

Nacogdoches Amateur Radio Club

2006 CLUB OFFICERS

President: Tom Atchison - W5TV

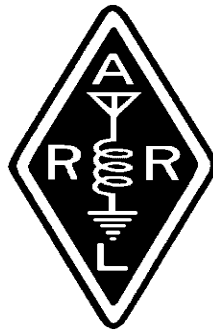
VP: John Chapman - KC5MIB

Sec/Treas: Army Curtis - AE5P

JULY MINUTES

The July meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on July 5th. Seventeen members and seven guests were present. **President Tom, W5TV**, 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.

Field Day: **Chef Mike, KD5PFQ**, was disappointed that after fixing fajitas for 40 people, only 15 showed up to eat. Mike stated that he will not be



doing that again. He did receive a rousing round of applause for his fine cooking.

Field Day results: 124 CW, 673 phone, 1842 QSO points plus 800 bonus for a grand total claimed of 2642. Congratulations to all who participated, and many thanks to all who helped.

Army, AE5P made a motion that the club donate \$200 to Christ Episcopal Church as a thank you for them letting us use their facilities for our meetings and VE tests. Passed.

Army, AE5P has LMR-400 available at \$35 per 100 feet. First come, first served.

Dave, NG5E has donated a Gap Titan vertical antenna to the club. Many thanks to **Kent, KD5SHM**, for taking it down and bringing it back to town.

Mark, W5TXR, with help from **Andy, KE5EXX**, **Andrew, KE5GAQ**, and **Kent, KD5SHM**, finished up his new tower and antenna installation.

Bryan, KK5XM, will open his station for anyone who wants to operate Sweepstakes in November.

Reminder that the CQWW VHF contest (6M and 2M only) will be the weekend of July 15 and 16. **Marshall, K5QE** will be opening his contest station

in Hemphill, and is looking for operators. **Army, AE5P** says he plans to operate as a rover, and will have his wife **Pat, NH6VJ** along as a second op on Sunday.

Meeting was adjourned at 8:10 p.m.

Show and Tell: **Kent, KD5SHM** showed his new FT-817. **Tom, W5TV** showed his WAS QRP certificate just received.

PRESIDENT'S CORNER

Well folks, I believe summer is here. The temperature outside is terrible and the humidity is high. Just a typical day in East Texas.

All the bands seem quiet today, however, we have been having some really great openings on 6 meters lately. If you haven't listened on 6 in a while, turn on your rig and set it on 50.125. If anything is happening, you will hear it first there. The folks I have worked have been running from

about 10 watts to around 100 watts and the antennas vary from verticals and dipoles to loops and beams. If the band is open and you have a rig that will generate a signal on 50 Mhz, hook some antenna to it and see what happens. You might be surprised. Of course, if the bug bites, you may find yourself looking for a better antenna and more power. We have all had that disease.

Don't forget our next meeting will be on August 2 at 7:00 p.m. at the Episcopal Church at the corner of Starr and Mound streets. If you have anything that is new to you in ham radio, please bring it for 'show and tell'. See you there!

73 de Tom, W5TV



V.P.'s CORNER...

Wow, where does the time go? I was doing a column for the news letter just

the other day. I really don't have a lot profound or even radio related to bring to the newsletter this time. I haven't even thought of a program for this coming meeting. SOOOO, I'm going to be asking the good graces of the club and bring your goodies for show and tell. I have some old technology to show off, some equipment that John (KC5IIT) and a few others may have used, I certainly used it.

I hope everyone is having a great summer.

73 to all,

John Chapman

e-mail:

jlchapman2@juno.com or kc5mib@arrl.net

VE TESTING

Our next VE testing is scheduled for Wednesday, August 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.

TRAINING MATERIALS

The club has purchased several copies of the latest ARRL "Now You're Talking" books, which provides everything a person needs to be able to pass the Technician class Amateur Radio license exam. Anyone may "borrow" one of these books for a \$20 deposit. When you return the book in good condition, you will get your deposit back. Interested? See Army, AE5P.

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 August 2nd at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. This is at the corner of Starr and Mound Streets in Nacogdoches. Hope to see y'all there.

Basic Electronics Part Six By Thomas Atchison

What does dB mean? This is the abbreviation for decibel. Deci is the metric prefix that means one-tenth, so we are talking about 1/10 of a bel. The bel compares the loudness of two sounds with each other. One of these sounds serves as a reference for the comparison. To calculate how many bels louder or softer the second sound is, simply divide the reference intensity into the other value. Then find the logarithm of that result.

$$\text{bels} = \log\left(\frac{I_1}{I_0}\right)$$

where I_0 is the intensity (or loudness) of the reference sound and I_1 is the intensity of the sound compared to the reference.

If the quieter sound intensity (smaller number) is used as a reference sound, then the ratio is larger than 1 and the logarithm is positive. On the other hand, if the louder sound intensity is used as a reference sound, the ratio is less than 1 and the logarithm is negative. The numerical value of the log of the ratios would be the same, but one would be positive and the other negative. This means that a positive value of bels indicates a sound is louder than the reference sound and a negative value of bels indicates a sound is quieter than the reference.

Sound intensity is similar to sound power, so we can apply the bel to power levels in electronics. The bel is a rather large unit, so we normally use the decibel. It takes 10 decibels to make one bel.

This means that the equation to compare two power levels in decibels is 10 times the equation to calculate bels.

$$dB = 10 \log \left(\frac{P_1}{P_0} \right)$$

where P_0 is the reference power level and P_1 is the power level compared to the reference.

As an example, suppose we measure the output power from a transmitter and find that it is 15 watts. Now suppose we use a power amplifier after the transmitter and measure the power from the amplifier to be 1500 watts. What is the gain or power increase provided by this amplifier? If we use the 15 watts as reference, then the gain would be calculated as follows:

$$\begin{aligned} dB &= 10 \log (P_1/P_0) \\ &= 10 \log (1500W/15W) \\ &= 10 \log (100) \\ &= 10 (2) \\ &= 20 \end{aligned}$$

The amplifier provides a 20 dB increase in power.

Now suppose we feed the output of our 1500 watt amplifier into some coax that feeds an antenna. Suppose we measure the power at the antenna and discover that we have 150 watts there. We now compare the power at the antenna with the amplifier power. In this case P_0 is 1500 watts and P_1 is 150 watts. Therefore,

$$\begin{aligned} dB &= 10 \log (P_1/P_0) \\ &= 10 \log (150W/1500W) \\ &= 10 \log (0.10) \\ &= 10 (-1) \\ &= -10 \end{aligned}$$

The negative sign says we have less power than our reference.

If you have a piece of coax with a loss of 10 dB in any reasonable length, then you might conclude that your coax is not so good.