July 2022 Volume 07-2022

Nacogdoches Amateur Radio Club

2022 CLUB OFFICERS

Pres: Bill Rascher – KT5TE

Vice Pres: Aaron Baker – KI5FIQ

Sec/Treas: Army Curtis - AE5P

Visit our web site at

https://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 having fun.

JUNE MINUTES

The June meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on June 1st. **President Bill KT5TE** opened the meeting at 7:00 p.m. in the Nacogdoches City/County Emergency Operations Center off FM 3314. Self-introductions were made by everyone present. Minutes were approved as published. Treasurer's report read.

WPX Contest was worked by several members. Short discussion held.

The May OTA Challenge was won by **Jim N5JGE**, who was presented with the ARRL book "Understanding your Antenna Analyzer. Congratulations Jim.

ARRL Field Day shirts were handed out to everyone present who gave their shirt size to the Secretary.

June OTA Challenge was to make as many QSO points as possible in Field Day. Results will be made known at the meeting.

July OTA challenge will be to make the highest score in the NAQP RTTY contest, July 16-17. If you can operate FT8, you can operate RTTY. Give it a try.

Field Day, scheduled for June 25-26 is fast

approaching. At a previous meeting, members volunteered as follows:

Overall FD Chairman: KD5FEE

Bonus Points: KI5MHB

Antennas: KT5TE

Radios and Computers: KI5FIQ

Public Relations and Publicity: KC5MIB

Digital: AA5HH

Food Chairman: W5NXK

Meeting closed at 7:38 p.m.

Program: FD Chairman Robert KD5FEE.

FD will be entered as Class 3F, with separate radios for SSB, CW and digital.
Breakfast Saturday 8:00 at IHOP. Begin setting up at 9:00. Lunch on your own. Club will provide pizza for dinner Saturday. W5NXK will cook breakfast Sunday.
Expect tear down Sunday morning about 9:00.
Have fun and stay safe.

FROM THE PRESIDENT

The busy month of June is behind us and I really enjoyed Field Day. A big thanks to all who helped make it so successful. As usual July will probably be more of an indoor month with one exception being the CQ VHF contest. At least we will be in the A/C of the car while roving for the contest. At our July meeting we'll discuss the roving contest in detail. This club roving contest is short with plenty of good eating, so come join us.

If you have any antenna ideas for next year's field day be sure to let me know early. It would be a good thing to have antennas up year round at the EOC for presentations at club meetings, contests and both winter & summer field days.

Hope to see you at our July 6th meeting.

73, Bill KT5TE

bill@watershipfarm.com

FROM THE VP CHAIR

Field day has come and gone, and I must say after only participating in a handful, this year's was definitely the most fun for me. The atmosphere in the room and having the three stations with their own mode seem to get more on the air as more people had their choice of what mode that they wanted to operate, and no one didn't really have to wait around much to get on the air and play radio. I wanted to do it last year, but the resources just weren't there so thank you to everyone who made my experiment possible this year. Looking back at the last field day events we had together as a club (2019 and 2021) we made more contacts this year than we did those two previous years. I'll have a breakdown of our numbers in a different article, but in 2019, we had a grand total of 389 contacts, while last year we only made 145. This

year we made a grand total of 439 contacts. I very much think this setup is what we will do in the future. As I said on the net Monday night, I very much enjoyed everyone peeking at the map I had on the projector to see what sections we still needed or even watch their QSO pop up as they logged a new section. It very much seemed like it was becoming a mini competition within the club, especially between those digital and CW guys! Once again, thanks to all who helped organize, set up, and participate in this year's event. Perhaps we can get a group for Winter Field Day at the end of January; practice makes perfect right?

P.S. Huge shoutout by the way to Darrell, KI5PYQ for doing a great job as the unofficial official Social Media Manager. He's done a great job keeping up with the Facebook page and posing about our upcoming events and he even has a few pictures up from Field Day.

73 de Aaron Baker KI5FIQ

baker.barisax@gmail.com

NOTES FROM OUR EC

It sounds like Field Day 2022 went off well. I really liked hearing the internal contest, digital and Morse Code (the original digital). It must have been an interesting interplay. Thanks to everyone who participated. Aaron, KI5FIQ, will have the final rundown on this year's events somewhere in the newsletter.

It's the end of June. Hurricane season is in "full" swing. At least we are 30 days into it. As of this writing we have 3 disturbances, 1 in the Gulf of Mexico down Brownsville way, 1 in the Caribbean along the coast of South America and 1 in the western tropical Atlantic. I guess the coast is clear for now, touch wood.

What are your plans should something develop this season affecting Deep East Texas? Evac, head to a local shelter, shelter in place? Have you prepared a bug out kit or as my military friends say an AWOL bag? If you do evac out of the area, do you have a clear destination? Are your family or friends prepared to receive you if you go that way? Are you lucky enough to have your shelter on wheels like an RV or travel trailer?

Tech Stuff: have you practiced reprogramming your radios for the local repeaters? Do you know what the repeaters are where you may be going. As I'm not conversant with DMR (yet) are you prepared with that equipment? Food for thought.

I'll close again with the weather. It's been hot and dry, the 0.2" we had at

the mill laid down the dust and left a few puddles but was it. The heat took care of those damp spots. We are looking at some improving chances of rain and lower temps through Saturday. If you go out, stay hydrated, manage your time outside. and work in cooler parts of the day.

As always thanks to everyone who check into our nets and the Net Controllers who try to ride herd on them.

See ya on the nets.

73 de John Chapman KC5MIB
kc5mib@arrl.net

VE TESTING

We did not have any applicants for the June VE test session.

Many thanks to VE's **Rusty KG5GEN, Ralph N6HR, Mike AA5HH, Mike W5NXK Robert KD5FEE** and **Army AE5P**.

Remember that we give VE tests the third Wednesday of **EVERY** month. For the latest information always check the club website at:

https://w5nac.com/ve-testing/

73 de AE5P.

email: ae5p@arrl.net

TWO METER CLUB NETS

Please join us each week for the two meter nets sponsored by NARC. All stations are welcome to check into the nets.

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 NARC meeting will be Wednesday July 6th at the Nacogdoches City/County EOC. Meeting begins at 7:00; doors open at 6:30. Come early for socializing before the meeting.

HAMLIST

Are you on Hamlist? Check it and join at:
https://w5nac.com/about/email-reflectors/

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 https://www.contestcalendar.com//contestcal.html

North American QSO Party, RTTY	1800Z, Jul 16 to 0559Z, Jul 17
CQ Worldwide VHF Contest	1800Z, Jul 16 to 2100Z, Jul 17
Tennessee State Parks on the Air	1400Z-2200Z, Jul 30 and 1400Z-2200Z, Jul 31
North American QSO Party, CW	1800Z, Aug 6 to 0559Z, Aug 7
Kentucky State Parks on the Air	1400Z-2200Z, Aug 13
Maryland-DC QSO Party	1400Z, Aug 13 to 0400Z, Aug 14
North American QSO Party, SSB	1800Z, Aug 20 to 0559Z, Aug 21
ARRL Rookie Roundup, RTTY	1800Z-2359Z, Aug 21
Hawaii QSO Party	0400Z, Aug 27 to 0400Z, Aug 29
W/VE Islands QSO Party	1200Z, Aug 27 to 0300Z, Aug 28
Kansas QSO Party	1400Z, Aug 27 to 0200Z, Aug 28 and 1400Z-2000Z, Aug 28
Ohio QSO Party	1600Z, Aug 27 to 0400Z, Aug 28
Colorado QSO Party	1300Z, Sep 3 to 0400Z, Sep 4
Tennessee QSO Party	1800Z, Sep 4 to 0300Z, Sep 5
Alabama QSO Party	1500Z, Sep 10 to 0300Z, Sep 11
ARRL September VHF Contest	1800Z, Sep 10 to 0300Z, Sep 12
Texas QSO Party	1400Z, Sep 17 to 0200Z, Sep 18 and 1400Z-2000Z, Sep 18
Iowa QSO Party	1400Z, Sep 17 to 0200Z, Sep 18
New Hampshire QSO Party	1600Z, Sep 17 to 0400Z, Sep 18 and 1600Z-2200Z, Sep 18
Wisconsin Parks on the Air	1600Z-2300Z, Sep 17
New Jersey QSO Party	1600Z, Sep 17 to 0359Z, Sep 18
CQ Worldwide DX Contest, RTTY	0000Z, Sep 24 to 2400Z, Sep 25
Maine QSO Party	1200Z, Sep 24 to 1200Z, Sep 25

Check out the many contests listed on the Contest Calendar link shown here. There are many State QSO parties and 'Parks-On-The-Air' events that may be just right for you. Check 'em out.

6 Meter Dipole

by

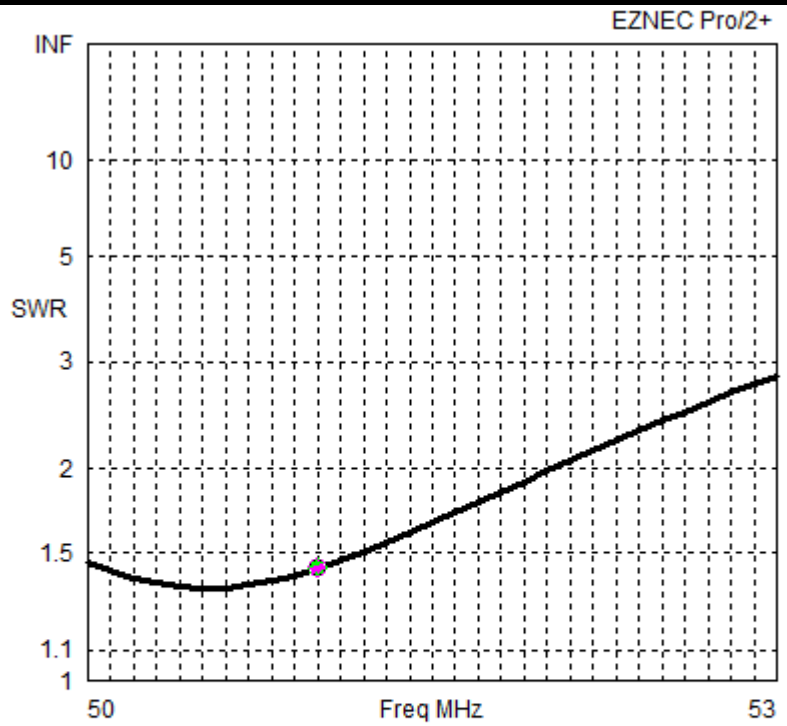
Thomas Atchison W5TV

Since we are entering the time when the 6 meter band is more active I thought it would be good to consider putting up a 6 meter dipole antenna to take advantage of the 'Magic Band'. In particular, last week I worked a station in Georgia who was S7 to S8 on SSB at 50.125 MHz. He was running 15 watts to an attic dipole.

The 6 meter band occupies the frequencies from 50 to 54 MHz. This band offers nearly every kind of propagation known. As we progress into sunspot cycle 25, which began in December 2019, we will find that there will be times when F-layer skip will provide worldwide contacts like we have on the high frequencies (HF). Most of the time, however, we will experience sporadic-E propagation, which peaks in June and December. The usual 'Season' for sporadic-E runs from May to July, with another shorter, peak in December and early January, however, sporadic-E propagation can appear at any time.

Most of our newer HF rigs have 6 meter capability built in. The normal modes for these HF rigs includes CW, SSB, and FM, therefore, you can work DX stations at the lower end of the 6 meter band and you can work FM stations at the middle of the band. In particular, you can determine whether the band is open by looking for beacons in the region between 50.060 MHz and 50.080 MHz. The CW-only subband runs from 50.0 MHz to 50.1 MHz. The recommended calling frequency for CW is 50.090 MHz. The SSB the traditional United States calling frequency is 50.125 and the DX calling frequency is 50.110 MHz. As the band opens, SSB signals will spread up the band toward 51.0 MHz , usually every 5 to 10 KHz. The usual FT8 frequency for 6 meters is 50.313 and the usual meteor scatter frequency is 50.130 MHz. The primary FM simplex frequency is 52.525 MHz with repeater outputs in the range from 52.5 MHz to 52.98 MHz.

With this in mind let's consider designing a half wave wire dipole for 6 meters that can be fed with 50 ohm coax and resonant between 50 MHz and 53 MHz with a minimum SWR in the weak signal area i.e. 50.0 MHz to 51.0 MHz. I will use EZNEC Pro 2+ to simulate the antenna. I used #12 copper wire cut to 9.5 feet in length and center fed with 50 ohm coax. The antenna was placed 10 feet above real ground and mounted horizontally. The resulting SWR plot is from 50.0 MHz to 53.0 MHz in shown in Fig. 1.



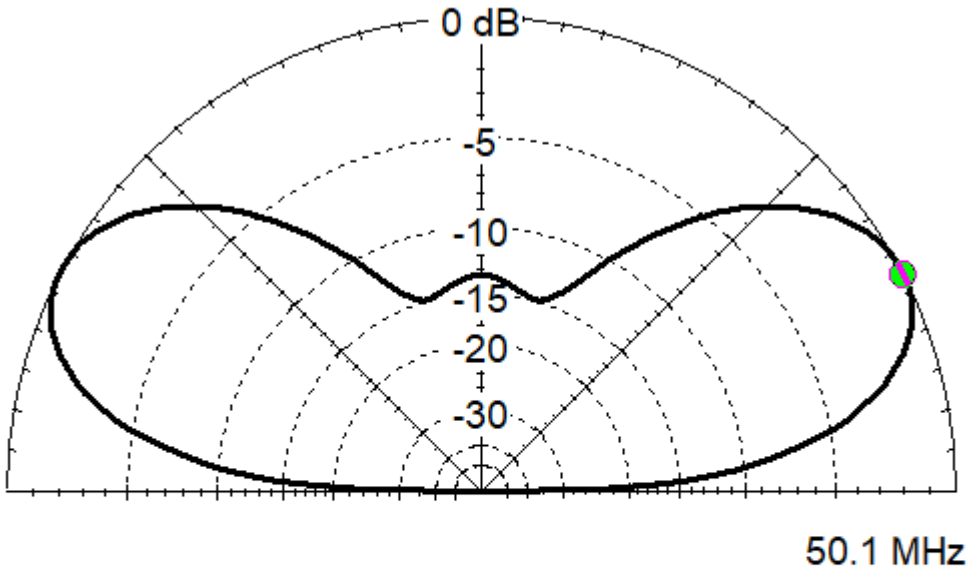
Freq	51 MHz	Source #	1
SWR	**1.43**	Z0	50 ohms
Z	68.69 at 8.94 deg.		
	= 67.85 + j 10.67 ohms		
Refl Coeff	0.1758 at 25.7 deg.		
	= 0.1584 + j 0.07621		
Ret Loss	15.1 dB		

Fig. 1

Note that the green dot on the graph is at 51 MHz so the weak signal region is always less than 1.5 to 1.

The elevation radiation pattern is shown in Fig. 2.

Total Field EZNEC Pro/2+



50.1 MHz

Elevation Plot		Cursor Elev	27.0 deg.
Azimuth Angle	0.0 deg.	Gain	7.67 dBi
Outer Ring	7.67 dBi		0.0 dBmax

Slice Max Gain	7.67 dBi @ Elev Angle = 27.0 deg.
Beamwidth	32.4 deg.; -3dB @ 13.1, 45.5 deg.
Sidelobe Gain	7.67 dBi @ Elev Angle = 152.0 deg.
Front/Sidelobe	0.0 dB

Fig. 2

The azimuthal radiation pattern is shown in Fig. 3.

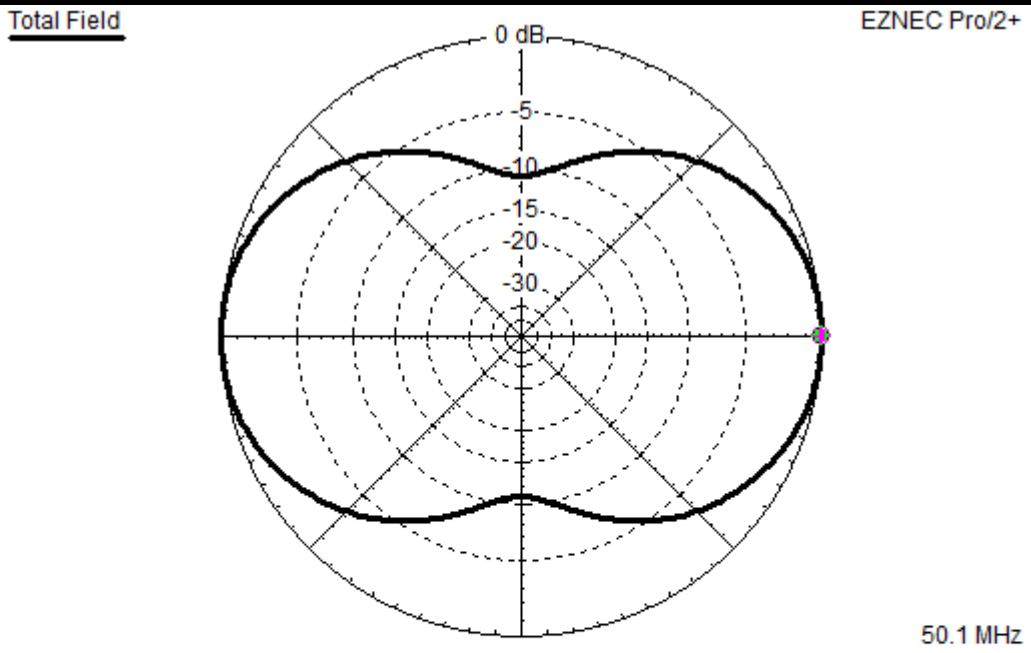


Fig. 3

The antenna is running along the y-axis.

If you are interested in operating 6 meters, this is a simple antenna to construct and it should provide you some good contacts on your mode of choice. Give it a try.

W5NAC 2022 Field Day Submission Summary

Entry received at: 2022-06-28 02:27:43 UTC

Submitted by: Aaron Baker, KI5FIQ E-mail: ki5fiq.adb@gmail.com
Call Used: W5NAC **GOTA Station Call:** (NONE) **ARRL/RAC Section**: NTX
Class: 3F
Participants: 22 **Club/Group Name:** Nacogdoches Amateur Radio Club
Power Source(s): Commercial, Battery
Power Multiplier: 2X
Preliminary Total Score: 2,404

Bonus Points:

Bonus	Points	Status
Public location	100	
Public information table	100	Documented by W5NAC_FD_InfoTable.jpg
Formal message to ARRL SM/SEC	100	Documented by FD SM MSG.txt
W1AW Field Day message	100	Documented by W1AW FD Bulletin.txt
Formal messages handled (10 x 10, max of 100)	100	Documented by FD HNDLE MSG.txt
Natural power QSOs completed	100	Documented by AP.png
Youth participation (1 x 20, max of 100)	20	
Social media	100	
Entry submitted via web	50	
Total bonus points	**770**	

Score Summary - Cabrillo log/dupe sheet file: W5NAC.dup

	CW	Digital	Phone	Total
Total QSOs	222	157	59	**434**
Total Points	444	314	59	**817**

Claimed Score = (QSO points x power mult) = 1,634

Band/Mode QSO Breakdown:

	CW		**Phone**		**Digital**	
Band	QSOs	Power	QSOs	Power	QSOs	Power
80m	12	100	8	100	12	50
40m	43		27		46	
20m	143		20		99	
15m	24		4		-	
Total	**222**		**59**		**157**	

Field Day Logbook by the Numbers

As most of you know, I'm very much a data guy, and as I was preparing the submission to ARRL I found a neat feature in the N3FJP log that breaks down everything in it and I loved every single thing about it.

Let's start at the beginning. Our first QSO was logged at 18:05 UTC. It was a CW contact made by K5ME with AA8CA, a 1D station from Ohio. The first Digital QSO would come just seven minutes later by AA5HH with KJ7ZHG, another 1D station in Arizona. Our first phone contact was then made at 18:28 by K5DBW with W3AO, a club with 11 stations running from the Maryland-DC section (AE5P would work one of their CW ops just 10 minutes later!)

Our total Operating time (when you take out the breaks longer than 30 minutes) was 17 hours, 22 minutes, and 47 seconds. We averaged 25.2 QSOs per hour. Before calling it quits, our final QSO came in at 6/26 15:08 UTC.

The three stations we had set up operated on four different bands – 15, 20, 40, and 80 (digital only operated on the latter three). Of our 438 QSOs, most of our contacts were made on 20 with 60% of our contacts being made on this band, followed by 40 with 26% of the share.

In terms of what sections we contacted, we made contact with almost every ARRL section in the US except for: Delaware, Virgin Islands, San Joaquin Valley, and Alaska. As far as Canada goes, we weren't as lucky as we only made contacts in 4 of the 13 sections in Canada. The section we made the most contacts with was the Ohio section with 23 contacts followed by Georgia with 19. We did get some DX as well as we made contacts with Chile, the Cayman Islands, Croatia, and Ecuador.

While band conditions weren't the greatest over the weekend, we did get out pretty far, California was our most contacted state with 36 QSOs, followed by Ohio with 23, and then Pennsylvania with 21.

The stats page gives the QSOs per operator, but I won't say who made what as that will spoil it for the meeting and book raffle. However, looking through the logs, it was interesting to see that all the ops (except for me who did hop around between digital and phone) all stayed on one mode.

And now for the fun part. As I said earlier in my article, in 2019 we had a total number of 389 contacts and in 2021 we had a total number of 145. This year we had a total of 438 which was a 12.5% increase from 2019 and a 202% increase from 2021. While we didn't get all of our usual bonus points, we still are looking at getting a higher number of points this year (2,404) compared to 2019 (2,390) which is only a 0.6% increase from then. Compared to last year (1,068) we saw a 125% increase.

For a contest that is not a contest, I know some were worried about the move from 2F to 3F. However, looking back at the historical data (granted I'm only looking at 2019 and 2021), in the 3F category, we have a good chance that we will be on the top once again.

Thanks again to all who helped make this event so successful. I hoped everyone who came out enjoyed it as much as I did. I'll leave you with our filled in map that everyone loved to see, 73.