



QST NFL



Sharing information of interest to Radio Amateurs in North Florida

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What's in your PIO Go-Kit?

By Scott Roberts, KK4ECR, NFL Section PIO

We have all heard the advertisement that says, "What's in your wallet?" I want to take a spin-off and ask you, "What's in your PIO Go-Kit?"

As a PIO (Public Information Officer) as well as an amateur radio operator, we should always be ready for deployment. But as a PIO, what should we have in our PIO Go-Kit? It is important for the PIO to have tools and resources available for use during an incident. Although this is not a complete list, a PIO Go Kit might include:

- Office supplies such as pens, paper, stapler, tape, etc.
- laptop computer and portable printer with an alternate power source(s)
- accessories (e.g., memory stick, mouse, etc.)
- Hemingway Editor App bookmarked on your laptop and smartphone (<http://www.hemingwayapp.com/>). This helps you write better press-releases and emails to the media and served agencies.
- Printed maps
- ARRL Printed Brochures & Flyers
- Cell phones / Smartphone
- Agency letterhead
- PIO and other emergency operations plans
- Camera
- Contact lists
- Battery powered radio
- Pre-scripted messages and template releases
- Business cards (physical and electronic)
- Cash – money
- 2-Way Radio / HT
- Change of clothes
- Toiletries

- Spare glasses or contacts
- Eye drops / Contact lens solution
- Medication
- Snacks / Power Bars

Being prepared before an incident happens is critical to the success of a PIO. You may have more items in your go-kit. This list is to help get you thinking about what needs to be in your kit.

Remember to stay prepared, and stay safe!

Citrus County ARC Special Event Station

John Bescher, N4DXI

The Citrus County Amateur Radio Club will be hosting a special event station, **W4F**, Nov 7-8, The Celebration of the 81st year of US Coast Guard Auxiliary. If you hear W4F, please work us. QSL cards from the Coast Guard will be offered via John Bescher, N4DXI, PO Box 947, Inglis, FL 34449. We will be on 40m, 20m and 15m SSB, maybe some RTTY on 40m. We will have three stations at the Citrus County Emergency Operations Center, Lecanto, FL using a 40 m dipole and a tower/tribander with a triplexer. Should be fun!

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Email your QST NFL input to n4gl.marty@gmail.com
Marty Brown, N4GL, Editor

Northern Florida Section SEC Report		September 2020
Karl K4HBN, NFL Section Emergency Coordinator		
Report	Counties Reporting	Counties in NFL
Number of Counties Reporting	14	43
Total Number of ARES Members		471
	Number of Events	Hours
Exercises & Training Sessions	116	937
Public Events	7	101
Emergency Operations	4	803
Skywarn Operations	10	803
Total	186	2700
Comments		
We are less than a month until the end of the 2020 hurricane season but don't become complacent. It is still possible for a storm to impact the USA. Be safe. k4hbn@arrl.net		

Statewide Digital Radio Resources

Arc J. Thames, W4CPD, Emergency Coordinator,
Santa Rosa County FL ARES

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

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

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

Volusia County Participates in SET

Don Ahlskog, K4EAE

The SET team pictured here is using lipo battery and solar backup .



The New Age of QRSS

Scott Harden, AJ4DV

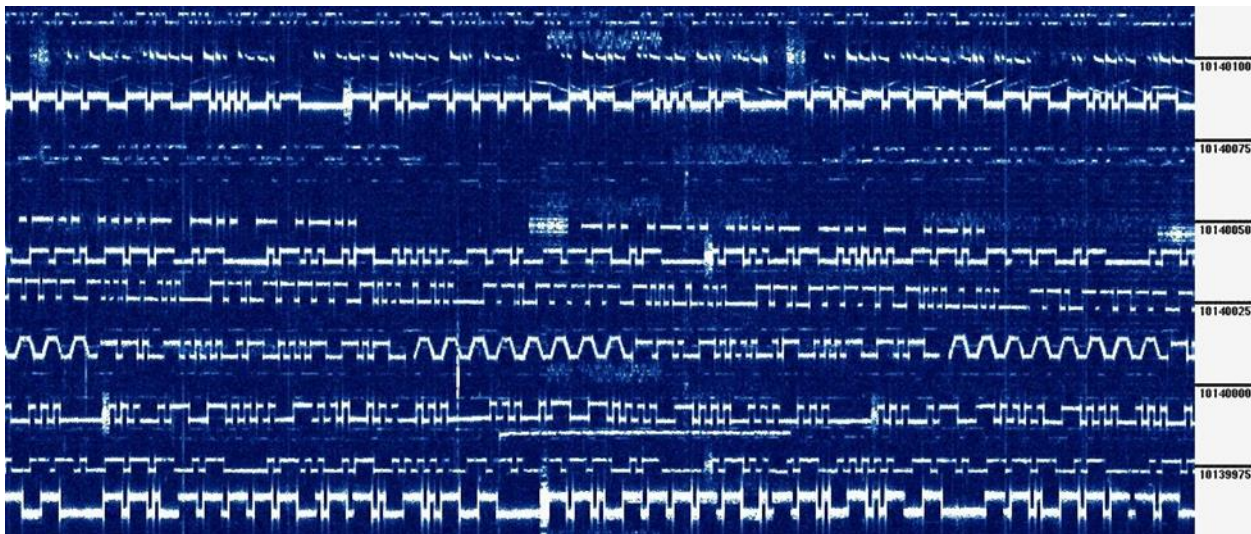
QRSS is an experimental radio mode that uses frequency-shift-keyed (FSK) continuous wave (CW) Morse code to transmit messages that can be decoded visually by inspecting the radio frequency spectrogram. The name "QRSS" is a derivation of the [Q code](#) "QRS", a phrase Morse code operators send to indicate the transmitter needs to slow down. The extra "S" means slow way, *way* down, and at the typical speed of 6 second dots and 18 second dashes most QRSS operators have just enough time to send their call sign once every ten minutes (as required by federal law). These slow Morse code messages can be decoded by visual inspection of spectrograms created by computer software processing the received audio. A QRSS grabber is a radio/computer setup configured to upload the latest radio spectrogram to the internet every 10 minutes. [QRSS Plus](#) is an automatically-updating list of active QRSS grabbers around the world, allowing the QRSS community to see QRSS transmitters being detected all over the world.

TLDR: Get Started with QRSS

- Tune your radio to 10.140 MHz (10.1387 MHz USB)
- Install spectrogram software like [FSKview](#)
- Inspect the spectrogram to decode callsigns visually
- Join the [QRSS Knights](#) mailing list to learn what's new
- Go to [QRSS Plus](#) to see QRSS signals around the world
- Design and build a circuit (or [buy a kit](#)) to transmit QRS

What is QRSS?

QRSS allows miniscule amounts of power to send messages enormous distances. For example, 200 mW QRSS transmitters are routinely spotted on QRSS grabbers thousands of miles away. The key to this resilience lies in the fact that spectrograms can be designed which average several seconds of audio into each pixel. By averaging audio in this way, the level of the noise (which is random and averages toward zero) falls below the level of the signal, allowing visualization of signals on the spectrogram which are too deep in the noise to be heard by ear.



If you have a radio and a computer, you can view QRSS! Connect your radio to your computer's microphone, then run a spectrogram like [FSKview](#) to visualize that audio as a spectrogram. The most QRSS activity is on 30m within 100 Hz of 10.140 MHz, so set your radio to upper sideband (USB) mode and tune to 10.1387 MHz so QRSS audio will be captured as 1.4 kHz audio tones.

To find out more about Scott's research, go to: <https://swharden.com/blog/2020-10-03-new-age-of-qrss/fskview.png>

LAKE Amateur Radio Association Supports WB4SA, Radio Scouting with their Jamboree On The Air

Frank Anders, KK4 MBX

A team from LARA took our Communications Trailer to Camp La-No-Che near Paisley, Florida for two consecutive weekends in October to support WB4SA, Radio Scouting with their Jamboree On The Air (JOTA) and ham radio demonstration. JOTA is the largest Scouting event in the world where scouts learn about communications and technology, fulfill rank requirements and have an opportunity to try amateur radio. The LARA communications trailer offered the Scouts an opportunity to experience communications on VHF (simplex, repeaters and packet), HF, and DMR. Approximately 1350 scouts along with their leaders and parents visited the events where they received a brief history about radio technology and learned SOS in morse code from Ken Lyons, KN4MDJ. After the presentation they were able to visit stations setup by LARA and WB4SA volunteers where they got a chance to experience amateur radio first hand. Members from LARA and surrounding clubs were on air giving the scouts a friendly voice for their first QSO.

WB4SA (BSA CFL Council) is one of the most active Radio Scouting programs in the country with 12,300 participants during 2019. LARA is looking forward to partnering with WB4SA in the future and continuing to promote the amateur radio hobby to the youth of central Florida.

To learn more about the Lake Amateur Radio Association and WB4SA visit their websites;

k4fc.org

radioscouting.us

Pictured are the LARA Trailer, Ken, KN4MDJ explaining how Ham Radios work and Dean, KM4QMB, demonstrating ham radio use.



Unscrambling the Mysteries of HF State-wide Communications

Part One: Critical Frequency

by Gordon Gibby KX4Z

Amateur radio operators, particularly those in “net” or emergency communications, are often familiar with “Maximum Usable Frequency” but not with an even more important and more-easily measured datapoint, **Critical Frequency**. *Critical Frequency is the key to choosing bands that will most likely allow both nearby and farther cities within one state to communicate.* The D-Layer of the Ionosphere is the other key(covered in Part Two).

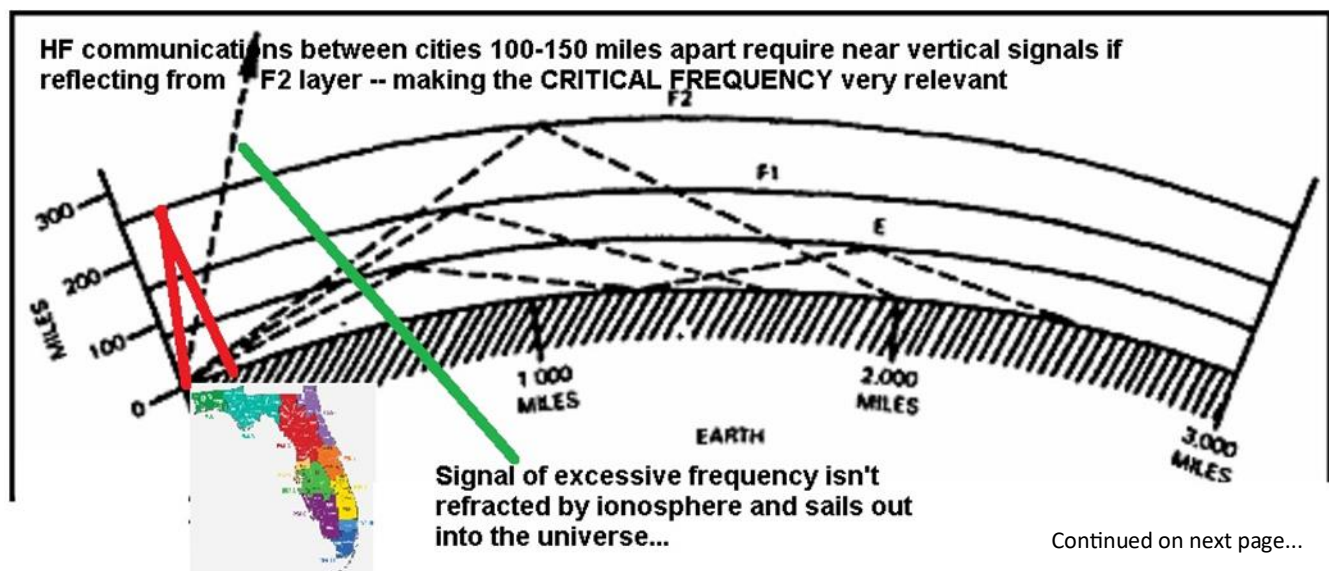
While measuring the maximum usable frequency that works between say, Miami and Pensacola can be difficult, it gives no information whether Gainesville can hear Jacksonville, or Panama City can hear Tallahassee. *But Critical Frequency is routinely measured every 15 minutes by multiple federal stations, including one at Eglin Air Force Base, and gives huge information useful to statewide or section-wide nets.*

Critical Frequency is measured by sending a continuous “chirp” moving from the bottom of the HF range (typically < 2 MHz) through 10-20 MHz, vertically up into the sky, and recording the straight-down return signal. This technology is >50 years old. The return signal is only detected when the ionosphere is able to refract the frequency by a full 180 degrees (reflect). The reflection/refraction is accomplished by **sufficient electron density to create an apparent conductive layer** (caused by UV / Xray ionization of oxygen molecules/atoms – hence the name “ionosphere”). Above a certain frequency, dependent on time of day/solar irradiation, the space between ions is too great to reflect the smaller size of the higher frequency radio wave....and no return signal is heard. That frequency is known as the Critical Frequency. Above that frequency, you are basically NOT going to be able to hold a skywave contact with a (nearby) ham on the other side of your city. And with Florida’s poorly-conducting sandy soil, *ground waves just don’t go very far...*

What’s even better, knowing the critical frequency and the general physics of radio wave refraction, the ionosonde web page will also give you good estimates of the MUF (maximum usable frequency) for various distances! (Allowing your net to plan for an auxiliary frequency for relays if required due to D-layer issues.)

Attempting to conduct a section-wide or state-wide communications on a band that is ABOVE the critical frequency will result in considerable frustration as stations within a modest number of miles from each other just can’t hear each other – and you’ll end up having to continuously use farther stations as relays.

It becomes a simple geometry problem. Lets look at some of vast amount of research that has gone into solving this in the past decades:



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The Figure, drawn from older ionospheric training materials, shows a scale drawing of the curvature of the Earth and the relative heights of E, F1 and F2 layers – and some geometries of dashed-black-line signals that were able to be refracted to reach stations at more than 1000 miles distance. However, Florida is less than 400 miles wide; I have added an image of the approximate size of Florida. In order to go from Pensacola to Panama City, or even Tallahassee, given the hundreds of miles upward to the F1 or F2 primary HF refracting layers, **the only workable geometry involves a signal going almost straight up.**

Such a vertical signal must then be refracted almost 180 degrees in order to make it to the desire station 100-200 miles away. Thus, if the chosen frequency is much above the Critical Frequency, this just isn't going to work. The signal will sail out into the universe (e.g.: the green line points to a signal that couldn't be refracted sufficiently). Some smaller fraction may be refracted enough to be heard in Texas or Maryland – but that won't do much good for the two stations in Florida trying to reach each other. We say, "the band has 'gone long'". *We simply need to move to a band that is at or below the Critical Frequency.* Traffic nets in upper midwest states have sometimes switched to 160 meters.

Brief Interlude on NVIS Antennas¹

The geometry shown in the Figure above demonstrates that if you wish to make radio connections within your own state by high frequency sky-waves, you need near-vertical radio waves. That is NOT the forte of most Vertical antennas (which optimize low-angle radiation, much more useful for DX contacts). The traditional antenna whose interaction with the ground-reflection results in a stronger signal heading UP than horizontally, is some sort of HORIZONTAL antenna (center, off-center, or end-fed) that is a modest fraction a wavelength above "ground." In Florida's low-conductivity soil, it's not clear to me what is the optimal height, but I seem to do OK with antennas from 15-40 feet off the ground on 80/40 meters.

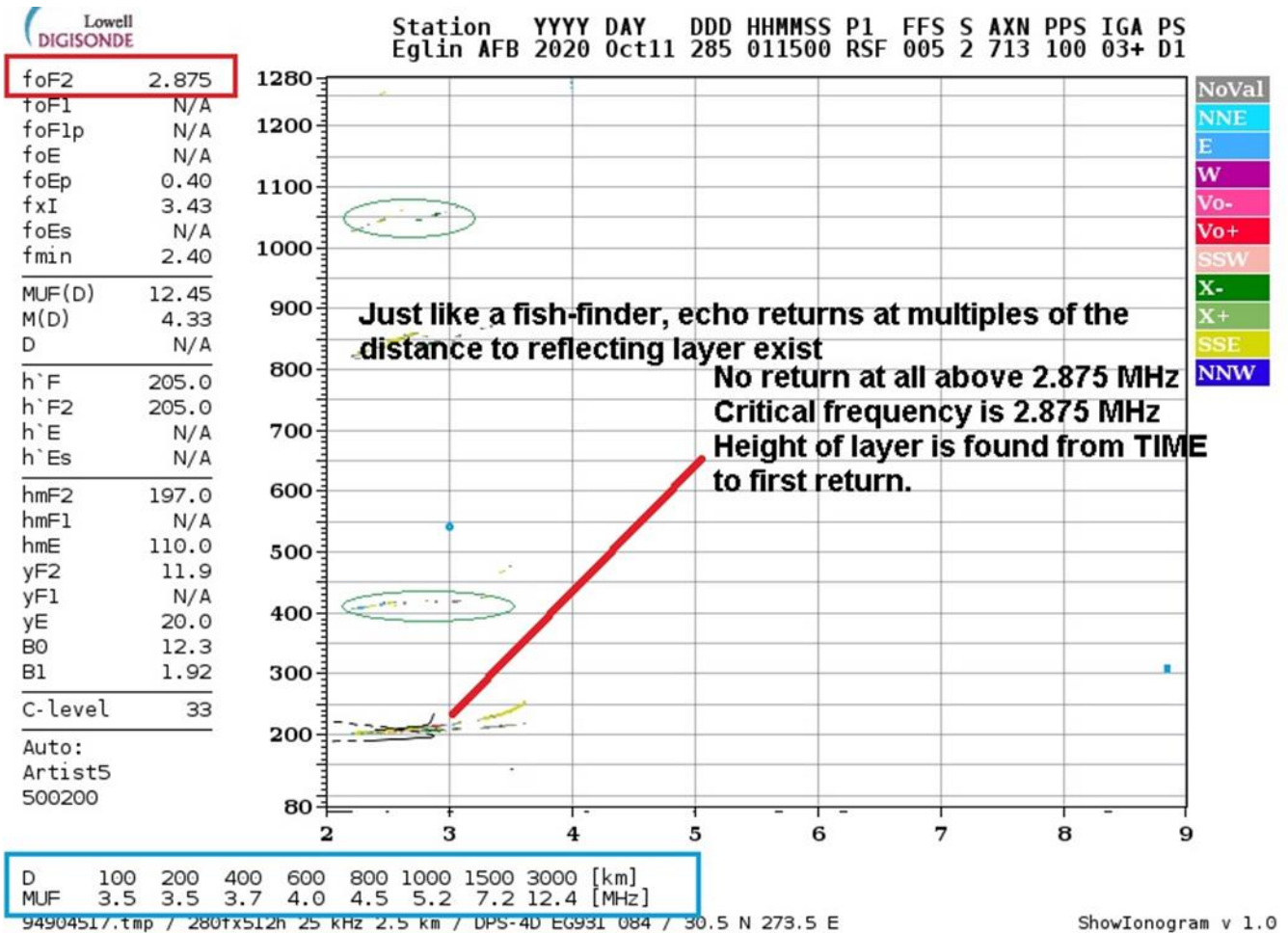
Typical Critical Frequencies

In the winter months near the bottom of the sunspot cycle, the critical frequency isn't very high At night it can easily drop below the 80 meter band! And even during the daytime, it may NEVER reach the 7 MHz 40 meter band. [For October, 2020, the Austin, Texas ionosonde demonstrated daytime critical frequencies generally 5-6 MHz and only rarely reaching 7 MHz.] That makes 80 and 60 meters very important (or access to the plentiful frequencies of the SHARES system). (But there is a fly in the ointment: D-layer absorption, which will be discussed in Part II).

You can easily examine the measurement of the critical frequency by referring to Eglin AFB measurements down the page at: <https://region6armymars.org/resources/solarweather.php>

¹ My reviewers asked that I add in this section.

Here is their measurement made at 10 PM EDT on Saturday, October 10, 2020:



Red Box: foF2 = critical frequency for the F2 ionospheric layer

Red line: The only returns were below 3 MHz. There were NO returns above about 3 MHz. The measured critical frequency for the F2 layer (determined height based of time of flight to hear the return) is 2.875 MHz (red box). That means that *Ocala is simply not going to hear the Villages* on 75 meter phone!

Blue Ellipses: Echoes from multiple reflections can occur. The signal can bounce back off the earth, into the sky and back down – there are multiple “echo” returns visible (ellipses). (Same thing fishermen see if they set the gain of their fish finder too high and see multiple echoes of the “bottom”.)

Blue Box: The small table in the blue box shows the calculated (not measured) maximum usable frequencies for various distances. Note that the 40 meter band only works if your intended target at this dark hour is more than 1000 km away! Not very useful for a state-wide net! The MUF for 4.0 MHz is estimated at 600 kilometers: even holding a statewide net on 75 meters with relays is going to be DIFFICULT. One might turn to 160 meters or SHARES frequencies below 80 meters in such a situation. And even in the sunny afternoon, in the bottom of the solar cycle, the critical frequency may not make it to the 40 meter band.

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CONCLUSION

The Critical Frequency is an easily measured parameter, widely available, and can help planners and net managers and net control stations much more effectively choose their techniques. Every 15 minutes on the bands, you may indeed hear that fast moving "chirp" as the Eglin ionosonde does its job!

REF:

<http://solar-center.stanford.edu/SID/StudentWork/SophieMurray.pdf> Incredibly educational paper from Stanford.

<http://solar-center.stanford.edu/SID/StudentWork/SophieMurray.pdf>

https://www.ukssdc.ac.uk/ionosondes/ionogram_interpretation.html Very simple explanation of reading an ionogram

https://www.ngdc.noaa.gov/stp/space-weather/online-publications/miscellaneous/afri_publications/handbook_1985/Chptr10.pdf Very in-depth discussion of ionosonde development and ionospheric measurements.

JACKSONVILLE AMATEUR RADIO NEWS

Billy Williams, N4UF

Nice turnout for the 20th Jacksonville FREE Hamfest on October 24th. Fewer sellers than the sixty who attended in 2019 but more hams looking for bargains and seeing friends. Eighteen took FCC tests administered by Jax Laurel and eleven earned their first license. Next is the Jacksonville Radio FREE Flea in late March.

The North Florida Amateur Radio (NOFARS) meets Thursday, November 12th at Hogan Baptist Church. The meeting starts at 7PM. At the October meeting, the second installment of Getting On Cheap & Quick focused on UHF and VHF.

For antenna support, two sections of standard chain link fence top rail--available at Lowes, Home Depot, Ace etc.--stuck into the ground a few inches and attached to the eave of your home make an excellent mast support for a simple vertical dipole or ground plane antenna. Even if using a cheap HT, this set-up will greatly increase range and effectiveness over an indoor antenna.

For a unidirectional radiation pattern, homemade beams are easy to construct using stiff wire or rods mounted on a boom made of PVC. Nofars.net includes a page on "Simple Antennas" which contains hints discussed in the Cheap & Quick" series.

Testing and evaluating long coaxial cable runs will be the basis for part 3 coming in 2021. Also, Jerry, N2GLF is preparing a program on operating HF mobile.

W4IZ's 444.4 MHz UHF repeater now has a "multimode" format which repeats Analog & Digital C4FM. In Analog Mode, it operates in parallel with W4IZ's 146.7 VHF repeater. For details, see nofars.net repeater page.

NOFARS has invited other ham groups to participate in its Jacksonville Radio Christmas Party & Dinner on Saturday, December 12th in the gymnasium at Terry Parker Baptist Church. Tickets are \$15 in advance. Members, guests, and visitors are all invited. Again this year, NOFARS will support Salvation Army Christmas Wish and TV47/Fox30 Chief Meteorologist Mike Buresh will attend. See nofars.net for details on tickets.



**SILVER SPRINGS
RADIO CLUB
2020 HAMFEST
Saturday, December 5, 2020**



FIRST CHRISTIAN CHURCH
1908 EAST FORT KING STREET, OCALA, FL 34471
DOORS OPEN AT 7:30 AM

SPECIAL NOTE:

Due to current COVID-19 Restrictions, face masks/coverings are required by City of Ocala while attending the Hamfest. Attendees must bring own face masks and will need mask to buy a ticket. Temperatures will be taken at door to gain entry. Table layout designed to promote social distancing and avoid overcrowding. Inside occupancy may be limited to avoid overcrowding. SSRC will follow all applicable official restrictions.

Grand prize and door prizes

Grand prize ticket is separate from door prize ticket. Both are available at the door only! Admission ticket stub good for door prizes only. No online sales

Grand Prize



XIEGU G90 HF SDR, CE-19 & Cooling Fan

VE TESTING - one session @ 10:00 am, Green Clover Hall 319 SE 26th Terrace, Ocala, FL - 1/2mile east of the Hamfest in the McPherson Governmental Complex. Look for road sign! Bring two forms of ID, FRN if issued and FCC License if upgrading. Test Fee \$15 cash. Test slots are limited. Preregistration is recommended at K4GSO.US

Commercial vendors - Main Hall only
TOWER ELECTRONICS
SIGNMAN OF BATON ROUGE
HAMWORLD
J T COMMUNICATIONS
PARADAN RADIO
CCTV ELECTRONICS
NITEFIRE ELECTRONICS

Active military and first responders in uniform and kids under 12 free. Must buy tickets for Grand Prize and door prizes.

Inside flea-market tables in adjacent hall & under semi-covered overhang areas subject to social distancing restrictions. All outside flea market locations on a first come first served basis. (BRING YOUR OWN TABLE & CHAIRS)

Food and drinks available for purchase from Scout Troop 439

TALK-IN ON K4GSO VHF 146.610 PL 123 -

GENERAL ADMISSION	\$10
TAILGATE – CAR & DRIVER	\$20
ADDITIONAL TAILGATE SPACE	\$10 each
ADDITIONAL PERSON	\$10

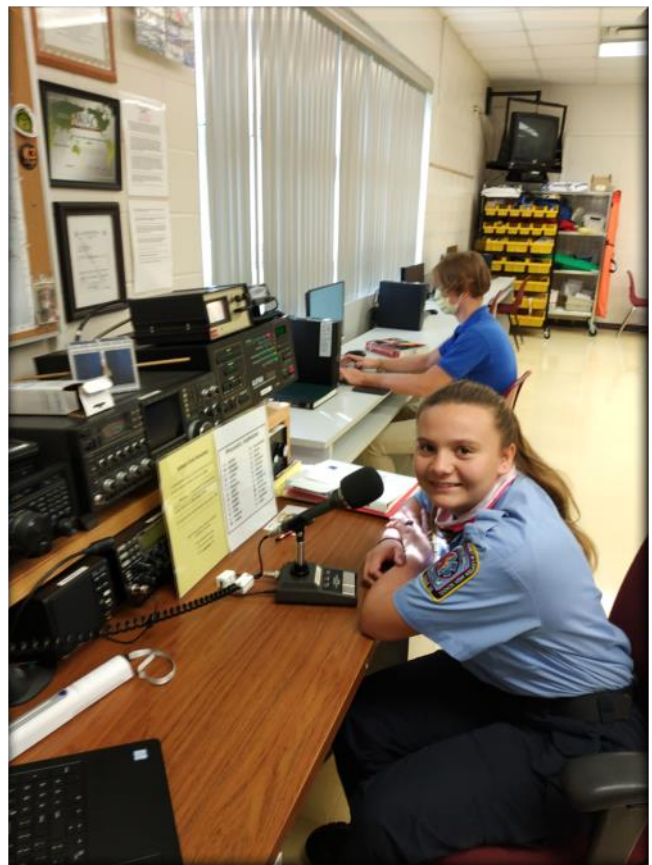
MORE INFORMATION ON THE SSRC WEBSITE: WWW.K4GSO.US/HAMFEST

Loften High School Participates in ARRL School Club Roundup

Bob Lightner W4GJ

Students at Loften High School here in Gainesville are participating in the ARRL School Club Roundup for the first time this year. So far they have 300 QSOs with other students, schools and individuals.

This is their second competition this month. The first one was National Fire Prevention Week. Our students are in the Fire/EMS Academy here. They used a special call, N4F, and logged 1,050 QSOs, giving fire safety tips to each contact. This year's theme was "Kitchen Fires."



Whispering in the Field

by Bert Garcia N8NN

Obtaining real-time performance measures of your portable antennas in the field is not easy. You can measure the SWR and input impedance with an antenna analyzer but obtaining reliable on-the-air measurements from distant locations requires at a minimum a transmitter and a cellphone. I chose to use a Weak Signal Propagation Reporter (WSPR) transmitter from <https://ZachTek.com> (1) shown in Figure 1. The WSPR TX Desktop is a low power transmitter with an Arduino minicomputer that encodes and transmits WSPR packets.



Figure 1: My WSPR TX portable setup in action.

In Figure 1 the WSPR TX is on the left and a 5-volt battery supply is on the right. The GPS antenna in the center is used to obtain accurate time and location information for the WSPR beacon and is included with the transmitter. A cellphone displays real-time reports from pskreporter.info, wspr.aprsinfo.com, or wspnet.org. Although the cellphone worked, it was slow to display reports, so a better solution is a laptop with an internet hotspot for faster results and a more useable interface. I prefer to use wspr.aprsinfo.com for ease of use.

My WSPR TX MidPlus model operates on 160/80/40/30/20 meters as a WSPR beacon transmitter. The WSPR TX HighPlus model operates on 17/15/12/10/6 meters. When the sunspot cycle improves, the HighPlus model will be more useful. The output power is 200 milliwatts. Using an end-fed wire antenna, my 200 milliwatts WSPR beacon was spotted on 20 meters in Brazil, Austria, Canary Islands, and Finland on the first transmission.

Looking inside the WSPR TX in Figure 2, on the lower left are the four low pass filters that are selected in the initial setup so the WSPR TX can change bands automatically during a beacon cycle. You can select any configuration of one to four bands. Everything is controlled by an Arduino minicomputer. The software is open source should you care to tinker with it.

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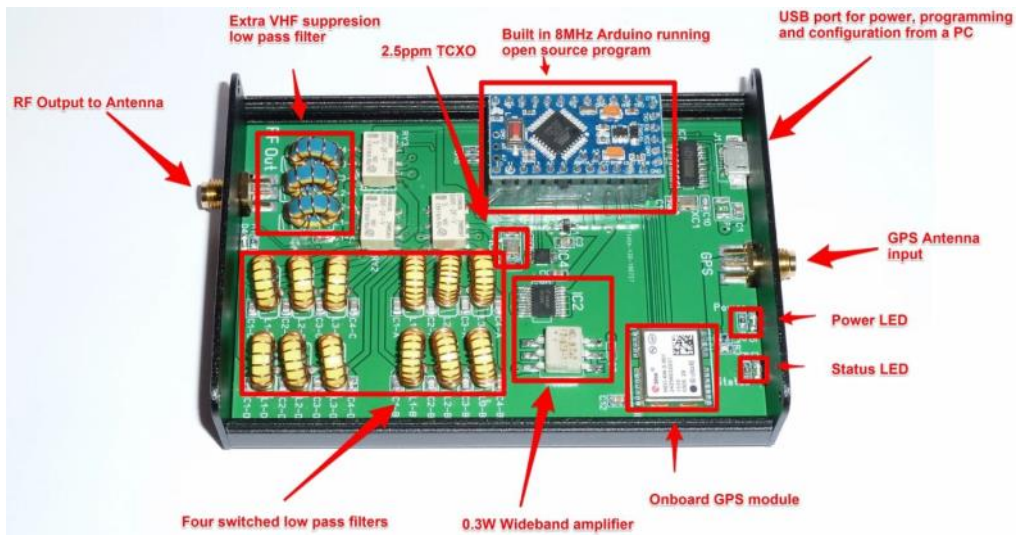


Figure 2: Inside the WSPR TX. Photo from Zachtek.com by permission.

Figure 3 shows the free software setup program used to set your callsign, select the bands and start transmitting. All the setup parameters are saved so the next time you apply power to the WSPR TX it will resume as a WSPR beacon without needing a computer. Any USB power source will operate the beacon. I used a cellphone charger battery in the field. The WSPR TX draws 250 milliamps when transmitting, 100 milliamps when idle.

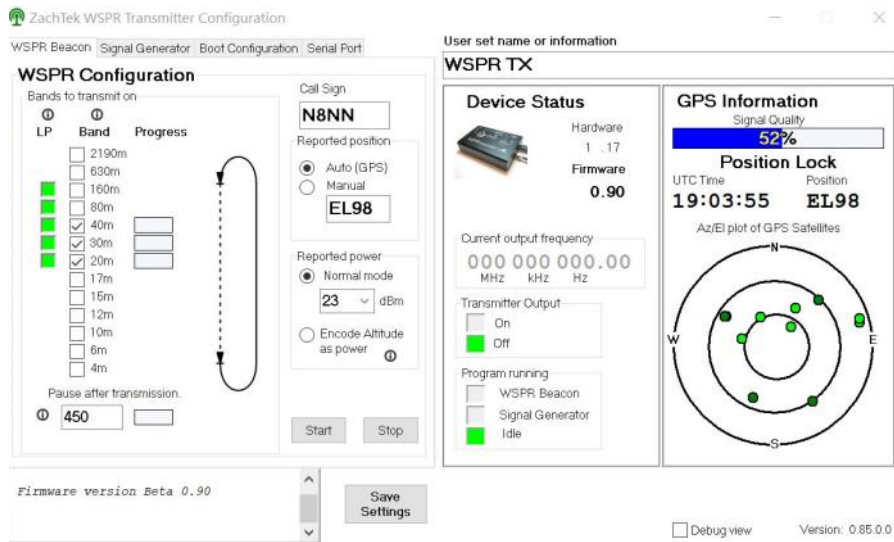


Figure 3: WSPR configuration software.

You can also use the WSPR TX as a signal generator. The WSPR TX from ZachTek is a handy piece of equipment to have in the field or at home.

References:

1. WSPR TX Desktop <https://www.zachtek.com/1012>, \$139 plus shipping.
2. WSPR information <http://www.arrl.org/wspr>.

HamTenna Vacation (or, How I Spent my Fall Vacation)

Darrell Franchuk KG4CCB

My wife and I spent 4 weeks outside Knoxville, TN from mid-September to mid-October in a rented house in Tellico Village alongside the Tennessee River / Tellico Lake. We went there to see colorful fall foliage while driving mountain roads in our Mazda Miata with the top down. To our dismay we discovered those are mutually exclusive objectives. We also visited with our son / daughter-in-law. But I digress.

Knowing Charlotte would be doing some part-time remote work and I would have a moderate amount of time available; I took along a bit of radio equipment which consisted of my FT-818 and accessories, a few antennas, and a 12-v battery / power system. The largest containers in the photo are 30 days of personal items.

The house is on sloped grade with an elevated deck at the rear about 13-ft above grade. This is where I set up the antennas which consisted of a 40-ft Spiderbeam mast, an MFJ End-Fed Longwire, Bert's 20m Delta Loop, an MFJ 935B Loop Tuner / loop, an ElberVert, and a Signalink 40-10m loop antenna. WSPR transmissions were made at 2.5watts with the FT-818 / WSJT-X / Dell laptop on 20m and 40m. One transmission cycle was performed with my SOTA Beams WSPR Lite beacon. Receiving was done with the FT-818 and with an SDR Play 1A / Dell laptop / SDR Uno software.



Receive cycles mostly ran for 24 hours each to see a complete day; however, it was necessary to limit transmission cycles to daytime hours and hours where I was at the house. That prevented too close a comparison between antennas that may have transmitted during different hour periods (i.e., morning versus evening). In all, 17 Receive cycles and 13 Transmission cycles were conducted. Below are most cycles for the various equipment configurations. The MFJ Loop and Dela Loop are 20m only. DX stations were mostly Europe, but included the Canary Islands, S Africa, Latin America, and Australia.

Receiver	Antenna	Band	Spots	DX	Spots/Hr	Most km
FT-818	MFJ Loop	20	83	4	3	7368
	SignalLoop		289	5	12	6875
	Mast / EFLW		381	18	16	7538
	ElberVert		1677	34	70	18115
	Delta Loop		265	9	10	7106
	SignalLoop	40	1803	3	74	14575
	Mast / EFLW		2064	3	86	13106
	ElberVert		973	1	41	6536
SDR Play	SignalLoop	20	918	20	38	15665
	Mast / EFLW		344	2	19	6385
	Delta Loop		260	2	19	7106
	SignalLoop	40	3003	9	125	18105
	Mast / EFLW		4583	5	95	12699
	ElberVert		443	0	18	3151

These are the observations I pull out of this data; perhaps others see more:

- The greatest number of spots mostly occurred on 40 meters which is the same as my home station experience.
- Vertical antennas were effective, both the ElberVert and the Mast/EFLW which was arranged essentially as a vertical.
- The SignalLoop seems much better than the MFJ Loop; however, I didn't test the MFJ Loop with the SDR Play which, surprisingly, sometimes performs better than the FT-818. Note the difference between the SDR Play and the FT-818 with the SignalLoop.
- The ElberVert performed better on 20m than 40m, but I don't have 20m with the SDR Play for further comparison.

Below are the top five transmission periods, based on the number of spots. All are 2.5 watts. On our last day, I ran the WSPR Lite at 200mw with the ElberVert antenna for a period of 2.75 hours during the early afternoon and generated 125 spots that included 3 European locations and the Canary Islands besides NE and Western U.S.

Transmitter	Antenna	Band	Spots	DX	Spots/Hr	Most km
FT-818	EFLW / Mast	40	3513	37	270	15788
	ElberVert		2572	15	180	7459
	SignalLoop		1431	5	114	7105
	Delta Loop	20	1216	45	78	7459
	EFLW / Mast		1030	50	114	15629

Additional testing would have been necessary to make further comparisons between antennas and between the F-818 and the SDR Play. But I must say that I am impressed with the performance of the SDR Play, a little black box that costs \$120. In general, I was a bit disappointed with the MFJ Loop antenna, but it is useful in hotels when access to an outside antenna is not possible. The SignalLoop antenna is another potential good option for inside use. Perhaps \$500 for a Chameleon is a good option, but I am not able to bring myself to spend that for a Loop.

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Besides the antenna testing at the house, I also did a brief session on the Cherohala Skyway with the FT-818 and a Diamond HFJ-350M portable and went to a local city park with the FT-818 and the EFLW / Mast to set up an Inverted V as well as mobile magnetic antennas on the roof of Charlotte's Forester for a little SSB activity. On the Skyway there was a bit of activity on 20m and 40m and I attempted a couple net check-ins and CQ transmissions, but with no success.

At the Lenoir City Park (Day 1) with the magnetic mobile antenna there was a bit of traffic and I attempted a few net check-ins and CQ transmissions with no success on 40m. I was able to connect with a POTA Activator in Florida (K4NYM at K-4629) on 20m.

On Day 2 I set up in a different location in the park. Here I used the Spiderbeam mast / EFLW in an Inverted V configuration. I contacted POTA Activators in Michigan and S Carolina with 5-7 signal reports.

On Day 3 I set up in another area in the park and had difficulty getting the EFLW / Mast to achieve resonance, which was complicated by having forgot to bring along the compact MFJ antenna tuner. None the less, there was a notable amount of traffic, but I was unable to made contact. About ½ of my 3-hour session was spent with antenna set-up.

On Day 4 I set up in yet another location in the park. Here I was able to contact a POTA Activator in Georgia, this time on 40m (KE4GTQ at K-2902) but I was not successful with net check-ins or CQ transmissions. The Day 2 location was moist soil near the water's edge whereas the Day 3 and Day 4 locations were on higher, and dryer, ground a short distance from the water.

On the Cherohala Skyway / Day 3 at Lenoir City Park



FCC Testing Information

4 Corners Radio Club, Davenport FL

- First Saturday
- 10:00 AM
- Polk County Firehouse, 50945 US 27
- Walk-ins welcome
- Info: WA2FRW@aol.com

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

Lake Monroe ARS FCC Testing, Sanford FL (LMARS)

Cancelled until further notice due to loss of venue because of COVID 19

- For more information and registration, contact Bob Cumming, W2BZY, 407-333-0690 or w2bzy@cfl.rr.com

Milton Amateur Radio Club, Milton FL

- Second Thursday of each even numbered month
- 6:30 PM
- Walk-in
- West Florida Hospital Rehab Institute, 8383 N Davis Hwy, Close to Johnson and N. Davis
- Info: Robert Speser, nb8s@icloud.com

Orlando ARC FCC Testing (OARC)

Cancelled until further notice due to loss of venue because of COVID 19

- Info: <https://oarc.org/events-ve-testing>

QCWA Chapter 45, Orlando FL

- Second Thursday
- 11:00 AM
- Golden Corral, 5535 S. Kirkman Ave, Orlando
- Walk-ins welcome
- Info: WA2FRW@aol.com

Silver Springs Radio Club, Ocala FL (SSRC)

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

Suwannee ARC, Live Oak, FL

- First Tuesday of the month prior to the meeting
- Saturdays available with advanced notice
- N4SVC, 9707 58th Street, Live Oak, FL 32060
- www.suwanneearc.org for more information

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://k4tlh.net/faq/license-testing/>

West Volusia Amateur Radio Society

- Second Saturday of each odd numbered month
- 9:00 AM
- Elks Lodge, 614 S. Alabama Avenue, Deland, FL
- Info: <https://westvars.org/testing>

Remember: Bring photo ID, CSEs, copy of current license, exam fee in cash, \$15 exact change. Large print exams are available.

**Due to the COVID 19 re-
strictions on gatherings,
please check with the or-
ganizations listed for
changes or cancellations.**

NFL Web Site

For net, hamfest and other events go to www.arrl-nfl.org. Webmaster Brian McClure, NW4R, maintains an up-to-date and detailed listing of all NFL nets and activities. If you need to make a change to an existing net or activity, or add a new one, you can contact Brian on the website.

NFL Officials

Section Manager – *Kevin Bess, KK4BFN*

Assistant Section Managers

Joseph D. Bushel W2DWR

John C Reynolds W4IJJ

Dave Davis WA4WES

Jeff Capehart W4UFL

Neil Light KK4VHX

Ray Crepeau K1HG

Steve Szabo WB4OMM

Want a QST NFL Reminder?

Marty Brown, N4GL, Editor

Click on the email below and I'll put you on the reminder list that lets you know when the monthly input is due, and when the newsletter is posted on the website arrl-nfl.org.

Email: n4gl.marty@gmail.com

Section Emergency Coordinator – *Karl Martin K4HBN*

Section Public Information Coordinator— *Scott Roberts KK4ECR*

Assistant SE Coordinator – *Dave Davis WA4WES*

Section Technical Coordinator – *Frank Haas KB4T*

Affiliated Club Coordinator – *Appointment Pending*

Section Traffic Manager – *Helen Straughn WC4FSU*

Official Observer Coordinator – *Robert Leasko WB8PAF*

State Government Liaison – *Darrell Brock N4GOA*



Newsletter of the Northern Florida Section of the ARRL

1. Spread the word about our website www.arrl-nfl.org and **QST NFL** on your club web-site, in a newsletter or at a meeting.
2. Send a write-up and picture of your next activity.
3. Make sure you, or the appropriate member of your club is on the email reminder list.
4. Contact: Marty Brown N4GL, n4gl.marty@gmail.com

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 writers are their own, and may not express the positions of the ARRL. Submissions may be made to the editor, Marty Brown, N4GL.MARTY@gmail.com.