



QST NFL



*Sharing information of interest to Radio Amateurs in North
Florida*

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www.arrl-nfl.org

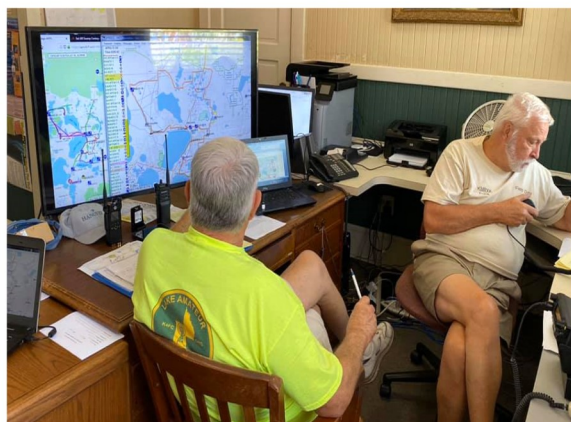
November 2019

Lake Amateur Radio Association Supports the 45th Mount Dora Bike Festival

Frank Anders, KK4 MBX

Mount Dora, a quaint Florida town known for its hilly terrain, is ideal place for bicycling and a bicycle festival. For the 45th year, on Oct. 3-6, the Mount Dora Bicycle Festival served as ground zero for pedal power. Hundreds of cyclists of varying skills took up the ride, and many more joined the celebration.

Leading up to and throughout the event LARA members joined the Mount Dora Chamber of Commerce to provide assistance in Marking Routes; providing communications with rest stops, support vehicles, and ride leaders; transporting disabled riders back to town, and tracking the progress of the rides each day using APRS and a TV monitor. The LARA team also partnered with the LAKE County Sheriff Department to provide safe crossing of a major highway.



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

Ocala Hamfest 2019

December 7, 2019

NEW VENUE!!!

FIRST CHRISTIAN CHURCH
1908 E. FORT KING STREET
OCALA, FL 34471

7:30 – 2:00

Vendors, Tailgating, VE Testing, AFFORDABLE FOOD, and much more!

k4gso.us/hamfest/



Northern Florida Section SEC Report

Karl Martin, K4HBN, Section Emergency Coordinator

Northern Florida Section SEC Report		September 2019
Report	Counties Reporting	County in NFL
Number of Counties Reporting	17	43
Total Number of ARES Members		485
	Number of Events	Hours
Exercises & Training Sessions	568	1290
Public Events	4	74
Emergency Operations	16	1087.5
Skywarn Operations	2	102
Total	590	2553.5
Comments		
The month started with Dorian sneaking by Florida. Luckily Dorian did not severely affect Florida but was excellent practice for the section. Thank you to everyone out there that did what they could for their community. We couldn't do this without you!		
Karl K4HBN k4hbn@arrl.net		

Alachua County ARES(R) Completes First Round of EOC Badging

by Gordon Gibby KX4Z

During Hurricane Michael, we discovered a significant "issue" in our county: background-checks / badging had not happened among our volunteers in some years. The State of Florida has relatively inflexible statute-driven requirements for deployed volunteers who may be serving in shelters with access to shelter residents, and we didn't have the best set of background checks to demonstrate....

An entire year of effort went into correcting that problem. Section leadership in three sections identified the legal requirements, and we dug up the deployment training requirements, RACES requirements, and set to work on encouraging volunteers to get the necessary training. We even graduated an EC-001 instructor (me) so that we could hold a successful EC-001 class to allow more persons to meet Level requirements. There were conflicting pieces of information to track for each volunteer-- who had background checks from county employment, from previous CERT checks, etc, and a lot of effort on the part of many to properly document their ICS and other training. The SERT TRAC system (<https://trac.floridadisaster.org/trac/loginform.aspx> see illustration below) is excellent for that function, because it allows uploading of PDF certificates from courses taken, and maintains a transcript as well.

It turned out to be advantageous just to have all but county employees to run through the entire fingerprint/background check system afresh to avoid any issues. With able assistance from Col. Huckstep W4JIR, Chief Deputy at the Alachua County Sheriff, funding was arranged and we put a dozen or so through the entire process. Then there was an issue figuring out how to create physical BADGES, since this had not been done in quite some time. New Emergency Manager Hal Grieb secured assistance from Alachua County Human Resources, who then held a two-day photo/badging set of sessions. H.R. even provided appointments for a few folks who "dropped through the cracks" of the planning process. In the process, EM Grieb made it clear that prospective volunteers had to be actually *solid volunteers, integrated and approved in our local training process* -- this will be of value to us as we move forward and stress the importance of actual real exercise participation....

In the end, we have now a healthy bunch of badged volunteers with all the appropriate training documented, and solid background check documentation for service. We believe these background checks are useful for up to five years. In the coming year, we will be arranging additional training possibilities to further increase our pool of qualified volunteers.

The screenshot shows the FloridaDisaster.org website interface. The user is logged in as Gordon GIBBY. The 'Certificates' tab is selected, displaying a list of completed courses. Each entry includes a course ID, title, dates, and a 'Download Certificate' link, all marked as 'Approved'.

Course ID	Course Title	Dates	Status
IS-800.b	National Response Framework, An Introduction	04/19/2016 - 04/19/2016	Approved
IS-100.b	Introduction to Incident Command System, ICS-100	04/27/2016 - 04/27/2016	Approved
IS-700.a	NIMS An Introduction	05/02/2016 - 05/02/2016	Approved
EC001	(ARRL Introduction to Emergency Communications)	07/28/2016 - 07/28/2016	Approved
IS-120.a	An Introduction to Exercises	02/20/2017 - 02/20/2017	Approved
IS-200.b	ICS for Single Resources and Initial Action Incidents	08/07/2017 - 08/07/2017	Approved
G-300	Intermediate Incident Command System for Expanding Incidents	08/21/2017 - 08/23/2017	Approved

A portion of a SERT TRAC listing of courses taken by a volunteer

NFL Section Needs Section Traffic Manager

Marty Brown, Editor

SM, Kevin Bess, KK4BFN, informs the editor that the position of Section Traffic Manager (STM) is now available. Like all section appointments, this job comes with great pay and exceptional benefits!

To quote the ARRL:

The STM is appointed by the Section Manager to supervise traffic handling organization at the section level--that is, to coordinate all traffic efforts within the section, regardless of mode or National Traffic System affiliation, so that routings within the section and connections with other networks and digital traffic nodes will result in orderly and efficient traffic flow.

Requirements: Familiarity with traffic handling on all modes; Technician class license or higher; Full ARRL Membership

For more information: [ARRL STM Info](#)

If you're interested in the job, contact [Kevin Bess, SM, NFL](#)

QCWA Chapter 62, Ocala, FL

Rhyne Killian. KA1CX President

Ocala Chapter 62 based in Ocala, FL held their bi-monthly meeting at the China Lee Buffet restaurant in Ocala on Thursday October 24.



There were 13 people in attendance, including a contingent of 6 members from the Gainesville chapter, which is now inactive. A member from the Silver Springs Radio Club was also in attendance to promote the Silver Springs Hamfest to take place December 7th in Ocala.

Ken Simpson, W8EK, a QCWA director, spoke about the QCWA district elections with some information on those who were running.

Bay County ARES Deploys for Mark

Matt Kennedy, W9NDN, Emergency Coordinator

Bay County ARES had it's first real world deployment since we formed last year. We had 4 operators in the field. Jim, KW4UT and Ron, KK4DWE at Bay County EOC. Bob, WB8PAF (BCARES AEC), and Doug, KN4PFZ were at the shelter. We had 3 additional stations monitoring Mark, KD4IMA (BCARES AEC), Gary, AJ4KY, and Matt, W9NDN (BCARES EC). It went well, and as with any deployment, we determined our weaknesses and successes. We will continue to build based on what we learned. Great job to all who participated.

Top: courtesy of Ron, KK4DWE is Jim, KW4UT

Bottom: courtesy of Doug, KN4PFZ, is Bob, WB8PAF



Alachua County Work on Quieting Inverter RFI Hash

by Gordon L. Gibby MD KX4Z

The newer inverter generators have been a real problem for HF emergency field communications, due to the wideband noise created by their fast internal switching waveforms. While those waveforms, on insulated-gate bipolar switching transistors (IGBT), allow for astonishing efficiency, quiet operation, reduced fuel draw, and pure sine wave output, they create almost the same output as an unfiltered spark gap transmitter running at 20kHz. The conducted noise via their AC power wiring can obliterate entire amateur radio HF bands. Normal background noise on 80/40 meters from a full-size efficient antenna is approximately -85 to -95 dBm, whereas generators can produce -60 dBm hash throughout the band. In Alachua County this was discovered during an exercise, forcing us to ditch the A/C and go to batteries in order to hear any signals. We've been working sporadically since then with various filtering and shielding systems, without much repeatable success.....until October.

A more technical article will be provided at <https://qsl.net/nf4rc/2019/InverterGeneratorSolutions.pdf>; this newsletter article will just go over the basic idea and the results obtained.

Noise can be both RADIATED and CONDUCTED. Radiated noise can be mitigated by moving the generator farther away, or wrapping it with grounded wire. For this test, we moved the generator 100 feet away with extension cords, and utilized a low-aperture ham-sticks 40 meter antenna only a few feet above a driveway.

CONDUCTED noise is much more of a problem in my experience, with the common mode noise traversing the AC extension cords as if they were an unbalanced transmission line against ground, pouring RF right into the transceiver power supply and from there into the radio. Differential noise (between hot and neutral AC wires, those acting as a transmission line) is also potentially an issue. Simple filtering techniques such as clip-on ferrites don't seem to be anywhere close to enough. The noise appears to go right through a standard MFJ switching supply, and is only reduced a few dB by using an analog old-style battery charger to charge a 12V car battery powering the rig.

HEAVY DUTY COMMERCIAL FILTER: A commercial line filter rated for up to 23Amps at up to 230VAC with differential and common mode rejection (in a 50 ohm test environment) in the 70 dB range was purchased (\$128) from <https://about.automationdirect.com/contact-us/index.html>. Very hefty toroids and capacitors are obvious through the ventilation gaps of the housing of this filter. This knocked the interference from my Champion 3400 (3.4 kW, <https://www.championpowerequipment.com/product/100263-3400-watt-dual-fuel-inverter/>) inverter generator down to about S5/S6 on an ICOM 718 (in the range of -90 dBm) -- a HUGE improvement, but still enough noise to drown out weak signals. (Approximately 30dB reduction in the actual power-line environment.) The Champion 3.4 kW generator is easily able to run the A/C system on my combination travel trailer/ham station, even in econo mode. Thus the interest in reducing its interference to non-existent.

Adding two common mode simple chokes made by simply winding the AC line cord from 4 to 9 times around an FT-240-43 high -permeability toroid (permeability >800) *obliterated* the inter fence. At that point, it was no longer even audible on the ICOM 718, and the S-meter was at S0 (interference well below -95 dBm). Finally a solution! Inline chokes can be easily constructed inside standard plastic electrical boxes, using short extension cords so that they can be inserted at any position in the AC power wiring. As the nodes/antinodes (impedance changes) will vary along the AC line cord "transmission line," different positions of the inductive chokes may be required for different bands or installations.

The Alachua County NFARC club will likely have a Lab-NLunch building session for the toroidal common mode chokes in the near future.

We also tested a Sam's Club 2kw "AI Power" inverter generator (<https://www.samsclub.com/p/sua2300i-2300w-inverter-gen/prod22271213>) and this less-expensive more-recent generator had even less interference than the Champion inverter generator and has other very nice monitoring features, as well.

Quieting Inverter (Continued)

Situation	Signal Level dBm
Typical 80/40 meter galactic background noise on full size antenna (normal aperture)	-85 to -95 dBm
Typical apparent noise, conducted, from generator 100 feet away	- 60 dBm (drowns out virtually ever signal on band)
Noise level with MIF23 filter at generator	-90 dBm
Noise level with MIF23 filter, and 2 inline multi-turn FT-240-43 common mode chokes	Below -95 dBm; no indication on S meter.

AI Power inverter generator that was somewhat quieter than the Champion (but still requires significant filtering)



Champion inverter generator and test-filter...note that this is NOT the final planned implementation! For safety and weather protection, the sys-



West Central County Parks on the Air Continues through December 31st

Reprinted from the October Issue of the West Central Section, *Presser*

Just a reminder that County Parks On The Air is underway now through December 31, 2019. This is an excellent opportunity to get out and sharpen your operating skills and also test your portable equipment setup as well. The list of county parks and the event rules is on the CPOTA web page, which is on the Section website at <http://arrlwcfl.org/wcfspecial-events/countyparks-on-the-air/>. We hope to see an increase in activity particularly as the fall and early winter approaches. If you have HF mobile, consider even pulling up in a county park and operating from your vehicle.

Following some previous suggestions, if you do not have a Facebook account and wish to do a County Park on the Air Activation, please email that information to Darrell Davis KT4WX, our Section Manager, and he will post it to the County Parks On The Air Facebook page for viewing. Please send that information one week or more in advance of your planned activation.

If you already have a Facebook account you are encouraged to post it directly to the County Parks On The Air Facebook page. Thanks for your understanding.



Combo Ham Action: Alachua County ARES(R) Successful Simulated Emergency Test & Fantastic Gainesville Amateur Radio Society Fall Picnic

by Gordon Gibby KX4Z

Snagging two birds with one stone, the Gainesville Amateur Radio Society (GARS <http://gars.club/>) held its picnic at a local park despite the passage of Tropical Storm Nestor, and the North Florida Amateur Radio Club (NFARC <https://www.qsl.net/nf4rc/>) sponsored the Alachua County ARES(R) Simulated Emergency Test at the same picnic – and it was all a huge success. Despite daunting predictions of 23 mph winds with gusts to 36 and driving rain, the actual weather in the wooded Gainesville San Felasco Park was overcast, mild breeze, very few mosquitoes as a result, and perfect temperatures. Shannon Boal K4GLM had observed that GARS picnics go on *rain or shine* and that a previous picnic had to have "no wake zone" signs placed around the 6" deep water on the pavement -- and the picnic still went on!

A slingshot, lead weight, and braided fishing line were used the day before the rain started, to establish lines at two key locations for HF antennas (40-50 feet up!). Thus we fielded both an end-fed 135-foot wire fed by a 49:1 Balun and an off-center fed dipole, allowing **two complete multi-band HF stations** to be up and operating by about 8AM. (Just not simultaneously....) Winlink messages were flying, and SSB contacts, CW on a unique thigh keyer, and even FT8 were all tried by enthusiasts, while VHF check-ins to the S.E.T. Check-In/Bulletin Net, and later the Status Report Net were carried out at the same time on handhelds. A minor flaw in the Incident Action Plan for the exercise was detected, and people worked around it.

Picnic!

Bountiful food arrived, and hamburger/hot dog cooking -to-perfection ensued by Debra Boal KI4CVS, as all the S.E.T. status reports, some in ARRL radiogram and some in simple prose, were collected by EC Jeff Capehart. Winlink status reports also flowed from all over the county toward Jeff's Winlink account. About the time that the S.E.T. concluded,

Larry Rovak WB2SVB goes over a point with Carol and Vann Chesney



the hamburgers and hot dogs were ready, and radio work ceased temporarily for gastric replenishment.

Alachua County S.E.T. Results: 13 Participants on the "Check-In" Net despite the error in the Incident Action Plan, which provided a chance for practice at "finding people." Formatted status reports were received from KX4Z, AA3YB, W4JIR, K9PDL, KD0QIX, WB2SVB, K4ZSW, AC4QS and KI4QBZ, a total of 9 received by voice (FM). Digital (WINLINK) reports were submitted by K4ZSW, AC4QS, KX4Z, KM4JTE, and AA3YB (5 total). Three total "issues" identified throughout the Exercise; AAR/IP in progress. *Relatively low participation, however, for approx. 50 enrolled in ARES(R), and such a "softball" S.E.T.*

Throughout the morning and into the afternoon, there was a never-ending buzz of friends catching up on happenstance and on recent technical developments. Impromptu operating or technical lectures erupted periodically, and everyone got to see and try new things. We made an important discovery of a storage battery well past its prime, which will lead to improved readiness for any future needs. A fantastic ham radio outing, despite the threatening weather, which was much worse in other locales.



Homemade end-fed dipole with 49:1 Balun in electrical box. Dog leash corkscrew provides "ground" in the 2500 ohm environment

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, starting September 1, 2018
- 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:
David A. Pennell, NP2MR (352) 602-5164
np2mr@yahoo.com in advance of the meeting.

Lake Monroe ARS FCC Testing, Sanford FL (LMARS)

- Third Saturday every month
- 9:15 AM
- Seminole County Sheriff's Office
Off SR 17-92, on 100 Eslinger Way in Sanford
- 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)

- First Wednesday every month
- 5:30 PM
- Beardall Senior Center
- 800 Delaney Ave, Orlando, FL 32801
- Info: <https://oarc.org/events-ve-testing>
- Monthly Club Meeting follows at 7:30 PM

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)

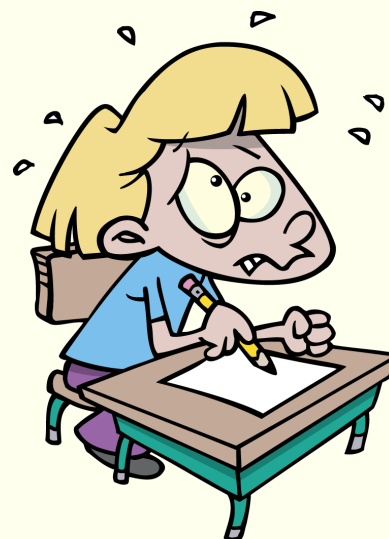
- Go to <http://k4gso.us/class/> to signup for classes
- Go to <http://k4gso.us/test-signup/> for testing. Testing is held on the 2nd Tuesday of odd months at 7 PM.
- Note <http://k4gso.us/ncvec605/> is requested to be filled out before you show for testing. It is best to download the form and open it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

- First Tuesday of each even numbered month
- 7:00 PM
- American Red Cross, 1115 Easterwood Drive, Tallahassee, FL
- Contact TARS : tallyamateurradio@gmail.com with questions
- Info: <http://www.k4tlh.net>



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

Links to the NFL Web Site

For net, hamfest and other events go to www.arrrl-nfl.org or select the option below. Web Master Bert Garcia, N8NN, 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, contact Bert at: n8nn@arrrl.net.

[Section Nets](#)

[Northern Florida STM Report](#)

[Florida Hamfest/Convention Calendar](#)

[Operating Events](#)

[Emergency Communications Archive](#)

Web Wise

NFL Officials

Section Manager – Kevin Bess, KK4BFN

Assistant Section Managers – Joseph D. Bushnel W2DWR, John C Reynolds W4IJJ, Dave Davis WA4WES, Jeff Capehart W4UFL, Neil Light KK4VHX, Ray Crepeau K1HG, Steve Szabo WB4OMM

Section Emergency Coordinator – Karl Martin K4HBN

Section Public Information Coordinator – Scott Roberts KK4ECR

Assistant SE Coordinator – Robert A. Mitchell W4HKG

Section Technical Coordinator – Frank Haas KB4T

Affiliated Club Coordinator – *Appointment Pending*

Section Traffic Manager – *Appointment Pending*

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.arrrl-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.