

# Nacogdoches Amateur Radio Club

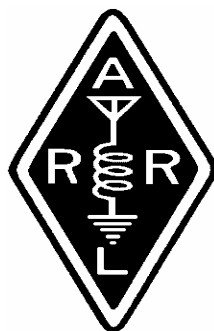
Pres: Andy Delgado - KE5EXX

VP: Lon Glaze - AE5BN

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 5th. Twenty-seven members and three guests were present. **President Andy, KE5EXX**, opened the meeting at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Each person present introduced himself. Minutes of the previous meeting were approved as published. Treasurer's report was not available.

No progress yet on a new web cam for the roof of the Fredonia Hotel.

The new antenna for the Nacogdoches Rec Center has been received, and installation is to be scheduled.

The Telnet/Airmail training held on October 4<sup>th</sup> by W5TXR and KD5FEE was reported to have gone well.

The Skywarn severe weather spotter training held on October 16<sup>th</sup> was also reported to have gone well.

Contesting: The CQWW DX SSB contest was just held, and several members participated. Sweepstakes CW was also just completed, and a couple of members participated in that. The June VHF contest results have just been released, and K5QE placed 3<sup>rd</sup> nationally in

multi-multi, AE5P/W5TV placed 2<sup>nd</sup> nationally in Rover, N5AIU/AE5BN placed 3<sup>rd</sup> nationally in Rover, KE5EXX/KE5GAQ placed first in the Delta Division and NARC placed 1<sup>st</sup> nationally in the club competition.

Congratulations to all!!

Our December meeting will be our annual Christmas party and White Elephant Auction. This is a family event, and everyone is asked to bring some finger food. It will start at 6:00 in the Parish Hall.

The 2009 Shuttle Columbia Special Event Station will be held on Saturday, February 7<sup>th</sup> at McMichael School. VE testing will be offered, and pizza will be served for lunch.

The Nominating Committee presented their report as follows: 2009 Officers, President AE5BN, Vice-President W5TV and Secretary/Treasurer AE5P. There being no further nominations from the floor, the slate was declared elected. They will

be installed at the December meeting.

Meeting was adjourned at 8:00 p.m.

## PRESIDENTIAL POSTULATIONS

Has another year come and gone already?

Let's take a stroll down memory lane, shall we?

We started off my term and ended last year with the Annual Christmas Party. We had good food, good fun, and raised some money.

February brought about the Annual Space Shuttle Columbia SES with a record turn out of attendance and media coverage.

In May we practiced with the Columbia Center and learned what not to do (remember the "fake" broken leg that was claimed as real?)

June brought about a record VHF contest with the club scoring at the top

of the nation, and the 2nd Annual Lufkin Hamfest which raised enough money to pay for Field Day's food and drinks, and a fun Field Day that was held at the Expo Center.

Who can forget Gustav and Ike this fall?

We've had opportunities for practice and real-time events. We've had our TELPAC node go up and down (it's DOWN now). We saw the .32 repeater go up and down (it's UP now).

Noted leadership author John Maxwell says in his book The 14 Laws of Teamwork that a good leader surrounds himself with good people, asks them use their strengths and gets out of the way. I've been accused of delegating, but that's what gets the job done best.

I'd like to thank everyone who helped this year, whether you volunteered at one of our many events or you gave me a pat on the back, it was all appreciated. I'd ask that you extend the same

courtesy to AE5BN for the next shift.

Guys, I've had fun. It's been work. My goal as your president has been to leave the club better than when I started. I think I've done that, but what matters is what you think.

Thank you for allowing me to be your leader.

So long, farewell, auf Wiedersehen, good night...

73 de KE5EXX sk  
email: [ke5exx@arrl.net](mailto:ke5exx@arrl.net)



## HAMMING IT UP

Wow! Time sure has flown by. Seems like just yesterday that we were at last years Christmas party and now it's that time again.

I have had the opportunity to talk on my HF antenna since I had to put it up again after the hurricane. I am using a 135' ladder

line fed dipole tuned with a tuner. Before, I had it orientated roughly east to west, fairly level and up about 35'. The ladder line also snaked through a cedar tree before running on into the house. After, I put it back up as a sloper roughly south-southwest to north-northeast. It is now about 35' high on the SSW end and about 50' or so on the NNW end. It also ended up with the center much closer to the house. The ladder line no longer has to go through the cedar tree and I was also able to get away with about half as much. I got on with some guys last Saturday night who range from Texas to Florida and up to about Tennessee. My 100 watt signal was compared to a fellow about 35 miles away from me who runs about 800 watts. My signal was said to be slightly better than his was. The extra height on the antenna definitely helped.

I also made some improvements to the antenna on my car. I was using a 2m/70cm dual-band

Tram antenna and a magnet mount that I got from Jerry. When I ran this combination on the roof of the truck even with 5 watts. I heard no complaints on the signal strength even from Lufkin. When I put this combination on the car's trunk I would have to turn up the power when I was talking from Lufkin. I decided that the best way to go was a NMO mount through the roof. This car has a moon roof. I don't like moon roofs but always seem to end up with them. I dropped the headliner down at the back of the car so I could see what I was getting into. What do you know they have a plastic tray that the moon roof slides back into. I drilled the hole just far enough back to miss the tray. I brought the wire down inside the trim and under the carpet back up to the front. The signal reports from Lufkin are now much improved with the antenna on the roof. Whether you use a magnet mount or a NMO like I did the roof is the place to mount an antenna.

See you all at the party!

73 de AE5BN Lon

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## VE TESTING

Our next VE testing is scheduled for Wednesday, December 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 \$14 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.

## NEXT MEETING

The next meeting will also be our annual Christmas Party and White Elephant Auction on Wednesday December 3rd at 6:00 p.m. in the Parish Hall of Christ Episcopal Church. This is a family event, so bring the entire crew. Everyone is asked to bring some finger food of their choice. A complete dual band HT with many accessories will be raffled off, with all proceeds going to the club, so bring cash or your checkbook. 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 Two

### By Thomas Atchison

In Part 1 we talked about introducing a variable frequency source into a wire and measuring the current in the wire as we increase the frequency. In this situation the current increases until we reach a frequency,  $f$ , where the wavelength,  $\lambda$ , is related to the length of the wire by the equation

$$L = \frac{\lambda}{2}.$$

If we continue to increase the frequency, the measured current will decrease. This is the sort of behavior that occurs when we have an RLC circuit that is tuned through resonance. Because of this, the length of wire  $L$  is called a resonant length. This length  $L = \frac{\lambda}{2}$  is the shortest length of wire that will resonate at the frequency  $f$  that has wavelength  $\lambda$ . In fact a length of wire has inductance, capacitance, and resistance, so we do have an RLC circuit. These

are distributed over the length of the straight wire; therefore, such straight-line conductors are called linear circuits.

Normally, we are operating at a particular frequency or band of frequencies. To construct a resonant wire antenna we then vary the length  $L$  so that we have  $L = \frac{\lambda}{2}$  at the frequency of interest. If we are talking about a band of frequencies, we normally select a frequency in the middle of the band and cut the length  $L$  to that frequency. We need to realize that we are talking about an ideal antenna in free space with this discussion. The formulas we discussed in Part 1 are not quite accurate for an actual wire. In a practical half-wave antenna the length is about 5 percent shorter. That is, for a practical half-wave antenna the formula is

$$\frac{\lambda}{2} = \frac{468}{f}$$

where  $f$  is the desired frequency in MHz.

This difference in length can be accounted for by realizing that energy does not travel as fast along a wire as it does in free space. The formula above calculates an electrical wavelength and the formula given in Part 1 calculates a free-space wavelength.

Remember when we were dealing with Basic Electronics we talked about circuits that offered a complete path around which electrical energy could move. The wire we are talking about above does not offer such a path. What is the difference?

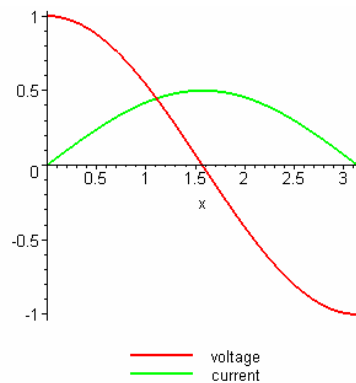
We didn't really mention it explicitly, but in the closed paths we studied in Basic Electronics we assumed that the electrical energy traveled around the circuit so rapidly that its action could be taken to be instantaneous. As long as the circuit is small compared with the wavelength, this is a good assumption.

The wire we are now talking about is not small compared to the wavelength. If the length  $L$  is one-half wavelength, then energy will travel from one end to the other in the time of one-half cycle of the applied frequency. For example, if a voltage is applied to the left end of such a wire when the voltage is at a positive peak of the cycle, a voltage impulse will reach the other end of the wire one-half cycle later and will be at a negative peak. As the voltage varies at the applied frequency, the ends of the wire alternate between positive and negative each cycle. What we are saying is that the voltages in the two halves of the wire have opposite polarity. When the energy reaches the end of the wire it is reflected back along the wire to combine with the incoming energy. All components of voltage add up to make a standing wave of voltage.

As stated in Part 1 the voltage causes a current to flow and this current is reflected back from the

end of the wire to create a standing wave of current.

Combining the voltage information with the current information from Part 1 we have the following graphic representing the standing waves of voltage and current:



Here the horizontal axis represents the wire of length  $\lambda/2$ .