

# Nacogdoches Amateur Radio Club

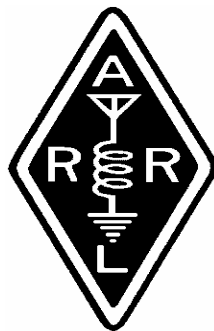
Pres: Lon Glaze - AE5BN

VP: Tom Atchison - W5TV

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.



## NOVEMBER MINUTES

The November meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on November 4th. **President Lon, AE5BN**, opened the meeting at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Twenty-five members and three guests were present. Each person present introduced himself. Minutes of the previous meeting were approved as published. The Treasurer's report was read.

### Reports:

The **Nominating Committee** reported their

recommendations for club officers for 2010 as follows: For **President: Rusty Sanders - KD5GEN**; for **Vice-President: John Jordan - N5AIU**; for **Secretary/Treasurer: Army Curtis - AE5P**. There were no nominations from the floor, and the three above were elected by acclamation. These officers will be installed at the next meeting.

### Announcements:

**John - N5AIU** announced that the NISD Club Station, KD5VVI, will be active in Sweepstakes Phone coming up later in the month.

**Bill - N5YA** announced he would be operating SS from his station.

**Jerry - K5JLW** mentioned Angelina County Skywarn Training on Nov.

12th from 6-9p.m. at Lufkin City Hall Room 102. No food or drinks.

**Marshall - K5QE** mentioned the Leonids Meteor Shower on the 17th. Should be a good time to do meteor scatter.

#### Unfinished Business:

The antenna still needs to be installed at the Nacogdoches Recreation Center.

The Telpac Node needs some work at the Fredonia Hotel.

#### New Business:

**Christmas Party** will be December 2nd beginning at 6pm.

**Mark - W5TXR** will donate two radios. One Alinco DJ-V17T 2m HT and one Alinco DR-235T 222 Mobile.

**John - KC5MIB** should be able to be our auctioneer. (will check schedule)

Pot luck all around.

**John - N5AIU** will pick up plates, etc.

**Mark - W5TXR** will pick up Drinks.

**Jim - KE5ZNJ** will pick up Ice.

Motion was made by **Andy - KE5EXX** to Raffle two radios (provided by **W5TXR**) at the December Meeting with one pot and two pulls, half of the proceeds going to the club and half the proceeds going to the food bank. Passed after discussion.

Meeting Adjourned.



### HAMMING IT UP

Hello all. I guess this is the last time you will have to read my ramblings. That is unless I write a guest column. ;)

Many of you have asked about my mom. She is finally out of the hospital. She is now at Castle Pines in Physical Rehab. She is

still not up and moving around like she needs to be yet. I do appreciate all the prayers and thoughts. She has to get her strength up before she can begin the chemo. Prayers are still needed for her and our family.

At the next meeting we will begin with a hopefully short business meeting where we will install our new officers. Rusty, KD5GEN as President, John, N5AIU as Vice-President and finally Army, AE5P as Secretary/Treasurer/Floor Sweeper and Chief Bottle Washer.

Our hopefully short meeting will be followed by our Christmas Party. We are having a white elephant auction, a raffle for radios and delicious food. I'm sure a good time will be had by all. We will start it off early at 6:00PM. See you there.

Merry Christmas and a Happy New Year to all!

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, December 2, at 6:00 p.m. at Christ's Episcopal Church. This is the Christmas Party and White Elephant Auction so I'm sure you don't want to miss it.

If you have any items around your shack that you would like to provide to another ham, wrap it up or just put it in a sack so that it can be auctioned. All proceeds from the auction go to NARC so it is a good cause.

I'm looking forward to seeing you at the party.

73, Tom W5TV

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

## VE TESTING

Our next VE testing is scheduled for Wednesday, December 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 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 December 2nd at 6:00 p.m. in the Parish Hall of Christ Episcopal Church. The church is at the corner of Starr and Mound Streets in Nacogdoches. This will be our annual Christmas Party and White Elephant Auction, so bring any items you would like to donate to the club, and bring money to bid on items. It will be a pot luck dinner, so bring your favorite dish. Families are most welcome to attend.

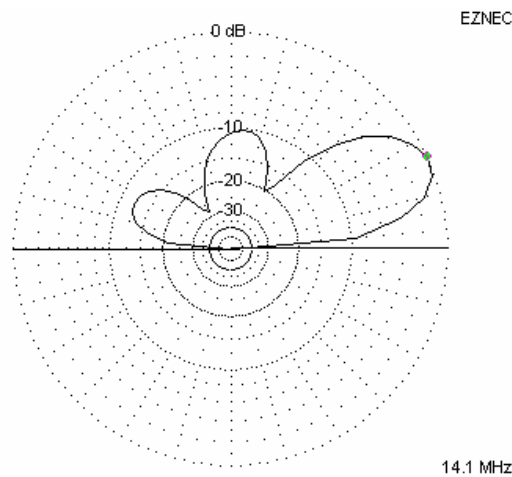
## BASIC ANTENNAS

### PART 13

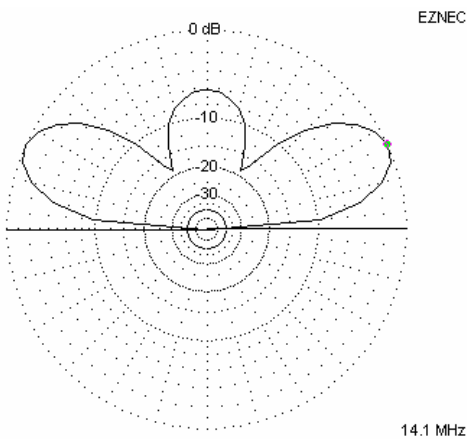
by

Thomas Atchison W5TV

Referring back to Part 12, we had a radiation pattern for our two element array (driven element and reflector) as follows:



We are looking into the side of the array with the reflector on the left side and the driven element on the right side. The major lobe of the radiation pattern is to the right, away from the reflector, and the smaller (minor) lobe is to the left. On a single dipole we would have a pattern that would appear as follows:



Here we are looking down the end of a dipole cut for 14.1 MHz.

Comparing the two radiation patterns we see that part of the energy in the left lobe has been reflected in the two-element array and it has combined with the right hand lobe to enhance it. As we have said the array does not create energy it just redistributes energy. As we look at the two-element array, the reflector end is called the back-side and the driven element is called the front-side. The energy being transmitted is stronger on the front-side than on the back-side. A comparison of the energy transmitted on the front-side of our array to the energy transmitted on a dipole at the same frequency is called the gain of the antenna. Of course there are benefits to using an array for receiving since the energy being received is stronger on the front-side than on the back-side.

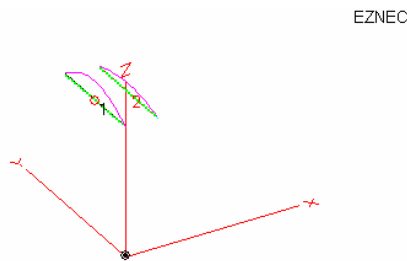
Now suppose we consider a two element parasitic array where the parasitic element is cut shorter than the driven element by about 4% and is spaced 0.15 wavelength from the driven element. Such a parasitic element is called a director. If we design our array to operate at 14.1 MHz, then the dipole has length

$$\frac{1}{2} \lambda (\text{in feet}) = \frac{468}{14.1 \text{ MHz}} = 33.2 \text{ feet}.$$

Since the length of the director is 4% shorter that would be 31.9 feet. With a spacing of  $0.15\lambda$  we get

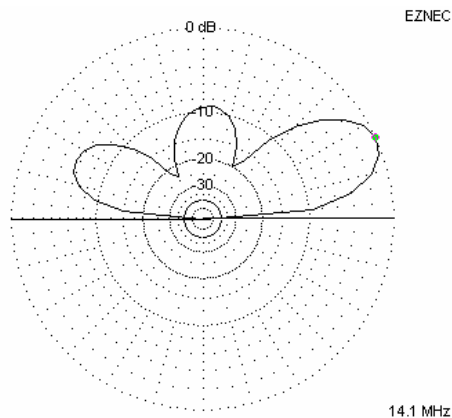
$$0.15 \lambda = 0.15(66.4) = 9.96 \text{ feet}.$$

Using EZNEC to model this array we have



The green lines are the elements of the array. The driven element is labeled 1 and the director is labeled 2.

The radiation pattern for this array is as follows:



We are viewing a vertical slice of the radiation pattern. We are looking into the side of the antenna with the driven element to the left and the director to the right. If you compare this to the dipole pattern above you see that there is a stronger lobe to the right (forward) than to the left. More radiation takes place from the driven element toward the director. The length of the director and its distance away from the driven element causes the energy that is reradiated by the director to add to the energy emitted by the driven element to increase the energy radiated to the right (along the major lobe).

In the next part we will combine these two arrays to form a three element array with a driven element, a reflector, and a director. This will create the popular three element yagi antenna.