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.
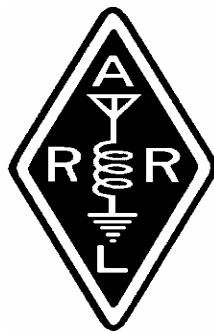
MAY MINUTES

The May meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on May 7th. Twenty-six 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 made.

Field Day coming up June 28 – 29 at the Expo Center. We will have the Nacogdoches Emergency

Operations Trailer on site for our use. Assignments were made as follows:
Person in charge: AE5BN
Radios: KD5GEN, K5JLW, N5AIU
Antennas: AE5P
Software: N3FJP
Food: Pizza and drinks

Reminder of the Lufkin Hamfest. Full details can be found at their website, http://www.lufkinhamfest.com

Meeting was adjourned at 7:36 p.m.

Show and Tell
AE5P: Army showed an ICOM AH-4 antenna tuner destroyed by lightning and his first place Rover certificate from the 2007 CQ VHF contest.
K5QE: Marshall showed his second place multi-multi   nationwide

certificate for the 2007 CQ VHF contest.

K5JLW: Jerry showed lightning detector kits he had available for sale.

Program

N5YA: Bill presented a program on grounding for towers and shacks, including a demonstration of a cadweld connection to a ground rod.

PRESIDENTIAL POSTULATIONS

The date is Friday, May 16, 2008.

I'm on an Alto ISD School Bus, loaded with Jr High students and their chaperone, headed for Arlington.

I've got my HT, a bottle of water, and the 4 students I am tasked with keeping an eye on while we watch the Astros at the Rangers.

I get a few minutes of peace while pre-game batting practice is going on to pull out my HT and listen for activity on the DFW area 2m and 70cm repeaters. I'm not sure how high up we are, but I'm less than 15 rows from the top on the uppermost level. We've got a great view.

So I set the VX5/R in VFO mode and start scanning at 144.000. I listen to a few conversations and then remember that one of the many functions of the VX5 is the ability to do a Tone Scan. How interesting. I lock on to a conversation in progress and ask the radio to find the tone for me. Just a few minutes later the radio locks on to the correct PL for that repeater. I add the frequency and PL to memory and can use it next time I'm in the DFW area.

I switch to the 70cm band and start the process all over again. I've added 6 more repeaters to the memory of my HT. I'm feeling pretty good about myself!

Take a few minutes and familiarize yourself with your radios. You never know when you might be traveling through a new area and want to ask directions. With any luck you'll get someone like Robert, KD5FEE who regularly monitors the repeaters and is quick to offer assistance.

We've got a busy month ahead of us. We've been asked to setup an info booth at a Disaster Preparedness Fair on the 7th. We have the June VHF Contest on the 14th & 15th as well as the Plano Hamcom. Next up is the Lufkin Hamfest on Saturday June 21. Finally we wrap up the busy month with Field Day at the Nacogdoches Expo Center on the 28th & 29th.

The final score ended up 8-16. The Astros lost. Although it was an exciting game through the 7th inning, I was somewhat depressed with the outcome.

See you this Wednesday!

73 de KE5EXX
email: ke5exx@arrl.net

HAMMING IT UP

I sent out a message on the Hamlist about the sale at Gigaparts. I'm not sure how many of you were able to resist the urge to save, ugh spend money. As some of you may have already heard, I was not able to resist. I have wanted to get something else to use in the house. I have been taking the FT-857D out of the car to use in the house. That was getting old. I like the FT-857D and think that I have a pretty good grasp of the menu system and settings. This combined with the 10% off sale and a manufacturer's coupon led me to pick a FT-897D. The FT-897D is essentially a FT-857D in a bigger box. It is a little more base/portable friendly and probably a little less mobile friendly. I think I am going to enjoy it.

I have also gotten a quad magnet mount and am in the process of modifying it to fit the roof of the Toyota Highlander. The humps on the roof were too wide to accommodate the mount as purchased. I am going to use flat aluminum bar available at Lowe's or Sutherlands to widen the footprint. I plan on mounting a 2m/70cm dual band horizontal antenna that we ordered from W4TE at www.efactorantennas.com and a KU4AB 6m horizontal loop that I ordered from www.ku4ab.com. I might try to add a 3/8 Stud Mount on it for HF antennas but I am not sure how well that will work out. You know what they say. If at first you don't succeed, try, try again.

Don't forget that we have a lot going on in June. Neches River Rendezvous is the 7th. VHF QSO Party is the second weekend. Lufkin Hamfest is the 21st. Field Day is the last weekend.

For Field Day, we will operate from the City Emergency Communications Trailer at the Expo Center. This is going to be a fun and exciting time and you won't want to miss it. New Hams here is your chance to operate some HF.

Rusty has arranged for us to have a special speaker at the meeting this month. The topic will be incident management. I encourage everyone to come so that we can have a good turnout.

73 de AE5BN Lon

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VE TESTING

Our next VE testing is scheduled for Wednesday, June 18th 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.

There will also be VE testing at the Lufkin

Hamfest on June 21st. http://www.lufkinhamfest.com

73 de AE5P

email: ae5p@arrl.net

CLUB NETS

Remember to join us each week for the 2-meter nets sponsored by NARC. Each <u>MONDAY</u> is the NARC ARES/RACES net, at 8:00 p.m. on the club's 146.84 repeater (PL 141.3). Second, on <u>THURSDAY</u> 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 June 4th 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 Electronics
Part Twenty Seven
By Thomas Atchison

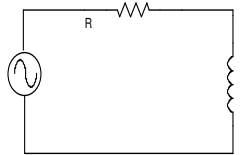We return to a circuit with resistance, R, inductance L, and an alternating voltage source. (Fig. 1)

Fig. 1

Since this is a series circuit, the same current, I, flows through both R and L. Each component has its own series voltage drop. For the resistor, R, the voltage drop is IR. If the inductor has inductive reactance X_L then the voltage drop across the inductance is IX_L.

Now, suppose $R=100\Omega$ and we measure the current as $I=1$ amp. Then the voltage drop across R is $V_R=IR$ so $V_R=100$ volts.

Similarly, if the inductive reactance is $X_L=100\Omega$, then the voltage drop

across L is $V_L=IX_L$. This means that $V_L=100$ volts.

Following the same procedure as in Basic Electronics, Part 26, the total voltage, V_T, will be

$$V_T=\sqrt{(IR)^2+(IX_L)^2}$$

$$=\sqrt{100^2+100^2}$$

$$=\sqrt{20000}$$

$$=141 \text{ volts.}$$

The total opposition to current in a circuit is called the impedance. Impedance is denoted by Z. The relation connecting the impedance to the current and the total voltage is

$$V_T=IZ.$$

In this case, $V_T=141$ volts and $I=1$ amp, so $Z=141\Omega$.

Using the above equation for V_T, we have

$$IZ=\sqrt{(IR)^2+(IX_L)^2}.$$

This leads to

$$IZ=I\sqrt{R^2+X_L^2}.$$

We can divide out the common I to get

$$Z=\sqrt{R^2+X_L^{\;2}}\;.$$

Let's consider an example. Suppose we have $R=30\,\Omega$ and $X_L=40\,\Omega$ in a series circuit with an alternating voltage of 100 volts applied. In this case the circuit impedance, Z, is

$$Z=\sqrt{900+1600}\;.$$

So $Z=50\,\Omega$.

The current, I, is given by

$$I=\frac{V_T}{Z}$$

so we have $I=100/50=2$ amps.

The voltage across the resistor is given by

$$V_R=(2)(30)=60\;\text{volts,}$$

and the voltage across the inductance is given by

$$V_L=(2)(40)=80\;\text{volts.}$$

The phase angle can be calculated using the reactance and the resistance as follows:

$$\tan\theta=\frac{X_L}{R}\;.$$

Here $\tan\theta=40/30=1.333$ so we have $\theta=53^o$. This means that I lags V_T by 53°.

Note that

$$V_T=\sqrt{V_R^{\;2}+V_L^{\;2}}$$

$$=\sqrt{60^2+80^2}$$

$$=\sqrt{3600+6400}$$

$$=\sqrt{10000}$$

$$=100\;\text{volts.}$$