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March 202



From the Shack of the Section Manager

Scott Roberts, KK4ECR (<u>kk4ecr@gmail.com</u>)



Wow! What a fantastic time at the 2025 Orlando HamCation! It was great to see so many of you there, catching up, sharing stories, and, of course, talking radio. A huge thank you to everyone who stopped by to say hello and those who joined us for the All Florida Section Forum on Saturday. Your enthusiasm and dedication to the hobby continue to inspire me, and I appreciate every conversation, idea, and handshake.

Exciting Legislative News for Amateur Radio

There's some promising news out of Washington for us! The Amateur Radio Emergency Preparedness Act has been reintroduced in both the Senate and the House. This legislation aims to restore the rights of Amateur Radio operators to install the antennas needed to serve our communities—especially during natural disasters when reliable communication is critical. This is a big step forward, and I encourage you to stay informed and support efforts that protect and enhance our hobby. You can read more about it here: <u>ARRL News</u>.

ARRL Dream Station Sweepstakes – Don't Miss Out!

Who doesn't love the idea of winning an Icom Dream Station? ARRL has launched an incredible sweepstakes where you could walk away with an IC-7760 HF/50 MHz transceiver, an IC-PW2 amplifier, and a microphone, all generously donated by Icom America. Whether you've been a long-time member or you're just considering joining, this is a fun way to get involved and maybe even walk away with some serious radio gear! The sweepstakes runs all year long, so check it out here: www.arrl.org/DreamStation.

The Key to Healthy, Thriving Amateur Radio Clubs

Let's talk about something near and dear to my heart—our Amateur Radio clubs. Clubs are the backbone of this hobby, fostering new hams, providing mentorship, and keeping local repeater systems alive. However, clubs can't thrive without active promotion and fresh faces. We need to continually recruit new members and keep our meetings engaging!

A Few Simple Ways to Keep Your Club Strong:

Make Promotion a Priority – Regularly post news about club meetings, Field Day, and events. Use social media, newsletters, and local news outlets.

Welcome New Hams – Reach out to newly licensed operators and personally invite them to meetings. A friendly handshake and a welcoming atmosphere go a long way.

Spice Up Club Meetings – If every meeting feels like a business session, members will stop showing up! Keep the admin talk short and focus on fun, educational programs. Need ideas? How about:

Guest speakers on topics like ARES, Skywarn, or antenna-building

Hands-on demonstrations and build nights

- Radio trivia with small prizes
- Show-and-tell nights (bring in cool gear and share stories)
- Field trips to local TV/radio stations or emergency management centers

If your club doesn't have a Public Information Officer (PIO), now is the time to get one! A PIO helps spread the word and ensures Amateur Radio stays in the public eye. Every club should have one.

And one more thing—if your club is a 501(c)(3) nonprofit, make sure your leadership understands the legal and financial responsibilities. Missteps in handling donations or Silent Key estates can cause unnecessary headaches. A little research goes a long way!

Why Every Ham Should Be an ARRL Member

I get it—some people had a bad experience with ARRL *twenty-five years ago* and still hold a grudge. But here's the thing: the past is the past. The question we need to ask ourselves is, what are we doing for the future of Amateur Radio?

Love it or hate it, ARRL is our voice when it comes to spectrum protection, advocacy, and education. Strength comes from numbers. Without membership and support, we weaken our ability to protect and grow this hobby. No, ARRL isn't perfect. But then again, neither is the USA—and I'm not about to leave the country!

I recently came across a great video by a fellow ham on why

ARRL membership matters. If you've ever doubted the value of being a member, I encourage you to watch it and share it with others. It might just change your perspective. <u>Why Every Ham</u> <u>Should Be An ARRL Member.</u>

As always, my inbox is open, and I look forward to hearing from you. Until next time—73 and keep the airwaves alive!

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.

I wanted to pass on a couple of upcoming dates you will want to mark on your calendar.

First, our annual NFL SET will be on April 12. Be watching the ARRL NFL site <u>https://arrl-nfl.org/</u> and your email for details.

We will also hold another NFL Section Town Hall in the next month to discuss Field Day. Again, details will be posted on the ARRL NFL site and sent out via email.

Thank you for trusting me to be YOUR Section Manager,

Scott

From the Section Emergency Coordinator

Arc Thames, W4CPD

From the Section Emergency Coordinator

I am pleased to announce that the date has been officially set for the 2025 statewide AUXCOMM exercise – Saturday April 12, 2025 starting at 0900 ET/0800 CT. Communications teams interested in participating should visit <u>floridaemergency.net/</u> <u>exercise</u> for full details and team signup. A little teaser of this year's exercise:

Florida is under siege as **Cyberstorm** unfolds—a devastating outbreak of tornadoes wreaks havoc across the state, crippling infrastructure and overwhelming emergency services. As the chaos peaks, a coordinated cyber-attack strikes, taking down internet and cellular networks statewide. With communications in disarray and panic spreading, emergency responders and amateur radio operators must step up to restore order and relay critical information. This exercise will test participants' ability to adapt, communicate, and coordinate in the face of simultaneous natural and cyber disasters. Are you ready for **Cyberstorm**?

Monthly Radiogram Challenge

I brought back the monthly radiogram challenge this year to help our volunteers and new operators practice using the NTS. For this month's question, "If you were to lose your internet & cellular service at the same time, where would you turn first for information?" You can use Winlink to inject a message into the NTS but it must be sent to via the NTS, not direct to W4CPD. We have full videos and instructions on using the NTS on our website at <u>arrl-nfl.org/nts/</u>

Hamcation

A huge thanks to everyone who stopped by to say hello or attended one of the many sessions. It seems to be a recurring theme every year, but "relationships" was our main focus. Whether it be with each other or the agencies we serve and partner with, at the end of the day, the relationships are what matter the most. What we do in emergency communications is 10% technology and 90% relationship. Knowing your community partners, neighboring agency teams and beyond is critical to being able to get things done and even get supplies and equipment in when necessary.



Website updates

If you find information that is out of date on the section website (arrl-nfl.org), please fill out the <u>online form</u> 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 13 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 1,196 hours of service to our communities. Thanks to the following counties for providing their reports: Alachua, Bay, Citrus, Escambia, Gilchrist, Leon, Madison, Marion, Santa Rosa, St. Johns, Sumter, Suwanne, and Walton.



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. <u>www.ARRL-NFL.org</u> 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 <u>earl.mcdow@gmail.com</u>.

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**! <u>https://arrl-nfl.org/wp-content/</u> uploads/2021/12/2021QSTNFLIndex.pdf

What's Inside...

Section Manager Section Emergency Coordinator Index Playground Hamfest Technician Class Ham Radio Open House Loften High School Alachua County Winter Field Day Suwannee County ARES® News Marching Forward Getting High On Frequency Alachua County ARES®/NFARC FCC Testing



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 <u>kk4ecr@gmail.com</u>. 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 <u>https://archive.org/</u> <u>details/dlarc</u>.

Three years of <u>QST NFL are now online</u>, 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.

FLORIDA

OUR C

SCAN ME

Flea Market Raffles Prizes Food Testing Camping RV's Welcome Talk-in 146.790, -, 0.6, 100Hz

PLANGROUND HAMPEST

ANNUAL

Friday & Saturday 14/15 March 2025



The Playground Amateur Radio Club will host a testing session at 10 AM CST, March 15th, as part of our 55th Annual Hamfest. Candidates must pre-register and have a Federal Reservation Number (FRN) or copy of their current license. Email <u>PARCFWB@GMAIL.COM</u> to pre-register or for more information.

COMING SOON TO A RADIO NEAR YOU

CLASSES TO OBTAIN YOUR

TECHNICIAN AMATUER RADIO (HAM) LICENSE

- Held at Mossman Hall, 301 SR 26, Melrose
- Starting Saturday, March 15, 3 PM to 5 PM
- Running 14 weeks
- Recommended Study Guide: Ham Radio School Technician License Course 2022-2026 Available at Amazon
 - Highly recommended: hamradioprep.com \$35

TEST GIVEN JUNE 7 AT WALDO CITY SQUARE

NO CHARGE FOR CLASSES ONE TIME \$10 FEE FOR USE OF CLASSROOM

CONTACT GEORGE DEITZ CELL PHONE: 307-840-0413 EMAIL: KN3PAT@yahoo.com

Ham Radio Open House—World Amateur Radio Day 2025

To help promote amateur radio science and technology, and to honor the 100th anniversary of the International Amateur Radio Union (IARU), ARRL is inviting radio clubs and schools to organize a Ham Radio Open House in April, built around World Amateur Radio Day (WARD) on April 18.

The event is intended to highlight the Amateur Radio Service for its development and practice of the latest radio communications and technology, and as a hands-on pathway into science, technology, engineering, and mathematics (STEM) fields for the next generation.

In April, amateur radio clubs, school stations, and other groups will have the opportunity to advance public knowledge about ham radio by welcoming their communities into their stations for the Ham Radio Open House, as part of World Amateur Radio Day. The focus will be on scientific advancement and demonstrating cutting-edge technology. This is a chance to not only shape the conversation about modern ham radio but also to show how it serves as a stepping-stone and testbed for many young people pursing STEM education and future high-tech careers.



ARRL has teamed up with <u>HamSCI -- Ham Radio Science Citizen Investigation</u> -- and the science community organization SciStarter to invite the public to participate in <u>One Million Acts of Science</u> during April, which is Citizen Science Month. By hosting a Ham Radio Open House at your group's station on April 18, you'll introduce individuals who might never otherwise find out about to-day's amateur radio, where science and technology intersect with fun and learning.

ARRL Public Relations and Outreach Manager Sierra Harrop, W5DX, said ARRL is excited to work with HamSCI and SciStarter on this project. "This is an exciting opportunity to really reclaim the public's image of ham radio and show them the modern, cutting-edge technology that's in use by many amateurs," she said.

Clubs are encouraged to showcase the latest weak-signal modes, such as FT8 using WSJT-X, or other digital modes. This could be a great opportunity to explore new areas of amateur radio and demonstrate how the service is at the cutting edge of electrical engineering.

Look for resources to help organize and promote the event soon. Find details at <u>www.arrl.org/world-amateur-radio-day</u>.

W.T. Loften (K4WTL) students had fun with the ARRL School Club Roundup

Bob Lightner W4GJ, Trustee for K4WTL

This month making about 300 contacts with various clubs, schools, and individuals on SSB and CW.

Our students will be engaged in two upcoming Special Events; **National Police Appreciation Week** and **National EMS Week**. We will be using the callsigns N4P and N4E for these two exercises. See QST Magazine for details.



YLRL Scholarships Available for Students

The Young Ladies Radio League (YLRL) has announced its Memorial Scholarship program for 2025. The scholarship program is aimed at female amateur radio operators studying radio, communications, electronics or amateur radio related arts and sciences. There are three Memorial Scholarship award categories:

- The Ethel Smith, K4LMB, Memorial Scholarship \$2,500 award
- The Mary Lou Brown, NM7N, Memorial Scholarship \$2,500 award
- The Martha "Marte" Wessel, KØEPE, Memorial Scholarship \$1,500 award

"YLRL is committed to investing in women in amateur radio, and we believe that every act of volunteerism through amateur radio, even a small one, helps turn the world into a better place," said Vicki Zumwalt, N6KLS, President of YLRL. "We hope that our scholarships will not only encourage students to learn more about science, technology, and engineering but also inspire them to take pride in being an amateur radio operator and to encourage others to do so as well."

The YLRL believes that education in the fields or radio, communications, electronics, and amateur-related arts and sciences will play an important role in shaping the world's future. Through these memorial scholarships, YLRL hopes to encourage female students to learn more about amateur radio.

To qualify, students must be female, have an amateur radio license, meet the requirements listed on the YLRL website and apply using the online application. Applications are due by April 30, 2025. Winners will be announced in July 2025. The Young Ladies Radio League (YLRL) is an international non-profit organization of female amateur radio enthusiasts. It was founded in 1939 and is the longest-running YL club in the world.

Alachua County ARES(R) Winter Field Day Effort

by Gordon Gibby KX4Z

The Alachua County ARES(R) crew had another go at Winter Field Day this year, again using the facilities of the Alachua County Emergency Operations Center. Two other known local groups held a Winter Field Day: The Gainesville Amateur Radio Society (<u>https://gars.club/</u>) held a daytime WFD at the Waldo EOC radio room, and the UF College group (<u>https://w4dfu.github.io/</u>) combined with Loften (magnet school) High School radio group (K4WTL), mentored by Bob Lightener W4GJ, to operate a daytime two-transmitter effort at a nature facility on the UF Campus. Having these two other groups operating nearby gives us some comparison data.

Our ARES(R) approach to Field Days is a little different, because we try to organize somewhat along the lines of a FEMA Exercise, with a written "Exercise Plan" that we produce in the form of an ICS201 Briefing document. (<u>https://www.nf4rc.club/historical-</u> <u>exercises/2025-winter-field-day-iap-final/</u>) Earl McDow K4ZSW with help from other volunteers, handled our 2.4GHz Ubiquiti microwave mesh system, using ARDEN networking. Susan Halbert KG4VWI and Mark McDow KN4POZ helped with that important part of the effort. We need it because we operate two sites, one at the EOC and the other some 250 yards away in a grassy overflow field that the Sheriff graciously allowed us to place a travel trailer and some antennas.



Cold Solder Joint In This Filter Knocked Us Off For an Hour At The Start

Handicaps: Making Our EOC Useable For HF Operations

Probably no one else besides us cares about the details, but every year **we learn a lot from this effort**. When we first started up renewed efforts at the EOC around 2016 it was very inhospitable for long radio disaster radio communications, with a lossy Comet multiband vertical antenna mounted on a fence, shadowed by the building. Efforts to put up a wire antenna on top of the building at great cost turned out to be another disaster because it turned out the building is one giant NOISE TRANSMITTER, with noise 20-30dB above typical residential levels. We were distraught.



Then we discovered the noise was "near field" in propagation and moving even across the back parking lot resulted in relative RF quietness -and we were allowed to put up first one, and then another huge wire

antenna in woods just south of the facility. Finally we had a workable HF antenna -- but only ONE such antenna, and only ONE coaxial feedline. Additional coax feedline penetrations were basically out of the question. The pricey HF wire above the building remains, a reminder of expensive, wasted effort by everyone.

Our one coax cable to our useful antennas is old and on the order of 300 feet or more, so it has a lot of signal loss, especially on the higher frequencies. With a LOT of effort, we have constructed an antenna multiplexer and various bandpass filters of VA6AM kits and designs (shown in photo, beside top operator Mannish Sahni KC4KZ), and for 2025 the plan was to operate 2-3 HF stations through those, occasionally switching out for a station in the grassy field trailer, on a sloping 40-meter OCFD of homebrew construction.

What was new for 2025 was the goal of operating the travel trailer system primarily on batteries rather than full-time generator. It was COLD this year (below freezing Saturday morning) so we planned to run the propane heater blower from battery as well. Due to the predicted extreme cold, we assembled in 50 degree weather Friday afternoon and put two lines through a pine tree to hold up the OCF dipole and a 6-meter semi-inverted Vee -- so Saturday we didn't have to freeze our fingers. A big benefit of this Winter Field Day effort was that we had to plan for heating, and learned that about 3 lbs. of propane would get the trailer through a very cold night with the inside at least at 50-55°F, and that the drain on the battery was in the 10-20 Ahr range to do so.

We thought it was virtually impossible to get coax or power cables into the EOC so we gave up on powering the EOC station by emergency power; the building has full generator support but of course they aren't going to run that just for our contest!

Operating Outcome

We did pretty well in operating, and for the very first time, we were able to get Dave Huckstep W4JIR to actually knock it off during the wee-hours of Sunday and get some sleep! There wasn't really anyone else left to contact, anyway, at that time.

Our stats compared to the previous year (both 3 transmitters) looked like this:

	2024	2025
Total CW Contacts	111	154 (37.5% increase)
Total Phone Contacts	129	173 (31% increase)
Total DIG Contacts	64	146 (128% increase)
Total Score	10,059	12,368
Total on-site operators	13 (counting some not in logbook) Log: 12	14 (counting some not in log- book) Log: 11

We were quite pleased with substantial improvements year-over-year, and especially with the huge increase in our Digital performance. We look at these Field Day-type exercises as a magnificent chance to learn, grow, and compare our progress against ourselves and others. We create, discuss and eventually publish a detailed After Action Review & Improvement Plan (AARIP) in FEMA-fashion after every such exercise. <u>https://www.nf4rc.club/historical-exercises/2025-winter-field-day-</u> <u>aarip/</u> This event allowed us to make several observations.

WE CAN'T KEEP UP WITH THOSE STUDENTS!

We judged that the W4DFU college crew (led by Matthew Self) with the capable Loften high school students and only 2 transmitters, are still **way more efficient at making contacts than we are!** Very impressive results for them, making some 460 contacts with only two transmitters and daylight operations! Searching for "*why?*" (besides their just being crackerjack operators, hi hi) we began to calculate the dB losses in our coax and multiplexer and found that on 10meters we had as much as almost 6dB total loss at the EOC -- while the Loften students enjoyed a short coax linked to a 3-element beam! We're getting an effective 25 watts out and their vastly superior setup is pushing 300+ effective power! We immediately started working how to "join 'em" if possible, and how to improve our plight if not. *Surprise!! For the first time we discovered a GAP beneath the standing door of the back entrance to our EOC, sufficient to run LMR400 coax and power cable -- with room to spare for even a second LMR 400! This was a huge discovery for us, and we think we can cut our coax losses by almost 3dB. Further, we may be able to situate a BEAM in the back parking lot! These are great improvements for our group to pursue, all discovered as a result of WFD.*

WE DON'T EAT AS WELL AS GARS!

We judged that the Gainesville Amateur Radio Society had way better nutritional support than we were able to amass! While Nancy (KM4YGI)'s chili in the crock pot (an idea we stole from the GARS team) hit the spot, we just aren't in their "league" on calorie-composition. Worse, no one told Mike H. (WB2FKO) where the food was, so he almost starved! So we have recruited food connoisseur Earl Sloan KI4OXD to be Incident Commander for our ARRL Summer Field Day effort and already the menu plans are looking WAY UP!

Our networking effort, led by the crew listed above, was nearly PERFECT this year with only a few drop-outs. We discovered issues with feeding a UPS system from a modified-sine-wave inverter -- it just doesn't work correctly! On-the-fly rearrangements resulted in much improved reliability. In preparation for this Exercise, 3-4 of our team plunked down hard cash to purchase 100-AHr LIFEPO4 batteries, some of which even have Bluetooth monitoring capability from a cell phone app! Wow! Using those, and moving the trailer laptop to a separate inverter system from the MESH system made for far better reliability -- another lesson learned thanks to the WFD. We operated the trailer ICOM 7300 for at least half or more of the entire event from one 100-Ahr LIFEPO4 and found it was still 55% charged at the end -- truly amazing. With much lower coaxial losses & no need for a multiplexer, our operators found it easier to run "CQ-strings" at the trailer than at the EOC, further convincing us of the need to reduce losses.



Consummate competitor Mike Hasselbeck WB2FKO in his usual posture

While we didn't succeed at getting many more operators for this Exercise, we did manage to convince one of our true competitors, **Mike Hasselbeck WB2FKO**, to work a bit more CW and we discovered we have a very formidable CW op in Mike! Hooray!! For the first time, he recognized the incredible advantages that N3FJP CW-canned scripts, driving a WINKEYER can bring -- another huge advance for us. Our CW crew hit 154 contacts, almost a 38% increase for us.

We were proud of our phone crew, because they really only had 1-1/2 average transmitters throughout the effort and managed an impressive "rate" for so few outlets. BIG improvements from sheer tenacity in the face of big transmission-line losses for those guys!

For the very first time, we almost made an ISSmediated packet QSO! Our satellite crew, including

Ron Lewis KN4ZUJ, Jeff Capehart W4UFL, and newcomer Susan Halbert KG4VWI tried very hard at sat contacts, but it was Susan who connected to the Russian packet digipeater on the International Space Station -- but we were so new at that, that we didn't understand how to do a keyboard CQ through it. Better next year!!



Ron Lewis KN4ZUJ and Jeff Capehart W4UFL Try Satellites

The most impressive improvement for our valiant warriors was in the Digital camp, where we operated PSK31 and had a 128% improvement, with 146 contacts (each 2 points!) to only 64 the prior year. We discovered early in the Exercise that our pre-training on FLDGI-

canned-texts hadn't taken "hold." We held some impromptu tutoring and suddenly our crews **understood** how to use them and wow!! did they ever! Hitting a few Function Keys is so, so much easier than hunt-and-peck typing for hours! We also found that we needed to add a bit more redundancy/verbosity to our very-terse scripts on PSK, so we think we can even further improve.



Winter Field Day 2025 - ARES(R) Alachua County

We ended up with 46 unique observations in our after-event "hotwash" and 25 Improvement Plans to try and catch up to the W4DFU team next year! It was a great event for our crew and a lot of fun!

Suwannee County ARES News

Gordon "Gordie" Beattie, Jr., W2TTT

NET STATUS SUMMARY

The weekly Suwannee County ARES Net came off every Sunday night at 8:30 pm ET on the 145.27 MHz (Tone 123.0 Hz, Offset - 0.600 kHz) repeater except for February 16 due to a miscommunication among members traveling for a family emergency or business. Section and state net activity was again imperfect, but demonstrated that our EOC, home, mobile and portable stations are all ready for the coming season. We have also verified that we can reach the other area repeaters in Suwannee County and beyond.

EOC PREPARATIONS

Overall, February was another quiet Winter month where most of our team continued the seemingly endless effort to clean up and repair storm-related damage from Debby, Helene and a few other 2024 storms, while also getting some key improvements done. The EOC has functional 80m and 40m dipoles, a dual band 2m/70cm omnidirectional antenna and a 2m Yagi pointed west towards Tallahassee. The 80m dipole is part of a magnificent 80/60/40m fan dipole that Mike KM4BTW built. Currently, it has one leg of the 60m segment fallen and twisted around the 40m element. We will be getting that addressed, but we're still able to get on 40m with a separate, stand-alone dipole for that band. Having an additional HF antenna gives us the ability to monitor and operate on two bands for voice or voice and data. For major events, we bring in a second ICOM IC-7300 and plug into the prepared Anderson PowerPole and antenna connectors.

MEMBER PREPARATIONS

We had an opportunity to acquire and test an ICOM IC-705 and an end-fed antenna with automatic antenna tuner that proved to be an excellent choice for 40m and 20m SSB late in the afternoon. We'll test it further with Winlink and FT-8 during this month. We have also re-tested the ICOM IC-7300 in the Kelty Raven 2500 backpack described in previous editions of the QST-NFL Newsletter. (NOTE: This backpack fits an ICOM IC-7300/9700 perfectly and was originally designed for the PRC-117 military radio system.) It worked well with two 12AH, 12V LiFePo4 batteries in the lower pouch as its power supply.

SOFTWARE PREPARATIONS

February and March are a time for software updates and preparation. Updating computer operating system and application software, especially Winlink, mapping, Incident Management and radio programming software, is essential and underway. We are also checking to make sure that radios have the latest factory firmware and that every computer in the ecosystem has the USB drivers needed to interface to the various radios. Some radios also have FPGA software in addition to the firmware driving the user interface. Don't forget to check that, too! For us, these activities center around the ICOM IC-7100/7300/9700/705/905 and the Flex radio 6400/6600 families of radios, although others are being checked as well. It is essential and prudent to verify that these software updates provide the expected functionality and are easily accessed. Adjustments in settings or procedures may be required after software and firmware updates. It is best to settle them when assistance resources are available without the pressure of a crisis.

OTHER PREPARATIONS

Finally, in preparation for the 2025 storm season and the Simulated Emergency Test (SET) in April, we are squaring away battery and charging systems and packaging them in a "ready to go" state along with personal items including food and medications. Further, the 145.27 MHz W2TTT/R repeater had its battery backup upgraded from 100AH to 200AH. A stored solar charger and panel is with the repeater and ready for post-event deployment. This enhanced power setup enables support for additional equipment, emergency lighting and a fan should AC Mains power fail. It also freed up a 100AH battery system and solar charger and panel for rapid deployment in support of other equipment.

NEW ARES MEMBERS WELCOME!

Suwannee ARES is looking for new members, with and without Amateur Radio licenses. We'll gladly train new members and help them get their licenses. Young and old, all are welcome to reach out to our Emergency Coordinator Mike Meador KM4BTW at <u>MMEADOR@HOTMAIL.COM</u> or Gordon Beattie W2TTT at <u>W2TTT@ATT.NET</u> to learn more.

Get On The Air!

Marching forward from February!

DJ Stewart KI4ZER

Hey and howdy to all of you wonderful communication enthusiasts! What a month! All things Ham and community and more! Education and training and communications galore was certainly the theme for February and leads us into the next month for more more more!

On 01 Feb, Mike W4BZM held a **Digital Demonstration** session at his station for NOARC members Derek KQ4LSX and Ted KQ4MUZ. During a three-hour session, they had discussions and live demonstrations of RTTY, PSK-31, FT-8/4, Winlink (with connections to both VHF and HF gateways), JS-8, and VarAC. They included discussion of Winlink degraded modes (Radio Only and P -P) for emergency communication. Their talks also delved into operating techniques, transceiver capabilities, antenna options, logging software, and interface devices. All three of the participants left the demonstration having learned something from each other. That evening, KQ4MUZ reported that he had his first successful QSO on FT-8. They plan to continue the professional growth process with some Winlink P-P experiments on 10 meters and 2 meters!

Teams from NOARC and PARC gathered to rescue a tilt over, crank up tower from a SK property (donated to NOARC) and were able to reintroduce it to the Amateur Radio Community! While the tower needed some new pulleys and cables, the apparatus was in decent condition and able to be saved from the scrap heap! This came by word of mouth over all things from social media! This is proof that people do look outside of their normal channels to engage with area Hams and embodies the ethos that we all carry to help each other!





Direction finding antennas have been all the rage as of recent times due to the increased amount of Fox Hunts and signal tracking at PARC! AC5LT gave a presentation discussing multiple build options, technique, and what factors are the most important when constructing an antenna for a single band or multiple bands! What a great tech night and a wonderfully engaging topic!

Mardi Gras! Whether you partake in in or not, the NOARC team joined up with the City of Crestview Florida to handle communications and safety protocol for a community parade! What a great event and wonderful exposure of Hams adding to community resources for com-

mand and control in a coordinated effort! NOARC even had some youth inspired to operate a radio or two and learn what volunteerism can do and how to operate in a real-time environment for communications as an example of how traffic handling is formatted to coincide support for the residents of an area!

NOARC meets for "Coffee in the Shack" each Saturday at 1000 am following



the business meeting! This time the project was Club Station clean up and system testing! NOARC recently has been performing work to their club station to bring all systems back on the air after some needed repairs came to fruition. Some of those projects included, tower maintenance, new coaxial cable installs, new band pass filters, ladder line maintenance, station grounding, radio interface firmware upgrades, contest logging software, digital communications integration such as FT8, JS8, and more! Be sure to put this on your radar as they perform this wonderful meet up monthly as an informal gathering to work on projects, mentor, and Elmer new and old Hams alike!

NOARC not missing a beat with their direct community support again aides the City of Crestview and the Crestview Police Department along with the Okaloosa County Sherif's Office for the Community Unity Flashlight Walk! There multiple volunteers from NOARC gathered to support the city with representation of communications coordination, pedestrian and civilian safety, and of course, show off communication capabilities to residents, business, and stake holders alike! Donning reflective vests and flashlights, the team deployed to strategic locations reporting the position of more than 500 walkers with flashlights who took to the streets in a demonstration for community openness and safety! This event occurs each year and in front of all of it, NOARC is lighting and communicating the way!

While all of this was going on, each Sunday, PARC gathers for their informal "Pile-Up" at 3 pm! There the team from PARC opens its doors to all Hams and interested parties for a chance to educate, mentor, train, Elmer, and show off what Amateur Radio is all about! This event is the bread and butter of PARC and allows for the free flow and exchange of ideas! Hams from all over to include vacationers attend this lauded event! Moreover, the PARC team usually has multiple projects from their highly technical members working on various projects or enhancing each other's skillsets! If you come to PARC for just a Pile-Up, you won't be disappointed in the results that will benefit you as a Ham! What a great way to get FREE training and experience by putting "hands-on" to increase your capabilities!

Speaking of fun! The NOARC Tech Night presentation on Portable Repeaters was a huge hit! KN4UDS has been aiding the NOARC team and visitors at all events for the better part of a year with a portable repeater and enabling reliable communications. The NOARC team used to use simplex frequencies primarily, but infrastructure and other RF interferences limited its reliable use over a four-football field area. This was problematic and caused operators to have to seek alternative measures for coordinating efforts that benefited the community and event officials. Enter the Portable repeater! Bridging the



gap and allowing for seamless communications and support! KN4UDS went over the technical aspects of setting up such a system with what radios and associated accessories are needed. As well, he went over how to license it and ensure proper communication etiquette is followed!

But wait, there's more! Do you recall that mention of word of mouth?! Well, NO-ARC has received other donations of Ham and communication equipment from SK families and NOARC, rather than let things sit and gather dust, re-introduced them through a Club Auction! The proceeds generated benefit the organization s a whole and add to the repairs that are ongoing for maintenance and upkeep/ upgrade to a much-needed attention area! This is a great way apart from a grant to bolster an organizations operating budget and offset expenses that are associated with repeater maintenance, shack repairs, equipment repair, membership recruiting, and more. The proceeds also help out with educational resources which in turn directly impact the community at large for putting on classes and testing sessions to obtain or enhance Amateur Radio Licenses!



If you missed the Auction at NOARC, don't fret! There is a wonderful event coming in just a matter of days at the newly renamed Fairgrounds! *The Destin-Fort Walton Beach Fairgrounds* and the Playground Amateur Radio Club presents **the** <u>55th Annual PARC</u> <u>Hamfest!</u>

Get your Tables, Get your Tables, Get your Tables! Come and participate in the best Spring show in all the Panhandle and make your mark on Amateur Radio History!

Clean out your shacks and get that upgraded thingamajig you've been dreaming of!

Come celebrate with PARC and other major vendors, patrons, and guests! Come say hello to the *"Ham of the Century"* W4RH! He was officially awarded at the Holiday Party in December as Ham of the century celebrating his longevity and involvement in Amateur Radio! As he turns 100 years old, still drives and talks frequently on the radio, he has been the glue in front and behind the scenes for decades in the area promoting all things communication and encouraging others to experiment and advance the hobby! But don't just come for W4RH, come for your chance to get deals, win prizes, connect with other operators, participate in testing, expand the radio hobby, and exchange ideas concerning the advancement and future of Amateur Radio! You will not want to miss! Come for the radio, attend with your friends, enjoy the multiple Food Trucks, and stay for the camaraderie!

Curious about the prizes?! Here's the list!

<u>First Place</u>: Xiegu X6100 HF! – Do not need to be present to win! <u>Second Place</u>: 20 AH "Go Box" with battery and charger! – Do not need to be present to win! <u>Third Place</u>: Combined prize of a Tiny SA & a Nano VNA! – Do not need to be present to win! <u>Door Prizes</u>:

The Hamspot – A Ham radio Hotspot! – Must be present to win!

A DigiRig Mobile! – Must be present to win!

A 30 Piece Rf Coaxial Universal Adapter Set! – Must be present to win! What a great and plentiful prize list and good luck to you! PARC is excited to once again host this wonderful long running event and support the community at large!

Getting High (On Frequency)

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

Well, since the last time we covered this topic we made some progress and rethought some things in the world of VHF-UHF and microwave. Business travel limited operations and slowed up some projects at home, but a few interesting things got done.

BEACON ANTENNA PROJECT

The beacon antenna project was focused on using a Ubiquiti AMO-2B13 on 2.3/2.4 GHz or an AMO-5B13 on 5.7 GHz. These omnidirectional antennas have both horizontal and vertical polarization available on separate ports and have a two degree down tilt. There was some thought about inverting the antennas to create an uptilt, but after some really big (and expensive) PVC pipe was purchased, the E-plane beamwidth of these antennas was recognized to be so wide as to not be of concern. In short, there's plenty of RF at and above the horizon making the inverted antenna packaging not worth the effort. Ironically, the PVC pipe will be repurposed for an HF low band project! These antennas still need to be swept for Return Loss/SWR. I'll probably sweep a 5 GHz Ubiquiti dish while I'm at it. Other projects and business travel have taken up time, so look for that information next month.

GETTING CONNECTED - AGAIN!

Another project was the repair of the broken 5 GHz SMA antenna connector of the ICOM IC-905 RF Unit. Now for those who are not familiar with the IC-905, it has a Control Unit that shares a look similar to the ICOM IC-705 QRP rig and a user interface similar to that radio and the IC-7300/IC-9700 family of radios. It uses a 48V Power Over Ethernet (POE)-like interface to the mast-mounted RF Unit. This allows for really short cable connections to antennas and lowers losses on receive and transmit.

To recap, the RG-400 cable on the 5 GHz SMA antenna connector was secured to the mast, but somehow stressed the connector on the rig and broke the long shield or barrel portion of the flange mounted connector.



Note the broken SMA Female shield barrel connected to the SMA Male cable. The first step in the repair involved opening the RF unit, determining how to extract the remnants and then ordering repair parts from ICOM.

To remove the connector, I used a small, sharp side cutter, some solder wick, a manual solder sucker, a soldering iron and a desoldering heat gun with a tiny nozzle to focus heat. The challenge was that even after removing the screws from the SMA connector flange, that the heat was absorbed by the heatsink to which it was mounted! So I started with desoldering the cen-

Then I pulled out the Teflon insulation leaving the shield barrel connected to the board on two sides. By slowly removing solder and in a few spots using small, sharp side cutters, I was able to reduce the thermally conductive solder and wick and suck it out. Eventually, there was enough heat that I was able to gently rotate and pull out the last of the SMA connector.

Above the open 5 GHz port, the 2.3/2.4 GHz port and the GPS antenna port on the bottom.



A properly installed and intact SMA flange connector.

This part was \$27. I ordered four SMA connectors because I'm impatient and paranoid about not having a spare should this problem recurr on any of the several SMA flange connectors.



ter conductor from the pad on the board and pulled it out through the insulator.



Inside of the unit with the back end of the SMA connector in place prior to removal.



The 5 GHz connection without a connector and to the right, the 2.3/2.4 GHz SMA flange connector.



The broken connector prior to the center pin's removal.



The new and old SMA flange connectors

After a little cleanup, I was able to insert and place a new connector into place. I first soldered the center conductor and then paused to check for continuity and possible shorts.

There were no problems, so the next step was to solder the shield. I had to "layer in" the solder because again the heatsink drew away heat. For reference, both the soldering iron and the little heat gun were set to 900 degrees Fahrenheit, but the lead-free RoHS solder doesn't like to flow. I replaced it with standard 60/40 tin/lead rosin core solder which worked better.



Note that the center conductor solder pad is to the right of the center pin just before the chip capacitor.



The shield and conductive foam that covers both SMA ports.



The IC-905 Control Unit showing 5.7601 GHz or 5760.1 MHz.

INFRASTRUCTURE IMPROVEMENT

The rebuilt pole barn at W2TTT/N2FWI's home

QST NFL March 202

On the air testing with the VIAVI ONA-800 test set went well and the repair was a success! The next step will be to mount several Female SMA to Female Type N bulkhead or 2.92 mm Female-Female bulkhead connectors on a small aluminum "L-bracket" and connected with a short piece of RG-316. You could also use an SMA Female-Female bulkhead or flange connector to protect the RF Unit's connectors.

https://a.co/d/2jWAOyY 6 inch SMA Male-Male https://a.co/d/0YHRFTZ. 12 inch SMA Male-Male



Above are 2.92 mm and SMA to Type N Female-Female bulkhead connectors. The 2.92 mm connector is compatible with SMA and uses an air dielectric instead of Teflon or similar dielectric material. The air type allows the connector to be used at higher frequencies or with lower loss.





Gordon and Nancy's friend Rich (still NOCALL after 45 years of prodding) helped with the wiring while Gordon did all the digging around the 25x40 foot concrete pad!



Four Harbor Freight shop lights light up the area under the roof and out at least fifty feet onto the lawn.

WHAT'S NEXT?

Well, besides the promised antenna Return Loss/SWR measurements, we will talk about improving the frequency accuracy of the ICOM IC-9700 using the Leo Bodnar kits and also some rework on the antenna mounting and operations of the IC-905 and CX-10G through 10 GHz.

Now get on the air!

Alachua County ARES(R)/NFARC Update

by Gordon Gibby KX4Z

February has been a mostly quiet month for the Alachua County ARES(R) crowd / North Florida Amateur Radio Club. We did much better in Winter Field Day than last year, and held our "hotwash" review meeting by zoom in place of the first-Thursday TechNite. That led to completion of our After Action Report / Improvement Plan, which was discussed and approved at the February meeting. (See: https://www.nf4rc.club/historical-exercises/2025-winter-field-day-aarip/) We improved in every category, and by a huge amount in the field of digital QSO's, possibly because we got the training to be more "down-to-earth." Once our crew learned how EASY the function-keys and canned text make simple Winter Field Day exchanges fly, they were off to the races!

New Incident Commander For Summer Field Day

Hooray! Earl Sloan KI4OXD says his wife's orthopedic issues are now resolving and he's getting a lot more active in our local group -- our 3rd highest scorer in this last WFD! Earl has graciously volunteered to take on the preparatory INCIDENT COM-MANDER shift for Summer Field Day (all the way to the event!). Already he is planning a massive upgrade to our modest nutritional supplement efforts! This is going to be FUN!! Last year we went 4A and made over 1600 contacts; this year we expect to be 4F (or more) at the EOC (with all its limitations) and hope we can do even better!

How To Help Youngsters?

We have entered into a very frank and candid discussion of what our group can do to help younger people get into ham radio and specifically into community-service through disaster communications. Bob Lightner W4GJ, who is in his mid 70's, has volunteered for years at a local public-service/technology magnet school, and has built up an award-winning and incredibly capable club of youngsters using ham radio. However, getting them LICENSED has been somewhat more difficult. Their students don't have a natural summer-Field Day "home" and the idea of inviting them to join with ARES for summer field day has some merit. But how to help them get LICENSES?



There were honest concerns voiced by many and this perhaps gets to the root of why

we have trouble growing our hobby (beyond technicians who often drop out, and rarely advance). While Youth on the Air have some great week-long camps, **doing something like that is a LOT OF WORK**. **Some in our group felt it wasn't our responsibility** (not seeing it as an opportunity?) *"We are here for emergency communications"* -- yes, that is true, but what happens when age attrits our forces and we haven't raised up new blood? Does the mission also include making longer-range provisions for our community by developing younger volunteers? One of our members has a lot of recent experience teaching adults to successful Tech licensure, and he is acutely aware that it takes a good bit of study and homework on the part of the learner. (I hadn't given that as much thought as I should have.) Just getting ready for FIELD DAY is a lot for our older group -- adding in the stress of managing youngsters in some kind of crash-course....well that might be asking too much. Good point!

We'll discuss that further and get even more input. Our group is consensus-led. One possibility is to spread out some training and do it by Zoom, since this magnet school attracts students from far away, who are bussed into the school. That avoids the need for chaperons also. Thanks to work by many in our area, including the Gainesville Amateur Radio Society, they actually have an "ECOMM" trailer with an Icom 7300, generator, A/C and 3-element triband beam! It would be a shame not to help these students get licenses -- maybe all the way to General eventually! But the process of helping them reveals a lot about the state of ham radio growth today. Our group has held numerous classes and mentoring over the years, which is why so many of our members now sport the Amateur Extra Class -- but there was a lot of home-learning by many also. Amateur radio attracts self-starters!

NEW PROJECTS



Our After Action investigations of our Winter Field Day brought us to grips with the incredible coaxial cable and filter losses that handicapped us at our EOC. As much as 400 feet of coax and modest additional losses in multiplexers, all due to the incredible NOISE created by the building's computer equipment, and the existence of only ONE coaxial cable for HF. Could we finally find a better solution? YES! When we carefully examined the rear security door, we

were surprised to find a GAP under the fixed portion, that will easily admit more than one LMR400 cable, and could have even accepted a power extension cord!

That is a game-changer for our HF losses! We may be able to move a Yagi setup into the back packing lot and feed it with temporary, but much shorter and lowe r-loss, LMR400. Also shorten the cable to our multi-band HF antennas. Hooray! Summer Field Day there may be much better!

Satellites is a sticking point for our group. We have only a couple of people who have any experience, and only one with real success -- and during competitions we are usually outclassed. Susan Halbert KG4VWI didn't let that stop her and she actually connected to the Russian packet station on the International Space Station (ISS) during WFD. Hooray, Susan! A little more and we will make QSO's that way! This got me thinking.

Transverter: My sBitx has a nice panoramic display and plenty of power to drive a transverter to 2meters or 70cm. Bit the bullet and ordered a dual-band model from Ukraine -- arrived in a week or

sBitx output (homebrew addition) and bingo, I can do SSB on 2 meters for the first time ever! 11-mile QSO from an indoor homebrew beam to a well-equipped VHF station Mike Hasselbeck WB2FKO has

Ron Lewis KN4ZUJ (L) and Jeff Capehart W4UFL (R) try for a satellite QSO





Ukrainian Dual-Band Transverter 5W(70cm) 10W(2m) https://sourceforge.net/projects/gpredict/)

Need to have full duplex for linear birds. I have a second sBitx and transverters are cheap! With some clues from the BITX20 groups.io forum pretty soon I had gpredict up and running and amazingly it can (through rigctld, part of the hamlib package) Doppler correct an Icom 7300 -- but it can directly correct the sBitx which has the port 4523 already built in! (Download at: https://sourceforge.net/projects/gpredict/)



created. Can this be extended to do satellites?

I'm a complete newbie at this stuff, but *gpredict* is completely free, available on multiple platforms, and does an amazing amoutn of the solution for satellite communications.

Shown beside is the default screen, which shows the footprints of whichever satellites you wish to track, and a birds eye view of any for whom you are in the "footprint." With its hamlib-based addons, it seems like a full satellite package.

How to physically aim the antennas? I'm less mechanically inclined but we have multiple rotators. Turns out gpredict can send the results of its trig calculators to rotctld, which speaks both "Yaesu" and "EasyComm" and can drive either a commercially available board, or even a K3NG-based Arduino Board



to control rotators! This might work! Next, I found a 90° gearbox on Amazon for cheap and will try to make a horizontal mast with elevation control from a top-rotator being azimuth-controlled by a rotator below it. What fun!

"Aluminum Haul" With a bum R knee (muscle injury) I was able to offload a BUNCH of tower and VHF-antenna aluminum

from a ham in Orlando who is struggling with health issues. He was almost GIVING these items away. I have never before seen a 17-foot boom a 2-meter antenna!! More directors than I can count! And five sections of an aluminum tower that will make 50-feet. I have no idea how we can put these to use, but after being tipped by Mike Hasselbeck WB2FKO, I couldn't resist and off the truck and trailer went down 3 hours to Orlando.



OUCH!

The next thing I did was take a spill on the stairs while trying to load equipment for talks at the WCF TechCon 2025 Conference---and *do even more damage* to the lateral head of the gastrocnemius in the back of my right knee. So now I'm on crutches to even reach the bathroom....hopefully this will heal and I can get going again. Thanks to Darrel Davis KT4WX, who set up a special Zoom, I was still able to give three talks to that great Technology Conference. Two of those talks might be of more general interest, so they went onto our Educational Articles page of our website:

https://www.nf4rc.club/how-to-docs/alachua-county-arduino-winkeyer/ https://www.nf4rc.club/how-to-docs/sbitx-matures/

Alachua County ARES(R) NFARC Website: Contact Email: Groups.io forum (open to all; 91 members) TechNite (7PM 1st Thur every month) Calendar: https://www.nf4rc.club/ docvacuumtubes gmail.com https://groups.io/g/NF4RC https://us02web.zoom.us/j/89530741792 https://qsl.net/nf4rc/CALENDAR.html

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: <u>https://dbara.org/testing/</u>

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 <u>n4ng@icloud.com</u> 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 <u>miltonarc.org</u>
Walk-in
Bagdad United Methodist Church
Info: Chuck, N4QEP, <u>merlinman3@yahoo.com</u>

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 <u>srcares.org</u>

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, <u>w2bzy@cfl.rr.com</u>

Silver Springs Radio Club, Ocala FL (SSRC)

•Go to http://k4gso.us/class/ to signup for classes

- •Go to <u>http://k4gso.us/test-signup/</u> for testing. Testing is held on the 2nd Tuesday of odd months at 7 PM.
- •Note <u>http://k4gso.us/ncvec605/</u> 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. <u>https://www.k4tlh.org/getting-started/</u> <u>license-testing</u>

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: <u>https://westvars.org/testing</u>

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

o REF046A – Florida Statewide o REF046B – NFL ARES[®] o 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!