QST NFL

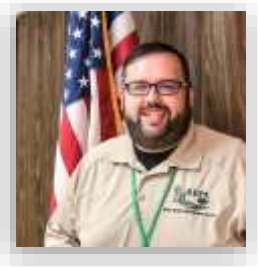
Newsletter for the Northern Florida Section

Come join the FUN!

Volume 13 Issue 2 | www.arrl-nfl.org | **February 2026**

From the Section Emergency Coordinator

Arc Thames, W4CPD



Wow, the month of January is already over! Hurricane season will be here before we know it. While I know we've been experiencing some unseasonably cold weather, when it warms up I hope that you all will take an opportunity to get and get on the air in local parks, public events, and anywhere you can find an excuse to setup your gear and see what is possible.

Hamcation is upon us and I will be in attendance on Friday & Saturday as well as assisting with the AUXCOMM class earlier in that week. If you happen to see me at any of these events, I'd love to put a callsign to a face and shake your hand! If you haven't ever attended Hamcation, I highly recommend giving it a visit. Each year there's something new that always surprises me and it's a great opportunity to fellowship with other amateur radio operators.

Monthly Radiogram Challenge

Want to practice using the national traffic system (NTS)? instructions on using the NTS on our website at arrl-nfl.org/nts/ For the month of February, please send me (W4CPD located in Pace, FL) a radiogram via the NTS with your answer to this question "What's the most important off-season (hurricane) that you can do to be ready for June 1?"

Thanks to the following hams for participating in last month's challenge:

Adrienne-AJ4D & Emmett-WA5EWN

Website updates

If you find information that is out of date on the section website (arrl-nfl.org), please fill out the online form and one of the team will take care of it as soon as possible.

Monthly EC Reports

Out of the 33 appointed ARES Emergency Coordinators we have in the section, we only received monthly reports for 15 last month. If you're an EC and are having trouble submitting your reports, please reach out to me. This information is so critical to knowing who of our teams are still out there and also hearing about the incredible work that's being done. Last month ARES volunteers provided 749 hours of service to our communities. Thanks to the following counties for providing their reports: Alachua, Bay, Citrus, Duval, Escambia, Gadsden, Gilchrist, Leon, Seminole, St. John, Suwannee, Volusia Walton, Washington

	Number	Person-Hrs
Exercises this month:	1	7.00
Training events this month:	9	94.70
Public service events this month:	1	28.00
Community service events this month:	1	60.00
Emergency events this month:	0	0.00
SKYWARN events this month:	2	25.00
Meetings this month:	14	443.00
Unclassified events this month:	26	91.50

Call signs of DECs reporting:
K4BJS, K4SOP, KB4HAH, KC4NVU, KD4EZW, KD4IMA, KF4ZZ, KM4BTW, KO4KUS, KO4YGV, KO4YOL, W4UFL, WA4MN, WE4MJ

NFL Officials

Section Manager
Scott Roberts KK4ECR

Assistant Section Managers
Kevin Bess KK4BFN
Helen Straughn WC4FSU
DJ Stewart KI4ZER
Joe Bassett, W1WCN

Section Emergency Coordinator
Arc Thames W4CPD

Section Public Info Coordinator
Jim Bledsoe, KI4KEA

Section Technical Coordinator
Frank Haas KB4T

Section Affiliated Club Coordinator

Section Traffic Manager
Helen Straughn WC4FSU

Section Official Observer Coordinator
Robert Leasko WB8PAF

Section State Government Liaison
Darrell Brock N4GOA

NFL Committees

Webmaster, www.arrl-nfl.org
Kari McClure, NW4R

Newsletter, *QST NFL*
Earl McDow, K4ZSW

QST NFL *is a monthly publication of the ARRL Northern Florida Section.* ***QST NFL*** is intended for wide distribution within the NFL Section, including club Leaders and all licensed Amateurs in Florida. A current issue of this publication can be found at the ARRL Southeastern Division web site, Northern Florida Section. 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

What's Inside…

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.

Bob Lightner W4GJ

We worked WFD again this year with students from the UF club. We used K4WTL and operated 3O using our ECOMM trailer and the ACFD MARC unit.

Callsign:	Exchange:
K4WTL	O3 NFL

Scoring Summary

Total Contacts		Phone * 1pt		Digital * 2pt		CW * 2pt		Multiplier		Final Score
748	=	639	+	0	+	109	X	9	=	7713







GARS Supports 60+ Mile Mountain Bike Ride

submitted by Ken Miller, KF4ULO

On Saturday, January 10th the Gainesville Amateur Radio (GARS) provided communications for the 100 mile Tour de Felasco in the town of Alachua. The Tour de Felasco takes place at the remote route within the San Felasco Hammock State Preserve every January as one of the premier Mountain Bike rides, with participants riding rugged terrain courses that range from 25 miles up to 62 miles (100 kilometers).

Unloading to start the ride.

Riders at the check-in table

One of the remote rest stops

GARS mobile antenna trailer elevated to over 60 feet high

Net Control with Deborah Boal (KI4CVS) and prospective ham, Sherry Conner. Also, Hugh Minnich (KN4IIM) and Dean Tillery (K9RFT)

WFD Training Palomar Antennas

Jim Carr KC4MHH

We spoke yesterday at the Winter Field Day training sessions about some articles that have been published by Palomar Antennas (https://palomar-engineers.com/) that may be of some interest. Attached are some articles that may help to expand your knowledge of antenna construction.

Yes, their main objective is to buy an antenna from them, and they are great antennas, but their articles do explain a lot of the formulas and design that go into some of the great dipole antennas….. antennas that you can build at home.

Many thanks to Terry, K4TMG, for putting on an excellent talk about antenna basics yesterday. He brought forth a tremendous amount of information for both new and seasoned hams.

What a January!

DJ Stewart KI4ZER

How can you not be into this wonderful amateur radio hobby?! With all the great people and experiences that are shared, amateur radio is certainly a reward to have in your lifestyle! The positive aspects are limitless! January 2026 has proven to be yet another highly active month for hams and the activity is just wonderful to say the least! So travel as you can and be sure to participate with hams from all walks of life in, around, and outside of your comfort zone because what you learn from others will undoubtedly not only inspire you, but interest those that are looking into the hobby and perhaps even bring awareness to those that do not even realize yet, that they are indeed, hams!

So where can you do that? Well thanks to multiple resources and our friend John, KI4HIE, area hamfests are one way and he compiled a list of some "local" area events! Some are on the ARRL page, and some are not or are in process of being added. If we've learned anything over the years, it is that one resource of information is not everything available. That is as true on the bands as it is on the web!

From the Desk of KI4HIE!

Here is a list of Hamfests gathered by our good friend John, KI4HIE! Be sure to note your calendars! Hamfests and Tailgate Calendar 2026 (REVISED – 01-09-2026)

Orlando Hamcation – ARRL SE Division Convention
Feb. 13-15, 2026 – 4603 E. Colonial Drive, Orlando, Florida 32803

DeFuniak Springs Tailgate
Feb.21 – 8am until noon. Location is 312 College Ave. DeFuniak Springs, FL 32435.

Dalton Hamfest
Feb. 27-28, 2026 – North Georgia Fairgrounds, 500 Legion Drive, Dalton, Georgia 30719

Birmingham Hamfest – ARRL Alabama Section Convention
March 6-7, 2026 – Trussville Civic Center, 5381 Trussville-Clay Road, Trussville, Alabama 35173

Bud's Tailgator
March 14, 2026 – Steele Creek Park, 368 Juniper Ave. Satsuma, Alabama 36572

Ft. Walton Beach Hamfest
March 20-21, 2026 – NWFL Fairgrounds – 1958 Lewis Turner Blvd. FWB, Florida 32548

Memphis Freefest (Delta ARC)
April 11, 2026 – Agricenter International, 7777 Walnut Grove Road, Memphis, Tennessee 38120

Mobile ARC W4AIX Hamfest
April 18, 2026 – 8:00am to 2:00pm – Mobile Fairgrounds,
1035 Cody Road N. Mobile, Alabama 36601

Wiregrass ARC Spring Tailgate
April 25, 2026 – Park Street, Headland, Alabama 36345

Knoxville Hamfest – ARRL Tennessee State Convention
June 13, 2026 – Wallace Memorial Baptist Church, 701 Merchant Drive, Knoxville, Tennessee 37912

Shreveport-Bossier Hamfest – ARRL Delta Division Convention
August 7-8, 2026 – State Fairgrounds of Louisiana, Agricultural Building,

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Huntsville Hamfest – ARRL National Convention
August 22-23, 2026 – Von Braun Civic Center – South Hall
700 Monroe Street SW, Huntsville, Alabama 35801

Shelby Hamfest – ARRL North Carolina State Convention
September 4-5, 2026 – Cleveland County Fairgrounds,
1751 E. Marion Street, Shelby, North Carolina, 28152

Bud's Fall Tailgator
September 26, 2026 – Steele Creek Park,
368 Juniper Ave. Satsuma, Alabama 36572

Crestview Hamfest
October 9-10, 2026 – Crestview Community Center,
1446 Commerce Drive, Crestview, Florida 32536

Deep South ARC Hamfest (Mobile)
October 17, 2026 – Mobile Fairgrounds,
1035 Cody Road N. Mobile, Alabama 36601

Headland Fall Tailgate
October 24, 2026 – Park Street, Headland, Alabama 36345

Montgomery Hamfest
November 14, 2026 – Alcazar Shrine Temple
555 East Blvd. Montgomery, Alabama 36117
//
Playground ARC Swampfest / Tailgate (date pending)
November 21, 2026 – 665 Denton Blvd. NW, Ft Walton Beach, Florida 32548

Ok so what about other than Hamfests and Tailgates?! Well, we are glad you asked. In Okaloosa County Florida you have multiple choices and both offer online and in-person events to participate in!

The North Okaloosa Amateur Radio Club holds at least two chances a month to interact! This occurs on the Second and Fourth Thursdays of the month at 7:00 pm central time at 4565 Live Oak Church Road Crestview Florida! NOARC has been around and knows their dials from their knobs and switches! Be sure to monitor them as they always have a project in tune or an activity on the scope! W4AAZ.Org or follow their Facebook or Instagram!

The Playground Amateur Radio Club meets on the First and Third Thursdays of the month at 7:30 pm central time! They also meet each Sunday at 3:00 pm central time for their famed "PILE-UP". All of this occurs at 17 First St SE in Beautiful Downtown Fort Walton Beach Florida! If you are in the area or are just curious, check them out at W4ZBB.ORG and like up North, don't forget to follow the South end on their Facebook and Instagram as well!

But what about membership you should choose to join! Let me tell you, both of those clubs have a wonderful approach! Just come in and see them and they will get you sorted! Rather than get lost in the void, they will greet you with a handshake and a smile! Each organization is a suitable place for your RF to beacon and bonus; they both have clubhouses with operational club stations! Even if you want to drift into frequency and monitor before keying up, NOARC and PARC will gladly receive you and most importantly, listen to your modulation!

One of my proofreaders of some of my work read that and said "DJ", "This article seems like more a of a recruitment for membership rather and your normal writing". Yes folks! That is a true statement! Let me explain why in not so many words made up into a short statement.

Continued Next Page

Over the years that I have been in the area here in Okaloosa County, I have learned from everyone. All age ranges, all backgrounds, all career types, and all levels of interest or dedication to the Amateur Radio Hobby. Do you know what I have learned? People will invest time in themselves and hobbies if it is exciting and they have something to be passionate about. To understand that better, you must invest in people and take an interest in their desires and wishes. True you cannot satisfy every single person, but you can at least listen to understand and be engaged with everyone's intent and the path they choose to go forward with! If you approach that with a welcoming environment, you cannot go wrong. So be motivated to find that person and invite them out to participate! Everyone needs a kitchen pass to something positive, why not Ham?!

Ok you get it, we want to grow our membership in Okaloosa County, and we want to continue to deliver consistent value and variety to develop the organizations well into the future. That should be true not only for the organizations in my county, but for yours as well. Remember, you can join any organization, but you choose where to participate!

In the front of the year there was a crawl through an attic to run some LMR…True story! And thank goodness it wasn't as hot as July! What was found under some items nestled in a corner from years past was simply amazing. Rather than being lost to time, new life is being brought back to an old advertisement piece! PARC presents to you an oldie but a goodie, one of the original signages from the Hamfest in Fort Walton Beach! This asset is being reworked and will be on prominent display at the March Hamfest in Fort Walton Beach! Come for the fun, stay for the deals, catch up with your friends, and introduce yourself to new faces!

Headed up North (but still staying in the South) Crestview Hams gathered and reinvigorated their Trailer project! After a brief break from the Holidays, NOARC is going in full force to enhance their communications capabilities while producing a visual asset to showcase to other organizations, Hams, and the community at large! This portable shack will allow NOARC to set up anywhere, anytime! Of course this is versus the need to plan, pack up, transport, set up, test, tune, operate, tear down, transport, you get the point! This will mark the ability to operate more, further communications, and ease the burden of geographically separated equipment!

The most amazing thing happened…On a random Saturday during a planned event in Fort Walton Beach, a new to the area Ham (moving in from another state) decided to take a chance to show up and seek assistance from strangers. Well after three minutes, no one was that much of a stranger anymore and an invitation to come back on Sunday to the Pile-Up was offered. Accepted the appointment the ham operator did and received some free training on radio programming for local frequencies and even got the opportunity to borrow some loaner equipment to help get on the air from a new domicile. Assisting newly arrived Hams that have been licensed, are newly licensed, or are interested in becoming licensed is a great thing and PARC makes major strides in assisting people to get and stay on the air! All the activity during the event, the visitors and the Club coming together, set up not only the PARC Garage Sale for success, but the experience(s) and the willingness to help, made for quite the weekend!

Continued Next Page



Being a part of a team and offering information should be second to none in Amateur Radio! In true fashion, many hams have been able to offer their input that affects the outcomes of the clubs and organizations. This happened in January in multiple organizations and clubs in Okaloosa County, Florida, Alabama, and beyond Connecticut! Wait… Connecticut? YES, to a town named Newington. Do you want to know what is there? The ARRL. Hang on, wait, don't stop reading! After multiple hams (from multiple areas, clubs and orgs) answered an open invite to have concerns, issues, or proposals heard, a meeting was held online to discuss positive pathways forward to influence the ARRL for more involvement. After all, this is year of the Club! Which in my mind, means if you are a club member, affiliate, or interested party, you get to speak and be heard! Not that you don't normally, but now we have a great reason to bolster our ideas for improvement, execute them, and really hon this hobby into what the future needs to bring! I can tell you that the ideas shared were lauded and noted for the ARRL Board meeting in January. We will just have to see how many of those things come to light. So, get involved, be a ham, go seek out other hams and participate to learn, and improve the amateur radio hobby for years to come!

SIGN UP TODAY FOR THE PLAYGROUND AMATEUR RADIO CLUB's 56th HAMFEST!

Hams, Homeschoolers and Hands-On Experience

Ken Miller, KF4ULO

The Alachua County Library District provides special programs available to home school students and parents. As part of this initiative, on January 16th of this year, the Millhopper Branch of the system brought in the Gainesville Amateur Radio Society (GARS) to present to students and teachers/parents.

One would think that this presentation was to be on the science behind amateur radio. While there was discussion of those aspects, the library wanted GARS to introduce Amateur Radio as:

1. As a potential hobby on an individual or family level.
2. How ham radio can be used in lesson plans for several subject areas.

Four GARS members made short presentations. Presenters were KG4GLM (Shannon Boal), K4TMG (Terry Gordon), KF4ULO (Ken Miller), and KO4LBS (Lorilyn Roberts). The first three presentations were on the history of amateur radio, the fun of exploring the world via radio, and how easily and inexpensively one can get into the hobby.

Of most interest was the presentation by Lorilyn Roberts. She is a well-known published author of teen fiction in the fantasy and science fiction genres, coming from the Christian perspective. What drove even greater interest is the fact that she home schooled her children. She discussed how radio can be worked into science and geography lessons, plus others.

Then came the big event - getting attendees on the air. Attendees got the chance to make contact on 2-meter simplex, local repeaters, and on East Coast Reflector (with three students making a contact with the Virgin Islands).

The session was well received by attendees and the library staff. In fact, it was so well received that less than four hours after the presentation ended, GARS was contacted by the Archer branch of the Alachua System to make a similar presentation at their facility, to be scheduled this summer. GARS will continue to provide public services like this as the calling of Amateur Radio is intended for. For more information, contact us at president@gars.club.

Sumter County ARES

Amateur Radio Emergency Service

501(c)(3) Tax-Exempt Non-Profit Organization

Sumter County ARES and Winter Field Day 2026

Mark Newby January 24-25, 2026

Sumter County ARES, in partnership with the Hog County Amateur Radio Association and the Red Oaks Amateur Radio Group, participated in Winter Field Day, January 24th and 25th, 2026. The event was held at the Sumter County ARES joint clubhouse in Webster, Florida.

Although Winter Field Day is considered a "contest" by some, as an alternative, we provided a venue where amateur radio operators could learn about corectly erecting antennas and setting up radio equipment to effectively communicate over the air. These are things that are fundamentally important to know in our role as emergency communicators. For those who were only familiar with 2m and 70cm operations, operating digital or HF stations were a new experience for them.

I want to sincerely thank all those who played any part in our Winter 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 and enjoy the fellowship. I was proud to see each one use their own experience and knowledge to Elmer others. All these contributions were important to making our Winter Field Day 2026 a great success.

To view more pictures of our Winter Field Day 2026, please visit www.sumterares.org/gallery-wfd2026

KX4Z Sequencer: Construction / Theory of Operation

Gordon Giby KX4Z

Version 0.1 populated and working prototype board

NOTE: *The Ver0.2 printed circuit board Gerbers, bill of materials (BOM) and schematic reflect improvements and corrections determined from the prototype unit (Ver0.1). Therefore they may be slightly different from the prototype unit in photographs.*

Access to Build Documents: https://github.com/docvacuumtubes/Sequencer

Includes

- Introductory/Operations Document;
- Construction/Theory of Operations
- Gerbers for PCB (including Drill File)
- STL file for enclosure
- STL file for back cover
- INO file for Nano Sketch (put in directory of same name)

Future additions will include a hinged cover for the M/S (Main/Sub) button on the ICOM 820H

Bill of Materials

Item	Qty	Value	Source	
LCD Display	1	2 line x 16 char	5V version https://www.amazon.com/dp/B00HJ6AFW6 MOUNT ON REVERSE OF PCB with slight elevation ~ 1/4-3/8"	
Arduino Nano	1		Solder or socket to suit Available from many suppliers Pack of 3 with programming cable https://www.amazon.com/dp/B07G99NNXL	
Contrast trimmer	1	10K	trimmer to adjust contrast https://www.amazon.com/dp/B0F1S6NP3N	
R2, R11	1	10K	Delay pot (R2) and Power Level (R11) panel mount https://www.amazon.com/dp/B082FCRQS2 May need 6mm extensions on shafts to pass through box front	

Continued Next Page

D3, D6	1	LED	Choose desired colors to suit	
R1	1	200 ohms	Medium display brightness Use 470 for dim	
R5, R6, R7, R8, R9, R15.	6	1K	1/4w resistors	
R3, R4, R10, R12	4	10K	1/4w resistors	
D1, D2, D4, D5, D7	5	1N4007	Can use any silicon 1A diode	
D8	1	3.9V Zener	1W 3.9V Zener to prevent excessive ALC negative voltage	
K1	1		Relay OMRON G2RL-2-DC12 https://www.mouser.com/ProductDetail/Omron-Electronics/G2RL-2-DC12?qs=pWf36BUtxBhoQA0rBDBjsg%3D%3D	
C9	0		10uF anti-reset capacitor NOT USED as hasn't been needed PCB traces provided in case future need.	
J1, J2	2		RCA phono plug jacks, Mouser 490-RCJ-012 https://www.mouser.com/ProductDetail/Same-Sky/RCJ-012?qs=WyjlAZoYn53isKUFZudEAg%3D%3D Be careful that you plug into the correct jack!	
Screws to mount PCB and back cover	8	M3 x 5mm (approx)	Suggest using M3 screws approx 5-8mm	
M3 press-in threaded sockets	8	Suggest M3 x 6 or M3 x 8	Use medium heat soldering iron to gently press flush into plastic mounts This assortment includes multiple different kinds of threaded inserts:https://www.mouser.com/ProductDetail/Omron-Electronics/G2RL-2-DC12?qs=pWf36BUtxBhoQA0rBDBjsg%3D%3D https://www.amazon.com/dp/B0D5V3TZLB	
Additional Items for Simplex Fail-Safing				
-4 Volt Source			Can be provided by a small suitable wall wort or by three AA batteries in series.	
Approx 20K resistor			Connect -4V source at the DIN connector to the ALC input of the ICOM 820H. Adjust the voltage and resistance so that the Sequencer is able to bring the transmitter substantially to full power, but the -4Volt source is able to cut the power to nil if the sequencer's negative power supply fails. Likely that as little as -2V will substantially silence the transmitter.	
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CONSTRUCTION

The parts list is provided in the bill of materials. Many parts are not crucial and can be obtained from Amazon or the junk box. Other than the LED's and zener, all the diodes can be virtually any silicon 1N400x diode, as the voltages here are minimal. Suppliers for the optional relay, the 2x16 LCD display, the 10K potentiometers, the contrast trimmer and the RCA phono jacks are provided in the BOM as these footprints must match the printed circuit board.

The value of R1 can be adjusted to provide the amount of brightness desired.

1. The SEND input of the Sequencer expects a POSITIVE voltage in receive, less than 5V. This is typical for most recent transceivers. Do NOT utilize the Sequencer on older vacuum tube transceivers with **very large negative voltages** on grid-blocked systems.
2. Don't solder in the LCD display (which goes on the bottom side of the board) until everything else has been soldered in, including the power supply wiring, as it covers up some of the board. The connections on the LCD display are close together -- be careful when soldering.
3. Use any 12-14V positive supply and any 5-10V supply for the negative source. They just have to be different supplies so you can provide the negative voltage for the op amp, and the positive supply must roughly match the relay requirements if you are using the relay.
4. When first turned on, the display may well be blank until the contrast potentiometer is adjusted properly to allow the characters to show.
5. The anti-reset capacitor (10uF electrolytic) has not been needed in this project, probably because the unit is normally operated NOT connected to any serial-communicating computer via the Nano USB port. It has been necessary in a rotator controller that uses serial control.
6. For simplex operation, or for additional failsafe protection, it is recommended that you use K1 contacts also to switch the +12 from your power system to provide downstream power for the preamps. Choose the NC (normally closed) contacts so that +12 (if it exists) is provided to the preamps' power input during RECEIVE. My preamp relay board (and many other designs) do not switch the preamp into the circuit unless this exists and also +12 is sent on the coaxial cable via a Bias Tee circuit.
7. There is a 2nd set of contacts on K1 which can be used for another purpose if desired.
8. **Test your transmitter (without sensitive downstream units connected) to verify that with full negative ALC input, the transmitter output is completely suppressed, and also that with the failsafe -4V supply system right at the accessory socket it is also suppressed.** It was completely suppressed on my IC-820H with only about -2 V needed.
9. Use Arduino IDE to load the sketch into the Nano and observe its operation. https://downloads.arduino.cc/arduino-ide/arduino-ide_2.3.7_Windows_64bit.exe
10. The SEND input is biased by internal Nano resistors to start off in the RECEIVE state. You can test the system by simply shorting the input to ground. The DELAY LED should flash briefly depending on the length of delay requested, and the ON LED remain on afterwards while the SEND input is shorted.

Continued Next Page

INITIALIZATION

The circuitry immediately sets near-maximum ALC output to suppress transmitter output, turns the LEDs off and printed suitable explanatory messages on the LCD screen.

LOOP

Once initialization is finished the software enters a loop. The desired delay and power level are continually re-measured.

If a transition to LOW on the SEND input is detected, the DELAY LED is lit up, the screen displays the delay state, and for the desired delay period, the ALC output remains at near-maximum negative for the requested delay time; relay K1 is energized at the transition.

After the expiration of the requested delay, the output ALC returns to the desire power level setting, the TX ON LED lights, and the screen displays the transmit state.

The system remains in transmit until the SEND input rises indicating the transmitter is off; at that point (RECEIVE state), the ALC is driven to near-maximum negative again, relay K1 is de-energized, and the display shows the re-ceive state.

Homebrew Satellite/Weak Signal T/R Timing Sequencer

Gordon Gibby KX4Z

NOTE: Full documentation, including software, hardware, BOM, pcb Gerbers and STL files for enclosure are available at https://github.com/docvacuumtubes/Sequencer

The Problem

Transmit/Receive sequencing is very simple when there is only one transceiver and no other equipment other than transmission lines and antennas involved. But when you add **transmit amplifiers**, or **receive preamplifiers**, or any kind of RF switching relay, it gets a lot more complicated -- because even millisecond overlaps in timing of different equipment can result in:

- hot switching of relay contacts, leading to either immediate failure or reduced lifespan, even of expensive vacuum relays
- instantaneous damage, often catastrophic, to sensitive GaAs receiving preamplifiers
- potential damage to transmitter power amplifiers due to improper loads.

VHF/UHF small signal operators whether pursuing terrestrial or satellite communications, often utilize amplifiers, additional receivers and remote (mast-mounted) preamplifiers. All of these bring the possibility of great damage if strong RF power shows up when it shouldn't. It isn't fun to lose an expensive GaAs preamplifier that was part of your satellite system, or was helping your distant tower-mounted system to overcome hundreds of feet of coax loss!

Commercial and Homebrew Existing Solutions

Traditionally, ham radio operators have utilized any of several commercial "sequencers" that take push-to-talk inputs and provide multiple different outputs to control transmitter output and operation of various amplifiers, preamps etc. These aren't cheap! And often the need was so unique that custom designs were needed.

- DX Engineering Time-Variable Sequencer Unit -- $319 https://www.dxengineering.com/parts/dxe-tvsu-1b
- M2 S3 Sequencer $248 https://www.m2inc.com/FGS3
- Homebrew Device: https://github.com/WA2FZW/Amplifier-Preamplifier-Sequencer-by-WA2FZW/tree/main
- MFJ 1708B-SDR / SDR RF Sensing TR/Switch (**no longer available**) https://mfjenterprises.com/products/mfj-1708b-sdr
- SDR Switch by N2EME - $179-$299 https://sdrswitch.com/ (appears to be RF sensing as well)

Lacking Any Internal Delay

My used ICOM-820H not only lacked the ability to delay the production of RF output after the closure of the PTT contacts, it further lacked an adjustable power level. The improved IC-910 provides adjustable power output, but still no ability to delay RF output -- in fact, even the IC-9700 does not appear to offer the feature. However, for HF operation, the IC-7300 does!

Lacking Ability To Delay RF Output

ICOM 820H, ICOM 910, ICOM 9700

and therefore possible to damage downstream devices

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My reading suggests that Yaesu full duplex satellite type transceivers may also lack a transmission delay option. The FT-847 includes a "transmit inhibit" input on the TUNER jack that has been used to inhibit transmission (see: https://www.kl7uw.com/TX-INHIBIT.htm) For such a radio, the "power level" can be set to 0% and the *positive*-voltage signal on C2 could likely be used for inhibit. In that case, the negative voltage supply and the op-amp inverter are not needed. (This suggestion has not been tested.)

FailSafe Topologies of Existing Solutions

- The DXEngineering Time Variable Sequencing Unit intercepts the CW key or other device, and itself controls the PTT input of the transceiver as well as controlling when DC power is sent to the PREAMP. This appears to provide a fail safe in the case that the +12 power fails.
- The DH8BQA sequencer works also by intercepting the CW key and Microphone PTT and itself delaying and controlling the closure of the PTT to the transceiver. Information on this design is limited: the best information that exists is a PDF of the printed circuit board unless you have a particular issue of a German magazine. (see https://www.dh8bqa.de/sequencer/)
- WA2EFZ's homebrew device is primarily oriented toward digital satellite efforts and derives its transmit signal directly from a USB output of the computer providing FT8, and then controls the transmitter PTT. I'm not clear on its fail-safing.
- I'm not completely clear on how the N2EME system works: it appears to involve the coaxial RF relays inside itself and presumably controls them adroitly to protect the external SDR used for receive. The information I read didn't make it clear how any delays were arranged.

None of these designs provide **adjustable power output** for my IC-820H. And they are either expensive, or require homebrew efforts, or difficult to perceive if they would properly protect as needed. Therefore I looked into how to work with the IC-820H.

IC820 Adjustable Power Hack

The traditional method for adjusting IC-820H output is a 9V battery and a potentiometer producing an adjustable *negative* voltage to the accessory back panel socket pin 8, configured as ALC (automatic level control). It seemed to me that this same feature could be utilized the delay the production of RF -- by just making the ALC signal strong enough to squelch any output. It turns out, this works!

Putting all this together to make a working unit

An Arduino Nano analog input can easily sense when the SEND output of any of those Icom transceivers goes to ground and then provide any desired delay to the ALC adjustment, and also provide adjustable ALC; it can also control additional outputs, such as a relay.

So I decided to use this technique to create just such a sequencer.

The state diagram is simple, as there are only about 3 important states: Receiving, Transitioning to Transmitting (followed by steady transmitting), and Transitioning to Receiving

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SEND OUTPUT is High ==> Receive state; set ALC to -4 volts

|

SEND OUTPUT transitions to LOW ==> transitioning to TRANSMIT State -- delay for an adjustable time, and then reduce ALC negative voltage to an adjustable negative voltage suitable for the desired power output

|

SEND OUTPUT transitions to High ==> Transmitter is turning OFF, going to RECEIVE; change ALC to -4 volts

Both Positive and Negative Power Required

In other to power the Arduino, measure SEND voltages that are positive, and create ALC voltages that are negative, the resulting system needs both a positive and negative supply of modest current. In my case, I used a powerpole connector to grab nominal +12 from station supply, and a wall wart to produce -10V from AC power. (This could be replaced by other technology.)

Connections Required

At a minimum, the system requires connection to the

1) SEND output and to the
2) ALC input of the ICOM transceiver.

Both of these are available on the back panel 8-pin DIN accessory connector on the ICOM transceivers. Beyond that, an optional relay output can be provided and contacts wired however the user needs; in particular, it can be wired in series with the +12 supply to the downstream preamps if desired (see below). Control for the relay comes from a different output of the Arduino Nano, so it can even be delayed by a different amount if necessary.

FailSafe Possibilities Of This Design During U/V or V/U Satellite Operation

The failure [in my case, damage to downstream preamp] possibilities depend on whether you are using your station for

- duplex on two bands (e.g. for satellite communication) or
- simplex only on one station.

When operating duplex, you only need a working preamp on the RECEIVE transmission line, not on the TRANSMIT transmission line. For operating simplex, you must have the preamp on the single transmission line you are using for both transmit and receive on these radios -- and hence more FailSafe effort is required.

Duplex (Satellite) Operation

Normally you transmit only on one band (satellite uplink) and receive on a different band (satellite downlink). You must receive on the 2nd band simultaneously with transmission on the first band (full duplex) to find your signal on the satellite downlink band. My KX4Z relay-switching system to insert low-cost LNA preamps uses coaxial-cable bias T provided + DC power **by the transceiver itself** to turn on a preamp in the transmission line (at a much lower price than commercial designs).

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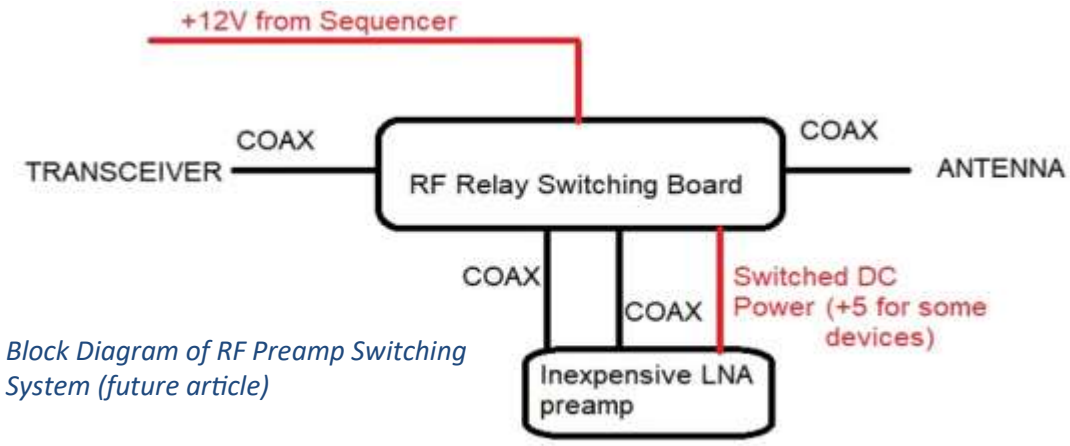


Block Diagram of RF Preamp Switching System (future article)

What this means is that even though the Sequencer has certain fail-safing when operated in the simplex mode, all of that becomes completely superfluous when operating in DUPLEX mode and taking advantage of the transceiver-controlled activation of ONLY THE PREAMP IN THE RECEIVE-ONLY TRANSMISSION LINE. This is a huge advantage for the duplex operator, and should be fully leveraged, as follow:

DUPLEX OPERATION ULTIMATE FAILSAFE:

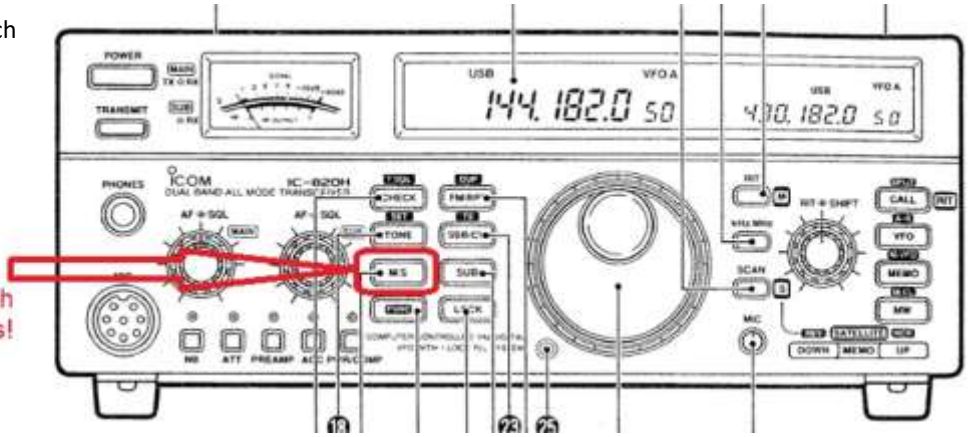
When operating DUPLEX (satellite operation) you should ONLY enable the coaxial cable +DC power for the band you will use for RECEIVE.

- *On the IC-820H this requires adjusting a transceiver "F-set mode" option. (Hold FUNC pressed while turning on power to access.)*
- *On the IC-910 and IC-9700 there are front panel buttons or menu choices to choose which line should have PREAMP enabled.*
- *Before initiating a satellite contact, configure these options so that ONLY the receive band gets preamp drive on its coaxial line.*

Impact of MAIN versus SUB BAND: The IC-820H is only able to TRANSMIT on the "Main" band, not the "SUB" band. You use the SUB band for RECEIVE. But either ham band can become the Main Band -- a hazard -- by touching the M/S switch button. The IC-910 has a similar button. *You must not accidentally change the RECEIVE band (which through the F-Set you have enabled preamp power) to become the MAIN.*

Therefore you might wish to place a protective cover over the front panel M/S button so that you cannot accidentally switch which band is MAIN.

On the IC-820H, protect the M/S switch against accidental change in transmit band.



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I will create a small hinged cover and 3D print it to protect that switch.

Those two protections will make it FailSafe that **you will not be able to place a preamp inline, at any time, on the TRANSMIT-enabled MAIN band of the IC-820H.** From that point, even if the Sequencer were to completely fail, power the sequencer were lost, or connection to the sequencer is lost -- it is impossible to damage a preamp.

If you do not employ those two protections, then you might accidentally configure the transceiver so that it is able to transmit on the transmission line that also has a preamp that is enabled by +DC on the coaxial cable. In that case, you are now operating as if you were attempting SIMPLEX operation. As long as your connections are proper and the Sequencer is functioning properly, you will still be protected even in that situation. The FailSafe review of simplex operation follows.

SIMPLEX OPERATION PREAMP SWITCHING & FAILSAFE

When pursuing DX contacts on single band SIMPLEX, both transmission and reception occur on the same transmission line, half-duplex (one at a time). This entails MORE RISK than the duplex 2-separate bands of satellite work discussed above! The KX4Z relay-switching / preamp systems (to be further detailed in a subsequent article) only place the preamp inline if both

(a) +12 power are provided to them, AND

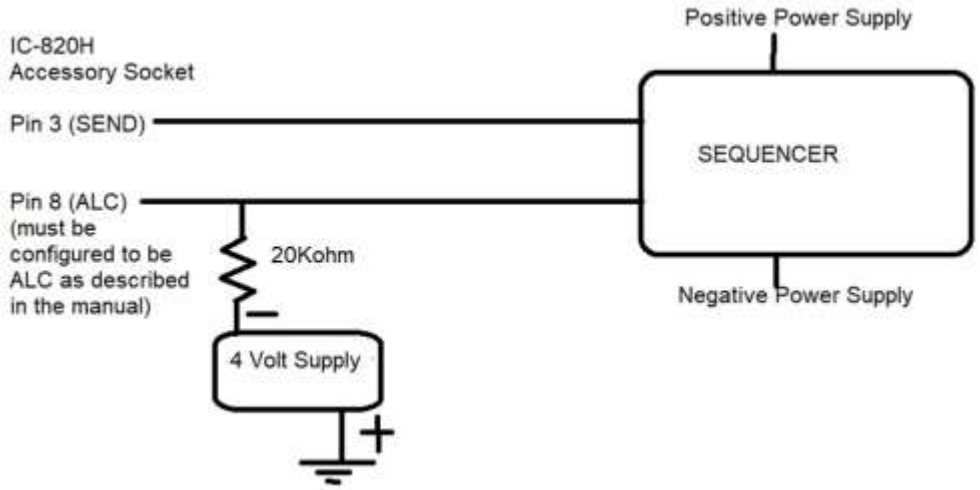
(b) +12 is sent down the coaxial cable from the transceiver, indicating it is in RECEIVE mode.

The danger period is the transition into TRANSMIT and beyond, when the preamp MUST be removed from the line prior to arrival of transmitter RF. This Sequencer circuit accomplishes that by creating a delay for relay operation by manipulating the ALC input of the transceiver to delay timing of real transmitter power.

There are multiple different fault scenarios to be protected against:

1) Disconnection of the SEND line connection to the Sequencer
2) Disconnection of the ALC line connection to the Sequencer
3) Loss of the Positive Power Supply connection to the Sequencer
4) Loss of the Negative Power Supply connection to the Sequencer

These are considered in depth as follows:



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1) SEND LINE DISCONNECTION: If the SEND line connection to the Sequencer is disconnected, the Sequencer will revert to RECEIVE state (due to the Nano pull-up resistors utilized) and as long as the connection to the ALCinput is maintained, it will forever **prevent any real transmitter power output, protecting the inline PREAMP**. FAILSAFE!
2) ALC LINE DISCONNECTION: **If the ALC control line connection to the Sequencer from the transceiver is broken, the Sequencer will lose the ability to silence the transmitter.** During RECEIVE, the preamp will be placed into the transmission line on command of the bias-T provided + voltage on the coaxial line. At transition to TRANSMIT, the impressed + voltage will be removed, but the transmitter power may arrive before the relays have moved the preamp to safety. The failure of the ALC control line connection is not automatically detected by this current design, and if no other steps are taken there is the distinct possibility of failure at the time of transition to TRANSMIT. However If the connector at the back of the transceiver remains intact, this can be fail-safed by a parallel connection of -4.0 volts from a separate or battery source to the ALC pin, through a resistor of approximately 20K. Loss of the connection to the Sequencer will leave this negative voltage to silence the transceiver. (Verify that it does by itself and adjust voltage or resistance until successful.) <u>FAILSAFE provided the additional negative supply remains connected to the transceiver ALC input. This is not a perfect solution.</u>

Possible FailSafe circuit for ALC input. 4V supply can be made with 3 AA Alkaline cells.

3) POSITIVE POWER SUPPLY FAILURE: If the positive power supply to the Sequencer fails, the circuitry will not function properly. **The builder can protection against this by using one set of the K1 relay to provide the + voltage to the power input of the KX4Z relay switching/preamps through the relay (use the Normally Closed contact as the relay ENERGIZES during transmit).** Thus if power is lost to the Sequencer, no power will be provided to the KX4Z relay switching to interpose the preamps, either. FAILSAFE if so wired.
4) NEGATIVE POWER SUPPLY FAILURE: **If the negative power supply to the Sequencer fails, it will be unable to generate a negative voltage to silence the transmitter appropriately. Some protection against this failure mode can be provided by a parallel connection of -4.0 volts from a separate or battery source right at the back panel DIN connector, through a resistor of 20K.** Check that this silences the transmit output (it should). The 1K output impedance of the 741 op amp in this circuit will be able to overwhelm that quiescent input and take over control of the ALC line when properly powered. FAILSAFE if the negative voltage remains connected to the ALC line.

Because this design does not include closed loop monitoring of the effectiveness of its control, but instead relies on the ALC control to reduce transmitter output, it is not totally fal-safed in the SIMPLEX operation, but it can be quite close if the suggestions above are carried out.

Construction

Detailed construction information is contained in a different article. A printed circuit board makes construction fast and easy. Parts for the unit are in the $20-$30 range; about $3 worth of filament builds the enclosure.

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Does it work?

Testing of this system demonstrated that it works as desired. During RECEIVE, it has already shut down any possibility of transmitter output with a -4 V ALC output. When either the CW key or microphone is pressed, there is no initial RF that I can see (because the ALC negatively affects the gain at an IF amplifier level in the transceiver). After a chosen amount of delay, the ALC is slightly or totally released as determined by the user's choice of "power level" setting. If the transceiver has been set to send DC voltage down the coaxial cable during RECEIVE to enable preamplifier, and to remove that on TRANSMIT, this system can provide a chosen delay (from negligible to extreme) to allow the preamps or relays to assume a safe state before RF arrives.

Ver0.1 Board, working. Very slight differences from Ver0.2 Board

INITIAL TESTING PROTOCOL

1) Test the system with your transceiver with no preamp or other item at risk downstream, FIRST!
2) Verify that your SEND output is providing a small positive voltage (e.g. 2-5V) to the SEND input of this circuit. Be certain you have wired up the DIN connector properly! Verify that when the transceiver goes into transmit, the Sequencer detects the transition immediately. The DELAY LED should briefly flash and then the ON LED; screen display should show corresponding states.
3) Verify that with 0% power level requested, there is NO transmitter output. This is important to be sure that the ALC output is connected properly and that it has sufficient strength to completely suppress power output. In my IC-820H, power disappears below about 60% "power level"
4) Verify that with 100% power level requested, and the additional negative supply also wired to the ALC input, full power or nearly full power can be achieved.
5) Verify that when the negative supply to the Sequencer is temporarily disconnected, the transceiver does not produce any measurable output power due to the additional negative supply also wired to the ALC input.

OPERATION

1) Adjust desired power level as desired. (This is unnecessary for the IC-910 and IC-9700; set for "maximum" and adjust with radio controls.) On the IC-820H, this control will not be linear, just relative.
2) Adjust the delay as desired. Initially test with a very LONG delay so that you can visually confirm that the transmitter is initially suppressed and then power is allowed.
3) Some recommend a minimum of 29milliseconds if there are downstream relays that need to settle. The relays in my preamp design are smaller and faster so 29msec should be more than adequate.
4) The delay is open-loop; there is no confirmation that downstream units have switched, so don't try for excessively short delays. (Some excellent commercial units actually check downstream state changes!)
5) At 20wpm, the length of a CW "dit" is 60milliseconds. On CW, if you set the delay for 40-60milliseconds and send one "dit" at the beginning of your transmission, the following characters should be transmitted corrected. If you press the mic PTT and delay speaking just an instant, the transmitter should catch your first word.

3D-Printed PowerPole Distribution Box

Gordon Gibby KX4Z

PowerPoles are used frequently for nominal 12VDC power distribution, with 30- and 45-amp connectors plentiful. There are lots of ways to split out power to several devices, even with individual fuses in each line. Gordon Beattie W2TTT points out a simple WAGO connector and molded ATO type blade fuse holders makes it easy to split out power and wire to flying power pole connectors.

COMMERCIAL = EXPENSIVE!

But commercial compact devices such as the RigRunner, with multiple fuses and input/output connectors are widely used as well. These are a bit "pricey" -- so I wondered if they could be 3D printed and homebrewed. It turns out that isn't hard!

LET"S HAVE SOME FUN AND SAVE SOME $$$$$

Homebrew Design

I started with a 7-connector 3D print by NikDFish (https://www.thingiverse.com/thing:5415432). I used third party powerpoles from Amazon (approx $1.25 per set) : https://www.amazon.com/dp/B07H81ZSNS and inexpensive 1/4" crimp connectors, approx 6cents each: https://www.amazon.com/dp/B01G4POUAU (remove the plastic insulating ring). I found it very difficult to put in the powerpoles in the tight openings and there was no hole to run a securing pin through. So I slightly redesigned NikDFish's design by removing one of the impeding ridges, adjusting the opening a bit, and adding an inside hole running the entire length of the block to allow a plastic pin to be installed to lock the powerpoles in position. I also created the .stl file to make a plastic pin out of ABS plastic, but you could use any suitable wooden or metal pin. You can also very carefully secure the crimp terminals or the powerpoles or both with very sparingly applied epoxy glue (which I haven't needed).

You don't have to populate all seven slots -- fill in just the ones you wish, and tape over the empty slots to prevent an errant wire from dropping into the box.

I wanted the distribution box to be usable either standalone or screwed to the sides of a go-box, and I didn't want to have to glue it permanently closed. So I created a mounting hole in the block and a post in the cover, suitable for accepting a M3 threaded bass insert (available at: https://www.amazon.com/dp/B0D5V3TZLB) so a M3 screw can hold the parts together. Alternatively, you can drill out the hole through the cover and use a 6-32 mounting screw to hold the entire assembly to a surface. I wanted the entire assembly to be safe from Florida heat, so I used purple ABS plastic for the body, and contrasting orange ABS plastic for the cover.

Files are available at: https://github.com/docvacuumtubes/PowerPole-Distribution-Box

Attribution: Recall that this came from NikDFish's original work.

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Assembly

Soldering the assembly together does require a bit of effort. I used 14AWG stranded wire, running the "negative" up one side and the "positive" buss up the other side. (I think it would be easier to use a short length of AWG 14 or AWG 12 solid wire on each side, and use stranded from the connectors to this solid piece.) Crimp + and - wires into the powerpoles first; insert the powerpoles from the bottom until they "click" into place; solder the negative wire to the buss secured to top and bottom powerpoles. Pull the positive wire through a terminal hole, cut somewhat shorter (after passing through) as possible to prevent too much crowding later on in the box, then solder or crimp on a terminal. Then pull the wire back down, to seat the terminal. Similarly secure the other fuse terminal to the positive buss. Insert fuses and adjust if needed the height of the crimp terminals.

USAGE

Typically the output of a big power supply would go into the first powerpole with a 30A fuse. Then radios or other devices can plug into the other powerpoles through appropriately sized fuses for each device. Beyond this, don't go crazy with fuses and connections -- there can be 100mV or more lost through each connection!

I used this quite successfully during Winter Field Day to allow a 20A continuous duty LIFEPO4 charger to charge two 23AHr LIFEPO4 batteries in parallel, giving each a nice charge rate.

Finding a Needle Valve in a Haystack!

Gordon Gibby KX4Z

Ever since 2018 Nancy and I have used a 3400-watt Champion inverter generator to power our travel trailer at stops without shore power, and our Alachua County NFARC/ARES team has used it several Field Days for hours on end -- the inverter makes a ton of RF NOISE, but a special AC filter helped with that.

Imagine my feelings when the trusty 7+ year old generator dripped ALL of its fuel into the bed of my pickup truck! A smelly and DANGEROUS problem. I thought it was the Rube Goldberg-rigged "gasket" I made for the bottom screw, out of some cardboard, to hold the carb together after the last ethanol-gas-water-induced clean-out....but it wasn't!

The actual problem turned out to be the needle valve not able to completely shut off the fuel when the level in the bowl was adequate. Rubber tip got hardened. This is a famous cause, but I haven't really seen it often... See: https://resources.jakmax.com.au/blog/carburettor-parts-explained/ for a nice diagram of how the needle valve and its seat shut off gas when the carb has enough.

This little needle is unusual in having a tiny wire "holder" to slide onto a prong on the plastic float. I thought to myself, "I'll never find the right replacement...."

But among the various carbs I have purchased cheaply on Amazon to try and keep various engine-driven items going....**I found one with just the same needle valve!** Hooray! Replace it, put all back together and bingo! No leak, and the old generator runs just fine!!

Hooray! So I found the Amazon model I had scavenged from, and ordered some replacements!

What's Happening in Alachua County ARES(R) !!

by Gordon KX4Z

Service: Review of Communications Plan

We started the year off right with a Zoom TechNite going over the carefully-drawn up backup Communications Plan for our County. It has layers of techniques and connections so just about anyone can fit in somewhere and we can accommodate just about any kind of input. We also list exactly who gets which confidential information when, so we don't run afoul of county authorities. See: https://www.nf4rc.club/comms-plan-2/

Reid TilleryK9RFT has come up with a tidy little home-exercise to get people practicing their WINLINK skills. He has a series of "points" for different regular Winlink messages sent, or peer-to-peer or various forms. We discussed it at our January meeting and beginning February, we plan to put in a volunteer-owned 2-meter radio at the county EOC for a month to allow people to practice peer-to-peer into the EOC. More details in our minutes: https://www.nf4rc.club/prior-meetings-2/2026-2/minutes-january-2026-meeting/

FLDGI TRAINING

(L) Rosemary Jones KI4QBZ and David Huckstep W4JIR soak up FLDGI know-how; (R) Charlie Scordo KR4BDJ and Jeff Capehart W4UFL (r) pay close attention too!

It has been a long time since we did formal FLDGI (keyboard-to-keyboard texting and more, over radio) training in Alachua County! Our primary usage has been in Winter Field Day, so after our incredibly successful December 3-hour WINLINK training, I thought it was time to take up Brett Wallace NH2KW's favorite digital comms and hold a 3-hour training on FLDGI. Unfortunately Brett had other obligations, so I ended up as a poor substitute to teach. The FLDGI seemed a bit more difficult for our participants, some of whom were having basic "Windows" difficulties with handling minimizing, maximizing and sizing various applications' windows and basic computer setup. But we got through a TON of FLDGI!

SIGNALINK CROSSOVER CABLE

One of the advances that help with that training is analogous to the old RS-232 "crossover cables" we all used to use terminal emulator software to text between computers. I made up a "Signalink CrossOver Cable" using two RJ-45 plugs and wires for (a) ground; (b) transmit audio; and (c) receive input audio. I used a 47K resistor to connect the TRANSMIT of one Signalink, to the RECEIVE INPUT of another, and vice-versa. Made up 3 sets of these crossover cables.

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The results were GREAT!! For our first time ever in training, volunteers could literally SEE the other person's "transmission" on their waterfall, and then respond. A lot easier to grasp how to "zero beat" the other station! I think this added a lot to the exercise.

WINTER FIELD DAY PREPARATIONS

There was curiously **less interest** among the troops for participating in Winter Field Day this year. Our EOC is supposed to move into spacious new quarters, but all of that is indefinitely delayed by contractor issues. We still have to truck in pickup-fulls of equipment to set up for events like Winter Field Day because our radio room is so small it can't handle many work stations. Susan Halbert KG4VWI proposed holding a TRAINING CONFERENCE instead -- but there wasn't much support for that and we ended up trying to meld her idea as a concurrent effort with Winter Field Day -- which diluted our troops even more -- and we only picked up 2 additional persons to help instruct at the TRAINING CONFERENCE (thanks, Charlie Scordo WR4BDJ and Brett Wallace NH2KW!! Brett's planned weekend job assignment was canceled by the Storm, so he pitched in!)

Meanwhile, we did our usual ICS planning for a 3-Indoor WFD -- and then miracle of miracles, we found that Earl Sloan KI4OXD was becoming our **SECOND RV-Comms-Trailer Owner**! For years, it has just been ME, and trust me, it is a LOT of work. But Earl was game for the effort! So we changed our planning to **4-Indoor** and got permission for his trailer on the Sheriff's grassy extra parking.

(L) Two of our 4 stations; (R) Earl Sloan KI4OXD"s new travel trailer equipped for radio.

WINTER FIELD DAY EFFORT

Earl had brake trouble, and there was an **enormous** MRAP on a massive trailer parked right where he needed to be! That caused a TON of problems, with Earl eventually having to move his trailer THREE TIMES as the MRAP suddenly needed to be moved. Earl was limited by the length of our networking Ethernet cable to the MESH transceiver, and also by the coax to the emergency antenna in the pine tree..... With some frustration and a LOT of patience, Earl got his Baptism into RV-COMMS-TRAILER Captain position and made it all work anyway!

VISITORS

Harlan Cook KN4VRM and Mark Weible N4GPA from MERT/Marion County were very patient with us as they joined our Training Conference and tried to learn something from our mish-mash of hands-on, lectures, and operating monitoring. They are working on getting HF SHARES going in Marion County. Thanks to Charlie Scordo KR4BDJ for teaching MESHTASTIC!!

Alachua Chronicle NF4AC Winter Field Day Results – Top 6%
https://alachuachronicle.com/local-volunteer-radio-team-hits-top-6-in-national-disaster-competition/

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ANTENNA CREW!!

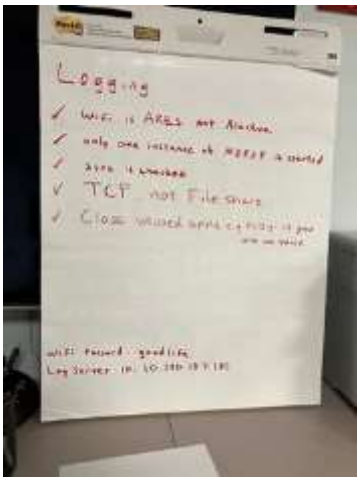
When the WFD dawned, I was so grateful for Brett NH2KW and Emily Wallace KO4JWC and Angela Basham AA4BV working on getting a line over the best tree limb for Earl -- took a load of work and got it done!! Hooray!

Getting everything set up?

Dave Huckstep W4JIR and I had put out most of the equipment and batteries and 120VAC inverters Friday afternoon, but final installation waited until Saturday so visitors to our TRAINING CONFERENCE could get hands-on experience. Oops! I didn't allow ENOUGH TIME, and some of our folks turned out needed more coaching -- we had some HF Radio Strings not completely sewed up tight when 1100 Starting Time arrived! Our team took that in stride -- but then our primary antenna (to which we have to run 200-feet of coax across a parking lot with pavement protectors after a cable cut at our EOC) -- seemed WONKY at our #1 Station. OUCH!! We frantically tried to make SWR measurements and got "all turned-around."

MR MURPHY IS DEVIOUS!

In the end....we had TWO problems with EOC Station #1 -- an antenna switch grounded out, that we didn't notice for an hour or more....and then a SHORTED COAX JUMPER that must have failed only recently. DOUBLE OUCH!! We concluded we have to (1) fix the jumpers with 90 degree angles or more stout cables and (2) double check stations by qualified HF operators much more in advance. A LEARNING PROCESS!!



(L) Trailer hitch-mounted carbon fiber mast holds OCFD multiband dipole; (C) trips on connecting to database; (R) our technique for keeping track of who is on what band

ANTENNA CREW #2!

Meanwhile, our AD-HOC ANTENNA SETUP CREW did a GREAT job of putting up not just one, but TWO emergency deployed antennas right out front of the EOC -- and that turned out to be a Salvation for us when we were badly confused about the back EOC antenna. The "separation" rf-wise between the antennas wasn't optimal, but it was workable. Mannish Sahni KZ4KC went right to work and was cranking out PSK31 contacts right and left!

It wasn't until the evening before we had discovered every one of Mr. Murphy's Tricks -- but we DID and learned a ton in the process. We worked most but not all of the night (thanks, David Huckstep K4JIR and Mike Hasselbeck WB2FKO!) , and although our contacts weren't quite as good as last year, we still had a ton of fun and even MORE people showed up to **help us pack up** at Noon on Sunday. And gobble some of the remaining nutritional supplements that Jeff Capehart W4UFL provided. (Thanks, Susan Halbert KG4VWI and Chris Cochran!). Earl McDow K4JSW and Mark McDow N4TEK set up the high speed mesh system and it was FANTASTIC the entire time. Those guys have just got it down!!

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I actually worked PHONE (*something I almost never do*) to get us the last contacts we needed to count 10 meters, and Earl Sloan KI4OXD worked for an HOUR on 2 meters to roust up enough contacts to count that band, giving us SIX bands we could count, HOORAY!

Our tally as of this writing:

PHONE	72	
DIGITAL	128	
CW	140	CW TOPS OUR TEAM FOR FIRST TIME!!
TOTAL	340	

We achieved every "Objective Multiplier" that I thought we had a chance at -- the way the WFDA counts it, we had "18" multipliers for a preliminary score of 10,944. (Subject to revision, of course!)

Our BATTERY system using many 100-AHr Eco-Worthy LIFEPO4's with blue-tooth monitoring, worked FANTASTICALLY. The biggest user of power was not the radios -- it was the computers! I think David Huckstep W4JIR went almost the whole effort on a 35AHr LIFEPO4 in his humongous go-box. We were able to recharge several batteries as needed using a couple of 20Amp LIFEPO4 chargers, fed by a RFI-Free governor-controlled ancient gasoline 900W camping generator. Our 120V volt BESTEK power inverter's modest RFI was crushed by serial filter chokes. (We tested inverters at a previous LabNLunch and this was the best.)

What I learned from the experience was that a LOT of our newer operators need help gaining "traditional ham radio" experience -- just mucking around on the HF bands and such. We will embark to handle that, and we're almost planning a GENERAL CLASS LICENSE COURSE because we found at least 6 people who were interested. (

TRAINING

In other training, I'm volunteering to teach "TECHNOLOGY" at a local school and I'm starting out with radio and electronics -- the Technician License! I have 3 students who are still plugging away at it!

CONGRATS to our EC, Jeff Capehart W4UFL who completed the Level III Professional Development Series!

It has been a BUSY MONTH!
Alachua County ARES(R)
North Florida Amateur Radio Club NF4RC
Alachua EOC Radio Club NF4AC
https://www.nf4rc.club/
https://groups.io/g/NF4RC

Veteran exercise participant David Huckstep W4JIR (R) explains techniques to Chris Cochran N1CSC; David's multi-mode station at right.

MERT

Marion County Sheriff's Office
Division of Emergency Management

COMMUNICATIONS UPDATE

February 2025

MERT's primary role is to support all open Evacuation Shelters throughout Marion County (FL) during declared Emergency events. We also support the Emergency Operations Center Incident Commander & staff, all cities in the county and other EMCOMM groups (CERT, HEC, ARES, MBA) with voice, image & data communications locally, statewide and across the United States. **"*Call MERT… When all else fails!*"**

Next Bimonthly Meeting

Saturday, March 21st, 10:00 am at the EOC

All are Welcomed!

Meetings conducted in Jan, March, May, July, Sept. and Nov.

Harlan Cook (KN4VRM) MERT Coordinator

Wow, it's already *February!*

As the new year moves rapidly forward, I want to thank each of you for the dedication, professionalism, and heart you bring to MERT. Our strength has always come from volunteers who believe in service, who show up, and who take pride in building something that truly matters for Marion County – *today and into the future!*

This year, we continue that tradition with purpose and staying focused on challenging ourselves to resolve problems, seek improvements and raising our skills consistent with our Code of Excellence.

One of our new initiatives is the development of the MERT Technical Library—a resource that will capture our collective knowledge, document our systems, and support training for years ahead. Your expertise and contributions will make this library a cornerstone of our readiness.

We are also beginning a reorganization of our radio room to increase access to key resources (Winlink, SHARES, HF), remove clutter and add new resources for operational capability. This effort will ensure that our communications center reflects the professionalism of the team that uses it.

Another project is focused on increasing the reliability of our repeaters by investigating the use of dual power supplies with DC automatic transfer switches (ATS). This addition, in combination with the significant uninterruptable power supply (UPS) capacity at both the Transfer facility (KK4DFC & KJ4CLL) and new Sheriff's Office communications bldg. (KG4NXO-2Meter & KG4NXO-70 cm) will add a new level of reliability to all four repeaters.

"When we strive to become better than we are, everything around us becomes better too." - Paulo Coelho

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Additionally, I am also extremely proud to announce that **Ray Woody, WB6FKJ**, has been selected as our new Deputy Coordinator. With so many highly skilled, experienced and dedicated members in MERT, this was not an easy decision, but Ray's steady leadership,
outstanding work to enhance our shelter documentation resources, along with his long-standing commitment to service made him a great choice.

With Ray's selection, we also start a new tradition by having our Deputy Coordinator contribute monthly articles to the "Communications Update" newsletter sharing his thoughts, ideas and experiences with all of us. I am sincerely grateful to Ray for accepting this challenge.

To all our members….thank you for everything you do. I'm proud of what we've built—and even more excited for what we will accomplish together in the year ahead.

With sincere appreciation,

Harlan Cook
MERT Coordinator

From the Deputy Coordinator

"My First Two Years with MERT"

Ray Woody (WB6FKJ)
Deputy Coordinator

Next month will mark my two-year anniversary since joining MERT. Since "semi-retiring" and moving to Ocala in April 2021, I had been looking for a meaningful way to "give back to the community". However, nothing I was considering was resonating with me. In December of 2023, I attended a presentation in our Stone Creek community center by Preston Bowlin about the Marion County EOC. I took him up on his offer to give anyone in our audience a tour of the EOC, and that is how I discovered the MERT organization. My thoughts were that joining MERT would be a great way to enjoy ham radio again and serve the community at the same time. I signed up and attended my first Wednesday meeting in February of 2024.

I have to openly admit that I felt like a lost puppy for the first several meetings. Despite having a ham radio background, I was hearing all sorts of terminology and acronyms that were completely foreign to me. It was a fire hose of alphabet soup. It didn't help that all of my prior ham radio experience had been exclusively in the HF bands. I had absolutely zero experience on the VHF/UHF bands. I vaguely knew about repeaters but had no idea how they really worked, or anything about offset and PL tones. After a few weeks, I was beginning to wonder whether I had made a mistake.

Fortunately, there were many friendly elders (young and older) that must have noticed my "Deer in the headlights" look. They told me not to worry and offered their help to help get me up to speed. They said that there is no such thing as a dumb question—*ask away!* It was comforting to hear that these folks also faced a learning curve when they first joined the group.

That was a big turning point for me. Things started to make more and more sense, and after another few weeks I felt like I had a much better grasp on things. It became much more
comfortable for me to attend our meetings.

"Remember that the happiest people are not those getting more, but those giving more." - H. Jackson Brown Jr.

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I'm telling this story because it is my hope that new volunteers coming aboard will persevere through the first "firehose of information" period. As a volunteer organization, we will always have a mix of new recruits, senior members with tons of experience, and everything in between. Everyone will work at their own pace through the MERT **Training Skill Book and New Member Orientation Guide**. But please always keep in mind that you will be surrounded by a great group of people that are more than willing to help you in any way they can.

The great thing about ham radio and EMCOMM / AUXCOMM is that there is always something to learn, new skills to acquire, and new experiences to be had. We are all in a constant learning and skill acquisition mode. That's what keeps things interesting.

As I reflect on my two-year anniversary, I have no regrets about joining MERT. It's been a very rewarding journey. I supported two deployments in my first year (Hurricanes Helene and Milton - just a few weeks apart). These deployments were invaluable real-time experiences that enhanced my confidence and left me with a sense of accomplishment. It has been a pleasure to collaborate with colleagues and leadership who are enthusiastic about supporting our community in times of emergencies. It has also been a pleasure to get to know our team members personally and share new experiences together as we continue to support the mission and growth of MERT.

A heartfelt thanks to everyone!

Ray Woody
MERT Deputy Coordinator

Announcement of New Deputy Coordinator

Ray Woody, WB6FKJ, has been selected to serve as the **Deputy Coordinator** for the Marion County Emergency Radio Team (MERT).

(L-R) Harlan Cook KN4VRM, Coordinator congratulates Ray Woody WB6FKJ selected as MERT Deputy Coordinator at the January 2026 Annual Meeting.

Since joining, he has dedicated himself to participating in every event, activity and meeting to learn more about our critical role supporting the Division of Emergency Management. He has also served as Shelter Operator twice in gaining critical experience in our role of providing licensed, MCSO background vetted and FEMA certified emergency radio operators ready to provide back-up communications should traditional telecommunications services fail.

His support of all members, consistent participation, calm professionalism and commitment to our volunteer goals make him exceptionally well suited to help guide our team as we expand our capabilities and support of Marion County's emergency communications mission.

Please join me in congratulating him and offering your support as he steps into this new leadership role. Working together, we continue to build a strong, resilient, and mission ready MERT!

"The best way to find yourself is to lose yourself in the service of others." – Mahatma Gandhi

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EOC Tower Update

When I arrive at the EOC, I have developed a new habit to spend a few minutes in closely inspecting the EOC tower checking several items.

MERT will have a training class on what to check at our next Wednesday "Check In" meeting.

My thanks to all Members for help with conducting your own inspections so we continue to maintain the EOC tower in a safe and reliable condition!

MERT 22 Coming Soon! Mark your calendar - **April 18th – Saturday – 8:00 am till 2:00 PM**

Wednesday "Check In" Updates

Harlan Cook, Ray Woody and Santos Pagan review the Shelter resource documents before the Jan. 14th Check In meeting for updates starting the new year. Ray is Shelter Mgr. and Santos Deputy Mgr.

MERT renewed its weekly meeting schedule reviewing current events, future activities and relaunching several projects delayed by the holiday break. January 's meetings have included:

◊ Restarting our North Florida ARES Net (NFAN) check-in's each week.
◊ Sharing news on the ARRL Northern Florida Section hosting a Town Hall Meeting for all Amateur Radio Operators in the SE Division on Friday, January 9th, at 8:00 PM
◊ Sharing the Alachua County ARES/NFARC will host a training event concurrently with the Winter Field Day on Saturday, Jan. 24th offering hands-on experience.
◊ MERT is planning its first 2026 Field Exercise event in NW Marion County in early March. Details TBD.
◊ MERT 22 is scheduled for Saturday, April 18th from 8 am till 2 PM focused on building HF operational experience. Bill Sobel is Chairman.
◊ Restarting our WEEKLY Training Nets.
♦ MERT revised our NET PROCEDURES to discuss Winlink Challenge results during the 8:00 PM CERT/MERT Net.
♦ MERT also added a Weekly Topic of Discussion for all operators input during the 8 PM Net.
◊ Remind everyone our semi-monthly meetings are restarting with our Annual Meeting scheduled for Saturday, January 17th.
◊

MERT members receive an update from ARES Coordinator Hayden Kauffman on proposed resources for informing volunteers on activation notifications.

A special treat was shared with members at the January 14th meeting when Ray Sherwood WA9MID shared some "golden oldie" copies of **QST** magazine from January 1964 and 1967.The 1964 QST edition also was titled "50th Anniversary Edition" celebrating ARRL's creation. Everyone enjoyed "going back in time" in seeing the articles and the major advances in amateur radio since then.

A funny note to add… One advertisement offered a "new" amateur radio for $1,795. That is equal to $18,760 in 2026! No wonder amateur radio was considered a "rich man's hobby" back then!

Ray Sherwood holds QST magazines from January 1964 & 1967.

"No one can do everything, but everyone can do something!" - Max Lucado

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January Monthly Meeting Update

MERT conducted its Annual Meeting in concert with the January Monthly AUXCOMM/EMCOMM meeting with several extremely informative and very interesting updates from all organizations.

- MERT Harlan Cook KN4VRM MERT Coordinator
  - ⇒ MERT Annual Meeting
  - ⇒ MERT 22 – Saturday, April 18th
  - ⇒ HF Interference Update - Solar Flux Report
  - ⇒ Deployment Awards
  - ⇒ March Field Exercise – NW Marion County
  - ⇒ MERT Deputy Coordinator Announcement
- CERT Calendar Update Kraig Pritts KA2LHO, CERT Liaison
- HEC (Hospital EMCOMM) Dave Welker W2SRP, HEC Coordinator
- What is AI and How can it Benefit AUXCOMM & EMCOMM Organizations
- ARES Hayden Kauffman N2HAY, ARES Coordinator ARES 2026 Projects, Plans and Initiatives
- MBA Update Mark Weible N4GPA, MBA Liaison 2026 MBA PSA Emergency Communication Plan

Kraig Pritts shares CERT activities

Dave Welker (HEC) shares more on AI.

Thanks to all Speakers for their interesting presentations

Hayden Kauffman (ARES) shares 2026 planned activities.

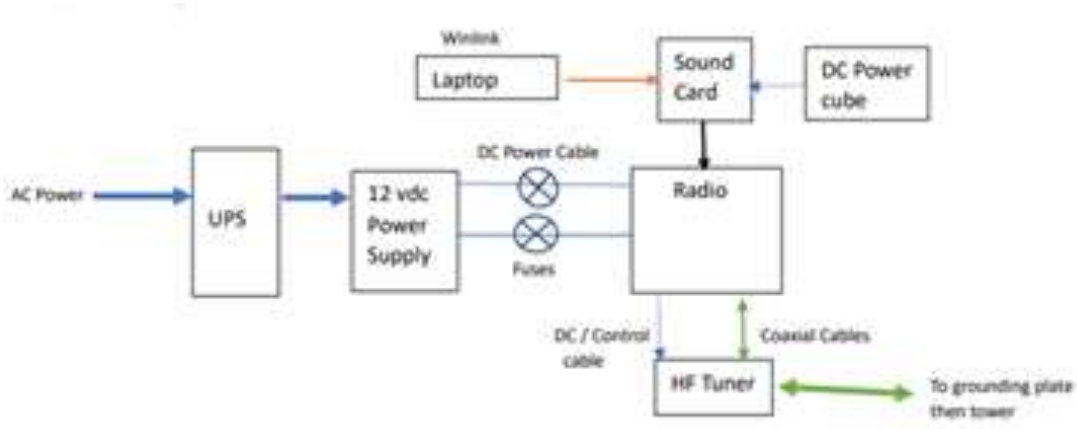
Radio Room Station Inventory & Network Diagrams

MERT Station #8

A new element of the Technical Library initiative will include conducting a complete equipment inventory of every component used at each station.

In addition, the project will include the development of a circuit schematic drawing helping in future training activities along with the benefit of improving troubleshooting efforts when needed.

Our thanks to Cindy Sheffield K9LRX for leading this project!



Schematic diagrams of all Stations are also being created for MERT's records.

"Volunteer service is the rent each of us pays for living - the very purpose of life and not something you do in your spare time or after you have reached your personal goals." - Marian Wright Edelman

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Deployment Recognition Certificates

During the January Monthly meeting, several members were acknowledged for their extended deployments of **over 24-hours of continuous duty** at the Shelters and EOC when assigned during an emergency activation by the Division of Emergency Management. We celebrate these members who fulfilled the primary mission for MERT service!







During January, these members were recognized for their extended deployments lasting over 24-hours at the Shelter Evacuation Centers during declared emergencies.

(Starting Top L) Mike Condon W9MNC (one of MERT's longest serving senior members); Nick Kiddey W4NFK – New Member Manager; Cindy Sheffield K9LRX – Deputy Logistics and Documentation Manager ; Phil Lewis W4EVV – Repeater Manager; Ray Woody WB6FKJ – Deputy Coordinator and Shelter Manager; Gray Moffett KC3DWY; Royce Hagerman KD7SNN – Logistics Manager.

MERT NEEDS YOU!

Please renew your participation in MERT activities, practicing Winlink messages and weekly radio Nets.

Celebrating MERT Accomplishments

To recognize the accomplishments of the entire membership along with individual members, MERT will be creating a location in the EOC radio room where awards and certificates can be displayed in celebration. To start the process, Harlan Cook – Coordinator and Ray Woody – Deputy Coordinator framed and presented the Meritorious Volunteer Unit Award MERT received on March 31, 2023 for display. It reads:

"Volunteers do not necessarily have the time; they have the heart." – Elizabeth Andrew

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"You are hereby awarded this Meritorious Volunteer Unit Award to acknowledge your contributions to the Marion County Sheriff's Office. From 20 March to 29 March, your Volunteer Unit conducted a major overhaul and much needed maintenance to the amateur radio communications tower located outside of the Emergency Operations Center (EOC). During this time, the team handled rewiring and refurbishment of the radio tower to include new cabling and 3 communications antennas. The impressive level of expertise displayed by the MERT team during the installation process will ensure communications will be mission ready for decades to come. The MERT team has proven themselves to be an invaluable resource to not only our own agency, but across the State of Florida. The unit is commended for their outstanding performance of duty." Signed by Sheriff Billy Woods.

Alachua County Training Event

On January 24th, it was truly fun joining other area radio operators participating in the North Florida Amateur Radio Club training and ARRL "Winter Field Day" activities at the Alachua County EOC. Topics included Fldigi, Meshtastic, digital-CW-voice contesting and several more topics in gaining the knowledge and skills for successful participation. Mark Weible N4GPA and Harlan Cook KN4VRM participated from MERT who sincerely thank the host, Gordon Gibby KX4Z for the invitation and opportunity to participate. *We enjoyed every minute!*

This 150 ft tower supports 2 Meter & 70 cm antennas.

(L) This is a temporary HF antenna set up in the front of the EOC resulting from a damaged coaxial cable to the OCF & End Fed HF antennas in back.

Alachua County EOC

Excellent design and equipped Go Kits used during event

All radios were battery powered.

The existing radio room is adjacent to the EOC but has very limited space. A new EOC with expanded AUXCOMM radio facility will open in 2026.

(L) MERT members Harlan Cook and (R) Mark Weible participate in the Meshtastic class as part of the Training & Winter Field Day event.

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Harlan helps install a 200 ft coaxial jumper to start the day with NFARC member David Huckstep (W4JIR)

Gordon Gibby (KX4Z) outlines the events and schedule for the Training and ARRL Winter Field Day event.

NF4AC members Mark McDow (N4TEK & David Huckstep (W4JIR) review "Phone" contacts.

Harlan Cook (KN4VRM)and NF4AC member Manish Sahni (KZ4KC) review the digital contacts.

Mark Weible (N4GPA)and NFARC member Brett Wallace (NH2KW) discuss the MBA Disaster Relief organization Mark leads for all the churches in Marion County.

Member Update

Mark Weible N4GPA shares this update on a recent event with his family.

"We went to Cocoa to celebrate our grandson's birthday. Our son works at KSC and got us in to see the Artemis II rollout. Did you know that the Kennedy Space Center ham radio club supports launch communications? Yes! However, you have to be a badged employee in order to join."

Mark, thank you for your update. It is always wonderful to see what members are doing!

Kennedy Space Center Amateur Radio Club N1KSC https://www.n1ksc.org/

"Start where you are. Use what you have. Do what you can." – Arthur Ashe

Continued Next Page

January Training Update


MERT Portable Radio Charging & Storage

This month's training topic included "Caring for MERT Portable Radios: Battery Charging & Storage Essentials"

Proper care of MERT's portable amateur radios ensures they remain reliable, in good condition, and mission-ready whenever the Division of Emergency Management activates us. While these radios are rugged, their performance depends heavily on how we store them and recharge the batteries. The class focused on two core practices every member should follow:

- ✓ Correct charging procedures, and;
- ✓ "THE Secret" - Removing batteries when radios are not in use.

Copies of the training update are available from Harlan and Ray.

CERT Activity Update

Many MERT members are also CERT members within the communities they live and help out at meetings, special events and fundraisers. In January, Harlan Cook joined the Stone Creek Community Leader June Benoit in selling tickets for the annual "Trivia Night" fundraiser held annually and shares it was fun seeing old friends and meeting new residents. All members are encouraged to support their CERT groups as often as possible.

L) Stone Creek resident Kevin Romanelli purchasing tickets from Jun(e Benoit – CERT Community Leader.

(R) Stone Creek resident Don Cecik purchasing tickets for the "Triva Night" fundraiser from June Benoit.

ARRL Club Update

After every Annual Meeting, we update the "ARRL Clubs" website with our Annual Meeting & Highlights"report allowing MERT access to free advertising on our group including the "MERT 22" Special Event each year.

Check out our report for the **Marion County Emergency Radio Comm Team** at:

https://www.arrl.org/Groups/view/marion-county-emergency-radio-comm-team

For more information on the Marion County Emergency Radio Team (MERT), visit:

KG4NXO.com

All amateur radio operators and the general public are welcomed to attend all MERT meetings every Wednesday from 9:00 am till Noon at the

Emergency Operations Center (EOC)
692 NW 30th Ave., Ocala, FL.

"Because the people who are crazy enough to think they can change the world are the ones who do." – Steve Jobs

Suwannee and Madison ARES®

James Gordon Beattie Jr W2TTT

WINTER FIELD DAY GOES EXPEDITIONARY

Well the month of January has been a bit colder through the month than normal, but for Winter Field Day we had relatively warm weekend. So was the warm and welcoming setup for Winter Field Day at the Corinth Baptist Church in Hamilton County. Madison ARC President and Madison County EC, Bryan Phillips K4BHP arranged for this excellent location for the event that was staffed by members of the Madison and Suwannee ARES teams as an expeditionary exercise. The team operated indoors with four transmitters in the "4I" class. Just about all the bonus point activities were completed, except for the two satellite bonuses. This gives the team something to address next time!

The team also operated with a special event callsign of K4M which worked out well overall, but from time to time that short 1X1 callsign caused a few stations to question the completeness of what they copied. "K4M" was fine on both phone and CW for its clarity, but we will have discussions about whether to go the special event callsign route in the future.

NET & REPEATER ACTIVITIES

Weekly ARES Nets were run in both Madison and Suwannee Counties and each had some participation in the weekly SARNET check-ins on Wednesday afternoons and solid representation on the North Florida Section and adjacent county nets.

Weekly ARES® Nets were run in both Madison and Suwannee Counties and each had some participation in the weekly SARNET check-ins on Wednesday afternoons and solid representation on the North Florida Section and adjacent county nets.

The 145.19 MHz, 145.11 MHz and the SARNET and GMRS repeaters in Madison County are all working well. The 145.19 MHz repeater in Lee is being outfitted with an Internet connection which will allow for Echolink connections in the next month or so. Preparations for the revival of the 442 MHz DMR repeater, formerly in Madison, are being made for its installation in Lee on the same water tower as the 145.19 MHz once the city completes some maintenance at the site.

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A NOTE OF SADNESS & GRATITUDE

Sadly, Jon Beaver KD4AMP passed away recently and was memorialized on January 31st. in Live Oak at a beautiful service attended by an overflow crowd. Many hams from Suwannee, Columbia and other counties were in attendance. Jon and his wife Patsy, host the Suwannee ARC station. Jon was an active influence for good throughout the Suwannee River Valley for decades. He will be sorely missed. May his eternal soul rest in peace.

Continued Next Page







OPINION: Thoughts on the End-Fed Half-Wave Antenna

James Gordon Beattie Jr W2TTT

Recently, there have been various discussions questioning the ARRL's wisdom in suggesting the use of the End-Fed Half-Wave (EFHW) antenna as a quick and effective way to get inactive or newly licensed amateur raido operators to take the plunge into HF radio operations. The EFHW antenna is simple and lowers the barrier to getting a working antenna installed and the idle licensee to get on the air.

By denigrating the EFHW and the ARRL's promotion of its use, many of us really experienced and somewhat demanding hams are missing something. The whole EFHW antenna craze and the ARRL's promotion of the basic EFHW antenna design is not focused on the needs of an operator who is trying to compete among the top ten of the DX Honor Roll. The objective is to move the new or otherwise inexperienced/inactive HF-interested licensee to put up something that will work and get them on the air quickly and easily with an acceptable level of operational satisfaction.
I think that this getting "back to basics" approach is genius and worthy of consideration. No, actually I think it is a brilliant strategy for its simplicity and effectiveness.

Let's put this whole discussion into some practical context.

1. Most of us experienced* amateur radio operators started out on HF with a simple end-fed wire out the window. That allowed us to hear stations and make contacts. *(* "experienced" is a euphemism for "old" and possibly cranky)*
2. Our simple antenna was a wire that went from the back of our radio or sometimes from a manual transmit/receive switch through a wooden window that was partially open and jammed with a towel or a piece of foam to keep out the weather and insects. The other end of the wire went outside and was tied to a tree, a post or even left to just droop down.

We had tube gear with adjustable TUNE and LOAD controls that allowed us to get some of our RF onto the wire and into the ether because the output circuits were able to handle mismatches that most modern solid state radio can't handle - even with an internal antenna tuner.

3. Having the wire antenna connected to the station equipment indoors generated lots of RFI because signal radiation started right at our equipment in our shacks! That often brought negative attention from family members and neighbors - and upon occasion, the FCC.
4. The EFHW is a vast improvement over the simple end-fed wire as it offers the same basic convenience of installation as the wire out the window, but with some key differences. Its coaxial cable connection goes from your transceiver to a matching transformer outside that is also connected to the near end of the wire. Like the wire antenna of years ago, the other end goes out to a support for the far end of the wire.
5. In this configuration, RFI is less of a problem while still being easy to install and exhibiting a stealthy or low profile esthetic.
6. Some licensed or inactive amateur radio operators will see the ARRL's EFHW antenna offering, do some reading and then conclude that they can buy the ARRL's antenna from a known, trustworthy source and get on the air. All good. That was the objective of the initiative.
7. With experience and perhaps growing needs, the now active licensed amateur radio operator may choose to put up other antennas that perform better or differently. Either way, the engine was primed and the operator is off and running.

I have too many friends who are on the air from home or during POTA operations who are happily making contacts with EFHW antennas. Is it my "go to" antenna? Honestly, "no", but I have assets on vehicles and at home that work for me. Perhaps if my operational needs change, I might try one. In any case, go with what works for you and "Get On The Air!"

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Now, I also have some thoughts about the idea of the ARRL selling products. I was initially a bit concerned about that marketing approach, until I looked at what they are trying to do. The ARRL's objective is to get folks to participate by OPERATING. For some who are not on the air and therefore lacking in Elmer-like guidance, having the ARRL offer a basic path forward provides a certain level of confidence to take that step from being licensed to operating. Their EFHW is a fine midrange model that accomplishes that objective while leaving the majority of the fixed EFHW, wire dipole and vertical antenna market to the traditional vendors and DIYers among us.

In conclusion, I support this ARRL initiative as it is another way to "move the needle" from those who are simply licensed to those who operate. Kudos to the ARRL for thinking outside the box.

My email signature line includes the statement, **"Get On The Air"**, so the ARRL EFHW antenna initiative is consistent with my persistent position.

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FCC Testing Information

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

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

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

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

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

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

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

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

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

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

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

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

Gainesville Amateur Radio Society
- 1st Saturday of even numbered months
- Tech day two weeks after testing
- https://gars.club/Testing.html

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

Statewide Digital Radio Resources
Designated ARES® **DSAR Reflectors & a DMR Talk group?**
DSTAR Reflector 046
REF046A – Florida Statewide
REF046B – NFL ARES®
REF046C – NWS Mobile, AL SKYWARN
DMR Florida State ARES® TG 31127
Link your local repeaters to help create a digital repeater network throughout the state!