

# Nacogdoches Amateur Radio Club

## 2023 CLUB OFFICERS

Pres: Aaron Baker - KI5FIQ

Vice Pres: Mark Phillips - KI5POH

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 business meeting of the Nacogdoches Amateur Radio Club (NARC) was held May 31, on the club's 146.84 repeater. The three club officers checked in, as well as five additional club members.

**Army AE5P** announced the ARRL June VHF contest is scheduled for June 10-12 and asked who planned to rove in the event. Aaron KI5FIQ and Army both responded in the positive. This likely will not be enough to carry the event forward.

**Field Day:** We were surprised to learn that Bill

KT5TE has announced that he will not be available for Field Day. All antennas and antenna hardware will be transferred to Darrell KI5PYQ (Thank you Darrell). Aaron KI5PYQ will take on duties of overall Field Day Chairman (Thank you Aaron).

Net closed at 8:17 p.m.

The regular June meeting of the Nacogdoches Amateur Radio Club was held as scheduled on June 7<sup>th</sup> at the City/County EOC with 19 members and 2 guests. **President Aaron KI5FIQ** opened the meeting at 7:00 p.m. Introductions were made by all present. Minutes of the previous meetings were approved as published. Treasurer's report was read.

The new NARC club shirts were passed out to those members present.

**Program:** Discussion on upcoming Field Day. Darrell KI5PYQ and Mark KI5POH volunteered to cook dinner to all present Saturday evening. RM K5AGE volunteered to cook breakfast for all present at breakfast time Sunday morning. (Thank you gentlemen, very much appreciated).

We plan to meet for breakfast Saturday morning, 8:00 at IHOP. Setup at the EOC will begin at 9:00. Break for lunch at 12:00 noon. Field Day officially begins at 1:00 Saturday afternoon. We will have 3 stations on the air with 1 digital (FT4/8), 1 phone (SSB) and 1 CW. Each station will be using a Flex radio.

Meeting closed at 2002.

## FROM THE PRESIDENT

Another successful Field Day is in the books once again. Thanks to all who helped getting things together, rather if it was radios, antennas, drinks, and/or food. It wouldn't have happened without y'all's help.

We came just short of 500 contacts, apparently the log changed some record numbers when the QSOs were edited, so while N3FJP showed 502, it was really 499.

Regardless, still a good run compared to previous years (It's at least the most amount of QSOs since I've become a member). Going the Flex route was definitely a good choice, while there were some pains every now and then with them, everyone seemed to enjoy using them and the fact we had all 3 stations on the same band operating all different modes

without (hardly) any interference.

Check out the article later in this newsletter to see how we did.

We'll debrief at the meeting next week and I'll show a break down comparing it from last year.

I hear it's also our ice cream social so bring your appetite.

Enjoy your month and stay cool in this heat.

73, Aaron KI5FIQ

Baker.barisax@gmail.com

## FROM THE VP CHAIR

Field Day was a success all the way around. We had good crews setting up radios, antennas and other equipment. Thank you all that helped set up and work each of the stations!

Thanks to Darrell (KI5PYQ) for grilling burgers Saturday night and RM (K5AGE) for cooking breakfast Sunday morning.

We will have another Fox Hunt in July, coordinated by Robert (KD5FEE). Robert will let you know the date soon. I hope to see you all at the July meeting.

Texas City Tideland Hamfest is on July 8 at Charles T. Doyle Convention Center, 2010 5<sup>th</sup> Avenue North, Texas City, TX 77590. Doors open at 8am and close at 2pm.

Stay cool in July!

Have a great June!

73, Mark KI5POH

[KI5POH21@gmail.com](mailto:KI5POH21@gmail.com)

## NOTES FROM OUR EC

A small handful of us are still at the EOC winding up Field Day 2023. We ran as 3F: 3 transmitters, operating in an Emergency Operations Center. All three radios were Flex radios. I will say those are some pretty cool radios. We had dedicated voice, cw and FT8 digital radios.

I'm sure many of you have looked over the results pages in QST where you will see some big multi stations (29A wow). We will have to ask how we did on 40m with all three radios running there.

The lead story in the June 1 ARRL News Letter announced ARRL had been elected to participate in SAFECOM, a part of the Cybersecurity, Infrastructure and Security Agency (CISA). Those of us who have worked the small computer environment have probably seen CISA warnings come down referencing the hottest computer threat.

If you haven't already read it, please head over to the ARRL website, search on SAFECOM and read the article (the link is too long to post). You may also wish to look at the CISA link at the end of this article. I looked it over. There may be some interesting things come from being able to sit at the big table with the adults.

In case you hadn't noticed, darn it's hot out. 100's whether real or perceived is just plain hot. I looked at a thermometer I keep in the Nitro and it read 116. Well we could dry out the jerky for the camping trip but not hot enough for dashboard cookies. So what to do, find some shade, work in the early morning hours if you can, hydrate, hydrate, hydrate and please save the adult beverages until you are done.

So let's close this up; my month of Mondays is almost done.

Thanks to all the hams that check into the nets and the

Net Control Operators for managing them.

73 all, see you on the Nets.

John KC5MIB

<https://www.cisa.gov/safe-com>

## VE TESTING

We did not have any applicants for the June VE test session. We do want to remind everyone that we offer in-person testing for all classes of Amateur Radio licenses on the third Wednesday of every month.

Many thanks to VE's, Rusty KD5GEN, Mike AA5HH, Mike W5NXX, Ralph N6RH, Robert KD5FEE, and Army AE5P.

For the latest information always check the club website at:

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

73 de AE5P.

email: [ae5p@arrl.net](mailto: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.

## HAMLIST

Are you on Hamlist? Check it out and join at:

<https://w5nac.com/about/email-reflectors/>

## NEXT MEETING

The monthly business meeting is held on the Club's 146.84 repeater, 8:00 p.m. on the Wednesday before our normal scheduled meeting which is always the first Wednesday of the month.

The next regular NARC meeting will be Wednesday July 5th at the Nacogdoches City/County EOC. Meeting begins at 7:00; doors open at 6:30. Come early for socializing before the meeting. After a very short business meeting, we will have a presentation on our results from Field Day.

This is also our annual Ice Cream Social, so bring your favorite flavor of ice cream or just your appetite and we'll do our best to fill you up with goodies.

Hope to see ya'll there.

## FOX HUNT

Our next foxhunt will be in July with the fox managed by **Robert KD5FEE**. Date to be announced. All club members are encouraged to participate.

## CQ VHF CONTEST

Scheduled for July 15-16, it is unique in that it only uses 6 and 2 meters. This makes for very quick contacts when roving, and we would love to have you join us for a fun weekend or even just for a day.

Want to play? Contact AE5P. Need equipment? Let us know.

## 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>

### IARU HF World Championship

July 8 - 9, 2023

<http://www.arrl.org/iaru-hf-world-championship>

### NAQP RTTY

July 15 -16, 2023

<https://www.ncjweb.com/NAQP-Rules.pdf>

### CQ World Wide VHF

July 15-16, 2023

6 and 2 Meters only

### NAQP CW

Aug 5 - 6, 2023

<http://www.ncjweb.com/NAQP-Rules.pdf>

### NAQP SSB

Aug 19 - 20, 2023

<https://www.ncjweb.com/NAQP-Rules.pdf>

### ARRL Rookie Roundup RTTY

Aug 20, 2023

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

### ARRL September VHF Contest

Sept 9 - 11, 2023

<http://www.arrl.org/september-vhf>

### TEXAS QSO PARTY

Sept 16 - 17, 2023

<http://www.txqp.net/>

### CQ WWDX RTTY

Sept 23 - 24, 2023

<http://www.cqwwrtty.com/>

### CQ WWDX SSB

Oct 28 - 29, 2023

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

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.

## W5NAC 2023 Field Day Submission Summary

Entry received at: 2023-06-27 02:11:56 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 ARC

**Power Source(s):** Commercial, Battery

**Power Multiplier:** 2X

**Preliminary Total Score:** 2,582

### Bonus Points:

Bonus	Points	Status
Public location	100	
Public information table	100	Documented by FD Table.jpg
Formal message to ARRL SM/SEC	100	Documented by SM Message.txt
W1AW Field Day message	100	Documented by FDMMessage2023.docx
Formal messages handled (10 x 10, max of 100)	100	Documented by FD HNDLE MSG.txt
Natural power QSOs completed	100	Documented by Natural Power Contacts.txt
Educational activity	100	
Youth participation (1 x 20, max of 100)	20	
Social media	100	
Entry submitted via web	50	
<b>Total bonus points</b>	<b>870</b>	

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

	CW	Digital	Phone	Total
<b>Total QSOs</b>	62	295	142	<b>499</b>
<b>Total Points</b>	124	590	142	<b>817</b>

**Claimed Score** = (QSO points x power mult) = 1,712

### **Band/Mode QSO Breakdown:**

Band	CW		Phone		Digital	
	QSOs	Power	QSOs	Power	QSOs	Power
<b>40m</b>	22	100	49	100	206	100
<b>20m</b>	24		68		83	
<b>15m</b>	16		25		6	
<b>Total</b>	<b>62</b>		<b>142</b>		<b>295</b>	

## Field Day Logbook by the Numbers II: 2023 Edition

Aaron Baker KI5FIQ

Just like last year, the data guy clicked on the stats button in N3FJP, so here's our breakdown for another successful Field Day!

Let's start at the beginning. Our first QSO was logged at 18:02 UTC. It was a Phone contact made by KI5MHB with N5PC, a 3A station from Oklahoma. Next was those digital guys who also made a contact just 3 minutes late with W5MWC, a 2A station that was also in Oklahoma. Finally, the first CW QSO would come just 20 minutes later by the one and only K5ME with W9UO, a 2D station in Illinois.

Our total Operating time (when you take out the breaks longer than 30 minutes) was 16 hours, 3 minutes, and 22 seconds. We averaged 31.1 QSOs per hour. Before calling it quits, our final QSO came in at 6/25 15:47 UTC.

We operated only on 3 bands this year (15, 20, and 40) between the three stations and yes even had all three stations on the same band at once! Of our 499 QSOs, most of our contacts were made on 40 with 56% of our contacts were made on this band, followed by 20 with only 35% of the share.

In terms of what sections we contacted, we made contact with almost every ARRL section in the US except for: New Hampshire, Delaware, East Bay (CA), Pacific (HI), Montana, and North Dakota. As far as Canada goes, we weren't as lucky as we only made contacts in 6 of the 14 sections in Canada. The section we made the most contacts with was the Ohio section with 27 contacts followed by North Carolina with 23. We did get some DX as well as we made contacts with Cuba and New Zealand (Shoutout to RM, K5AGE for getting that contact with ZL1DK).

Band conditions were pretty great this year compared to last, California was our most contacted state with 46 QSOs, followed by Texas with 39, and then Florida with 33.

Wolfie, KI5MHB, was our top operator with 186 QSOs split between phone and digital. Followed by the digital guys of Tony, KE5ASM, Mike, AA5AH, Dave



KI5RAT, and Ralph N6RH with 110 contacts. (If I missed anyone in that group I apologize I'm going from memory here!)

And now for the fun part - comparing to last year's numbers (well for me anyway). Last year we had a total of 438 contacts so compared to this year's 499 contacts, we get a 14% increase from last year and for the points we had 2,404 points so with our 2,582 points we get a 7.4% increase from last year. A pretty good run if I do say so myself.

For a contest that is not a contest, I think for running as a 3F again this year was definitely the right move. Everyone gets a better chance to operate the mode they want to and made for interesting conversations. As stated in my column, the move to Flexes made the experience even better and having the laptops on the TVs at the EOC was fun to watch as the bands came alive at 1 PM.

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.



## Why I Think That Ham Radio is Such a Great Hobby

Jim Edmondson, N5JGE

My interest in radio started when my Dad bought a Knight Kit Star Roamer general coverage receiver. We built that kit on an old picnic table in the basement when I was about 10 years old. I put a long-wire antenna from my second-story bedroom window to a tree out back and enjoyed shortwave listening for many years. When I finally got my novice license, the Star Roamer was my receiver and I built the HealthKit HW-16 crystal-controlled CW transmitter to complete my station. The long-wire was replaced with a trap dipole to better fit our small townhouse lot. Next, I built a VFO to replace the HW-16 crystals. Unfortunately, college and starting a family and a career interfered with upgrading my novice license and I let it lapse. Over the next four-plus decades, I was an off and on again shortwave and scanner listener at my home station and portable on my many business trips. When PCs first came out, my sons and I built several and learned a lot about the hardware and software aspects of MS-DOS and then Windows computing.

Getting back into ham radio was on my "To Do List" for retirement, but I did not pursue it immediately. When Covid started, I found myself with time on my hands and my Wife encouraged me to get back into ham radio. I passed the Technician and General exams in the same session and I picked up where I left off 40+ years ago. Two big differences were that I no longer knew Morse code well enough to operate CW and that PCs were pretty much integrated into many aspects of ham radio. At first, I was happy to operate on the HF and explore all of the old and new operating modes. However, there are so many facets to this hobby and I soon found myself drawn back to kit-building. Today, that usually means QRP operation. Those two activities also work very well with the current popularity of Parks on the Air (POTA) operating.

There are several good quality QRP kits available today and the capabilities in small packages is pretty amazing. [QRP Guys](#), [QRP Labs](#), and the [\(tr\)uSDX](#) are all fabulous kit makers. In the case of QRP Labs and (tr)uSDX, you can purchase assembled units if desired. Kits today are nothing like those of the Knight kits. Gone are the terminal strips, the use of tube sockets to connect components and chassis punches to mount controls. Instead, we now have PCBs (Printed Circuit Boards) with SMDs (Surface Mount Components), through-hole components, microprocessor control of SDRs (software defined radios) and 3D printed cases. Some SMD components are smaller than a grain of rice – quite a challenge to solder onto PCB pads! Fortunately, many QRP kit PCBs are supplied with the SMDs already mounted. In those cases, kit-building consists mainly of assembling the BPF (Band Pass Filter) and LPF (Low Pass Filter) sections and connections to the power supply and PC. This includes mounting several through-hole components, jacks, switches, pushbuttons, etc. as well as winding and mounting the toroids.

Kit-building has provided a great way to learn more about modern radio operation. I built a QRP Labs QDX and promptly fried the final RF amplifier (four BS170 MOSFETs). There is a very active groups.io email list for QRP Labs products ([QRP-Labs email list](#)). Several members were very helpful in helping me troubleshoot and localize the

problem. One gentleman even mailed eight BS170s to me as there were out of stock at the usual electronics suppliers! It turns out that a cold solder joint at one of the toroids in the transmitter LPF presented an open circuit to the RF amplifier and caused the failure.

Because the QDX is very sensitive to poor SWR, especially if the impedance of the antenna is <50 ohms, I bought and built a "QRPoMeter" kit. I also learned about this ingenious device on the QRP Labs email list. It is a resistive SWR bridge, so even if the antenna connection is open (infinite resistance), the parallel resistive network presents a 2:1 (100 ohm resistive) SWR to the radio. This greatly reduces the chance of burning out the RF amplifier. In addition to measuring SWR, the QRPoMeter also makes accurate measurements of the output power of rigs up to 15W. Along with a current-limiting DC power supply to measure rig receive and transmit current draw, you can head off many problems. (You can also use most DMMs (Digital Multi-Meters) to check QRP rig current draw.)

The second area from kit-building that caught my interest was LPF design. The LPF is critical to reducing the transmitted power of harmonics leaving the final RF amplifier. For radios installed after January 1, 2003 and operating below 30MHz, FCC regulations require the spurious emission to be 43dB below the fundamental (operating) frequency signal strength. There are many types of filter designs, but most of the QRP rigs use a multi-stage pi-design with a trap at the second harmonic. I used filter modeling software ([ELSIE](#)) to see how the QRP Guys LPF should work and then used a NanoVNA to sweep the filters from rig and found much different behavior. This led to buying some capacitors and inductors to model and assemble alternate filters. I found some combinations that work much better and will try them out soon. I am waiting for delivery of a Tiny SA, a spectrum analyzer in a NanoVNA type form factor. This will allow me to measure the output power over a wide frequency range, evaluate filter designs and verify compliance with the FCC regulations.

In doing these investigations, I found a website ([MegawattKS](#)) that described how you can assemble a decent electronic lab for a minimal investment. A NanoVNA, tinySA and a current limiting 30V / 5A DC power supply each cost about \$60. A decent DMM might run <\$50. According to MegawattKS, a small oscilloscope (up to 40MHz) and signal generator (up to 20MHz) are available for about \$70 each. Test boards, cables, attenuators / DC blocks and components would round out a decent electronics hobby lab.

While this has been a rather rambling and personal article, I want to summarize why I think that ham radio is such a great hobby based on my experiences over the last 3-years since re-entering the hobby.

- First are ham radio operators: your local club and VE team, on-line forums, You-Tube community and many others.

- The huge number of different activities that you can participate in: many kinds of operating, EmComm, contesting, DX'ing, QRP, QRO, POTA, SOTA, IOTA, YOTA, antenna design / building, radio and accessory design / building and on and on.
- The huge number of educational on-line resources to learn about the above activities, electronic theory and practice and much more.
- Active software development for weak signal modes, N1MM, GridTracker, POTA.app, QRZ.com, ClubLog and many others.
- The advocacy by and resources from the ARRL.

With the above support, I was able to get tested in the middle of Covid and pick up where I left off 40+ years before – now that is amazing! My biggest regret is waiting so long to become a ham operator again.