

Newsletter for the Northern Florida Section Come join the FUN!

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January 2024

From the Shack of the Section Manager

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

Happy New Year to everyone in the Northern Florida Section!!!

2023 is now behind us, and 2024 is ahead, brimming with opportunities, and I am eager to see the remarkable things we will achieve together in our Amateur Radio communities.

First, let's talk about goals. The start of a new year is the perfect time to set your Amateur Radio aspirations. Perhaps this is the year you'll upgrade your license to use new frequencies and make more contacts. Or maybe you'll take the step of mentoring a newer Ham Operator, sharing your invaluable experience and knowledge to nurture the next generation of enthusiasts. Remember, every big achievement begins with a small step, and your goals are the roadmap to an exciting and fulfilling year in Amateur Radio.

Next, I encourage you to get more involved in club events. Our clubs are the heartbeat of our community, offering not just knowledge and skill development, but also a chance to connect, share, and enjoy the camaraderie that makes Amateur Radio so special. Whether it's a field day, a contest, or a workshop, your participation adds value to our community.

One event you certainly don't want to miss is the 2024 Hamcation in Orlando this February. It's more than just an event; it's a celebration of our shared passion for Amateur Radio. With fascinating exhibits, insightful forums, and the opportunity to meet fellow enthusiasts from all walks of life, Hamcation is a highlight of our calendar. It's a place to learn, to shop, to explore, and most importantly, to enjoy the fellowship of the Amateur Radio community. **We will be holding our annual Tri-Section Florida Forum on Saturday, February 10 at Hamcation.** I look forward to seeing many of you there!

Last, let's not forget the NFL Section Member of the Month. This is your chance to shine a light on someone who makes a difference in our community. Whether they're constantly helping others, innovating, or just being an exemplary member, your



nominations help us recognize the unsung heroes among us. Please send your nominations to Scott Roberts at kk4ecr@arrl.org. Let's cele-



brate those who go above and beyond in our Amateur Radio family.

As we embark on this new year, I want to remind you that Amateur Radio is not just about the airwaves we explore; it's about the connections we make, the knowledge we share, and the community we build. Here's to a year filled with discovery, learning, and, above all, the joy of Amateur Radio.

Wishing you all a fantastic 2024 filled with clear frequencies and strong connections!

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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: Marty Brown <u>N4GL.MARTY@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> <u>up-</u> <u>loads/2021/12/2021QSTNFLIndex.pdf</u>

From the Section Emergency Coordinator

Arc Thames, W4CPD

As we bid farewell to another eventful year, it is with immense gratitude and admiration that I extend a heartfelt thanks to the dedicated members of the Northern Florida Amateur Radio Emergency Service (ABES[®]). Your upwaver



Amateur Radio Emergency Service (ARES[®]). Your unwavering commitment and tireless efforts have been nothing short of remarkable, especially in the face of the storms that tested our state this past year.

We also saw the success of a statewide amateur radio communications exercise that helped strengthen and build our relationships with our served agencies. The capabilities demonstrated during this exercise did not go un-noticed. Amateur radio remains a steadfast auxiliary and supplemental communications method in times of disaster.

As I reflect on the achievements of the past year, I also look forward to the promise of a new chapter. The dedication and success of the Northern Florida ARES[®] section in 2023 has set the stage for even greater accomplishments in the coming year. We are excited about the possibilities that lie ahead and the continued growth of our ARES[®] community. I'm currently working with partners in the Florida Communications Unit to determine what exercises we can have ahead of the next storm season.

I want to express my deepest appreciation to every member of the Northern Florida ARES[®] section. Your hard work, passion, and commitment have made a positive difference in the lives of our neighbors, and we are truly grateful for the positive impact you have had on our state.

Here's to the spirit of camaraderie, preparedness, and community service that defines the Northern Florida ARES[®] section. May the coming year bring new opportunities, continued success, and the fulfillment of shared goals.

Thank you for your unwavering dedication, and we look forward to achieving great things together in 2024.

Please note that the NFL ARES[®] Net has moved to 7198. Hopefully this frequency will remain clear and available moving forward. We apologize for the inconvenience of having to move it around.

In November, our ARES[®] teams reported a whopping 3,573 hours of volunteer service! Thanks to all who submitted their reports.

	Number	Person-Hrs
Exercises this month:	9	217.00
Training events this month:	18	749.00
Public service events this month:	3	18.00
Community service events this month:	9	1,838.00
Emergency events this month:	22	211.00
SKYWARN events this month:	3	32.00
Meetings this month:	13	322.00
Unclassified events this month:	80	186.00

Call signs of DECs/ECs reporting:

KW4MO KM4BTW W4UFL KB4HAH N2HAY WE4MJ W4KKJ KA3OGG K4BJS KO4KUS KD4INH W4CJB WA4MN

Help Wanted—Editor, QST NFL

Marty Brown, N4GL

After 8+ years at the helm of this project, I am ready to move on. I think you'll agree that **QST NFL** has come a long way, from a two-page email from former SM Steve Szabo, WB4OMM (SK), to where we are today. This progress is due to the support of the Section Officials and the consistent contributors.

If you want to make a difference to the Section, and be part of whatever's going on, this is a great job for you. The structure is in place, and the editor's position is "move in ready." I will remain as an advisor and consultant.

If you would like more information, contact Section Manager Scott Roberts, KK4ECR <u>kk4ecr@gmail.com</u>, or Editor, Marty Brown, N4GL <u>n4gl.marty@gmail.com</u>

ARISS Celebrates It's 40th Anniversary

David Johnson, AA4KN, AMSAT Ambassador in Central Florida

Visit our official celebration website at <u>https://www.ariss.org/</u> <u>overview.html</u> or by going to our ARISS website at <u>http://www.ariss.org</u> and choosing "40th Anniversary" in the dropdown menu section.



Celebration of the Positive Impact of Amateur Radio on Human Spaceflight

Sessions with VIP speakers Astronaut experiences Student & Educator Alumni 40yr History Review Technical Sessions Exhibit Floor



22-24

FEBRUARY 2024



or visit ARISS.org

Center for Space Education Astronauts Memorial Foundation Kennedy Space Center, Florida

Alachua County NFARC/ARES®: Full steam ahead!

by Gordon Gibby KX4Z

Even with all the holiday busy-ness & hoopla and some other worthy clubs in Alachua County doing *great events*, our ARES[®]/NFARC group managed to have a very busy & productive December! The emergency-communications-oriented Winter Field Day is our latest major project after our unexpectedly good showing in ARRL 2023 Field Day.



Note unusual coil forms for 10-meter filter...

FILTERS, FILTERS! Our EOC has huge limitations with only ONE HF coax cable, and that coax *hundreds* of feet long to reach an antenna in chigger-infested woods far away from the deafening switching noise of systems in the EOC.... So we have pursued antenna-multiplexer solutions. Our December LabNLunch had **two team battling** to improve or make bandpass filters for 10meters and 80/160 meters. It was frustrating!! On their second try, the 80/160 meter team got a workable low pass filter. The 10 meter team had a much harder time, with huge passband losses (5 dB at one point).... Wendell Wright KN4TWS and I worked hours on that filter and even-

tually got the passband to 1.2 dB (still not good) and



10Meter Team: Lorilyn Roberts KO4LBS, Susan Halbert KG4VWI, Leland Gallup AA3YB, Eric Pleace KO4ZSD, Manish Sahni KQ4KTE

20+ dB isolation from 15 meters.... but this isn't good enough, so independently, both of us ordered bandpass filter kits from VA6AM. Wow, has this taught our group a LOT about filters, the nanoVNA and spectrum analyzers!

MODE TRAINING Never did a Winter Field Day before -- Phone and CW are obvious, but none of us know what DATA modes are common since WSJT-X isn't allowed. So we've done training on RTTY as well as JS8. We can't get the auto-logging to work as well as we want, so we'll manually log. We have the canned text figured out for both systems. Our people like JS8 a lot!

<u>GOOGLE DOCS SIGNUP</u> - Encouraged by Susan Halbert KG4VWI, we are trying Google Documents for our Winter Field Day sign-up. Three stations (on one coax!) and 12 two-hour "slots." We opened on Dec 2....first time for our group, so had trouble getting it "open" for people without Google accounts...but we got it working! Out of 36 "slots" we have all but six filled already!! However, many of our players will yield their time to help mentor newbies. THIS IS FUN!!!

<u>ANNUAL LUNCHEON</u>. Susan Tipton K9PDL graciously set up our holiday celebratory luncheon at a popular lunch spot at a convenient in-town location and we had a good crowd and great time! Even somewhat-vegan Eric Pleace KO4ZSD said it was good food at a chicken spot! Informal celebrations of various members' legendary accomplishments, particularly David Huckstep's hundreds of FT8 Field Day contacts, after he SWORE he was only going to do voice!



SECOND TRAILER?? -- While Gordon struggles to replace ancient (leaky) sky-

lights and vents on his 2006 travel trailer, Susan K9PDL and Jeff W4UFL chose the "high road" and have purchased a used Class A diesel pusher motor home! It looks GOR-GEOUS and we all got to hear their stories of DRIVER TRAINING this behemoth! What fun! Hey, can we drill a hole for a bulkhead SO239 and use it for Field Day next hot summer, Susan??

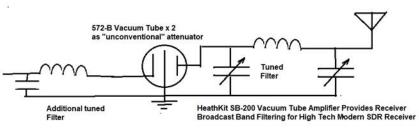


New RV Vent installed to stop one of Gordon's pesky leaks!



An example - not actually their motorhome

FILTERS AGAIN!! Eric Pleace KO4ZSD and Leland Gallup AA3YB provided a head-scratcher for the EOC practice crowd when they BOTH brought in their G90 fancy high-QRP portable radios - and NEITHER would receive at all on our EOC antenna!! Duh??? We spent over an hour trying to figure this out until someone (Dave W4JIR?) mentioned the AM BROADCAST STA-TION just down the road! Complete



QRP FRONT END FILTER: Alachua ARES[®] has been known to pursue **unconventional solutions**....but this takes the cake!

and utter overload of a nice SDR design built without front end receiver filters. The ICOM 7300 has *bookoo* front end filters and never had a problem. (Subsequently Eric put a scope on his antenna connector at his house -- where he also had problems -- and found a full 0.400 V RMS of WRUF 850 AM right there to overload his receiver!

We had NOTHING in our EOC right at that moment to solve the problem because all the bandpass filters were out for our LabNLunch work.....so we improvised by **using a vacuum tube Heathkit SB-200 **backwards** as a tuned filter & attenuator!** You could actually tune it with its pi network controls! (Note that for this to work, the SB-200 must actually be in **AMPLIFY mode**....*not* in standby, to force the signals through the filters!) The G90 was suddenly a GREAT receiver on 20 meters with the SB-200 acting as a physically enormous filters/attenuator! (And if he had transmitted, he would have had instant full-break-in 200W output as a bonus!!) We had folks rolling on the floor laughing at passing a signal BACKWARDS through plate-cathode capacitance despite the interposed grounded grid shielding! It worked! Eric was a happy man, and went home to <u>homebrew a broadcast filter and 3D print his own enclosure with mounting holes for SO-239</u>. Will he go into business?? Waiting on word....

NEW FACILITY PLANNING We are all pulling together to help County Emergency Management get proper arrange-

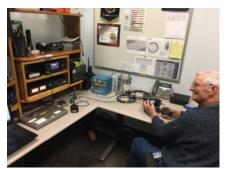
ments made for our backup radios at the NEW EOC -- a huge cavernous World War II facility somewhat closer in town, and more than 40 feet elevation higher! They had no idea that we are running SEVEN different radio systems and associated antennas! There was a collective GASP on the authorities' part when they realized just how much our group has cobbled together and will need replicated to continue our services to the County at the new location.... David Huckstep W4JIR is working to arrange meetings with relevant officials while Gordon KX4Z did preliminary investigations with famous Gainesville Zoning and Planning.... We now have written a slew of white-paper documents to help the design of the new facility.



Thoughts on EOC design	https://qsl.net/nf4rc/2023/DesignConsiderationsExpanded.pdf
Antenna design proposal	https://qsl.net/nf4rc/2023/AntennaProposal4.pdf
Antenna Needs Summary	https://qsl.net/nf4rc/2023/AntennaJustificationSummary.pdf
Antennas & Ordinances	https://qsl.net/nf4rc/2023/AntennaRegulation.pdf

ALACHUA COUNTY EAST SIDE EMERGENCY COMMS. Reid Tillery K9RFT remains hard at work, now has antenna up at at least 2 fire stations on the east side and weekly training for contract firemen. He's hoping to get a Tech class going!

<u>SIMPLEX DOCUMENTATION</u> There is a renewed push to be able to coordinate emergency backup communications even if repeaters (which are well managed by Gainesville Amateur Radio Society, who held a work day recently with ARES[®] participation) were to encounter problems. Leland AA3YB has pioneered this



Eric Pleace KO4ZSD at the EOC for Simplex Test & HF experiments

Continued on next page...

last year, and Lorilyn Roberts KO4LBS (of middle school CW class fame) and Mike Martell KK4KRZ took up the challenge and came up with a fantastic Google Spreadsheet for documentation of RF 2meter pathways and have held TWO Drill Exercises to provide testing data. More power to them!!

GARS Supports Santa Delivery

Mike Martel, KK4KRZ, submitted by Barbara Matthews, KO4TWZ

The GARS support of **Santa Delivery** (Saturday 16 December) in Gainesville, Florida was a big success. Eleven Amateurs came to support the event.

GARS members were prepared to act as radio support for Santa's Shandscair helicopter arrival, but the Santa Delivery Helicopter was unable to deliver Santa due to weather. As usual, however, amateurs provided activities for children at the event.

Ham radio volunteer participants:

Susan Halbert, KG4VWI Earl McDow K4ZSW Tom Gause W4YGT Mike Martell KK4KRZ Eric Pleace KO4ZSD Dean Covey KV4LR Hugh Minnich KN4IIM Karyn Shander KQ4JBR Josh Beau De Rochars KQ4BXA Robert Hu KQ4KZS Jim Carr KC4MHH

Morse Code Demonstration

Morse code sheets where passed out to children to write their name and find and fill in the morse code for each letter. Then the children used the code practice oscillators to send and hear their name. We used an amplifier to send the code out over the crowd. This attracted more kids and adults to the GARS booth. There were at least 50 kids/adults trying their hand at morse code. We also passed out literature about the GARS organization and ARRL.

Talk to Santa and Mrs Clause

Karyn Shander KQ4JBR (Mrs Santa Clause) and Mike Martell KK4KRZ (Santa himself) manned the radio on 146.560 MHZ. At the GARS Booth Tom Gause W4YGT and Eric Pleace KO4ZSD assisted children using a Hand Held radio to talk with Mrs Clause and Santa.

HF demonstration

Dean Covey set up a 20 meter station with a buddy pole and Yaesu 857 transceiver to demonstrate HF. One visitor to the booth told us he planned to give his son a Technician Study Manual for Christmas and that his son and he were going to study for the test.

Two new hams Josh KQ4BXA and Robert KQ4KZS came ready to provide landing zone security. Even though the new hams could not practice the landing zone security, they received a lot of information from Jim Carr KC4MHH about various repeaters, how they work and how to use them.

Loften High School Gearing Up for Winter Field Day

Bob Lightner, W4GJ

The <u>W.T. Loften High School</u> students are gearing up for <u>Winter Field Day</u>. We will be working alongside the <u>University of Florida Gator Amateur Radio Club</u> using the call sign: W4DFU/M. Our location will be at the <u>Natural Area Teaching Laboratory</u> (NATL), which is dedicated to teaching students and the public about ecology and biotic diversity on the UF Campus. We will be operating from our ECOMM trailer using our generator. We hope to have two transmitters on the air from this location. Please QSX for our students on CW and SSB on the HF bands.

Power Line RFI - Vacation Learning Event

by Gordon Gibby KX4Z

Sanibel Island, a Gulf barrier island, is Nancy (KM4YTG)'s favorite place on earth -- for the beaches and the shelling. Unfortunately not only is it expensive (\$\$\$\$), so we can only afford to go there in a travel trailer and stay at Periwinkle Trailer Park...but even worse, the entire island was devastated by Hurricane IAN a year ago. Nevertheless, when Periwinkle reopened, we scheduled 5 nights there.

Our stay was an "experience," a good one, but in the process I learned new tricks about investigating POWER LINE RFI. As soon as I connected up my 30-ish foot vertical to the telescoping fiberglass mast on the RV, and 9:1 Balun and turned on the IC-7300 receiver, I knew I was in trouble. **The frying pan man**



Suspect Pole at Periwinkle Park, Sanibel Island

made RFI noise on 80 meters was 10 dB over S9!! That is about 20 dB louder than background noise should be. But worse, the noise was very stubborn against going away at higher frequencies -- even on 10 meters I had S3 noise when background noise should be near zero.

Actually operating was almost impossible. Only strong FT8 signals could be received. This was a ham radio vacation disaster.

<u>Wider Perspective: What Remains On Sanibel One Year Out</u> Meanwhile, Nancy and I found public beaches in working order, learned how to deal with their new cellphone \$5/hour payment system (all their cash collection boxes were destroyed). The Dairy Queen is no more. Jerry's grocery and small restaurant was still in operation due to their 2nd floor height. Ace Hardware, 6 feet stairs, said water was to 3 feet in their store -- they recovered. I'd say that about 95% of the businesses along Periwinkle "strip" are GONE, a year out from the hurricane. The breakfast place we used to use after visiting the lighthouse -- gone. The lighthouse buildings? COMPLETELY GONE. Only the steel lighthouse remains, fenced in with warning signs. Nevertheless Nancy and I found new places to try out -- Island Pizza was reasonably priced and delicious! Doc Ford's restaurant is the only one open for dinner (that we could afford) but it was great (and packed)!

RFI SMARTS. The ARRL has good reference material on power line noise. (Especially: <u>https://www.arrl.org/</u><u>power-line-noise</u>) I read a bunch, got in the truck and started hunting with the AM radio. The transformer at one site south of us was RFI-hot, and the one it was connected to, and the high tension line/pole from whence they got their power. But it didn't seem to be that strong. I drove all around and found a high tension line on East Gulf Street, 2 miles away, that seemed "hotter." How to discern which is the real problem?

<u>Go Higher, Young Man</u>! That is when I learned to go HIGHER in frequency. On vacation I had little equipment, but I put the 7300 in the truck on 6 meters, and used a 2-meter mag-mount for a testing antenna-- and it worked!!

			- Driving to the Ali
Freq	Location	RFI Strength on Icom 7300	Gulf there was We can cross that clearly the feede
53 MHz	Transformer nearest my site	S3	campsite, and co <u>Nodes & Anti No</u> more about node The standing wa valleys along an lines connected t mitter" act like E the :spark transm the "transmission power radiation)
53 MHz	Next transformer across dirt street	S3	
53 MHz	Feeder pole for the above, approx 100 yards away (pictured above)	S5	
53 MHz	Next high tension pole north of Feeder Pole above	S3	

Driving to the Alternate Suspect Site on East Gulf -- there was *almost no signal* on 6 meters. We can cross that site out. The real problem is clearly the feeder pole 100 yards from my campsite, and conduction/radiation from it.

Lodes & Anti Nodes That's when I learned nore about nodes and anti nodes of antennas. The **standing waves of radiation peaks and alleys along an antenna**! You see, the power nes connected to a high power "spark transnitter" act like END-FED ANTENNAS for he :spark transmitter." For each frequency of he "transmission" there will be nodes (low power radiation) and anti-nodes (high power Continued on next page...

radiation) points along the power line (antenna) that correspond to various fractions of a wavelength. Obviously, for 3.5 MHz they will be farther apart, than for 6 meters! On 6-meters the distance between nodes and anti-nodes is only single digit yards, and you can easily observe it as you drive along the power lines.

<u>Ultrasonic Detection</u>. ARRL publications indicate that the arcs that cause RFI (more-so than "corona discharge") actually have a sound wave component. Listening at ultrasonic frequencies (30-40kHz) erases the daily hustle and bustle noises of a community, and parabolic microphones allow you to get high directionality (quoted 12" @ 50 feet) -- and "sight holes" allow you to pick out individual hardware on top of power poles. (See the MFJ product here: <u>https://</u>

<u>mfjenterprises.com/products/mfj-5008</u> -- might be a good asset for a radio club!) I didn't have access to any of this equipment, but in the stillness of the nighttime at the RV park, I went to the pole and on its south side where the insulators are located, I could distinctly, but faintly HEAR the buzzing of tiny arcs. Confirmation!

<u>How to Get It Fixed</u>? I'm just a transient RV vacationer and not the property owner. After some thought, I drafted a letter that the Park could send to the Lee County Electric Cooperative, detailing the investigations that "one of their transient vacationers" had completed, and a cover letter to explain the problem



Ultrasound Parabolic Mic - from the ARRL article referenced

and asking them to forward the enclosed letter to the power company. The Sanibel Library is up and running, a luxurious facility with a printer for use by the public! 10 cents/page. Got it all printed out, envelope addressed, stamp affixed.....and then I went to the Periwinkle Park Office to see what reception I would get.

Hooray! The gal in the office was VERY impressed by all the printed letters, and stamped, addressed envelope, and commented how much WORK I had done to document the problem. Getting their park "up and running" they had developed great relationships with the power company linemen and she would take my letter to the management and encourage followup. A few days later I got this email from Periwinkle Park:

Hello Gordon Gibby,

We really appreciate you taking the time to bring the interference issue to our attention! We have a good relationship with our linemen we will be sure to send out the typed letter to Lee county co-op. We hope the next trip does not have any interference issues and will work on this existing issue.

Thanks so much, Periwinkle Park

Let's hope the power linemen get a chance to work on this little issue!

Digital Library of Amateur Radio & Communications

Marty Brown, N4GL, Editor

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 <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.

MERT Update

Harlan Cook (KN4VRM) MERT Coordinator



Marion County Emergency Radio Team



Marion County Sheriff's Office

Thank You All for a Fantastic Year!

I extend my very warmest wishes to everyone for a wonderful Merry Christmas and Happy New Year. I hope everyone has a relaxing, enjoyable and safe holiday season. Blessings to all!

From MERT's **Standard Operating Guidelines; I. Introduction...** "The Marion County Emergency Radio Communications Team (MERT) consists of volunteers with the interest to help their community during times of disaster."

What we did together as volunteers in support of the Division of Emergency Management "...to help their community..." is nothing short of **AMAZING**!

From the completion of the <u>huge EOC Tower re-cable project</u>, rewiring the radio room, adding UPS capacity at every radio station, consolidate all MERT inventory in a single location allowing 24x7 access, conducting our first MERT 20 Exercise by making contacts with 7 countries and 24 states... **to**... creating a completely new Member Skill Book & New Member Orientation Guide and staffing the shelters/EOC during one Activation... shows how MERT members worked together and accomplished the major tasks needed for a better future.

My sincere thanks for your wonderful support and dedication to our Mission!

The combined MERT, ARES[®], CERT and HEC November monthly meeting had 34 attendees learning more about ways to protect expensive amateur radios and personal electronics from Coronal Mass Ejections (CME), Solar Flares and Electromagnetic Pulse (EMP) events.

Pat Davis, Bill Davis and Gray Moffett organized the presentation and arranged to have Scott Davis visit as guest speaker sharing more details on what these events are, the potential destructive energy fields they produce and some resources detailing ways to protect your equipment.

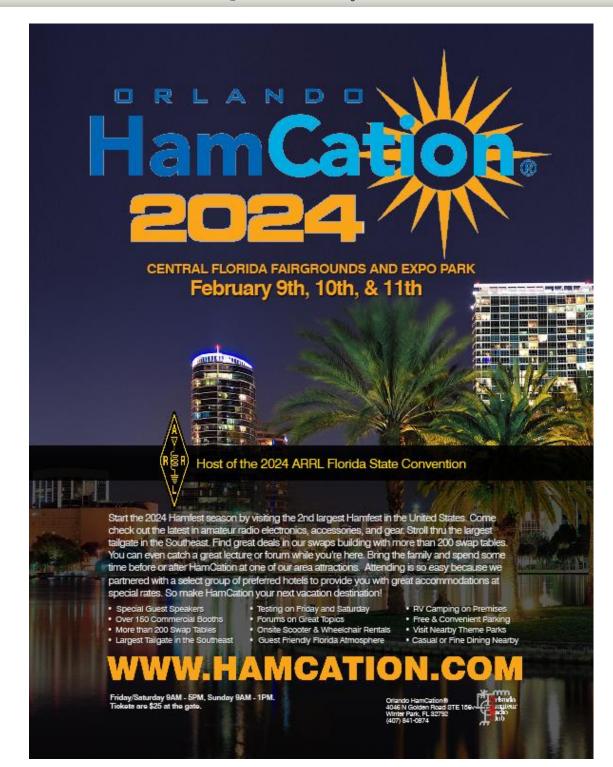
Attendees learned that solar flares are the least powerful natural events and will cause communications blackouts but very rarely cause equipment failures. CMEs are the next most powerful events that can and <u>have caused</u> <u>radio equipment failures</u>, electrical grid blackouts, radio/TV stations going off-air and satellite failures with warning times of 18-40 hours. The most powerful events are EMP's which are manmade devices designed to cause catastrophic levels of electrical equipment and system failures across entire continents with only minutes notice. Protective devices were shared including Faraday shields & electrical protective shunts.

Thanks to Scott, Pat, Bill and Gray for a fascinating and thought-provoking presentation!



We thank these event organizers: Top Row: Scott Davis, Guest Speaker and Pat Davis (KQ4BRW) 2nd Row: Bill Davis (KQ4ILZ) and Gray Moffett (KC3DWY)

Sign up for Space Weather Alerts on Solar Flares and CME's at: NOAA Space Weather Prediction Center <u>https://w.swpc.noaa.gov/</u>



Orlando HamCation needs your help! It takes an army of Volunteers to make HamCation happen every year. If you volunteer for HamCation for just four hours, we will give you a ticket to get into HamCation all weekend. We need volunteers starting on Tuesday morning all the way through Sunday afternoon, after the show ends.

Just to highlight a few of the areas that are needing help right now, Tailgate, RV, Forums, IT, Logistics, On Site Ticket Sales, Security, and Talk-In.

For more information on volunteering for HamCation, including signing up, go to <u>www.hamcation.com/hamcation-volunteer</u>. Also on this page is the full list of volunteer areas and the description and duties of each area.

HamCation gives back Track your hours that you volunteer and HamCation will make a donation to your Ham Club/501 C 3 organization of your choice. (We'll provide you with the form)

Suwannee ARC, N4SVC, Celebrates 10th Year of Clubhouse

Steve N2CEI, President, Suwannee ARC

On the evening of Oct. 3rd, during our regular meeting, the Suwannee ARC celebrated the 10th year of our Clubhouse. Yes, there were the traditional cupcakes and coffee for everyone but the main purpose of our meeting was to discuss how the clean up and the minor repairs and changes to some of our antennas after Hurricane Idalia was progressing. All was back to normal except for one of our KT-34 Triband Yagis that membership decided we should replace with one of our spares. That work party will be established after the New Year. It was also established that the membership would help out with the new tower installation at the QTH of N4UTX. The hole was being dug and the base needs to be set in preparation for the concrete pour. Hopefully and depending on the weather, it will all be done in Nov. Club members participated in the CQWW DX SSB contest the last weekend of Oct. as individual operators all with casual operations. Some rare DX was spotted and worked and members did increase their DX totals. And the highlight for some of us was operating in our first ARRL EME contest. It's a two weekend event in OCT and NOV.



Our Nov 7th meeting was a standard get together and we discussed further tree removal to eliminate future problems. We also scheduled our holiday party on the 2nd Tuesday of the Dec. out of convenience for membership. Then we organized a tower raising party at the N4UTX QTH. The tower base was to be set the following weekend and the concrete was to be delivered the week after. The base was finished before the rain came. Sometimes you get lucky!

Pictured at left at our 2023 Holiday Party, going clockwise are Sandra K4SME, Steve N2CEI, Laurie, Dustin KO4VFA, Haley, Ben N4UTX, and Phil KE4PWE. (Photo by Rose, KM4RLK)

And still being lucky, we had good weather for the 2nd weekend of the

ARRL EME contest. We only operated on 2M and made 79 QSO's total in 21 states and 28 DX countries. It was a great learning experience for those that participated, and we are looking forward in perusing WAS and DXCC on the 2M band.

The first weekend of December was the ARRL 160M contest. Membership participated at our 160 meter station lo-

cation and welcomed back a member that had moved out of state but has operated with us before. Because of the CME and the local lightning storms that weekend, conditions were horrible! But we had Fun and ran up a very competitive score! The following weekend, a membership work party readied the clubhouse for our Holiday party and took some time out to operate in the ARRL10M contest. The 10M band was Hot and we made plans to operate on Sunday but it was a bust because of another lightning storm. Our Holiday Party was on Dec 12th with over 25 members and families attending. We had a good time with music and plenty of food involved. Members talked about the various on-the-air holiday events and their personal amateur radio plans for the coming year. All was enjoyed and everyone arrived home safely!

Membership will be involved in the Stew Perry Top Band contest the last Saturday night in Dec. Yes, some of us are



Picture from our 2023 holiday party, Ben N4UTX, Jon KD4AMP and Mark KN4FRM

night owls and enjoy the160 meter band to its fullest! In the time period between Oct and Jan, there are numerous contests and operating events not mentioned that membership participated in such as the VHF/UHF/Microwave sprints, various State QSO Parties, the ARRL Sweepstakes on both CW and SSB along with just chasing some DX, at home and on a Saturday afternoon at the clubhouse. Something is always going on activity wise here with the Suwannee ARC.

So, if you are passing through the Live Oak area, take time to say hello on our 145.410 repeater (-600, 100 PL) and as always, if you hear us on the bands 160M through 3cm, give us a call and say HI! Then if you worked us in any operation event, or just in a casual QSO, you will find your QSO information on LOTW. Yes, we are close to "back to normal" at the station and enjoying this hobby as in the past! We hope you are enjoying your favorite aspect of the hobby and maybe catch you on the bands some day! See you soon! All the best of the Holiday season to you all and '73 from all of us at the Suwannee ARC!



1958 Lewis Turner Blvd Fort Walton Beach Florida Friday, March 8th— 4pm to 6pm Saturday, March 9th— 8am to 5pm Vendors set up Friday starting 8am. No public show until 4pm. Vendors set up Saturday 6am. No public show until 8am.

Testing, must pre-register PARCFWB@GMAIL.COM Swapmeet, Tailgate, Indoor Booths, Food Concessions, National Vendors, Local Ham Radio Dealers Area Club Tables, ARRL Representatives

Reserve your tables and spots: PARCFWB@GMAIL.COM \$8.00 admission, \$10.00 per table/spot Boy Scouts in Uniform Free 12 and Under Free 90 and Above Free

Contact Information: PARCFWB@GMAIL.COM, or the NWFL Hamfest Hotline at 850-359-9185. All voicemails will be returned if no answer.

TVARC Holds Licensing Courses

Brad Castelli, KN9B

Amateur General Licensing Course on Monday evenings, Jan. 8 - Feb. 26, 2024 in The Villages, Florida The Villages Amateur Radio Club is holding an in person General license course. You will meet once a week for seven weeks followed by exams on the last night. The course is free and open to the public. More class details and study resources are listed on the club website; www.K4VRC.com ("Interest in becoming a ham" tab). You are encouraged to get your friends to sign-up too, so you can study together. Contact: Brad KN9B, kn9b@arrl.net



Amateur Extra Licensing Course on Monday evenings, Mar 4 - Apr. 8, 2024, in The Villages, Florida The Villages Amateur Radio Club is holding an in person Extra license course. You will meet once a week for five weeks followed by exams on the last night. The course is free and open to the public. More class details and study resources are listed on the club website; www.K4VRC.com ("Interest in becoming a ham" tab). You are encouraged to get your friends to sign-up too, so you can study together. Contact: Brad KN9B, kn9b@arrl.net

What's Happening? Okaloosa & Walton Counties

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

Chatter that Matters!

Do you want goosebumps?! The ones that make you jump in your seat?! The kind of rush that tingles and makes you experience joy and wonder?! Remember when you were younger and the rush of adrenaline and fast paced thoughts of anticipation excited you?! Bring back the thrill and join the ultimate social hobby that will open a world of possibilities. Amateur radio offers you the chance to gain valuable technical skills, deepen your knowledge of communications, and connect with fascinating people both near and far. This is so much more than just a hobby - it is a vibrant community eager to welcome newcomers. Imagine chatting with fellow enthusiasts across town or astronauts aboard the International Space Station! Whether you are a techy person, aspiring communicator, or simply seeking friendly faces who share your interests, amateur radio has something amazing in store for you. Join a Club, Organization or team up with your friends today to enhance your world through this endlessly rewarding activity. The airwaves are calling your name – **it is time to answer!**

Area Clubs and organizations in Okaloosa and Walton Counties, Florida include:

The North Okaloosa Amateur Radio Club! <u>4565 Live Oak Church Road, Crestview, Florida</u>! Meetings on the 2nd and 4th Thursday of the month at 7:00 pm! <u>W4AAZ.Org</u>

The **Playground Amateur Radio Club**! <u>17 First Street SE, Fort Walton Beach, Florida</u>! Meetings on the 1st and 3rd Thursday of the month at 7:30 pm! <u>W4ZBB.Org</u>

Okaloosa County Amateur Radio Emergency Service Group! <u>90 East College Blvd., Niceville, Florida</u>! Meetings as listed on their website <u>OC-ARES.Org</u>

The Walton County Amateur Radio Club! <u>312 College Ave, DeFuniak Springs, Florida</u>! Meetings on the 1st and 4th Tuesday of each month! <u>WF4X.Com</u>

Walton County Amateur Radio Services! <u>75 South Davis Ln., DeFuniak Springs, Florida</u>! Meetings on the 3rd Tuesday of each month! <u>n4ema.wordpress.com</u>



What do we do?!

- 1. Amateur radio enthusiasts share insights on events, digital experiments, and staying connected through a time-honored hobby. Learn more about parades, luncheons, and celebrations in the world of amateur radio.
- 2. Tap into the fascinating world of amateur radio communications. This post covers everything from digital experiments to community events and celebrations for radio hobbyists.
- 3. From parades to formal dinners, amateur radio operators know how to celebrate their enduring hobby. Discover the events and experiments that keep these enthusiasts connected.
- 4. Amateur radio connects hobbyists through events, experiments, and on-air conversations. This post dives into the celebrations, parades, dinners and more.

Learn about the events, experiments, and celebrations that keep these enthusiasts connected through a shared passion. If you are seeking thrills, skills and a sense of purpose? Grab your headphones and transmitter - amateur radio calls. Master morse code, go digital or analog and reach out across the miles to build bonds that last through communications from your radio to your cell phone or computer and engage today! Your reward will be bonds that last a lifetime!

Recent Updates!

What have the listed organizations been up to besides the above-mentioned activities, events and gatherings?! THE WHOLE SHEBANG!

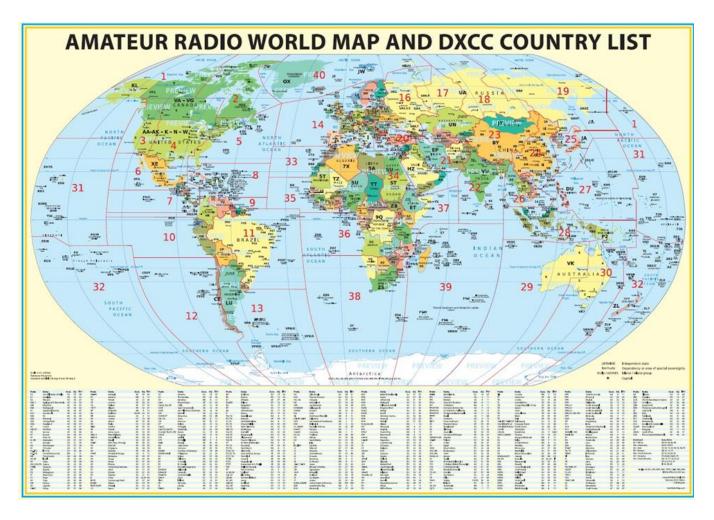
- **NOARC** has been assisting Local Churches, participating in training and teaching its members, and participating in events which help to feed the community!
- **PARC** has been teaching and instructing its members to enhance their technical skillset and planning for their Fox Hunt and the 54th Annual Hamfest in March on the 8th and 9th of March 2024!
- Walton County ARC has been preparing its members for upcoming Fox (transmitter) Hunts and Annual Tailgate on Jan 13 20233!
- Walton County ARES[®] has been Training in instructing its membership with Winlink, DRATS, and emergency communications capabilities to better serve the area for when, not if, a disaster of any type occurs!
- **Okaloosa County ARES**[®] has been teaching and certifying its members and guests on the ARES[®] Standardized Training Plan!

Apart from the technical and informative instructions being offered, the groups gathered to celebrate this holiday season with a potluck, raffle and Holiday Party!

Each group has multiple events and outings planned! There is no shortage of activities to join in on as a guest or a member! Each entity is welcoming and offers free training!

All you have to do is attend!

Interested in learning more?! Consider interviewing ham radio operators about how the hobby has evolved over decades - getting perspectives on changes in technology, regulations, community and more will draw you in and get you hooked into a worthwhile venture that is enjoyed by individuals, families, and people from all walks of life! Come out and enjoy today!



Madison & Suwannee Counties ARES® News

J. Gordon "Gordie" Beattie, Jr., W2TTT W2TTT@ATT.NET

Gordon W2TTT and Nancy N2FWI traveled to New York City to help with race coordination for the New York City Marathon on Sunday November 5th. This is a marquee training opportunity wrapped up in a live event where 55,000 elite runners traverse the City of New York.

Nancy and Gordon are part of an Amateur Radio team that comes from ten states to volunteer for this event. Years ago the first Amateur Radio Communications Director, Steve Mendelsohn WA2DHF/ W2ML (SK) started to exchange talent with other Marathon teams from around the country as a way to develop improved best practices for communications support. While most of the volunteer Hams are local to metro NY/NJ, there are many who fly or drive in days before the event to participate. They also participate and lead various key planning roles remotely in the months leading up to the



Marathon. It is an amazingly complex event with a diverse social landscape, great people and awesome experiences for anyone interested in contributing and honing their skills. A few have participated since the 1970s, but most since the 1990s or early 2000s. Each year there are new volunteers, so the team has depth, and is infused with new ideas that keep it at the top of the game.

The primary mission for the hundreds of volunteer Amateur Radio operators along the twenty-six mile course is the tomely delivery of vital information to the Race Control Center in Central Park via the attached Amateur Radio Communications Center. They also provide a backup should other systems go down. The NYPD has required the integration of Amateur Radio volunteers for over forty years and with the New York City Roadrunners engages the Amateur Radio community for this and other events throughout the year as part of a layered strategy for "observe and report" and backup communications functions.

The nets covering the course are hierarchical and layered for reliability and capacity. There are separate DMR Talk Groups and sometimes repeaters for the Start, Finish, VIP, Medical, Lower and Middle Course and Central Park areas and functions as well as FM "Analog" repeaters for backup snd overflow. Additionally, each Mile Captain has a Simplex Net that is usually FM but may also be DMR. Traffic is tactical in format and includes everything from position reports, to logistics requests, spot reports of runners with unauthorized equipment or other gear, medical issues, runner drop outs, course disruptions due to fire or EMS activity in a community, protests (There are protests! THIS IS NEW YORK BABY!) and the presence of suspicious items or people near the course. (As I said, THIS IS NEW YORK... "See something,

course. (As I said, THIS IS NEW YORK... "See something, say something".)

Nancy is a net control for one of the many nets including the very early DMR VIP Net starting a little before 5 am and then she shifts over to one of the FM nets until about 8 pm. She, along with others, have a long day.

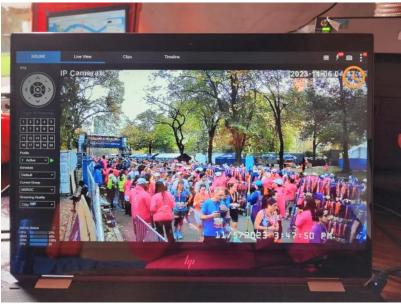
Gordon manages the AREDN Mesh-based network and cameras. All the cameras are supported by a Windowsbased Blue Iris video server sitting in New Jersey supported by two separate broadband providers. From there, remote viewers can access all the cameras in the network. The video feeds come from key points of interest and are fed into the Race Control Center and to Hams who are assigned to NYPD's Operations Center in downtown Manhattan at One Police Plaza. An additional local instance of Blue Iris is also monitored by Gordon and others in the Amateur Radio Communications Center In Central Park.



Because cellular network overloading along the race course can cause video stream dropouts, an ARES[®] team from Connecticut deployed a Starlink Terminal to backhaul their AREDN Mesh-based video traffic from the 59th Street Bridge area into the Internet.

Using APRS, Gordon tracks and displays the whereabouts of the Race Precursor, Lead Female and Male Runner, press vehicles and the Runner Drop-Out buses. These are all equipped with APRS trackers built by Dave N3UXK. Additional trackers built by individuals are also on the course and help to refine our overall operational picture from Central Park. Further, some of our Ham volunteers run the <u>APRS.FI</u> application on their phones or other devices. We have specified a message format for both RF and cellular trackers and use the logs to determine coverage gaps in both the APRS and cellular networks. Our beacon message format indicates Amateur Radio RF or which cellular carrier is in use which enhances our post-event analyt-

Right—This is an AREDN Mesh camera focused on the post-Finish area watching for medical issues among the exhausted runners. Note the racks of completion medals.



SDR Websites

Dr. Leon Couch K4GWQ, submitted by Ken Simpson, W8EK

SDR - DC-Washington NA5B http://na5b.com:8901/

SDR - FL-Boca Raton http://boca.homeip.net:8073/

SDR - FL-Casselberry KC4GO http://68.204.28.43:8073/

SDR - FL-Orlando N4BUT A http://sdr.n4but.com/

SDR -FL-TampaKiwi KF4LIJ http://kiwisdr.namtimmad.com:8073/

SDR - FL Ocala K4NDZ http://sdr.k4ndz.com:8073/ #freq=24950000,mod=usb,sql=-150

SDR - GA-Atlanta http://wv5l-sdr.dynu.net:8073/

SDR - GA-Dahlonega http://websdr.lumpkinschools.com/

SDR - GA-Ray City http://kd7nfr.freeddns.org.:8073/ SDR - OH-Cleveland N8MDP httpL//n8mdp.ddns.net:8904/

SDR - OH-Coventry http://24.166.57.85:8073/

SDR - OH-Westerville http://216.186.187.217:8073/

SDR - PA-Milford-For KZ55AW http://k3fef.com:8901/

SDR - PA-Philadelphia http://areyouready.dyndns.org:8073/

SDR - Utah 80-30M SDR #1 http://websdr1.sdrutah.org:8901/index1a.html

SDR - Utah 20-10M SDR #2 http://websdr2.sdrutah.org:8902/index1a.html? tune=18145usb

SDR - Utah 40-10M SDR #4 http://websdr4.sdrutah.org:8904/index1a.html? tune=18145usb

SDR - PoliceFireAmateurBroadcastify https://www.broadcastify.com/

Chip Failure & Protection For WINKEYER-USB SMT

by Gordon Gibby KX4Z

As we in NFARC/Alachua County ARES[®] gear up for our first ever Winter Field Day, I was paying more attention to my trusty WINKEYER-USB SMT that *worked so well* during ARRL (summer) Field Day. The WINKEYER is a great system that allows you to send perfectly-timed CW canned text direct from your Field Day logging keyboard, using function keys. It made my Field Day very much less stressful!

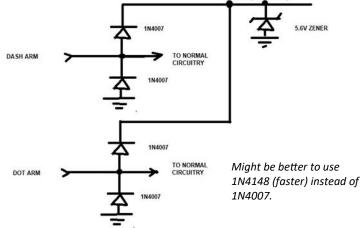
But I began to notice that it was absolutely *chewing through* pricey AAA batteries! I measured the current draw when running from batteries and it was in the range of 30mA!! Way too high. Steve K1EL advises it should be normally about 2-3 mA and within about 5 seconds of inactivity drops to just "leakage" type levels. That's why there is no "on-off" switch (you can "lock" it for travel). Mine wasn't doing that....at all. Something was busted...

The Cause

Steve -- the ham radio vendor -- advises that units damaged by electrostatic discharge (ESD) will display this high current draw phenomenon. He believes it is rare, and usually related to a lightning strike. (I don't remember any and nothing else in my shack was busted.) It turns out that the ESD protection systems installed these days in MOSFET devices such as the keyer chip used in the WINKEYER, cleverly use more FETS/MOSFETS to attempt ESD protection. Those internal protective circuitries can be fairly complex! (See: https://e2e.ti.com/blogs/b/powerhouse/posts/what-type-of-esd-protection-does-your-mosfet-include) But that protection is *limited*, and when the protective devices in the Winkeyer processor fail, they apparently begin to draw additional current.

<u>Oops</u>

At this point, we had a hiccup. Unbeknownst to me, the WINKEYER has a "Revision C" (indicated by a stick-on label on the bottom of the keyer enclosure) -- and you MUST ask specifically for Rev C when you order a replacement WK3-IC: <u>https://k1elsystems.com/WK3IC.html</u> (This could be better explained, perhaps?) I received a chip that wouldn't work, and Steven and I went round and round in emails until suddenly he figured it out -- and promptly sent me the slightly different pinout chip that worked PERFECTLY. He was very quick to help once it made sense to him. Now the battery current is only a few mA, drops to nearly nothing after a few seconds, wakes up instantly if you touch the paddle. Hooray!



My 2nd Rate Protection Circuit

I was determined to add some additional protection but I probably chose sub-optimally. There is a lot of argument that Zeners (the traditional protection technique) are too "slow" to protect from ESD. But I had already had a chip failure and figured something had to be added! So I added 1N4007 silicon diodes (from my junk box) in both directions (to +V and to Ground) from both paddle inputs, and a 5.6V zener on the +V line. Mi The easiest way was to solder to the terminals on the paddle 3.5mm stereo socket. Steve and others indicate that only TVS diodes are fast enough. However the "slowness" of zeners is perhaps due to their significant cross junctional capacitance, and that should in itself be somewhat protective! TVS diodes have much less accuracy in their avalanche voltage, so



they are far harder to put the "right one" in a circuit. My theory is that the internal "fast" protections of the chip were clearly exceeded-- so makes sense to add **some** additional protection even if it will only kick in some nanoseconds later: it might be enough to avoid overload of the internal protection circuitry? The 1N4007's unfortunately have an intrinsic region. **1N4148's might have been better.** Time will tell.

FCC Testing Information

Hog County Amateur Radio Association, Bushnell FL

First Saturday, 11:00 AM
Cross Connection Church, 1451 West County Road 476, Bushnell, FL 33513
Info: <u>sumterVE@gmail.com</u>

Lake ARA, Leesburg FL

- •Monthly on the 3rd Saturday, prior to monthly 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 miltonarc.org
- 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>

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 <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. [®]//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: <u>https://westvars.org/testing</u>

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

Statewide Digital Radio Resources

Did you know we have designated ARES[®] DSAR Reflectors & a DMR Talkgroup?

· 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!