February 2005 **Volume 02-2005**

Nacogdoches Amateur Radio Club

2005 CLUB OFFICERS

President: Kent Tannery – KD5SHM

VP: James McLaughlin – N5VOO

Sec/Treas: Army Curtis - AE5P

FEBRUARY MINUTES

The February meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on February 2nd. Twenty two members and three guests were present. **President Kent, KD5SHM**, 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.

Army – AE5P, gave an update report on the heliax situation, and the lawsuit status.

It was requested that we put together some statistics on our VE tests, and consider publishing results in our newsletter.

If you want to be a net controller, now is the time to speak up. **K.J., KK5BE**, has the master list and is the person to contact if you want to be added. A script to follow is available for your use. We will publish the net controller list on our web site.

The second annual **Shuttle Columbia Special Event Station and Reunion** is planned for Saturday, February 5th at the Knights of Columbus Hall. We will meet at the Hall on Friday afternoon at 3:00 to set up the antennas. WD5EFY has donated the use of his portable towers to set up a 40M dipole, and AE5P will donate the use of his Butternut vertical. Saturday we will meet for breakfast at IHOP at 6:00 a.m. Events will run from 7:00 a.m. until 7:00 p.m. We plan to have food for lunch available for a donation. There will be two HF stations and one VHF station. Everyone is asked to wear a name tag.

Meeting was adjourned at 7:45 p.m.

Program:
Discussion of the January VHF contest by **N5VOO**, **KD5SHM**, and **K5QE**, including the problems of grid circling and captive rovers

PRESIDENT'S CORNER

Building your own Radio

Have you ever thought or dreamed of building your own ham radio? We have all heard about people who have done this with the help of kits, like Heathkits, and others who just grabbed a schematic and some parts to build their own. Here is my story concerning my first build of an Elecraft K2 radio and how you too could do this.

First let me say that I had a backup plan in place before I opened the bag with all the little pieces. Army, AE5P, had stated that he would help get me started, help with problems, and even totally bail me out and build the whole thing if necessary. (I later found out why he would do such a thing). I also decided not to tell anyone so in case it did not work out the way I wanted, I would not have to eat crow. So the first thing to learn was the proper way to solder using a good soldering iron and thin diameter solder. Some old circuit boards and electronic parts were pulled out and I began flowing solder into the holes. The solder iron tip placed carefully to heat BOTH the component lead and the hole so that a bond is made. I guess it is natural to over do it at first (big blobs) but I soon learned to just fill the hole with only a small mound of solder at the top. Note: You always check the other side also to make sure the solder flowed through the hole.

Everything else in the Elecraft kit is about following instructions. The manual is very detailed and even includes pictures of the components to help you see the difference between a resistor and a capacitor to identify the right part. All the electronic parts are numbered and after taking an inventory it is a good idea to make your own notes like "small, blue ones" or something that helps you locate them when it is time to grab one. The inventory also gets you familiar with what is in the bag. Muffin tins or organizer boxes (like a fishing tackle box with sections) let you sort the parts out and be organized.

So while following the steps in the manual I soon realized that each little solder blob is important to the overall project and taking your time and watching where that hot soldering iron goes is important to keep from frying something by accident. Soon I relaxed and it became fun. Maybe "fun" is not a good word. This was addictive! All I wanted to do was work on this thing. When I was not working on it, I was reading about building it on the Elecraft website. I also read on the website that there are lists of people who will build these radios for others for a small fee, and some will do it for free. Now I understand why. This is really fun, and when I mentioned this to AE5P, he says he understands, and now I see why he was

so willing to build the radio for me.

I now have the basic radio built and have made some contacts on it and I am now building some add ons, like DSP and transverter options. I read on the Elecraft reflector that some guys have a hard time leaving the cover on this thing and I understand why. Building the radio is as much fun as using it. This is also like "open source" because if someone figures out a way to modify the radio for the better, Elecraft will review it and if they approve, they will put out a "modification update" so that everyone can do the mod to improve the radio. The guys who build the first Elecraft radios can upgrade theirs to the same radio being sold today with these mods.

This was my first electronic build and I really enjoy doing this. If you have ever thought about an electronic build, do it, but make sure you have a good kit and detailed manual if it is your first project. The web is full of projects like the Elecraft radios www.elecraft.com or the Rock Mite QRP transceiver at www.smallwonderlabs.com and others. Heat up the irons and let the solder flow.

73 de KD5SHM

V.P.'s CORNER…

Hey guys I know this has been addressed before but I believe it might be good to go back over again before we the next contest or severe weather hits. I want to bring up the idea of standardizing of power connecters using Anderson Power Poles. For those who don't know what an Anderson Power Pole is check out this site http://www.connex-electronics.com/?url=/html/products/anderson/powerpole/pp_main.html . Now for the fun part: how does one know what the standard is, and how do you construct a set of power poles?

RESEARCH:

Doing research is key to any project that you might undertake. My first stop was the ARRL website (www.arrl.org) where I did a search for standard power connectors. I must say that the ARRL must have consulted the Dell website when building because I can't find a thing on this site. This being said I went to the best addition to the internet www.google.com there I typed in "standard power connectors amateur radio" and came up with one of the best sites on standardizing power connectors which was here in Texas. The Austin/Travis ARES website (http://www.tcares.org/connectors.htm) which listed power poles and other various connectors used in amateur radio. There they point out a site on how to assemble 30amp power poles (http://www.tcares.org/co

nnectors.html) but don't really address what the standard is in amateur radio, perhaps there isn't a standard for power poles. Within a few minutes of searching I did come across a site from Google that pointed to the QSL website (http://www.qsl.net/w6apd/powerpole.html).

CONSTRUCTION:

The construction of power poles are fairly easy to assemble with help of the QSL website I found the following "Power poles® are both polarized and genderless, so you never have to worry about male vs. female or positive vs. negative. Connections can be quickly made and remade in the dark without any hassles and the 30 amp connector can easily handle 100 watt radios. Housings should be mated according to the diagram above, viewing from the contact side (opposite the wire side), tongue down, and hood up, **RED on the LEFT, BLACK on the RIGHT.** Use a 3/32-inch-diameter roll pin, 1/4 inch long, to keep the housings from sliding apart."

Okay with all that being said where do you get these wonderful gadgets? I have ordered many times from www.powerwerx.com and they come in sets for next to nothing. Here you can order the zip cord, chassis mounts, and larger power poles. Power poles have many different uses. http://home.comcast.net/~buck0/app.htm has many ideas for different construction for amateur radio.

I hope this helps out when it comes down to constructing a standard for your radio room. It has helped me tremendously. During the VHF/UHF contest last January it was handy to have everyone's amp and radio using these power poles even though some were backwards ;-) but that is why I made a jumper to fix this problem. I would recommend not doing this so there isn't confusion when hooking up your radio.

This has been a public service announcement from N5VOO please be kind to your pets and other amateur radio operators.

73 de N5VOO

VE TESTING

Our next VE testing is scheduled for Wednesday, March 16 at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Applicants should bring a picture ID, their current Amateur license and any CSCE's, along with a copy of both, and $14 to cover the cost of the exam(s). Take note of the price change; the cost of exams is now $14. Correct change is always very much appreciated.

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. Remember the 141.3 PL

tone now in use. Second, on THURSDAY evenings at 8:00 p.m. is the Deep East Texas Skywarn Net on the club's 147.32 repeater (PL 141.3). The PL is turned off for the net. Please join us for one or both.

NEXT MEETING

The next meeting will be on Wednesday March 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.

SIGNAL REPORTING

Conditions on the air can change very quickly. You may contact a ham who has a strong signal and on the next exchange realize that his signal is quickly fading away to nothing. You may be operating QRP (less than 5 watts) and the other station might be operating at 1500 watts using an amplifier. You may hear him well, but because of your low power you need to know quickly how the other station is copying you. You certainly don't want to start a ragchew if the other station has great difficulty trying to figure out what you are sending due to poor conditions. Using the "RST" format is a way to exchange information quickly. It stands for the following:

R – Readibility

S – Strength

T – Tone

For Readibility (R):

1 – Unreadable

2 – Barely readable, occasional words.

3 – Readable with considerable difficulty.

4 – Readable with some difficulty.

5 – Perfectly readable.

Remember, "readability" is based on copy conditions such as QRM (interference), QRN (static), and QSB (fading). It does not mean you didn't copy because the sending speed was too fast. Also, a very weak signal can be very readable with a good receiver, so don't confuse this with strength.

For Strength (S):

1 – Faint signal, barely readable.

2 – Very weak signal.

3 – Weak signal.

4 – Fair signal.

5 – Fairly good signal.

6 – Good signal.

7 – Moderately strong signal.

8 – Strong signal.

9 – Extremely strong signal.

Strength means how loud the signal is. If you have a signal meter on the face of your rig, it is probably numbered from 1 to 9. You can use this as a rough guide to estimating the strength number to use. However, no S meter is exactly correct, so you still need to estimate this. A booming signal may rate a "9", and if his signal gets a little weaker you may then call it an "8". The next station you contact might be a bit less in strength than the first but still quite loud, so you might give him a

"6" or a "7". If the signal is just avove the noise level, it might be a "2" or a "3", while a signal that is in the noise might rate a "1".

For Tone (T):

For other than voice modes only.

9 – Perfect tone

8 – Near perfect tone

The "tone" designations actually go all the way to a "1", but transceivers today are almost always perfect in tone. In fact, if you give someone a "T8", he might get very upset if his rig is an IC7800 for which he just spent $11,000 on purchasing it! Also, there are stations from other countries who can't afford, or do not have access to state of the art equipment. Many are using patched up equipment form the 1950's. They are fortunate to just be on the air. It would be a bit unkind to criticize their signal tone, so it is best to just give them the standard "9". I don't think I have ever given anyone less than a "T9".

Tone was originally much more important when spark station were on the air (1901 – 1923), and even with vacuum tube rigs in the 1920's and 1930's many hams did not have crystal control and every time they hit the key to transmit the frequency would shift causing a chirp.

Some Examples:

589 to 599 – a normal strong signal.

529 – weak, but fully readable.

449 – somewhat difficult reading signal and it's also fairly weak.

229 to 329 – about the worst you can give and still copy the call sign and signal report to make it an official contact.

Contest Reports:

Having said all of the above, in a contest, any contest, the report to give is 59 (5nn on CW), regardless of how weak, strong, hard to copy, etc. If you really want to get a bad name in the contest world, give out other than 59 for a report.

73 de AE5P with thanks to W2MY/5