. Hundreds of people will gather in locations that allow them to operate and hopefully promote amateur radio and the many facets of the hobby. Each club approaches the event differently. Field Day is not a contest, but many treat it as one. Clubs do not win Field Day, but the bragging rights of putting up a multi-radio station and operating through the night encourages many. Teams set up and operate until they get tired in the evening, then they go home and start again in the morning.

CQ CQ CQ,

DJ Stewart, KI4ZER , Assistant Section Manager, President, W4AAZ, W4ZBB

You are invited!

Calling all Radio Enthusiast, Amateur Radio Operators, GMRS, FRS, CBRS, Aviation Band, Shortwave, Communications Dealers, Wholesalers, Distributors, and anyone else who loves or is involved in all modes of radio communication! Gather your gear, set-up your booth, and partake in one of the BEST Hamfests in Sunny Florida! Over the nearly last half of a decade, the North Okaloosa Amateur Radio Club in Crestview Florida has been hosting an absolutely wonderful Hamfest! This Annual Autumn event is lauded by many and always brings out a surprise or two during it's course! Stay tuned with the links below to follow along for more announcements!

Bolstering 40,000 useable square feet, this facility offers ample space inside with HVAC, restrooms, refreshments, meal hosting, ample parking and more! the house is packed with Vendors and Patrons alike filling the capacity of the facility!

What: Noth Okaloosa Amateur Raduo Club's Annual Autumn Amateur Radio Hamfest!

When (Day 1): Friday October 10th, 2025, **VENDORS SET UP ONLY** 1030 - 500pm. NO SHOW.

When (Day 2): Saturday October 11th, 2025, **0600 Vendors, 0800 Show Start** and goes until 100 pm!

Where: 1446 Commerce Drive, Crestview, Florida in the Crestview Community Center! Do not let them name fool you, this place is massive!

Admittance for Visitors & Guests: $8.00 each person. Boy Scouts in Uniform FREE! 12 and Under FREE! 90 and above FREE!

Prices: Vendor Tables/Table Spots: $15.00 each spot/space/table (good for the entire show). First reserve first served. If you are a walk-in the day of the show, tables may be limited as this show typically sells-out.

Food: Meal & bake sale services provided by Live Oak Baptist Church! Menu to be announced! If you recall them in the past, you know you're going to be eating just as well if your grandmother was baking you a pie for that after dinner desert!

TALK IN: 147.360, +, 0.6, 100 Hz Tone

Want to have us advertise your business as attending? just email us or drop us a line!

Activities Offered:

Liscense Testing at 1000 Saturday, Oct 11th, 2025!

- Refreshments!
- Local Vendors!
- National Vendors!
- Area Club Booths and Tables!
- Private Individual Tables!
- Raffles & Prizes!

Continued on next page...

Links to the Hamfest Website(s):

- W4AAZ.ORG—https://w4aaz.org/noarc/hamfest-2025/
- ARRL.ORG—http://www.arrl.org/hamfests/noarc-annual-hamfest
- NOARC Facebook Page—https://www.facebook.com/NorthOkaloosaARC/
- NOARC Instagram—https://www.instagram.com/noarc.fl/

Contact Information:
Hamfest Hotline 850.359.9186 or email: NOARCINC@Gmail.Com

Be sure to reserve your tables with NOARCINC@Gmail.Com

What has you Hamming on?!

DJ Stewart, KI4ZER , ASM, President, W4AAZ, W4ZBB

In the last few weeks high energy has been seen, given, experienced, and shown! This is because 90 percent of everything is showing up! In doing so, inspiration can and will strike for yourself and those that are around you. Word of moth travels the fastest and the farthest! Nowhere is that truer than in your own backyard (so to speak)!

- ⇒ Volunteer in Cubs and Organizations
- ⇒ Participating in local Politics
- ⇒ Travel to areas outside of your immediate location.
- ⇒ Dedicate time for training and expansion.
- ⇒ Recruit & promote positivity in Amateur Radio
- ⇒ Log contacts and annotating experiences.
- ⇒ Utilize social media, e-mail, & other forms of communications to speak about Amateur Radio
- ⇒ Contest, DX, CQ, QSL, experiment.
- ⇒ Learn from others but make it your own.
- ⇒ Pick up the microphone!

Prime examples in the past month include travel to multiple tailgates, gatherings, and events hosted by lone hams and organizations alike! Where do you ask?! To start, Daleville, Alabama, Panama City, Florida, Headland, Alabama, Valparaiso, Florida, and more! Seeing how others operate, communicate, experiment, and welcome others is an important part of expansion in this wonderful journey we call Amateur Radio! Be proud of being a part of this and embrace every opportunity you can! What you learn and share will bring others together and continue to develop the future of our passion in communications!

What have some of the clubs been up to as of late in Okaloosa County Florida other than traveling and participating in events at other locations?! Well, the folks at the Playground Amateur Radio Club have been working heavily on Clubhouse improvements and portable operations! Upping their game, members have been building personally owned deployable kits to take to display to the public in multiple events! These events include communications assistance with community runs that support Autism awareness, education booths to the public such as fairs, festivals, and Hurricane Expositions! PARC even hosted a FOX hunt on World Amateur Radio Day! W4ZBB.ORG

The North Okaloosa Amateur Radio Club has been teaching a class of new and perspective Hams to get more people licensed and active in the Ham and local community! Not only that, but NOARC has been active in hosting runs as well with assistance from the PARC team while also continuing with Club Trailer improvements and training people on station operations while Elmering and mentoring antenna builds! Keeping the energy going, NOARC has also been developing exceptionally energetic and informative Technical Nights! You do not want to miss them! W4AAZ.ORG

Discussions of interest! The more you explore, the more you will learn! So, what are some of the active and ongoing conversations occurring concerning new developments in Amateur Radio? Glad you asked! Ai in Ham Radio? Yes! As technology evolves, so does experimentation to incorporate it to make things easier for the operator. “But is it really Ham Radio?”. That is for you to decide. If you were around last century and involved in the hobby, you may recall some operators questioning advances in technology like the capability to link repeaters via analog microwave links and then eventually digital signals over internet protocol. Today, those linked repeaters are more prevalent and seen as a viable standard. As we expound into the next phase of capabilities, we approach things with an open mind and continue to experiment and determine our own preference for radio communications and the technologies that aid us in doing so.

Artificial Intelligence in Signal Processing

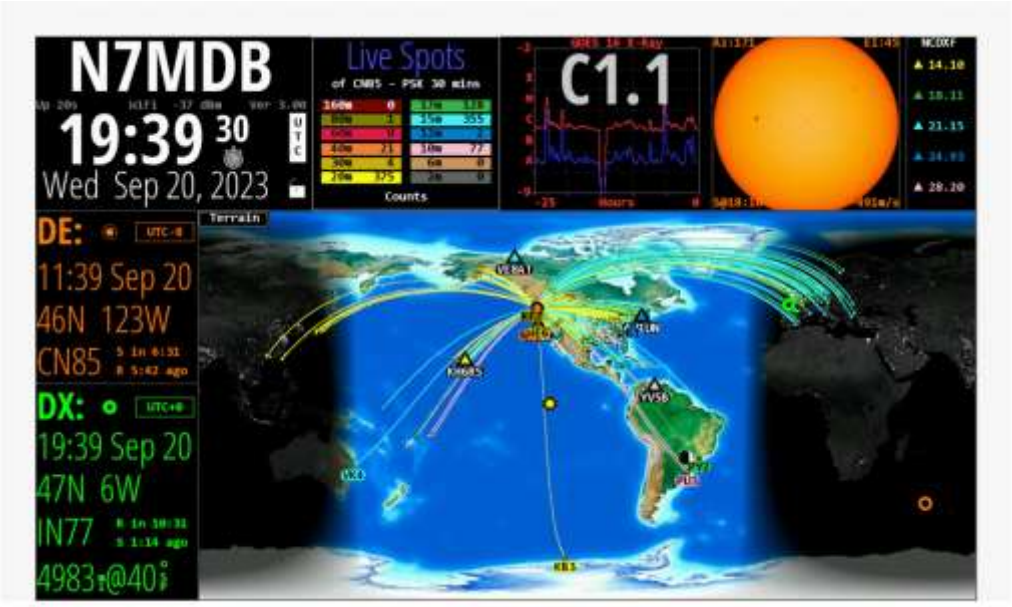
The Open Research Institute (ORI) is pioneering the use of deep learning for decoding radio teletype (RTTY) signals, evolving from recognizing individual characters to processing entire messages. This AI-driven receiver technology, termed DeepReceiver, represents a significant leap in intelligent radio reception and has been accepted for publication in ARRL QEX magazine.

So, what is next Amateur Radio?!
Well, that depends on you. As you can determine from the above, space is the limit with operations on the ground continuing in true radio form. Whatever piques your interest, your objective and open mindedness is needed. We, the current generations of Amateur Radio Enthusiasts, as passionate as we are, must take action to inspire the next generation. But not only that, we need to learn from the up and comers who show interest. The way we communicate is different these days than the ways we learned or practice. So were the ways and practices of those before us. How do you share while hearing from others to accept new ideas and bring in those who wish to be involved? Do not rush to an answer on that. Think about it. Write it out. Save the file or plan, then come back to it later and review it. After you review it, act on it. Take the action to be involved and get the word out about positively recommending Amateur Radio as a social and sustainable interest in your community. Remember to find a way to relate it to the interests of those you speak with. IF you can make it interesting to them and make Amateur Radio practical to someone in their daily life, the prospective operator or licensee will participate regardless of the former, current, or future technology and capabilities. We are here to arouse interest. All of us. Join in and participate actively!

A $50 Greyline Map for Your Shack

Jim Kvochick K8JK

You want a fancy clock and radio information display in your shack like this, right?



Of course you do. You just want someone else to do most of the legwork in making it all happen. Well for 50 bucks, and a user supplied HDMI monitor, this can be in your shack, up and running in under 20 minutes.

Hamclock is a software application created by Elwood Downey WB0OEW and is available at Clear Sky Institute. There are tons of instruction pages and YouTube videos on installing this on Raspberry Pi processors.

I've written about the Inovato Quadra many times before, especially during the shortage of Raspberry Pi units as the world stumbled through the COVID epidemic. You can read about them and other little things that I've tinkered with on my blog, "Reflections From Both Ends Of The Feedline" at https://k8jk.wordpress.com
I have the little computers sprinkled around everywhere.

The Inovato Quadra was the brainchild of Michael Burmeister-Brown N7MDB. I suspect it was a little urging from the amateur radio population that helped set the stage for the next generation of software, that includes all kinds of pre-installed amateur radio-oriented applications, including Hamclock. In addition to new software, Michael has added a cute little fan, 3D printed stand, and USB hub to the bundle for $49 plus taxes and shipping.

It will probably most folks longer to take the unit out of the package than it will to set up the software to run the Hamclock application.

The $49 package includes:

- Inovato Quadra with current software load
- USB Power Supply
- 4 Port USB Hub
- 1 USB Mini Fan
- 1 3D Printed Stand

You can add a cute little keyboard for another $10 but I'm guessing you have a USB keyboard and mouse handy. I use a Logitech K400R keyboard for most of my radio projects, because it's a little bigger and includes the trackpad built in.

Continued on next page...

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- 4 Port USB Hub
- 1 USB Mini Fan
- 1 3D Printed Stand

You can add a cute little keyboard for another $10 but I'm guessing you have a USB keyboard and mouse handy. I use a Logitech K400R keyboard for most of my radio projects, because it's a little bigger and includes the trackpad built in.

I also used a "Black Friday" TV with an HDMI port for the monitor, strapping the Quadra to the back of the monitor hanging on the wall.

If you already have a Quadra, and would like to update the hardware, no worries. The Inovato.com has an ordering section for the legacy components.

Additionally, you can buy a MicroSD card with the new software, or follow these steps to create your own:

Items you will need:

1. A computer (Windows/Mac/Linux) with an SD or micro-SD slot or USB adapter.
2. A 16GB or larger **micro** SD card. Ideally a microSD card with adapter so it can be used in standard or micro slots. Note that if you get a 32GB microSD card or larger, you can also use it to make backup, so a good investment.

Step 1:

1. Download and install Balena Etcher (https://www.balena.io/etcher)
2. Download the Quadra firmware (https://www.inovato.net/quadra-awh6-current.img.gz)
3. Insert the SD card into your computer's SD slot
4. Launch Balena Etcher
5. Select "Flash from file". Select the Quadra firmware you downloaded above
6. Select the drive containing the SD card (its size should match your SD card size) under "Select drive"
7. Click "Flash"

This will take several minutes and will create your Quadra installer & recovery SD.

Step 2:

Unplug or don't connect a monitor at this point as the installation is automatic if one is not connected. Insert the SD card into the Quadra (the almost invisible slot next to the blue USB connector) and plug in the power adapter.

The front panel LED (light) will briefly turn red then blue while the Quadra boots, then turn red again while flashing the internal ROM. This will take about 10-20 minutes. When it is done, the LED will turn blue.

Finally, unplug the Quadra, remove the SD card, connect the monitor, keyboard and mouse to the Quadra and reconnect it to power. After a few seconds you will see the Quadra logo. A few moments later, the full desktop will appear. You may want to change your password again as it will now be the Quadra default 1n0v@t0.

You might want to order two of these, because there are lots of other useful preinstalled amateur radio applications to explore included in the new distribution. Be sure and read through the manual that Elwood prepared for Hamclock, to unlock all the cool features of this tool. If you have issues, just reach out. (k8jk@outlook.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

Hernando County Amateur Radio Association (HCARA)
2nd Thursday of each month at 6:00 PM
For details and to register—http://www.hamstudy.org and go to **Find A Session**
Exam cost is free. FCC charges do apply

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