

Nacogdoches Amateur Radio Club

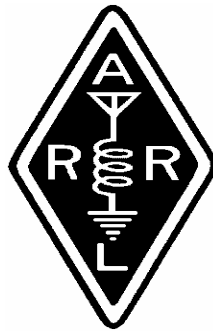
Pres: Andy Delgado - KE5EXX

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.



JUNE MINUTES

The June meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on June 4th. Twenty-eight members and nine 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 read.

New software has been installed on the Telpac node for W5NAC-10, and is reported to be much

more stable than the previous version. Many thanks to **Kent, KD5SHM** and **Andy, KE5EXX**.

An Emergency Preparedness Fair will be held on Saturday, June 7th at the LDS Church. Members will man a Ham Radio information table complete with a portable ham station.

The state wide hurricane exercise was today. We had 3 operators at the EOC, 3 more at the EOC trailer at Fredonia Hill Baptist Church, and AC5Z at home for HF support. Much traffic was passed for several agencies.

Field Day coming up June 28 - 29 at the Expo Center. We will have the Nacogdoches Emergency Operations Trailer on site for our use and thus will

be eligible to operate as class 3F. Assignments were made as follows:

Person in charge: AE5BN

Radios: KD5GEN, K5JLW, N5AIU

Antennas: AE5P

Food: Pizza and drinks

Meeting was adjourned at 7:34 p.m.

Show and Tell

AE5BN: Lon showed off his new Yaesu FT-857 and FT-897 transceivers.

Program

Robert Ford from the Nacogdoches Fire Dept. presented a program on the Incident Management System (IMS) and Incident Command System (ICS) now being used by most agencies. Many thanks to **Rusty, KD5GEN**, for arranging this program.

PRESIDENTIAL POSTULATIONS

June 2008 is now in the history books. Thank goodness. We're all tired.

It kicked off with a triple threat Saturday (06/07/2008). Some of us went to the Disaster Preparedness Fair at the LDS Church here in Nac. Some of us went to the Neches River Rendezvous. And finally, some of us went to the K5QE contest station for last minute preparations for the June 2008 VHF Contest. (More on that later)

The 2nd weekend was a double trouble weekend (06/14 - 06/15/2008). We had the opportunity to go to Plano for HamCom. Many of us took part in the afore mentioned VHF Contest. We saw records broken. The K5QE Contest Station scored more than 1 Million Points. The AE5P/W5TV White Rover scored more than 160,000 points (this has never been done in our group). The N5AIU/AE5BN Red Rover made more contacts than

it ever has before, coming in a close second to the White Rover. We've seen the opportunity arise for some modifications to the Red Rover to make it more efficient. Dustin and Amanda christened their version of the KE5CLQ/KE5CLR Red Rover (we're debating on whether to call it Red 2 or Little Red) and ran the grids with The Pack. KC5MIB was able to make the trip on Saturday before being recalled to work. These rovers "Pack Roved" with each other to the Beaumont/Nederland Grid Corner and racked up the QSO's between each other and anyone else who was brave enough to enter the fray.

Finally Andrew and I took our usual trip to Arkansas to make our rove through 13 Grids. Usually we make Q's and log both of us. With the AMAZING opening on 6 meters, we had to adapt and overcome. Andrew was able to run on 6 and log his contacts. Would you believe he made more than 16,000 points and will most

likely win the AR Section and the Delta Division. Keep your fingers crossed.

On to the single event 3rd weekend. Many of us made the trip to Lufkin for the 2nd Annual Lufkin Hamfest. This year was bigger and better than last year. Most of the tables were occupied with vendors. The Nacogdoches club was responsible for VE Testing and the Concession Stand. As I understand it, we had 10 people who tested. The concession stand pulled in more than \$240 in sales. I picked up a small rotor for a soon-to-be-installed push-up pole. Congrats to BB, KE5JER, on winning the Icom 2200H Grand Prize.

Finally we wrapped up the month with ARRL Field Day 2008. We met at IHOP for breakfast, and then migrated to the Nacogdoches County Expo Center for setup. This year we were able to operate from the Emergency Command Trailer which allowed us to declare the class of 3F (EOC). We used 3 antennas

for the main transmitters. The Green Monster military mast held a Mosley Tri-Bander (10m, 15m, 20m). We also had the Butternut Vertical Antenna (10m, 15m, 20m, 40m) and an 80m dipole strung between 2 light poles. We had 855 QSO's for a total for 1,076 QSO Points. We'll get you an updated total after all of the bonus points are added. Thank you to all who were involved.

I look forward to seeing you at the NARC Meeting this Wednesday. We'll review all that occurred this month as well as see what's in store for tomorrow. Don't forget your show and tell items that you picked up at HamCom or the Lufkin Hamfest.

See you this Wednesday!

73 de KE5EXX
email: ke5exx@arrl.net



HAMMING IT UP

It sure has been a busy month. We just got through doing the June VHF Contest. Army and Dr. Tom ran the White Rover. John J. and I ran the Red Rover.

Dustin and Amanda ran in their new Red Rover. John C. ran Saturday with us in his Silver Streak Rover. We all had lunch at Pappadeaux's in Beaumont before starting at 1:00PM local time in Nederland. Army had decided that we should try Pack Roving. This was a relatively new experience for most of us and the first few hours were hectic. We did work a little 6m that afternoon. We finally got a little more in the groove when we headed north. A lot of the times we were able to work the other rovers while in motion. This helped with the time some. We had some technical difficulties along the way but Army helped us

straighten those out. We stopped a Novrosky's in Jasper before heading on north.

I do not recommend the Chicken Fried Steak at the Jasper location. It was like trying to eat the sole of a leather shoe. We headed north out of Jasper working each other for the most part and Marshall. We did miss some contacts with each other. We are going to try to improve on that next time. We finished up all our EM21 contacts with Marshall except 2m before heading back into Lufkin to spend the night.

We woke up bright and early Sunday morning and headed north to catch up with Army. We worked Marshall on the way into Nacogdoches on 2m to finish up our EM21 contacts with him. We headed north on Business 59 and we were talking to Army on 2m when K5TR in EM00 Texas Hill Country broke in. We worked him on 2m and he asked if we had more bands. I told him yes, but we had to

point at him. I had EM10 in my GPS so we pulled in to the Budweiser parking lot at the top of the big hill. I pointed just a little west of EM10 and we worked him on 222 and 432. I will have to say that I was impressed.

We proceeded north working from the clearing on FM315 out of Mt. Enterprise. Everyone else said that they were racking up on 6m. We were not. When we got to Marshall we turned off the Amp and turned up the power on the radio. Still couldn't work anybody. We finally unhooked the coax from the Amp and hooked it to the radio. That did it. We went to working 6m contacts faster than we could write them down.

We did the grid swapping again right out of Queen City and for the most part right outside of Shreveport. We knew that Army was ahead of us in scoring because of the 6m problems and we tried to work some more 6m from the clearing north of Mt. Enterprise on 315 and

on the slow drive on back to Army's. It was not enough to overcome the deficit. Army did beat us in the scoring by a little over 5,000 points. There is always next time.

To put into perspective how much better we did: John and I had almost 16,000 points in the January contest. This contest we had 160,512 points. A tenfold increase. It was a lot of hard work and I am very proud of our effort. Thanks to all who helped us out.

73 de AE5BN Lon

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VE TESTING

Our next VE testing is scheduled for Wednesday, July 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 July 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.

Basic Electronics Part Twenty Eight By Thomas Atchison

Now let's consider what happens in a series circuit that contains a resistor, R , a capacitor, C , and an alternating current, Fig 1.

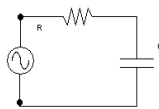


Fig. 1

Suppose we measure the current through this series circuit to be 100-mA. This current flows through each part of the circuit. If the resistance R is 500 ohms and the capacitor C has a capacitive reactance of 75 ohms, then we can calculate the voltage across each component using Ohm's law.

For the resistor we have
 $E_R = IR$ where

$$I = 100 \text{ mA} = 100 \times 10^{-3} \text{ amp and}$$

$$R = 500 \text{ ohms. So}$$

$$E_R = 100 \times 10^{-3} \times 500$$

$$= 50 \text{ volts.}$$

For the capacitor we have
 $E_C = IX_C$ where

$I = 100 \times 10^{-3} \text{ amp and } X_C = 75$
ohms. So

$$E_C = 100 \times 10^{-3} \times 75$$

$$= 7.5 \text{ volts.}$$

We cannot just add these voltages to get the total applied voltage because the voltages are not in phase. In this case we realize that the voltage across the resistor is in phase with the current through the resistor, however, the voltage across the capacitor lags the current through the capacitor by 90 degrees.

We represent the current and voltage with a vector diagram as we did in Part 26, (see Fig. 2).

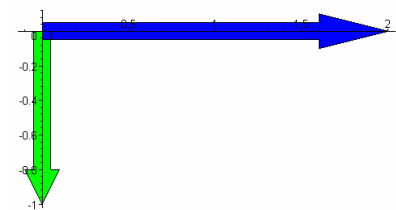


Fig. 2

Here the blue vector represents the voltage across the resistor and the green vector represents the voltage across the capacitor. If

we alter the plot so we have a right triangle to allow us to use the Pythagorean relationship again, we have Fig. 3.

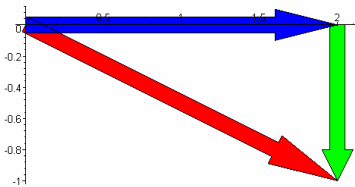


Fig. 3

Here the blue vector is still the voltage across the resistor, 50 volts, and the green vector is the voltage across the capacitor, 7.5 volts. The red vector is the resultant vector and it represents the sum of the two voltages using the phase difference. In this case we have

$$\begin{aligned} \text{Total Voltage} &= \sqrt{(50)^2 + (7.5)^2} \\ &= \sqrt{2556.25} \\ &= 50.6 \text{ volts.} \end{aligned}$$

The angle between the blue vector and the red vector is called the phase angle between the circuit current and the total voltage. If we designate this angle as A , then we

can use the tangent function from trigonometry to calculate this phase angle. Therefore,

$$\tan(A) = \frac{\text{length of opposite side}}{\text{length of adjacent side}}$$

In this diagram, the length of the opposite side is 7.5 and the length of the adjacent side is 50. This means we have

$$\tan(A) = \frac{7.5}{50} = 0.15$$

Using the inverse tangent function on a calculator we find that $A = 8.5 \text{ degrees}$. We say that the current leads the voltage by 8.5 degrees or that the voltage lags the current by 8.5 degrees.

We usually call angles positive if they are measured counter-clockwise from 0 degrees. We usually call angles negative if they are measured clockwise from 0 degrees. Since the angle A is measured clock-wise from the blue vector to the red vector, we designate the phase angle as -8.5 degrees .

In this case we would specify the total voltage as 50.6 volts at -8.5 degrees .