



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)



The 7 Habits of a Highly Successful Ham Radio Operator

I have been re-reading the book "7 Habits of Highly Effective People." It got me thinking about the habits we should have to be highly effective ham radio operators. So, this month, we will explore the seven habits that can help us become effective ham radio operators.

Habit 1: Stay Curious and Keep Learning

The first habit of a highly effective ham radio operator is to **stay curious**. The world of ham radio is constantly changing. New technologies, modes of communication, and regulations are constantly being introduced. To keep up with these changes, it's essential to keep learning. You can learn in many ways. Start by reading books about ham radio, watching online videos, or joining classes. You can also listen to podcasts or attend webinars where experts share their knowledge. The more you learn, the better you will understand how to use your equipment and communicate effectively. For instance, learning about different radio bands and frequencies can help you find the best times to communicate. Understanding how to use digital modes like FT8 or DMR can open up new ways to connect with others. Remember, staying curious will keep your interest alive and help you become a skilled operator.

Habit 2: Practice Regularly

Like playing a sport or learning a musical instrument, practice is crucial in ham radio. The more you practice, the better you will become at using your equipment and making connections. Set aside time each week to operate your radio. This could mean talking to other operators, experimenting with different frequencies, or trying out new modes of communication. When you practice, don't be afraid to make mistakes. Everyone makes them, even experienced operators! Each mistake is an opportunity to learn and improve. Regular practice will make you feel more comfortable and confident when using your ham radio.

Additionally, consider setting goals for your practice sessions. You might want to aim for a certain number of contacts or try to communicate with a new country. Setting goals can make your practice sessions more exciting and rewarding!

Habit 3: Be Prepared and Organized

Being prepared is another essential habit for effective ham radio operators. This means ensuring that your equipment is in good working order and that you know how to use it. Regularly check your radio, antenna, and other gear to make sure everything is functioning properly. It's also a good idea to keep your equipment organized. Create a checklist of items you need for your ham radio setup. This can include things like spare batteries, tools, and manuals. Organizing everything will help you get started more quickly when you want to operate. Another helpful tip is to maintain a logbook. Record your contacts, including the date, time, frequency, and call signs of the operators you talk to. This not only helps you keep track of your progress but also allows you to look back and remember your favorite conversations.

Habit 4: Join a Club

Ham radio is not just a solo activity; it's also about connecting with others. Joining a local ham radio club can be a fantastic way to meet fellow operators. Clubs often hold meetings, events, and activities where you can learn from others and share your experiences. You can find mentors who can help you improve your skills by participating in a club. You'll also meet new friends who share your passion for ham radio. Many clubs also organize special events, like field days or contests, which can be a lot of fun! If you can't find a local club, consider joining online forums or social media groups dedicated to ham radio. These platforms allow you to connect with operators from all over the world, ask questions, and share tips. Building relationships with other operators will enrich your ham radio experience.

Habit 5: Help Others

One of the most rewarding aspects of being a ham radio operator is the opportunity to help others. Many ham radio operators volunteer their skills during emergencies. They provide vital communication support during disasters, helping first responders and communities stay connected. To prepare to help in emergencies, consider taking training courses in emergency communication. Many ham radio clubs offer these courses, and they can teach you how to assist during critical situations. Being ready to help others not only makes you a more effective operator, but it also contributes positively to your community. Also, don't forget about helping new operators. If you see someone struggling with their equipment or trying to make their first contact, offer your assistance. Sharing your knowledge and experience can make a big difference for someone just starting in ham radio.

Habit 6: Experiment and Have Fun

Experimentation is a vital part of being a successful ham radio operator. Don't be afraid to try new things with your equipment. This might mean building your own antennas, exploring different communication modes, or even trying to reach distant stations. Having fun is essential in this hobby. If you aren't enjoying yourself, it may be difficult to stay motivated. Find activities that excite you, whether it's participating in contests, joining special events, or simply chatting with friends on the air. You might also want to explore different types of operating, such as portable operation or contesting. Each activity can offer unique challenges and experiences that will keep your interest alive.

Habit 7: Be Respectful and Follow the Rules

The final habit of a highly effective ham radio operator is to be respectful and follow the rules. The Federal Communications Commission (FCC) has established regulations that all ham radio operators must adhere to. These rules help ensure that everyone can enjoy the airwaves safely and fairly. Always give proper identification when you operate your radio, and be polite to other operators. If you hear someone struggling or making mistakes, offer words of encouragement rather than criticism. A little kindness goes a long way in creating a positive atmosphere on the air. Following the rules also includes respecting other operators' time and space. If a frequency is busy, it's best to wait for an opening rather than interrupting someone else's conversation. Being respectful helps make the ham radio community a welcoming place for everyone.

Becoming a highly effective ham radio operator takes dedication, practice, and a positive attitude. By developing these seven habits—staying curious, practicing regularly, being prepared, joining a community, helping others, experimenting, and being respectful—you can enhance your skills and enjoy your hobby to the fullest. Ham radio is not just about making contacts; it's about connecting with people, learning new things, and having fun. As you embrace these habits, you will not only become a better operator but also a valued member of the ham radio community. So, grab your radio, get on the air, and start practicing these habits today!

Thank you for allowing me to be YOUR Section Manager!

NFL SECTION TOWN HALL MEETING

Watch the NFL Section website for an announcement about our first NFL Section Town Hall Meeting. We will hold this meeting via Zoom. During this meeting, we will give updates on our section, cover a training tip, and answer questions from our members. If there is a topic you would like to discuss at this meeting, please email Scott Roberts at kk4ecr@arrl.org.

VISIT YOUR CLUB

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



From the Section Emergency Coordinator

Arc Thames, W4CPD

We've already made it through our first activation for this year. Unfortunately, some of the same areas were impacted as last year but thankfully no significant communications outages were experienced. I want to extend a special thanks to volunteers from Leon county who staffed the radio room at the State EOC along with others who made the drive over to be on standby.

Since the first day of the activation occurred on a Sunday, I took the opportunity to make the drive over to Tallahassee for the first shift. In doing so, I had an opportunity to perform operational checks on the radios as well as verify & test Winlink capability to & from the State EOC. Over the last few months, we've also created additional documentation for the radio room to help our volunteers have all the resources they need at hand while staffing the State EOC.

We are very blessed to have a fantastic relationship with the communications leadership at the State level and continue to work with them to ensure we can provide the best auxiliary communications services we can. As a reminder, please visit floridaemergency.net for any disaster or emergency communications activation events for operating plans and frequency information.

I've had a few people reach out regarding the annual ARRL Simulated Emergency Test or SET in October. Due to hurricane season, we generally do our exercises in the spring or early summer as we did this year. I am working with leadership at the State level to plan a large scale exercise for the spring as we did last year to allow for communications testing ahead of hurricane season as well as task book sign-off activities.

Don't forget, the new emergency communications courses are now available from the ARRL and align with the new ARES task book. The courses can be found online - <https://www.arrl.org/online-course-catalog> and the task book can be found via [this link](#).

Monthly ARES Statistics

The ARRL is still experiencing server issues, so we are still unable to provide the monthly report at this time.



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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. www.ARRL-NFL.org Opinions expressed by contributors are their own, and may not express the positions of the ARRL.

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

All submissions are subject to editing prior to publication.

Looking for Something?

Gordon Gibby, KX4Z, has taken the time to index the articles from all the 2021 issues of *QST NFL*!

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

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NFL Section Member of the Month!

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

Digital Library of Amateur Radio & Communications

Marty Brown, N4GL

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

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

ARRL Expands Publications Archive

ARRL® has expanded member access to its rich archive of publications. The [ARRL Periodicals Archive and Search](#) now includes content from two more popular ARRL magazines: *QEX* — *A Forum for Communications Experimenters*, which features technical articles and columns of interest to radio amateurs and communications professionals; and *NCJ* — *the National Contest Journal*, which covers information, scores, and advice from the world of competitive radiosport and the contributions of top contesters.

Before accessing the archive, members should ensure they are first logged in to the [ARRL website](#). Members may now view and download articles from across the extensively indexed archive of *QEX* from 1981 to 2011, and *NCJ* from 1973 to 2011. Members can access an index and view copies of articles from the huge ARRL periodicals archive.

A sample search from the archive can be seen below:

ARRL Periodicals Archive and Search

<p>Search by:</p> <p>Title/Keywords: <input type="text" value="build a"/></p> <p>Author name: <input type="text"/></p> <p>Author call: <input type="text"/></p> <p>Year: <input type="text" value=""/></p> <p>Month: <input type="text" value="-Any-"/></p> <p>Publications: <input type="text" value="QST"/> <input checked="" type="text" value="QEX"/> <input type="text" value="Ham Radio"/> <input type="text" value="NCJ"/></p> <p>Column(s): <input type="text" value="- None -"/> <input type="text" value="Ham Radio : A Second L"/> <input type="text" value="Ham Radio : A Word from"/> <input type="text" value="Ham Radio : Advertisers"/> <input type="text" value="Ham Radio : Backscatter"/> <input type="text" value="Ham Radio : Circuits and"/> <input type="text" value="Ham Radio : Comments"/> <input type="text" value="Ham Radio : Digital Tech"/></p> <p><input type="button" value="Search"/> <input type="button" value="Clear"/></p> <p>News ARRL Audio News</p> <p>ARRL Periodicals Archive Search</p>	<p>Results 9 to 16 of 35 previous 1 2 3 4 5 next</p> <hr/> <p>SEP 2009 - QEX (PG. 3) Build a Low-Cost Iambic Keyer Using Open-Source Hardware Author: Chapman, Richard, KC4IFB Article: QEX Archive [PDF] Report a problem with this entry</p> <hr/> <p>NOV 2009 - QEX (PG. 40) Waveguide Filters You Can Build--and Tune Part 1 A Tour of Filters Author: Wade, Paul, W1GHZ Article: QEX Archive [PDF] Report a problem with this entry</p> <hr/> <p>SEP 2004 - QEX (PG. 30) Build a Super Transceiver--Software for Software Controllable Radios Author: Gradijan, Steve, WB5KIA Article: QEX Archive [PDF] Report a problem with this entry</p> <hr/> <p>JAN 2003 - QEX (PG. 57) Easy-to-Build 50:300 Ohm and 50:45 Ohm Transformers (RF) Author: Lau, Zack, W1VT Article: QEX Archive [PDF] Report a problem with this entry</p> <hr/> <p>NOV 2003 - QEX (PG. 54) Building Microwave Quads and Yagis (RF) Author: Lau, Zack, W1VT Article: QEX Archive [PDF] Report a problem with this entry</p>
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AUGUST in ALACHUA COUNTY!

The happy wanderings of the North Florida Amateur Radio Club (NFARC, NF4RC)
In Support of Alachua County ARES®
Gordon Gibby KX4Z

PROJECTS GALORE

(1) At the August meeting, we had one of the County VHF/UHF go-boxes out for **practice connecting up volunteers' Signalinks/ computers** as we work at getting better at providing DATA as well as VOICE from deployed locations.

(2) By way of that testing, we also **tested the removal of "digipeating" from EOC VARA station NF4AC** and subsequently were unable to repeat the "looping" that bedeviled us during Hurricane Debby. *Maybe a fix??*

(3) **BACKUP EOC GO-BOX:** David Huckstep W4JIR reports that almost everything ordered for the County's backup (2nd) HF/VHF go-box for the EOC itself, has arrived. Dave is busy assembling it into a commercial "gator" go-box. **Famous for building back-breaker systems....** Dave is trying to make this one "lighter" -- at least, so he claims!!

(4) Dave also emphasized our primary missions with the EOC: communications EOC<->TLH and EOC<->shelters. He has met with Asst. EM David Peaton to discuss data flows. Peaton is very open to taking and giving information! We may have a way eventually to provide hazard maps to residents in shelters to help in decision-making on returning home. Great work, the two Davids!

(5) We discussed the very generous offer of a King Conversion kilowatt SB-221 6meter amplifier by George Deitz KN3PAT -- and decided to TAKE IT!!

(6) In what will turn out to be a fateful talk, **local VHF guru Mike Hasselbeck WB2FKO** gave us a ten-minute slide show on exotic VHF long distance comms -- and meteor scatter jumped out at us!

<https://www.nf4rc.club/>

<https://groups.io/g/NF4RC>

ZOOM: <https://us02web.zoom.us/j/89530741792>

Mike Hasselbeck WB2FKO and I headed out to Earleton, FL and picked up the incredible donation of a kilowatt 6 meter (Technician-Friendly!) 3-500Z amplifier donated by George Deitz.

This was converted from an HF amp, and the tubes look good!

Mike is spearheading this project & is laying plans for testing with a VARIAC and an autotransformer (unit is 220VAC). We hope to have it working soon!!



METEOR SCATTER POTA

Our folks just love operating at Parks On The Air! While several of us were building Arduino Keyers, Ron Lewis KN4ZUJ was out at San Felasco with his Xiegu tearing up the ionosphere!

METEOR SCATTER -- December 14th we're going to do POTA with Meteor Scatter during the famous Geminids showers, guided by Mike H. WB2FKO and possibly with our NEW 6 METER AMP. Turns out 6 meters has LONG meteor openings compared to 2 meters and many of us have 7300's that can do this exciting mode-- and have never done it before. So here we go! Join in on the fun with us, at San Felasco with our tower trailer, 6 meter beam, amp & rigs. Regular HF POTA simultaneously--with our Antenna Multiplexer.



Duval ARES Sorties In Support of Hurricane DEBBY Shelter Activation

Brian Schultheis, K4BJS Duval County ARES PIO, 27AUG24

On a quiet Saturday evening on August 3rd, members of Duval County ARES prepared their QTHs for upcoming Tropical Storm DEBBY and enjoyed watching the Jumbo Shrimp beat Lehigh Valley for a fireworks finish. ARES had already been notified that there was no intent to activate shelters, as the storm was not any more of a threat than Florida evening thunderstorms. However, once the 1700 outlook was updated by the National Hurricane Center, the tranquility came to an end. The storm had intensified and the track moved closer to Duval County. Less than 24 hours later, three shelters would be manned and operational with the ARES team, and remain so for another 48 hours.

Sunday, August 4th was dedicated to individual preparations to man three different shelters throughout Jacksonville. The Emergency Coordinator (EC), K4BJS, Brian Schultheis, spent the better part of the day coordinating with volunteers and ensuring they were well-informed of the conditions they would encounter. Every shelter had inspected by ARES personnel previously this past June, and those "shelter fact sheets" were provided to the respective volunteers by the EC and Ops Chief, John Reynolds (W4IJJ). The EC personally verified every volunteer had completed their tailored 24- to 72-hour deployment checklist, while simultaneously preparing to personally man the EOC as well.

The next 48 hours were a whirlwind. LaVilla school, Landmark Middle School, and the Legends Center were manned with ARES personnel, 24/7, until the storm was passed well and clear. Volunteers consisted of notable veterans such as Brandi Kiehl (K4PL), Rajesh Verma (K4SK), and Clint Randolph (KB4CDR). Newcomers also contributed significantly, namely Mike Biddle (K4PEB), Pearlie Harris (KQ4BSV), and Randy Boyd (KR4BBR). These shelter managers were guided by such notables as Brian Schultheis (K4BJS), Miller Norton (W4EMN), Roger Knight (K5RLK), and Donny Stratman (KM4CTB), all of whom took a turn running a tactical net from the EOC.

Throughout the storm, Duval County SKYWARN ran a parallel net on the W4IZ repeater. SkyWarn Coordinator Ron Snelling (KM4RLS) and assistant Bill Largin (KN4DLE) diligently kept the net up throughout the storm. Bill Johnson (KO4RMX) and Mike O'Brien (KK4UQP) provided weather reports in-situ throughout the nights and days. This net provided significant situational awareness to the EOC and shelter sites.

Working alongside American Red Cross volunteers, the shelter operators checked into the tactical net on the evening of August 3rd. In addition to hourly situation reports to the EOC, the shelter operators assisted the shelter manager with set-up and tear-down of cots, distribution of food, and general good order operations. Additionally, the shelter operators utilized the real-time weather reports provided by SkyWarn to inform shelter managers on when to expect breaks in the weather to facilitate food delivery windows. The shelter operators embodied the "servant leadership" mantra North Florida ARES strives to espouse.

In addition to the voice tactical net at the EOC, Duval ARES monitored the Florida SARNET. Regrettably, a nefarious actor inhibited communications discipline on that net and rendered it sub-optimal. To supplement the tactical net, shelter operators utilized WinLink to pass ICS forms via packet and VaraFM to the EOC hourly and at the end of every shift.

While the storm was relatively minor, it served as a reminder of how swiftly ARES can be called upon in an emergency. Additionally, the storm validated best practices already in-place: proactively test and document hurricane shelters prior to the season; deployment checklists; prepared ICS-205s; and most importantly strong relationships with local community partners. Despite the efforts of DEBBY, Duval ARES demonstrated they are prepared to weather not only that storm, but others to come.

DIY Paddle

Gordon Gibby, KX4Z

I was very surprised how well this thing that I threw together in 20 minutes with about three dollars worth of parts and some spare lumber and spare right angles worked really well!!

As you can see I just have it connected with clip leads to the existing wires so I didn't have to build the cable for it quite yet.

Here's what I found:

1. I can send perfect Morse code with it.
2. The touch is actually a bit too light, it's actually lighter than my Bencher. I would either shorten the \$.88 piece of galvanized steel that I picked up at Home Depot or else put two of them together to make it a tiny bit stiffer
3. Because the touch was so light, so little force needed, I had to space out the Contacts just a tad wider than I normally would, but I could still send perfect code with it, and of course almost no force whatsoever necessary
4. I used stainless steel screws in the uprights, and I found that I could easily adjust them with some pliers and a screwdriver. I've never adjusted my Bencher since I got it, once you get these things set you tend to just leave them alone
5. You might want the slightly wider spacing that I used when you're beginning, because it makes it easier not to lose control, and then as you get good you might want to snug it up just a tad.
6. If I were going to use this long-term, I think I would cut the piece down to about 60% length, with a hacksaw, and that might make it the right stiffness. That would make the length a little shorter and that's nicer too.
7. The right angles are stainless steel and left over from some job I did on the front porch, we can get a ton of them.

The key is to put the contacts "in board" from where your fingers are at the end, that allows it to come to a touch but you don't feel a sharp stop because there's more give to go at your end. That way you don't irritate your arthritis. A straight key doesn't work this way; it bangs your joints every time you push on it!

I put on the hardwood knob just to make it look really nice and I got the idea of course from Heathkit because that's how they built theirs. I filed the edges at the very end just a bit to make sure nothing was sharp.

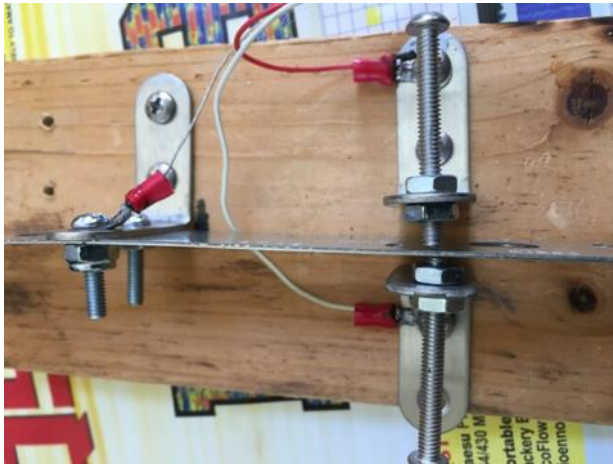
This is an easy way to make a paddle of a little bit of one by four pine, for less than five dollars, and it works quite well!!!

If you want us to have a lab and lunch to build these critters also, reply here and sign up! (and if somebody comes up with an even better idea we can do that too!)



Paddle Update

Gordon Gibby, KX4Z



My guess about moving the leverage point up a bit was just about perfect and the feel of the paddle is just about exactly what I like now! I like the feel of a venture with the points very close together so you don't have to move much at all.

The cost is just astonishingly cheap: brackets, \$10 for 18, would make six paddles. So about two dollars per panel with tax screws, about one dollar per paddle galvanized metal piece, \$.88 piece of one by four, about one dollar.

So five dollars gets you a paddle; add another couple dollars for the wiring and you're up to about seven dollars for a wired paddle!!

https://www.amazon.com/gp/aw/d/B08BZPG7ZM?psc=1&ref=ppx_pop_mob_b_asin_title

I chose to use stainless steel screws to touch the galvanized paddle, which might dramatically reduce corrosion effects. With those caught between two nuts it's very easy to adjust the travel. The rest of the hardware can be plain old zinc covered. Who knows, zinc covered might even be better for the screws!



Craig Fugate Presentation

Reid Tillery, K9RFT, WRZM878

With great pleasure I announce that Craig Fugate, Former National Director of the Federal Emergency Management Agency (FEMA) will speak at our Melrose Library on PROTECTING OUR COMMUNITIES WITH BACK-UP COMMUNICATIONS. The meeting will be on Tuesday, October 8 at 2 pm.

If anybody knows anything about effective emergency management, it's Craig Fugate. He served for 10 years as the Emergency Manager for Alachua County. He later served as Director of the Florida Emergency Management Position under Gov. Jeb Bush and was included in the National Guard Association of Florida Hall of Fame. Later, due to his extensive experience with Florida's extreme weather emergencies, he was appointed by President Obama as FEMA Director.

We are honored to have such a high-profile, well-qualified speaker. Please make plans to attend and learn how we can help our community prepare for a potential disaster. If not us, who? If not now, when?

Over the past so many months some of us have worked diligently to create backup communications in our communities. We've established a GMRS (General Mobile Radio Service) repeater in Windsor, and one is soon to go up at Cross Creek. Melrose has a small, but established GMRS radio network which we hope to grow. And plans are in the works for a GMRS repeater in Melrose.



FCC Comments on 902 – 928 MHz

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

Filing Comments on FCC Proceedings - NextNAV 902-928 MHz Use Case

From time to time the word goes out within the Amateur Radio community or in the media that there has been activity before the Commission that would impact Amateur Radio or another aspect of our communications ecosystem and a plea goes out to weigh in. Such is the case with the current FCC action related to NextNAV's proposal to rework the 902-928 MHz band.

Well, there are usually a number of hurdles that one must jump through in order to get one's thoughts before a government official. The first hurdle is to acquire and to read whatever documents have been filed or posted. If you have it, start by obtaining the FCC filing number and use it at this web site to get the document.

<https://www.fcc.gov/ecfs/search/search-filings>

In this case, I didn't have the filing number, so I simply entered, "NextNAV" into the Filers search key box and pressed SEARCH.

This revealed a few results but since filing numbers always start with a year and a hyphen so I clicked on the one with "24-240". This revealed several document links.

"WTB and OET Seek Comment on NextNav Petition for Rulemaking"

This is where you will find comments on the proceeding. You can poke around and see what has been received by the Commission. It's all public.

You will also be able to pull a list of commenters by selecting the, "View History Report".

Below that there are two ways to enter your comments.

"**+New Filing/+Express Filing**"

They are mostly the same except that "+New Filing" allows for document attachments and the "+Express Filing" option allows for typing or pasting in some text in a rapid manner.

Below that we find two documents filed by NextNAV. The first is their original filing and the second a supplementary filing. In this case, the original filing has the basics of NextNAV's petition and the second has technical details that are even more informative than what was originally filed. Read them both and take notes.

<https://www.fcc.gov/ecfs/document/10416238018537/1>

<https://www.fcc.gov/ecfs/document/10607137757430/1>

At the end is a section called, "FCC Actions" where you will find the FCC's documentation including their notice in a PDF. Read that as well and note what the Commission's Wireless Telecommunications Bureau (WTB) and Office of Electronic Technology (OET) are asking in their notice.

Continued on next page...

Once you have digested all this, assemble your thoughts and prepare them for submission. You can write them in a word processor, a spreadsheet or in slides. The site will accept .docx, .doc, .pdf, .xlsx, .xls, .txt, .pptx, .ppt and .rtf file formats. The "+New Filing" can accept up to 100Mb of files per filing.

Be thoughtful and respectful and make logical points supporting your position and challenging those of the previous filings as appropriate.

Sharing your ideas elsewhere is also an important avenue of creating awareness of issues. It may result in persuading others to comment and the FCC to act in a manner more aligned with your wishes.

Finally, comments are due by September 5th. Once they are all in, a shorter period of about two weeks will be opened for "Reply Comments". Follow that as well and respond as you see fit.

Get On The Air!



Alachua County and Debby

Gordon Gibby, KX4Z

Thankfully Alachua County was generally only the recipient of rain and sub-tropical storm level winds "for the most part" during Hurricane Debby. We had up to 32,000 people at various times out of power, and due to lightning we had a bunch of ham radio resources go down (thankfully not the 82 repeater!). Columbia county to our north fared worse, with an entire tower-facility out of power.

We mustered **six background-checked volunteers** throughout our county for service, generating up to \$10,000 or more in "match" value for the county; Columbia County mustered only 3 and Brad up there was discouraged. *What the county takes note of, are actual warm bodies mixing with all the deputies and county shelter personnel actually there to serve.*

We were very, very grateful for Waldo participation as it is important to have a voice-voice-voice on 3.970 for people who can't reach us in any other way! Additionally, great liaison was performed by K4GNV frequently checking into the net on the 82 repeater that handled 218 check-ins and 32 volunteer reports beyond those from the county-opened shelters. Our EOC person is very, very busy attending meetings and watching over 7 systems for communications to Tallahassee, including HF voice, HF data, Shares Voice, Shares data, SLERS, ALE (automatic link establishment) and SARNET (when it works) along with VHF Voice and lately, UFH GMRS.

As part of the national response to disaster, we are required (by federal law) to have at least two tiny courses under our belt to be part of the official response -- those are EASY to do, IS-100 and IS-700 (IS stands for "independent study") -- you can find more information here: <https://www.nf4rc.club/how-to-docs/county-ares-docs/ares-application-form/>

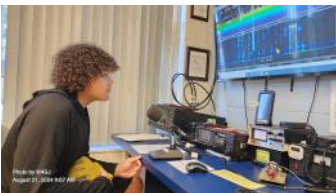
We also "go with the flow" and fill out analysis documents of how we did, and what we will work to do better, for every incident in which we are asked to serve. These are then presented, discussed, and approved. See: <https://www.nf4rc.club/2024-hurricane-debby-aarip/> The juiciest part is on page 17 where the list of things to FIX is shown -- many of which we have already fixed; others still in progress. FIXING things in our county is how we get better and better.

GMRS Repeater (Channel 15/23) was proven to be fully county-wide during Hurricane Debby. Great opportunity for providing radio connection to family or neighbors who don't have ham radio licenses. Multiple radios easy acquired. Gordon and EOC have cheap radio-oddy DB20 and have the programming for such; there are many options.

Loften High School

Bob Lightner, W4GJ

The new 23 freshmen are getting familiar with their HAM station at K4WTL, William Travis High School. They are making contacts on the HF bands and learning about their new hobby. Here are some photos of these new kids. We now have 54 active operators counting the upper classmen.



The Villages Amateur Radio Club September Technician License Course

Brad Castelli KN9B - kn9b@arrl.net

The Villages Amateur Radio Club is holding a free in person Technician license course. Class will meet once a week for nine weeks followed by an ARRL/VE License Exam. The course is free and open to the public.

Class meets on Monday evenings, Sep. 9 - Nov. 4, 2024 in The Villages, Florida.

More class details and study resources are listed at ARRL.org and club websites; www.K4VRC.com ("Interest in becoming a ham" tab).

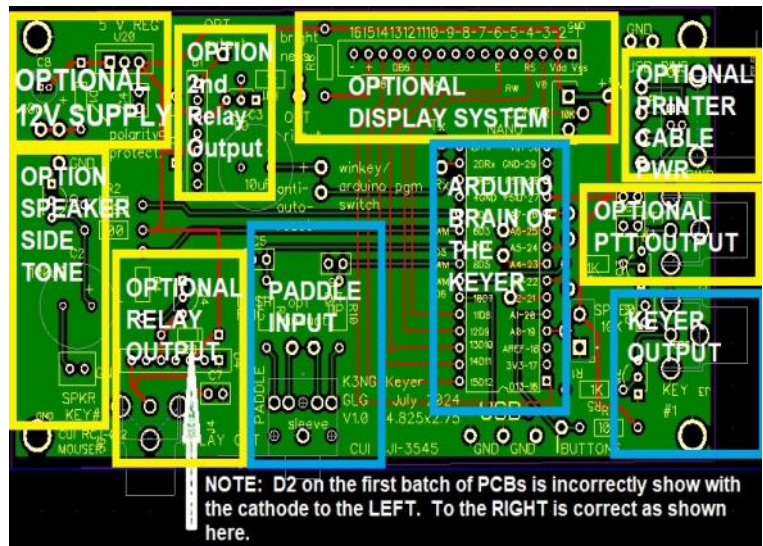
You are encouraged to get your friends to sign-up too, so you can study together.

Alachua County K3NG Arduino Winkeyer Emulator Club Project

Gordon Gibby KX4Z

Why This Project?

After a surprising upset in our NF4AC Alachua County ARES (R) Field Day internal friendly-competitive effort (where CW turned in the highest number of contacts by any operator, roundly quashing even FT4!!), there was renewed interest in this humble ancient human-readable digital technique with huge dB advantage over SSB. Steve K1EL's incredible WINKEYER-USB was key to this success: <https://www.k1elsystems.com/WKUSBX.html> This is a great product that is a keyer, a memory keyer, and allows N3FJP and other logging systems to send perfectly-timed Morse code. After getting your reading speed up to snuff, it makes Field Day a breeze! However, Steve has to charge a fair price for his wonderfully constructed commercial items. I wondered if we could come up with a club building/learning project based on K3NG's excellent code for an emulator. <https://blog.radioartisan.com/arduino-cw-keyer/> And so the project began!



Local Development

In August, development work on our local version of a KIT PROJECT for our group reached maturity. The command options judged the most useful were crammed into the 32kilobytes of the Arduino Nano, filling 96% of the available space.

A prototype keyer was surprisingly successful -- worked perfectly as a standalone keyer, as a canned-text ("memory") keyer, and also with control via USB cable from logging software N3FJP. It can include a 2line x 16character LCD display, which makes operation of the feature-rich keyer much easier, and shows every character transmitted. (K1EL sells a version with a display also.)

Only one screen-printed error was found on the pcbway.com-fabricated boards. One diode in an optional portion of the board was printed "backwards" -- my error, not the fab company. Easily handled. I included several "optional" hardware sections, so the board can operate from 8-20V, and even key older high-negative-voltage inputs like Heathkit vacuum tube rigs.

Available For Other Ham Clubs To Utilize:

A complete manual with section-by-section instructions, operating instructions for the completed keyer, list of parts and suppliers, costs, and a schematic was created. Everything is freely available, as K1EL would want. You can read or download here: <https://www.nf4rc.club/how-to-docs/arduino-k3ng-winkeyer-emulator-locally-developed-morse-code-keyer-manual/>

Simplified software files can be downloaded in zip form, and extracted to find Arduino-IDE-compatible code, at: <https://qsl.net/nf4rc/2024/AlachuaCountyVersion.zip>

The Gerbers will be available as well, either from our website or as a "shared" project at pcbway.com.

Continued on next page...



Sumter County ARES

Amateur Radio Emergency Service
Mark Newby, KX4LEO
Emergency Coordinator



Sumter County ARES and Field Day 2024

June 22 - 23, 2024

County ARES, in partnership with the Hog County Amateur Radio Association and the Red Oaks Amateur Radio Group, participated in the ARRL Field Day, June 22nd and 23rd. The Sumter County ARES EmComm Trailer was set up in a large field in Bushnell, Florida from which mostly digital contacts were made. A large tent was set up outside the EmComm trailer from where phone and CW contacts were made on the HF bands, as well as simplex and satellite contacts on VHF and UHF. All radio equipment was powered by batteries, using only solar energy to maintain their charge.



Despite periods of rain and thunderstorms, participating in Field Day provided us an opportunity to develop our skills to meet the challenges of emergency preparedness, to promote the advancement of amateur radio, and to acquaint the public and local officials with the capabilities of amateur radio for emergency communications.

I want to sincerely thank all those who played any part in our Field Day event. Some came to help set up and tear down, while others came to operate radios and log contacts. Some brought food, water and supplies. Yet others simply came to show their support. I was proud to see each one use their own experience and knowledge to help others. All these contributions were important to making our Field Day 2024 a great success.



To view more pictures of our Field Day 2024 or to read our full After-Action-Report, go to www.sumterares.org/gallery-fd2024. For more information about Sumter County ARES and how to become a member, check us out at www.sumterares.org.

Sumter County ARES-PO Box 1034, Webster FL 33597-Main: (352) 444-2216 Ext. 3-FAX: (352) 254-5861-www.sumterares.org

Five Flags Amateur Radio Association & Pensacola State College

Eugene Bannon, KB4HAH

The Five Flags Amateur Radio Assoc (FFARA) and Pensacola State College (PSC) is looking forward and wishing to announce of our continued joint Amateur Radio class "**Introduction to Amateur Radio & Upgrade**" (R-06254) course for the fall term of 2024. The class will be held at PSC's main campus in Pensacola, FL, off 9th Ave, in Bldg. 96, room 9663 on Tuesday and Thursday night from 6-8:30PM.

We will be teaching individuals who have little or no radio experience to pass the FCC Technician class (entry level) and tech them to become an active member in the Amateur Radio Community.

The class also help those individual who want to upgrade their amateur radio class to General class (intermediate level) and/or Extra class (Advance Level). For a full description of the course and where to register for the class.

You can go to: [American Radio Relay League | Ham Radio Association and Resources](#) for a full description of the class and the registration information for the class.



Bill explaining his end-fed long wire



Gene explaining his go box



Ron shows details of construction of VHF antenna



Students taking FCC Test April 25, 2024



Student soldering antenna

The Road to Extra

Bryan Phillips K4BHP

When I was in high school, I had an English teacher who made us remember and recite poetry as a class project during my Junior year. Looking through various books, I settled on one I had heard of my family members having to recite in their classes and it was Robert Frost's poem "The Road Not Taken." In his poem, Frost wrote of the traveler taking a road not used as much, and how that particular path had made all the difference in their life. Each person in amateur radio will also find themselves on a similar journey where they will have to determine the path that is best to take. For some it may be in the following of a family member who has been in the hobby for some time. A few could be into radio because of a loved one who was once an operator, but has since become a silent key. For others, it is the possibility of doing something that nobody else in their family has ever done.

In my amateur radio journey, I must confess I fall into the majority of these. Following in the footsteps of my great uncle, my journey in amateur radio started with taking the first step on GMRS at the suggestion of my cousin. However, little did I know, the path less traveled is the one that has made all the difference. I was going to go down the path that would enable me to learn new things, meet some amazing people, and challenge myself in the pursuit of getting on the air.

When I began the journey of obtaining my technician license, I remember thinking to myself "I will be a technician for a while." My Elmer Gordon (W2TTT), however, would disagree with that assumption I had made. I remember one evening during one of our classes he looked at me and said I would be an extra one day, that I wouldn't stop at tech or general, being I had the mentality to pursue extra one day. General yes, but extra, most definitely not I thought to myself. I figured it was something I was incapable of accomplishing. Studying for my technician license was proving to be somewhat daunting. I honestly shrugged it off and continued to have my mind set on the plan I formulated. I would get my technician, wait some time and get general, and stop. However after my first hf contact, I found myself wanting to do more. I was hooked on hf.

Six months after becoming a Technician, I began to study for my General, even taking the question pool in my carry on bag during our Romanian mission trip. I studied and made passing practice test scores, but Hurricane Idalia had other plans. It was post hurricane I realized the value of hf privileges, and I needed to get my scores up to take my General test. Before the hurricane, I was passing but getting out of my study habits my scores had gone down. I committed to studying and after several weeks I signed up for a Zoom session with the idea of taking a chance and seeing what would happen, and to my astonishment I passed. I knew I was finished, but was I really finished? I began to think about what my Elmer had said. Could Extra be within reach? Was it worth it? Did I have what it takes to get a license only a small percentage ever attempt?

With new years come new ideas and goals. Studies show that roughly ten percent or less actually keep up and achieve the goal they set when the new year begins. During the winter I started to think about whether or not I should pursue my extra license. After all, the question pool was set to expire in only a few months. Maybe it would be worthwhile to study for it. After all it would benefit not only myself, but my club, and would help to get others on the air. I did what I normally do and called my fellow hams, including at one point, contacting my Elmer to see what he thought, and also admit to a certain extent he was right. I was already deviating from my initial plan of spreading things out and pursuing license advancements, so why not continue on. I decided to go for my extra, and with the help of several websites, encouragement from friends, and countless hours watching videos of extra classes on YouTube from W4EEY, I set the goal of taking my test before the beginning of July. Up until this point, I had deviated multiple times from my initial plans. What was one more change going to hurt?

Fast forward to May when I received an invite from the Valdosta Amateur Radio Club for an exam session at the end of May. I had inquired previously with them about taking my general test but ended up taking it Zoom due to my schedule. This only left me with a few weeks to study and get prepared. Could I make this happen? With a few weeks between the invite and the exam, I crammed each moment I had in preparation. I was left with two mentalities, either I would take the test and pass, or take it and fail and chalk it up as a good practice session. Whatever would happen I was going to be okay with it. The Saturday I had been waiting for arrived and as soon as graduation at the school I teach part time concluded, I headed out to Valdosta to take the test. I was nervous. I remember taking the test and hoping I wouldn't forget everything I had been reviewing. Having taken countless tests in my life, as well as studying for my bachelors degree and masters degree, the extra test was rough to say the least. I gave it my best shot and passed. K4BHP was now an extra. I was ecstatic to say the least, to have gone from a tech in January 2023 to an extra in May 2024. The realization of knowing I couldn't have done it without the help of my friends, studying, and prayer. But in the end why did I want to advance to a higher class license?

Continued on next page...

According to several internet searches, one would find that the average number of people who get their extra class license make up only a small percentage of people. Whether it is the rigorous question pool, the time involved to study, or the daunting idea of just one more test, a search in the ARRL website shows that the vast majority of ham operators are licensed as techs and then followed by generals, with extra class licensee totals coming last. However the extra License has within it several benefits one may find for not only their pursuit and advancement in the hobby, but also several benefits to those around them.

The first reason I wanted to pursue an extra class license was for extra privileges. Since getting my tech license I have kept a copy of the band plan at my base station. When I got my general class, I made sure I stayed within the general class privileges. As an extra, one gains a small amount of extra band space. It isn't a lot, but it is just enough to justify the idea of upgrading one's license. My reasoning was that I have a little more room to operate, but for field day or club events, it would be a little more room for those around me to operate under my callsign. It is also in these extra frequencies I have met some ham operators who have been on the air for fifty years or more. To share a brief QSO with them, and listen to them reminisce about what they have done on the air, makes me look forwards to the day I can do like them, and tell another new ham about my adventures on the air.

The second reason I wanted to pursue my extra class license was to give back to my club and community. As an extra, the idea of being able to give back by having the ability to give tests was something that interested me. When I took my tech test, I had to drive over an hour and half to take my test. For General it was a Zoom call I had to pay for. But to be able to have the ability to form a VE team in our local club with fellow extras was in a sense, an ideal way to give back, like those who have helped me along the way. This is something that I have been pursuing in our local club, and hope to have our own VE team up and going this upcoming fall to begin giving tests and getting more people on the air.

Finally, as with anything in amateur radio, there is always a challenge to pursue. Just like in the poem by Robert Frost mentioned above, the path least taken is the one that makes the difference. I have always loved a challenge. There is something inherent in setting a goal, and doing the necessary steps to achieve said goal. A sense of adventure and straying off the path always taken by everybody else. When told I could be seen going for my extra one day, the words I had in some ways disregarded became the objective I wanted to complete. Just like at my college graduation there was a sense of accomplishment. I had studied and it paid off. I was now part of the smaller number of those licensed. But it took me going down a path completely different then that which I had originally set out on, and the end result of finding myself accomplishing my goal.

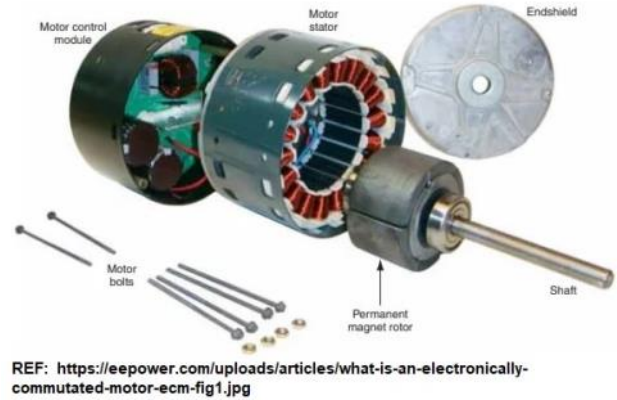
To this day, the thought of this journey in my radio hobby in some ways seems very surreal. The lessons learned, the doors opened and the knowledge gained are all but a few of the things I have benefited from during this journey in upgrading licenses. But in the end if one is on the air, and is reading this, let me encourage you. That if the idea of gaining extra space on the air sounds good, and if the notion of helping your club by giving tests so that others can get on the air or having privileges that others can use seems of interest. Maybe the opportunity of the personal challenge and attaining something that only a few people pursue in our hobby sounds inviting, then maybe this is your personal invitation in your amateur radio calling for you to take the road less traveled, go for your extra, and see the difference it brings to your radio journey, not only with yourself, but with those around you. See you on the air! 73, -Bryan K4BHP.

K4BHP
Bryan Phillips
President
Madison Co. ARC

Debby's Impact of Stuff

Gordon Gibby KX4Z

More and more of the population are heeding the call to develop alternative energy sources, and adding solar power, or backup generators to have resiliency in the face of power outages. In just a moderate storm in Alachua County due to Hurricane Debby, we had as many as 36,000 county homes out of power at one time or another. My house lost power and instantly switched over, automatically, to backup solar panel/lead-acid battery power. Every year we make about 50% of our electrical power usage at our home with solar panels on top of a pole barn.



But there have been unexpected downsides that have cost us THOUSANDS of dollars, quite unexpectedly. And it could catch YOU as well--read on!

In order to reduce the A/C startup current, we went the extra mile and paid \$8500 for a top-of-the-line **inverter-based AC unit** for one of our AC systems. After paying that much for a fancy TRANE system, you would expect excellent reliability, wouldn't you? NO! We just had our second BLOWER MOTOR FAILURE, and each one costs enough to wipe out months and months of solar power generation. **And the dealer says it is because we have solar power!** Other computerized parts of the system have also already given up the ghost....that would have been unlikely to have occurred with a cheaper, simpler system. And this system is only loafing most of the year, set just to 84 degrees or so with no one staying in the rooms. We have lost lots of money because we went with a more "efficient" system....

How could that be?

March 2018 \$8512	Purchase of Unit
Aug 2019 \$453	1st ECM Blower motor failure
Jun 2020 \$347	Bad computerized thermostat
June 2021 \$420	Ants into controller board of system and conductivity through their bodies destroyed system
Aug 2024 ?? \$500	Our 2nd Blower motor ECM failure

These new-fangled very expensive A/C systems save a tiny amount of energy and become somewhat more efficient by using a new type of fan motor, an "electrically commutated motor" (ECM). (See exploded diagram above.) Instead of simply using 60 Hz AC and a bit of capacitor-start-wizardry, they literally have a computer and a DC switching supply making 340 volts of DC and then using IGFET or other FET transistors to switch the DC in a never ending series of waves to three different windings on the stator. By using all this incredibly expensive computer and transistor circuitry, they create an infinitely adjustable 3-phase motor, that can spin at any speed they wish. And they are constantly measuring things and "communicating" between the outside unit, the inside unit, and the thermostat....and they appear VERY SENSITIVE to any disruption.

And apparently they just CROAK if you glitch the power to them enough times. Luck of the draw whether the circuitry survives if power goes down....and comes back up quickly. Guess their engineers didn't think about that possibility? The local A/C company says the people with solar power or generator power back are the ones that pay the \$\$\$\$\$\$ to have these pricey gizmo electric fan blowers replaced **every few years**.

Continued on next page.

In our case, we got 2-3 years out of each electric blower before it died. (And we lost other pricey components in other years.) Because the whole system is "communicating" (using some proprietary 12V version of something like RS232), if the blower motor dies, instantly the thermostat knows and shuts everything down. You can't replace this expensive piece of failure with an ordinary fan....because it is "communicating." What a disaster! It is not just TRANE -- I found reports for several brands where dealers were trying to figure out why they were replacing the motors *every few years*....despite them supposedly being "more reliable."

So for the societal benefit of being alternative energy suppliers, we have already paid about \$1500 in costs to replace blower fans!

It is just my guess, but perhaps the micro-controllers of the pricey ECM motors can't handle a sudden RE-appearance of AC power as the solar or generator brings backup power on line in either fractions of a second or a second or so. The current limiting systems in the "brilliant" motor controller may not be able to limit the inrush current in that event, or may mis-time the next 3-phase pulses or experience elevated "back-EMF" from the still spinning rotor and fan blade. I dunno exactly the cause, and the dealer just replaces the parts, but it sure seems like poor engineering for a system to fail BECAUSE you had backup power. That is precisely what my local AC expert is telling us he has been seeing for years now in the Alachua County area. It isn't his fault -- these systems just apparently aren't really ready for "prime time."

So here are some options that appear out there for **avoiding this financial disaster**, particularly with units that serve areas of your house that are only rarely occupied after you become empty-nesters:

1	DON'T BUY a fancy inverter based AC system with communicating ECM motors throughout, in the first place. Go with simpler older technology.	You'll save a bunch of money in repair costs, but the startup currents may be too high for your solar power system to start the AC system.
2	Pay \$800 one or more times to buy "power stabilization" systems. (I don't know the technology, but it might be ferro resonant transformers or it might be fancy UPS systems.)	My AC guy thought both indoor and outdoor units would need this and he was cutting the price for us. This would still be another \$1600 out of our pocket. And no guarantees at all that it will save the next blower motor
3	TURN THE SYSTEM OFF and only allow it to see AC power when guests are around and actually need it. ANY TIME this system is seeing electrical power that may glitch and be restored quickly by solar....it might be destroyed.	This will require adding backup simple portable electric heaters in the winter to keep pipes from freezing and possibly a dehumidifier in the summer with a hose to the sink to drain water, to avoid mold, but it might save us many expensive AC repair bills! <u>Sounds like a winner to me!</u>
4	Design an Arduino circuit that follows the AC power carefully and instantly turns OFF a relay to kill the AC system 20-Amp breaker if there is <u>any momentary loss of AC</u>and STAY OFF for at least 5-10 minutes until the power is completely stable and all the capacitors and stored energy in the \$\$\$\$\$\$ AC system have drained. The Arduino can run easily from a small battery for a long time if need be, until the power is rock solid again.	<u>I may actually try to design this.</u> Compared to a Winkeyer, this is very simple. It just has to have a couple of transistors to be able to control a big 30A AC capable relay... And far, far cheaper than the "power stabilization" systems....

Wish me luck!

"When All Else Fails"....Our Stuff May Get Hit Also!

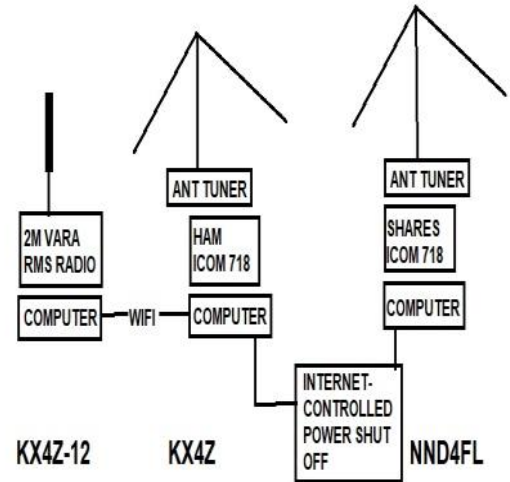
by Gordon Gibby KX4Z

That phrase that so often exudes arrogance and irritates professional systems operators! During Hurricane Debby I got a solid dose of "just what can happen" to our ham radio infrastructure....

I was deployed to a public shelter on the storm-side of the county, while my wife (KM4YGI) was at home with a 2-meter radio and solar power backup (as well as generator). All over the county there were as many as 32,000 households that lost power during what was a moderate wind and rain event in our county. There were lots of cell phone outages.

A few hours into the event, Nancy reported the power had gone out and our house was on solar (battery) power. Internet was also out. She would be fine, and I made the *assumption* that Winlink RMS's at the house would switch to radio-connection modes.

2-meter VARA-FM RMS KX4Z-12 is set to make WIFI connection to the RMS_RELAY gatekeeper on HF RMS station KX4Z, so that if the internet goes out, messages can be automatically relayed from the 2-meter VARA station, over to the HF station and make connection to a distant RMS (which still has Internet) and transact traffic that way. I figured this would work as usual and some hams in Alachua County probably still dropped off Field Situation Report messages with KX4Z-12 VARA-FM 2m. To allow control of rogue-transmitters, both KX4Z (HF) and NND4FL (SHARES HF) stations are powered from an internet-controllable power switch -- but not KX4Z-12.

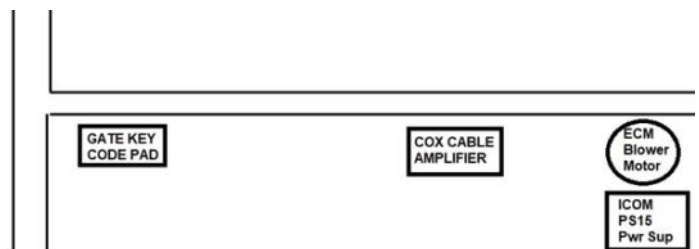


 How little I knew about what REALLY happened!

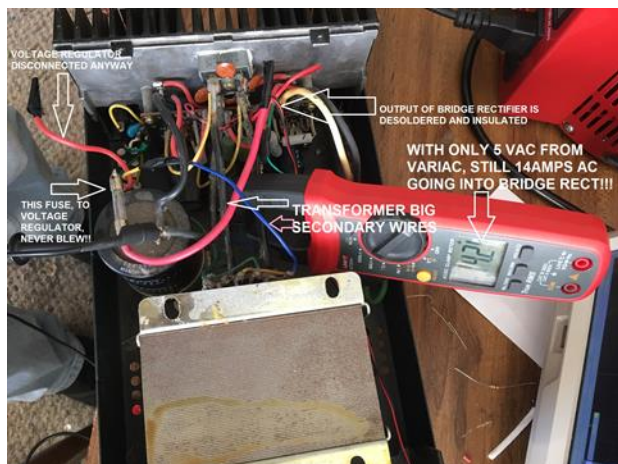
Nancy remained fine throughout the storm, impressed at the great job W4JIR (David Huckstep) and all our Alachua County hams were doing with storm reports and volunteer service. She doesn't check on RMS stations or perform other diagnostic work beyond connecting up the rabbit-ears TV when the Internet quit and the house went to solar power....

DISCOVERIES. When I got home I soon discovered that both (1) the ham KX4Z and (2) the SHARES NND4FL HF stations were **off the air** with no power. (3) The cable router was in a "fugue state" and needed rebooting. (4) The HF antenna for KX4Z RMS was **laying on the ground**, after a stress fracture breakage beside a previous solder splice. (A couple days later, the SHARES NND4FL antenna did exactly the same as it tumbled down. (5)) And as separately reported, (6) the fancy ECM Blower in the guest house AC bit the dust (again).

THAT WASN'T ALL. It took well over a week for us to sort out more of the damage and prove that it wasn't our router that was busted -- it was COX cable itself. I had 30Mbs download....but zero to 0.4 MBps upload, an unexplained great disparity. A new \$200 router -- no change! Real Reason: A Motorola line amplifier a few doors up from me was close to smoking -- the repairman found it stinking so hot he couldn't hold it. And the front gate pin-pad, to get into the neighborhood -- that was INOP as well. So lightning apparently took out all kinds of equipment all throughout our 1/2 mile road -- and I haven't heard from other neighbors yet!



Continued on next page...



Lightning apparently overwhelmed the bridge rectifier in the SHARES HF power supply, which is now a complete **dead short**. Supplying only 5VAC from a VARIAC powering the ICOM supply, the transformer secondary is plunging 14 amps of AC into the shorted \$6 bridge rectifier. Replacement is on the way (thanks, Amazon!).

When the ICOM supply got toasted, it blew the fuse in the Internet-controllable AC supply controller -- and that took power away from BOTH Winlink HF RMSs, so we lost all HF outflow. That meant KX4Z-12 VARA 2meter was talking to a useless HF computer.

So basically, every piece of Winlink gear in my house was INOP. Even though I had full solar power backup! North of me, Columbia County digipeater and RMS gear didn't have power backup and Brad N5CBP reported a slew of repeater & digital systems down, also. In our county, **only 2meter VARA-FM W4DFU-12 remained solid**; K4ZSW-10 had a blown output power amp (of indeterminate cause).

Yep, when lightning comes to call, ham radio gear is often just as vulnerable as anything else! Better have our own backups for our "*when all else fails*" backups!



ARRL IT Security Incident - Report to Members

08/22/2024

Sometime in early May 2024, ARRL's systems network was compromised by threat actors (TAs) using information they had purchased on the dark web. The TAs accessed headquarters on-site systems and most cloud-based systems. They used a wide variety of payloads affecting everything from desktops and laptops to Windows-based and Linux-based servers. Despite the wide variety of target configurations, the TAs seemed to have a payload that would host and execute encryption or deletion of network-based IT assets, as well as launch demands for a ransom payment, for every system.

This serious incident was an act of organized crime. The highly coordinated and executed attack took place during the early morning hours of May 15. That morning, as staff arrived, it was immediately apparent that ARRL had become the victim of an extensive and sophisticated ransomware attack. The FBI categorized the attack as "unique" as they had not seen this level of sophistication among the many other attacks, they have experience with. Within 3 hours a crisis management team had been constructed of ARRL management, an outside vendor with extensive resources and experience in the ransomware recovery space, attorneys experienced with managing the legal aspects of the attack including interfacing with the authorities, and our insurance carrier. The authorities were contacted immediately as was the ARRL President.

For the whole story: https://www.arrl.org/news/arrl-it-security-incident-report-to-members?_zs=Espwl&_zl=GIF43

How I got started in Ham Radio

Earl McDow, K4ZSW



My first radio was a toilet paper roll, razor blade, graphite lead, headphones, and some wire. I would listen to it under the covers at night. Clear channel WSM was a particularly strong station with the Grand Ole Opry rocking the rafters. Karl, my fellow friend in radio and I demonstrated this marvel to our 6th grade class. My first presentation on the wonders of the airwaves.

I'm not sure how I was able to still have my second radio from 7th or 8th grade shop class, but there it is.

Somewhere in time we discovered a great Elmer in Bill Myers, W4PQP. We both earned our Novice and Technician Licenses under his mentoring. He had the shack we could only dream of—Collins hardware, hand rotated using car axle beam, enormous MARS supplied generator.

A HealthKit receiver kit got me on the air with my Novice ticket. I had a borrowed DIY transmitter. Longing to talk on the air, I build my first 6146 6 meter transmitter and acquired a converted tank receiver and some 50 MHz crystals after passing the Technician exam. My first merit badge was—Radio. Still involved after 65+ years.

6 meter activity was vary active at the time. My old QSL cars probably went the same place as my brother's baseball cards. I do remember pretty good skip conditions. Club activity and fox and hound events were instructive and fun.

In 1963 it was off to the University of TN and enrolled in the first EE course based on the new silicon devices. We still had to take the power courses to possibly go to work for the TVA. Our first textbook was mimeographed pages from Dr. Pierces new book on semiconductors. We gave Dr. Symonds (power lab professor) a hard time with our much safer 5-12V environment. We did recognize the need for MORE power to drive the final amps we coveted.

Got a job at the academic computer center my freshman year and advanced from night operator to systems support (IBM 1620, 1401, 7040). I let my license expire with the new computer interest. 54 years later I happened to stop at a GARS Field Day event and re-started my Ham adventure again (Technician, General, and then Extra) in 2018. With all the new technology it was like drinking from a fire hose. I owe much to my current Elmers in NF4RC and GARS. Thank you!

To get to know so many NFL Hams, let me suggest those that are willing provide a one page history of how you got involved in this great helpful hobby and how you can Elmer a new member.

Suwannee County ARES News

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

Well, the month of August brought us a third hurricane in three years, two of which were within a twelve-month period (Ian 2022, Idalia 2023 and Debby 2024). Now hurricanes are not an unknown in Suwannee County, but statistically we are among the areas of Florida where they are less frequent and of generally lower strength. So much for statistics! As we are still repairing after the CAT 4 Idalia, we were challenged with a strong CAT 1 Debby.

PLANNING

The Suwannee County EOC station KK4RQY was prechecked in the days before Debby's arrival and we were ready to communicate if needed. Summer vacations took several key individuals out of the area so it was decided that we would only staff the EOC station and a shelter (either Live Oak or Branford) in the event of a breakdown in communications.

READINESS

Fortunately, Debby did not require an activation of our stations, but we had HF voice and Winlink data capabilities at the ready along with 2m and 70cm FM voice for our area repeaters, simplex and SARNET. We were set up this way in the EOC and in several portable and home stations with standby power.

POSTSCRIPT

One concerning lesson learned came from a radio call from a ham in Wellborn the day after the hurricane. There was a report of rising water requiring boat rescues for a number of families. Phones were down and a local ham put out a call for help on SARNET as he couldn't reach anyone on the 145.27 or 145.41 repeaters. We will be discussing this case and adjusting our plans accordingly. This may involve extended monitoring duties for Amateur Radio, GMRS, CB and other radio services and will require a serious level of planning and public awareness promotion.

MONTHLY ACTIVITIES

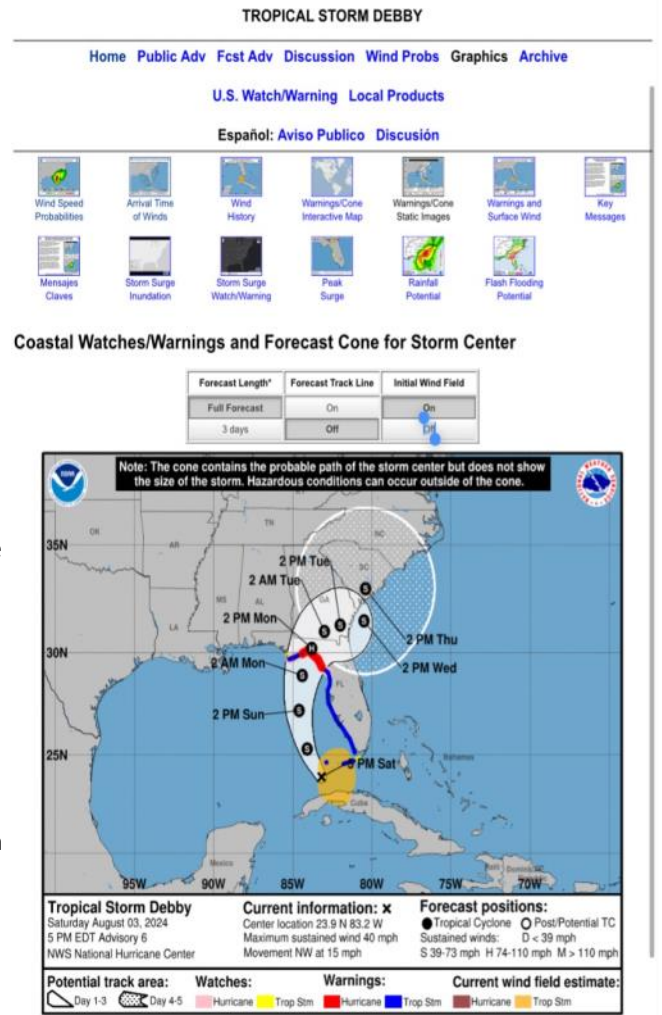
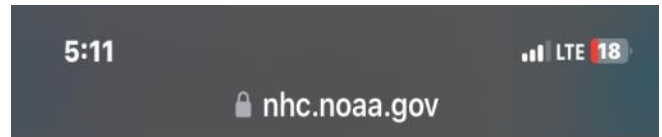
Beyond the activities related to Hurricane Debby, we held our regular weekly local nets and in about half the time we did our Wednesday check-ins on the 9:00 am North Florida Section ARES Net and the 1 pm SARNET role call from the EOC station KK4RQY. Better travel and medical appointments scheduling will enable us to get back to a 100% level.

One key highlight of the Suwannee County Emergency Management operation is that even as the County officials and expanded Incident Management Team did their post-Debby work, the routine activities and operations of the Amateur Radio station continued without a problem. This is as it should be and worthy of note as it can sometimes be absent in some EOCs when the situation is challenging. Kudos to the Suwannee County Emergency Management officials and to their Amateur Radio volunteer operators for working well together.

CLOSING NOTE

We still have several more months in the 2024 Hurricane Season, so we'll need to be on the watch.

Get On The Air!



* If the storm is forecast to dissipate within 3 days, the "Full Forecast" and "3 day" graphic will be identical

[Click Here for a 5-day Cone Printer Friendly Graphic](#)

How to use the cone graphic (video):



About this product:

This graphic shows an approximate representation of coastal areas under a hurricane warning (red), hurricane watch (pink), tropical storm warning (blue) and tropical storm watch (yellow). The orange circle indicates the current position of the center of the tropical cyclone. The black line, when selected, and dots show the National Hurricane Center (NHC) forecast track of the center at the times indicated. The dot indicating the forecast center location will be black if the cyclone is forecast to be tropical and will be white with a black outline if the cyclone is forecast to be extratropical. If only an L is displayed, then the system is forecast to be a remnant low. The letter inside the dot indicates the NHC's forecast intensity for that time:

D: Tropical Depression – wind speed less than 39 MPH
 S: Tropical Storm – wind speed between 39 MPH and 73 MPH

Kudos to the Suwannee County Emergency Management officials and to their Amateur Radio volunteer operators for working well together.

The Panhandle is absolutely CQing!

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

Can gravitational waves impact RF?

A gravitational wave affecting the radio spectrum you say. What? Is that possible? Put your seat belts on and anchor down as we lift your understanding deeper into radio signal propagation!

Did you know about fluctuations in the earth's gravity and the constant changes in its magnetic field? More than likely, that answer is a resounding yes. But have you thought deeper and considered that the changes affect the gravitational waves and cause underlying issues with the transmission and reception of all modes of signals?

We begin this short brief with discussion on How Gravitational Waves Could Generate Radio Signals inspired from an [article from MIT](#) in 2009. In this article, the study and research divulge that [even though potentially weak signals] the amplitude and frequency of change in gravitational waves does and can emit transmission detectable on many communication radio types. Have you ever been listening to a radio and the station goes quiet but there is some underlying, indiscriminate noise other than the normal buzz of static? Have you ever watched a television set that loses its signal and the same occurs underneath the white screen peppered with black and grey dots? It is like something is there, but you cannot identify just exactly what.

You have just heard what perplexing signal enthusiast has been for decades [if not longer] and it may be leftovers from a period long passed. Are we indeed hearing the change of gravitational waves as a reaction to the changes in magnetic fields when impacted from the sun? The short answer is yes.

The motion of Gravitational waves are transient displacements in a gravitational field—generated by the motion or acceleration of gravitating masses—that radiate outward from their source at the speed of light. With that, we can deduce that the sun's solar conditions can affect the gravitational fields. Thus, the same can be said for the altering of those fields in the presence or absence of an impactful K-index.

Leaving the rabbit trail behind, [trust me, you can get lost down there] it is proposed that you can listen for, hear, and identify the noise of space time events in action. The undertones generated from these events may not overtly impact your transmission and reception, but they could if you are say working a distant faint station during a contest or experiment to determine signal path and distance on the HF bands and your intended QSO cannot be heard above the noise.

So, fathom the possibilities for a minute, read deeper into the plausibility, and gain better insight on what might need to be done to detect signal anomalies while constructing a station capable of getting through the noise!

Check out [pulsar timing arrays](#). Your imagination, inventiveness, and creativity will not be disappointed.

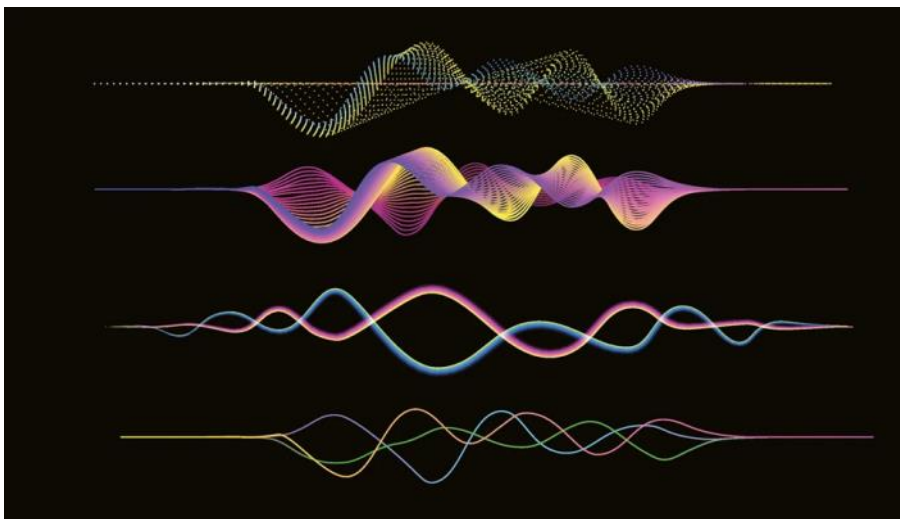


Photo from [Historic RF Milestones](#)

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Dx Hunting!

A Brief overview! You should always know your Capabilities. You may have been doing this for a while and think you have it down, but believe me, everyone gets rusty and the standards in communication and practices of others, can and do change! Understand your License Class Privileges and at first, work with a Control Station. Overall, Amateur Radio DX hunting is a popular activity among ham radio enthusiasts, where operators aim to establish contact with distant stations, often in rare or remote locations. This practice not only enhances technical skills but also fosters a sense of community among radio operators worldwide!

Listening is a fundamental skill for DX hunters. Experienced operators spend significant time listening to identify potential contacts and understand propagation conditions. Ensuring that the amateur radio station is in optimal working condition is crucial. This involves checking the equipment, such as antennas and transceivers, to ensure they are functioning correctly and efficiently.

Participating in DX contests is a strategic way to make numerous contacts over a short period. Contests like the CQ Worldwide DX Contest provide opportunities to connect with many foreign operators. During these events, operators use a "hunt and pounce" technique, tuning across bands to find strong signals calling "CQ Contest" and making quick exchanges.

Learn from others. There are more ways than one and maybe have or develop a preferred style. Participate in groups (large or small). Multiple Modes: SSB Voice/APRS/Digital/CW, Organize an event, Special Event Station, FOX Hunt (VHF – 2M/70cm or HF – 80M). the challenges are fun and encourage team building!

QSL cards are confirmations of contact between amateur radio operators. While traditional paper QSLing involves sending physical cards, many operators now use electronic QSLs (eQSLs) for convenience and cost-effectiveness. Electronic systems like ClubLog's Online QSL Request System (OQRS) allow operators to request and pay for QSL cards via PayPal, reducing the need for physical mail. The QSL Bureau system is a cost-effective method for exchanging QSL cards, as it consolidates mailings and reduces postage costs. However, some operators prefer direct QSLing, which involves sending cards directly to the other operator, often including a self-addressed stamped envelope (SASE) and sometimes a small fee to cover return postage.

DX hunting presents several challenges, including dealing with pileups—situations where many operators attempt to contact the same station simultaneously. Patience and persistence are required to succeed in these scenarios. Despite the challenges, the rewards of DX hunting include the thrill of making long-distance contacts, earning awards, and the satisfaction of technical achievement.

Amateur radio DX hunting is a dynamic and rewarding aspect of ham radio. It combines technical skill, strategic planning, and a passion for communication, offering enthusiasts a unique way to connect with the world. Whether through contests, QSLing, or simply listening, DX hunting continues to be a cherished pursuit for amateur radio operators globally! So, get on that key and speak into that microphone, other are waiting to hear from you



Now that your imagination is running wild, we here in Okaloosa County continue to provide exceptional amateur radio services, encourage development and attempt to enhance the hobby with the utmost regard for the largest benefit to all! We invite you to join our family, teams, partners, and affiliation celebrating a long-standing legacy of comradery and compassion. Please join us at any of the regular Technical Nights, Meetings or events that are currently planned! Your influence directly shapes the amateur radio community and provide a positive path for the future! Without you involved, we are just chasing sparks.

NOARC – W4AAZ.Org 2nd and 4th Thursdays, 700 pm CST, 4565 Live Oak Church Road, Crestview, FL

PARC – W4ZBB.Org 1st and 3rd Thursdays, 730 pm CST, 17 A First St SE, Fort Walton Beach, FL

Continued on next page...

UPCOMING EVENTS!

NOARC HAMFEST! Oct 5/6, 2024, 1446 Commerce Drive, Crestview, Florida!

What: **NOARC's Annual Amateur Radio Hamfest**

When (Day 1): Saturday October 5th, 2024. VENDOR ONLY set up @ 0800. Soft show opening at 3pm until 6PM. Amateur Radio License Testing: Saturday, October 5th, 2024, at 1PM CST. Details below!

When (Day 2): Sunday October 6th, 2024. VENDORS ONLY set up @ 0600. Full show opens @ 0800.

Admittance for Visitors and guests: \$7.00 each person. Ages 12 and under FREE, ages 90 and above, FREE, Scouts in uniform, FREE!

Prices: Vendor Tables/Table Spots: \$10.00 each spot/space/table (good for the entire show). First reserve first served. If you are a walk-in the day of the show, tables may be limited as this show typically sells-out.

Food: Meal and bake sale services provided by the Playground Amateur Radio Club of Fort Walton Beach Florida.

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

Contact Information: Hamfest Hotline 850.359.9186 or email KI4ZER@ARRL.Net



The Annual Playground ARC Holiday Party! ALL HAMS, CLUBS, SPOUSES, RADIO ENTHUSIASTS ARE WELCOME! This is a great chance to meet offsite, get dressed up and come with your holiday cheer!

The Playground Amateur Radio Club, INC. is proud to announce that we will be hosting our annual Holiday event December 15th from 4 to 7 pm as a Banquet in the newly renovated event space at Angler's on Okaloosa Island Florida! We formally invite you to bring your friends & family and come out for a night of friendship and fun to close out our year together! We hope to award 2024 Ham of the Year to all clubs. So, if you are part of a club you would like to have it and your members at this event recognized, please contact us at parcfwb@gmail.com

Stay tuned for updates, as this event is going to be big!

Please email kq4frb@gmail.com if you would like to RSVP!!!

Continued on next page...

DON'T FORGET TO GO NETS!

Monday Nights: Okaloosa ARES at 7:30 PM on 147.120+ 100Hz , Walton County ARC / ARES Conjunction Net 7:30 PM on 147.285 + 100 Hz. Echolink node WF4X-R 637806

Tuesday Nights: Northwest Florida DX Net at 7:30 PM on 147.555 (Simplex)

Wednesday Nights: 7:30 PM on 147.285 + 100 Hz. Echolink node WF4X-R 637806

Thursday Nights: Walton County ARC "Chit Chat Net" 7:30 PM on 147.285 + 100 Hz. Echolink node WF4X-R 637806

Friday Mornings: SAR Net Duval County EOC (All Amateurs welcome) at 9:00 AM on 444.900+ 100Hz

Friday Nights: 7:30 PM on 147.285 + 100 Hz. Echolink node WF4X-R 637806

Sunday Nights: PARC at 7:30 PM on 146.790- 100Hz

Sunday Nights: TCARC at 8:30 PM on 146.730- 100Hz (Temporarily on 147.120, + 100 Hz)

Each and EVERY Night!

The GCVTN at 8:00 PM on 147.360+ 100Hz See the [ARRL NFL Page](#) for information regarding wider area nets.

We are all in this together! Whatever reason inspired you to be involved in amateur radio we hope that you are continuing to pursue it, share it, and demonstrate it! This community would be nothing, if it wasn't for the wonderful people we meet, interact with, and learn from! Be sure to continue your commitment to enhance others lives and be the example for others to follow and lead your hobby, clubs, and organizations to success!



Good Idea from MERT

Harlan Cook, KG4NXO

As a part of the revised MERT Incident Commander RED BOOK procedures, Member Roll Calls are now scheduled during all Emergency Activations at 8 AM, Noon and 4 PM daily. To assist with that procedure, I am picking up a project that was started earlier this year to document the equipment MERT members use.

The information will be used to identify who has Digital equipment, who have HF radios (reachable via NVIS antenna), who have tall antennas with better propagation (for emergency Simplex communications), who have handheld radios, who can serve as radio RELAYS, who have batteries or generators that can remain on the air during extended power outages, who have GMRS radios and can help their local communities during emergencies, etc., etc.

If you have not submitted this information before, **thank you** for taking two or three minutes to fill in the form and reply asap. If you have changed or added to your radio capabilities, thank you for sending me what has changed.

This information will be included in the **RED BOOK** for the MERT Incident Commanders information.

Call Sign	HF Radio	GMRS	WinLink
Phone	HF Antenna	Faraday Box	Digital Radio
VHF/UHF Radio	Battery Backup	Mobile VHF	Other Capabilities
VHF/UHF Output	Generator	Mobile HF	
VHF Antenna Description	CB	Handy Talkie	

Technician License Class

Reid Tillery, K9RFT

Know anyone who wants to be a ham? Know anyone who wants to get involved in emergency communications? Well, now is their chance. We will have a blended Technician class offered at Mossman Hall in Melrose, beginning Thursday, September 19th. This will be a blend of in-person instruction and online materials. The class will finish on December 5th, 2 days before the test at Waldo.

We had 100% pass rate last time, and I know we can do that again.



LEARN A NEW SKILL!

MELROSE HAM RADIO TECHNICIAN LICENSE CLASSES

What is ham radio?
More properly known as the Amateur Radio Service, ham radio is two-way radio communications using multiple radio bands, including high-frequency, very-high-frequency, and ultra-high-frequency. You can use ham radio on the ground, at sea, or in the air. It can be used for short-distance communications or for world-wide communications. It's even possible to talk with the International Space Station via ham radio.

Why learn ham radio?
Not just anyone can use ham radio. You need to be licensed by the FCC. Once licensed, however, the ham-radio world opens up to you. As a licensee, you'll have a good working knowledge of radio and you can use that knowledge to communicate with others. Most hams are great people. "By searching the skies, you'll find new friends." is what they say about ham radio and that is definitely the case. You'll end up meeting some very fine people. And you'll gain new skills, which you can use everyday or in emergency situations. Won't you join us on the airwaves?

Class: Melrose HAM Radio taught by Reid Tillery
Dates: Thursdays starting Sept 19 through Dec 5
Time: 7:00 - 9:00 pm
Location: Mossman Hall 301 State Rd 26, Melrose

This is a blended class - Reid will teach in person, and students will also study online materials between classes.

Cost: \$10 in-person classes (pay at first class)
\$29.95 online materials
(order now at hamradioschool.com)

To sign up, contact Reid at reidtillery@gmail.com

WHEN ALL ELSE FAILS, HAM RADIO WORKS!

Mossman Hall Hours
Monday 10am-2pm, Tuesday 4-7pm, Friday-Sunday 12-5pm
First Fridays 12-9pm, Second Saturdays 9-5pm
MossmanHall@gmail.com MossmanHall.com

Suwannee County Hams Train and Give Back

Gordon Beatty, W24TTT



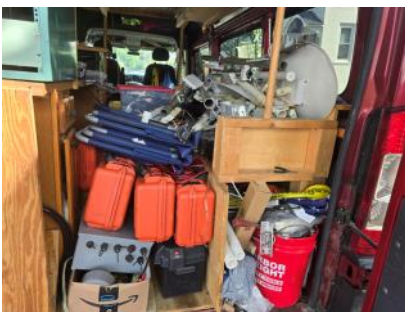
Nancy and Gordon Beattie of Suwannee County (N2FWI & W2TTT) helped out with the Passaic County Fair at Garrett Mountain Reservation in New Jersey again this year as a way to do an immersive emergency communications training exercise and to give back to those with whom they've volunteered for decades. The fair serves as the county's annual emergency deployment exercise and engages all county and several municipal agencies while being evaluated by the New Jersey State Police Office of Emergency Management.

The Deputy Emergency Management Director, Sheriff's Officer Rob Scott KD2ION has a small team of volunteer hams who form as the Situational Awareness Unit identified in the Incident Action Plan. Nancy and Gordon work with Rob and two other volunteers Dave Henninger N3UXK and Aly Badawy ALOY.

Cmdr. Robert Scott KD2ION and Gordon Beattie W2TTT.

EQUIPMENT ASSETS

The team brings to bear situational awareness capabilities consisting of video and radio communications assets including Amateur Radio, Wi-Fi and cellular wireless networks. Cameras are deployed across the fair grounds and remote parking lots and networked using AREDN mesh nodes and cellular modems. The team also provided display consoles based on Blue Iris video integration software and was located in the Sheriff's Field Communications Unit.



The team deployed Ubiquiti and Mikrotik AREDN mesh nodes on 2.4 and 5 GHz. These radios, cameras, batteries and other gear come from two equipment caches in New Jersey and Florida. Below is a photo of some of the demobilized equipment packed up to go

This is another photo of the demobilized gear from the Fair's remote parking lot consisting of five camera nodes with pan-tilt cameras and 5 GHz AREDN



Continued on next page...

OPERATIONS

The Fair is a good multi-day test of skills to plan, adapt, deploy and maintain a network of twenty cameras for several days. The team's cameras were focused on security screening, the exit bus stop, ATMs, access roads, parking lots and other areas of interest. The team also tracked weather and set up radios and antennas for the Amateur Radio community to reach us from inside or outside the Fair on the NJ2PC 2m FM repeater and an internal net channel using our NJ2PC 70cm DMR repeater.

Below is a 5 GHz AREDN mesh node (Mikrotik Dish), a UHF vertical and a 2.4 GHz omni AREDN mesh node mounted on the rear of the Sheriff's Field Communications Unit.



AN OPERATIONAL TEST

The Mikrotik AREDN mesh dish node is based on 802.11ac Wi-Fi technology which delivers improved speeds and longer range than 802.11n devices. This dish node was deployed as a test of what will be needed to meet the facilities changes for next year's fair. It will also allow the team to support many additional cameras. The test was a success and can be confidently incorporated in our plans. It also gives the team time to acquire and configure new nodes.

This trailer served as the Technology Center for the duration of the event.

Deployment packages were integrated, tested and staged prior to deployment in this trailer. Battery charging and assessment for deployables took place here daily. Demobilization of all equipment also took place in this trailer. The drop ramp door provided convenient access during peak periods and was otherwise closed off for security. The mast supported one of the 5 GHz AREDN mesh nodes and a pan-tilt camera.

FIRE!

This year was unusually quiet with few incidents of note. Good thing!



A brush fire likely started by a discarded cigarette at a scenic overlook on the fair grounds



Firefighters in the snorkel bucket searching the cliffside for flare-ups.

CONCLUSION

This year's fair was a success although its last day was rained out. All systems worked as designed and the public was well served. In addition to the aforementioned 802.11ac node test, we also are looking to make camera nodes more compact by mounting the camera, the AREDN mesh radio and antenna if separate, on a two foot section of 1-1/2 inch PVC pipe. This will make transportation and deployments a bit easier.

If anyone is interested in fixed or deployable AREDN mesh operations, please reach out to Gordon Beattie W2TTT via email W2TTT@ATT.NET or phone or text 201.314.6964.

Six Meters Opening Up

Terry Gordon, K4TMG

From this morning's ARRL Propagation bulletin:

Solar Cycle 25 is now much, much stronger than anyone anticipated, and it is slowly growing stronger through at least this weekend.

Today's Wednesday estimated international sunspot number is 281.

It is increasingly likely that we'll have widespread coast-to-coast and worldwide six meter F2 propagation during about half of the days between late October and at least early February.

Widespread F2 openings are likely to bring six meter CW and SSB to life like we haven't experienced in more than 20 years.

The first sign of enhanced six meter F2 will be increasingly frequent TEP from Europe and North America to South America and the South Atlantic islands. TEP may begin very sporadically by late August and become increasingly frequent later in September and especially during October.

Coast-to-coast F2 propagation and propagation crossing the Atlantic to Europe and Africa may begin sporadically during September and October and become frequent and long lasting by early November.

Effective 6 meter antennas can be very small.

3 element Yagis are small, lightweight and very effective. 20 foot antenna height is adequate but sloping terrain or higher antennas perform much better. Heights higher than 50 feet are not necessary and in many cases perform poorly.

Are you ready for this once in a lifetime experience?"



QCWA Ocala

Ken Simpson, W8EK

Ocala Chapter 62 of the Quarter Century Wireless Association held their regular meeting on Thursday, August 22, at the China Lee Buffet in Ocala



From left to right
WB2FKO, N4KPI, N8AJU, W3HH

They were fortunate to have three new members attend, specifically Randy Carter, N4AYS from Gainesville,

Steve Carman, W4IT from Fort White, and Mike Haselbeck, WB2FKO from High Springs President Ken Simpson, W8EK, still has many items from the estate of W8DYV to sell. Most are ham items, although some are less ham related, such as scanners



From back to front
N4AYS, K4GWQ, W1DOH,
KM4KKL, W4IT

Chapter 62 meets on the fourth Thursday of the even numbered months, at China Lee Buffet on East Silver Springs Blvd in Ocala at 12:30 PM.

All are welcome and encouraged to attend. The next meeting will be on October 24.

Chapter 62 also holds a net every Saturday morning at 9 AM local time, on 3940 KHz. Please check in with us.

MERT

Marion County Emergency Radio Team



Marion County Sheriff's Office
Division of Emergency Management

COMMUNICATIONS UPDATE

September 2024

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

"Call MERT When all else fails!"

MERT Monthly Meeting
The next meeting is on
September 21st @ 10:00 am.
All Amateur Radio operators are
Welcome!

Hurricane Debby and MERT Readiness



Harlan Cook (KN4VRM)
MERT Coordinator

Hurricane Debby was a slow-moving and erratic tropical storm which slowly crossed the Caribbean then up the Gulf coast making landfall in the Big Bend region of the panhandle (as a Cat 1 hurricane just 50 miles NW of Marion County). It went on to cross the state then Georgia and on as a huge rain making machine causing widespread flooding across the SE U.S. all the way into the Carolinas and up to New England.

The flooding and wind damages are not new to us living in Florida... but it was a huge wake up call to many living deep inland along the East Coast who rarely experience such significant impacts. The future suggests, regrettably, there will be more of these events ahead for areas

For MERT, we did experience something new—our first ever Level 2 activation because of the hurricanes close proximity as it moved northward through the Gulf. This was a precautionary step as MERT is especially capable of monitoring and receiving reports and status conditions from around the state – and reporting those to the EOC IC when appropriate. Please review the article in this month's newsletter sharing the Division of Emergency Managements Activation Levels in detail for your future reference.

I also want to compliment all the Members who responded on short notice to activate supporting the EOC and those participating in the post Hurricane Debby Hot Wash and the multiple training events this month who showed a dedication and willingness to enhance personal skills while learning new ones. Working together, we are raising our capabilities and our ultimate performance... ***"When all else fails. Call MERT!"***

What a team! ***My sincere thanks to all.***

Management staff. **MERT** is at normal operations level.

Since MERT communications capabilities can provide unique information resources to the Division of Emergency Management, MERT activations may be precautionary steps allowing monitoring and reporting conditions to the EOC Incident Commander.

EOC Activation Levels

As Hurricane Debby slowly moved up the Gulf coast of Florida, Preston Bowlin (Director of Emergency Management) requested MERT to activate all resources in support of the Emergency Operations Center Level 2 activation. As this was a first for MERT, lets review the specific description of each activation level to support future events.

Level 1 - Full Scale Activation of Marion County Emergency Response Team

In a full-scale activation, all primary and support agencies under the local and state plan are notified. The Marion County EOC will be staffed by Division of Emergency Management personnel and all Emergency Support Teams and Functions, including MERT, are to be fully staffed for emergency operations.

Level 2 - Partial Activation of Marion County Emergency Response Team

This is a Division of Emergency Management activation that may not require activation of every section, branch or Emergency Support Functions. All primary, or lead, Emergency Support Functions are notified. The Marion County EOC will be staffed by Division of Emergency Management personnel and necessary Emergency Support Functions. MERT may be activated to support the EOC.

Level 3 - Monitoring Activation

Level 3 is typically a "monitoring" phase. Notification will be made to those local Agencies and Emergency Support Functions who would need to take action as part of their everyday responsibilities. The Marion County EOC will be staffed with Division of Emergency

Hurricane Debby Activation

As Tropical Storm Debby moved closer to north central Florida on Saturday, August 4th, MERT was activated while on Level 2 readiness. MERT acknowledges the following members for responding to the EOC and begin activation and full monitoring activities in support of the Marion County Division of Emergency Management.



**Bill Gillespie,
Coordinator -
MERT
KW5BG
Assistant
IC on
08/04/24**



**Harlan Cook,
KN4VRM
Coordinator -
MERT IC on
08/04 –
08/05/24**



**Gary Neron,
KS4TSX
MERT IC on
08/05/24**



**Phil Lewis,
W4EVV
Radio Opera-
tor
08/05/24**



**Leon
Juncyszyn,
K8ZAG
Winlink
Gateway
repairs on
08/03/24**



**Hayden Kauf-
man,
N2HAY
ARES Coordi-
nator on
08/04 –
08/05/24**

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MERT Appreciation Visit

During the Wednesday, August 7th “Check In” meeting, Director Preston Bowlin visited with members in thanking them for their support during the Level 2 activation on August 4th/5th. He shared that due to the slow speed and erratic path of the hurricane, he wanted MERT operational... as a precautionary step, just in case it took an unplanned and sideward path cutting across central Florida.

We sincerely thank him for the visit and his constant support of our dedicated commitments of service. Harlan Cook, Coordinator and Bill Gillespie, Assistant Coordinator added their thanks to all members for their training, readiness and willingness to respond when called upon.



**Preston Bowlin,
Director of Emer-
gency Management**

Hurricane Debby Hot Wash Update



The “Check In” meeting on Wednesday, August 7th was very focused on discussing the preparations and events leading into and during the Hurricane Debby activation. As members are encouraged to provide honest and important feedback during all Hot Wash’s, the discussion was a model for all future conversations.

The MERT IC’s, radio operators and members experiences of our LEVEL 2 radio room activation resulted in a very valuable HOT WASH output detailing several revisions, changes and additions needed to the **Incident Commanders RED BOOK** (See KG4NXO.com “RED BOOK” tab) They included:

- Inclusion of the detailed EOC Activation Levels as a Resource.
- Inclusion of the MERT Radio Room Layout as a Resource.
- The addition of the specific information details to be announced on KK4DFC, KG4NXO and KJ4CLL on an hourly basis for MERT Members, CERT Operators and other local amateur radio operators monitoring MERT repeaters.
- Inclusion of conducting MERT Shelter Operator Roll Call on KK4DFC each hour.
- Procedures for conducting Shelter Operator support when any Roll Call response is not received by the MERT Radio Room.
- Inclusion of a Member Roll Call announcement at regular times (8 am, 12 Noon and 4 PM) each day during activations.
- Inclusion of informing MERT Members of all open Shelters prior to MERT activations.
- NVIS antenna information and Construction Guide for the MERT NVIS Go Box kit.
- Deletion of the MCPS PC User and Password sections.
- Addition of the Division of Emergency Management checkout, testing, use and check in procedures for the laptops for Shelter Operators.
- Creation and inclusion of the “Resolving MERT Communications Failures at Shelters Guide”.

Shelter Emergency Radio Kit (SHREK) Update



Coordinator Harlan Cook (KN4VRM) led a training event on the Wednesday, August 14th “Check In” meeting reviewing many key steps to undertake when a MERT Operator experiences a communications failure while on duty at a Shelter.

He created and shared “**Resolving MERT Communication Failures at Shelters**” which details activities for Shelter Operators to perform in restoring radio communications with the MERT Radio Room.

The document will be included in the “MERT Shelter Reference” 3-ring binder provided all Shelter Radio Operators and is available online at KG4NXO.com under the “MERT Shelter Reference” tab.

New NVIS ANTENNA Resources

MERT completed a series of classes on the theory, EMCOMM importance, setup and actual operation of Near Vertical Incidence Skywave (NVIS) antennas during July. The training classes culminated in the setup and operation of MERT’s NVIS antenna on 40 meters with a contact to Ryan Salom’s father 60 miles north of Ocala in just 30-minutes!

Continued on next page...

From the events and training activities, three new resources were created in August to simplify the training, setup and operation in the future.

1. "NVIS 101" – This is a training resource explaining the theory, HF band limitations, radiation patterns and operational tips of NVIS antennas.
2. "NVIS Setup Instructions" – This resource provides detailed guidance in the safety precautions, construction details for the specific NVIS antenna MERT owns, and radio room procedures for operation.
3. NVIS ANTENNA GO BOX – This resource is designed for rapid deployment ensuring all components are available for set-up/operation anywhere MERT is deployed.

NVIS activities will be an annual training and operations event for MERT in the future.



(Photos L&R)
MERT members constructing the 40/80 Meter NVIS antenna MERT owns on July 17th.



Members constructed and made a 40 Meter contact within 30-minutes!



MERT's NVIS antenna and support hardware are now available in a GO BOX stored in the warehouse.



MERT's equipment in the new Marion County Communications Bldg.

As we all know, "moving" is usually a challenging event that can have some "surprises" along the way. As reported last month, MERT completed the move of all its equipment into the new state-of-the-art communications building at the Sheriff's Office Complex with both KG4NXO repeaters (2 Meter & 70 cm) and our Winlink Gateway (145.0300 MHz) supporting Packet and VARA FM digital communications.

However, electronic equipment can be fidgety and this was the case over the past few weeks as the Gateway PC & software was a major challenge. The great news is MERT's Technical Advisor (and Past Coordinator) was dedicated to get the root cause.... Please thank **Leon Jurcyszyn (K8ZAG)** who was dedicated in solving the programming problems in bringing this MERT Gateway reliably online.

New Volunteer Services Coordinator Announced

MERT members had a very special guest on Wednesday, August 21st when Lt. Paul Bloom visited our meeting and introduced the new Volunteer Service Coordinator, Sarah Jenkins.



(L-R) Sarah Jenkins, new Volunteer Services Coordinator & Lt. Paul Bloom, Director of the PIO

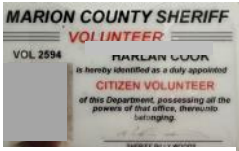
MERT sent a congratulatory note and Ms. Jenkins replied:

“Good morning,

Thank you for your kind words. I am ready to get moving and look forward to working with you. As soon as I get settled, I will be in contact with you to get more information regarding MERT. I look forward to learning about all of our volunteer opportunities in depth. Please do not hesitate to reach out to me in the meantime. If I don't know the answer, I will get it.

My numbers are below in my email signature.

Thank you again!
Sarah”



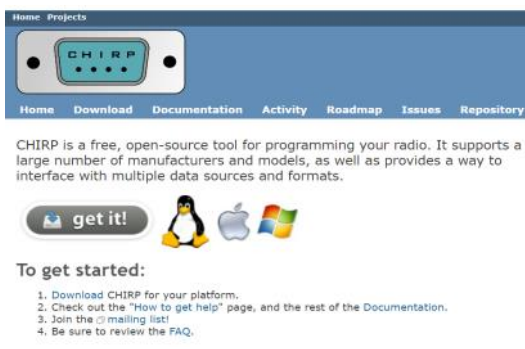
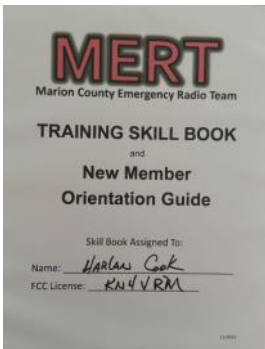
Level 2 MCSO Identification

This is a very important position for the Marion County Sheriff's Office supporting all the Volunteer organizations... and especially MERT. A key resource for us is completing/approving the Level 2 background applications allowing our personnel access to the school shelters during activations. We look forward to working closely with Ms. Jenkins and congratulate her on her new position!

August 21st Training Topics

Focusing on Level 1 and 2 Tasks in the TRAINING SKILL BOOK and New Member Orientation Guide, Coordinator Harlan Cook presented two topics for review. First was the explanation and background of Anderson Power Poles followed by a document on Anderson Powerpole Assembly Instructions which included practical “Do's & Don't” construction experience from several members having decades of experience.

The second topic was sharing the two most common programming software resources for programming amateur radios – CHRIP and RT Systems. A detailed presentation of each was presented along with major differences and overviews on the resources and procedures to get started. It concluded with a summary by Bill Gillespie, Assistant Coordinator (KW5BG) who leads MERT's support in this area to our members and all amateur radio operators.



MERT's “Check In” meeting on August 21st presented topics relevant to expanding MERT members skills and knowledge in amateur radio basics. Thanks to everyone joining in the event and sharing their personal experiences!

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HF QRP Radio Update

Leading off our August 21st “Check In” meeting, Kraig Pritts (KA2LHO) presented an update on his newest passion to create his personal very low power HF “Go Bag” radio. In last month’s MERT newsletter “Communications Update”, Kraig shared details on his efforts to design and construct a low power HF radio. This is called “QRP” operation and refers to transmitting at a very reduced power while attempting to maximize one's effective propagation and contact range.

MERT thanks Kraig for sharing his efforts designing and perfecting his compact and extremely well-designed HF radio he will be using around the state and U.S. making contacts with hams around the world!



(L-R) Kraig Pritts (KA2LHO) sharing his extremely compact and very portable HF antenna along with his amazing QRP HF radio.

WE NEED NEW AND ACTIVE MEMBERS TO FULFILL OUR MISSION IN SUPPORTING ALL THE OPEN SHOOLS WHENEVER ACTIVATED FOR CITIZENS SHELTER AND SAFETY.

Please join us in helping others, when they need help!

Learn more about MERT at KG4NXO.com

FCC Testing Information

Daytona Beach Amateur Radio Assn (DBARA)

- Monthly, third Monday, 5:30 PM, prior to meeting
- Lehman Building, Embry-Riddle Aeronautical University
- Registration Required
- Info: <https://dbara.org/testing/>

Hog County Amateur Radio Association, Bushnell FL

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

Lake ARA, Leesburg FL

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

Lake Monroe ARS FCC Testing, Sanford FL (LMARS)

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

Milton Amateur Radio Club, Milton FL

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

Orlando Amateur Radio Club

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

Santa Rosa County FL ARES® Testing (Walk-in)

- Information and dates can be found at srcares.org

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 sign up 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, geraldguy@gmail.com

Tallahassee Amateur Radio Society (TARS)

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

West Volusia Amateur Radio Society

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

Gainesville Amateur Radio Society

- 1st Saturday of even numbered months
- Tech day two weeks after testing
- <https://gars.club/Testing.html>

Statewide Digital Radio Resources

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

- **DSTAR Reflector 046**
 - 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!

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