

Nacogdoches Amateur Radio Club

2014 CLUB OFFICERS

Pres: John Cechin - W5FWR

VP: John Chapman - KC5MIB

Sec/Treas: Army Curtis - AE5P

Visit our web site at

<http://w5nac.com/>

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.



SEPTEMBER MINUTES

The September meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on September 3rd. **President John W5FWR**, opened the meeting at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Eleven members and one guest were present. Each person present introduced them self. Minutes of the previous meeting were approved as published. The Treasurer's report was read.

Old Business:

Army AE5P discussed the Texas QSO Party coming up the last weekend of September. He has agreed to host the club at his shack for TQP using the club call of W5NAC, but cautioned that unlike the last few events held at his shack, he is determined that this time operating the radio will have first priority. Everyone is invited to attend.

New Business:

Rusty KD5GEN reported that the Nacogdoches Fire Department has offered a couple of dual band radios with antennas to the club. Rusty will follow up with the City on this.

Meeting closed at 7:30 p.m.

Show and Tell: **Army AE5P** showed off a new

gyro controlled electric screwdriver.

Program:

Rusty KD5GEN presented a program on NacWise Alert, a new Mass Notification system being implemented by Nacogdoches Emergency Management. The system allows selected groups of individuals in Nacogdoches County to be contacted automatically by telephone in case of an emergency that might affect them. The City has offered NARC access to and use of the system. Information on the program is available at <http://nacwise.com/>.

MY 2 CENTS FOX WILLY ROGER

OCTOBER:

What can I say about October, let me think about that, I know a new concept for me. Well for one thing Halloween will be upon us. Maybe the club should have a Halloween costume party or meeting, it's too late for this year, but what about next year? This could be carried further. February we could

dress as presidents. Maybe we could have a May poll. July is already taken, except we could dress as Uncle Sam and Dr. Tom. September this is a great month, why because it's my Birthday. October we already covered. November is Turkey month, everyone could come as a Turkey, oh wait.... December is and has been set aside for our Xmas get together, but we don't dress as Xmas trees, I think we are missing something here.

This is the month that the committee goes forth and finds officers for our club, remember, standup and be counted.

WOW what a program, thank you **GEN** for filling in at the last minute. We had a few contests in September, the **VHF**, the **TQP** and many more fun times that I can't remember them all, but I am sure that our club members can and will inform us.

As I reported last month, and the month before, "the winds and rains that

took its toll on my word tree are still evident". The word tree is still in a state of shock and in **ICU**. No one donated to the "**SAVE THE WORD TREE**" and so this NL will be all the worse for it. Remember to help return the word tree to its grandeur once more, thank you.

Are you thinking about being a club officer? That was the question presented to you last month, remember this is a great club, so please help keep it going.

PHASE II.V.V:....

GB seems to be happy living out doors, she still ventures forth on to the roof and other yards, so all is good with her.

Does anyone remember the story of "The Ten Little Indians"? I think it was one of Agatha Christi's; well it seems to be working to me, but only in reverse. The house is now called "Guess Who's Coming to Dinner". I now have 8 cats, yes you heard me right, **EIGHT**. There is **TB** and **CU** inside and **GB**

and **HM** outside. Now I have the wild and semi-wild visitors. The first, or should I say **#5** is a regular, next **#6** is a semi-regular, longer hair with streaks of light orange, and the latest, **#7** is a 5 week old "give or take" kitten, short gray hair, and last but not least, **#8** the **Opossum**. I don't think I will be giving these names.

Now if anyone would care to donate to "FEED THE PHASE II.V.V:" the outside five, for now, please do. I have had one person give and it didn't even hurt a bit.

TB and **CU** have settled into a sort of routine. **TB** sleeps most of the time on the bed with me, and **CU** sleeps squarely in the middle of the bedroom door, both waiting for me to wake up. When **TB** thinks I am awake, she will sit on top of me and start talking to me until I am up. When I'm dressed I will go to the kitchen for breakfast and the cats are waiting for me. I know they didn't pass me in the hall or leave the bedroom

before me, so the question is how do the cats get to the kitchen before me? I am beginning to think I have some hidden passage in my house, what do you think? After breakfast and feeding the outside group, and take my meds **TB** and **CU** have a game of chase and then it's off to nap time till late afternoon, tag must be a high energy game? Did I tell you that September 1st was **CU**, **GB**, and **HM's** birthday, one year old it was a great party, you should have been there, great fun, pin the tail on the dog, spin the catnip, goldfish dunking and much more. **CU** still lays by the front door waiting, hoping for a bug to slip into the house, this is still a great deal of fun, I am still finding bits and pieces of bugs around the house, if only I could teach her to clean up after her play time. I was at the cat doctor and see that my quote was wrong, so I will now correct it, thank you.

**THOUSANDS OF YEARS
AGO CATS WERE
WORSHIPED AS GODS,**

THEY HAVE NEVER FORGOTTEN THIS

The century plant is still standing but it's had it, now you got to remember that this plant is in the middle of a bunch of others, so getting it to the curb is going to be interesting to say the least. If any of you want century plants just let me know.

Be sure and hug a cactus today, they need love too.

The word tree is finished for this trip and maybe for a long time to come, it thanks you all for enjoying its words.

Remember: keep your powder dry and your head below the horizon.

Happy Trails

73 Enjoy

What do you think, let me know?

73,

John Cechin W5FWR

Carrots4ever2u@suddenlink.net

VEEPS CORNER

It's the Texas QSO Party weekend. How did you do? How many of the 254 counties did you contact? I know over a few years there have been one or 2 counties that haven't had anyone. Was there anyone in one of those counties this year?

Fall has arrived and with that the cool mornings and of course the longer nights. I heard a great signal Friday (26th) from the BBC on Ascension Island on the 40 m band. I have a small shortwave receiver (I showed it off at a club meeting a few years ago) that sits next to the bed and when I decide to tune around, well it sits on my stomach. The overnights are getting longer time wise and radio path wise. Are you ready for it?

I'll pick up on a thread from Kent (SHM). Even though we are getting in the fall season the weather is sometime more severe than that which we see during the spring and

summer. If you've been catching the forecast, particularly the Tropical Weather Forecast, you will have notice the Atlantic has been fairly quiet. Ah but this is Mother Nature and she can be a fickle thing. We have a little over a month before Hurricane Season 2014 ends, so like Yogi Berra said "it's not over, until it's over" or something like that.

Watch this space for some news later on.

73 and good DX

John

KC5MIB

jlchapman2@juno.com

VE TESTING

Our next VE testing is scheduled for Wednesday, October 15th 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 Emergency Weather 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 October 1st** 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 come and bring a friend.

OUR NEWEST HAM

At the September VE testing session, three persons were examined to either upgrade their existing license or to obtain a new Amateur Radio license. John Harris of Nacogdoches is now KG5DZX, our newest ham. Please welcome him when you hear him on the air.

TX QSO PARTY

The Texas QSO Party was held on Saturday September 27 and Sunday September 28. As noted in the minutes from last month's meeting, the event was hosted locally at the AE5P shack using the club call sign of W5NAC.

Many thanks to Jim WA5GVQ, Bob K5ME, Tom W5TV, John W5FWR, Bill WK5F for stopping by and

spending some time on the microphone or CW key.

W5NAC posted some of the best results ever for TQP, with 643 Q's, 1429 QSO points, 177 multipliers, a score of 252,933 before bonus points, 116 Texas counties worked (out of a possible 254), 48 US states (missed Alaska and Hawaii), 5 Canadian provinces, and 9 DX entities.

Special thanks to Bob K5ME for the many CW points he added to the log, and to John W5FWR for jumping in his car and giving us contacts for Angelina, Rusk, Panola, and Houston counties.

On air contacts were made with several club members which also helped our score.

This was definitely the best TQP for the club ever, thanks to the participation of so many members.

UPCOMING EVENTS OF NOTE

Mark your calendars for the following events coming up in the next few months:

CALIFORNIA QSO PARTY - October 3 - 5

<http://www.cqp.org/index.html>

BELTON SWAP MEET - October 4

<http://www.tarc.org/hamexpo/>

ARIZONA QSO PARTY - October 11 - 12

<http://www.azqsoparty.org/>

CQ WW DX CONTEST SSB - October 25 - 26

<http://www.cqww.com/index.htm>

ARRL SWEEPSTAKES CW - November 1 - 3

<http://www.arrl.org/sweepstakes>

ARRL SWEEPSTAKES
SSB - November 15 - 17

<http://www.arrl.org/sweepstakes>

CQ WW DX CONTEST
CW - November 29 - 30

<http://www.cqww.com/index.htm>

ARRL 160M CONTEST
CW - December 5-7

<http://www.arrl.org/160-meter>

ARRL 10M CONTEST -
CW, PHONE - December
13-14

<http://www.arrl.org/10-meter>

ARRL ROOKIE
ROUNDUP CW -
December 21

<http://www.arrl.org/rookie-roundup>

Vertical Antennas

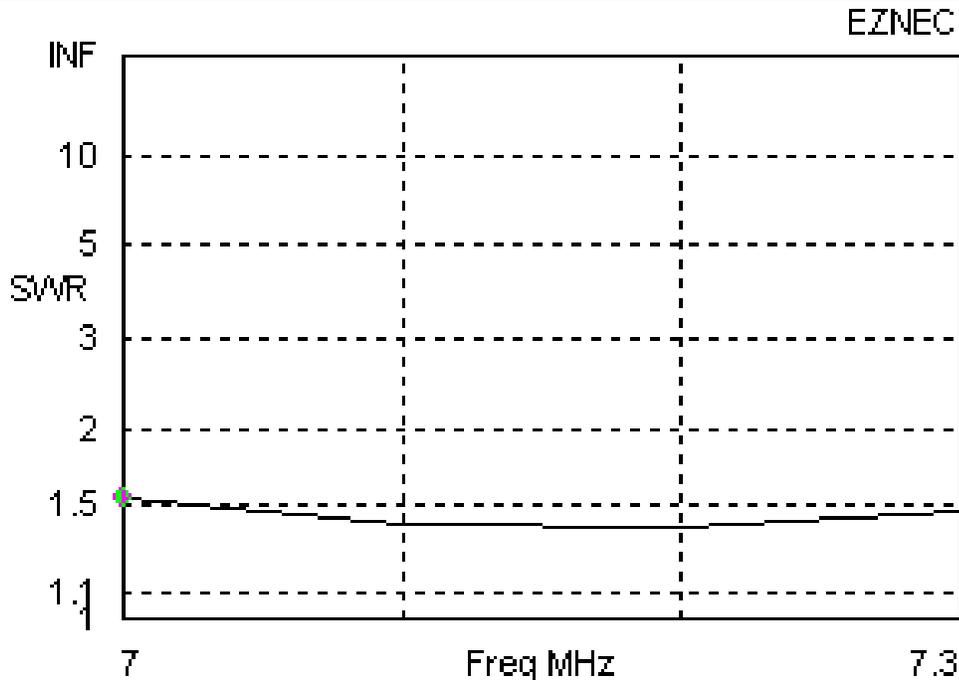
By

Thomas A. Atchison W5TV

I ran across an article in the September 1972 issue of QST by a well-known writer of days gone by named Lew McCoy, W1ICP. The article was entitled "Some Plain Facts about Multiband Vertical Antennas" and it begins on page 14 of that issue. Lew wrote many, many articles for QST over the years and his work is exemplary. If you have a chance to read his work, please take that opportunity. His paper suggested some ideas I would like to mention in this article.

First, when we talk about a vertical antenna we are usually talking about a radiator that is one-quarter wavelength in length and mounted vertically (of course). This radiator can be ground mounted, however, it must be insulated from the ground. It works against the ground or, more likely, against a set of ground radials. Early in my ham career I used 1.5-inch irrigation pipe which I slipped over a glass coke bottle as an insulator. The length of the pipe was 33 feet, which is a quarter wave-length on 40 meters. It was guyed by non-conducting material (nylon cord). I used 8 buried ground radials of varying lengths around the base of the pipe. Using 180 watts on both AM and CW, I was able to work all over the United States, South America, and Europe.

If we use EZNEC to model this antenna we get an SWR graph over the range from 7 to 7.3 MHz shown in Fig. 1.

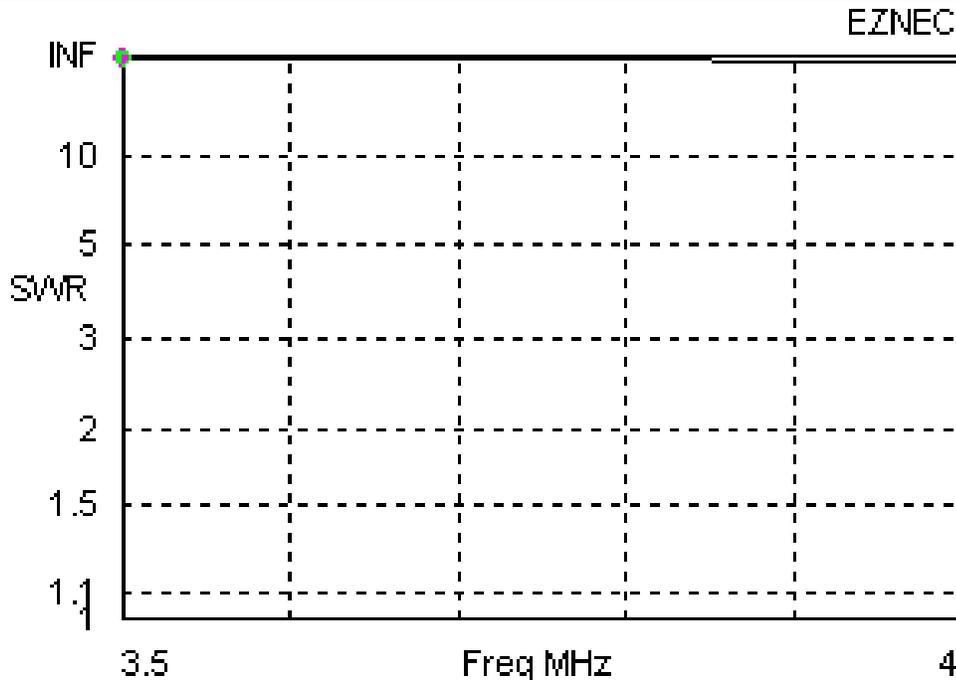


Freq	7 MHz	Source #	1
SWR	1.55	Z0	50 ohms
Z	35.53 at -15.2 deg. = 34.29 - j 9.318 ohms		
Refl Coeff	0.2154 at -143.02 deg. = -0.1721 - j 0.1296		
Ret Loss	13.3 dB		

Fig. 1

The energy supplied to the antenna is dissipated in the form of radio waves (the useful part) and in heat losses in the metal radiator, radials, and insulating material. Of course the dissipated power is I^2R where I is the rf current supplied by the transmitter and R is composed of a real resistance (ohmic loss) and a radiation resistance, which is an assumed resistance. In the case of the above vertical, the feed-point impedance of the antenna is approximately 35 ohms in radiation resistance and there is an ohmic resistance associated with the radiator. For purposes of this discussion, let's suppose that the ohmic resistance of the radiator is 33 ohms (1 ohm per foot). If we fed 68 watts of power into the antenna, 35 watts would be radiated and 33 watts would be used up in heat loss.

What happens if we try to use our vertical on 80 meters? The following, Fig 2, is from EZNEC using the 40-meter antenna described above.



Freq	3.5 MHz	Source #	1
SWR	> 100	Z0	50 ohms
Z	360.1 at -88.97 deg. = 6.497 - j 360.1 ohms		
Refl Coeff	0.9951 at -15.81 deg. = 0.9575 - j 0.2711		
Ret Loss	0.0 dB		

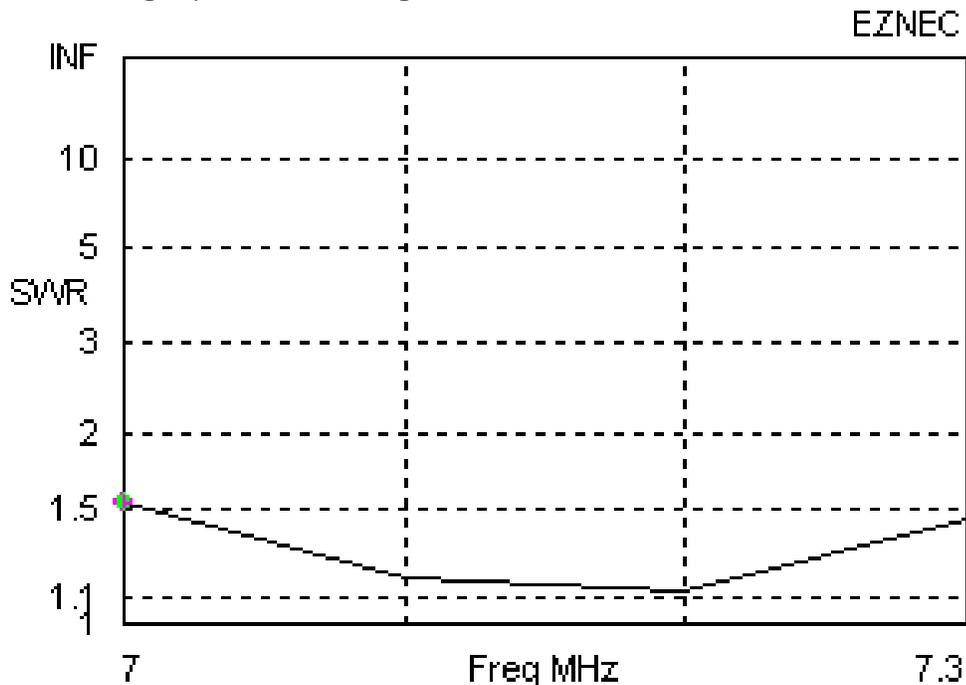
Fig. 2

In this case the SWR line is at the very top of the graph where it says INF.

The radiation resistance when we try to use our 40-meter vertical on 80 meters is a little over 6 ohms but the ohmic resistance is still 33 ohms. In this case, feeding 39 watts of power into the antenna results in 6 watts radiated and 33 watts dissipated in heat. This is not a good situation! Of course since the SWR is well over 100:1 your transmitter would 'shut down' when you tried to operate on 80.

If we go back to the 40-meter vertical that has a feed-point impedance of about 35 ohms, we could mount it above ground and use three or four radials as guys. The radials should be approximately 33 or 34 feet in length. You can use an insulator at the end of each radial and continue with the guy wire using nylon cord. Remember that the radiator must be insulated from the mounting pole, however we now have the radials drooping and this increases the feed-point impedance to a point nearer to 50 ohms.

Another possibility for constructing a simple vertical is to use a wire radiator that could be easily pulled up in a tree. Four wire radials at the bottom can be drooped and used to stabilize the vertical radiator. If we use #12 wire the EZNEC simulation has the SWR graph shown in Fig. 3.



Freq	7 MHz	Source #	1
SWR	1.55	Z0	50 ohms
Z	53.05 at -24.13 deg. = 48.42 - j 21.68 ohms		
Refl Coeff	0.2157 at -81.74 deg. = 0.03098 - j 0.2135		
Ret Loss	13.3 dB		

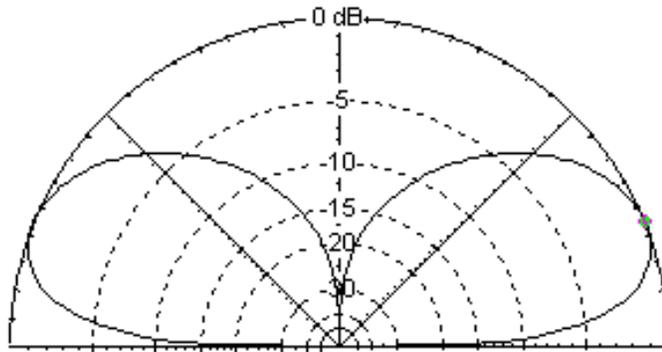
Fig. 3

In this case I used 33.5 feet of #12 for the vertical radiator and 34.8 feet of #12 wire for the four radials. The top of the vertical radiator was at 48.5 feet so the bottom was at 15 feet. The radials drooped from 15 feet down to 4 feet.

The elevation radiation pattern is shown in Fig. 4.

Total Field

EZNEC



7 MHz

Elevation Plot
Azimuth Angle 0.0 deg.
Outer Ring -0.26 dBi

Cursor Elev 22.0 deg.
Gain -0.26 dBi
0.0 dBmax

Slice Max Gain -0.26 dBi @ Elev Angle = 22.0 deg.
Beamwidth 36.0 deg.; -3dB @ 7.9, 43.9 deg.
Sidelobe Gain -0.26 dBi @ Elev Angle = 158.0 deg.
Front/Sidelobe 0.0 dB

Fig. 4