

# Nacogdoches Amateur Radio Club

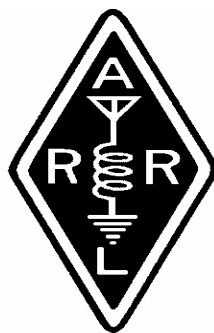
Pres: Andy Delgado - KE5EXX

VP: Lon Glaze - AE5BN

Sec/Treas: Army Curtis - AE5P

## DECEMBER MINUTES

The December meeting and annual Christmas party of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on December 5th. Forty members and guests were present. **President John, KC5MIB**, opened the meeting at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Each person present introduced himself. John then turned the meeting over to the incoming **2008 President, Andy, KE5EXX**. Minutes of the previous meeting were approved as published. Treasurer's report noted no change from last month.



**Kent, KD5SHM**, updated us on the Simulated Emergency Test (SET) planned for tomorrow (12/6/2007) with the City of Nacogdoches, the Columbia Geospatial Center and the Texas State Guard. The SET net will be on the 32 repeater.

**Army, AE5P**, gave a report on the repair of the remote base facility on the 32 repeater.

The **Shuttle Special Event** Station will be held on Saturday, February 2, 2008 at McMichael School. The NISD school club will join us. A special VE session is planned at that time.

We experienced a small problem with our Winlink node at the Fredonia Hotel. **Andy, KE5EXX** got it fixed, so W5NAC-10 is in service. K5QE-10 is also available.

The **Lufkin club** Christmas party will be held December 15 beginning about 4:30 p.m. at the Hudson home of K5HIS/K5HER. Talk-in on the Lufkin 94 repeater.

**Toledo Bend ARC** Christmas party will be December 8, 6:00 p.m. at the American Legion Hall in Hemphill.

The **ARRL VHF contest** will be January 19 - 20. Several members are planning on going out as Rovers for this contest, and several others plan to operate from the K5QE

contest station. If you would like to participate, please contact **Marshall, K5QE**, or **Army, AE5P**.

Meeting was adjourned at 7:25 p.m. for some fantastic food, followed by our annual White Elephant Auction, conducted by **John, KC5MIB**. The raffle for the 2M HT donated by K5QE netted the club \$209, while the auction raised \$689, a new record. Many thanks to all who participated.

### NEW MEMBERS

Please help us make welcome the following new club members:

**Bob - KD5FHL**  
**Landon - No Call Yet**  
**Kevin - No Call Yet**  
**Wesley - KE5RQX**  
**Richard - W5IBX**  
**Stephan - KE5RQV**  
**Brittany - KE5RQU**

### PRESIDENTIAL POSTULATIONS

My military career wasn't a long one but I did learn a few things...

I started out at Ft Knox Kentucky which is home of the US Army's Armor Training Center. My job classification started out as a 19E which means that I did all things related to the operation and maintenance of the M60A3 Tank. I was enrolled in the Army's One Station Unit Training (OSUT for short). Basically it was a concurrent BASIC training and Advanced Individual Training. I learned discipline and respect among other things (including weapons, communications, and the dreaded Gas Chamber). Upon graduation from OSUT, I was transferred to the 4<sup>th</sup> Infantry Division at Ft Carson Colorado. I was then encouraged (told to do it) to cross train in the wheeled vehicle mechanic's

school and then as a 19K which is the classification for M1A1 Armor crewman.

You ask what does this have to do with Amateur Radio? I learned the difference between medium range and long range communications and how and what not to do with antennas and radio mounts. I learned net procedures by sitting in a guard shack in 18 degree weather with 24 inches of snow on the ground. I learned the importance of being very descriptive with your words while being concise. This one I learned by listening to the radio as our newly commissioned platoon leader got his rear end chewed on by the company commander for not being descriptive yet concise.

I learned that although not as secure as wired communications, the radio was nice because I didn't have to get out in the snow to pull comms wire 1000 yards to the command center. (You know how it is, up hill in the snow both ways....)

I learned the importance of performing Preventive Maintenance (PM) on my equipment. You are always happy when your equipment isn't what fails when you see the next guy who was too lazy to PM his gear get in trouble.

I learned that being mobile in a HMMWV (Hum Vee) with your radio was much better than carrying your radio on your back. (This was before the Army realized the usefulness of the HT and VHF/UHF FM Communications, we used 6m FM-not necessarily a good thing.)

Being involved this last month with the Texas State Guard during the Columbia Center's SET allowed me to see the progress that the military has made. It's pretty exciting. It also allowed me to see another reason why I am involved in Amateur Radio. We embrace the change that the latest technology is providing. We practice and learn new modes. We practice and learn new

frequencies. We practice descriptive yet concise communications. We know that our communication method is not secure and monitor our words. We maintain our equipment. Many of us have communication capabilities in our homes, in our vehicles, and on our person.

Ours is a GREAT hobby that has REAL WORLD implications. We have been praised by our community to all who will listen. We have performed spectacularly in 2007! Let's use every opportunity to continually out perform ourselves! Let's make 2008 even better than 2007.

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



## HAMMING IT UP

I am honored that I have been chosen to serve as your 2008 Vice-President.

I would like to tell you a little about myself. I live in Lufkin, but I do work here in Nacogdoches. My very understanding wife's name is Tammy. We have one daughter, Madelyn, who is five years old and quite a handful. Some of you found that out at the Christmas Party. I was first licensed as a Technician call sign KC5HMM in 1994. I became inactive sometime around 1996. In 2007, I got interested again via a ham radio thread on an Internet forum that I frequent. I have since upgraded to general and then Extra. I requested a new sequential call sign and received AE5BN, which is much easier to say phonetically. I also became a VE and have been a regular at the

monthly sessions. I began attending meetings and have felt at home since the first time I walked in the door. We have a great bunch of folks here and I am happy to be a part. My re-entry into Ham Radio has been much more encouraging and fun than my first entry was. Even though I have been a ham for quite awhile, I am still relatively wet behind the ears, so to speak. I will be calling on some of you for advice and suggestions from time to time. I have taken part in my first field day, my first UHF/VHF contest, my first HF contest, and my first hamfest, all since becoming a part of this club. I owe this club thanks for all of it.

In case any of you haven't heard, congratulations to Marshall K5QE are in order. He was the top score in the Multioperator category in the 2007 ARRL UHF Contest. He was assisted by Lon AE5BN, Andy KE5EXX, and Andrew KE5GAQ. This was the first contest that I had ever really

taken part in. I learned a lot and I really enjoyed it.

Don't forget that the ARRL VHF Contest is coming up January 19-21, 2008. Begins 1900 UTC (1:00 PM Local) Saturday, ends 0400 UTC Monday (10:00 PM Local Sunday night). John N5AIU and I will be taking out the Red Rover. If you have SSB capabilities make sure and listen for us. If you would like to try roving contact Marshall K5QE. For those of you with FM only listen for Marshall K5QE on Sat. and Sun. at 9:00PM local time on 146.460 MHz. He can sure use the extra contacts. Let's see if we can help him win this one too.

Make sure your calendar is open on Saturday February 2, 2008 8:00AM to 3:00PM CST for the Columbia Special Event Station at McMichael Middle School. This will be a new first for me and I am looking forward to it.

73, AE5BN Lon

email: [ae5bn@arrl.net](mailto:ae5bn@arrl.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 \$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 be on Wednesday January 2nd 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 ham radio related goodies that you got for Christmas, bring them for Show and Tell. Hope to see y'all there.

### Basic Electronics Part Twenty Two By Thomas Atchison

Now consider an ac circuit with a single capacitor such as in Fig. 1:

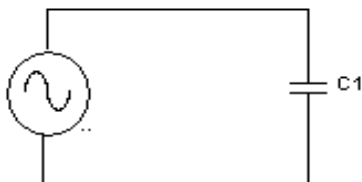


Fig 1

As we have discussed before, this capacitor will have an opposition to an alternating current flowing

in the circuit. This opposition is called capacitive reactance. At low frequencies this reactance is large, and it decreases as the frequency increases.

When we apply an alternating voltage across this capacitor, the increasing voltage stores energy as an electric field. The capacitor returns that energy to the circuit when the voltage decreases. More specifically, if we start the voltage at zero there is no charge on the capacitor so there is a large current that begins to flow. As electrons build up on the negative plate of the capacitor, this charge tries to prevent more electrons from moving onto the plate. This causes the current to decrease. When the voltage reaches its maximum value the capacitor is fully charged so the current stops.

Next the applied voltage begins to decrease. Since the capacitor voltage is then larger than the applied voltage, electrons

move off the negative plate of the capacitor. This changes the direction of flow of current in the circuit. As the applied voltage decreases to zero, the capacitor current increases, draining all the charge off the capacitor plates. This relationship between alternating voltage and alternating current is shown graphically in Fig. 2

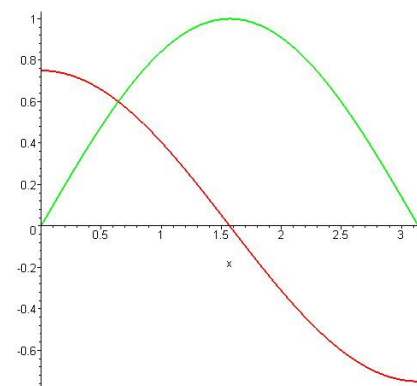


Fig. 2

The green curve is voltage and the red curve is current. In general, the two waveforms have different amplitudes.

Now notice the phase relationship between the voltage across the capacitor and the current through it. These two waveforms are 90 degrees out of phase with the

current waveform reaching its maximum at 0 degrees and the voltage reaching its maximum value at 90 degrees. The current waveform reaches its negative peak at 180 degrees where the voltage waveform is back to zero. In this situation we say that the current leads the voltage by 90 degrees. Of course we could also say that the voltage lags the current by 90 degrees. Both of these statements mean the same thing.

As an exercise, see if you can complete the waveforms as the voltage reaches its negative maximum and returns to zero.

Recall that power is the product of voltage and current, so we can plot the power curve on this same graph as in Fig. 3

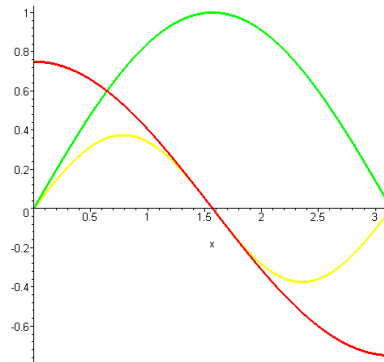


Fig. 3.

Here the power waveform is the yellow curve.

In the next installment we will consider what happens to voltage and current if we replace the capacitor with an inductor.