

Nacogdoches Amateur Radio Club

2010 CLUB OFFICERS

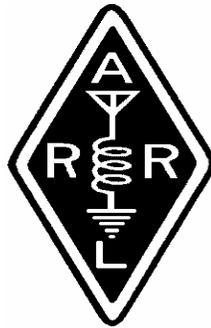
Pres: Rusty Sanders - KD5GEN

VP: John Jordan - N5AIU

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.



APRIL MINUTES

The April meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on April 7th. **President Rusty, KD5GEN**, opened the meeting at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Seventeen members and six guests were present. Each person present introduced himself. Minutes of the previous meeting were approved as published. The Treasurer's report was read.

Old Business:

Winlink:

The Winlink Node from the top of the Fredonia Hotel is being rebuilt.

Field Day:

The airport has been approved for our use. Co-chairmen **W5TXR** and **KE5ZNJ** continue to plan. **KE5ZNJ** to write a newsletter article on their plans.

Fun Run:

Debbie Tanner from the Nacogdoches Safe and Drug Free Organization gave a presentation on their Lanana Creek fun run scheduled for April 24th. NARC will provide communications support for the event.

New Business:

NRR:

Mike - WD5EFY gave a report on the annual

Neches River Rendezvous on the first Saturday in June. Mike plans an article for this newsletter next month.

Long time members **AC5Z** and **KK5BE** have recently undergone surgery and are recovering. Please keep them in your prayers.

Meeting adjourned at 8:06 p.m.

Programs:

Porter Stanaland, Regional Liaison Officer for Governor's Division of Emergency Management, gave a short program on DEM and his role there. He will present a more comprehensive program on this at a future meeting.

Robert - KD5FEE gave a multi-media presentation on the Amateur Radio High Speed Multi-Media Mesh network in Austin.

Oscillations From The Chair

Hello again! Army Curtis, AE5P and I went out to Belton for their hamfest. This was the first time for me to make the trip to that event. We were able to see many items associated with ham radio and some with other band uses. I was really amazed at the large number of vendors present. The rains cycled during the night and day keeping the tailgating pretty much shutdown.

One of the most unusual items that I noticed was apparently a military whip (olive drab painting) mounted on a small Jeep. The whip was 40 or so feet in length. The operator indicated that he could tune from 160-meters up through 6-meters. As long as the whip was, he certainly could not drive down any highway due to the extreme height of the antenna which could be damaged by overpasses and other objects.

This last weekend, (April 24) a number of the local NARC members assisted with providing communications for the first ever T.R.A.I.L. walk/run held on the Lanana Creek walking trail. This was sponsored by the Nacogdoches Safe & Drug Free Coalition. It seems they had a very good turnout of walkers and runners for their first event. I appreciate everyone who assisted in providing communications so the organizers could keep up with the event.

Even though the weather has short changed us on rainfall, we have experienced some pretty rugged weather events approaching our county in the last month. The last 'almost' event died out as it got to the western Nacogdoches County line. This particular storm had been very violent in some of the counties to our west. The storm produced a very interesting light show in the form of cloud to cloud lightning as it approached. Whether or

not you participate in the Skywarn program, you should pay special attention to the weather this time of the year and protect your equipment as best you can from possible lightning strikes.

On Monday, April 26, after the normal NARC net, several of us moved to 6-meters and conducted a short net and it was interesting. After making contacts on SSB, we shifted frequencies and tried FM. When I first moved to Nacogdoches in 1966, the fire department operated on 46.100 MHz FM simplex. The base station antenna was mounted on the top of a water tower near the top of Orton Hill on East Main Street. The mobile units had Motorola radios operating from 45 watts up to 100 watts. The vehicle antennas were all a steel rod on a whip with no loaded coils. The fire department was able to cover almost the entire county with this system. Six meters is just above the old fire frequency and offers a lot of possibilities

for use. We are seriously considering having a six meter net in the near future.

I hope to see all of you at the next meeting on May 5.

73 until next month.

KD5GEN- Rusty

email:

rusty.sanders@att.net

VP's CORNER

A big part of the Vice President's job is to arrange programs for our club meetings, and this past month, we had lots of programs. Many thanks to Porter Stanaland, Debbie Tanner, and Robert Judy for their presentations.

NARC provided communications for the Lanana Creek Fun Run on Saturday, April 24th. This is the first event like this the club has had an opportunity to work in some time, and we had a good turnout for it. Many thanks to Rusty KD5GEN, Army AE5P, Robert

KD5FEE, John KC5MIB, John N5AIU, Jim KE5ZNJ, Andy KE5EXX and Andrew KE5GAQ for their help with this. Next time, you need to think about getting involved. It's fun!

At our next meeting, Army AE5P will present a show and tell type program on directional antennas. I don't think you will want to miss it.

Hope to see you all there.

73 de John N5AIU

email:

jjordan@nacogdoches.k12.tx.us

VE TESTING

Our next VE testing is scheduled for Wednesday, May 19th 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 \$15 to cover the cost of the exam(s). Correct change is always very much appreciated. 73 de AE5P
email: ae5p@arrl.net

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. We are always looking for folks who would like to become net control operators. If

you are interested, please contact any of the existing net controls. We will be pleased to help you in any way we can.

NEXT MEETING

The next meeting will be on Wednesday May 5th 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. Please bring any show and tell items you might have.

BASIC ANTENNAS

PART 18

by

Thomas Atchison W5TV

A loop antenna is a closed-circuit antenna. That is, it is an antenna in which a conductor is formed into one or more turns so its two ends are close together. Generally, we have two types of loop antenna, small loops and large loops. The small loop antennas are more like coils of wire as far as the current distribution is concerned. The total length of conductor in a small loop is on the order of $1/10$ wavelength. We will not discuss these small loop antennas here.

A large loop antenna is one in which the current is not the same either in amplitude or phase in every part of the loop. We want to examine how this current distribution provides us with an antenna that is of interest to amateurs.

First, we consider the half-wave loop antenna. In this case we have a conductor that is a half-wavelength long and it is formed into a loop or a square. Suppose we form the antenna into a square with each side $\frac{1}{8}\lambda$ and feed the antenna in the middle of one side.

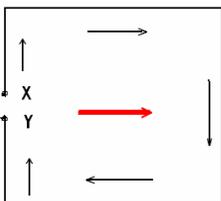


Fig. 1

Here the current flows in a closed loop with a distribution that is approximately the same as on a $\frac{1}{2}\lambda$ wire. This means that the maximum current occurs at the center of the side opposite the feed point terminals x-y. The current is minimum at the terminals themselves. This current distribution causes the field strength to be maximum in the plane of the loop and in the direction looking from the low current side to the high current side (red arrow).

Let's construct a closed loop antenna for 14.1 MHz. Remember that $\frac{1}{2}\lambda$ in this case is 33.2 feet so we have 8.3 feet on each side. See Fig. 2.

EZNEC

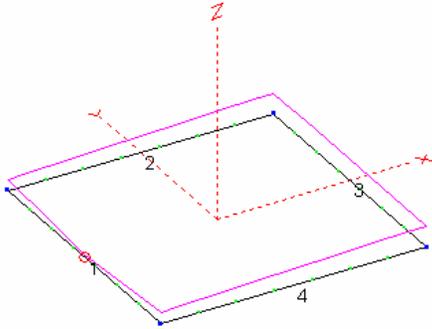


Fig. 2

Here the darker line represents the antenna wire and the pink line represents the current with the feed point at the number 1. If the loop is mounted horizontally at about 40 feet the radiation pattern is at Fig. 3.

EZNEC

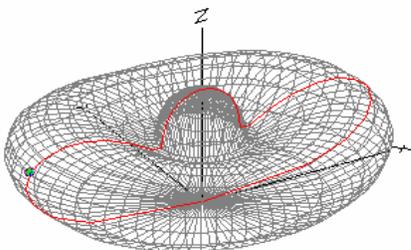


Fig. 3

The red curve represents an elevation slice with maximum radiation at 25 degrees.

If we construct a closed loop of length one wavelength for 14.1 and mount it vertically with the lowest wire at about 40 feet we have the antenna in Fig. 4.

EZNEC

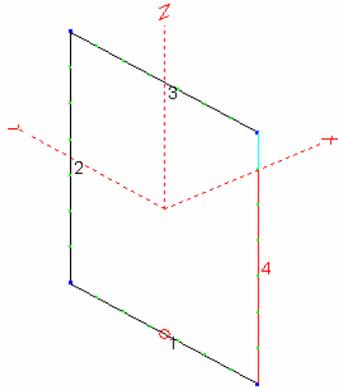


Fig. 4

The feed point is again at the number 1. In this situation the radiation will be maximum perpendicular to the plane of the wires as seen in Fig. 5.

EZNEC

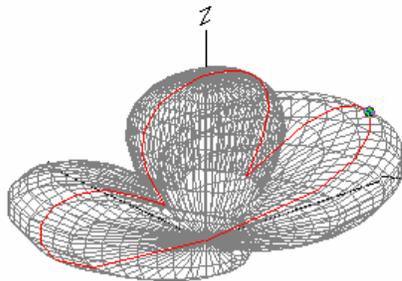


Fig. 5

The red curve represents an elevation slice.

This last antenna is the basic building block for the quad antenna. We will look further at a two element quad next time.