QST NFL

Newsletter for the Northern Florida Section

Come join the FUN!

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From the Shack of the Section Manager

Scott Roberts, KK4ECR (kk4ecr@gmail.com)

In the heart of every community, there lie hidden heroes whose contributions often go unnoticed. Among these are those of us who are Amateur Radio operators; dedicated individuals who harness the power of radio waves to connect, serve, and safeguard our communities. Our passion for communication transcends hobbies; it's a vital service to society, especially in times of crisis.

A couple of weeks ago, I was in a local Ace Hardware picking up some items for a project I was working on for my shack. I was approached by a gentleman who reached out to shake my hand. As he reached out, he thanked me for being an Amateur Radio operator. He went on to explain that while he was in the military, deployed on a ship, it was an amateur radio operator that made it possible for him to communicate with his wife back home. He continued that it was that Amateur Radio operator who delivered the message from his wife, that his baby girl had been born. As he continued to shake my hand, he went on to tell me how thankful he was that Amateur Radio operators manned the local shelters in our county during Hurricane Irma, ensuring that communications were uninterrupted doing the storms.

This was a first for me. I had never had anyone approach me with such deep, sincere gratitude for my doing what I enjoy so much. What we do is important – our "hobby" is important – our training is important – our support of our served agencies is important. While going out to a park and tossing an antenna up in a tree and making contacts is a great amount of fun, we need to remember that we are preparing for when we are really needed to support our communities and served agencies.

As Amateur Radio operators, we are the linchpins in our emergency response systems when conventional communication channels falter. We are the unseen force that ensures messages are relayed, coordination is maintained, and hope is kept alive. Our role is not just about technical prowess; it's a testament to our unwavering commitment to the well-being of our communities.

For those of us who embark on the journey of becoming an Amateur Radio operator, the path is filled with challenges, learning, and immense satisfaction. It's not merely about mastering the equipment or acing the licensing exams; it's about embracing a lifelong mission to serve. The knowledge we gain and the connections we make are invaluable to every life we touch through our service.

To every Amateur Radio operator in our section who serves our local communities: our dedication does not go unnoticed. We embody the spirit of selflessness, readiness, and resilience. We bridge gaps with every communication or message passed, bringing people closer in times when distance seems insurmountable.

Let this be a reminder that our contributions are crucial and deeply appreciated. Our efforts not only enhance our community's safety and connectivity but also inspire others to explore the profound impact of volunteering. We are not just operators; we are guardians of communication, champions of community service, and true heroes in every sense.

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Vacant

Newsletter, *QST NFL*
Earl McDow, K4KSW

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

Submissions may be made to the editor: Earl McDow , K4KSW, earl.mcdow@gmail.com
All submissions are subject to editing prior to publication.

Digital Library of Amateur Radio & Communications: Past issues of QST NFL are now online

It's Your Choice! NFL Section Member of the Month!

To submit a nomination, please send an email to Section Manager Scott Roberts at kk4ecr@gmail.com. Include the nominee's name, call sign, county, reason for the nomination, and a photo of the nominee. I will review the nominations and reach out to you if we have any questions.

It's Election time for Northern Florida Section Manager

Ballots will be mailed April 1st, 2024 and should be returned by May 20th. NFL has 2 candidates running, and they have each submitted information on their candidacy. See below.

For details on how the election is handled:
ARRL Section Terms and Nominations Information

A Renewed Commitment: Running for ARRL NFL Section Manager, Scott Roberts, KK4ECR

As the sun rises on new opportunities and challenges in the world of amateur radio, it's with a heart full of enthusiasm and a vision for our collective future that I announce my candidacy to run once more for the position of ARRL NFL Section Manager.

KK4ECR & KN4KSI

Reflecting on the past two years, it's not just the activations we've navigated together that fill me with pride, but the tangible contribution our community has made to society. From coordinating critical deployments during hurricanes to liaising with our served agencies, we've proven that amateur radio is an invaluable asset to our communities.

Looking ahead, I am eager to champion a three-pronged philosophy that scales the lessons learned during my two years as YOUR Section Manager.

First, we will strengthen the bonds of support among ARRL associated organizations, civic leaders, and individual operators. By fostering these relationships, we build and reinforce the foundation of our amateur radio community.

Second, I am committed to expanding educational programs that recruit and equip operators throughout our section. This includes adult training as well as strategic youth education initiatives in schools, Scouting, and beyond. Our aim is to ignite the spark of amateur radio in the hearts of the young and old alike, ensuring a robust future for our hobby and its service to the community.

Last, in the wake of lessons learned from Hurricane Maria in Puerto Rico, I pledge to focus on preparing a contingent of operators. Together we will train to be ready to respond to disasters, embodying our availability to tackle regional crises.

The future of amateur radio shines brightly, and I am honored to be a part of it. Together, let's embrace the exciting changes and challenges ahead, continuing our journey of enjoyment, service, and contribution.

I look forward to two more years as YOUR Section Manager.

Jim Kvochick, K8JK, Running for NFL Section Manager

K8JK@Outlook.com

I am Jim Kvochick, K8JK, an ARRL Life member, actively licensed since 1968. Prior to relocation to the state of Florida, it was my privilege to serve as the ARRL Section Manager in the state of Michigan.

During my tenure in that position, the section team was able to grow the amateur radio population within the state, as well as provide ARRL members with access to resources and services provided by both the ARRL and its members.

In nothing but the most positive of spirit, I have successfully submitted my candidacy for the position of ARRL Section Manager in the North Florida Section.

Amateur radio has served me well in both my personal and professional life, and I look forward to returning the favor by providing servant leadership to the North Florida Section - its members and volunteers, as together we continue to expand our ranks, and support our many emergency preparedness objectives, along with continuing our own education and growth within the hobby.

My experience in supporting a large geographical area like Michigan can serve us in Florida too, as we reach out to more amateurs in more places within the North Florida Section. Additionally, we need to continue to explore new avenues to expose amateur radio to more potential new members of our fraternity.

Together, lets apply our talents and energies in making our hobby even more visible in the North Florida Section. Not just the communities where we live who count on us to be ready to provide communications assistance, but also those individuals who may be new to amateur radio and its many facets looking to us all for support and guidance.

I look forward to working with you all as we apply our energies to make the ARRL North Florida Section even greater together. I'm always happy to assist. If you have additional questions for me, do not hesitate to reach out.

I humbly ask that you consider supporting me in becoming the next ARRL Section Manager in North Florida.

Hail & Farewell

QST NFL Has a New Editor

Marty Brown, N4GL

Please welcome **Earl McDow, K4ZSW**, our new Editor for ***QST NFL*** starting with the April 2024 issue. Earl is from Gainesville, and I want to give a big Thank You! to Gordon Gibby, KX4Z for recommending Earl.

Starting next month Earl will be sending our mailing list and regular contributors an email with a deadline for the April input. You can submit your articles and pictures to Earl at earl.mcdow@gmail.com

It's been my pleasure to be your editor, and I know that Earl will enjoy the same support I have had over the past 9 years.

Guidelines for QST NFL Contributors:

- Word documents DOC or DOCX work best
- Use the Calibri 10 font when possible
- PDFs work when no further formatting is required, such as a poster advertising a hamfest
- For pictures and graphics, please use PNG or JPG format
- Provide names, call signs, and venues for pictures when possible
- All input is subject to editing before publication

From the Section Emergency Coordinator

Arc Thames, W4CPD

I hope everyone had a wonderful time at Hamcation if you were able to attend. I unfortunately only made it for one day due to sickness but am glad I was able to connect with many of you.

I wanted to share a success story from our team locally in Santa Rosa County. Over the last few months, we've been working to teach tech classes. They've been open to the community, but we've done them absolutely for free to include their book, test, and when they pass a basic HT that's programmed with our local repeaters for our CERT volunteers and first responders. We've done this by soliciting donations from some of our volunteers, but we did this totally free so that we removed as many barriers from someone getting their license as possible.

I know sometimes folks don't know where to find students at so we've engaged with our CERT (Community Emergency Response Team) and have had a wonderful turnout with those volunteers attending the classes. You can also offer these classes to first responders and 911 dispatchers. This is a great way to network with served agency staff and provide something back to the community at the same time.

If training isn't a part of your ARES program, I highly encourage you to put this towards the top of your list of priorities. Training is a great way to find new volunteers and just build those community relationships. Since we've been providing these training sessions and bringing up new operators, our weekly nets have grown, and the new hams have continued checking in regularly.

If you need help building a training program, please feel free to reach out to myself or Scott-KK4ECR and we can connect you with resources.

Monthly ARES Statistics

In January 2024, ARES volunteers in our section reported 1,440 hours. Thanks to the Emergency Coordinators who submitted their monthly report and for all of you that have volunteered and contributed to those hours! Many of our counties supported an emergency activation for our counties due to severe thunderstorms that swept through the state in early January.

	Number	Person-Hrs
Exercises this month:	10	351.00
Training events this month:	16	330.00
Public service events this month:	4	3.00
Community service events this month:	3	278.00
Emergency events this month:	3	69.00
SKYWARN events this month:	4	55.00
Meetings this month:	10	135.00
Unclassified events this month:	99	219.00

Call signs of DECs/ECs reporting:

KO4YOL K4SOP KN4PFZ KW4MO W4KKJ W4UFL KM4BTW KX4LEO WE4MJ WA4MN KB4HAH KD4EZW

Bridging the EMCOMM Gap Through POTA (Parks on the Air)

By: Bryan Phillips KQ4FMY

With weather somewhat warming up in the panhandle, the days of being secluded to one's ham shack slowly draws to an end. This changing of the season also not only brings warmer weather but also a means of making contacts, and what better way to do so then getting out into the local parks and enjoying the pastime that bridges the gap of one's love for amateur radio and the outdoors. This bridge is what is referred to as POTA in the ham community.

This past Presidents Day, I had the opportunity to attempt a POTA activation at the Madison County portion of the Twin Rivers State Forest, park K-4642. This was my first attempt at an activation since punching my general ticket post Hurricane Idalia. Armed with a NANOvna, my Wolf River Coils SBA1000, and trusty Yaesu FT-891. I set off for an enjoyable afternoon with the hopes of achieving my first ever park activation.

Arriving at the designated spot, I then set out to put together my station which I had been mentally planning for the past several days. If anybody is familiar with the Wolf River Coils SBA1000, there are numerous videos in discussion about the effectiveness of ground radials that are included in the kit, or using a section window screen, aptly dubbed “the Magic Carpet.” For this activation I opted for the screen approach, and after getting 20 meters tuned, I then proceeded to log my spot and begin calling out the words I had been rehearsing “CQ POTA, CQ POTA.”

After some time, I was able to achieve my activation making a total of 34 contacts on the log and I began to disassemble my spot that got KQ4FMY onto the airwaves. In my mind I was celebrating a successful activation. However, during my activation I thought of how much my radio journey had changed since Hurricane Idalia visited the Suwannee River area several months earlier. During the post hurricane cleanup, not only had I begun to resume my studies for my general license, but I also started to place an emphasis on my radio gear purchases, and how they could be incorporated into successful post disaster communications.

During my POTA attempt I reflected on the ease of assembling the antenna, tuning it, and getting my station on the air. When adding up the effectiveness of the antenna and comparing it to how long it took me to get my station live, it did occur that portable operations like POTA are the perfect opportunities to practice one's EMCOMM capabilities. As a disaster is always different, so does the means of setting an antenna up in sometimes less than ideal surroundings. When the need arises for an emergency deployment, can your station be moved? Can it be stowed and reassembled? But more importantly, be effective at the spur of the moment?

Taking time to enjoy a sunny day, in the woods, on the air, was rewarding in itself. But the ability to personally critique how my station can adapt into less than ideal situations was not only educational but also rewarding. Through this, I learned it is possible to make contacts on a simple set up, but more importantly, the knowledge gained on better deployment was well worth the trip to the woods. I look forward to many more attempts at activating parks in our local area. However, in doing so, I hope to gain a better understanding of the significance of making my portable station even more effective. A day in the woods is good nonetheless, but a day on the air in the woods is the best.

POTA Set Up Park K-4642 Twin Rivers State Forest Madison County Florida

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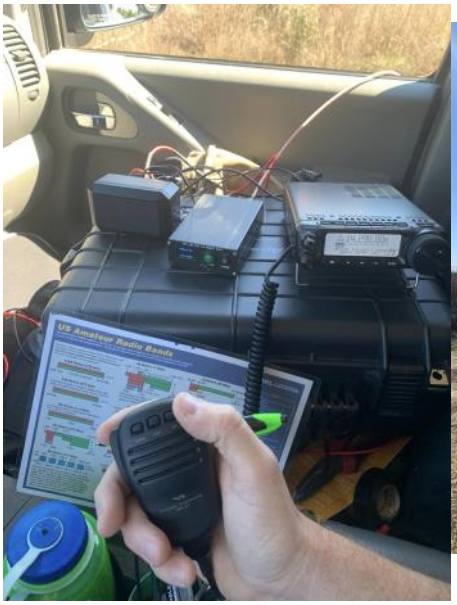
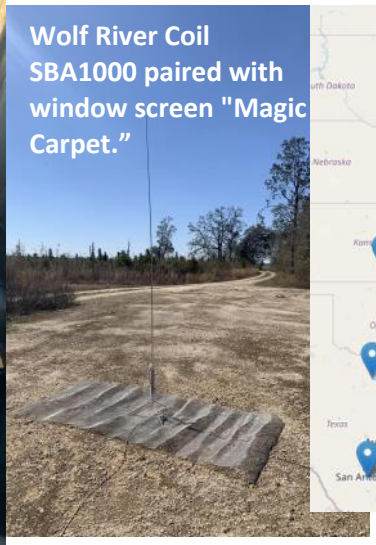
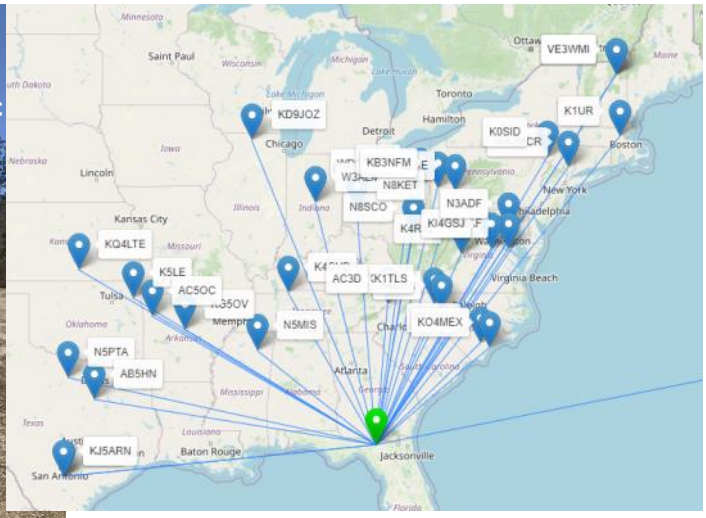


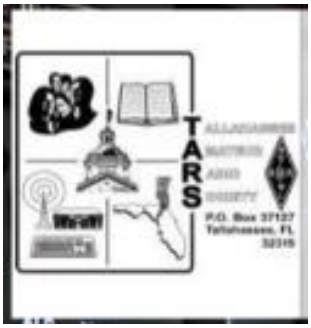




FT-891, ATU-100 Tuner and 18 ah LiPo4 Battery

Tallahassee Hams Participate in Multiple Events

By Chris Pandolfi KO4DN, TARS President



The month of February has been a good month for ham assisted events.

The first event on February 11th was the Tallahassee full and half marathon. This marathon starts at the state capitol and takes runners through some of the most scenic sites in Tallahassee. Ham radio operators reported lead and last runners, posted at key intersections, and relayed if any runners needed help. Todd Clark KN4FCC was the leader of the ham team.

Next event on February 24th was Lieutenant Governor Jeanette Nuñez's Race for Our Heroes 5K run, walk, or ruck. This event raises money for veterans. Phil (Chief) Fusilier headed up the ham team for this event. This took place at a local park in Tallahassee. Hams were stationed at key points on the route and one ham was a rover.

On the same day, the National High Magnetic Field Laboratory held their annual open house. This event is attended by hundreds of kids and adults. Randy Pierce, AG4UU and his team set up a booth, demonstrated ham radio, and had plenty of literature to pass out. Those interested in ham radio signed a log sheet and will be contacted soon.

Lastly, on February 25, TARS and hams from South Georgia helped support the Havana Hills Spring Remembrance Event. Garret Langston KO4KKX lead the ham team to help support communications. There are several routes in this event, an 88-mile, 48 miles, and a 25-mile route through some beautiful southwest Georgia country. Hams manned key points along the route and also roved in the sag wagon.

Thank you to the those that lead the groups and those that volunteered to help.

North Florida Amateur Radio Club/Alachua County ARES® Tries FIRST Winter Field Day

by Gordon Gibby KX4Z

Putting up seven HF antennas for ARRL Field Day just about "killed" our very successful Field Day crew... and the #1 request in our Hotwash was.... reduce the antenna work!

So we decided to do our very first-ever Winter Field Day -- at the EOC, where we already have an antenna....but just *one* HF antenna that can be used at a time....**there is only <u>one</u> HF coax cable**. How would we operate multiple powerful transceivers and their delicate receivers on that ONE coax? The answer was to start learning about Antenna Multiplexers, especially the excellent kits produced by VA6AM. As has been documented in the pages of the journal, we took Pavel's Triplexer, and turned it into a QuadPlexor, and then a Quintplexor -- and we learned how to build better and better bandpass and low- and high-pass filters also. To save $$$$ we worked with kits, and with scratch-built boards of our own design....and we *learned the hard way*! It took two solid Saturdays of LabNLunches to build filters, and many, many more hours of individual work as well to tune these devious little monsters. **Wendell Wright KN4TWS** and **Eric Pleace KO4ZSD** were stalwarts in this process.

Our ONLY HF feedline for Winter Field Day

<u>Making Matters Worse</u>

That ONE coax is somewhere between 300 and 400 feet long, according to time-domain reflectometer readings....no one knows where it really goes. We've seen it underneath the EOC raised floor, and we've seen literal loops of it on top of the roof, where it then crosses the back parking lot and heads into the adjacent woods to our homebrew antennas.... talk about LOSSES!!! Our bandpass filters were lossy, the antenna multiplexers had additional loss, and the COAX has hundreds and hundreds of feet of LOSS.

Would this work for real in a 24-hour contest -- or a real disaster event? Nobody knew.

Winter Field Day answered that question.

Our table full of kitted and scratch-built filters

We set up all our Antenna Multiplexers, and our hodgepodge of bandpass and low-pass and high-pass filters, designed to allow us to put one station on just about any band of 160 meters, 80 meters, 40 meters, 20 meters, 15 meters, 10 meters or even 6 meters. We can't have one on CW and one on Phone -- just ONE period, on each band. That's all! We taped them down to a table and ran 50 foot coax lines into the EOC room. We were amazed when real 300 watts showed up on our power meter -- from 3 simultaneous transmitters! -- And receivers worked just *fine*!

<u>Beginners</u>

We had **near zero experience** with Winter Field Day. No clue what techniques would be popular. So we held a Tech Nite on RTTY, and another on JS8...and we held general training on the contest rules. We wrote up as much as we could about canned text options, and we tried hard to get our crew ready -- but even going into the contest, many of the members didn't even understand the significance of *multipliers* in a contest.

Wendell KN4TWS holding down Phone

We expected to hear a lot of JS8 or RTTY.....we heard almost none. And JS8 proved to be a cumbersome technique for our members. Surprise, Surprise! **PSK31 is the order of the day!** LOTS of those signals, but many of our members didn't understand how PSK works, or how the intricate canned texts we had built into FLDIGI would help them....and our Voice guys were having a hard time of it.

Continued on next page...

CW Shines Again!

The BRIGHT spot was 20 meter CW. Wall to wall signals running 15-25 wpm. Heaven! And just then, ***our logging computer died***....so for about an hour, I punched function keys on N3FJP to command the WINKEYER to send CQ's, answers, exchanges, and QRZ's..... and logged on paper in henscratchings....Aaarggh!! Concentration city! Then mercifully **Susan Halbert KG4VWI** and **Earl McDow K4ZSW** got the entire logging system rebooted and back on line! Nirvana! Blast a CQ, type the call, punch a button, type the response, punch a button--it is LOGGED! -- and the next station responded -- like clockwork! There was Great Rejoicing in the hall as our score climbed. **Lorilyn Roberts KO4LBS** and I teamed up for over 100 CW QSO's and came close to toppling the Voice Guys!

Dave Huckstep W4JIR (L) and Craig White KO4ZRZ (R) happy phone ops!

But we had unfortunately laid a trap for them, too. The PACTOR modem has a funny audio amplifier and we think we may have been *injecting reverse audio* into the mic circuit of Station #1....making the job even harder!

New Successes!

Nevertheless, our Tech-licensed **Rosemary Jones KI4QBZ** and **Eric Pleace KO4ZSD** turned on a computer cw-decoder program for receiving Morse, and used FLDGI to send code -- and actually made a CW contact, despite neither of them able to copy CW! What Winter Field Day Bravery!!! They then proceeded to complete a PSK31 contact and swore up and down that FLDGI does PSK31 eons better than it does CW! Exhausted, they quit at that point.

Iron Man Dave

David Huckstep W4JIR -- as usual -- operated the entire 24 hours, except when I tricked him once to get a hold of that coax line for 30 minutes to make some more CW contacts and try to catch up to him! Craig White KO4ZRZ helped -- and **Mike Hasselbeck WB2FKO** & **Wendell Wright KN4TWS** soldiered through the night. I saw **Jeff Capehart W4UFL** mentoring **Susan KG4VWI** on PSK and I think both of them put in some phone work, too.

Multipliers, Multipliers

Brave CW/PSK ops Eric Pleace KO4ZSD & Rosemary Jones KI4QBZ -- neither of whom really knows much CW!

We were desperate to get MULTIPLIERS. About 15 hours into the contest, Counselor **Leland Gallup AA3YB** finally looked at the checker-board score table on the whiteboard and realized how Multipliers work! From that moment he was a changed man and started moving people around to bands where we desperately need this or that technique to fill our our multipliers! I went to 2-meters and coached **Reid Tillery K9RFT** (the ONLY person we really heard well) how to do Morse Code using dit-dah language! We couldn't get ANYTHING ELSE to work....his FLDGI was out to lunch. How to do data? We finally gave up and each sent our exchange as a peer-to-peer WINLINK email! It worked! We got all three techniques on 2meters! On 70cm we got voice but the signal was so weak (hundreds of feet of coax again) that we couldn't do any more. And on 6 meters -- despite the kindness of GARS volunteers -- we had loud switching system interference so we couldn't do anything. We made solid use (after checking carefully with the rules group) of WINLINK to schedule contacts over radio, and we even used WINLINK to remind people with cell phone texts (OK'd by WFDA).

Then -- new member **Manish Sahni KQ4KTE**, smelled SMOKE in the room of Station 1 beside the Filters.....and I suddenly lost about 20 dB of received signal level on 15 meters....and the SWR went to infinity.. (somehow I finished the contact??). A 3kV capacitor in a scratch-built filter had been returned to **charcoal**, literally! *Smoke*

Continued on next page...

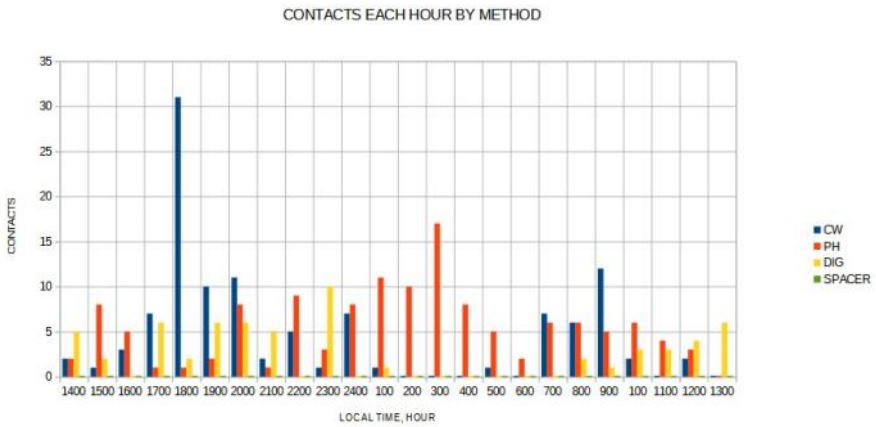
came out when we opened the paint can! Disaster! Grab the trusty soldering iron, use pliers to keep it from singing the table, pull out the Amazon assortment of new caps, put three in parallel to better handle the current, construct a 30 pf 3kV cap and we were back on 15 meters!

By the last hours there was no one else to contact. The bands were dead, there were no CQs. We only got ONE contact on 160 because the entire time there was a furious 160meter CW contest....making operation there nearly impossible.

Great Score For Our First

We had GREAT FUN and conquered many unexpected problems. Our breakdown looked like:

Band	CW	Phone	Dig
160	2	0	0
80	26	47	1
40	14	58	34
20	60	10	20
15	3	8	7
10	5	6	1
2	1	2	1
70cm	1	1	0



With duplicates removed, we ended up with (if we counted correctly) 304 contacts, 21 multipliers and a claimed score of 10,059 for our first-ever Winter Field Day. And we have a LONG list of "things to do better" next year! Next up is building a YAGI and trying out ARRL Field Day!

The 2024 Florida QSO Party will be held the weekend of April 27th – 28th.

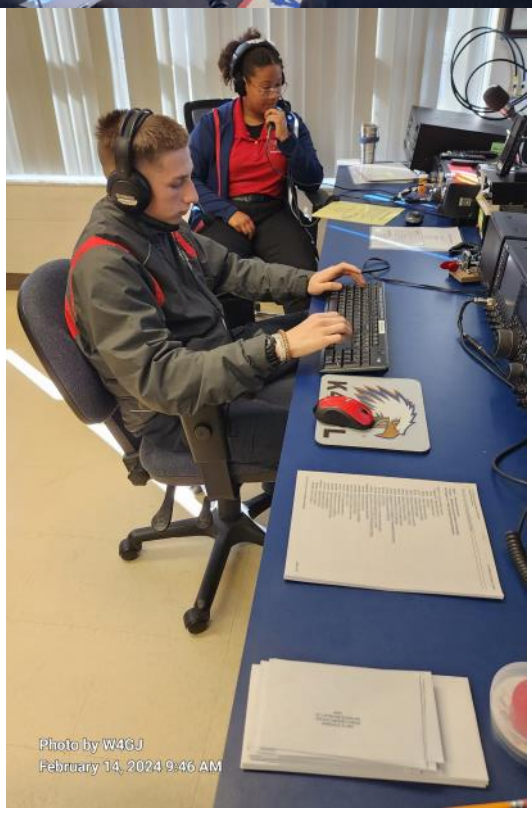
Stay tuned for details. Since the re-introduction of the Florida QSO Party to the contest scene in 1998, the Florida QSO Party has become one of the fastest growing and most popular State QSO Parties around today. This is due, in part, to the tremendous effort by the mobile teams to activate as many counties as they can to allow those participating from out-of-state, to achieve a county "Sweep" (working all 67 Florida Counties). Florida stations operating from home are also valuable, since that increases the chances that stations will work all counties! If you are a serious or casual participant from Florida, or from outside of Florida, the Florida QSO Party was designed to be a FUN operating event. Why not give it a try?

https://floridaqsoparty.org/

Loften High Gets On-the-Air

Bob Lightner,W4GJ, Trustee for K4WTL

Loften High School Students were active in two events; Winter Field Day, and the February ARRL School Club Round-up. We had twelve students involved in WFD out of our 55 club members. Most were from our Fire/EMS Academy, with one from the Computer Gaming and Apps Academy. We made 116 contacts for WFD, earning 464 points and for SCR we made 129 contacts with 19,026 points.



What's Happening -- Alachua County ARES®/NFARC

by Gordon Gibby KX4Z

Our North Florida Amateur Radio Club/ARES(R) group ended January on a high note, with our QuintPlexor a big success, allowing our first Winter Field Day to do well, despite only a single HF coax cable at the EOC... We made over 300 contacts and around 10,000 points mostly through that single coax with as many as three 100-watt stations pounding away simultaneously.

WFD demonstrated some of the advantages of a "go-box" -- assembled and portable ham radio station -- so February opened with a Zoom TechNite on how to build these in multiple ways, from very professional and pricey Gator boxes, all the way through plywood and down to milkcrate-and-ziptie. Building a go-box is real work and doesn't turn everyone's crank, but it has been years since our group worked through it, so February was a refresher. (https://www.nf4rc.club/how-to-docs/technite-go-box-construction-options/)

Monthly Meeting

Susan K9PDL demonstrates features while Earl K4ZSW and Leland AA3YB(front R) observe the kitchen

Our monthly meeting fell on Valentine's Day, but even worse, on a special day in the Catholic Church -- so we moved the meeting to Tuesday Feb 13 and redesigned it as a cookout/potluck and very limited "Celebration" meeting just to consider the AARIP. (https://www.nf4rc.club/2024-winter-field-day-after-action-report-improvement-plan/)

This was a huge success!! We had two inquiries from new people, and some spouses joined in as well. Wendell Wright KN4TWS, Earl K4ZSW and others (man)handled the propane grill and there were PLENTY of potluck dishes to add. Jeff W4UFL and Susan K9PDL very carefully maneuvered their new Class A Motorhome (33,000 lbs!) through our grassy field and got it parked on pavement and we all gawked at how *wonderful* it is on the inside!! We think an antenna mast will lash just perfectly to the rear climbing ladder! Everyone seemed to have a great time and we went ALL the way through the Improvement Plan, improved that further, and passed it all. We learned a lot about what works in Winter Field Day and think we can further improve our planning, training and performance next year.

Busy setting up mountains of food!

We had spouses show up!

Updates on GARC and W4DFU

Matt Self KN4EDG, President of GARC

The leaders of GARC, UF's Gator Amateur Radio Club, would like to provide a brief update on what we've been up to and have planned for the next few years. To start, we reactivated the student club back in 2021 due to inactivity from the COVID-19 pandemic (and students graduating). With the help of our Station Trustee, Dr. Jay Garlitz AA4FL, and other alumni support, we became more active and gained new student members. Over the last 3 years, we have worked to provide an organization for UF students interested in any aspect of radio to learn, develop skills, and have fun.

Figure 1: Matt KN4EDG, club president, helping with tabling at a student organization fair

Last year, we integrated a fully remote setup in the W4DFU station, funded by a grant from ARDC. This grant added a Flex Power Genius XL and Tuner Genius XL to our Flex-6600 system. We are looking into applying for another grant within the next semester for extensive antenna work.

During Fall 2023, we held a VHF/UHF Slim-Jim antenna build, which proved to be successful (even though we faced an issue with ordered parts). We also held our annual Winter Field Day event this past month, alongside the Loften High School club (under the leadership of Bob Lightner W4GJ). We had a great time, made nearly 350 contacts on multiple bands and modes at our operating position of the UF Natural Area Teaching Lab (NATL) pavilion. We hope to continue this newfound tradition of WFD at NATL for years to come.

In the future, we hope to have plans for POTA activations, antenna builds, and licensing classes. To stay up-to-date with GARC, join our Discord server (link: https://discord.gg/djjsk7J4QR), which we have found to be the most in-tune method of communication for college students.

Figure 2: Winter Field Day 2024 - Operating as W4DFU 2O NFL

MERT

Marion County Emergency Radio Team

Marion County Sheriff's Office
Division of Emergency Management

COMMUNICATIONS UPDATE

February 2024

Mark your calendars!
MERT Monthly Meeting
The next Meeting will be on Saturday March 16th 10:00 am
at the Marion County EOC!

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

With the New Year… New Activities Ahead

Harlan Cook (KN4VRM)
MERT Coordinator

With a new year and our new "Training Skill Book and New Member Orientation Guide" in place, our 2024 weekly meeting activities have changed towards a keen focus on learning and training events, including exercises. I thank all our members for the support and enthusiasm shown during January. I fully acknowledge last year saw many changes and activities unique and perhaps even unusual too. I never dreamed 2023 would be as incredibly busy as it turned out to be and that's why all members saw a major shift from prior year's meeting routines.

I know a large majority of our weekly meetings required a keen focus on the planning and work assignments (even homework) necessary to complete a significant number of vitally important challenges from the HUGE tower rewire project, addressing the lightning strike and radio room repairs/rewire, HF radio repairs, adding UPS at every radio, the additional exercises we had (MERT 20 and ARES Service Denied) and the new Mobile Command Center (MCC) and its testing, repairs and retesting. Whew! When you add in major revisions to the MERT IC RED BOOK, Shelter Guide and SHREK radio reprogramming.- it truly was a monumental accomplishment by the whole membership! I am very thankful for everyone's participation and support.

However, as important and vital as all these projects were to our Mission, the most significant and major result I'm most proud of in 2023… was the creation of the new MERT Skill Book combined with the New Member Orientation Guide.

"The broadest, and maybe the most meaningful definition of volunteering…
Doing more than you have to because you want to, in a cause you consider good." ~Ivan Scheier

Baseline Noise Signature Before Construction of New Alachua County EOC

Gordon Gibby, KX4Z

HOW TO APPLY THIS STUDY
TO AN ALREADY EXISTING RADIO STATION

It is easy to determine your local radio noise at an existing station, if it has a reasonably "full size" HF antenna. Since noise comes from generally all directions ("isotropic"), the "gain" of any full-sized antenna with respect to isotropic noise is basically 0dB. Using a calibrated spectrum analyzer (rather than an S-meter), make measurements of the received energy at a "vacant" spot in a ham band (in dB-milliwatt, "dBm") and use the following formula to calculate the E-field of noise at each frequency:

E-field noise in dBmV/m = 107dB + dBm reading on spectrum analyzer +20log(9.72/ l)

where l = wavelength of that frequency in meters = 300/(frequency in MHz).

After calculating the E-field noise for your location in dBmV/m, simply compare to the chart on page 3 of this Radio Society of Great Britain handout: https://rsgb.org/main/files/2018/01/180116-Noise-leaflet-issue-2.3.pdf

INTRODUCTION

Volunteer radio operators have a big stake in how a new Emergency Operations Center is specified and constructed. The wrong moves can result in a facility that has crushing wideband impulse noise on many or most important frequencies used for local, inter-county, state and federal backup communications. Uninterruptible power supplies can generate enormous conducted radio frequency interference (RFI) that then gets turned into radiated noise by the hundreds or thousands of feet of power wiring within the facility. Backup generators may also produce damaging RFI if not properly chosen. Computer rooms are another huge potential generator of RFI. Pulse width modulated variable speed HVAC fans are another significant problem.

One of the first steps in contributing to the design and build-out of a new facility is to assess the location and original local structures for radio frequency interference. This takes some work! You can't always just go slap up a full-size HF dipole and VHF antennas to make baseline measurements! Our local ARES® group has developed a protocol using a simple and easily-constructed 2-foot dipole, and obtained reasonable Antenna Factor (AF) calibration data for it, so that baseline measurements can be made with a suitable spectrum analyzer, and present professional results[1]. The Antenna Factor allows easy conversion of 50-ohm dBm power measurements by the spectrum analyzer into the preferred dBmV/m/meter electrical field strength specification, used in the electromagnetic compatibility (EMC) industry. Figure 1 presents the Antenna Factor values for our simple 2-foot dipole[i]:

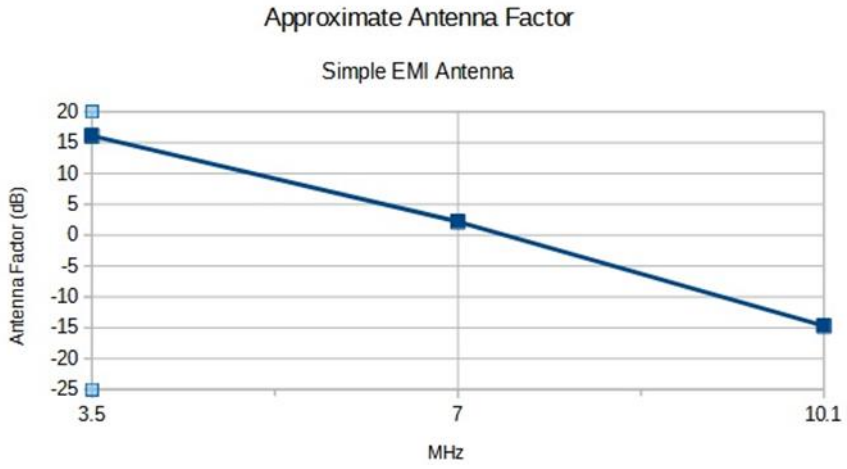


Figure 1: Antenna Factor for Simple 2-foot Antenna

[i]Later analysis of data from the EOC measurement suggests that the values for the 7MHz and 10.1 MHz are somewhat lower than reality. See further discussion in this paper. While the 3.5 MHz value seems appropriate, further experiments may improve on the 7MHz and 10.1 MHz values presented in this paper.

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The Siglent SSA3021X spectrum analyzer is a wonderful instrument, but it requires 120VAC power, cannot be powered directly from DC. This tripped me up on my my first attempt to characterize the baseline RF noise environment for the new Alachua County EOC structure, because I didn't realize the magnitude of the radiated RFI noise from the modestly-filtered inverter power supply utilized to create the required 120VAC. I obtained the baseline facility RF noise plot shown in Figure 2, which shows significant RF noise in the left one-quarter of the 3-100MHz plot. However, this is spurious. I discovered the problem when powering the spectrum analyzer at home from the same filtered inverter system and comparing to the spectrum obtained when powered from a diesel-powered generator: the spectrum from the diesel generator displayed *much* lower values (in a quiet RF environment) below 20 MHz.

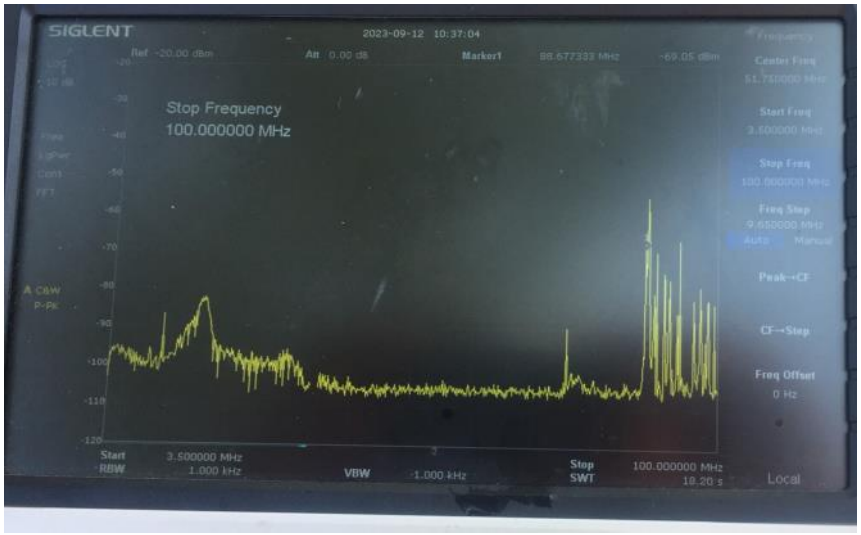

Figure 2: Initial effort at 3.5-100 MHz baseline noise plot. The signals at the right end are FM radio stations; the majority of the apparent noise at the left end of the plot (magnitude -80dBm to -100dBm, frequency 3-18 MHz) is actually created by the inverter power supply.

As a result, Eric Pleace KO4ZSD and I made arrangements to revisit the new EOC structure and repeat the measurements using either diesel generator (with additional conducted filtering as well) positioned ~100 feet away from the measurement antenna (using several long extension cords) or from available utility power. On Wednesday 7, 10AM we commenced measurements.

Figure 3. Eric Pleace KO4ZSD monitors the spectrum analyzer with the monitoring antenna close by. The AC power comes from 100+ feet away to further minimize any interference.

Using the filtered diesel-powered generator power, 10 kHz bandwidth[ii], with no input attenuation, and using the analyzer's preamp option, the noise floor of the device was approximately -122 dBm. A very low noise floor is important for accurate measurement.

Baseline RF radiated noise measurements were carried out at two locations, chosen to be near to proposed backup communications antennas:

Location	Position
1	Concrete sidewalk southwest of main building, south of main parking lot, just west of the southern outbuilding
2	Grassy area south of main building, approximately 12 yards east of the eastern edge of the southern wing, and 9 yards north of the fence to the Reserve Park

Table 1: Locations of baseline RF noise measurement

[ii] 9 kHz is actually preferred in standard measurements but I erroneously didn't understand that any numerical bandwidth can be entered. To convert 10 kHz noise voltage measurements to 9kHz bandwidth, simply add -0.92 dB. The difference is generally negligible.

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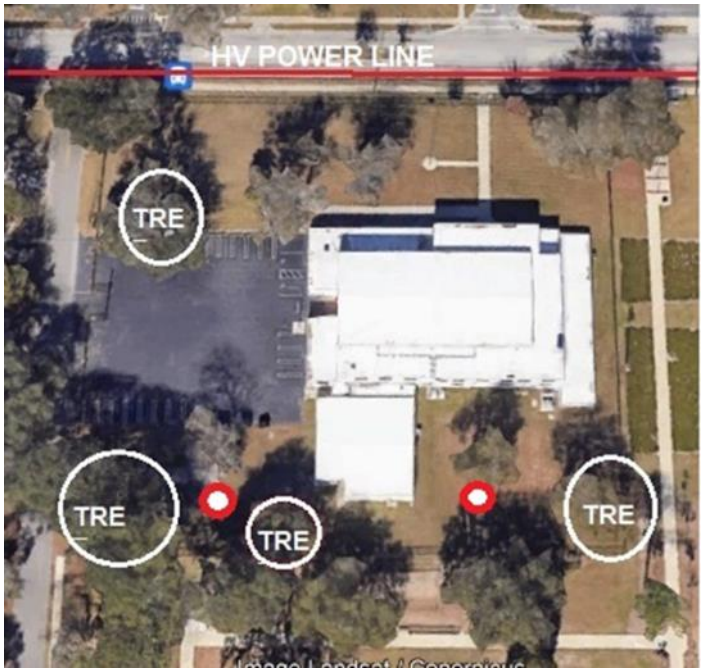


Figure 4: Baseline noise measurements locations #1 (left) and #2 (right) shown in satellite view. A High Voltage power line runs east-west on the street north of the building, and the power transformers powering building are centered along the east wall of the building. TRE = tree.

At each location, when zooming out to include frequencies up to 100 MHz, we could easily pick out expected local FM radio stations, confirming the operation of the antenna and feedline. Our concerns for this session were NVIS HF frequencies suitable for connection to nearby counties, and our State Capital. Therefore we made detailed measurements at 3.5, 7.0 and 10.1 MHz as shown in Table 2 Spectrum analyzer power measurements were then converted to E-field signal strength (dBmV/m) using Equation 1, which is derived from Ohm's Law in a 50 ohm system using the definitions of decibel for power and voltage as appropriate[2].

E dBmV/m = 107dB + dBm + AF (dB) (Equation 1)

where dBm is the power measured by the spectrum analyzer.

For each measurement, the frequency was adjusted by small amounts to avoid obvious true communications signals, and all measurements were made with 100 averages, computed by the spectrum analyzer. At location 2 we were able to obtain utility power and re-measured using this for the spectrum analyzer; there was no significant difference between measurements from the filtered diesel generator AC power, and that from the local utility present at an AC outlet on the building.

Location	Frequency (MHz)	dBm noise power measured	AF for 2-foot antenna at that freq.	Calculated dBmV/m (baseline noise)
1	3.5	-123 dBm	16.1 dB	0.1 dBmV/m
1	7.0	-122.5 dBm	2.2 dB	-13.3 dBmV/m
1	10.1	-122 dBm	-14.2 dB	-29.2 dBmV/m
2	3.5	-121 dBm	16.1 dB	2.1 dBmV/m
2	7.0	-121 dBm	2.2 dB	-11.8 dBmV/m
2	10.1	-120.8 dBm	-14.2 dB	-28 dBmV/m

Table 2: Measurements of baseline RFI noise at important NVIS frequency bands at site of new Alachua County EOC/Fire Rescue Headquarters, before renovation.

Continued on next page...

Discussion

Limitations of this study include the use of a simply-constructed monitoring antenna with approximate calibrations, rather than a very expensive and accurately calibrated EMC antenna. The spectrum analyzer utilized is a few years old and I have no way to recheck its original calibration. The measurements were carried out on a dry, cool day in the winter with little thunderstorm activity in our region. Measurements made in mid-morning benefit from high D-layer absorption at lower frequencies, reducing received galactic noise from the universe.

These are fairly "quiet" measurements of baseline outside RF noise, measured before significant retrofitting of the structure for the EOC/Fire Rescue Headquarters. Figure 5 plots these measurements (purple line) against

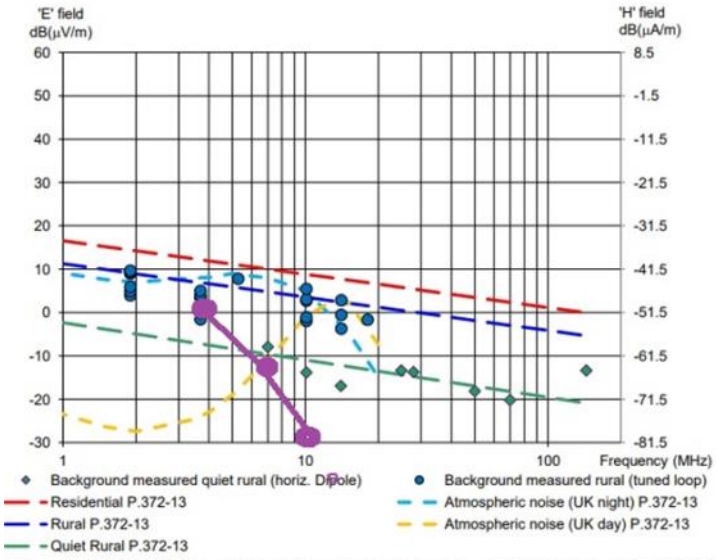


Figure 1 ITU/R P.372-13 expected receiver noise levels together with levels measured by RSGB EMCC 2014 to 2017.
REF: https://rsgb.org/main/files/2017/12/221216-Noise-leaflet-issue-2.pdf, page 3

Figure5: Comparison of EOC measurements (purple dots and line) with ITU / RSGB measurements

While the 3.5 MHz measurement seems appropriate, the 7 MHz and 10.1 MHz values are *too* quiet -- quieter than reasonable by ITU/RSGB experimental measurements[3]. This suggests our Antenna Factor calibrations for those frequencies need revision. The calibration of the measurement antenna was hampered in that it wasn't precisely in the same location as the comparison "full-size" antenna. Repeating the calibration and getting the antennas closer may yield improved AF measurements at 7 and 10.1 MHz.

Despite those cautions, because the same monitoring antenna was used, the spectrum analyzer noise power measurements can be directly compared with measurements previously made at our existing EOC (and not requiring any use of the Antenna Factor)[4]. Those much earlier measurements showed spectrum analyzer power measurements as great as -55 dBm at the trapdoor access to the facility roof! Parking lot measurements were typically -80 dBm, or fully ***40 db stronger noise*** than the baseline at our proposed new location. Those astonishing noise captures were all man-made noise created by EOC-installed equipment. The solution for our team was to abandon an expensive antenna created above the roof, and instead create new antennas 100+ feet south of the building into adjacent woods. These were very successful.

In conclusion, with baseline noise data documented, building designers can attempt installations that do not significantly damage this RF-quiet environment, and our team can monitor their success by repeating these measurements. New RFI-generators may potentially be picked up early enough to mitigate before the building is complete-

[1]G Gibby "Building a Simple Electromagnetic Interference Measurement Antenna" QST NFL, February 2024, pp 7-9. [Online]. Available: https://arrl-nfl.org/wp-content/uploads/2024/01/00-QST-NFL-February-2024.pdf Accessed 2/8/2024.

[2]A. H. Systems, Inc. "Useful Formulas for RF Related Conversions" [Online]. Available: https://www.ahsystems.com/EMC-formulas-equations/RFconversions.php Accessed 2/10/2024.

[3]International Telecommunications Union. Recommendation ITU-R P. 372-16 (08/2022) Radio Noise. [Online]. Available: https://www.itu.int/dms_pubrec/itu-r/rec/p/R-REC-P.372-16-202208-I!!PDF-E.pdf Accessed 2/08/2024.

[4]G Gibby "EOC Interference Rate of Decay with Distance: May 14 to May 20 [2019] Data Capture and Analysis" [Online]. Available: https://qsl.net/nf4ac/2019/May18Investigations.pdf Accessed 2/8/2024.

Sportsman's Paradise Amateur Radio Club (SPARC) Wakulla County

Ken Fields, W4KEF, President SPARC

On Feburary 24 2024 the SPARC IN Crawfordville Wakulla Co had an antenna build for our upcoming Fox Hunt. Date is unknown at this time. Will let everyone know the info. Here are some pictures of the buil:

QCWA Chapter 62

Ken Simpson, W8EK, President

Ocala Chapter 62 of QCWA held its regular February meeting on February 22 at the China Lee Buffet in Ocala. As normal, we enjoyed a great meal; as we have said many times, "If you did not get enough to eat, it was your own fault."

We were pleased to have Bob Winston, W2THU, the President of Cleveland Ohio Chapter 1 visit us.

We also had a guest speaker. Jim Kvochick, K8JK, is running for Section Manager for the North Florida ARRL section. He spoke about things that he would do as Section Manager.

Chapter 62 also holds a net on 3940 MHz at 9 AM every Saturday morning. Everyone is welcome.

From Left to right
Our speaker, Jim, K8JK; Doug, W3HH; Ken, W8EK; Sue, N8AJU; Marty, N4GL; Wayne, N4FP; Jeannie, KC8MNW; Leon, K4GWQ; Dennis, N4KPI; Charlie, W1DOH; Bob, W2THU

Suwannee ARC Welcomes Springtime

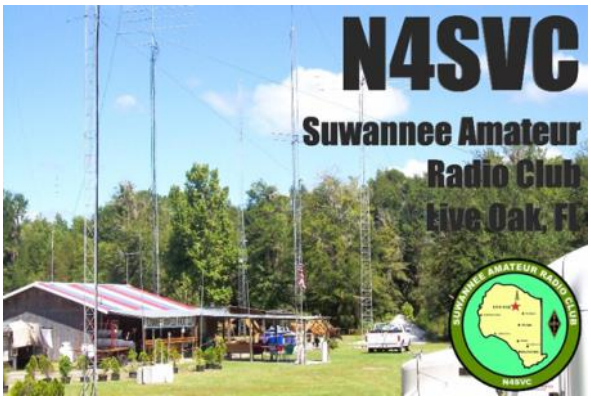
Steve Kostro, N2CEI, President, Suwannee ARC

The SARC welcomes springtime but not so fast! The club is actively involved in making some upgrades to our Antenna systems and AC power distribution along with some Hurricane readiness at the Clubhouse. This of course requires time being spent outdoors. So—we hope the summer heat stays away for a while. This work includes shunt feeding the vertical support for our 80M Four Square antenna to allow the use on 160M. It is a 72 foot tower with cross-member supports or the 80M system that should provide enough top loading for an efficient radiating 160M vertical. The ground plane field is already in place so most of the hard work is done! We are also in the process of installing a new 4 element Tri-band Yagi that will replace the Yagi that was destroyed by last fall's hurricane. It was decided that some tree removal was required to be ready for any future storms which will allow the new installation of a multiband Yagi for our designated WARC band tower. So—lots of work to do on the cooler weather weekends we have left!

As for the Clubs operation, the competitive spirit sparked and interest in some club members to participate in the "World Wide Award 2024" that was designed to "Promote friendship between amateur radio, and celebrating the 150th anniversary of the Marconi birth in 2024, involving as many countries as possible in a single event." It took place for the entire month of January and provided some very handsome wall paper for those that met the goals of the event. Congratulations to those that were involved!

As for other operating events, membership was involved in the Stew Perry Top Band contest (160M) the last Saturday night in Dec. The club was also involved in the ARRL Jan VHF sweepstakes, the CQWW160M CW and SSB contests. There were also various sprints and activity nights that membership enjoyed at their leisure at the clubhouse or at their personal stations. AND—we are just about finished (hampered by the recent weekend weather) with the tower and antenna installation at the QTH of N4UTX where Ben will most likely be a DX hound for the foreseeable future!

As for the further operating events, members will participate in the ARRL International DX SSB and the CQ WW WPX contest in preparation for the Florida QSO party in April. The ARRL DX contest is a great event to operate in if you are working on your Countries worked list. The CQWW WPX does the same thing but is focused on the various call sign prefixes from around the world. April brings many VHF/UHF sprints and then the Florida QSO party where you can work every county in Florida. If you hear us on, give us a Call! So, if we are not working at the club station on the weekend, we are operating!



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. We are "back to normal" at the station and enjoying this great hobby of ours! We hope you are enjoying your favorite aspect of the hobby and maybe catch you on the bands some day! See you soon and all the best from all of us at the Suwannee ARC!

Sumter County ARES®/Red Oaks ARG/Hog County Winter Field Day

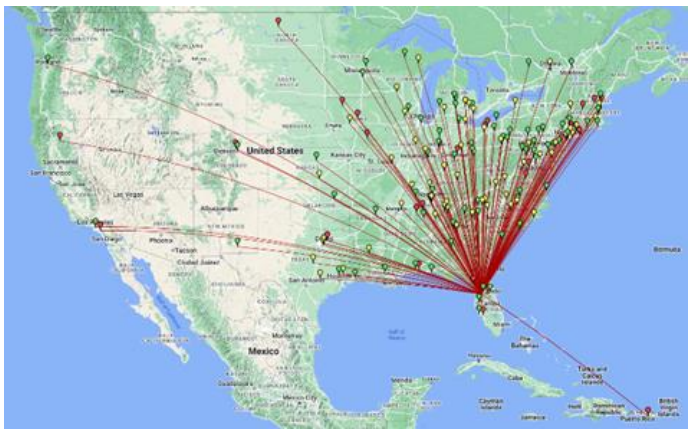
Mark Newby, KX4LEO

Partnering with the Red Oaks Amateur Radio Group and the Hog County Amateur Radio Association, Sumter County ARES participated in Winter Field Day, January 27-28, 2024. The Sumter County ARES Emergency Communications Trailer was set up in a large field at the Red Oaks RV Park located in Bushnell, Florida, from where we operated three (3) stations under the club call sign K4HOG. Participating in this annual contest, we used this opportunity to test our emergency communication capabilities.

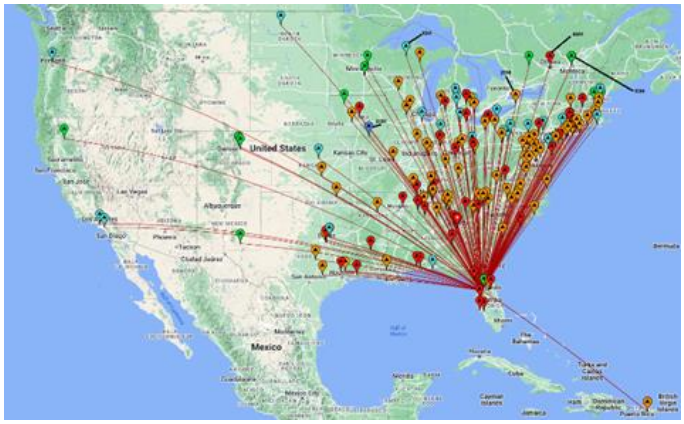
We operated three stations. The first station operated phone and digital using an ATAS-120 vertical antenna attached to the roof of the trailer. The second station operated strictly phone using a 71' 6-80 meter end-fed wire attached to the top of a 30' pushup pole on the trailer, and extended out in a northeast-southwest flattop configuration. The third station operated strictly CW using a Tactical Delta Loop antenna.

A Winlink message was sent via HF to meet one of contest objectives. Within a narrow window we were also able to make a satellite contact using an HT connected to a homemade yagi antenna.
All DC equipment was powered directly from a bank of four deep-cycle AGM marine batteries, while all AC dependent equipment was powered by a 3000w inverter connected to the same battery bank. The bank was periodically charged using roof-mounted solar panels or a gasoline generator.

Statistics and illustrations provided by Dave Bushong, KZ1O



Breakdown By Band:
dkblu = 80, red = 40, org = 20, ltblu=15, grn = 10



186 QSOs Total:
Red = CW, Green = Voice, Yellow = Digital (PSK)

Getting Better As A Group

by Gordon Gibby KX4Z

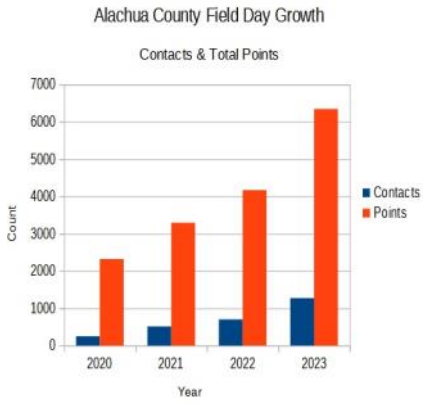
Preface: I am the farthest thing from an "expert" on management or group dynamics. These ideas may be a total *flop* in your local group. Someone brighter than I am might be able to explain what really works and why; this is just the best we can do in Alachua County.

FUN

Over the last 7 years or so we have been having just a barrel of fun in Alachua County learning and growing in our partnership with the Alachua County Emergency Management. I think we're now on our 4th Emergency Manager, and are very much appreciated and integrated into local disaster response, as *volunteers* (not in charge of *anything*). Our group 7 years ago was about 5-6 diehards and now we run around 15 at meetings, have 79 members of our NF4RC@groups.io site, over 1022 topics there in just over 2 years. In the face of predicted historic hurricane damage, we've still been able to muster volunteers for multiple shelters even though most of us are old and retired and have significant responsibilities at home.

OBJECTIVE IMPROVEMENT

A lot of our volunteers are somewhat limited in their ham radio experience. Many of them we have helped boost to General and then to Extra Class. To give us more chances for more diverse growth in skills, we started participating as a group in the ARRL Field Day, beginning in 2020, using the Alachua EOC Radio Club call, NF4AC. This was a real stretch for us, since neither I nor any of the rest of us were really "contesters." It has done us a lot of good in learning all kinds of things, and in 2023 we led the nation in the small 4F category and were #2 in the nation in all "F"-EOC-affiliated stations. We entered Winter Field Day for the first time this year, stuck with only one HF coax line....and we think we will end up in the upper 5% or better of logs. It taught us a lot!



GROWTH PRINCIPLES

What are the principles that we think have helped us the most? *Mostly, we just do what experts advise, and we do what wise people before us have already figured out.* Lacking any real expertise in management, we adopted ideas in *The Five Dysfunctions of a Team* (https://en.wikipedia.org/wiki/The_Five_Dysfunctions_of_a_Team) and we emphasize **servant leadership**. Patrick Lencioni wrote his "business fable" to emphasize the deadly impact of:

- Absence of trust -- the unwillingness to be vulnerable to the group
- Fear of conflict -- "seeking artificial harmony over constructive passionate debate"
- Lack of commitment -- ambiguity-inducing lack of real buy-in to group agreement
- Avoidance of accountability -- low standards resulting from not calling a spade, a spade
- Inattention to team results -- putting self in front, instead of paying attention to the team's actual results

I think these principles have helped us. Volunteers are expected to do what they're asked. That applies in our EOC as well as in our commitment to the ARRL. Our group took seriously the ARES(R) Plan (https://www.arrl.org/files/file/ARES Plan.pdf) developed by the ARRL Board of Directors and we have steadily tried to grow our members by honestly pursuing growth in the ARES(R) Taskbook. (https://arrl-nfl.org/wp-content/uploads/2020/01/Florida-ARES-Training-Task-Book-2020-R1.pdf) A huge amount of effort by dedicated Florida SEC's went into that document, and we honor their effort. That has worked well for us, and we further wrote our own special Taskbook for service within the complicated milieu of our Alachua County EOC where we have as many as 7 different radio systems. These written documents keep us honest and help with ***accountability***. We have the blessing of weekly radio nets with other county, state and federal volunteers in the SHARES system, and with monthly scripted exercises with several Florida Counties and State FDEM, written by a expert at Flagler County EM -- these allow us to gauge real results. So do the Field Day and Winter Field Day efforts.

Not Reinventing The Wheel

We use the Incident Command System wherever possible, particularly since we are affiliated with county government and the EOC. We use the HSEEP (Homeland Security Exercise Evaluation Protocol) almost religiously to guide all our exercises -- including Field Days. This helps with all five of the Dysfunctions of a Team. We **write up** every

Continued on next page...

exercise using a slightly altered version of the official HSEEP report. I think that has potentially been one of the most important factors in our growth.

Why? Because it guides us to hold immediate "Hotwash" discussions of what worked, what didn't -- and we are candid in these discussions! Just about *every single comment* gets noted and appears in our written document. Every single problem, we will try to address. We write "**Improvement Plans**" that are in the *dozens of issues to improve* before the next event....and then we go to work fixing them! (See p21 of our Winter Field Day report: https://www.nf4rc.club/2024-winter-field-day-after-action-report-improvement-plan/)

We are all weird

We are a diverse group. Lots of different personalities, lots of different life circumstances. We aren't perfect, at all -- I, along with all of us, have many failures. The stress and strain of these exercises forces us to learn how to work together, to put up with each other's quirks and failures. We all know each other pretty well by now! Some folks don't like this, and they drift away. But competence attracts competence, and wow! do we have some really sharp volunteers in our group who have made major improvements in our group. Volunteers created our logging system. Volunteers keep our digipeaters and RMS stations going. A volunteer created our groups.io site (appalled at my pitiful prior efforts!). Volunteers run our Wednesday training at the EOC. We're *grateful* for all these people with their varied input.

Part of the bigger team

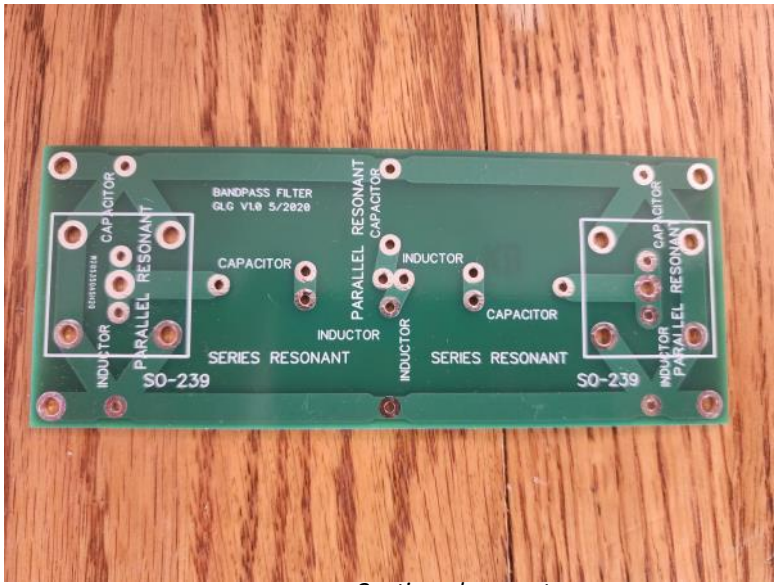
The ARRL has been a big help to us in so many ways. We have literally taught their EC001 course locally. We give far more than lip service to their ARES(R) Plan. The NFL Section has been a huge help to us, with structure, connection to the State, wise guidance and Section-wide exercises. Rick Palm was instrumental with involving our group in some special 2022 National Convention training, which also strengthened us and others (we hope). Using those five principles has helped our group a lot.

Suwannee County ARES News

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

Well, after a somewhat busy January with a storm activation at the EOC on the 9th, and a successful Winter Field Day on the last weekend of January (see last month's January 2024 NFL Section Newsletter for details.), we had a pretty quiet month here in Suwannee County with only a few days with winds over 30 mph. We were able to staff the EOC each week for both the morning NFL Section ARES Net and the weekly SARNET County and Served Agency Net on Wednesdays. The "quiet" provided some time for some modest improvements in our EOC and some time to plan further improvements.

On our planning agenda is the replacement of our 80m dipole with a multi-band fan dipole. Given the move of the NFL Section ARES Net to 40m and the need to have daytime coverage, we'll keep the "temporary" 40m antenna installed in 2022 for Hurricane Ian. Having two HF antennas is a helpful asset. While we haven't yet had issues with simultaneous operations on 80m/40m or 40m/20m, we are in the process of building bandpass filters as our antenna arrangements could change either in the EOC or with the deployment of the new mobile EOC.



The filter project is a product of several interclub collaborations:

1. Kudos to Gordon Gibby KX4Z for spearheading their "QUINTPLEXOR" filter project for the Alachua EMCOMM team. Their project was driven by the need to share a SINGLE HF coaxial cable in the EOC. Gordon refined the building of discrete bandpass filters using a PC board that he designed and had made. These $5 PC boards create a stable and simplified construction effort.

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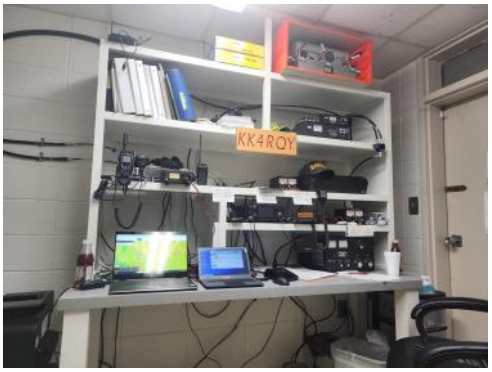
2. Kudos also go to Brad Swartz N5CBP for his leadership of the Columbia Amateur Radio Society's (CARS) Field Day effort which requires filters to keep everyone sane between stations.

Gordon Beattie W2TTT took up the effort to encourage filter building for individual member stations as a CARS activity and purchased four boards from Gordon. Components have been ordered and the initial filter boards will be built over the next few weeks by Brad and me with the help of other CARS members. Once they are done, and we have some experience building and tuning them up, we'll build more filters and spread out the knowledge and workload. The goal is to have filters for both the CARS and the Suwannee/Madison Field Day stations before the end of June. Additionally, we'll have the opportunity to put filters in the EOC stations if needed. Finally, for those of us who operate multiple bands simultaneously from our home shacks, we can build and deploy filters as well.



We have also begun a process of putting Anderson PowerPole connectors on the power cables of our power supplies, radios and accessories so that we can add another layer of power resilience to the station's building generator setup. We are also adding multi-outlet "fan-out" cables to provide us with the ability to surge additional equipment into the EOC during activations. This has been a need during previous activations and we've had to juggle a limited number of spare AC mains power outlets, while our two AC/DC power supplies had ample spare capacity. Instead of an expensive fused distribution strip, we fabricated Anderson PowerPole pigtails and joined them with two Wago clips. Since each device cable has an inline fuse and the power supplies have internal circuit breakers, this is a safe, cost-effective and convenient method of power distribution. There will be more on this in the future.

This is an example of a modest "surge" of extra equipment into the Suwannee County EOC station. Added were two laptops: one for situational awareness and administrative support and the other for Winlink and an HT for a local repeater. This allowed the existing radio to monitor SARNET and another local repeater. We also had at the ready a second IC-7300 and cellular hotspot/AREDN mesh/battery box.

Another activity on our planning agenda is to measure and if necessary, mitigate conducted and radiated emissions from the numerous switched-mode power supplies around the building and even with some of our deployable equipment. Again, this is something that was triggered by Gordon KX4Z Gibby's assessment of the noise from their generator and the new Alachua County EOC site.

Best practices, even done at a "best effort" level, can be revealing and helpful. Gordon had researched the topic and homebrewed a "Line Impedance Stabilization Network" (LISN) to conduct device noise measurements. When Gordon Beattie W2TTT heard of this, he offered the use of his commercially-made LISN for more refined measurements. Gordon KX4Z quickly accepted the loan and it was brought to Gainesville at the February Lunch 'n Lab that he hosted. If nothing else, well all learn of the relative quality of the KX4Z designed LISN. Once it is returned to W2TTT, noise measurements in Suwannee County and possibly elsewhere will follow.

Other projects in the works are some maintenance activities on Dan W1JXG's Openspot and Joe KI4TRR's ZUMSPOT. Their DMR hotspots will get updated and their computers will be getting new or updated RT Systems software to enhance interoperability. While the free "Chirp" and vendor-specific programming software are out there, the time and effort that is saved when using RT Systems software to copy memories between radios makes the $25 cost per radio model an easy choice. Some radios require a special cable, but many do not and simply use a USB cable.

We recommend the use of RT Systems software to expedite updates and sharing. Sadly, we all have radios for which RT Systems does not have a support package and they are usually not up to date unless they are comprehensively managed. Consider the availability of RT Systems software (www.rtsystemsinc.com) when selecting a radio for purchase. The low price of the radio may be overshadowed by its upkeep especially during an activation or while on a trip.

Another project is to relocate the 443.775 MHz repeater and the 145.27 W2TTT repeater (formerly the W1QBI repeater) from the W2TTT radio shack to his shop where there is more space. That move depended on finishing a wall with plywood and insulation, power distribution and an adjacent workbench. Now that has all been completed, hardline will be run into the workshop. During the week after Easter, both repeaters and duplexers will be tuned up with a borrowed VIA-Solutions CX-300 and other tools in the W2TTT ham shack.

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Final Note - An Invitation

All are welcome to join the Suwannee County ARES team! Contact our Emergency Coordinator Mike Meador KM4BTW at mmeador@hotmail.com or Gordon Beattie W2TTT at w2ttt@att.net or call or text to 1.201.314.6964.

Our weekly net is on the 145.27 MHz (Tone 123.0 Hz, -600 kHz) Falmouth repeater at 8:30 PM ET every Sunday evening. Suwannee County ARES Net has routine check-ins from Suwannee, Madison, Leon and Columbia Counties in Florida and from Loundes County in Georgia. This thirty minute net is a weekly station test, a training opportunity, a news channel and also a bit of a social gathering. It is followed at 9:00 PM ET by the Madison ARES Net on 145.19 MHz (Tone 123.0 Hz, -600 kHz) in Lee.

Come join us!

What a FebHAMuary! Okaloosa & Walton Counties

DJ Stewart, KI4ZER

Folks! Oh, my, gosh! The activity and energy jumping into 2024 has just been astounding! We are in the throes of greatness and participation! There are no shortages of events, things to do and goals to achieve! The best part, we get to have this journey together! From technological improvements in multiple to clubs, to hamfests taking off, visiting vacationers, and more folks getting licensed the Amateur Radio Hobby is alive and well! And not just in our little sliver of the world we call the Panhandle of Florida! In the beginning of the month, we started off with the Walton County Amateur Radio Club and the final fix to replace their tower rotator. The weather was finally nice the entire day and no rain stopped the event. This has been a long time coming as the old rotor needed to be changed out but the weather on all days planned had played a large factor. We hope the Walton County ARC enjoys their improved functionality and wish them many great contacts as a result!

Rewinding a couple of days, the Playground Amateur Radio Club hosted its Tech Night on Understanding Propagation presented by the Club's Secretary, Scott, AC5LT! This was a wonderful night and attended by a nearly packed house! Understanding the basics of propagation is essential for amateur radio operators to make accurate signal path predictions and optimize their communication strategies.

Moving Forward into the 1st full week of the month, the North Okaloosa Amateur Radio Club had its business meeting! Planning for their October Hamfest, event Participation, and major Clubhouse improvements took hold! The buzz here is all about improvements, elmering, mentoring, and training!

Speaking of participation and area enhancements, Dave KD7KE, Rick KK4WDR, and Dave KM4DYR changed the 145.230 repeater antenna in Miramar Beach. The new antenna has 6db gain on 2 meters, increasing coverage and improving weak signals and can now be heard from many locations panhandle wide! Be sure to tun it in!

Did you make it to HAMCATION?! Some of our members did from area clubs and were able to represent the ARRL! Thank you to Frank, W4RH and Curt, WA4BOZ for going and representing the Panhandle! Reports back were that of a great time and enjoyment by all! The Flea Market had all kinds of gems, the dealers had plenty in stock and the information booths had the new upcoming items on display for demonstration!

Did you watch the Superbowl?! Does that sound un-related to Ham Radio! Well, you would be wrong. The Playground Amateur Radio club hosted their weekly Pile-Up and moved right into the Superbowl. KQ4FRB hosted and organized a smorgasbord of food made by volunteers and held raffles to win radios and gift cards and more! At the same time, the DX was QSO'd around the world and contacts were also made as the Playground Team hosted their weekly Sunday Night net on 146.790 at 730 pm CST and held the

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reigns on the Sunday Night GCVTN on 147.360 at 8 pm CST from the Playground Clubhouse! Guess what else! We got to check in with the Twin Cities ARC on 146.730 at 8:30 pm CST! What a wonderful way to enjoy some great company, watch a sports game, communicate globally and locally, and dine in style to our finger foods delight! The best part [in my opinion] was the Jalapeno Pie! Thanks Ed, AA0EU!

The Playground Amateur Radio Club that same week hosted its monthly Business meeting! The energy in the room here was all about promoting the club through education and "how to" when operating an Incorporated Non-Profit and ensuring the Organizations longevity! If you are a member, or want to be, contact the Club at W4ZBB.ORG for more greatness in the area! Hats off the membership here as they drive the suggestions that become reality!

The North Okaloosa Club Follows this event up with a blast of a Tech Night covering Parks on the Air! Special Presenter randy, N4SAX presented, and the room was almost at capacity! As it should be! POTA is a wonderful way to go out anytime and have field day, your way! With the advent of easily transported off-grid power and portable antennas, the options are limitless! Here are some of the descriptive notes from the Tech Night:

For Activators:

1. Follow the Rules: Familiarize yourself with the program rules available at docs.pota.app.
2. Choose a Park: Visit pota.app to locate parks in your area.
3. Set Up Your Gear: Once in the park, find a quiet frequency and start calling CQ.
4. Spot Yourself: Head to pota.app and click the button to add a spot.
5. Log Your Activation: After your activation, submit an ADIF log.

For Hunters:

1. Sign Up: Create an account on pota.app to track your progress.
2. Spot Activators: Visit the spotting page on pota.app to see who is on the air.
3. Make Contact: Spin the dial, answer their call, and log your contacts.
4. Upload Logs: Generate an ADIF file and upload it on the website for tracking.

Want to know about a double event, two states apart?! Members from the North Okaloosa Amateur Radio Club and The Playground Amateur Radio Club attended the Dalton Georgia Hamfest! What a location! The entire Fairgrounds were filled! Three buildings and an outdoor area dubbed "The Boneyard" (Tailgate) the was spread over 85,000 sq ft! Deals a plenty were had and the interaction with the Hams and vendors was amazing! This was done by leaving on a Friday, traveling 6.5 hours North, and enjoying the sights, sounds, flavors, and of course, the Ham! We went into Tennessee not once, but twice! once for a dinner and the other time for the International Tow Truck Museum before heading home! The Dalton Hamfest is an exceptionally large show with three indoor buildings and a large outdoor tailgate area! The activity in this area is all about radio! CB, GMRS, FRS, HAM, you name it, if it's radio, it's there! No segregation of services as they merge and blend all facets of communication into one! We highly recommend checking this show out!

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That same evening [with a team on the road] Joe, KN4UDS the Vice President and Activities Director from the North Okaloosa Amateur Radio Club put together a powerful team of individuals to participate with the City of Crestview for the annual Community Unity Flashlight Walk. This event bolsters the city's vision in coming together to unite in a 1.2 mile walk to get to know your local law enforcement and put a light on crime! KN4UDS used a portable mini repeater to ensure the control Station could stay in touch and communicate needs, ensure safety, report on the walkers positions, and record any issues that would have come up to enhance overall pedestrian wellbeing. This serves as the epitome of an example for many of the actions that NOARC does for all events with the city and with the Crestview Main Street Association! And of Course, a large round of thankyou goes out to Michelle and her family for also taking the time out of their evening to participate with the event! Michelle is Joe's YL and she has been paramount in supporting Amateur Radio for over a year now! Be sure to see her and others at the next NOARC event! W4AAZ.ORG

So how do you close out an action-packed February? You have a HAMFEST in March! That's right! IT IS TIME for; The 54th Annual Playground Amateur Radio Club Hamfest! 1958 Lewis Turner Blvd! Fort Walton Beach Florida! March 8th and 9th, 2024! Welcome, to HAMFEST season! It is going to be a wonderful year and we in the Panhandle cannot wait to participate in your events and present you with ours!

Until next time, enjoy what you do in the exceptionally fun and adventurous hobby! The rewards are plentiful, and the company is second to none on, and off the microphone!

FCC Testing Information

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

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

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

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

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

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

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

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

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

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

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

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

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

Statewide Digital Radio Resources

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

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

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