

# Nacogdoches Amateur Radio Club

## 2013 CLUB OFFICERS

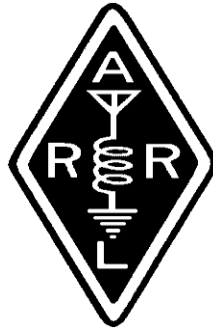
Pres: Mike Brown - KF5KEY

VP: John Cechin - W5FWR

Sec/Treas: Army Curtis - AE5P

## 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.



## DECEMBER MINUTES

The December meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on December 5th. **President Rusty KD5GEN**, opened the meeting at 6:00 p.m. in the Parish Hall of Christ Episcopal Church. Thirteen members and six guests were present. Each person present introduced himself. Minutes of the previous meeting were approved as published. The Treasurer's report was read.

Discussion held on the 10<sup>th</sup> anniversary Shuttle Columbia Special Event Station, which will be held

at the Hemphill Columbia Museum on Saturday February 2<sup>nd</sup>. Because this is the 10<sup>th</sup> anniversary of the loss of Columbia, many dignitaries and guests from NASA are expected to attend beginning Friday, February 1<sup>st</sup>. There is an opportunity to put our special event station on the air Friday as well as Saturday. All Amateur Radio operators, and especially NARC members, are invited to attend. Carpooling will be available to those interested.

Being the final meeting of 2012, the gavel was officially passed to our 2013 incoming President, **Mike Brown KF5KEY**. Many thanks to **Rusty Sanders KD5GEN** who has done a great job as President for the past three years.

Meeting adjourned at 6:12 to begin the pot luck supper and annual Christmas Party with White Elephant auction.

A total of 17 white elephant gifts were auctioned off, raising \$253 for the club. Many thanks to all those who participated.

## FROM THE PRESIDENT

Greetings to all from Colorado. I have spent the last few weeks at my daughter's home in Pueblo West, Colorado, and we are having a wonderful time. I must say that the trip here was an experience though. The first day from Nacogdoches to Amarillo was totally uneventful. Up early and left for Pueblo and all was fine until halfway between Clayton, New Mexico and Raton, NM. I don't know when they began naming the winter storms, but this one was named "Draco," which is a Latin derivative meaning "Dragon." And

the storm we ran into was a dragon. First came the snow, with some of the largest flakes we had ever seen, and as long time skiers, we had seen quite a bit of snow. Then came the wind, steady at about 40-50 MPH with gusts exceeding 70 mph. The trip through Raton pass was exhilarating (read we were scared as hell!), but we made it through okay.

The hundred plus miles in a driving blizzard, often times in a complete whiteout, was a real thrill. I told my daughter and grandkids that I wanted a white Christmas, but not in that fashion. We made it to Pueblo without mishap and were totally exhausted upon arrival. I had forgotten how nerve-racking it is to drive on ice and snow, much less accompanied by a blizzard.

We are having a wonderful time here, and it really did snow on Christmas day...my first white Christmas since I was a child living in Albuquerque.

Now on to things radio-related. If you missed our annual Christmas party and white elephant sale, then you really missed a fine time. Great food, fun and fellowship followed by a great auction which helped augment the funds in the club coffers. Thanks to all who came and participated.

We are making plans to commemorate the 10th anniversary of the loss of the Columbia. Once again, we are going to have a special event station at the Columbia museum in Hemphill, and we would like to have as many participants there as possible. Being here in Colorado, I don't have access to my notes as to dates and times, but this will be discussed in the upcoming club meeting the first Wednesday in January.

In addition, the Neches River Rendezvous is in the planning stages, and although it is still several months away, we would very much like to have interested volunteers to

begin to make plans to help with this annual event.

Sorry that this letter is so brief, but having been out of the state for so much of the time, I am totally out of touch with much of the radio goings on at home. Hope to see all of you at the next club meeting.

73 to all....

KF5KEY - Mike

Email:

[michaelleebrown@hotmail.com](mailto:michaelleebrown@hotmail.com)

### MY 2 CENTS FOX WILLY ROGER

#### IT SEEMS TO ME:

Have you ever heard or said "The magic has gone out of our!!!"? Well that's what has happened to HAM radio. That's right, you heard me: the magic has gone out of our hobby.

I say OUR hobby because we are the caretakers of Ham radio. You newer Hams will be the innovators of tomorrow devising new ways to use

the hobby, but what you have missed is the late night contacts made the world round by the glow of the tubes from your radio and the warmth it gives during the more chiller times.

Yes that's right the good old tube radios, the now mostly forgotten and sometime stacked on some shelf, collecting dust, placed there to make some Hams ask "what are those?" the top of the line radios like Halicrafters, Drake, and Heathkit, to name a few. Their time has come and gone but not forgotten by a few of us.

OK by now you know where my heart is and will be. That is not to say that I am not a fan of my IC 756 PRO. I am very much so, but sometimes I would like to hook up some LEDs to give the shack that glow, yes yes yes. Which brings me to my latest concern, that being "knobless radio or SDR". You newer Hams must be very careful of this mode of communications because as everybody knows that the

computer is the most dangerous tool of the 19<sup>th</sup> century, the plague of us all. I have even heard that SDR will give you weak wrist, so show caution.

Yes caring the torch forward for our hobby will fall to the new Hams. Go and do great things with Amateur Radio, there are soo many roads to travel, pick one, some, or all, but pick, and remember, don't forget where the hobby came from. You might think about having a club SES tube radio day. Either build your own or rescue one and put them on the air. Tube radios will not give you weak wrist. It might put a little gray in your hair, but that never stopped me. What do you think?

73,

John Cechin W5FWR

[Carrots4ever2u@suddenlink.net](mailto:Carrots4ever2u@suddenlink.net)

## VE TESTING

Our next VE testing is scheduled for Wednesday, January 16th at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Applicants should bring a picture ID, the original and a copy of their current Amateur license, the original of any CSCE's and \$15 to cover the cost of the exam(s). Correct change is always very much appreciated. 73 de AE5P  
email: [ae5p@arrl.net](mailto:ae5p@arrl.net)

## CLUB NETS

Remember to join us each week for the 2-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. We are always looking for folks who would like to become

net control operators. If you are interested, please contact any of the existing net controls. We will be pleased to help you in any way we can.

## NEXT MEETING

The next meeting will be on **Wednesday January 2<sup>nd</sup>** at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. The church is at the corner of Starr and Mound Streets in Nacogdoches. Please come join us and bring a friend.

## CONGRATULATIONS

Congratulations to Tim Leonard, KE5PQL. Tim upgraded to General at our December VE testing session.

## BASIC ANTENNAS

### PART 48

by

Thomas Atchison W5TV

In the October 2012 issue of QST, I read an article that described the construction of a dual band antenna for 6 meters and 2 meters using 450  $\Omega$  ladder line. The article, by Steve Ford, WB8IMY, is on page 49 of QST. My purpose in this article is to describe the basic construction and refer you to Steve's article for more detail. In my simulation I used different lengths for both the 50 MHz wire and the 144 MHz wire. The simulated antenna was horizontal at a height of 30 feet. If you plan to use this antenna for FM work you would want to shorten the lengths and mount the antenna vertically.

The 450  $\Omega$  ladder line should be cut to a total length of about 119 inches. If we consider a  $\frac{1}{2}$  wavelength as about 113 inches on 6 meters, then we have an extra 3 inches on each end to wrap around insulators. The other side of the 450  $\Omega$  ladder line is trimmed to 39 inches, centered on the 6 meter element. That is, make a cut at 19.5 inches on either side of the center of the 119 inch ladder line. The total 39 inches will remain intact and it will serve as a coupled resonator on 2 meters. You need to remove the unused wire and insulation outside the ends of the 39 inch 2 meter radiator. A rough diagram is shown below.

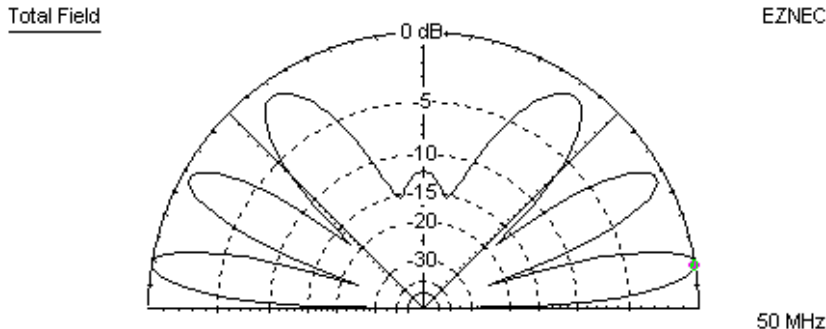


The antenna is fed in the center of the 6 meter element. Cut the 6 meter element at its center and attach an SO-239 with the center conductor connected to one side of the 6 meter wire and the ground connection to the other side. Since this is a balanced antenna with an unbalanced feed line (52 ohm coax) we need to prevent radiation from

the outside of the coaxial feed line. One way to diminish feed line radiation is to put several ferrite beads on the coax near the SO-239 connector. This antenna should provide a good match to 52  $\Omega$  coax for both 6 and 2 meters.

A simulation of this antenna using EZNEC is shown below.

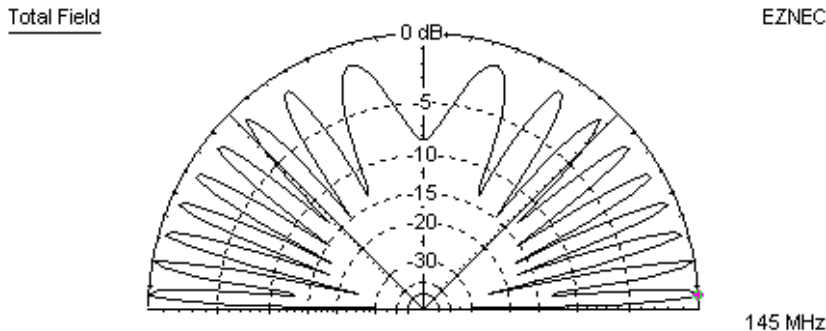
At 50 MHz we have the following radiation pattern:



Elevation Plot		Cursor Elev	9.0 deg.
Azimuth Angle	0.0 deg.	Gain	8.34 dBi
Outer Ring	8.34 dBi		0.0 dBmax

Slice Max Gain	8.34 dBi @ Elev Angle = 9.0 deg.
Beamwidth	9.4 deg.; -3dB @ 4.6, 14.0 deg.
Sidelobe Gain	8.34 dBi @ Elev Angle = 171.0 deg.
Front/Sidelobe	0.0 dB

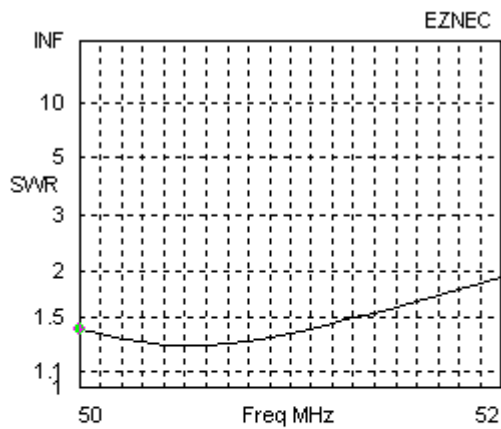
At 145 MHz we have the following radiation pattern:



Elevation Plot		Cursor Elev	3.0 deg.
Azimuth Angle	0.0 deg.	Gain	11.0 dBi
Outer Ring	11.0 dBi		0.0 dBmax

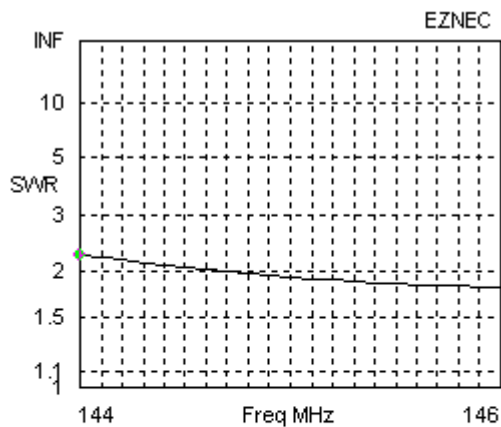
Slice Max Gain	11.0 dBi @ Elev Angle = 3.0 deg.
Beamwidth	3.1 deg.; -3dB @ 1.7, 4.8 deg.
Sidelobe Gain	11.0 dBi @ Elev Angle = 177.0 deg.
Front/Sidelobe	0.0 dB

The SWR from 50 MHz to 52 MHz is as follows:



Freq 50 MHz                      Source # 1  
**SWR** 1.4                              Z0 50 oh  
 Z 63.73 at -13.2 deg.  
   = 62.05 - j 14.55 ohms  
 Refl Coeff 0.1672 at -42.98 deg.  
   = 0.1223 - j 0.114  
 Ret Loss 15.5 dB

The SWR from 144 MHz to 146 MHz is as follows:



Freq 144 MHz                      Source # 1  
**SWR** 2.24                              Z0 50 oh  
 Z 88.28 at -29.63 deg.  
   = 76.74 - j 43.65 ohms  
 Refl Coeff 0.3819 at -39.51 deg.  
   = 0.2946 - j 0.2429  
 Ret Loss 8.4 dB

This antenna is easy to build. You can alter the lengths to suit your particular frequencies and location.