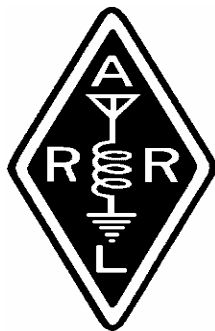


# Nacogdoches Amateur Radio Club

Pres: Lon Glaze - AE5BN

VP: Tom Atchison - W5TV

Sec/Treas: Army Curtis - AE5P



## MAY MINUTES

### 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.

The May meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on May 6th. Twenty-eight members and five guests were present. **President Lon, AE5BN**, opened the meeting at 7:00 p.m. in the Bailey Library of Christ Episcopal Church. Each person present introduced himself. Minutes of the previous meeting were approved as published. The Treasurer's report read.

A special guest was introduced and recognized. Our new **NTX Section Manager, Jay Urish, W5GM**, was visiting, the

first time the **NTX SM** has visited our club in over 4 years. Welcome, Jay and thanks for coming!

On May 24<sup>th</sup>, the annual **N5YA/K5QE** cookout will be held at **N5YA**. All are invited.

The June 2008 VHF contest had a number of winners from NARC. The team of **AE5P** and **W5TV** placed 2<sup>nd</sup> nationally for rovers, and 1<sup>st</sup> place in the West Gulf Division. The team of **N5AIU** and **AE5BN** placed 3<sup>rd</sup> nationally for rovers, and **KE5GAQ** placed 1<sup>st</sup> in the Delta Division for rovers. To top it off, **NARC** won the Club Competition and received a very nice gavel which President **Lon** immediately put to good use.

**Marshall, K5QE**, announced that he will participate in a special 6 meter "dx-pedition" to grid EL58 south of New Orleans on May 28 - 29. Grid EL58 is very rare, being reachable only by boat.

Meeting was adjourned at 7:25 p.m.

**Program:**

**Marshall - K5QE** and **Dustin - K5RNT**, presented an excellent program on 6 meter meteor scatter, and had a full station set up to demonstrate a MS QSO with a station in New Mexico. Well done guys.



## HAMMING IT UP

Here we are again. Another month has gone by. Some of us made the trip to Bill's place for the VHF South BBQ Memorial Day Weekend. We were treated to a delicious dinner. It was rather humid but it didn't rain while I was there. We toured both Bill and Marshall's shacks while we were there. We were at Marshall's and he suggested that we go out and watch the EME antenna move. That sure was something to see. Reminded me of a James Bond Moonraker movie. Quite a few folks came down. I think the count was somewhere around forty or so. Some were there from Mississippi and I believe a couple had come down all the way from Indiana. We had a good visit and some good fellowship. I enjoy getting together and visiting with folks especially when

there is eating involved too.

We have a lot going on this next month. June 13th and 14th is the June VHF contest. I believe that most of us will be taking different routes this time so there may not be much pack roving going on this time. If so our scores may not be quite as high this time. I imagine that John and I will go south to Nederland where we will attempt to find a better spot to work from. After that we will head north. On Sunday we will start here and head North at least as far as Southern Arkansas. I suspect we will have a great time and if we are running alone we won't have to work quite as hard as we usually do. If you have 6m or higher frequency SSB capability get on and see how far you can get. You would be amazed how far you can talk when conditions are good.

We also have Field Day coming up on June 27th and 28th. It will be held at the Nacogdoches

Airport. Hopefully, we will be able to find us a good shady spot where we won't get too hot. We will be discussing the preparations for Field Day at the meeting.

Bob K5ME is going to do a presentation for us on Propagation. This should be a good one. See you all there.

73, this is AE5BN Lon.

email: [ae5bn@arrl.net](mailto:ae5bn@arrl.net)

### VP's CORNER

The next meeting of the Nacogdoches Amateur Club is on Wednesday, June 3, at 7:00 p.m. at Christ's Episcopal Church. Bob Knibb, K5ME, will present a program entitled Ionospheric Propagation. If you have ever wondered how we communicate over long distances on the high frequencies, come and hear this presentation.

Also, if you have 'Show and Tell' items, please bring them to the meeting. Folks are always interested in what is new around the club.

73, Tom W5TV

email: [w5tv@arrl.net](mailto:w5tv@arrl.net)

### VE TESTING

Our next VE testing is scheduled for Wednesday, June 17th 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 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 June 3rd 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. If you have items for show and tell, please bring them. Hope to see y'all there.

## BASIC ANTENNAS PART 7

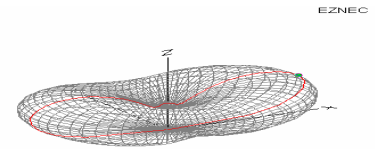
by

Thomas Atchison W5TV

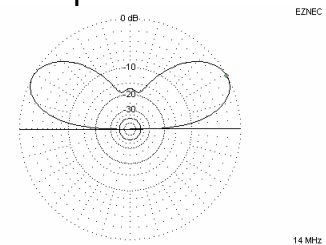
Now let's return to a horizontal wire antenna that is  $\frac{1}{2}$  wavelength long at a resonant frequency of 14 MHz. Remember from Part 6 that the total length of our antenna is  $\frac{\lambda}{2} = 35.13$  feet. We open the conductor at the center and apply a driving voltage across the gap at 14 MHz. In Part 6 we discussed the antenna radiation pattern when the antenna is in free space (no earth ground). Now we want to determine what happens to our radiation pattern when we put our antenna over an earth ground. Being over an earth ground changes the radiation pattern depending on how high the antenna is above the ground.

Let's start with our antenna at a half wavelength above ground. In this case that would be approximately 35 feet.

Here is the radiation pattern

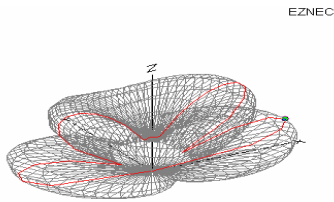


The red curve is an elevation plot perpendicular to the wire antenna. If we look just at this slice of the radiation pattern we have

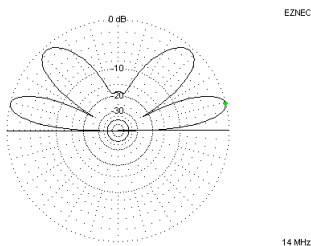


Here we are looking at the end of the antenna. The lobes are broadside to the antenna. The radiation angle for maximum signal strength is about 30 degrees; therefore, this maximum signal will travel out until it is reflected back from an ionization layer. If the reflection is at the right angle, the signal will come back to earth and be received by a station at some distance from the transmitting station.

Now if we raise the antenna so that it is one wavelength above ground or about 70 feet we get the following radiation pattern.



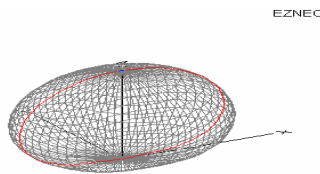
Again, the red curve is an elevation slice of the radiation pattern broadside to the antenna. If we look only at this elevation slice we get the following



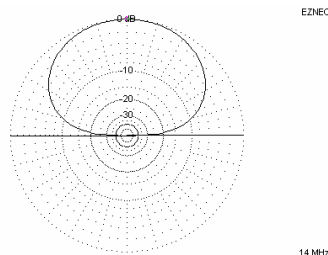
Notice that we now have two lobes, one at a low angle of radiation and the other at a higher angle of radiation. The lower lobe has an angle of radiation of about 14 degrees and will provide communication at a greater distance. The upper lobe has an angle of

radiation of about 48 degrees; therefore, this will provide communication closer to the transmitting station.

Now let's see what happens if we drop our height above ground to about 10 feet. The radiation pattern is as follows:



Again, the red curve is an elevation plot. If we take the elevation plot by itself we have



Notice that we now have the signal being radiated almost vertically. This is better for local communication. That is why people say that if an antenna is close to the

ground it will give better local communication. Generally that may be true; however, there are other factors that affect the radiation pattern of a low antenna such as proximity to trees and buildings.