May 2016 Volume 05-2016

Nacogdoches Amateur Radio Club

2016 CLUB OFFICERS

Pres: John Cechin – W5FWR

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 and have fun.

APRIL MINUTES

The April meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on April 6th. **President John W5FWR** opened the meeting at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Eleven members and two guests were present. Each person present introduced himself. Minutes of the previous meeting were approved as published. The Treasurer's report was read.

Army AE5P gave a report on the 13th annual Shuttle Columbia Special Event Station held the weekend of February 6. Operators included **AE5P, Jim WA5GVQ** operating from the AE5P station, **Tom W5TV** operating from his home station, and **Ray W5NRF** operating from his home station. A total of 621 contacts were made, all using SSB on 20 and 40 meters. Over 100 QSL cards have been received so far. It is planned to post all contacts to LOTW and to send QSL cards for all contacts as well.

Army AE5P gave an update on the high altitude balloon program at Timpson ISD. **Roy Platt KF5YSG**, the driving force behind the program, is leaving Timpson. Ms. Cindy Sessions will replace Mr. Platt as the school representative for the program. The next launch

is expected this coming fall.

NPOTA, the National Parks on the Air event, continues with many operations from all over the country. See the ARRL web site for latest details.

Planning for the **NARC Field Day** operation continues. Current plans call for operation from the City/County mobile EOC to be located at the Nacogdoches Airport. Save the weekend of June 25-26 and plan to participate.

Meeting closed at 7:30 p.m.

Program: Bob W5ME gave an excellent program on his experiences working on high altitude data gathering with the National Weather Service.

MY 2 CENTS

FOX WILLY ROGER

MAY 2016:

April has passed us by, leaving us with the sweet smell of the plants starting to bloom, the weather changing, the pollen all over, and the IRS yearly visit, just to say hello. MAY is here, the plants are in their full glory, the weather doesn't seem to make up its mind, cool in the morning and warm to hot in the afternoon. I'm not complaining it's not hot all the time.

K5ME gave a great talk on his chosen work career, if you missed it, you missed a great talk, check with BOB and ask for a summary of his talk.

NPOTA is starting its fifth month of the one year planned run. The club is talking about doing a turn in the Big Thicket.

Field Day is just a few months away and it looks like the club will be doing our part from the airport once more, a great choice, they have bathrooms next door, no tree seeking, what a relief.

Remember the VHF season is in full swing with June, July, and September to cover a few.

THE CRAZY CAT GUY:

Well no one caught what I did; I reprinted the same cat guy column from the month before.

My blackberries are ripening and I go picking the ripe ones in the morning. The other AM, the outside cats decided to supervise the process. LU, the black male, climbed a tree, walked across the roof, walked across the tower brace from the house, and walked down the coax rack, where he found a spot and settled down to watch what I was doing and making sure I was doing it correct. It looks like Daisy May is caring some extra baggage, anybody want a cat?

The inside cats are just the same, just more demanding, each one thinks that she is number one and should be the only one getting attention from me. My cats are still happy to see me when I make a trip

away from the house and return. Tar Baby and Rolly Polly have a game going on, they sit looking at each other and wait for the other to move so the chase can start and its done time and time again, sounds like going to work?

DID YOU HEAR THE ONE:

About this doctor that worked in a local hospital in the ER. About once a week the doctor would stop at a bar that his friend owned. In the years the two had a contest formed, the doctor would guess the ingredients of the drink the bartender would dream up. The doctor had a perfect record. One night the doctor went to the bar as usual and the bartender "as usual" had a drink waiting. The doctor took a sip and sat there thinking of what the ingredients were in the drink, the doctor drank and drank until the glass was empty, looking very puzzled and said "I'm stumped". The bartender looked at him with a big grin. He had finely stumped his friend" when he said,

WAIT FOR IT …..

"It's a Hickory Daiquiri Doc."

GREAT INVENTIONS:

The automatic transmission, these days all you have to worry about are two pedals, in my day it was three plus a button to make the headlights shiny or dull. Don't forget the button to start the car, how easy you guys have got it, all you have to do is keep it between the ditches. And colors, in my day you could get any color you wanted as long as it was black. Mind-boggling.

DID YOU EVER THINK?

Math problem for you extras:

1 + 4 = 5

2 + 5 = 12

3 + 6 = 21

8 + 11 = _____

And the answer is_____

Check with Dr, Tom to see if you're correct.

(Maria you're a math major, join in)

Why is that you can fill a hamper with dirty cloths but when you wash and dry them, they don't all fit in the same hamper, go figure.

In the beginning when metric tools started appearing on the market, the first were sockets, here you had a metric tool but it came in standard drives, ¼, 3/8, and ½, what happened to the metric drive system? Don't forget the screwdrivers?

HMMM

I will now leave more spaces for the others to use, don't be shy, and fill up the pages.

LIVE WELL, LAUGH OFTEN, LOVE MUCH!!!

KEEP YOUR POWDER DRY AND YOUR HEAD BELOW THE HORIZON

Happy Trails
73

John Cechin W5FWR
Carrots4ever2@gmail.com

NOTES FROM OUR EC

The March winds have certainly brought to us the April showers. We will probably close out the month with some more rain. We have accumulated just over 4 inches of rain here at the office and we still aren't done.

All the rain has kept flood warnings on the Angelina River and Attoyac Bayou. We've seen the pictures of the flooding in Houston and all the hail damage in Dallas. A buddy of mine commented he always wanted a skylight.

All that weather means outages of various types and durations. The flooding in Houston and here will take more than a few days to recede. Both the Angelina and Attoyac have crested but it still takes time.

What is your plan for power if there is an electrical outage? Do you have a big generator for the house, a small generator to keep a few things running or are you just depending on your batteries for your radios?

I won't go into the routine maintenance for your generator; just a few of you have a generator.

So let's take a moment to talk batteries, mainly nickel cadmium (nicad) and lithium ion (li-ion), the type used in most of the newer hand held radios.

Do you know how old your batteries are? The one in my VX-5 is original; as far as batteries go it's no spring chicken. I got caught with a very low battery one night trying to get the net summary, yep embarrassing. How often do you let the battery run down until the squelch opens, a sure sign the battery is low and it starts screaming to be fed? How often do you charge your battery or do you leave it continuously on the charger?

Nicad batteries had a tendency to develop a "charge memory." If you didn't run it all the way down (say 50% of charge) before charging, the battery would see that 50% as fully depleted and not give you the fully charged life. Not good. It takes some battery conditioning to get it back and not many of us have a battery conditioner to rework a battery to get it back. The new battery chemistries like li-ion don't exhibit that problem and most of the newer HTs are using li-ion batteries. One more warning, don't leave the radio continuously on the charger. Most chargers are not smart chargers usually they are wall warts or wall warts with cups to put the radio in. They don't see the status other than it's fully charged. So as soon as you see it's fully charged remove it from the charger.

Take a few minutes, get that HT out, knock the dust off of it, grab the manual, review it, run that battery down and give it a fresh charge.

OH, can you hit all of our repeaters, .84, .32 and the 440 from your location? Give it a try and let us know.

73 de John Chapman KC5MIB
jlchapman2@juno.com

VE TESTING

Our next VE testing is scheduled for Wednesday, May 18 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 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.

NEXT MEETING

The next meeting will be **Wednesday May 4** at **7:00 p.m.** in the Parish Hall of Christ Episcopal Church. Come join us.

VE TEST RESULTS

Congratulations to **Bill Rascher KG5LFR** for upgrading to Extra and to **Jim Turner AG5EH** for passing his Tech, General and Extra all in one sitting.

FIELD DAY

Plans for Field Day are taking shape, but we need you to make it all work. Here's the plan at this point:

We will operate from the Nacogdoches Airport using the City/County Mobile Command Post EOC Trailer located behind the Pilots' Lounge. We will operate Class 2F using an Icom 756 Pro-II furnished by WA5GVQ and a solar powered FT-817 furnished by AE5P. Antennas will include a Cushcraft A3S tri-band yagi to be mounted on the 'Green Monster' and a Butternut HB-2V vertical for 40/80 meters. In addition, we will have a club 'Orange Box' with VHF/UHF FM radio and portable antenna.

Ralph WD5RAH will bring his 5th wheel RV out and operate a GOTA station from it with separate antennas.

Please check out the full rules for Field Day at http://www.arrl.org/field-day . There are many opportunities for bonus points, and we will be accepting volunteers for bonus categories and making assignments for

bonus categories that have no volunteers. It is strongly recommended you attend the May meeting so you can avoid being assigned a category that may not be your first choice!

Bonus points are available for:
Media Publicity
Public Location **(done)**
Public Information Table
Message Origination to SM
Satellite QSO
Alternate Power **(AE5P)**
W1AW bulletin
Educational Activity
Site visitation by elected governmental official.
Site visitation by representative of an agency.
GOTA bonus **(WD5RAH)**
GOTA coach
Web submission of results **(AE5P)**
Youth participation
Social Media

See something you would like to do? Volunteer at the meeting or via e-mail prior to the meeting.

The club will provide drinks (soda, water, coffee) for the event, pizza for supper Saturday evening for pre-registered participants, and breakfast Sunday morning prepared by WD5RAH.

Logging will be via laptop computers running N3FJP software.

Breakfast Saturday morning at IHOP or Denny's will be followed by setup at the airport. We will definitely need lots of help in getting antennas and other equipment setup Saturday morning, and taken down again Sunday. Please plan to assist.

Field Day can be a lot of fun, but it is also a lot of work. The only way it can happen is if everyone pitches in and helps. It is probably one of the best opportunities available to learn about setting up a ham station and operating it under emergency conditions. Many hams have gotten their first real radio experience during Field Day.

You do not have to be an expert to participate; you do not need to be a member of NARC to participate; you don't even need to be ham.

You only need to be willing to help.

Please help make this our best Field Day ever.

UPCOMING EVENTS OF NOTE

Mark your calendars for the following events coming up in the next few months. Full information on these events and much more can be found at http://www.hornucopia.com/contestcal/contestcal.html

CQWW WPX Contest – CW
May 28-29
http://www.cqwpx.com/rules.htm

NECHES RIVER RENDEZVOUS
June 4
kb8qwn@gmail.com

HAMCOM 2016
June 10-11
http://www.hamcom.org

ARRL June VHF Contest
June 11-12
http://www.arrl.org/june-vhf

ARRL Field Day
June 25-26
http://www.arrl.org/field-day

IARU HF World Championship
July 9 – 10
http://www.arrl.org/iaru-hf-championship

CQ VHF Contest
July 17-18
http://www.cqww-vhf.com/

North American QSO Party CW
August 6 – 7
http://www.ncjweb.com/NAQP-Rules.pdf

North American QSO Party SSB
August 20 – 21
http://www.ncjweb.com/NAQP-Rules.pdf

ARRL September VHF Contest
September 10 – 11
http://www.arrl.org/september-vhf

Texas QSO Party
September 24 – 25
http://www.txqp.net/

CQ WW DX Contest SSB
October 29 – 30
http://www.cqww.com/rules.htm

ARRL Sweepstakes CW
November 5 – 7
http://www.cqww.com/rules.htm

ARRL Sweepstakes SSB
November 19 -21
http://www.cqww.com/rules.htm

CQ WW DX Contest CW
November 26 – 27
http://www.cqww.com/rules.htm

ARRL 160 Meter Contest CW
December 2 – 3
http://www.arrl.org/160-meter

ARRL 10 Meter Contest CW/SSB
November 10 – 11
http://www.arrl.org/10-meter

An HF Log-Periodic Antenna

by

Thomas Atchison, W5TV

This construction of a log periodic antenna is from the ARRL Antenna Book, 16th Edition, chapter 10. The antenna covers the frequency range from 18.06 MHz to 29.7 MHz. This will include the 17, 15, 12, and 10 meter amateur bands. The design is for a short array; therefore the antenna will fit on a boom of length 10 feet.

The antenna consists of a total of 5 elements with lengths as follows:

L_1 = 27.243 feet
L_2 = 21.794 feet
L_3 = 17.436 feet
L_4 = 13.948 feet
L_5 = 11.159 feet.

The element spacing is as follows:

D_{12} = 3.269 feet
D_{23} = 2.616 feet
D_{34} = 2.092 feet
D_{45} = 1.674 feet.

Here, D_{12} denotes the distance from L_1 to L_2, D_{23} the distance from L_2 to L_3, etc.

The terminating stub is a 6 inch shorted jumper.

The antenna is fed with a 52 ohm feeder through a 4:1 balun.

A diagram of the antenna using EZNEC is shown in Fig. 1 below.

EZNEC

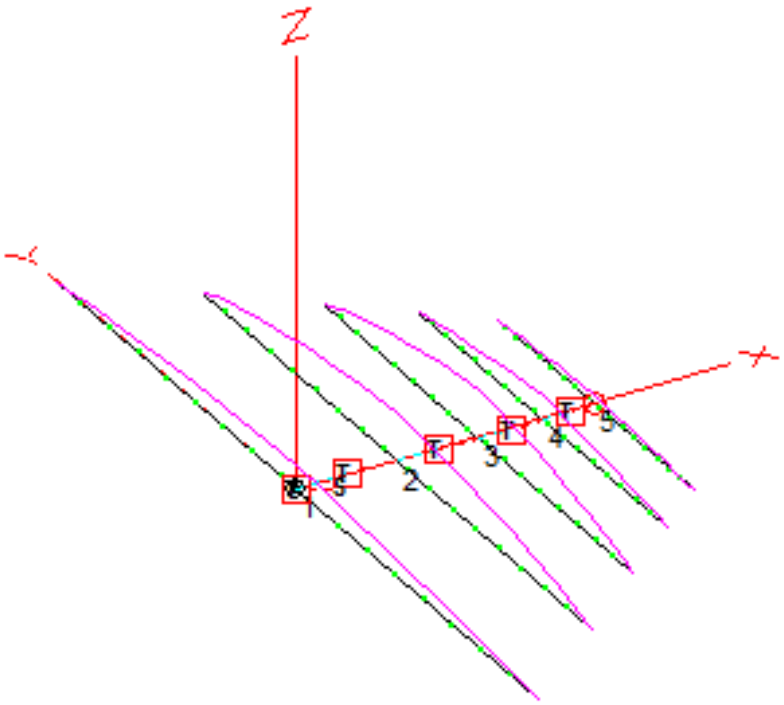
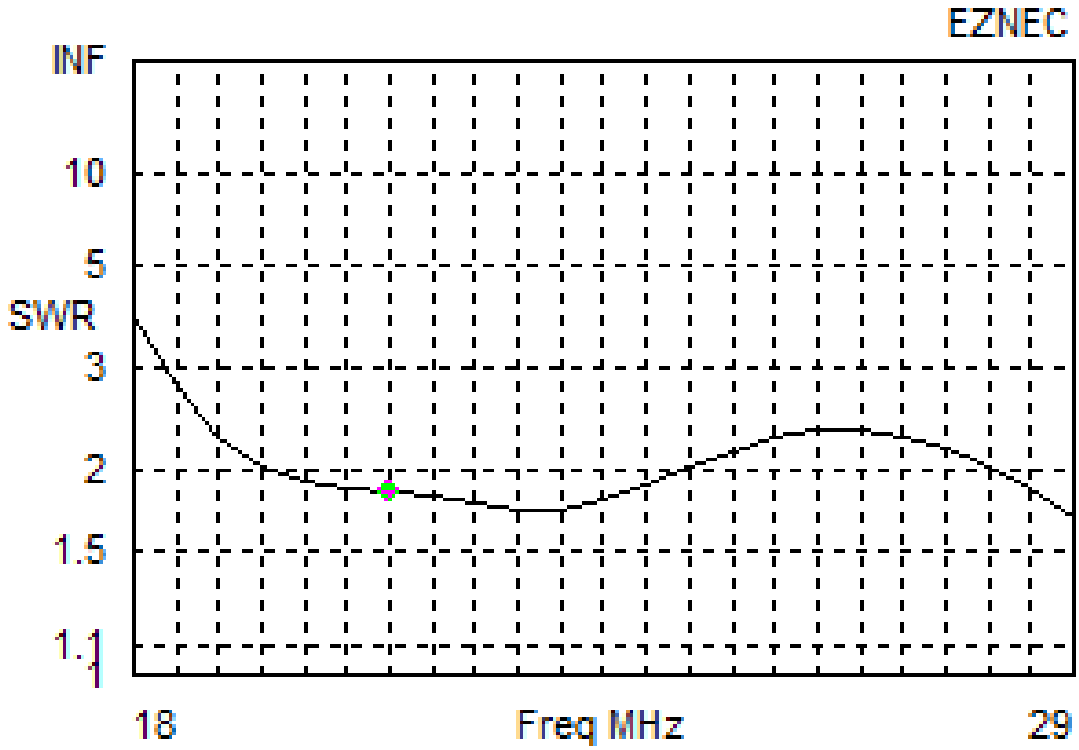


Fig. 1

The five dipoles are labeled 1 through 5 and the pink curves represent current distribution on the elements. Remember, these elements are all driven using the phase shift technique described in the previous article.

An SWR plot from 18 to 29 MHz is shown in Fig. 2 with a source Z0=200 ohms. This permits the use of a 4:1 balun and 52 ohm coax feed line.

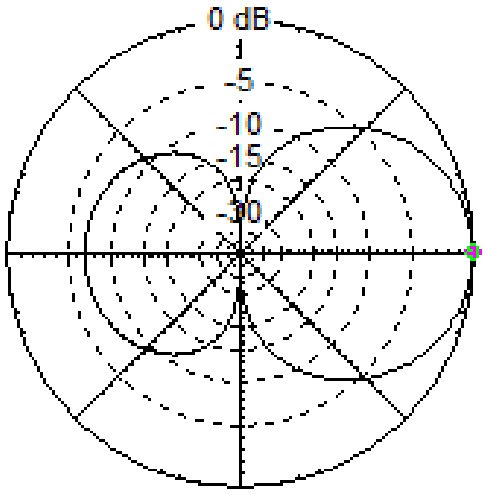


Freq	21 MHz	Source #	1
SWR	**1.86**	Z0	200 ohms
Z	136.6 at -26.24 deg.		
	= 122.5 - j 60.39 ohms		
Refl Coeff	0.2995 at -131.47 deg.		
	= -0.1983 - j 0.2244		
Ret Loss	10.5 dB		

Fig. 2

An azimuth plot at 21 Mhz is shown in Fig. 3 below.

Total Field EZNEC



21 MHz

Azimuth Plot		Cursor Az	0.0 deg.
Elevation Angle	0.0 deg.	Gain	4.69 dBi
Outer Ring	4.69 dBi		0.0 dBmax

Slice Max Gain	4.69 dBi @ Az Angle = 0.0 deg.
Front/Back	6.84 dB
Beamwidth	72.6 deg.; -3dB @ 323.7, 36.3 deg.
Sidelobe Gain	-2.15 dBi @ Az Angle = 180.0 deg.
Front/Sidelobe	6.84 dB

Fig. 3

Notice that the gain is 4.69 dBi which isn't exceptional, however, the front to back ratio is 6.84 dB and that is respectable.

Since this is to be a rotatable array with self-supporting elements aluminum tubing should be used for all elements. It is suggested that element number 5 should be ½ inch OD, element 4 should be 5/8 inch, element 3 should be ¾ inch, element 2 should be 1 inch, and element 1 should be 1 ¼ inch OD.