



QST NFL



Sharing information of interest to Radio Amateurs in North Florida

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ARRL to File Vigorous Opposition to FCC's Proposed Fee Structure for Amateur Radio

Mickey Baker, N4MB, n4mb@arrrl.org
Southeastern Division Director

Many of you have written or called asking me what the ARRL's position is on the Proposed FCC's fee structure for amateur licenses. I've given many of you my opinion, but here is what you will see soon from HQ...

The League will file vigorously opposing comments on all aspects of the proposed fee. Based on our Washington Counsel's advice, the ARRL will file a few days before the deadline.

As of today, (September 17, 2020) no deadline has been announced. It will be determined when the NPRM appears in the Federal Register, which could be as late as October or November.

ARRL is working on instructions and guidance to file more impactful comments.

There is plenty of time to file comments. The ARRL advises not to file comments early. We will use this time to assess issues and information gathered and will publish guidelines so that we may have a powerful, more unified voice.

Be patient. Almost 1000 comments have already been filed – make sure yours is legally sufficient and considered.

To read FCC comments, and to comment in due time:

https://www.fcc.gov/ecfs/search/filings?proceedings_name=20-270

In other news, as of right now, there are TWO October ham-fests scheduled:

- The PCARS Melbourne Hamfest is ON for October 9 and 10 at the Melbourne City Auditorium: <http://www.pcars.org/hamfest/2020/>
- The Coastal Amateur Radio Society hamfest (Savannah, GA) is rescheduled for October 24, 2020: http://coastalamateurradiosociety.net/wpW4LHSblog/?page_id=871

As always, reach out via email or telephone if I can help you.

Want Section Email Messages from ARRL?

You must give permission for ARRL to include your email in notices of interest to the Northern Florida Section. To do this you must edit your profile on the arrrl.org web site.

1. Login to arrrl.org
2. Underneath your name, on the upper part of the page, click on "Edit Your Profile"
3. The next page is where you can indicate what you get from ARRL. Just below the middle of the list, you'll find: "News and information from your Division Director and Section Manager (Note: Some Divisions/Sections may not send notices.)"
4. Click to put a check in that box.



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

Escambia County ARES Activates for Hurricane Sally

Gene Bannon, KB4HAH

The Escambia County ARES Emergency (ECEN) net was fully operational throughout Hurricane Sally's visit to our county, even after we lost the 146.76 repeater for about 4-6 hours, due to a county emergency generator equipment problem at the tower site. Several folks including Frank-N4XAE were passing information on the 146.76 simplex to other hams and to the EOC/ Later, we did finally get everyone on the ECEN transferred to the back-up repeater (145.45 on the Naval Hospital) that had a fully operational emergency generator. We attempted to establish liaison coverage to Florida SAR NET via Mike-N4DIA, and the North Florida ARES NET on 3.950 with Dan-KT4DD. Unfortunately the North Fla ARES net was not operational at the time and SAR net was in stand down mode as well. The coverage with the 145.45 repeater was not as good to the north, but we did relay information using Doug-KE6MYV to relay from the W4UC-DMR repeater (444.325-DMR) to the ECEN. Once the portable emergency generator was hooked up the main county communication tower site, the 146.76 repeater was back on the air.

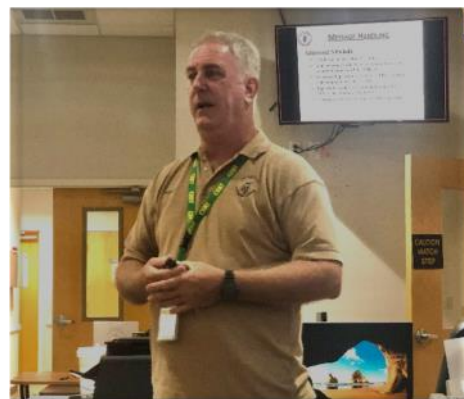
While the Hurricane Sally was still blowing through the county, we held several net check in's and passed damage information to EOC when it was appropriate. After Sally blew through the area, we started to gather damage information, power outages, and capabilities of the local area hams. By 1PM on the 17th, it was determined that the county did not need ARES assistance, since they had been able to reestablish communication to all the essential element needs for Emergency county operations. So the Escambia County ARES stood down at that time. Since then, a majority of the local hams checked in periodically with status reports of Commercial power outages and, what has been reconnected to the power grid and what other services are available and where in the county. Including getting just a health and welfare check and passing it to the rest of us from the different hams that haven't been heard from since the storm came through. I'm glad we have such a great group of hams that are ALWAYS willing to help when we need it.



What's happening? Santa Rosa County Edition

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

September started out just like any month for amateur radio operators in Santa Rosa County, FL. The ARES team met on Saturday the 12th and learned how to fill out radiograms, ICS-213 forms, and how to pass traffic over the air from AEC Steve-W4SJV. Each person in attendance was given a 50-page radiogram notepad to use when receiving traffic as well as a detailed instruction guide on radiograms. Little did the team know their skills would be put to use just a few days later.



Pictured AEC Steve-W4SJV



Pictured EC Arc-W4CPD and Chris & Matty who passed

Following the training session, the team provided license testing and we are proud to report that both individuals successfully passed their technician test. We plan to offer license testing at all our future Santa Rosa County Amateur meetings.

Every amateur radio meeting offered at the Santa Rosa County Emergency Operations Center (4499 Pine Forest Road in Milton, FL) is open to all who wish to attend. No club or ARES affiliation is required. We are here to help empower and educate the amateur radio community in Santa Rosa County. Our next meeting is Saturday October 24 at 9:00AM CDT.

Now enter Hurricane Sally...

For the first time in many years, the Santa Rosa County ARES team was requested to activate on Monday, September 14. The mission we were given was to staff the radio room at the Emergency Operations Center (EOC) as well as one shelter in Milton, FL.



Within 3 hours of receiving the call to activate we were at the EOC getting equipment powered on and deploying a "go kit" to the shelter location for what would end up being a 72-hour activation. Thankfully, over the past several months, we have been regularly operating from the EOC to ensure all equipment is functioning properly, so we knew we were ready to go. We had also recently checked the antennas at our shelter locations and tested simplex communications as well in the event of a repeater failure.

← Radio setup at the Milton Community Center shelter

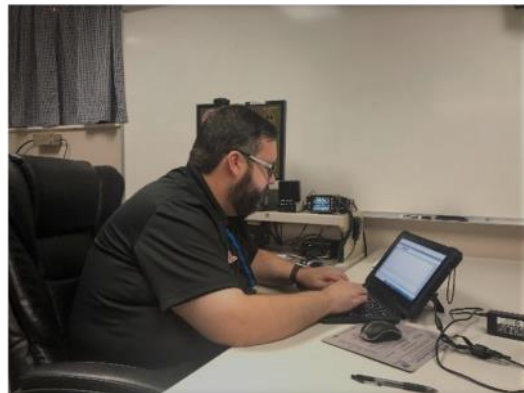
Pictured Jack-W4JPH operating at the SRC EOC



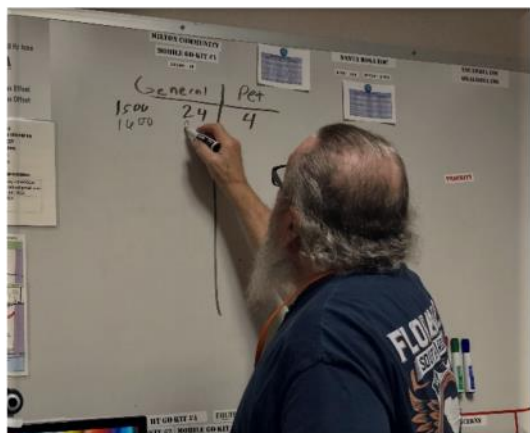
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The outer bands of Hurricane Sally began arriving in the Santa Rosa County area in the late hours of Tuesday, September 15. Entering the early morning hours of Wednesday, September 16 we began to see increasingly worsening conditions in our area. While there are no “positives” to a hurricane impacting your area, the slow-moving nature of Hurricane Sally allowed us time to interact with Emergency Management officials to see how we could better assist them and refresh on how our interactions with them would occur.

As Sally approached, a SKYWARN net was also activated and our Santa Rosa County ARES repeater linked with the repeater that services the National Weather Service of Mobile, AL. ARES leadership was able to monitor storm updates as they occurred thanks to the NWS Weather Chat system that is used for SKYWARN reporting by our net control stations. Santa Rosa EC, Arc-W4CPD, maintains an EchoLink and AllStar Link node at his home that provides the connectivity to the NWS repeater. While Arc was operating from the EOC, his wife Josie-WD4DCL stayed home on standby to setup a generator to power Arc’s internet connection to maintain the outside linking. We are pleased to report that we maintained EchoLink and AllStar Link capabilities throughout and after Hurricane Sally thanks to Josie’s efforts. The EchoLink connection was also used by amateurs outside of the area to check on their families in Santa Rosa County.



Pictured Arc-W4CPD updating his ICS-214



Pictured Jack-W4JPH logging shelter numbers

Before and after the hurricane had moved through our area, we tracked the current number of clients at the local shelter and provided updates to the Emergency Management staff as needed. We were utilized as the primary means of communications to the shelter and assisted with communicating needs and requests from the shelter to the EOC as well.

We want to send out a HUGE thank you to Arc-W4CPD, Jack-W4JPH, Jon-KM4QQO, Steve-W4SJV, Ed-K4PFL, Hal-WA5HC, JD-KE4MD, Ray/Daisy-K1HG/KT4KW, and Josie-WD4DCL! We could not have supported this activation without you. Also, a major thanks to Bill-WY8O, Dan-KT4DD, Frank-N4XAE, and others that served as liaison stations between Santa Rosa and Escambia counties. We plan to make the liaison stations a standard operating procedure in the future.



Welcome To

HamCation 2021

Central Florida Fairgrounds and Expo Park
February 12th - 14th, 2021

ARRL National Convention Training Tracks and Luncheon
Double Tree by Hilton Hotel Orlando at Seaworld
Thursday, February 11, 2021.



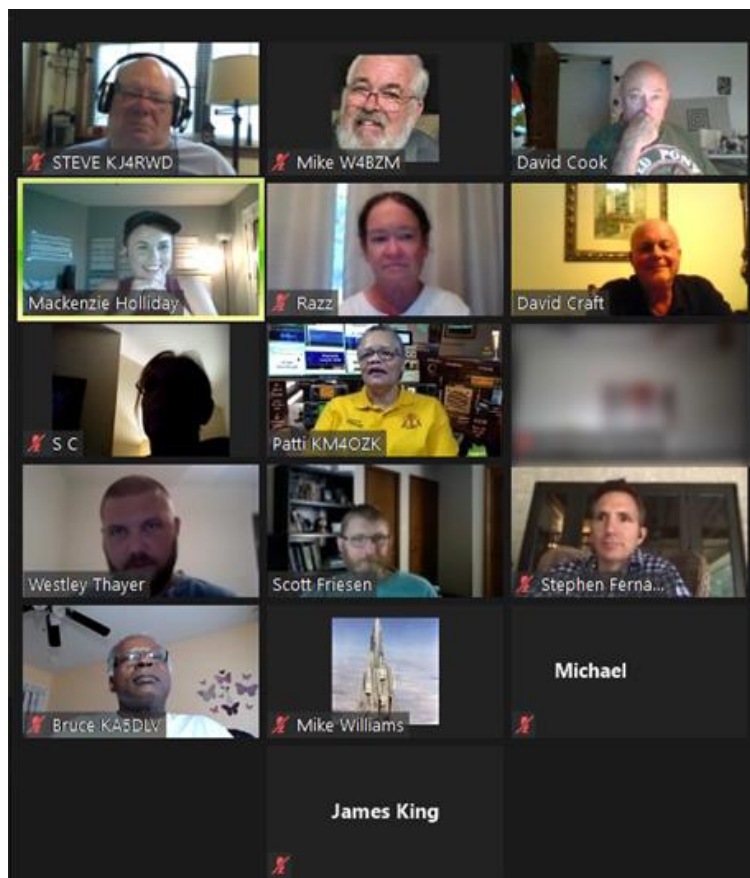
Host of the 2021 ARRL National Convention

Remote License Classes by North Okaloosa Amateur Radio Club (NOARC)

By Mike Behr, W4BZM

Recent articles in ARRL QST and on various web sites have addressed how to conduct remote testing. Little mention has been made of the conduct of remote instruction. Recordings of license training classes by various instructors have existed for some time both as for-sale packages and as YouTube videos, but the conduct of a live class, with real-time, two-way remote participation, seems to be a new environment for most clubs. This article describes NOARC's experience with remote instruction during a recent class for the Technician License. We hope that our experience may benefit other clubs who are trying to conduct classes during the Cov-19 social constraints.

Remote instruction was a new experiment for both our students and instructors. After delaying the class for months awaiting resolution of the Cov-19 dilemma, we decided to change from our traditional in-classroom format to an entirely remote delivery. We used the Zoom application, and it worked surprisingly well.



Zoom participants on second night of class

Background:

NOARC's philosophy for license classes is that we teach not only the material required to pass the license exam, but also the information necessary to become a knowledgeable, proficient amateur radio operator.

Our syllabus is based on the following assumptions:

- A "boot camp" of teaching the entire course in two days on a weekend is undesirable. The students quickly become saturated, and even if the student passes the exam, he or she is likely unable to operate as a ham without significant additional instruction.
- A drawn-out course of an hour a week for several months is too long. Students, anxious to get a license or an upgrade at the beginning of the course, become impatient with the slow progress and either drop out or decide to study on their own so as to take the exam before the class ends.
- A reasonable compromise is a course which requires considerable effort (homework of reading the book and independently working on the questions) on the part of the students. We plan our courses for a single three-hour class per weeknight, with durations of four weeks (Technician), six weeks (General), or twelve weeks (Extra).

Preparation:

As we had done for previous sessions, we announced the class on the Club website and Facebook page, during our nightly net sessions, and via the ARRL class listings. For this class, we also put announcements in a local paper. We ultimately enrolled 17 students in the class, including a family of five with children in grade school. To our surprise, we drew students from out of state (Dothan, AL) and one from an entirely different time zone (near Tampa). The remote delivery format gave us an outreach that we had never considered in the past.

We held four classes on Monday nights, starting at 6:30 PM CDT and ending at 9:30 PM CDT, with breaks. Everyone who started the class finished it. We had intended to use the instructional material from HamRadioSchool.com, but were prohibited from using that presentation material on Zoom by the author's copyright restrictions, so we used the ARRL License Manual and modified our local presentations to accommodate the remote delivery.

We utilized an existing Zoom "Pro" account of one of the instructors because we needed meetings to include more than two participants for more than 45 minutes. Since few of our instructors had conducted classes via Zoom before, we held an instructors-only training session prior to the class. This session allowed each instructor to practice the procedures for starting/stopping the sharing of screens, and exposed issues with room lighting, audio levels, and limitations of Zoom backgrounds. (Without the benefit of a green screen, using an optional Zoom background sometimes resulted in our props becoming "invisible" as we moved them about!)

We decided in advance that while one instructor was doing a presentation, another instructor would monitor the Chat window to watch for student questions. This allowed the students to submit questions without disrupting the flow and timing of the presentation. It also allowed instructors to receive "time to go" reminders on the chat window. We published a strict schedule in advance and encouraged instructors to practice their presentations using a clock. The instructors prioritized the exam test questions in advance as "must cover" or "will cover if time permits".

Since we would not be able to provide the physical handouts we used in the past, we set up an email distribution list of both students and instructors to send out meeting announcements, copies of charts after the classes, and other support material such as local repeater lists.

We anticipated that we would be constrained by lack of a physical whiteboard for illustrations and explanation of questions. Zoom provides a rudimentary whiteboard, but it is difficult to use with a mouse. Some instructors had pen tablets for the computer, others used a "link to iPad" feature of Zoom, and others had small physical whiteboards available. We ultimately discovered that carefully modifying the presentation to use "build" slides often obviated the need for the previous whiteboard usage.

We designed our syllabus so as not to rigorously proceed through the ARRL License Manual in Chapter 1, 2, 3, order, but rather to provide a mix of operational and technical information for each of the four nights. Additionally, Chapter 3 was broken up and presented in bite-size pieces because its size and technical content had previously been shown to intimidate new students. This resulted in the following schedule:

- 1st class:
 - Chapter 1 (Welcome to Amateur Radio)
 - Chapter 2 (Radio and Signals Fundamentals)
 - Chapter 3 (section on Electricity)
- 2nd class:
 - Chapter 7 (Licensing Regulations)
 - Chapter 3 (section on Ohm's Law and Power)
 - Chapter 4 (Propagation, Antennas, Feed Lines)
 -
- 3rd class:
 - Chapter 6 (Communicating with Other Hams)
 - Chapter 3 (section on Radio Circuits)
 - Chapter 5 (Amateur Radio Equipment)
- 4th class:
 - Chapter 8 (Operating Regulations)
 - Chapter 9 (Safety)
 - Chapter 3 (section on Components)
 - Discussion on taking the exam

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Class Execution:

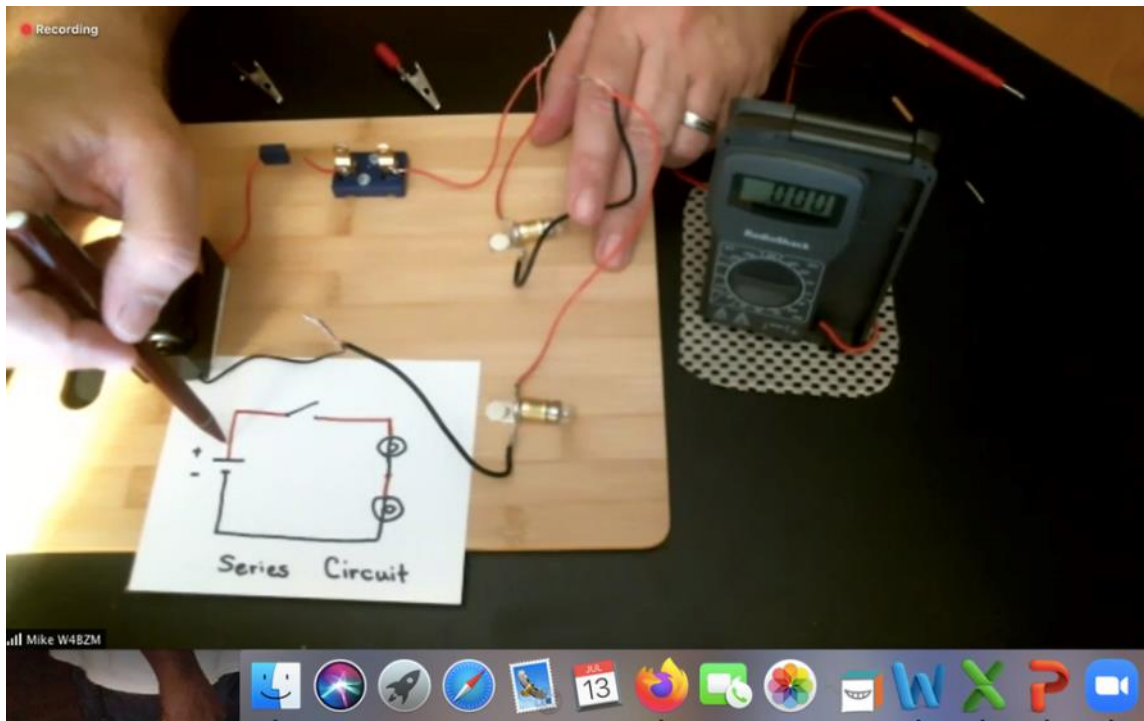
Students and instructors established free Zoom accounts prior to the first class.

Students and instructors were e-mailed a Zoom meeting number and passcode, which admitted them to the Waiting Room. They were then admitted individually to the class session by the Zoom Host, to control attendance and prevent “meeting bombers”.

At the beginning of the first class, we covered Zoom basics such as:

1. How to use Zoom’s independent controls for participant audio and video. (Eliminated embarrassing background conversations when participants thought the “stop video” button controlled both video and audio!)
2. Agreement by all parties that the classes would be recorded, and anyone not wishing to be recorded should mute his/her microphone and keep participant video off.
3. To prevent “stealing” video feed from the instructor, participants were asked to keep microphones muted unless they were asking a question.
4. To conserve bandwidth, instructors who were observing but not actively presenting were asked to stop their video.
5. The importance of proper clothing (pants, please!) when leaving or reentering the room.
6. In retrospect, we should have emphasized the difference between “speaker view” and “gallery view” for the participants, since at least one student later mentioned that the demonstrations were too hard to see in the small (gallery-size) window.

To compensate for our inability to physically pass around examples of transceivers, electrical components, etc., we made maximum use of pictures on our presentations and close-up demonstrations (series and parallel circuits, current blocking by a diode) using a webcam. End-of-class evaluations by the students indicated these demonstrations were very helpful.



Demonstration Board for Series and Parallel Circuits

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We frankly struggled with how to review exam questions in class.

- Asking the students to unmute audio to give answers to the multiple-choice questions often resulted in squeals of feedback; additionally, the students who had prepared well in advance jumped in with the answers before others could even read the question.
- An alternative was used wherein students submitted answers to the instructor via the chat window. While this method worked, the sheer number of responses appearing and scrolling up in the chat window sometimes made it difficult for the instructor to access the overall response.
- After the class was complete, we learned of Zoom's "Poll" function which provides automatic graphing of answers to pre-prepared questions. This could have been very helpful, but it would have required much more preparation by the instructors (typing in every question and all the multiple-choice answers prior to class).

After each class, we emailed a copy of the presentations used during that session to the student distribution list. We converted the presentations from Powerpoint to PDF format to keep the file sizes manageable.

Results:

Overall, we were very pleased with our class.

One of the students successfully completed the Technician exam halfway through the course, using remote testing by a different organization. That student also continued self-study for her General ticket and passed the General exam by the end of our Technician course.

NOARC offered in-person testing (with appropriate social distancing) one week after the end of the course. Of the 15 local students who took the course, 12 participated in testing. Nine of those received their Technician licenses, one student (mentioned above) upgraded to General, and one passed the Technician, General, and Amateur Extra exams in a clean sweep.

Instructors for the class were Bruce (KA5DLV), Patti (KM4OZK), Mike (KK4KRZ), Ron (KI5FR), Steve (KJ4RWD), "DJ" (KI4ZER), and Mike (W4BZM).

We encourage other clubs to consider the use of remote instruction. It works!



North Florida Amateur Radio Club/Alachua ARES® Offers General Class Course

by Gordon Gibby KX4Z

We'll give the General Class course once again in Alachua County. This time we're holding it as two Saturday sessions, November 14th and 21st, 9AM-6PM each day. Location is to be determined, likely the Alachua County EOC, but depends on the number preregistered. To pre-register, go to our web page (<https://www.qsl.net/nf4rc/>) and click the link (the URL is impossibly long) to the google form that allows us to get pre-registration information.

Participants are asked to purchase a General Class manual and study it prior to the meeting – our previous experience is that the course review itself is not enough for most students to score much higher than in the 60's on practice tests; individual study is definitely required to pass. (Note that the questions changed in July of 2019.) There is no charge for the course itself, but we always do

a LOT of "hands-on" and traditionally each student builds their own full-size HF antenna to get real life experience in building, soldering, SWR and operating. We'll build an end-fed resonant half-wave banal-fed antenna; expect a materials charge of about \$20.

Holding these types of courses is one way to grow our own members, so some of the instructors will be "new" and others will be "seasoned." Expect to get a variety of teaching styles and as much "hands-on" as we can arrange. Also bring a mask as we'll probably be still within the COVID-19 guidelines in our county. Also bring pocket money for lunch, as we traditionally call out for pizza. This year we're doing the General Class; in alternate years we do the Extra Class course. For further information, Contact: docvacuumtubes@gmail.com.

Bang for the Buck - QCX QRP CW Transceiver

Bert Garcia N8NN

Here's feature-packed, high performance, single-band 5 watt CW transceiver kit that you can easily build -- the QRP Labs QCX (1). Select any band 80-17 meters. You get digital readout with two VFO's, split operation, RIT, built-in iambic keyer with 12 memories and adjustable repeat and delay, 200 Hz CW filter, noise blanker, on-screen CW decoder, QSK or semi-break in, and S-meter. WSPR and CW beacon modes are built-in, and you can add a GPS receiver for WSPR accuracy if desired by plugging it into the CW key jack. You can use a computer interface for CAT control. A computer is not required to install or operate the transceiver.

The QCX built-in test equipment -- voltmeter, RF power meter, frequency counter, signal generator -- make initial alignment simple. I paid \$49 for this excellent transceiver. The new improved QCX+ version sells for \$55 today, sold by QRP Labs (1)..

I selected 40 meters for my build. The double-sided circuit board comes with a pre-programmed microprocessor. All components are through hole mounted, so there is no surface mount soldering required. All the controls and connectors mount on the board, or you can choose to leave them off the board as I did so the transceiver can be mounted in a case you provide. Figure 1 is my QCX-40 undergoing an initial smoke-test and alignment, making 4.15 watts into a dummy load. There was no smoke, and the error free build has worked perfectly for months without a failure!

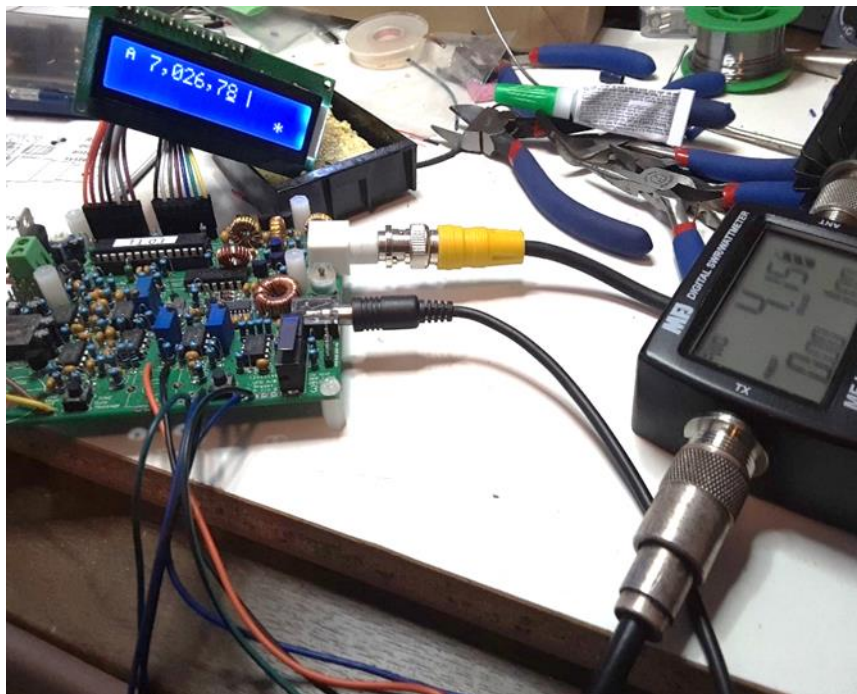


Figure 1: My QCX-40 initial test and alignment.

I decided to mount my QCX-40 in a case (2) and add a 120 VAC power supply (3) as well as Anderson PowerPole connectors for battery power to make this a versatile radio. I included a PTT modification to interface with the QRP Labs 50-watt amplifier to be described in a future article. I also added an interface for an external speaker with volume control, and fuses on both the AC and DC lines. Figure 2 shows the front panel with the multi-function pushbuttons labeled as left/center/right, LCR. The buttons select the VFOs and other operating parameters as well as stepping through the extensive menu system. Figure 3 shows the rear panel three-position switch to select between internal AC and external DC power, and the AC on/off switch.

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Figure 2: QCX-40 front panel.



Figure 3: QCX-40 rear panel.

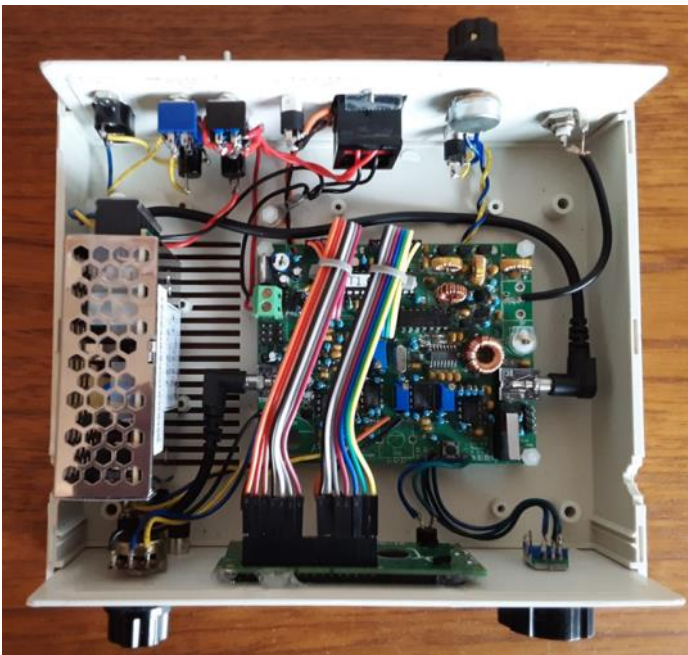


Figure 4: Inside my QCX-40.

So, why build your own gear? It's simple -- "Vegetables grown in your own garden taste better!" When you build your QCX transceiver, you can keep it simple or add as many bells and whistles as you choose. The newer QCX+ version has a separate front panel circuit board that can make installation in a case easier. I encourage you to try the QCX+ transceiver since it is simple to build and quite inexpensive at \$55 for a complete high-performance CW radio. Check out the QCX Builder's Gallery (4) for photos to inspire your one-of-a-kind QRP transceiver build.

References:

1. QRP Labs QCX <https://grp-labs.com/qcx.html> original version, replaced by the QCX+ <https://grp-labs.com/qcxp.html>, \$55 plus shipping.
2. Banggood instrument case <https://www.banggood.com>, \$10.99 + shipping.
3. Power Supply TDK/Lambda LS25-12 <https://www.digikey.com> \$17.50 + shipping.
4. QCX Builder's Gallery <https://www.grp-labs.com/qcx/qcxgallery.html>.

Customizing a Flagpole for an Off-center Fed Vertical Dipole Ham Radio Antenna

by Pete Castella, N4CQ

The ham radio community is used to getting creative, and I was able to test that by customizing a regular flagpole into a ham creativity radio antenna recently. This is some information about my experience creating that and some lessons learned along the way.

I live in an HOA community and therefore have several restrictions on having antennas. A flagpole is a good option to use for antenna, and as a veteran it's something I like to display anyway. Vertical flagpole antennas require radials. I previously converted one flagpole to a vertical antenna using radials. However, my grass cutters cut them twice so I needed to find a new option that didn't use radials.

What I selected

I did a lot of research first and decided to use an off-center fed vertical dipole. This way I would not need radials, and I only had to put my coax in conduit.

(This article from Ham Radio Secrets was a big help to me:

www.hamradiosecrets.com/off-center-fed-dipole.html).



I decided to order from TelePole Manufacturing (www.telepole.com) because their flagpoles were heavy and would also support the modifications needed to make it into an off-center fed vertical dipole. Their reviews state that their poles have sustained winds of 80mph with gusts of 100mph.

There are many ways to set up an off-center fed vertical dipole antenna. I chose a 75/25 off-center fed because it enabled me to have the connections down low in case I needed to make adjustments. Plus, it wouldn't interfere with raising and lowering the flag itself.

After consulting with my Elmer (Bert Garcia N8NN), I decided to go with my coax inside the pole rather than a ladder line because I would have had trouble keeping the ladder line from touching the insides of the pole. I pre-ordered white acetron rods from Zoro (www.zoro.com)

that were 2.125" diameter x 1 foot long. I sized what I wanted to fit inside the flagpole. That cut down on grinding and sanding so I only had to grind and sand the half part that went into the sleeve. I selected acetron over nylon because they were less susceptible to temperature changes.

Creating the antenna and customizing the flagpole



The sleeve that comes with the flagpole is extra heavy aluminum and I inserted the ABS sleeve into it to cut down on the diameter so it wouldn't have a big wobble to it. That means that I had to grind my acetron rod down to size too, though. I ended up using a hand-held grinder to get it down just 1/100th of an inch. Getting everything precise was important all along the way of this project.



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I used an orange traffic cone spray painted to match the flagpole to camouflage the bottom section, which is insulated from the ground. If I ever have to take the pole down due to high winds (I live in Florida so hurricanes can be an issue), I could rest it on top without damaging it.

All sections of the flagpole and coax were all checked along the way using my Fluke for conductivity. I ensured each section made good contact using Noalox Anti-Oxidant Compound to improve electrical conducting. Even the coax going in and out was secured and protected with grommets.

Inside the pole, I taped all of the wires really well so no moisture can get through. Connections have to be sealed water-tight with 3 layers of tape.

Most people do a pole at the ground but I didn't want mine to be seen. I used an irrigation box about 10" long x 15" wide x 10" high. I ended up putting a small plastic rack inside to hold the line isolator and tuner up high so they will not ever be submerged in water.



Other considerations

- There were many other things I had to keep in mind along the way during this project. Just some of these included:
- I ordered a drill bit for plastic. It doesn't drill like a normal bit; it scrapes and therefore does not overheat the plastic. I used a 3/8" one.
- I used a 7/8" drill bit for the flag pole grommets.
- I used a drill press to drill through everything to make sure it all lined up and drilled straight through for the bolts on the other side.
- I made sure to get the hardest 3/8" hex bolts – grade 8. Even if a bit more costly, I erred on the side of safety throughout this project.
- The cleat had to be moved down on the flagpole and it was attached so tight that I had to drill the bolts out in order to be able to move it down. But, this reinforces that the flagpole I chose was of good quality.

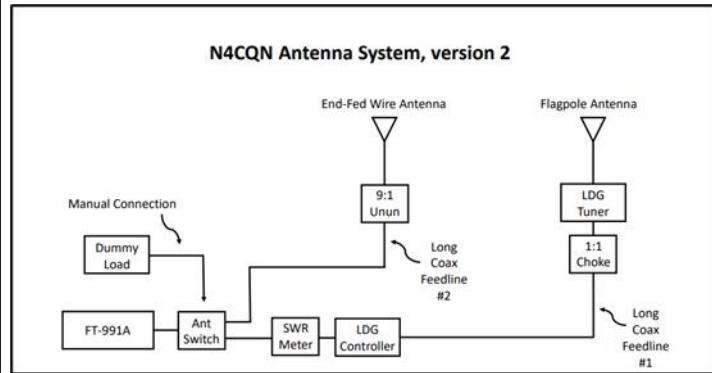
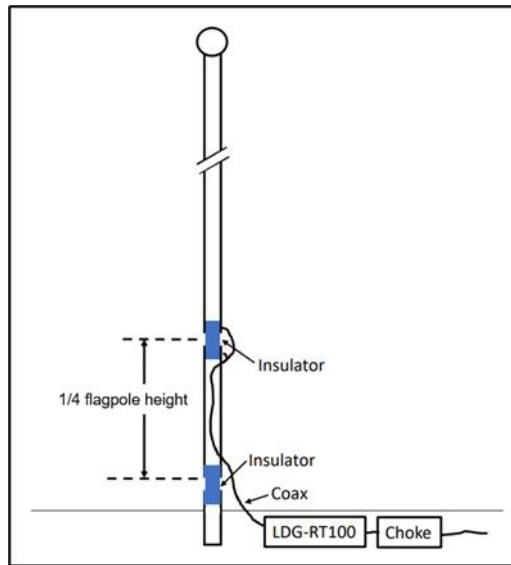
Tuning

My radio is a Yaesu FT-991A. The tuner I selected was the LDG-RT-100 and an MFJ line isolater. I will use an antenna switch to move between 3 options. (Had I known the LDG-RT-100 would not do more than 30 watts on digital, I would have gotten the LDG-RT-600).

With the exterior tuner, everything tuned from 6 through 80. Eighty was the worst at 2:1. But I believe my FT-991A can handle that. My biggest disappointment was the the tuner I have will only do 30 watts on digital.

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Here is a diagram of my flagpole and station system:



Results

Immediately after getting the flagpole up, I was able to make many contacts!



Overall, this was a fun project and something I'd recommend to any other hams needing to get around HOA or other antenna restrictions. I'd be happy to share more details and swap best practices with anyone else out there too.

Note: If you have questions contact:
pcast@lightningspeed.net



New Contest!
October 3 & 4, 2020
foxmikehotel.com/challenge/
Portable Operations
Challenge



COMING OCTOBER 9th and 10th, 2020

The 55th Annual Melbourne Hamfest

and Official 2020 ARRL Southern Florida Section Convention

Melbourne Auditorium

625 E. Hibiscus Blvd
Melbourne, Florida

Friday - October 9th - 1pm to 7pm

Saturday - October 10th - 9am to 3pm

Ocala Hamfest 2020

Saturday, December 5, 2020

FIRST CHRISTIAN CHURCH

**1908 E. FORT KING STREET
OCALA, FL 34471**

7:30 – 2:00

Vendors, Tailgating, VE Testing, Food, and much more!

k4gso.us/hamfest/

Jacksonville Amateur Radio News

Billy Williams, N4UF

The big event this month is the 20th Jacksonville FREE Hamfest on Saturday, October 24th at Terry Parker Baptist Church, 7024 Merrill Rd. The fun starts at sunrise and goes until noon with free admission and tailgate spots.

NOFARS September meeting program focused on getting on HF quickly and cheaply. With a bumper crop of newcomers attending meetings, starting on HF and VHF/UHF are always timely topics. The first presentation concentrated on HF and a follow-up program will cover VHF/UHF.

For HF, it's hard to beat the simplicity of a sloping dipole antenna. No matching networks, just cut and hoist using nylon twine as support. A tree branch above ten feet or so can be effective, especially on CW and digital modes. For those in HOA-controlled subdivisions, simple antennas often fly beneath a property manager's radar if properly placed.

New to the Jacksonville Radio Collection-- https://nofars.net/jacksonville_radio_collection -- are several mp3 audio clips. One is a rare sign off of Jacksonville's municipal radio stations, WJAX AM & FM, for unexpected maintenance during Summer 1971. An NBC outlet with heavy local news coverage, WJAX signed on in 1925 and lasted under city ownership until the 1980s. The Jacksonville Radio Collection includes historical articles about broadcasting, public safety, Amateur Radio and other forms of electronic communications in northeastern Florida. It has articles previously published in NOFARS *Balanced Modulator* newsletter and items not previously published. New articles are always welcome.

NOFARS HAMFEST NEWS

The Fun Starts At Sunrise

2020 JACKSONVILLE FREE HAMFEST

SATURDAY, OCTOBER 24TH

TERRY PARKER BAPTIST CHURCH PARKING LOT

7024 MERRILL RD

7AM-NOON

FREE ADMISSION

FREE TAILGATING: 60+ Sellers in 2019

FREE FCC TESTING BY JAXLAUREL VEs

SELL YOUR ELECTRONIC ITEMS

HUNT FOR YOUR NEXT BARGAIN

W4SNN HOSPITALITY

MEET YOUR FRIENDS & MAKE NEW ONES

.....

ARRL Simulated

Emergency Test

(SET)

October 3-4

Trailer Hitch Mount HF Antenna Testing

Darrell Franchuk – KG4CCB

In February we bought my wife a new Subaru Forester and she bequeathed to me her 2015 Forester. Since then I have pondered what radio(s) I wanted to install; did I want an HF/VHF/UHF rig or just VHF/UHF? After some consideration I determined that would be guided by what antenna(s) I would install. I did not want to drill any holes and I did not want a lip mount somewhere. For VHF/UHF I lean toward a Diamond motorized mount on a roof luggage rail with a dual band antenna that can be raised when I want to use it but kept lowered when not in use. The only option I can see for an HF antenna is a trailer hitch mount even though I recognize it is considered probably the least effective and desirable. Before proceeding, however, I needed to know objectively if it is a reasonable option. If not, then my radio choice will be limited to VHF/UHF.

I chose to test an MFJ Hamstick after chatting with a Levy County ham who uses these on his very nicely equipped pickup truck. He simply installs the appropriate Hamstick for the band he wants to work. As I do not expect to do a lot of mobile HF operating, this appealed to me. As to performance, I decided to use WSPR to test antenna propagation.



I mounted a 20-meter Hamstick in the trailer hitch mount I purchased from Main Trading Co. in Paris, TX and parked MY Forester in the driveway, which oriented it SE and fed it with my FT-818 set to 2.5 watts. The initial transmissions were received to the northwest and at a 90-deg angle of that to the northeast. Subsequent transmissions were received more broadly in the U.S., but not a heavy density of locations. Next, I reoriented the Forester to the northeast and again the same pattern. And then the Forester was reoriented to the southwest. Again, a similar pattern, which perplexed me but left me thinking the antenna was generally omni-directional. But then I considered my location here in Florida as related to the U.S. geography. There are not many locations to the SE and SW to receive my transmissions. So, then I reoriented the Forester to the northwest, and what a dramatic change. Locations in a broad range of U.S. locations received the transmissions.

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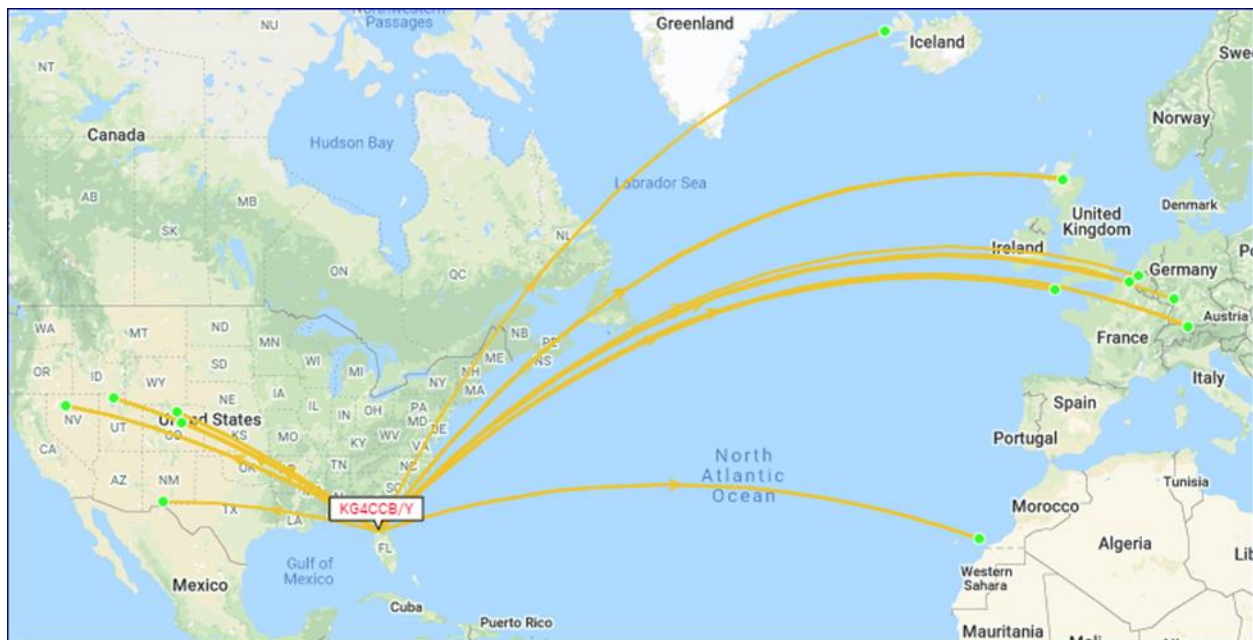
Transmissions

Orientation	Total Spots	# Hours	Distribution	Most km	Least
Southeast	930	13.25	Western US, Europe, Iceland,	7799	983
Northeast	380	15	Like above	7799	1471
Southwest	73	2.5	Much of US, Alaska, Hawaii	7409	1522
Northwest	560	8	Whole US, Europe, Iceland,	13014	756

Orientation	Total	# Hours	Europe	Other	Most km	Least km
Southeast	763	24	22	4	15589	457
Northeast	585	26	16	3	7757	1137
Southwest *	127	2.5	6	2	7277	1002
Northwest	610	25	7	3	15589	457

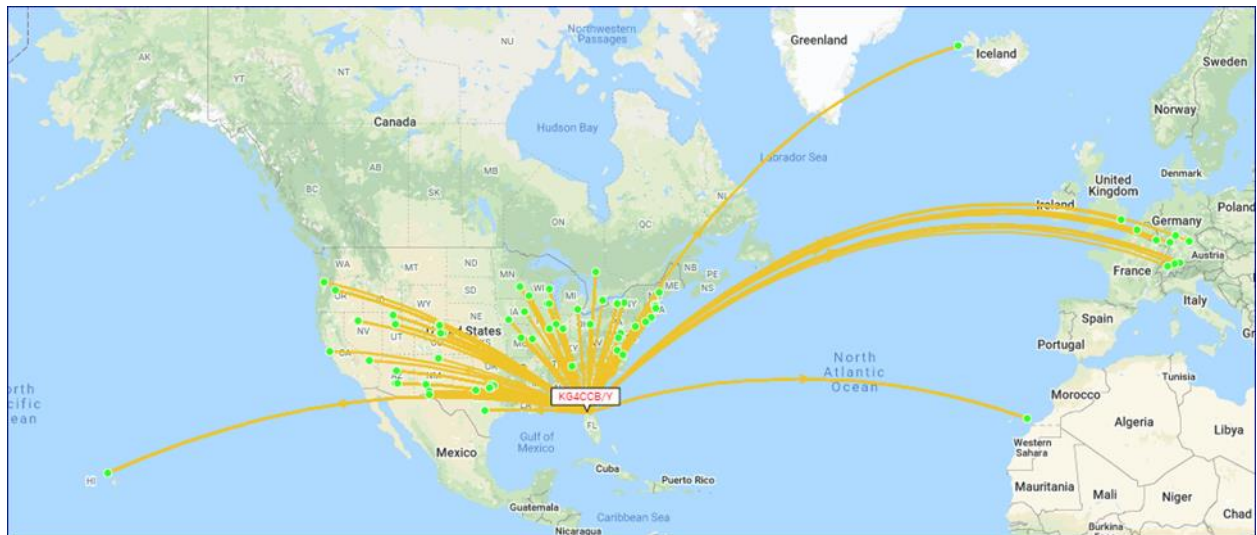
*Cut short considering similar pattern

A few graphics below illustrate the propagation results. Notice that SE orientation results in more dense European contact distribution and less so in U.S. while NW orientation results in less European contact and more within the U.S. Results are skewed by the limited amount of receiving points to the southeast of Florida.



20m transmissions with FT-818 and Tow Hitch Hamstick with vehicle facing SE

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FT-818 transmitting with Tow Hitch Hamstick on 20m with vehicle facing NW

In consideration of the above, it seems to me that mounting an antenna on the tow hitch will achieve reasonable results. It also seems that propagation will be greatest along the long axis of the vehicle. But that could be more accurately determined if I were testing in Kansas City near the geographic center of the U.S., or similar. Perhaps others, more knowledgeable and experienced with propagation, will have a better interpretation.



The Xiegu G90 SDR Transceiver

Guy Johnson, N4DEL, West Volusia Amateur Radio Society (WESTVARS)

I recently (February) purchased a new SDR 24 bit digital transceiver, Xiegu G90, and thought I would give my impressions. The unit is Chinese, has 20 watts out on SSB, and runs 160-10 meters. Has a built-in antenna tuner which is fast and compensates well for matching. It is well built and the head unit comes off the body and cable to attach is included. It has a 1 3/4 inch color screen loaded with information. There are about 20 controls and knobs that give an excellent ability to operate. Receive sensitivity is comparable to my 857. The mike also provides 25 buttons for control. I did install a heavier power cable and a larger main tuning knob. No 6 or 2 meters.

What is nice, is Xiegu has been great with SDR updates to improve performance. I have installed 4 so far. The unit is great for portable, mobile, and just plain fun to use. I have made numerous contacts on 40 and 20 and get favorable reports and it's fun to tell hams I am running 20 watts! These sell for about \$450 at several vendors. There are several groups loaded with info about this little unit if you are interested. They talk about CW and digital modes which I have not tried yet. I am not connected with Xiegu and this is just my personal view.



Attempting to Serve a Faith-based NGO's Communications Needs After Hurricane Sally

by Gordon Gibby KX4Z

David Puscher KK4RXT and I spent a week with the Florida Baptist Disaster Relief group deployed to Pensacola, Florida in support of survivors of Hurricane Sally. This is a faith/ministry-based group that provides 5-10,000 hot meals/day for distribution by other groups, roof-tarp crews, and chainsaw teams as well as teams that get the mud and molding building materials out of flooded homes. They fill important niches in the disaster response. As such, they are like a small corporation on wheels, with their own Admin group to handle large numbers of volunteers and also interface with public requests. David & I had never deployed with this group before and sought to better understand their communications trailer and their communications needs.

The first communication issue became obvious as the string of heavy trailers and 65kW generator and truck after truck of volunteers sped along their 400 mile deployment. Communications was a weak spot between disconnected sections of the convoy, trailers experiencing tire blowouts and emergency stops, plans for regular rest stops, and confusion about the route with ever-changing road closures and detours. David & I were in near continuous VHF connection but with no one else. Solution: The future plan is now mag-mount antennas, truck-mirror antennas for fiberglass-cab vehicles, and a bunch of business radios!

When we all arrived to the acres of parking lot pavement reserved for us in the back of a huge Pensacola church, the real fun began. The communications trailer includes a recently repaired and upgraded **geosynchronous auto-steering 12GHz satellite system/dish** – but David was the one who had computed the coordinates ahead of time and knew we needed an opening through the trees at a certain azimuth and elevation – which helped guide the positioning of the trailer. At that point, Internet was non-existent at the church, and a good section of their building was running on a huge emergency generator.

Over the next days, Internet returned and the Admin crew settled into a makeshift office with almost a dozen volunteers on computers using Google applications to handle over 200 credentialed or day-volunteers' paperwork and accommodations (Covid-19 bed-spacing in Sunday school rooms). At first,

they worked from a cell phone hotspot. In the comms trailer, we had discovered that 1Mbps Satellite is S L O W compared to what web surfers are used to, and were plumbing the depths of two cascaded **fail-over routers**, and a mysterious **Verizon data modem**. TCP/IP NETWORKING turned out to be much more important to their communications than we had expected.

Radio was a bright spot for us – We got the **roof masts** upright and had a 25-foot **business band Motorola repeater** working quickly and this was a huge hit with the security team, whose radios we discovered were matched the repeater on one channel (but more work needs to be done to investigate their other unknown channels). As a second kitchen campus was stood up 4 miles away, to double the meal output, we were happy to discover it was within the coverage area of our repeater and the radios we had loaned out to the leadership. Score 1 for the hams! At the very start, David and I had put up a nice **end-fed sloping 80-meter-and-up resonant antenna** using a weighted sling-bag, and the ICOM 7300 transceiver/Pactor/ARDOP/VARA system was easily able to make **WIN-LINK data connections** to varying stations throughout the day, including both amateur and SHARES.

Everything we did was in some way easier because of our amateur radio experience. *Hams are uniquely suited to serving advanced communications needs, especially if they have some experience with computerized digital comms.*

As the local communications improved, the need for the comms van declined and we moved on. The scope of the response effort provided at the site was truly amazing. A couple of days I got up around 2-3AM and helped with the meal preparation – on some days their assignment was 10,000 meals from one propane-powered kitchen staffed by dozens of volunteers and a forklift to keep pallets of #10 cans flowing. Enormous propane tanks were refilled periodically, and the 65kW diesel generator ran continuously to power multiple trailers, including a few campers for longer-term staff. Crew of assessors, tarpers, and chainsaw group headed out day after day working on 600+ work orders. Thankfully cell phones were generally working as **we had zero capability to provide those crews with emergency VHF/UHF comms back to the base camp** at this point.

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After about 4 days of serious effort, David and I had repaired the transport damage to the interior of the trailer, figured out just about every communication system, and wrote a 36-page heavily- illustrated manual for additional core volunteers. David completed full Windows operating system version-upgrades of six Admin laptops we discovered within the trailer and got them all set for the comms printer. We demobilized a few days later and the core team then all undertook a systems exam and started

refresher training. Leadership of the Disaster Relief group encourages us to develop a “**deep bench**” of **ham volunteers in each of the seven Florida FDEM regions** – and we will also be looking for dozens of entry level volunteers who have the typical ham radio skills of dealing with handi-talkies and mobile radios to assist deployed teams out of reach of cell phones.

If you’re interested, send me a note!

docvacuumtubes@gmail.com



The very beginning of creating the “village” of trailers. Comms trailer is at the left, Potable water tank in the foreground, and volunteers are raising the supports for the cooking at the smaller kitchen trailer. Generator trailer is hidden by the kitchen trailer, Pallets of foot and equipment are beside the potable water trailer. About twice this number of trailers were there within another 2 days.

Roof-mount deployable mast system used for repeater, VHF/UHF, and cell phone systems

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/fag/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

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*

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 arrr-nfl.org.

Email: n4gl.marty@gmail.com



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

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