



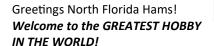


Providing timely and interesting information to Radio Amateurs in North Florida

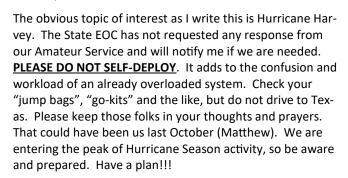
Volume 4, Issue 9 <u>www.arrl-nfl.org</u> September 2017

Steve's Take:

NFL Section Manager Steve Szabo, WB4OMM



Hi Folks,



Fall is upon us! My favorite time of the year! The contest season starts with the September VHF Contest through the start of next year. Time to get out and check those antennas and cables! Also, a great time to get outdoors as the temp and humidity drop to reasonable levels! The ARRL Simulated Emergency Test is quickly approaching - the main weekend for the 2017 ARRL Simulated Emergency Test (SET) is only a little more than a month away — Saturday and Sunday, October 7 and 8, more info is here: http://www.arrl.org/news/get-with-the-set-arrl-simulated-emergency-test-set-fall-classic-just-ahead.

There are a large amount of contests, events, and activities that lend to portable operations. Look here for a schedule of contests and activities: http://www.hornucopia.com/contestcal/contestcal.html.

Last month, I visited the Gainesville Amateur Radio Society (GARS). It was a blast! I had dinner with a few of the Club officers and, at the meeting, we talked about various issues that are on the horizon for ham radio in Central Florida. This month I head to Sanford for the Lake Monroe ARS Annual Auction! No, I'm not bidding on anything!!! I have too many radios already!! (Do we really ever have too many radios??). Pensacola's Hamfest is Sept 22nd and 23rd – I can't make this year's Hamfest as Friday the 22nd is my



Check out our fabulous NFL Section Web Page and read our spectacular Newsletter (September issue) QST NFL. http://arrl-nfl.org/

Keep vigilant on the weather and have a GREAT Labor Day holiday!

Get involved, get active, get happy! Stay safe, get on the air, and have fun!!

EVERYONE COUNTS!

73, Steve WB4OMM

Steve Szabo WB4OMM

NFL Section Manager

ARRL, The National Association for Amateur Radio™

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What's inside

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 Demonstrates WINLINK
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Email your QST NFL input to WB2VYK@gmail.com Marty Brown, WB2VYK, Editor



Hams & Hurricane Harvey

Thanks to: Carl Berry, KC5CMX, AEC Marion County FL ARES

ARRL Reports....

On the morning of August 29, radio station WGMD in Rehoboth Beach, Delaware interviewed ARRL Public Information Officer Mike Urich, KA5CVH, on the scene in Harris County, Texas. Click the PLAY button in the upper left corner to listen. (Our thanks to WGMD for their permission to redistribute this interview.)

http://www.arrl.org/hurricane-harvey-response

John Ellis, NP2B, Has Flagpole Antenna Article in September QST

QST NFL Contributing Editor, John Ellis, NP2B, has another article in the September 2017 **QST**. John's topic is a flagpole antenna that might work around your HOA restrictions.



Countdown to W4DXCC

September 22nd and 23rd, 2017, Pigeon Forge, TN

- W4DXCC DX and Contest Convention
- Ham Radio Bootcamp W4DXCC Registration
- Prizes & Special Raffle
- Banquet
- Vendors: Icom, Yaesu, Elecraft, Flex Radio Systems, Vibroplex companies, Expert Amps, Steppir and US Towers

Hotel Reservations Here
Convention Registration Here
Online Registration Here

Dave Anderson, K4SV Convention leader info@w4dxcc.com

Understanding Propagation Numbers (A, SFI, K)

Carl Berry, KC5CMX AEC Marion County FL ARES

http://www.iw5edi.com/ham-radio/?understanding-propagation-numbers,91

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Alachua County ARES Demonstrates WINLINK for Dixie Amateur Radio Club

by Gordon Gibby KX4Z

Three amateurs from Alachua County, Vann Chesney AC4QS, Gordon Gibby KX4Z, and Rosemary Jones KI4QBZ trekked westward to Trenton, Florida and joined the DARK club (http://www.darklub.org/) on Monday, August 21st to provide a full working demonstration of email by VHF WINLINK and keyboard QSO's using packet radio. Within minutes of arrival, club members were having fun keyboard chatting with each other using three small ham stations, made out of plywood-mounted Baofeng UV5-R transceivers and homebrew soundcard interfaces.

Vann demonstrated that with nothing more than a length of coax to his mag-mount vehicle antenna, his plywood go-box radio could easily reach the North Florida Amateur Radio Club digital repeater NF4RC-7 and send email via Alachua County WINLINK gateways - buzzing the cell phone of one of the Dixie club members with email during his talk! Two new WINLINK free accounts were set up on the spot for Dixie Amateur Radio Klub members, and how to use simple sound-card based systems with free "soundmodem.com" software was demonstrated with four total working stations in the same room. The low-power Baofengs were assisted by a go-box node repeater out in the parking lot. The Alachua ARES group is becoming highly portable!

Dixie acting president Mike Sherrill KB4MS, in his professional Florida Forest Service role, was the key to allowing the Alachua County ARES group the use of the Forest Grove lookout tower and antenna. This now provides digital communications to western Alachua County, all of Gilchrist county, and some of Dixie County.

Dixie club members enthusiastically embraced the new trappings of a quite venerable amateur radio packet technique. With the Alachua County "emergency-Steinhatchee-digitalhighway" S.E.T. expedition coming on October



Portable inexpensive voice & digital station useful for training or short-distance emergency communications. Printed circuit board contains simple transistor circuit & transformers to isolate sound card from radio and activate push-to-talk.

7th, Dixie members may join in on some of the disaster communications exercise.

Reference Information

Free software to allow soundcard to act as TNC: http://uz7.ho.ua/modem_beta/soundmodem97.zip

Free EasyTerm keyboard QSO software: http://uz7.ho.ua/apps/easyterm39.zip

Free WINLINK email software:

ftp://autoupdate.winlink.org/User%20Programs/
Winlink Express install 1-5-7-0.zip



Alachua (Continued)

Alachua County ARES Successful MESH Test Leads to Network Plans

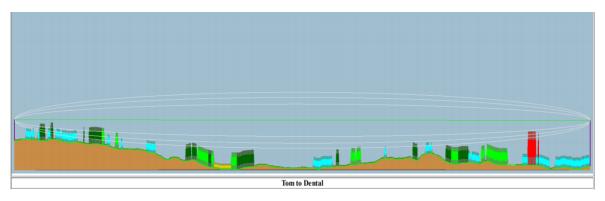
by Gordon Gibby KX4Z

The first known Alachua County outdoor 4-mile 2.4 GHz ham radio contact was made Saturday August 5th, from the roof top of the University of Florida Dental building to an omnidirectional 15 dBi vertical hoisted 60 feet high into a pine tree by Tom Cox, NK3F. 14 dB S/N was achieved on 2.397 GHz, 5 MHz bandwidth. Transceivers were Ubiquiti 600 milliwatt Bullet-M2's, using AREDN free software. Alachua County ARES volunteers hand-held a 24-dBi parabolic dish antenna pointed at 300 degrees, watching a computer plot of signal strength to find the peak signal.

The parabolic antenna concentrates the 0.6 watt microwave signals into a beam with a signal roughly equivalent to more than a 100 watt transmitter. Radio Mobile Online (http://www.ve2dbe.com/rmonline.html) predicted success, but was optimistic by about 10 dB. Microwave signals are easily absorbed by foliage, and our link had to descend through considerable tree tops to reach Tom's vertical antenna.



Alachua ARES members (L to R) Gordon Gibby KX4Z, John Troupe KM4JTE, and Vann Chesney AC4QS make first outdoor microwave contact.



Radio Mobile's stylized chart of the signal path showing Fresnel Zone & possible obstructions. (http://www.ve2dbe.com/rmonline.html)

The Radio Mobile plot (with Tom on the left, Dental Tower on the right) indicated that a group of dormitories' roofs might interrupt the lower portion of the "Fresnel Zone" space which the microwave signal occupies. (see http://www.qsl.net/nf4rc/TomToDental.pdf) Although 4 miles apart, the antennas were high enough to allow relatively uninterrupted direct line of sign (except for tree tops). Throughput wasn't measured, but with a 5 MHz bandwidth, extremely high speed would be expected.

The ubiquity web server at the far end was accessed to further test communications.

U.S. amateur radio operators enjoy considerable space at 2.4, 3 and 5 GHz bands, some of which overlaps the Part 15 consumer WIFI spectrum for which these low-cost microwave transceivers were originally designed. By "upgrading" the Ubiquiti devices with replacement ham-radio firmware from AREDN, it becomes possible to select frequencies that are "ham-only" --- legal for amateur radio operators but outside the consumer Part

Alachua (Continued)

15 bands. This reduces QRM from consumer devices as well as making it less likely that these systems will experience unwelcome intruders. Full FCC-legal identification is automatically transmitted at regular intervals.

Voice (voice over ip, voip), email, video, and keyboard contacts would be possible, using inexpensive Ubiquiti hardware available even on Amazon. Ed Gray KN4DZE, is building a Raspberry-pi based emergency comms web server for this system. Two weeks later a planning group led by Jay Garlitz AA4FL, President of the Gator Amateur Radio Club (GatorRadio.Org) met and examined possibilities to install the parabolic permanently on the roof top. His club already has 5 HF wire antennas, an HF beam, VHF beam, steerable satellite antennas, and several omnidirectional VHF antennas on that roof! Along with the 2.397 GHz station, a 5 GHz station is planned, as well as a link to a 2-meter AX.25 packet system that would connect to the existing 4000-sq.mile ARES low speed packet network, to enhance emergency communications.

Working from Perry Field, Silver Springs ARC

Carl Berry, KC5CMX AEC Marion County FL ARES

Jeff Hecht (L), K8GD, visiting from Dayton, brother of Doug Hecht, KM4ZQF, shown here working AE1N on 20 meters. Jeff is using one of the Kenwood TS-570s at the Silver Springs Radio Club's Perry Field station on the East Rhombic. 599 into New Hampshire.

Jeff said in an off comment it would be worth it to move to Florida and to join the club just to work the rhombics."

The next station worked was in North Carolina, and they were working on 4 watts on 40. "The gain on the antennas is phenomenal," Jeff said, thoroughly impressed to the point of his jaw dropping.

The club is always looking for new members and, with the great antenna farm we have, we'd love to have you join or drop by for a meeting. There's always something going on, and if there isn't, YOU can make it happen!

73 and see y'all December 2 at the Happy Hams and Hogs Hamfest.



DOORS OPEN AT

7:30AM

By SSRC's very own

Brian Purdy W3AVR



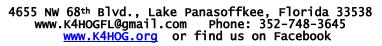


Friday Free For All Net Kicks off on the 146.925 Repeater

Hog County Amateur Radio Association, Inc. Gene King - KI4LEH, President



Hog County Amateur Radio Association, Inc. - K4HOG





August 28, 2017

To: Marty Brown - WB2VYK, Editor

ARRL North Florida Section – News Letter

Reference: New – "Friday Free For All Net"

Hey Marty,

I wanted to let you know about our new "Friday Free For All Net". We kicked it off Friday, August 4, 2017 at 8:30 PM on the 146.925 Repeater in Sumterville, Florida. We have four Nets behind us now with the first two having fourteen (14) check-ins, our third one dropped to eight (8) but our fourth one bounced back with eighteen (18).

The Net is a multi-purpose Net wherein we include a "Trader's Net", "Technical Net", "Informational Net" and wrap it up with a "Rag Chew" Net. We have been able to list a few items on the Trader's Net, no sales as yet though. The Technical Net has made it interesting with a few technical questions which of course garner several different answers or view points if you prefer. The Informational Net is of course to share information that may be of interest to Hams; HamFest / Tail-Gates, events that are going on by other clubs and community events that may be of interest. Then of course we wrap up by the Rag Chew Net which may also be a review of previous items.

Due primarily to the implementation of the new repeater and antenna the 146.925 now has a much larger foot-print. On this Net we have had check-ins from the farthest being Jacksonville, with others from Astor, Dunnellon, Winter Garden, Umatilla and Tampa.

Again, just wanted to let you know about the Net and if you run out of items to post about we would appreciate the opportunity to be listed. The Net is open to all amateurs who can reach the repeater.

73,

Gene King - KI4LEH

New Florida WINLINK HF-Forwarding Gateway Opens in Crown District

by Gordon Gibby KX4Z

Retired cardio-thoracic nurse Ray Cook, Jr., WD4SEN of Middleburg, FL, turned on the third WINLINK high frequency (HF) gateway in the North Florida Section in early August. He already had considerable experience with multiple VHF WINLINK gateways and an APRS digipeater in Clay County. Ray's volunteer Kenwood rig runs about 100 watts output through an automated tuner into an off-center fed dipole and provides both WINMOR (sound-card mode) and PACTOR free radio email access for thousands of miles. Earl Leach, WX4J, graciously donated the PACTOR modem for this effort. Earl put years and years of volunteer service into this system.

Why is an HF-forwarding gateway important for emergency communications? The answer is that it can provide communications even after a loss of the Internet and normal telecommunications. Most VHF WINLINK gateways only connect to the Internet, and during a telecommunications crisis may have no way to forward email (though some can act as a local email postoffice, similar to a bulletin board system). However, if an email is uploaded to Ray's station and instant forwarding to the addressee by the Internet isn't available, his system will automatically search out a more distant HF station to whom the message can be forwarded. If that station can't access the Internet, the process continues until the message reaches an area of working Internet, or alternatively until it reaches the designated "message pickup station" for the recipient, who then retrieves it up by radio. The FCC allows this operation in narrow slices of HF amateur bands in the CW/data portions. If the internet exists somewhere, email can be sent to any normal email address, even if that person isn't even a ham or involved in WINLINK – a perfect EMCOMM system. Email can include any kind of attachment, though small is the order of the day --- this is RADIO transmission! Speeds are limited by FCC regulations and available bandwidth.

Ray tested that system by simulating Internet loss, then created an email and watched it get forwarded in minutes out of the state — all automatically. Hooray! Ray is now far more capable of providing backup distant email access for his local EOC in the event of a catastrophe, and is looking forward to doing more lo-



cal training of other ARES volunteers. He's also considering funneling more of his existing VHF nodes/gateways back into his HF gateway, and possibly setting up an HF Gateway at his local EOC. The EOC might want to position their gateway on non-amateur, federal frequencies as part of the (hush-hush) SHARES federal version of the same WINLINK digital email system.

Ray's station makes the third automated HF WINLINK gateway suitable for emergency communications in the North Florida ARRL Section, joining AF4SK in the panhandle, and KX4Z in the Gainesville area. There are only two federal digital SHARES gateways in our state. All told, the entire WINLINK system moves approximately 50,000 message traffic by radio every month. Florida stations are often used by mariners in the Carribean, Gulf and South Atlantic waters, particularly during the calm-water months. His station now appears in the lists of possible gateway stations in free WINLINK user software. (download: ftp:// autoupdate.winlink.org/User%20Programs/ Winlink Express install 1-5-7-0.zip) It is likely that after his station becomes better known, he'll move up to handling 100-300 email traffic every month!

Northern Florida STM Reports for August 2017

Tom Housworth KIOJO Section Traffic Manager

Station Activity Reports

TOTAL CALLSIGN KI0JO 566 KZ8Q 211 N9MN 158 KA1G 97 WC4FSU 56 WB4RJW 51 KM4VTK 50 WD3B 45 N3JUY 38 AF2W 33 W4NFG 29 KJ4HGH 16 KJ4G 13 KZ1V 3

Public Service Honor Roll

CALLSIGN	TOTAL
KF4DVF	136
KI0JO	120
WD3B	115
WC4FSU	110
KA1G	100
KZ8Q	100
WB4RJW	90
N3JUY	88
AF2W	83
N9MN	80
KB4VOH	74
KJ4G	73
KJ4HGH	66
KZ1V	26

Brass Pounders League

CALLSIGN	TOTAL
KI0JO	566



Nets

NET	ABB.	QNI	QTC	QND	SESS	MGR
						WR4FSU/
Florida Phone Traffic Net	FPTN	1358	187	851	31	N4GMU
Northern Florida ARES Net	NFARES	1963	44	945	27	W4NFG
Northern Florida D Star Net	NFDSN	68	4	58	4	W4NFG
Northern Florida D-Rats Net	NFDRN	42	2	59	5	W4NFG
QFN CW NET	QFN	283	38	354	31	KZ8Q
Volusia County Traffic Net	VCTN	320	35	563	31	WD3B
Gulf Coast VHF Training Net	GCVTN	889	38	435	31	K4QBH
Lake County ARES Net	LCARES	195	13	197	13	N4KXO
Seminole VHF Traffic Net	SVTN	437	84	647	29	KG4QCD
North Florida Phone Net	NFPN	1949	6	952	31	AI4GF

Florida Hamfest/Convention Calendar and Operating Events

If you don't find your local hamfest or activity listed here, contact the webmaster at the email address on the bottom of this page. Find more information at the ARRL Hamfest Calendar.

- September 9, 2017 3rd Annual Lakeland ARC Hamfest, Lakeland, FL http://lakelandarc.org
- September 22, 2017 Five Flags ARA Hamfest http://pensacolahamfest.com
- September 23, 2017 Pasco County HamFest, Odessa, FL http://sarcfl.com
- October 13, 2017 Florida State Convention 52nd Annual Melbourne Hamfest & 2017 ARRL State Convention, Melbourne, FL http://www.pcars.org
- October 21, 2017 WV4ARS Hamfest, DeLand, FL http://westvars.wixsite.com/deland-new!
- October 28, 2017 Fall 2017 Cy Harris, Oakland Park, FL http://browardarc.net/free-flea/
- October 28, 2017 Jacksonville FREE Hamfest, Jacksonville, FL http://nofars.net
- November 4, 2017 LARA Annual Tailgate, Tavaras, FL http://www.k4fc.org NEW!
- November 11, 2017 SPARC Fest, Pinellas Park, FL http://sparc-club.org
- November 11, 2017 Palms West ARC Flea Market, West Palm Beach, FL http://palmswestradio.org
- November 18, 2017 Flamingo Net/UMARC Free Flea, Coral Gables, FL http://www.flamingonet.8m.net/
- November 25, 2017 Hamfest in the Woods, Okeechobee, FL http://K4OKE.com
- December 2, 2017 Silver Springs Radio Club Hamfest, Ocala, FL http://k4gso.us/hamfest NEW!
- December 8, 2017 Tampa Bay Hamfest, Plant City, FL http://www.fgcarc.org/
- January 19, 2018 Southwest Florida Hamfest, Ft Myers, FL http://swflhamfest.info
- January 27, 2018 DeSoto County Hamfest, Arcadia, FL http://desotoarc.org
- February 9, 2018 Florida State Convention, Orlando HamCation, Orlando, FL http://www.hamcation.com
- February 24, 2018 4th Annual TECHCON Conference, Winter Haven, FL http://www.arrlwcf.org
- March 10, 2018 Charlotte County Hamfest, Punta Gorda, FL http://prra.club
- March 17, 2018 Southern Florida Section Convention, Stuart, FL http://www.stuarthamfest.com

FCC Testing Information

LMARS FCC Testing

- Every odd month (January, March, May, July, September, November)
- Fourth Saturday
- 9:15 AM
- Seminole County Sheriff's Office
- Off SR 17-92, on 100 Bush Blvd in Sanford (across from Flea World)
- For more information and registration, contact Bob Cumming, W2BZY, 407-333-0690

North Florida ARS

- Weeknight testing for all grades of license in Feb., May, Aug. and Nov.
- Hogan Baptist Church at the corner of Hogan Rd. and Parental Home Rd. in Southside.
- Advance registration is required. See http://nofars.net/home/fcc testing

Lake ARA

- Monthly on the 3rd Saturday, prior to monthly meeting. (Except December)
- 8:00 AM
- <u>LARA Clubhouse</u> (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.

Suwannee ARC

- 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



Section Nets.....

For net details go to $\underline{www.arrl\text{-nfl.org}}$ and select the Nets option.

Net	Frequency	Day/Time (Local)		
Central Florida D-Star Training Net	REF046C. D-Rats nfl.ratflector.net	Wednesday, 0900		
Clay County ARES Net	146.925, Tone 156.7	Sunday, 1930		
Crestview Gulf Coast VHF Training Net (GCVTN)	147.360, (+), PL 100Hz	Daily, 20:00		
Crestview SARNet	Statewide UHF Net on linked repeaters on 444.900, (+) PL 100Hz	Friday, 0900		
Crown District ARES Net	145.925 (156.7)	First Wednesday, 2030		
Defuniak Springs Walton County ARC Net	147.285 (+), PL 100Hz	Monday, Wednesday, Friday, 1930		
Duval County ARES Net	146.70 (127.3)ALT:147.315(127.3)	Wednesday, 1930		
Florida Hurricane Net,	D-Star REF037C	Monday, 2100		
Fort Walton Beach – Playground ARC Net	146.790, (-), PL 100Hz	Sunday, 2000		
Friendship ARC—Ocala	146.61, PL 123	Monday, 1600		
Hog County Amateur Radio Assn Net , K4HOG,	145.490, PL 123.0	Monday, 2000		
Bushnell FL Hog Country Friday Free For All	146.925	Friday, 2030 NEW		
Madison County ARES Madison County ARC	145.190, Lee Repeater, PL 123	Sunday, 2100		
Milton 2-Meter Net	145.490 (-), PL 100Hz	Monday, 2000		
Milton Santa Rosa County ARES Net	146.700 (-), PL 100Hz	Tuesday, 2000		
Nassau County ARES Net	147.000 (-) (127.3)	Wednesday, 2030 (Except 1st Wed)		
NFL ARES Net	7.242, Primary 3.950, Secondary	Monday-Saturday, 0900		
NFL D-Star Net	REF046C, D-Rats on nfl.ratflector.net.	Wednesday, 0900		
NFL Digital Net	3.590 PSK 31, USB	Sunday, 1900		
NFL Phone Net (NFPN)	3950 Alt 7242 and 7247	Daily, 1930		
Northwest Florida DX Net	147.555 (simplex)	Tuesday, 1930		
Okaloosa County ARES Net WIRES-X System in FM (not digital)	442.950 (DCS023) North Area 444.800 (100 Hz) South Area	Monday, 1930		
Orange County ARES Net and Skywarn	443.050	Thursday, 1900		
Pensacola Escambia County ARES Net	146.760, PL 100Hz	Monday, 1930		
QCWA Citrus Chapter 45	147.195	Tuesday, 1930, Echolink W2AS-L, #node 627152		
QCWA Suwannee Chapter 62, Ocala	3940	Saturday, 0900		
QCWA The Villages Chapter 217	443.150, PL 103.5	Friday, 1000		
QFN CW Traffic Net	3547 Winter (7105 Summer)	Daily, 1900		
Santa Rosa County Skywarn Net	146.700, K4SRC Repeater	Monday, 2000		

Section Nets, continued......

SAR NET	http://sarnetfl.com	Click 140614_FDOT_UWAVE_Map_with_UHF_cove rage.16664435		
Seminole VHF Traffic Net	147.090 MHz, offset of +600, PL 103.5 147.450 Simplex	Daily, 1915 First Monday, 19:15		
St. Johns County ARES	147.210 (127.3) ALT:147.015 (127.3)	Wednesday, 2000		
SSRC (Silver Springs Radio Club) Net SSRC Ragchew Net SSRC Skywarn/ARES SSRC MERT	146.610 pl 123 28453 146.610 pl 123 146.610 pl 123	Monday, 1900 Monday, 2000 Wednesday, 2130 Thursday, 2130		
Suwannee ARES/Emergency Prep Net	145.270 PL 123 145/410 PL 123 FSQ— 3.594 MHz	Thursday, 2030		
TARS News and Information Net	147.030+, PL 94.8	Thursday, 2000		
TFN Tropical Florida Sideband Traffic Net	3942	Daily, 1800		
The Villages Amateur Radio Club (TVARC) Rag- chew Net	443.225, PL 103.5 Echolink K4VRC-R	Monday, 1900		
Traders Net	3.933	Sunday, 0800		
Valparaiso Twin Cities Amateur Radio	146.73, (-), no PL tone	Sunday, 2030		
VCTN Volusia County Traffic Net	147.150, +.600, tone 127.3 145.330,600, tone 127.3 (Alt)	Daily, 2245		
Walton County ARES Net	147.375 (+), PL 100Hz	Wednesday, 1900		

NFL Officials

Section Manager – Stephen W. Szabo WB4OMM
Assistant Section Managers – Joseph D. Bushnel W2DWR,
John C Reynolds W4IJJ, Dave Davis WA4WES, Jeff Capehart
W4UFL, Neil Light KK4VHX, Ray Crepeau K1HG
Section Emergency Coordinator – Strait Hollis KT4YA
Assistant SE Coordinator – Robert A. Mitchell W4HKG

Section Technical Coordinator – Frank Haas KB4T Affiliated Club Coordinator – Steve Palmer KM4SDP Section Traffic Manager – Tom Housworth, KIOJO Official Observer Coordinator – Rick A. Lloyd AA4W State Government Liaison – Darrell Brock N4GOA





Newsletter of the Northern Florida Section of the American Radio Relay League (ARRL)

- Spread the word about our website <u>www.arrl-nfl.org</u> 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 WB2VYK, wb2vyk@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, WB2VYK, wb2vyk@gmail.com.