



# QST NFL



Sharing information of interest to Radio Amateurs in North Florida

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December 2021

## Jacksonville Radio News

Billy Williams, N4UF

The Jacksonville Ham Radio Christmas Dinner is Saturday, December 11th at Terry Parker Baptist Church. In addition to catered barbecue, there will be prizes and awards. The fun starts at 4pm. Hams, families and visitors are invited. Again, we will participate in the Salvation Army Christmas Wish program. CBS47/Fox30 Chief Meteorologist Mike Buresh will collect toy donations. Contact Neal N4FAS via [n4fas88@gmail.com](mailto:n4fas88@gmail.com) to reserve a seat. Only a few tickets will be sold at the door.

NOVEMBER 11TH NOFARS MEETING: Army, Navy, Air Force and Coast Guard veterans were among a dozen or so in attendance who spoke about their military jobs and duty stations. Major Keith Biggers from Jax Salvation Army summarized the organization's projects and activities. He thanked area hams who support Christmas Wish.

STEVE BRYANT, KK4PTS: A Navy veteran who often attended NOFARS meetings, Steve passed away in late September following complications from surgery. After enlisting in 1967, he served on the USS Forrestal and the USS John F. Kennedy in the Mediterranean.

One of his last assignments before leaving the Navy in 1977 was supporting the Attack Squadron 72 Blue Hawks. He was an Aviation Fire Control Technician, PO First Class. Steve became a heavy machinery master diesel mechanic, known for his abilities to keep equipment ready for the task at hand.

Steve was buried in Arkansas at the Fayetteville National Cemetery. His sisters, Linda and Susan, wrote that "he shared with us how much he enjoyed his involvement with Ham Radio and the people he communicated with all over the world. We will miss him tremendously: he was indeed a special big brother...an encyclopedia of knowledge of many subjects and loved his city of Jacksonville. We want to thank your club for being a special part of his life."

Continued on next page...

## Did you know?

Arc Thames, W4CPD



The NFL section has a **Facebook** group? Be sure to [check it out](#) and join to stay connected!



If you have an event you want to share with the section, or an article you'd like to write for the **ARRL NFL website**, [arrl-nfl.org/](http://arrl-nfl.org/)? You can [Contact the webpage manager](#) using the Contact Us link on the website. We'd love to be able to share your event or article with the section!

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You can email your **QST NFL** input to [n4gl.marty@gmail.com](mailto:n4gl.marty@gmail.com), Marty Brown, N4GL, Editor.

All submissions are subject to editing prior to publication.

JACKSONVILLE FREE HAMFEST: Excellent weather with over fifty sellers highlighted the October 30th Jacksonville FREE Hamfest. The auction was back with Jack Driskell, KB4B as auctioneer. The next large gathering is the 2022 Jacksonville Radio FREE Flea on Saturday, March 27th.

PINS & DECALS: Peel-off decals and pins with NOFARS triangular logo are available from K14PIL. Pins are \$5 and decals are \$3. Proceeds go to the W4IZ repeater fund.

2022 NOFARS OFFICERS: Officers for 2022 include K14PIL (President); N4UF (VP); KF4AAF (Secretary); N2GLF (Treasurer); K1KVA (Activities Mgr.) and K14RHQ (Director).



**SILVER SPRINGS  
RADIO CLUB  
2021 HAMFEST**

**Saturday, December 4, 2020**

**FIRST CHRISTIAN CHURCH**

**1908 EAST FORT KING STREET, OCALA, FL 34471**

**DOORS OPEN AT 7:30 AM**

**SPECIAL NOTE:**

Because of COVID-19, all attendees are encouraged to use their own judgment regarding use of face masks/coverings while attending the hamfest. Table layout is designed to promote social distancing and limited occupancy. SSRC will follow all official COVID restrictions.



**Grand prize and door prizes**  
Grand prize ticket is separate from door prize ticket. Admission ticket stub good for door prizes only. Both are available at the door only! Additional door prize tickets \$5 each.  
No online sales.

**VE Testing**  
One session only at 10:00 AM  
Bring two forms of ID & FRN + FCC Reference copy, if upgrading  
Test Fee is \$15 cash.  
Test slots are limited.  
Pre-register at K4GSO.US

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

Ham Food and drinks available for purchase from Scout Troop 439

General Admission	\$10
Tailgate – Car & Driver	\$20
Additional Tailgate Space	\$10 each
Additional Person	\$10

**Grand Prize**



YAESU FTM-300DR

**Commercial Vendors**  
Tower Electronic  
Signman Of Baton Rouge  
Hamworld  
J T Communications  
Paradan Radio  
Nightfire Electronics  
And others

**Flea Market & Tailgate**  
Inside flea-market tables in Fellowship Hall

Separate Tailgate area in parking lot on a first-come first-served basis.  
No advance reservations.  
(Bring your own table and chairs)

TALK-IN ON K4GSO VHF 146.610 PL-123

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

## Five Flags ARA & Pensacola State College Graduate Another Class

Gene Bannon, KB4HAH

The Five Flags Amateur Radio Association (FFARA) and Pensacola State College (PSC) Sponsorship of the "Amateur Radio Introduction and Upgrade" fall term class of 2021 had recently completed another graduating class of 10 in which eight are newly and/or upgraded ham operators. The class was presented in a classroom environment with instruction on how Amateur radio operators conduct our hobby safely. We introduced the rules and basic knowledge that is required for our ham radio equipment. We demonstrated the skills needed to operate our equipment using our Mini Field Day presentation, and we had our students construct their own VHF/UHF portable antenna. Furthermore, we took our class to the Escambia County Emergency Operations Center to demonstrate the importance of amateur radio in the event of distress and disasters. We are very proud of our students and hope they will enjoy our hobby as much as we do.

Here are just some photos of our class this term.



Ann KN4ZEA & Ann build their antenna.



Dave N4KD & Larry N4TAC giving instruction on building the antennas.



Testing....



Class mini-Field Day fall 2021



Kathey testing her antenna.



Mini-Field Day October 26, 2021



Victor, Bill, and me putting up Bill's digi antenna October 26, 2021

## Gainesville Amateur Radio Society Celebrates Veterans' Day

by Gordon Gibby KX4Z and Vann Chesney AC4QS

The amateur radio operators from the Gainesville Amateur Radio Society were out in full force assisting with the helicopter landing and parachutists of the Gainesville 2021 Veterans' Day festivities at a local park. They also provided a booth to allow the public to get a look at ham radio and get questions answered by experienced hams.

Eighteen of the local club members participated in the public service event and seven were detailed to do "foreign object debris" sweeping of the area where the helicopter down-wash might create projectiles. Jim Carr KC4MHH headed up the "aviation detail" using DMR channels for comms with his crew of helpers.

Vann Chesney AC4QS, current president of the GARS club, helped arrange the entire effort and was quite happy with the volunteer turnout. Although a somewhat smaller public attendance, there were still a LARGE number of citizens milling about all of the booths and sampling the food. One GARS member brought some donuts which were free and quickly scarfed up by visitors! Lots of camaraderie and sharing of stories and knowledge went on throughout the half-day event.

The Gainesville Amateur Radio Society plans to also serve on Saturday, December 4th, when Santa Claus arrives by helicopter at a huge local college field as part of local Christmas festivities. The club provides a "radio connection" (2-meter FM) to "Santa Claus" for children to notify the jolly old fellow of their Christmas wishes and is always very popular with moms and kids.

These events are also a great way for ARES(R) members to help out and gets sign-offs on their Task-book as well as have fun with other hams.



Larry Rovak WB2SVB (right) chats with fellow GARS member Ken Miller KF4ULO while young adults get their questions answered by hams manning the booth.

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### DHS AUXCOMM Course Feb 7-9, 2022 Orlando, FL

The AUXCOMM class is designed for auxiliary communicators and other communications groups who volunteer to provide backup radio communications to support public safety agencies such as Emergency Management, Fire, Law Enforcement, Medical, and so on. More information can be found on the [Hamcation website](#).

When asked how he enjoyed the course, *Arc-W4CPD, Assistant NFL Section Emergency Coordinator* said: "It was hands down one of the best emergency communications courses I've taken. It really tied together many of the other individual courses I had tak-

en. The hands on activities and the group exercise at the end were invaluable. If you're interested in emergency communications, this course is for you." Only 30 seats are available so be sure to [apply for the course](#) as soon as possible.



## Panhandle Activity

DJ Stewart, KI4ZER

### Hello fellow Hams!

October was a very productive month and November has proven to be just as abundant with activity in the **Panhandle of Florida!**

Our first stop of the month takes us to the **Walton County Amateur Radio Club in DeFuniak Springs Florida** for their monthly Business Meeting.



There they discussed upcoming events sure to be of great interest in **Walton County** supporting **Amateur Radio** and the community at large! First up on their docket was planning and official announcements of events! They are inviting all Hams to come and enjoy a **free Tail 'Gator** (pun intended)! There will be at no cost to you (donations accepted) for **Coffee, Donuts and Dogs!** Come grab a spot on **Saturday January 8<sup>th</sup> 2022 from 8:00 am to 2:00 pm**, drop your tailgates and open your trunks to **buy, sell, swap, trade** or even just to ragchew! This is an **ARRL Sponsored event** and is sure not to be one to miss. More information can be found at the **ARRL Website** at: <http://www.arrl.org/hamfests/wf4x-presents-coffee-donuts-dogs-tail-gator> . More accounts of their events appear later in this writing!

Moving ahead a couple of days we then go to the **North Okaloosa Amateur Radio Club (NOARC)!**

They, along with their much appreciated members and Activities Director **Joe Fellica KN4UDS**, led efforts in unison with the **City of Crestview** to set up and coordinate all communications for the **Downtown Fall Festival**. The direct support enabled the event to be a great success and continues to foster the exceptional relationship not only with the city, but showcase to the Public the support they offer during normal daily life and emergency preparedness!



While at this event they enhanced their communications and coordination capabilities by utilizing a portable repeater owned by **KN4UDS** to ensure reliable communications were established apart from simplex to amplify and rebroadcast their signals over a large area which at times has been known to impact signal reliability.





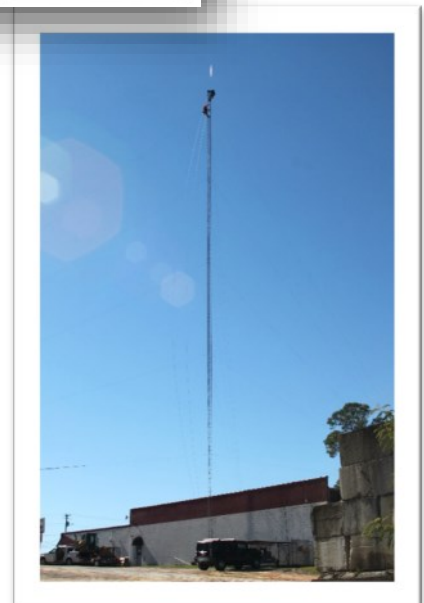
Pictured is the portable repeater in a box. The antenna was attached to a stop sign pole.

**NOARC** being no stranger to providing a vital Amateur Radio service throughout the Panhandle moved on that night to the **Live Oak Baptist Church** in **Crestview Florida** (their sponsored home) and assisted with a parking event for the Annual **Live Oak Baptist Church's** Fall Festival! There, **NOARC** assisted with a night time operation to ensure vehicles and pedestrians alike were able to move around in a safe and orderly fashion! **NOARC** of course took their obligatory annual reflective vest photo which is a staple in the Club!

That Same week, **NOARC** held their Business meeting at the **Live Oak Baptist Church** in **Crestview Florida** and made plans for future endeavors in the club. One of those such items is the **2<sup>nd</sup> Annual NOARC Hamfest**. More information can be found on the **W4AAZ.Org Website** here: <https://w4aaz.org/noarc-hamfest/> . This is an **ARRL** sponsored Event!



Moving into the weekend members of **NOARC** met up with members of the **Southern Amateur Radio Union** to assist with the installation of a new antenna to enhance the repeater link system. That frequency is 147.075 and is available on **Echo-link** at **K04ACL-L**.



## ATU100 Automatic Antenna Tuner Kit

By Bert Garcia N8NN

Numerous commercial automatic antenna tuning units are available priced from \$120 to well over \$1,000. As an alternative, here's an ATU for \$36 in a kit you can build in an evening [1]. The ATU is based on a design by Dave Fainitski N7DDC and uses seven relay-switched inductors and capacitors. The kit includes an OLED display that shows Power, SWR, Inductance and Capacitance. My circuit board arrived with all the surface mount components installed, including the pre-programmed microcontroller. The builder installs the through-hole components and winds the inductors. The required pushbuttons were missing. The power connector provided was not a PC mount. The builder must supply their own case. There is an optional case on Ebay for \$29, and a fully assembled version is also available on Ebay.

The ATU100 is rated at 100 watts and at least 1 watt is required for tuning. The ATU operates from 9-15 VDC at 300 mA. The most recent tuning solution is memorized and retained when power is removed. The three pushbutton functions are Tune, Bypass and Auto. In the Auto mode, the tuner will tune while transmitting, even with an SSB signal. In the manual Tune mode, a continuous carrier is required for tuning. A TX-Request signal is provided to key your transmitter if it includes that feature. I did not try using TX-Request.

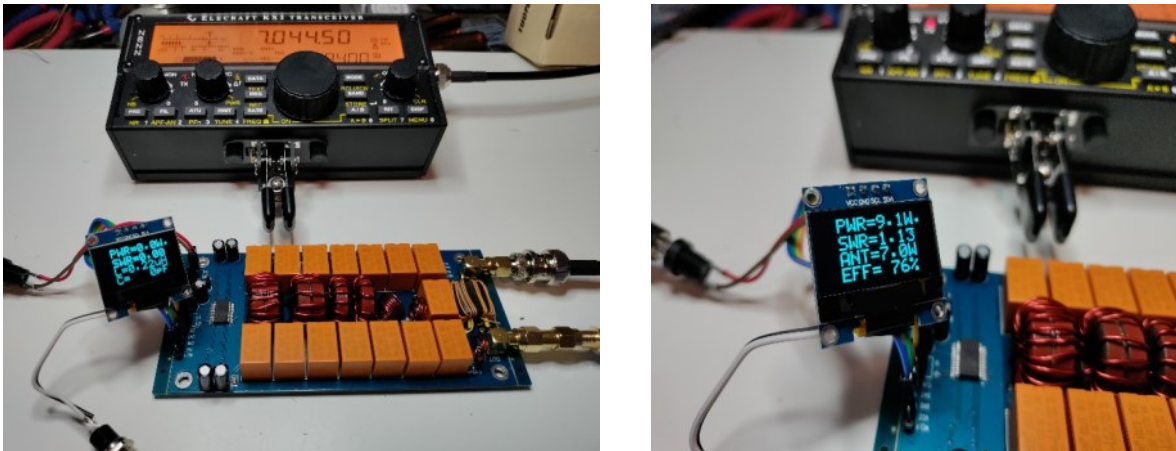


Figure 1: ATU-100 in operation. SWR 1.13 on 40 meters with an end-fed wire antenna.

To operate the ATU, transmit a steady carrier then briefly press the Tune button. The display will show "TUNE" and you will hear the relays clicking as a solution is sought. When the SWR is below 1.3:1, tuning will stop. If you see "OVERLOAD" on the display, you have applied too much carrier power to the ATU. Reduce power and press the Tune button again. The accuracy of the Power display is about 10%. The displayed values for L and C are not calculated; they are programmed into the software. The relays are not latching, so DC power must always be supplied. The current draw is 300 mA, so battery operation is not recommended.

Figure 1 shows my ATU100 connected to an Elecraft KX2 with 9.1 watts into a 126-foot end-fed wire antenna. The SWR tuned to 1.13 to 1 on 40 meters. The ATU100 was able to match the antenna on 80 to 10 meters with an SWR below 1.3 to 1 on all bands with most bands below 1.1 to 1. I found the automatic mode very convenient to use. The ATU100 started a tune cycle in less than one second if the SWR exceeded 1.3 to 1 and finished tuning in about 2 seconds on all bands.

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The most challenging part of the kit is locating the assembly instructions! I have included some websites that will be useful for this kit [2]. Photographs of the assembled kit and schematics provide clues for winding the inductors. The winding polarity of T1 and T2 are not stated, so I just followed a photograph. A ribbon cable is provided to connect the display to the circuit board; however, the Clock and Data wires must be swapped at one end of the cable because the pin functions on the display and circuit board do not align. The ATU100 is fully operational even if the display is disconnected.

The input/output connectors are SMA. While they appear fragile, most SMA connectors are rated at 500 watts – more than adequate for a 100-watt ATU. I used male SMA to female BNC adapters to connect the antenna cables I use for my QRP transceivers. Male SMA to female SO-239 cable adapters were also used.

Since there are no instructions for winding the inductors, I prepared Table 1 by winding and measuring thread to determine the wire lengths. The air core inductors are 0.35-inch in diameter and were wound on a ballpoint pen then removed. The 2xT58 stacked toroids were glued together to make winding easier. For the 10:1 transformer T1-T2, use the provided insulated wire to wind the two 10 turn coils. Take care building T1 and T2. The wire is very delicate, and the insulation is difficult to remove. Use AWG 18 solid insulated wire for the single turns in T1 and T2.

Inductor	Core	Value	Diameter	Turns	Wire Size	Wire Length
L1	Air	0.05 uH	.35"	3	0.5 mm	5"
L2	Air	0.10 uH	.35"	4	0.5 mm	7"
L3	Air	0.22 uH	.35"	7	0.5 mm	12"
L4	T58	0.45 uH	-	8	0.8 mm	10"
L5	T58	1.00 uH	-	13	0.8 mm	16"
L6	2xT58	2.20 uH	-	13	0.8 mm	19"
L7	2xT58	4.40 uH	-	20	0.8 mm	25"
T1, T2	Binocular	-	-	10:1, 10:1	-	See text

Table 1: Inductor winding data.

The ATU100 provides a lot of value for the price. It works well and is fun to build. I plan to put my ATU100 in the optional case and take it on my next day in the park. Enjoy!

#### References:

1. ATU 100, <https://www.banggood.com/> search ATU100. May be available at a lower cost from Ebay suppliers. A fully assembled ATU100 is available on Banggood and Ebay. Search Ebay for the optional case.
2. ATU100 websites,  
[http://www.oz9f.dk/wp-content/uploads/2020/02/ATU-100\\_Extended\\_Board\\_User\\_Manual\\_eng.pdf](http://www.oz9f.dk/wp-content/uploads/2020/02/ATU-100_Extended_Board_User_Manual_eng.pdf),  
<https://github.com/Dfinitiski/N7DDC-ATU-100-mini-and-extended-boards>.

#### Back in Time—1966

Bob Lightner W4GJ

<https://m.youtube.com/watch?v=FUMIPvBi8Sk>  
 RCA Vacuum Tube Production, Lancaster PA 1966



## Digital Oscilloscope JYETech 15001K

By Bert Garcia N8NN

A handy piece of test equipment to have is an oscilloscope, but good digital oscilloscopes are expensive. Here's a \$25 oscilloscope kit that is "good enough" for measuring voltages up to 50 volts peak and AC signals up to 200 KHz. This 'scope is the JYETech 15001K [1]. You can build this kit in an evening. I found the 2.4 inch color TFT screen sharp and clear, and the triggering modes very stable and accurate. Use the 'scope with an external 9 volt battery. Do not power it with more than 9 volts or you will damage it. The 'scope measures 4.5 in x 3 in x 3/4 in and weighs 4 ounces.

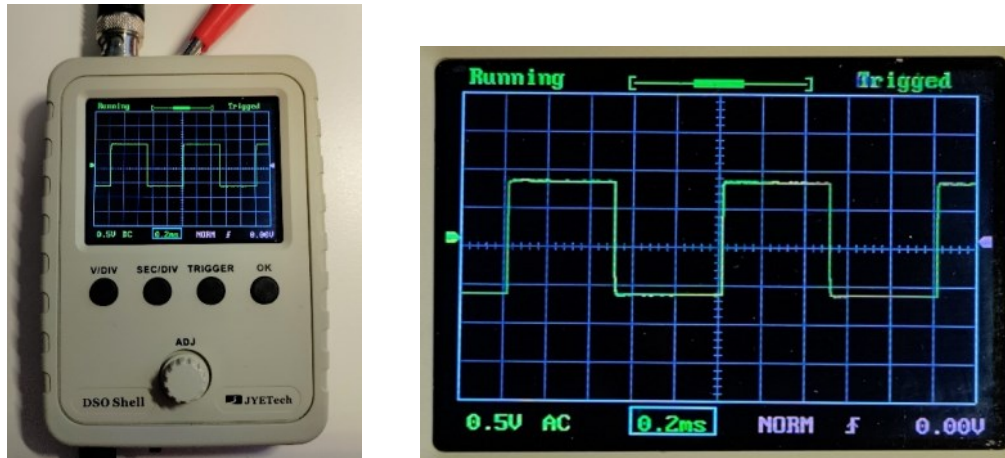


Figure 1a, 1b: JYETech 15001K displaying a square wave.



Figure 2: The kit before assembly.

The surface mounted components are preinstalled, and the software is preprogrammed. You only need to install the through hole components. Enjoy this handy little 'scope!

Reference:

1. JYETech 15001K Digital Oscilloscope, <https://www.banggood.com/>.

## Some Suggestions for Ham Radio Courses by Clubs

by Gordon Gibby KX4Z

- Scheduling options include doing weekly evening sessions versus the "weekend marathon" that we prefer in Alachua County; somewhat depends on how difficult it is for your participants and instructors to clear out a certain evening for quite a few weeks versus clearing out one weekend.
- Google Forms work really well to accumulate participant registrations, and can produce any kind of list or spreadsheet you wish. Always get ham radio callsign, name, telephone number, and email address.
- I use "Gmail" and create a "contact label" for each event. This makes it very easy for me to have multiple different mailing lists, so I can easily write an email to all the participants in this or that venue.
- The ARRL provides very useful Q&A slides for each level of exams. Drop down to item 3, "Teaching Resources" on the page: <http://www.arrl.org/instruction-arrl-resources> We generally prefer to add in additional slides with overview information, and we **bold** and **enlarge** the correct answer on the answer slide to speed things up. Many questions can be grouped together in a more logical fashion to speed things up.
- The National Conference of Volunteer Examiner Coordinators maintains the question pools and diagrams. See the sidebar of this page: <http://www.ncvec.org/page.php?id=338>
- Having a hands-on project provides an additional tactile and kinesthetic avenue for learning. Projects could include 2-meter slim-Jim antennas, full size 40-meter dipoles (requires space and a tree!) , simple variable voltage power supply construction, or the digital receiver that we built in November 2021. Expect your students to be VERY SLOW -- many have never built anything at all and don't know how to solder or recognize a transistor or a center insulator.... Provide adequate time and consider breaking the project into multiple different time slots On our receiver, the Arduino/Si5351 portion was pre-soldered on their boards -- all they had to do was put in LM386 amplifier, 3-transistor preamp, and wire the toroids and diodes of the mixer. Even those small circuits took HOURS for persons with relatively little previous construction experience.
- Once you've planned any project, divide the available minutes by the total number of questions in the license question pool to determine the time available per question, then divvy up the time by the sub-elements so each instructor has a well-defined start and stop time. Schedule 5-10 minute breaks appropriately.
- Try to get the TEMPERATURE of the room in a good comfort zone. (We have no control of the temp in our county building....)
- Solid ability to project slides is a real requirement. There are so many LARGE SCREEN TVs now that doing this with a TV in a living room is also a good option.
- We strongly prefer to have tables to allow demonstrations -- voltmeters, antenna analyzers, VNA's, oscilloscope, spectrum analyzer, and we always try to have access to HF and VHF antennas and have working go-box stations there to allow participants to hear and participate in HF and VHF voice and data QSO's.
- We handle meals very simply to keep the group moving forward without delays due to transportation -- pizza delivery works well for us.
- Be very careful to return the room to the generous owner in as good shape as you received it!

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- A note of THANKS to your venue provider, plus possibly a copy of a newsletter article with photos, will help secure the use of the facility for the NEXT session. Our local Assistant Emergency Manager was stunned to hear we had done 17-1/2 hours of training in one weekend!
- Sending out thank-you's and/or certificates to your INSTRUCTORS will help get them to come back next time -- this is a LOT of work for many of them.
- Our experience is that students who have only attended the sessions without any outside reading and study will score in the 50's to 60's on practice tests and MUST DO OUTSIDE STUDY to pass...you can drive that home with a "practice test" at the end, which is also a good way to show them how to use any of the large number of online practice test generators. We like <https://hamstudy.org/> but there are MANY available.
- Year after year, your instructors will grow and get better. The first times I did these, I had to do the entire course myself, and the voice and brain are not always up to that.... As your group gets stronger you'll have more people confident enough to teach these sections, all the way through Extra Class

**Possible Project Files (you can find many more)**

Technician Class: <https://qsl.net/kx4z/TwoMeterHomeMadeSlimJim.pdf>

General Class: <https://qsl.net/nf4rc/2019/InstructionsEFHW.pdf>  
<https://qsl.net/nf4rc/2019/BalunArticle.pdf>

Extra Class: <https://qsl.net/nf4rc/2021/DirectConversionReceiverOverview.pdf> (multiple additional files for each subsection available on same web site)



**More Panhandle Activity**

DJ Stewart, KI4ZER

As is the aforementioned activities hasn't made your head spin, the **Playground Amateur Radio Club** meet up that weekend to begin the installation of their replacement tower!

Attending the event were multiple clubs. In direct support of the efforts to be undertaken present was of course the **Playground Amateur Radio Club** along with members from the **North Okaloosa Amateur Radio Club, Okaloosa County ARES, Walton County Amateur Radio Club, Walton County ARES** and even folks from the **Emerald Coast Radio Association in Navarre!** The activities of the day were safe, educational and brought forth a great effort to be lauded by all!



## Alachua County ARES(R)/NFARC Extra Class Marathon Course

by Gordon Gibby KX4Z

I think this has been by far the best Extra Class review course we've ever held. We had a good number of students (7, plus two others who were prevented by work or surgery from coming); 2 "observers", and 5 instructors plus one possible future new instructor coming to watch and observe our ideas. The hands-on receiver soldering project was a hit also, and helped with demonstrations of the "circuits" portion of the material.

Every instructor has free reign to present the material in their area reviewed as they wish. Most take the ARRL question-and-answer slides and dress them up with additional information or time-saving rearrangements, but some, like Mike Hasselback WB2FKO, take a completely different tack and make their own slides teaching the basic principles of electricity and components. Hard work! His incredible review of how the field effect transistor and bipolar transistor came to be, with all the personality clashes between Shockley and his co-workers, was fascinating as was his physics explanations of how those devices work!

We had some avid DX'ers in the group and during Leland Gallup's review of "operating practices" we had a very informative discussion of how to make those contacts and how the QSL bureaus etc. work. The sharing of information between everyone throughout the room is just electric.



*Emily KO4JWC and Amy KO4IDO soldering on the receiver*



*Not to be outdone, Todd KN4TGU and Stewart KK4DXF developed solder-many-components-at-a-time tactics to pull (briefly) into the lead!*

This time, instead of building an antenna, we worked on soldering together key circuits of an Arduino-controlled, digital-VFO, direct conversion receiver, with "Heathkit" type one-component-at-a-time soldering instructions matching a printed circuit board. The students broke into teams and went to work! For a while it was the "girls against the guys" between the two teams and did they have fun! Folks were touching and dealing with transistors, sockets, integrated circuits, resistors, ceramic and electrolytic capacitors. Later would come tiny trifilar windings and making toroid transformers. The oscilloscope and spectrum analyzer were demonstrating the square waves from the Si5351 phase locked loop VFO, and their rich odd harmonics. With the Arduino, the receiver is CAT- and computer-controllable, so with a little tweak to the "code," we had the little receiver doing **wanna-be spectrum analyzer duty**, scanning from 14 MHz to 40 MHz, picking up all the harmonics of a 16-MHz. Pierce crystal oscillator created as a signal source. (The other signal outputs of the Si5351 could also be RF sources -- lots of possible projects!) All of this brought the elements of the Extra Class license material alive for the students.

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A course like this is just fantastic for a ham radio community. Everyone learns! The questions get changed every few years, so the instructors are having to review and learn material almost as much as the students. Already-licensed hams drop in to get a refresher and see all the equipment and projects -- putting all this together takes WORK and so hams recognize the benefit of hearing what others have organized for better grasp. Tips and knowledge and ways to get things done more easily get passed all around -- everyone has a different set of skills to bring to the tasks. If your group would like to hold similar projects or classes, we can certainly help with ideas, printed circuit board information, etc.



*Some of the participants (l to r): Leland Gallup AA3YB, Craig Fugate KK4INZ, Joe MacKenzie KK4MAC, Amy Woods KO4IDO, Todd Johnson KN4T-GU, Dean Covey KV4RL, Stewart Reisener KK4DXF; the two receivers soldered together and successfully tested are also shown.*

REFERENCES:

<https://qsl.net/nf4rc/2021/DirectConversionReceiverOverview.pdf>

For each set of step-by-step directions, drop down to the heading "School Radio Kit" on this page:

<https://qsl.net/nf4rc/EducationalArticles.html>

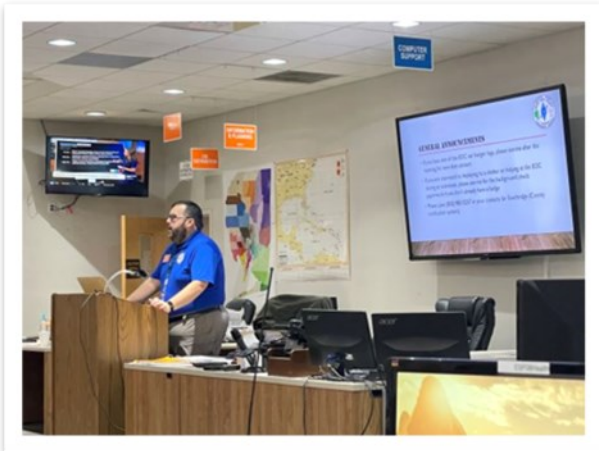
Gerbers available here: <https://qsl.net/nf4rc/2021/ZippedGerberRadio.zip>

Arduino code available here: [https://qsl.net/nf4rc/2021/sketch\\_sep24a.ino](https://qsl.net/nf4rc/2021/sketch_sep24a.ino)



## What's happening? Santa Rosa County Edition

Arc Thames, W4CPD, Assistant NFL Section Emergency Coordinator



We had one of the largest turnouts for our November ARES meeting focused on the [Florida ARRL Tri-Section ARES task book](#). The Task Book is a working document that enables those ARES communicators electing to participate in the training plan to track and document their training plan elements as they are completed. The Task Book contains all training plan items, completion dates and signoffs as the ARES communicator increases their skill and proficiency.<sup>1</sup>

*Pictured – Arc W4CPD presenting*

<sup>1</sup> Florida ARRL Tri-Section ARES task book

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The Santa Rosa County ARES team will utilize the task book as our training plan for 2022. Our goal is to have our active ARES members signed off to level 2 of the task book. The training and activities outlined in level 2 cover many of those that an operator needs an understanding of to operate independently whether within our own county or away in a deployment. During our meeting, Arc-W4CPD emphasized the importance of being self-sufficient as during an activation you may not be nearby someone who can assist you.

Our team was extremely excited about the learning opportunities presented for next year. Two of the topics we will start off with are message handling, to include radiograms and ICS forms, as well as a deep dive and hands on refresher with Winlink. We plan to setup numerous TNC's of varying types to give our team the experience of using and setting them up in the field. Two of our ARES members wanted to get a head start on their training and stayed after the meeting to brush up on using Winlink. Assistant Emergency Coordinators Jon-KM4QQO and Jack-W4JPH worked with Mark-K4MMP and Janet-K4JGP to help them understand what we would use Winlink for during an emergency activation.



We work hard to keep plenty of activities and training opportunities going in the Northwest Florida area. You can find activities for Escambia, Santa Rosa, Okaloosa, and Walton counties on [nwflhamradio.net](http://nwflhamradio.net).

On Saturday December 4 we will have a Fox Hunt in the tri-county area combined with a Christmas Luncheon. All are welcome. The fox will begin transmitting at 9:00A central and we will announce the location on the 146.700 K4SRC repeater at 11:00A so everyone can make it over for the Christmas luncheon. A donation box will be available for those wishing to contribute to the cost of the food.

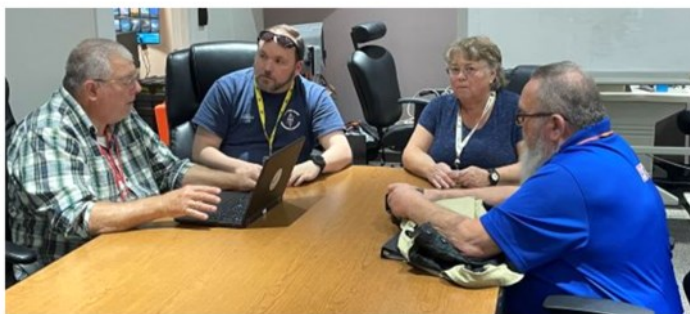
January 29/30, 2022 will mark Winter Field Day again. The team had a great time working this contest last year and are no doubt excited to participate in January. We took a vote and the resounding response was to host it for a second year at Bear Lake Campground in Munson, FL. All are welcome to participate



and more information can be found on our website, [srcares.org](http://srcares.org).

For information on joining or participating in the Santa Rosa County ARES team, please reach out via email [info@srcares.org](mailto:info@srcares.org), visit our website [srcares.org](http://srcares.org), or [find us on Facebook](#).

PS..Arc-W4CPD, Net Manager for the Northern Florida ARES Net, is looking for additional Net Control Stations for the morning Net (9A E/8A C). If interested in finding out more, please email Arc – [arc.thames@srcares.org](mailto:arc.thames@srcares.org).



Pictured from L-R: Mark-K4MMP, AEC Jon-KM4QQO, Janet-K4JGP, and AEC Jack-W4JPH

## Duval County Trains on Portable HF Antennas

Brian Schultheis, K4BJS

Bill Johnson, KO4RMX is Duval County ARES Volunteer of the Year for 2021. Bill serves as Duval County ARES Board Member, Logistics Chief, and Liaison Officer. The group got together on November 13th for a training session on portable HF antennas. Attendees covered methods for hanging halfwave wire antennas, along with technical aspects and hands-on practice with half wave dipole, multiband linked dipole, multiband half wave inverted V, and the multiband Wolf River Coil vertical. Instructors Brian Schultheis, K4BJS and Mike Robison, KD2SXD covered the pros and cons of each antenna for establishing specific radio communication circuits within a portable operating situation. Special emphasis was given to antennas designed to cover the primary ARES bands of 40m, 60m, 75m, and 80m. Instructors also guide the students through erection and disassembly of each antenna. The monthly ARES training session covered using WinLink Peer-to-Peer. Group members set up 5 HF radio stations at Hogan Baptist Church using 1:1 interior HF antennas, i.e. dummy loads. At 5 watts radio operators used Vara HF, P2P mode for Winlink messaging and there were a few phone contacts as well. It was a valuable learning experience for everyone and established a useful training tool for future lessons. Thanks to Dr. Gordon Gibby for pioneering this training method in the ARES community.

[K4BJS.HA@gmail.com](mailto:K4BJS.HA@gmail.com)

Photos courtesy of Mike Robison, KD2SXD



## FCC Testing Information

### 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](mailto: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](mailto:w2bzy@cfl.rr.com)

### Milton Amateur Radio Club, Milton FL

- Check date at [miltonarc.org](http://miltonarc.org)
- Walk-in
- Bagdad United Methodist Church
- Info: Chuck, N4QEP, [merlinman3@yahoo.com](mailto:merlinman3@yahoo.com)

### Orlando Amateur Radio Club

- First Wednesday
- 5:30 PM, Walk-ins allowed
- ARRL/VEC
- Central Florida Fairgrounds Craft Building, 4603 W Colonial Drive, East Gate off Fair Villa Road
- Info: [testing@orac.org](mailto:testing@orac.org), Robert Cumming, 407-333-0690

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

- Information and dates can be found at [srcares.org](http://srcares.org)

### Seminole County

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

### Silver Springs Radio Club, Ocala FL (SSRC)

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

### Suwannee ARC, Live Oak, FL

- 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](http://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>

**This information is subject to change. Check with the testing venue to confirm the testing session.**

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



## NFL Web Site

For net, hamfest and other events go to [www.arrl-nfl.org](http://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. Bushnel W2DWR*

*John C Reynolds W4IJJ*

*Jeff Capehart W4UFL*

*Neil Light KK4VHX*

*Ray Crepeau K1HG*

*Steve Szabo WB4OMM*

*Scott Roberts KK4ECR*

**Section Emergency Coordinator** – *Karl Martin K4HBN*

**Assistant Section EC** – *Arc Thames W4CPD*

**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*

### Statewide Digital Radio Resources

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

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

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

*Email your QST NFL input to [n4gl.marty@gmail.com](mailto:n4gl.marty@gmail.com), Marty Brown, N4GL, Editor. All submissions are subject to editing prior to publication.*



Newsletter of the Northern Florida Section of the ARRL

1. Spread the word about our website [www.arrl-nfl.org](http://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](mailto: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](http://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. All submissions are subject to editing prior to publication.*