

Nacogdoches Amateur Radio Club

Pres: John Chapman - KC5MIB

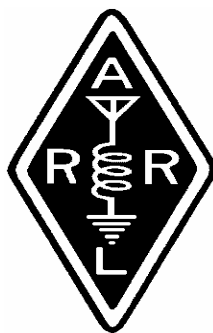
VP: Andy Delgado - KE5EXX

Sec/Treas: Army Curtis - AE5P

SEPTEMBER MINUTES

The September meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on September 5th. Twenty-five members and three guests were present. **President John, KC5MIB**, 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 published.

Please welcome our newest hams and members, **Dustin (KE5CLR)** and **Amanda (KE5CLQ)**



Williams. Dustin works with **Bill, N5YA**, and they live in the Hemphill area.

Lots happening as usual. The September VHF contest will be the weekend after this meeting, the Texas QSO Party comes up the end of the month, Belton will be October 6th, and the Simulated Emergency Test is scheduled for October. Get involved and stay busy.

Army, AE5P, made a motion that the club go on record as endorsing the re-election of **Coy Day, W5OK** as Division Director, and **David Woolweaver, K5RAV** as

Division Vice-Director. Motion passed unanimously.

By a show of hands, interest is high for another Shuttle Columbia special event next year. Accordingly, we will have it on the first Saturday in February, 2008.

Robert, KD5FEE, made a motion that the club donate \$150 to Christ Episcopal Church as a thank you for letting us use their facilities for our club meetings and VE testing. Passed.

Meeting was adjourned at 7:48 p.m.

Show and tell:

John - KC5MIB: A Super Antenna and an old Swan 350.

Bert - AC5Z: 2M J-pole

Marshall - K5QE:
Corroded LMR-600, so we know what not to use.

PRESIDENT'S PODIUM

October has arrived and from the weather you really can't tell that fall is here other than it's not quite as hot during the day.

Skywarn training has been scheduled at the Nacogdoches Parks and Recreation Center on North Street next to the Library and Java Jacks for 18 October 2007, 6 - 8 PM. It is easier to get there than on campus. The training is good for 2 years.

The TX QSO Party was fun. I went out, but my 40 meter antenna still needed a bit of help. I did make a few contacts on 146.46 simplex, most with the school station. I had a good time driving around but was a bit frustrated. Oh well, there is always more to learn and do to improve things.

I will be appointing our nominating committee for the new officers. We will elect them at the November meeting and the new officers will take over in December. I would also like to discuss a holiday event.

I'm looking forward to seeing everyone at our next meeting, if you have goodies you would like to show off, please bring them for show and tell.

73 to all,
John Chapman
e-mail: kc5mib@arrl.net



V.P.'s
ELEMENT...

Another weekend, another contest....

Effective today at 15:00 local, the 2007 Texas QSO Party is over. If you had a chance to get on the

air give yourself a pat on the back!

I had the opportunity to activate 11 counties this year (Nacogdoches, Cherokee, Houston, Anderson, Rusk, Shelby, Panola, San Augustine, Trinity, Polk and Tyler). This is actually the first year I have gone mobile for the TQP. I have to tell you, it would have been a boring contest if I didn't have 6m and 2m SSB, 40m was long most of the time.

I don't know if it was conditions or locations, but I found some areas that I just couldn't hear anything on 40m. Of course I was just using a 40m Hamstick on a triple magnet mount. Anyway, most of Angelina County and what little of Trinity County I went through was just absolutely RF Wasteland. Maybe that's why the TQP never has anyone activate Angelina.

Hopefully those of you who participated in the contest had better results from your homes.

Don't forget to submit your scores and use Nacogdoches ARC as your affiliated club.

So, what's next? The Pineywoods Purgatory is next Saturday, as well as the Belton Hamfest. But don't think that there has to be some big event to turn on the radio.

Speaking of events, here's a top ten list of things for NARC members to do this month:

10. Get on the local repeaters.
9. Try out the new weather station.
8. Send some RF-Mail via the W5NAC-10 winlink node.
7. KD5SHM found an AM receiver you can build.
6. Build yourself a new antenna.
5. Get on HF. If you don't have HF privileges, study for your General Exam.
4. Watch for the International Space Station fly overs.
3. Try to hit the Devers, TX repeater (444.850 MHz / + / 151.4Hz PL) @ 1500 ft.

2. Clean your hamshack.
1. Find your white elephant gift for the NARC Christmas Party!

See you soon!

73 de KE5EXX
email: ke5exx@arrl.net

VE TESTING

Our next VE testing is scheduled for Wednesday, October 17th 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
email: ae5p@arrl.net

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 October 3rd 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. Hope to see y'all there.

Basic Electronics Part Nineteen By Thomas Atchison

As we saw in Basic Electronics, Part 18, you can change from just about any ac voltage to any other ac voltage using a transformer. The relationship between the input voltage and the output voltage depends on the number of turns in the primary winding and the number of turns in the secondary winding. It is important to realize that the amount of energy in a system must remain constant. We can neither create nor destroy energy, however, we can change energy from one form to another. In the case of transformers, we can't get more energy out of the transformer secondary than we put into the primary. Unfortunately, a real transformer will change some of the input energy into heat in the wires and the core material. It also takes some energy to overcome the resistance in the wire and that will show up as

heat energy in the wire. All of this electrical energy converted to heat represents a loss of electrical energy, not a loss of energy.

The input power of a transformer can be calculated by measuring the primary voltage and the primary current. For example, if E_p represents the primary voltage and I_p represents the primary current, then the input power P_{in} is given by

$$P_{in} = I_p \times E_p$$

If we also measure the secondary voltage E_s and the secondary current I_s , then the output power P_{out} is given by

$$P_{out} = I_s \times E_s$$

If no electrical energy is lost in the transformer, then we must have

$$P_{in} = P_{out}$$

You realize that a real transformer will always have some electrical energy converted to heat and lost. This means that

the output power is slightly less than the input power.

Now if we return to our current and voltage relationships we get

$$I_p \times E_p = I_s \times E_s$$

This can be expressed in the form

$$\frac{E_p}{E_s} = \frac{I_s}{I_p}$$

Referring back to Part 18 we realize that if N_p represents the number of turns in the primary winding and N_s represents the number of turns in the secondary winding, then

$$\frac{N_p}{N_s} = \frac{E_p}{E_s}$$

This leads to a relationship concerning current

$$\frac{N_p}{N_s} = \frac{I_s}{I_p}$$

Notice that the primary and secondary currents have the opposite order from the number of turns in the windings. This means the winding with

fewer turns will carry a larger current.

Therefore, you should use a larger diameter wire for the winding with fewer turns and you can use smaller diameter wire in the windings with more turns.

The wire size determines how much current the transformer can safely handle. Remember that smaller diameter wire has more resistance; therefore, you have a trade-off based on the amount of current the secondary will require. A transformer made with smaller wire will be smaller in size.

If you must have a higher secondary current, then you will need to select a transformer that will handle this higher current, therefore, it will need to be constructed of larger diameter wire.

Suppose you have a transformer that has a turns ratio of 5 to 1 (primary to secondary). That means that there are

5 times more turns in the primary winding than in the secondary winding. If the primary winding can handle 3 amperes, how much current can you draw from the secondary?

To solve this problem we use the relationship

$$\frac{N_p}{N_s} = \frac{I_s}{I_p}$$

This results in the equation

$$5 = \frac{I_s}{3}$$

Solving for I_s we get

$$I_s = 15 \text{ amperes.}$$

We usually think of a transformer in terms of its ability to change voltage, however, the current available from a transformer must also be considered.

Texas QSO Party

We have a little extra space this month, so I thought I would try and fill it up with some thoughts about TQP.

Several NARC members were active this year. I used my station (AE5P) as the club station using the club call (W5NAC) and had a ball, operating almost exclusively on 40 meters. John (N5AIU) operated the school station (KD5VVI) for the entire contest. Doug (W5BL) operated from Red River county and was heard throughout the contest. Andy (KE5EXX) went mobile and activated 11 East Texas counties, primarily on 2M SSB, but also on 6M for some of them. Andrew (KE5GAQ) operated for a short time. John (KC5IIT) went out Saturday afternoon and operated from his home station on Sunday. Rusty (KD5GEN) hung out at AE5P on Saturday, and then operated from his home station. John (KC5MIB) went mobile as reported in his column. Johnny (KA5BQM) was heard from Sabine county on Saturday, and Marshall (K5QE) was heard on Sunday. Tom (W5TV) operated from home, as did Bob (KD5FHL). For some, this was their first

experience with a contest. I sure hope it will not be their last.

I had the pleasure of working many mobile stations during the contest, and following them from county to county. I hope to get the chance to meet some of them in person some day. K5NOT, K5NA, KK5LO, K5P, K5MRA, N5GRC, WOBH, to name a few. And there were an amazing number of out of state mobiles who called in. Along with a variety of special event stations that were active.

Propagation on 40 meters was weird again this year, with very long skip for most of the weekend. It was Sunday afternoon before I began hearing any stations in central Texas, or in the Houston area. I never did hear any stations from the DFW area. Too close.

As John, N5AIU discovered, you can move to 20 meters and have a monster pile up of stations

wanting to work you. Great fun.

As Andy found out, 2M SSB proved to be a very effective mode for counties near us. Yes, it takes a little different antenna (horizontally polarized), but it worked very well where there was no contact possible on 40M. Many of us now have one of the multi-mode radios that include 2M SSB. Do you have an antenna for it? A simple loop is very effective, especially mobile. A small yagi is even better. This might make an excellent club construction project for the future.

New to contesting? Don't have a station setup? Come over to AE5P and use my station under the club call. Or, come over and just hang out and observe. Need help with logging? Just ask for a little assistance. We are most happy to help you get off on the right foot. And TQP is one of the best events there is to get started with.

If you did operate, don't forget to send in your log, and show that you are part of Nacogdoches ARC. I'm sure we will not win first place, but I'll bet we make a pretty decent showing.

73 de Army AE5P