

# Nacogdoches Amateur Radio Club

## 2020 CLUB OFFICERS

Pres: Bill Rascher - KT5TE

Vice Pres: Steve Bartlett-WB5IDY

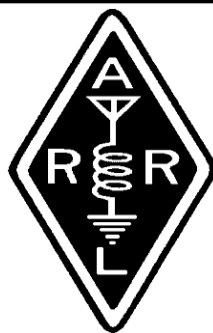
Sec/Treas: Army Curtis - AE5P

Visit our web site at

<https://w5nac.com/>

## MISSION STATEMENT

The Mission of the Nacogdoches Amateur Radio Club is to support and promote Amateur Radio by public service, offering training to unlicensed interested parties and licensed Amateurs, mutual support of other Amateurs, engaging events that promote Amateur radio to the general public and other Amateur radio operators, and continuing fellowship by regularly scheduled organized meetings and events and having fun.



## OCTOBER MINUTES

The October meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on October 7th. Because of the Wuhan virus, the meeting was again held as a virtual meeting using the club's 147.32 repeater. **President Bill KT5TE** opened the meeting at 7:00 p.m. Ten members and guests checked in. Minutes of the previous meeting were approved as published. The Treasurer's report was read.

Reports were made on Club participation in the various

contests available since the last meeting.

Thanks to **Andy KE5EXX** for once again making facilities available at the International Church of Nacogdoches for VE testing in October. Three persons presented themselves for testing. Full details later in this newsletter.

Other contests and special events coming up in October were mentioned. All club members are encouraged to participate in as many of these as possible. They are a wonderful way to improve your communications skills as a Radio Amateur.

Members were reminded that a tailgate sale is planned for Saturday October 17 in Central just north of Lufkin on Hwy 69.

The sponsors hope to grow this second annual event into a full hamfest. All are invited to attend, whether to sell radio equipment or to buy.

The President appointed a nominating committee consisting of Army AE5P, Ralph N6RH and Robert KD5FEE to find candidates for club officers and report back at the November meeting, at which time election of officers will be held.

There being no further business, the meeting was adjourned at 7:35 p.m.

## FROM THE PRESIDENT

This past month has gone by fast and was fun. For me the chance to climb and disassemble John's, W5FWR tower was very interesting. RM was on the tower with me, and of course I had the easy job of just standing on a rung, undoing bolts and watching everyone else work. At one point I felt the tower shake, looked down and Army AE5P was pointing up. After looking up I informed RM, K5AGE that he should not look up. Which of course that is exactly what he did. I think he said something like "aw crap", and that was a very real description of what could have happened since buzzards were landing on the antennas above us. We weren't sure if they knew what the future held for us or if just taking a break.

Getting that tower down got me to thinking about my VHF tower. Last month I bought and took

down two antennas for Tom W5TV, a 12 element 2m M<sup>2</sup> and a 9 element 70cm Cushcraft. The plan is to put those antennas on my VHF tower. But the mast is only 6' above the top of that tower with a 5 element 6m M<sup>2</sup> at the bottom and a dual band vertical FM antenna at the top of the mast. At a 6 meter workshop in Austin a couple years ago a researcher from an antenna range showed the results of an interesting experiment with antenna distance on a mast. He tested what the effects were for closely mounted antennas. How close? How about each antenna's mast bracket touching. His results showed that it really didn't matter how far apart the antennas were. There is some loss, but not much. He did say it would be best to at least keep the antennas about a meter apart. This might be more important if you're at the legal limit.

So my thinking is maybe I'll need to add another section of tower for tree height and a 22' chromoly mast. Plus a second

rotator plate for another thrust bearing and also an additional set of guys. I have confidence that Army, AE5P can guide that mast into the tower. There are a lot of details to work out, but I know the membership will have suggestions to help me get this done. I like the idea of two thrust bearings to take load of my Yaesu G-450.

With a thousand irons in the fire why not add another?

73, Bill KT5TE

[bill@watershipfarm.com](mailto:bill@watershipfarm.com)

## FROM THE VP CHAIR

### Nothing a Doughnut Won't Fix

I am lucky enough to have a little lake cabin on a great private fishing lake near Fairfield, Texas. I have been working on setting up antennas and equipment at the cabin to allow me to enjoy all my hobbies while relaxing on the lake. Yes, I fish a lot, but it is always fun to make some radio contacts from a remote location. I have set up a 2 meter antenna and also an end-fed multiband HF antenna. We can debate the evils of end-fed wires, but I will tell you I have contacts in 52 countries with less than 100 watts ..... so there. Ha!

One down side of high impedance antennas that use a matching transformer is some RF back in the shack. End-fed antennas really need a counterpoise or a

ground system as well as a good choke to reduce common mode currents.

I decided to build a simple choke and researched all options including ferrite beads, a toroid wrap, and air coils. Based on Dr. Google, the best wide range high impedance chokes are crafted with a ferrite core having adequate turns to produce 1000 ohms or more in the 5 to 20 MHz frequency range. My tuned wire antenna had RF problems on 20 meters, enough to cause my Signalink USB device break on and off during a transmission.

I used a FT240-43 toroid (the doughnut) and 12 turns from a scrap of RG 8x coax with some crimp-on PL-259 connectors. I recommend wrapping about half of the turns one direction and then make a crossing over the core and complete the remaining wraps on the other side. This cross wound technique, often called a Guanella Balun, makes the final location of the in and out leads at a better position for

mounting, and also reduces the mutual capacitance, increasing the commode mode impedance. The total cost for the choke was about \$16 dollars and it had no notable effect on the operation of my rig or SWR but it eliminated the RF enough for everything to work properly yielding an estimated 4000 ohms of impedance.

It was an easy project taking about 15 minutes to build. The FT240-43 core can be bought on line for \$12 or less plus shipping

(<http://www.amidoncorp.com/ft-240-43/>). If you want to pay \$70 to \$90, you can get the same choke in a nice plastic box from several quality vendors!

Have fun. Build it yourself.

73, Steve WB5IDY

[bartlett.steve58@gmail.com](mailto:bartlett.steve58@gmail.com)



## NOTES FROM OUR EC

I'm writing this one a bit earlier than my previous columns. It's Friday 23 Oct.

Let's dive right in. In last month's EC Corner I mentioned we would expand upon my comments about Radio Teletype (RTTY). Army and a couple of others play in the RTTY contests. Seem like there is a contest for most of the radio modes.

Teletype was a direct descendent of Morse code. It was and may still be used to pass Record Traffic. Record Traffic is some type of formal messaging where a true printing of the message is

required. It may include, news wire, stock ticker telegram messages stock transactions. I won't get into the history of RTTY. It looks quite fascinating. Why should we worry about it?

We in the EC community or even as traffic handlers may be called upon to pass traffic that a record, physical or electronic, will be required. This may be things as listing evacuees in a shelter, a request for specific equipment, a message wishing someone a happy birthday, or a welfare message into a storm damaged area.

And like a lot of things in this world, the job is not done until the paperwork is complete. There are numerous forms out there. FEMA has a host of them. We may be asked to fill out ICS-213 General Message Form. The ARRL has its radiogram form and DOD has a message form, which I really don't expect you will be required to fill out. It is a pain to do and yes, I've done a few of them.

Thankfully flmsg has a few of the message forms including the FEMA and the ARRL radio gram. A couple of websites at the end.

The weather seems to be settling in. Hurricane season ends this month, we fall back to Central Standard time 1 Nov. Leaves are filling up the gutters again.

Please remember to check into our Monday ARES net and Thursday Weather net. Thanks to all who do.

73 de John Chapman  
KC5MIB

[kc5mib@arrl.net](mailto:kc5mib@arrl.net)

## VE TESTING

Thanks to Andy KE5EXX, we were able to continue our VE testing in August, September and October at the International Church of Nacogdoches. Due to the Wuhan virus, we were forced to cancel the test sessions originally scheduled for March, April and May. In June and July, we met at the North Street Church of Christ thanks to Steve WB5IDY.

The October VE session saw three individuals present themselves for exams. Mike KI5JSB upgraded to Extra, and James from Flint and Chad from Henderson both passed their Technician exams. Callsigns have not been issued at the time of writing.

Two big items regarding our VE testing program. Beginning with the October testing session, anyone who passes their Technician exam will be given a current copy of the ARRL General License Manual in the hope they will return to upgrade to

General. It's important that we do all we can to promote new additions to our ranks.

Second, effective with the November VE testing, we will meet at the Nacogdoches County EOC, which is located off FM3314, just west of Loop 224. Turn off FM3314 at the soccer fields, and continue west on the interior road to the EOC. This is the same location we used for our Field Day operation in 2019.

For the latest updates, please check the club website at:

<https://w5nac.com/about/testing/>

73 de AE5P.

email: [ae5p@arrl.net](mailto:ae5p@arrl.net)

## TWO METER CLUB NETS

Remember to join us each week for the two meter nets sponsored by NARC. Each **MONDAY** is the **NARC ARES/RACES** net, at 8:00 p.m. on the club's 146.84 repeater (PL



141.3). Second, on **THURSDAY** evenings at 8:00 p.m. is the **Deep East Texas Skywarn Emergency Weather Net** on the 147.32 repeater (PL 141.3). Please join us for one or both.

## NEXT MEETING

The next meeting will be a real face-to-face meeting at the EOC off FM3314. We have been given permission by the County to use the EOC for our monthly meetings and our monthly VE test sessions. Many thanks to our VP, Steve for making the arrangements for this.

With this return to real meetings, we will also resume our raffle for a free book on Amateur Radio. Everyone present at the meeting will receive a ticket at no charge.

Persons attending the meetings are asked to consider wearing a face mask. Appropriate distancing will be followed.

Please come and join us for this return to normal meetings. It will be very good to see everyone again.

For the latest updates, please check the club website at:

<https://w5nac.com>

A special program is planned to show off the HF go-kit we received recently from the West Gulf Division Vice Director Lee Cooper. The kit includes a 100 watt HF transceiver, an automatic antenna tuner, power supply, and a SCS Pactor modem. Putting this together with a club Orange Box VHF/UHF radio setup provides complete coverage for Winlink communication as well as SSB and CW modes.

## UPCOMING EVENTS OF NOTE

Mark your calendars for the following events coming up in the next few months. Full information on these events and much more can be found at <http://www.hornucopia.com/contestcal/contestcal.html>

Note that all dates shown here are local, CST dates while all contest logging uses UTC dates and times.

### ARRL SS CW

Nov 7-9, 2020

<http://www.arrl.org/sweepstakes>

### ARRL SS SSB

Nov 21-22, 2020

<http://www.arrl.org/sweepstakes>

### CQ WW CW

Nov 28-29, 2020

<http://www.cqww.com/rules.htm>

### ARRL 160M CW

Dec 4 - 6, 2020

<http://www.arrl.org/160-meter>

### ARRL 10M CONTEST

Dec 12 - 13, 2020

<http://www.arrl.org/10-meter>

## Two Meter Antennas for SSB

by

Thomas Atchison W5TV

Suppose we want to have an antenna that could be used for 2 meter SSB. Two major types of antennas are directional antennas and omnidirectional antennas. Most people use horizontally polarized antennas on SSB. Common directional antennas are usually either a multi element yagi or a multi element quad. These antennas require a rotor because they are directional. If you want to work 2 meter DX then this is the way to go, however, if you want to work local stations at various dispersed locations then an omnidirectional horizontal antenna is a simpler choice. If you like to build things I recommend you consider a 2 meter halo. Halo stands for "HALf wave LOP". It is simple, horizontally polarized and omni directional.

The halo antenna is a half wavelength dipole with the legs bent in the shape of a circle. However, the ends do not meet, so technically it's not a loop (Fig. 1). This loop can be fed with coaxial cable using a gamma match.

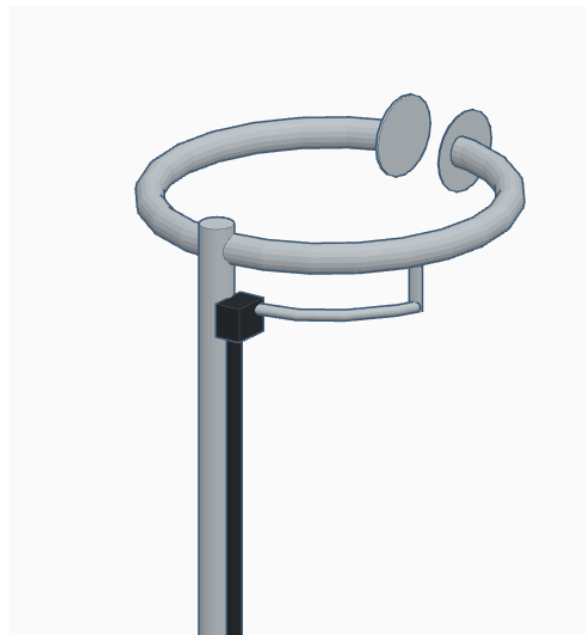


Fig 1



A typical radiation pattern for a halo antenna is shown in Fig. 2.

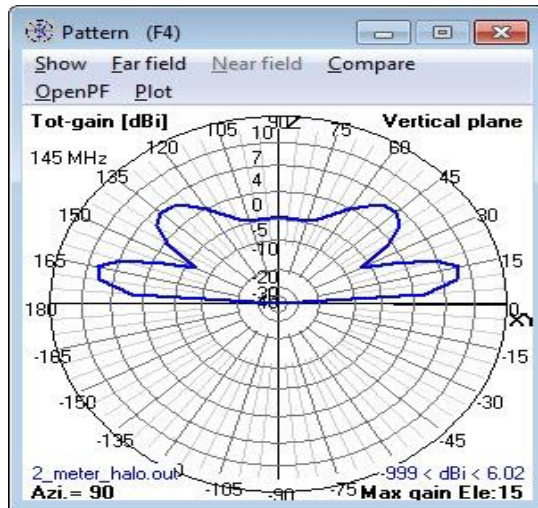


Fig. 2

Notice there are two lobes, one at about 15 degrees and one at 45 degrees. The 15 degree lobe provides maximum gain.

The half wave dipole can also be formed into a square but with the ends NOT touching. (Fig. 3)



Fig. 3

The halo antenna can be stacked for additional gain. (Fig. 4)



Fig. 4

There are several web sites that provide additional information regarding halo antennas for 2 meters. I have included an example below.

[2 Meter Halo Antenna by Mike Fedler N6TWW - QRZ Now](#)

These antennas may be home made as indicated by the article above. Several are available commercially. An example by M<sup>2</sup> is provided below.

[2M HO LOOP - M2 Antennas](#)

If you want to look at a different 2 meter horizontal polarized antenna that can be homemade consider the Hourglass Loop Antenna described in the web site below.

[The Hourglass Loop Antenna - ARRL](#)

This last antenna was published in the 2018 issue of QST on page 35 and it is featured in *The ARRL Antenna Book*, 23<sup>rd</sup> Edition.

I have hopes that this article will generate some local interest in 2 meter SSB. Have fun!

## WE HAVE A NEW HOME!

Thanks to our Vice President Steve Bartlett, and to our Nacogdoches County Judge Gregg Sowell and Emergency Management Coordinator Tara Triana, the Nacogdoches Amateur Radio Club has been granted access to the County EOC to use for our meetings and our VE test sessions.

This is most welcome and will allow us to resume real meetings rather than virtual ones. We used the EOC for our Field Day operation in 2019 and it worked out very well. There is a lot of room in the facility, with many tables and chairs. Perfect for our use and very easy to allow for appropriate distancing.

Please plan to attend our next meeting on November 4<sup>th</sup>. The meeting will begin at 7:00 p.m. with doors opening at 6:30.

We will resume the book raffle, with everyone present receiving a raffle ticket without charge. The winner of the raffle will receive a current book of interest to Radio Amateurs. Matter of fact, we will have two book raffles to celebrate our return to 'real' meetings again. You will not want to miss this.