

Nacogdoches Amateur Radio Club

Pres: Andy Delgado - KE5EXX

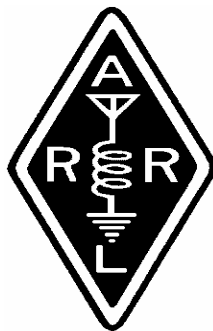
VP: Lon Glaze - AE5BN

Sec/Treas: Army Curtis - AE5P

MARCH MINUTES

The March meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on March 5th. Twenty-five members and five guests were present. **President Andy, KE5EXX**, opened the meeting at 7:00 p.m. in the Bailey Library of Christ Episcopal Church. Each person present introduced himself. Minutes of the previous meeting were approved as published. Treasurer's report was made.

Our club liability insurance is up for renewal. Moved, seconded, and voted to approve payment of the renewal.



No change in status on the 147.32 repeater.

NARC mission statement was discussed by **President Andy**. Tabled until next meeting. Several alternatives will be published on Hamlist.

The Lufkin Hamfest will be held in Lufkin on June 21st. Moved, seconded and voted to have NARC operate the food booth there.

Field Day. **Rusty, KD5GEN**, made an outstanding presentation on 16 different possible sites for our Field Day operation this year.

Decision on which one to use was tabled until the next meeting.

Many thanks to **John, W5FWR**, for processing all of the QSL cards received from our Shuttle Special Event Station operation in February.

Kent, KD5SHM, announced that 42 people received Skywarn training on March 3rd.

Meeting was adjourned at 7:55 p.m.

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:

Ron Barbee - KE5TQB

PRESIDENTIAL POSTULATIONS

Got HF?

We do!

I'm absolutely amazed!

A few lengths of wire cut at just the right spot and attached to a feedline and voila! We have HF at the house again! We've been without HF at the house for more than a year. I was having withdrawals.

We talked to the neighbor just south of us and they said no problem, you can use the trees in the back yard. Unfortunately, the neighbor to our North hasn't been home at the same time that I've been awake so that means we

have a vertical antenna instead of a dipole. I can't wait until we get it horizontal.

With some advice from K5QE and N5YA, we constructed a dipole that is 41' on each leg. The theory behind this is we have a small lot and wanted to be able to tune several bands. Since a 40m dipole is roughly 33' on each leg we knew that we would at least be able to get 40m without too much trouble. We wanted to be able to tune for other bands, our only concern was that the antenna not be the wrong harmonic for the other bands. Marshall's original guess was 40' and Bill advised 41'. So we went with 41' stranded wire connected to some parts from thewireman.com. If you are interested in building a dipole that will last, take a look at the Wireman CQ 803 dipole center and Wireman 562 300 ohm KW twinlead.

Using a wrist rocket slingshot with a fishing reel attached, we shot a line into the south

neighbor's Oak tree. We attached our heavy duty string and pulled it back into our yard. We then shot a line into an Oak in our yard and attached it to the first line. We pulled the dipole up until it was vertical. Believe it or not, the dipole will be at about 70' when we get it completed.

Ok, having said all this, we attached the twinlead to a Matchbox tuner and started testing. Once we proved to ourselves that we could tune at least on 40m and 20m we made a 9A contact from Croatia. I was pumped!

So, now we have a temporarily vertical dipole that I have successfully tuned from 40m -10m. I can't wait to get it horizontal.

It feels good to have HF again.

73 de KE5EXX
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HAMMING IT UP

We made it back from our vacation in Hot Springs, AR. My HT was the only radio gear I took with me. We actually stayed in Hot Springs Village. Hot Springs Village has a pretty active amateur radio club. Their repeater has pretty good coverage from what I heard. I did check into their net while I was there. They seemed a little surprised when I did. I heard a fair amount of traffic on the repeater during the day too. Most of the time, I would have been out of range for the HT. It did snow the first night we were there. Of course our daughter Madelyn had to get out in it that morning. She just loves snow. We also went up in the observation tower in the Hot Springs National Park the day the snow was on the ground. It was pretty to look out on but sure was cold. We dug for crystals while there and did get some

pretty ones. Didn't get to do the hot bath thing and heard later that we were really missing out. We were there a little early in the season so a lot of stuff wasn't open yet.

A while back I was trying to talk to Dr. Tom on the 84 repeater and was losing the first part of my transmission. Robert later informed me that I must have hit my wires button (O on the keypad). I checked all through the manual to find a way to disable this function. I found nothing. I later found a site with some info on it. I have tried this on my FT60 HT and it does in fact disable the WIRES function. Hitting the WIRES button now turns on the indicator on the display, but that is all it does.

All credit goes to KB6OT of Redondo Beach, CA for the information.
<http://www.kb6ot.com/Wires1.html>

DISABLING THE YAESU WIRES FUNCTION

The Yaesu WIRES(TM) (Wide-coverage Internet Repeater Enhancement System) proprietary Internet Connection feature operates by transmitting a short (~ 0.1 second) DTMF (Dual Tone Multi Frequency) tone burst each time the Push-to-Talk button is pressed. The WIN (Western Intertie Network) System repeaters are set up to mute DTMF tones. Each time the WIRES DTMF tone is transmitted, the repeater mutes for several seconds and the first few words of the user's transmission are lost.

The WIRES function is turned ON or OFF by momentary pressing the 0 key on a FT-60, VX-170 or VX177 handheld or left VOL knob on a FT-8800 or 8900 mobile radio. The WIRES function can be disabled so that it can not accidentally be turned on using the following steps:

FT-60, VX-170 & VX-177 (possibly others) Lon)

1. Press the F/M key then immediately press the 0

key to enter the menu mode.

2. Rotate the Dial knob to menu - INT MR.

3. Press the F/M key then rotate the Dial knob to select a memory (d1 through d9) that is empty, i.e. it contains (six dots) = no tone.

4. Press the F/M key to store the setting.

5. Rotate the Dial knob to menu - I NET.

6. Press the F/M key then rotate the Dial knob to select INT.MEM.

7. Press the F/M key to store the setting.

8. Press the PTT button to exit the menu mode.

To re-enable the WIRES mode, select INT.COD in menu.

FT-8800 / FT-8900

1. Press the SET key momentarily to enter the set mode.

2. Rotate the Main band Dial knob to select menu 15 - DTMF W.

3. Press the Main band Dial knob momentarily then rotate the Main band Dial knob to select a memory (d1 through d16) that is

empty, i.e. it contains (six dots) = no tone.

4. Press the Main band Dial knob momentarily to store the setting.

5. Rotate the Main band Dial knob to select menu 17 - INET.

6. Press the Main band Dial knob momentarily then rotate the Main band Dial knob to select INT.MEM.

7. Press the Main band Dial knob for $\frac{1}{2}$ second to store the setting and exit the menu mode.

8. Rotate the Main band Dial while pressing and holding the left VOL knob to select the same memory selected in step 3 above.

To re-enable the WIRES mode, select INT.COD in menu.

I like the FT-60R a lot more now that I can't accidentally turn on this function. If you have one of these you might want to try this.

Don't forget that the Belton Hamfest is Sat. Apr. 19th at the Bell County EXPO Ctr. 301 W. Loop 121, Belton, TX 76513. It Opens at 7:00 AM. Hope to see you there.

73, AE5BN Lon

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VE TESTING

Our next VE testing is scheduled for Wednesday, April 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

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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 April 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 items for show and tell, please bring them. Hope to see y'all there.

MISSION STATEMENTS

At the next NARC Meeting, we will select our Mission Statement. These are the 3 submissions I have received. Please read through these and decide which you like.

1. 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.

2. The Nacogdoches Amateur Radio Club is a local community based volunteer organization dedicated to preserving the tradition and values of the avocation while encouraging community service and embracing new technology.

3. The Nacogdoches Amateur Radio Club is a community-based organization of amateur radio operators. As radio operators, the members of the organization facilitate community communication during various emergency and non-emergency events, encourage the enlistment of new members through education and embrace the use of emerging technologies.

Basic Electronics Part Twenty Five By Thomas Atchison

Now we consider a series circuit with an inductor, a capacitor, and an alternating voltage source, Fig. 1.

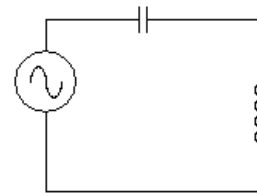


Fig. 1

This is a series circuit so the alternating voltage causes the same current to flow through each component. That is, the current through the capacitor is in phase with the current through the inductor. Because of this we consider the current to be at 0 degrees. The voltage across each of these components is not in phase, however. Remember that the alternating voltage across a capacitor lags the current by 90 degrees and the alternating voltage across an inductor leads the current by 90 degrees.

Taking these two together we see that the voltage across the capacitor is 180 degrees out of phase with the voltage across the inductor. Since the current was at 0 degrees, then the voltage across the inductor is at 90 degrees and the voltage across the capacitor is at -90 degrees, see Fig. 2.

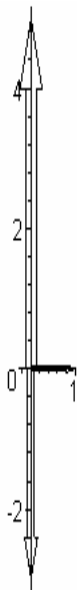


Fig. 2

Here the arrow pointing up represents voltage across the inductor, the arrow pointing down represents the voltage across the capacitor, and the right pointing arrow represents current.

If we know the current in the circuit we can calculate the voltages using Ohm's law. Let's

assume that the current is 1 amp in this circuit. Suppose that the capacitor has a capacitive reactance of 3000 ohms and the inductance has an inductive reactance of 5000 ohms. To calculate the voltage across the capacitor, we use Ohm's law in the form

$$E = I X_C$$

where E is the voltage, X_C is the capacitive reactance, and I is the current.

Then $E = (1 \text{ A})(3000 \Omega) = 3000 \text{ volts}$. We take this voltage in the direction of -90 degrees as described above.

For the voltage across the inductor we use Ohm's law in the form

$$E = I X_L$$

where E is the voltage, X_L is the inductive reactance, and I is the current.

Then $E = (1 \text{ A})(5000 \Omega) = 5000 \text{ volts}$. We take this voltage in the direction of 90 degrees as described above.

Because of the phase relationship, we note that when the voltage across

the inductor is at its positive peak, the voltage across the capacitor is at its negative peak. This 180 degree phase difference continues at each point of every cycle. To determine the total voltage we must combine these two voltages. To do this we consider the voltage in the capacitor as a -3000 volts since it is represented by the downward pointing arrow and the voltage in the inductor as +5000 volts since it is represented by the upward pointing arrow. The resulting voltage in the series circuit is the sum of these voltages or +2000 volts. The plus sign means that the resulting voltage is due to more inductive reactance than capacitive reactance.

We could have considered the total reactance in the circuit to be X . Then $X = X_L - X_C$. This means that $X = 5000\Omega - 3000\Omega = 2000\Omega$. Therefore, the voltage is

$$E = I X = (1 \text{ A})(2000\Omega) = 2000 \text{ volts.}$$

We subtract the capacitive reactance from

the inductive reactance because we take the inductive voltage at 90 degrees and the capacitive voltage at - 90 degrees.

Consider what would happen in this circuit if $X_C = 1000\Omega$ and $X_L = 800\Omega$. Calculate the voltage in the series circuit and interpret the result.