January 2008 **Volume 1-2008**

Nacogdoches Amateur Radio Club

Pres: Andy Delgado – KE5EXX

VP: Lon Glaze – AE5BN

Sec/Treas: Army Curtis - AE5P

JANUARY MINUTES

The January meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on January 2nd. Twenty-one members and four 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.

The annual Christmas party was a great success, and everyone reported having a good time.

Kent, KD5SHM, reviewed the Simulated Emergency Test (SET) held last month with the City of Nacogdoches, the Columbia Geospatial Center, and the Texas State Guard. It was a good exercise, and the Amateur Radio community got high marks for our participation.

The January ARRL VHF Sweepstakes will be held the weekend of January 19th. K5QE will be on both Saturday and Sunday evenings at 9:00 p.m. local time on 146.460 FM simplex, and would appreciate any and all contacts with club members. Several members are planning on going out as rovers.

Marshall, K5QE, was the overall winner of the August 2007 UHF contest in the multi-multi category. Congratulations to Marshall and folks who helped operate the station and who went out as rovers.

The Columbia Special Event Station is scheduled for Saturday, February 2nd at McMichael Middle School on the southwest loop. Breakfast at IHOP at 7:00 a.m. Antenna setup will follow breakfast. It was voted that the club will provide pizza and drinks for lunch.

Meeting was adjourned at 8:00 p.m.

Show and tell by John, W5FWR and Andy, KE5EXX.

Program by Army, AE5P on how to tune a tube type RF power amplifier.

DUES ARE DUE

Reminder that dues for 2008 are now due. Dues are $24 per year and cover all licensed hams in one household. You can pay the Treasurer at the club meeting, or mail him a check at his callbook address. Please inform the Treasurer if you are a current ARRL member.

NEW MEMBERS

Please help us make welcome the following new club members:

Landon Barfield – KE5RZG
Kevin Funderburk – KE5RZF
Wesley Lucas – KE5RQX
Paul Wells – KE5RQV
Brittany Wells – KE5RQU

PRESIDENTIAL POSTULATIONS

February 1, 2003

My wife, Sharon, and I were in Dallas, TX at a business convention taking a break after the first session. I received a call on my cell phone asking if I heard the explosion.

When the meeting reconvened, the convention organizers announced the loss of the Columbia.

On the way home, Sharon received a call from Douglass ISD saying that school was canceled the following Monday due to debris on the campus. (Do you remember that we didn't know if the debris was toxic?)

By the time we made it back to Nacogdoches on Sunday afternoon, I had already received several voice mails from different county organizations requesting help in getting computer and phone networks up as soon as possible.

I began my part by setting up temporary workstations at the Sheriff's Office and wiring up 2 Foretravel Motorhomes behind the SO. We built and installed new computers and servers. We worked several long days and nights getting the debris data logged.

The community rallied behind anyone who was involved in the search and recovery of debris. I remember getting calls from other small businesses asking what we needed, saying, "Don't worry about paying until later."

I wasn't an Amateur Operator yet. I certainly didn't envy all of you who were out in the cold rain helping provide communications. I worked hard and long; you worked harder and longer.

It's been five short years since the disaster. I don't think any of us will forget

where we were or how we were involved.

As Amateurs, we learned a lot from the disaster. You did all that was asked and more. You certainly lived up to the motto, "When all else fails, Amateur Radio."

Please join us Saturday, February 2, at 8 a.m. for the 5th Annual Space Shuttle Columbia Recovery Special Event Station. This year we will meet at IHOP on North St for breakfast at 7 a.m. Then migrate over to McMichael Middle School on the Southeast Loop to setup at 8 a.m. The plan is to be on the air between 8:30 an 9:00. We only have to put up one antenna. AE5P recommends we use the Green Monster (Military Mast) to be the support for an Inverted Vee. KTRE has been airing our Public Service Announcement for the last week. The Daily Sentinel will be announcing this week. There is an announcement at the Sheriff's Office. I sent an announcement to Johnson Space Center. Hopefully we will have a good showing.

The Columbia Center has invited us to join them downtown at the old John S. Wyatt building for the memorial there. I will ask if we can leave some flyers there directing people to the school.

See you Saturday!

73 de KE5EXX
email: ke5exx@arrl.net

HAMMING IT UP

We have just finished up the January VHF Contest. John N5AIU and I ran Marshall's Red Rover. We used my callsign and operated from 13 grids. We made 150 QSOs and scored 12,588 points. Many of our contacts were with others besides Marshall. We even took contacts from some regular Joes who weren't all that interested in contesting. I think that an important part of ham radio should be talking to new folks making new friends. Several others went roving and I remember Andy telling John and I at the testing session that we couldn't beat him or Army. Wink, Wink, Nudge, Nudge. I must give credit where credit is due. A large number of our points came in when we caught up to Andy and Andrew in Northeast Texas-Southwest Arkansas. That really helped our score. Thanks guys. We left Marshall's around 09:30 Saturday morning and made it back around 21:00 Sunday night. We ran almost 800 miles. My legs and backside sure was sore. It was cold and windy the whole time. We really had a good time. We will have some discussions on what to do different in the next one. I already have some ideas on some of the things I will be doing differently. If you haven't tried it then I encourage you to give it a

go. I do have some stories but I'm saving them for later. A big thanks to Marshall for the use of his equipment.

If any of you are interested there is a Hamfest in Orange, TX on February 23 08:00-15:00 at the VFW Hall on Hwy 87 North (1 mile North of I10). Sponsored by the Orange ARC and the Jefferson County ARC. Free admission. Talk in freq. 147.180 (+) No Tone. I have heard several guys on HF say that it is a pretty good little hamfest to attend and it isn't too far away.

A good bit farther away is the Greater Houston Hamfest on March 1 08:00-14:00 at the Fort Bend County Fairgrounds in Rosenberg, TX. $5 Admission. Talk-In: Primary 146.940(-) Tone 167.9. Backup 145.470(-) Tone 123.0 Club Call: KK5W. I hate to sound like a commercial, but the Grand Prize for the Raffle there is an Icom IC-7000 HF/6/2/70cm all mode radio. (I sure wouldn't mind winning one of these. We use one of these that Marshall has in his Red Rover. I haven't got it totally figured out yet but it is a very nice radio.)

73, AE5BN Lon

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VE TESTING

Our next VE testing is scheduled for Wednesday, February 20th 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

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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 February 6th 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.

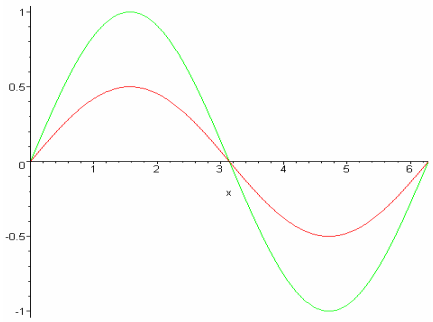
Basic Electronics Part Twenty Three By Thomas Atchison

Now consider an ac circuit with a single inductor as shown below.

Inductors oppose alternating current. This opposition is called inductive reactance.

Inductive reactance is low for low frequencies and high for high frequencies. As an alternating current flows through an inductor, the inductor stores some electrical energy as a magnetic field around the inductor. If we start with zero current and begin to increase toward a positive peak, the increasing current causes a magnetic field to build up around the inductor, storing energy. The current increases rapidly at the beginning, so the magnetic field strength increases rapidly. When the current reaches a positive peak and begins to decrease, the energy stored in the inductor reaches a maximum. As the current decreases, the magnetic field collapses, returning its energy to the circuit. When the current crosses zero the magnetic field returns all its energy, and the field strength becomes zero.

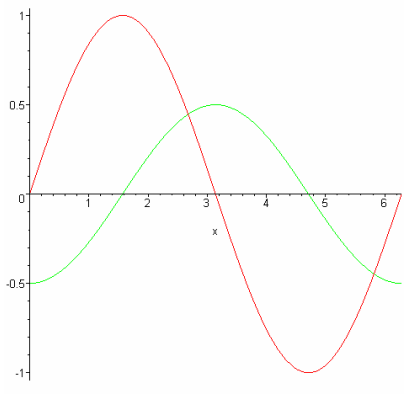
The current reverses direction with the current increasing toward a peak negative value. The magnetic field direction reverses, storing energy again. This magnetic field increases until the current reaches its peak negative value. Then the current decreases and the inductor returns the energy stored in it as the magnetic field collapses. The relationship between the alternating current and the magnetic field strength is illustrated below.



The current is represented by the green curve and the magnetic field strength is represented by the red curve. Note that the magnetic field is in phase with the alternating current.

Now we recall that a changing magnetic field induces a voltage across the inductor. The voltage is largest when the magnetic field changes fastest. Therefore, a slowly changing magnetic field induces a small voltage. Looking at the curves above we see that the magnetic field is changing the fastest as we begin at zero. That means that the induced voltage is a maximum there. When the magnetic field reaches its maximum in either direction, there is a moment when it is not changing, therefore, the induced voltage is zero there. Since the magnetic field and the alternating current are in phase, then we have a similar relationship between current and induced voltage.

The induced voltage has a polarity that opposes the changing current because it tries to maintain a steady current. This means that when the current is in the positive direction, the induced voltage has a negative polarity. This is illustrated by the graph below.



Here the red curve is current and the green curve is induced voltage. As you can see, the induced voltage lags the current by 90 degrees or the current leads the induced voltage by 90 degrees.

As you know, you must have an applied alternating voltage to create the alternating current through the inductor. This applied voltage is different from the induced voltage caused by the magnetic field. Next time we will discuss how this applied voltage relates to the induced voltage.

Musings of a Rover

Pat (NH6VJ) and I (AE5P) made our usual rover journey in the just completed ARRL January VHF Sweepstakes. Thanks to recent revisions of the rover rules, we were legal this time, but it was still not without its problems.

The rules for rovers were recently revised (hmm, sure are a lot of r's there) and there are now three classes of rovers: Rover, limited Rover, and unlimited Rover. See http://www.arrl.org/contests/announcements/rules-vhf.html for the complete rules. The new rules now specifically permit family station operation, where licensed members of the same family can share one transmitter. This change can be a tremendous help for many members of our club.

Anyway, this contest I decided to try something different in our route, and travel west on Saturday instead of south as we usually do. The idea was to get into grids EM11 and EM12 and be able to work all of the many stations in the DFW, Austin, and San Antonio areas. Only problem was, we couldn't find any. I guess a lot of the contest operators in these areas are also football fans, and were busy watching the division playoffs that weekend, because they sure were not on the air when we were. So much for the best laid plans….

Propagation certainly didn't help much this year either, as conditions were not the best. Matter of fact, they weren't even poor. They were terrible. But such is life in radio contesting. As usual we learned a lot, and we are already looking forward to the next big VHF contest in June.

If you would like to participate in one of these contests (they really are a lot of fun), please contact me and we will do what we can to get you started on the right foot.

de AE5P/r