TALES FROM THE SWAMP

January 2024

Editor: Kevan Nason, N4XL

Thank you to our group leadership:
President – Ed, K3DNE
Vice President - Dave, WN4AFP
Treasurer – Scott, KG9V
Secretary – Kevan, N4XL
Web Master – Frank, KG4IGC
SFCG Webpage: swampfoxcontestgroup.com

SFCG Annual Meeting

SFCG's annual meeting will be held on **Sunday, January 26'th at the Lizard's Thicket in Lexington SC at 2PM**. 2PM is the earliest weekend time they had available where they can *partially* guarantee that the banquet room will be available for a private event (apparently business is booming and they use that room as a regular dining room on weekends). Again, this year, I pushed and attempted to negotiate a firm 2PM availability but they can't guarantee that all previous customers will have finished and be out of the room by 2PM - last year we had to wait about 1/2 hour for the room to clear and be re-arranged for our meeting. There is a group that has the room reserved after us (at 4:30pm) so we'll have to be done and out no later than 4:25PM. I will attempt to keep the meeting moving at an appropriate pace! Please let me know ASAP if any member has any new business to be included for our meeting.

A spouse or a guest is welcome. If you know of a potential member please feel free to invite that person as a guest.

The Lizard's Thicket is located on US-1 between I-26 and I-20 west of I-26 in Lexington SC (see address and phone # below). There are many Lizard's Thickets in SC - I went to the wrong one in 2020 and was late to the meeting!

Lizard's Thicket
4616 Augusta Rd.
Lexington, SC
803-785-5560

In addition to the usual business meeting/elections, SFOTA award presentations, lunch/dinner (order off the menu and pay individually), there will be a presentation by Kevan N4XL pros use of the Contest On-line Scoreboard and using the Reverse Beacon Network (RBN) before and after a contest to help us.

Minutes will be posted on our website as soon as available.

Looking forward to seeing you there!

73,
Ed K3DNE
President, Swamp Fox Contest Group

Contest Tips:

SFCG Member Tips	
Tip	**From**
Work a contest that you will enjoy!	WN4AFP
You don't have to run up a big score all the time. The State QSO Party challenge is a great example. There is an award for working all the approved state QSO parties. If you other things to do that weekend, get on and get a minimum of 2 contacts, submit the and do what needs to be done.	KZ3P
VHF Contesting. When on digital and signal strengths are > 10dB, check out SSB and CW. It is a lot faster making QSO's on SSB/CW than FT8 or even FT4.	K3DNE
VHF Contesting. Check out dxmaps.com, click on the appropriate band to see propagation paths, monitor the Hepburn Tropo Forecast at https://www.dxinfocentre.com/tropo.html and real time paths at https://vhf.dxview.org/.	K3DNE

If you have my kind of eye sight, which is BAD (but, hey, I can still see daylight), get plenty of monitor acreage and increase the magnification. Change the fonts to large and bold in N1MM skins. Use the upper right hand arrow in N1MM to make the window text larger. Color code important buttons. Don't position your monitors where you are constantly looking up. Place them at eye level or where you are looking downward.	N4IQ
Speaking of eye sight, I always have two set of spectacles handy. One in case I lay down the first pair and can't find them. I always wash them before the contest with Dawn detergent to get the greasy finger prints off. I keep a bottle of Liquid Tears handy. I also have four lamps within my contesting work space. Each one has a different purpose. So be sure you have lighting that enhances your contesting experience.	N4IQ
If you are operating in a Multi-op contest, as a courtesy, be sure to OPON for the next operator. You don't want to claim his contacts when he forgets his OPON. (I frequently forget OPON.)	N4IQ
If your goal is to do the best you can then avoid distractions. The list of what those are is virtually endless, but here are some things to think about. Determine what you need to efficiently put Q's in the log. They should be right in front of you so you can just move your eyes to see them. No turning or raising your head needed. I use N1MM and for me those items are: Entry window, Check Log (Super Check Partial display), Band Map, Spectrum Window, and the Mult & Q Window. Arranged for just a slight turn or within easy reach: The radio, antenna switching, Log Window, Gray Line map, Info Window (has my rate). Distracting things needing a big turn of the head but still easy to quickly reference are the Online Scoreboard, RBN display, email, and my computer interface controls (manual CW speed and SO2R functions).	N4XL

- For non-SDR radios, some contesters do not seem to understand amplifying band background noise along with the desired signal is not a good thing to do. Besides making it hard to hear the signal through all the amplified noise, it reduces the dynamic range of the receiver. Meaning it harder to copy weaker stations on a busy contest weekend. I've read SDR radios work a bit better by giving the receiver a bit of noise it can use a baseline to help separate signal from the noise but admit I haven't contested enough with an SDR radio to appreciate that quirk. I do leave a bit of background noise when using them though. Those of us who use non-SDR radios can benefit from the advice below. And from the little experience I have with SDR rigs I still found that reducing the amount of band noise heard is easier on my ears than letting the full noise blast come through the receive amplifier chain.

  From the Contesting Wiki.

  Set coarse adjustment of front end gain

  The goal is to provide enough gain so that the band noise from the antenna is just above the receiver noise floor, which in turn is just above the AF amp noise floor (if detectable).

1. Without connecting an antenna, turn on the pre-amp.
2. Advance RF gain until one can just start to hear the receiver noise floor (just above the audio noise floor, if that is audible). At this point there is enough gain in both the RF and AF stages to hear the internal noise of the receiver. This is the maximum useful gain setting. One never benefits from using more gain than these levels.
3. Connect an antenna. Antenna noise should be heard above the receiver noise floor. Tune to a empty frequency, even if it is just outside the band edge.
4. Switch off the pre-amp. If the operator can still hear the antenna noise above the receiver noise floor, continue to next step. If not, the pre-amp is needed with this antenna on this band; go to the fine adjustment of front end gain section. Typically one will need the pre-amp on the highest frequency bands.
5. Add attenuation. (For a receiver with multiple attenuation levels, increase the attenuation step-by-step.) When the operator no longer hears band noise above the receiver noise floor, too much attenuation has been added. Remove/reduce the attenuation until the band noise is heard just above the receiver noise floor. This is the correct adjustment on this band for this antenna. Go to the fine adjustment section.

Note the setting of the pre-amp and attenuator settings. This is the setting to be used for this band/antenna combination in future, unless band noise level changes markedly. One never needs more gain than provided by this setting; extra gain just chews up the dynamic range of the operator's hearing and of the receiver's analog-to-digital converter.

Set fine adjustment of front end gain

In the previous steps, the attenuator/preamp provided a coarse adjustment (e.g., in 10 dB steps for the Elecraft K3) of front end gain. The goal now is to improve this a bit by tweaking the RF gain control.

If all attenuation was applied in the previous steps (typical on bands with higher noise levels, such as 160-40m at night), a substantial further front end gain reduction may be needed; this will be done now using the RF gain control.

1. Reduce the RF gain control until the band noise is just above the receiver noise floor. This is the final setting for this band/antenna combination under these band noise conditions.

Highlights From The Reflector:

- Dave WN4AFP received a 1st Place Out-of-State in the IAQP. Congratulations!
- Several entries about Telnet scripts and CC-User were made. It seems to be a weak spot for several members, including your Editor. Perhaps someone might dig deep into that and prepare a talk or disseminate some information on that?
- Dennis K2SX asked a question about coax. An important thing about that question is Dennis is actively working on establishing a station at his new QTH.
- RTTY contests continue to be important to members. Bob KZ3P, Frank KG4IGC, Ted K7OM, XXX are all active and enjoying them.
- We didn't hear back from Herschel KA2G about whether his 50" TV was better than multiple smaller computer monitors would be.
- Kevan N4XL asked if anyone was using a Stream Deck in their station. Apparently not.
- Ed K3DNE is frustrated at the lack of 6 meter F2 propagation. Now is the time in the Solar Cycle it should be occurring, but there haven't been as many days with F2 as he had hoped for. ChatGPT gave him an answer into why that could be. So impressive was the answer that Jim N2ZZ is concerned the ChatGPT AI is studying up for a Ham license. Jim didn't think it would come to pass though because the AI bot doesn't have a physical location and couldn't pay a license fee. This Editor isn't so sure it couldn't solve those problems though, Jim.
- A lot of discussion about the DX Marathon and DX Challenge. You'd have to peruse the many posts to get details.
- The new SFOTA board is up and running.
- Dave WN4AFP posted a link to a W1DED interview with CT1BOH. If you don't know about W1DED's interviews, you should. If you are interested in improving your contesting skills and don't know about CT1BOH, you should.
- Bob KZ3P has entered the ranks of FT8 competitors.
- Bob W1RPG let us know about the Holy Cluster at https://holycluster.iarc.org/ . From the info link on that page: "The Holy Cluster is being developed by a group of Israeli amateur radio enthusiasts, with the support of the Israeli Association of Radio Communication (IARC). We hope this platform will serve as a valuable tool for radio operators worldwide, fostering collaboration and enhancing the global radio communication experience." Frank KG4IGC said "Wow! That's a nice DX cluster page Bob, I made sure that I bookmarked this one. TNX for sharing!".

- Some great scores were posted after the NAQP CW. Good job folks! Andy AA5JF is finding out why Bill N4IQ's scores are so good. After you get the hang of it, SO2R really helps. People are signing up for the upcoming NAQP SSB test coming up this weekend.
- Ed K3DNE created a Groups.io Poll so people could click on options to say if they were coming or not, and if they were bringing another with them. Using the poll that way makes it easier for him to track the count. Unfortunately, people didn't read the underlined part that said, "Please respond to this poll so we can get an attendance estimate." Nor did they notice it was clearly visible in his post. Now he has to manually track the verbal responses and add those to the poll numbers. Hope people didn't both answer and click the poll.
- Dennis K2SX shared that Tom K5RC is selling the W7RN superstation. Let's hope a contester purchases the $1.1 million QTH and keeps the many towers and radios on the air.
- Dave WN4AFP shared an IARU certificate awarding him 1st place SC, 2nd place IARU Zone 8, and 5th place W/VE. Dave also mentioned he was 1st place in ARRL's Roanoke division. Great job, Dave!

Work Dupes or Not? (aka: Who Gets the Log Check Penalty?)

By K1TTT as published in the N1MM User Manual

In paper log days you used to get penalized for too many dupes that weren't marked as such in the log. I don't know of any contest that has ever penalized you for working too many dupes as long as you marked them in your log and didn't try to claim points for them.

Its kind of ironic that the Cabrillo log format has no way to mark dupes, the sponsor's log processing software automatically rescores all the logs so you don't have to worry about even recognizing dupes or worrying about not claiming points for them.

On your specific question. You log by2a but 6y2a properly logs on5zo… 6y2a would get credit because the log checking software would properly match up the one-off call by2a with their log entry of on5zo. If there really is a by2a and they send in a log you would lose credit for a confirmed not-in-log. If there is no such callsign as by2a issued you would lose credit and penalty and lose the multiplier (assuming you didn't work any other by) as a bad call. If there is a by2a but they didn't send in a log you might get to keep the credit if the log checking software and manual checkers don't recognize the busted call.

Lets take it one step further. Say you really screwed up and logged by2et so the log checking software can't figure out that it was really 6y2a that you worked… now 6y2a loses qso credit and penalties for being not in the on5zo log. You may or may not lose credit as above based on the by2et log and callsign status…. now, later on you hear 6y2a and call them again. If they recognize you are a dupe and come back 'qso b4' and refuse to work you, THEY LOSE! They will never get credit for on5zo and will lose the penalty points. If instead they ignore the dupe and work you again the original not-in-log doesn't matter as they are now in your log and everyone gets credit… so NOT logging the dupe is bad.

The same holds for other combinations of them busting your call, or both of you busting each other, etc. It is always better to just log the dupe and move on. There is actually less of a chance you will get penalized if you work the dupe than if you don't.

David Robbins, K1TTT

GMT is GMT, or Not?

By VE3IAY as published in the N1MM User Manual

Not quite. Some of Bill Gates' boys didn't know the difference between Greenwich Mean Time and the local time in Greenwich, England. In some versions of Windows, one of the choices for time zone is labeled (GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London, but unfortunately, despite what the time zone list says this setting is NOT repeat NOT Greenwich Mean Time; it's local time in Greenwich (and Dublin, Edinburgh, Lisbon and London), which in the summer is daylight savings time, i.e. GMT + 1:00 .

There's an often published workaround. If you absolutely gotta put your computer on GMT because you're tired of resetting some old DOS software that doesn't know any better, you can set the computer for (GMT) Casablanca, Monrovia. Those places never go on daylight savings time, so their local time really is the same as GMT all year round, not like Greenwich.

But you know what? If you're using Windows software like N1MM Logger, it's a lot easier to set your computer to your own local time zone and let the operating system take care of all that time zone and daylight savings time stuff automagically.

73, Rich VE3IAY

Observations by the Editor:

- In "SOG The Secret Wars of America's Commandos in Vietnam" by John L. Plaster were explanations illustrating early use of a couple contesting tips we use today. John described some psychological warfare actions taken to spread propaganda to the North Vietnamese population. Goals included spreading information countering Communist propaganda and pushing disinformation to the North Vietnamese. I saw a link to a method they used and two contesting techniques.

  First, they chose transmitting frequencies for clandestine broadcasts close to the stronger North Vietnamese government broadcast station's frequency in the hope that people tuning into the well-known official station would discover this other signal close by. That's like someone seeing D4C spotted at 21375 and then calling CQ on 21372. Secondly, they would start broadcasting on the government's frequency immediately after the official broadcast finished. Some people would naturally keep listening as we spread our message. Unlike today's Ham's, back then those PsyOps stations used the same call sign the North Vietnamese did. (We don't do that today because we want credit for the Q's!)

  Another technique mentioned used was to put clandestine transmitters in a plane flying along the North Vietnamese coastline. That would both confuse the radio direction finders trying to locate and shutdown (shoot down?) the transmitter. And by moving the weaker powered transmitter closer to North Vietnam in a plane the stronger signals received by the common people could overcome the jamming used by the North Vietnamese government.

  The most unique tactic used was genius. The PsyOp group's biggest problem was getting people to listen to our broadcast. They would tune it to the government broadcast rather than our PsyOps signals just a few KHz away. Ordinary people didn't have many receivers so we gave them more to use. We parachuted handheld transistor radios to the North Vietnamese population. But they weren't the same radios anyone could by in a stateside store. These were specially made in Japan just for the PsyOps group. Government broadcast frequencies were fixed and well known. We didn't want to totally block them because it would be obvious to listeners something was wrong with their radio and they wouldn't use it. Instead, these special transistor radios would generate noise on government broadcast frequencies. Rather than listen to the hard to copy government signal, people would instead tune to that clearer sounding broadcast they found close by. Mission accomplished.

- A Ham's radio was interfaced to his radio. It worked fine until he turned the radio off. The radios COM port changed when he turned it back on and his software wouldn't work. The new COM port numbers had to be put in. Not surprisingly he thought

there might be a software issue. John K3CT wrote the response below to the man's request for help on the software users forum. It turns out rather than being a software issue the problem is with the radio. I'm sure this problem is frustrating people using that model radio no matter what software they are using. NOTE: The first paragraph is refers to what happens in N1MM logger, but the concept applies to whatever logger or software that you use to communicate/control your radio.

> The first test is to open the Bandmap and turn Off the radio. After 10-20 seconds a red box will appear in the Bandmap window notifying you that the radio communications was lost and the program has switched to manual radio mode. Turn the radio back On and single click the red box to re-establish radio communication. If it doesn't reestablish communication because Windows changed the COM port number here is the reason.
>
> The older Icom radios removed the power from the USB to COM IC inside the radio when the radio is turned Off. This removes the virtual COM port from the Windows hardware table while the port is open. When you turn the radio On, Windows is aware that the port is open and assigns a new virtual COM port number. Now you need to change the COM port ID in Configurer. The same thing happens when a user pulls the USB cable out of the computer while our software is running.
>
> The solution is to exit N1MM Logger, then turn Off the radio.
>
> Icom changed this behavior and now the USB to COM port IC inside the radio remains powered when the radio is turned off eliminating this issue. My recollection is the IC-7300 was the first radio with this circuit change. If not, it was the IC-7610.

The line "The solution is to exit N1MM Logger, then turn Off the radio." means the order you do things is important. Bill N4IQ once mentioned to me he had to start things up in a particular way for everything to work right too. If you're having similar problems, try experimenting with startup and shutdown order. Once you find the magic combination – write it down. Eventually it should become second nature for you.

This type of behavior isn't new. Way back in the 80's I was told to start up such and such a program before this and that one – or else this and that one wouldn't work. The explanation was some programs were poorly written and grabbed all available memory when they started leaving no room for others to work with. As users, we often had no clue ahead of time about how the program was written. We just tried this or that until we discovered a sequence that worked. And yes, sometimes we found we just couldn't run one program if another was open too.

- On the subject of COM ports, hears another mention of FTDI driver issues. This came from a recent post string on the microHAM reflector, but it could easily apply to non-microHAM devices too. It specifically deals with how microHAM's router software needs a proprietary FTDI driver to function. microHAM devices may stop working if you (or Windows or a program used to automatically update outdated drivers) updated the driver used for a COM port used by a microHAM device. As I've mentioned in previous newsletters this could also happen if you are using an older cloned FTDI device and have a driver update. The gist of Joe W4TV's comment is if you suddenly have problems with an FTDI device that has worked fine for months you may have to check for a driver issue. At least put in your list of things to check if the problem happens to you. It might be necessary to roll that port back to an older driver. (Be aware if you do that if you unplug your device and plug it a different COM port that isn't using the rolled back driver you'll again have the original problem.)

  *microHAM writes serial numbers to the FTDI USB UART in each of its interfaces. When Router runs, it binds the FTDI driver it installs to that serial number which *over rules* Windows default assignment of the "newest" WHQL drivers.*

  *microHAM Router and the Router installer have operated that way from the beginning and *any properly installed* Router installation will use the version of FTDI the driver package included with the version of Router being installed.*

  Checking the microHAM download site, the current version of Router is still 9.3.5 which means properly installed microHAM Devices (Device Manager -> USB controllers -> microHAM USB Device) will (or should) show: Driver Provider FTDI, Driver Version 2.8.28.0 regardless of any other FTDI driver installed in the system.

  Any other driver is an unsupported configuration and can cause unpredictable operation.

  Joe's information is not new to me, but I troubled by that explanation. Some people, an example being Billy AA4NU who started the thread, have updated their FTDI driver and their microHAM device worked fine. I wondered why that could happen. Joe says microHAM devices need to use a proprietary FTDI driver, but Billy said his devices didn't. After looking up what function a driver performs I decided the key lies in Joe's last sentence, "Any other driver is an unsupported configuration and can cause unpredictable operation."

  Microsoft says, "The driver, usually developed by the device's manufacturer, knows how to communicate with the device hardware to get the data. Once the driver gets the data, it gives it back to the operating system, which then gives it back to the app." It adds "Drivers don't always have to be developed by the device's

manufacturer. If a device follows a published hardware standard, Microsoft can write the driver, so the device designer doesn't have to provide one."

What I get from that, and Joe's comments, is to ensure all design functions of a microHAM device work correctly the driver must be the one written by microHAM rather than the generic FTDI driver you can find on the web. Using the generic FTDI driver may give you many of the functions a device is capable of, but not all. So a given user might find using the generic FTDI driver gives them control over every feature they use, while another user might find they can't use a feature they need.

Thus, some say you need to use the manufacturer's driver and others say that's hogwash. Just use the latest driver out there.

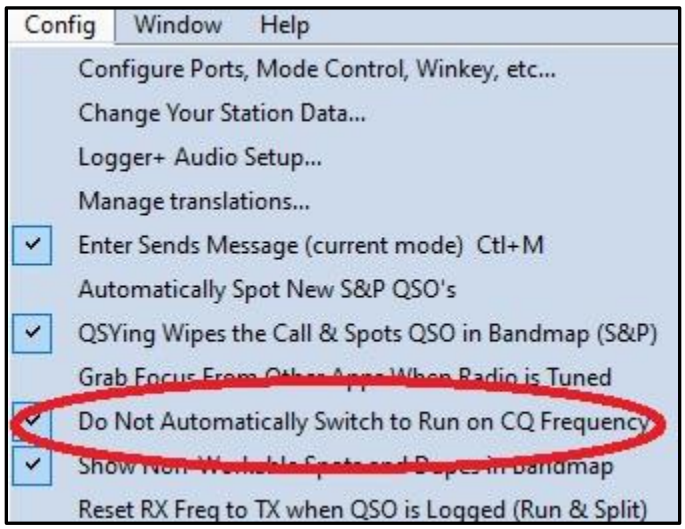
N1MM+ Tips:

NOTE: Unless otherwise specified references to problems people are having, solutions, and tips come from the N1MMLoggerPlus Group.io reflector. A search there for items described should turn up the original posts and replies.

- Selected changes made since last newsletter. (NOTE: These often come from a user requesting a change or fix to a problem.)
    - As contest rules change the Development Team frequently adds the capability for self-spotting to additional contests. Just because the {SPOTME} macro didn't work last time you tried for a particular contest doesn't mean it won't this time.
    - Available Mult & Q window update speed was slow.
    - Sleeping COM ports were causing an InvalidComObjectException error.
    - SO2R focus now follows Spots.
- Whether or not to send QRL? when you are S&P and find an apparently unused frequency where you can call CQ is debated by operators. If you are one who does ask, then N1MM's feature of switching to Run when you push F1 when in S&P causes consternation (F1 contains QRL? by default). Aurelio PC6A came up with this solution:

    I have my S&P F1 message defined as:
    F1 QRL?,QRL?{S&P}

- Another issue that pops up now and then is the radio mysteriously switching to Run when you are tuning the band in S&P. If you previously called CQ on the band and return to that frequency (by later being in S&P and tuning for people to work). An easy way to stop that is:



- Many countries are becoming creative and issuing call sign with prefixes not normally seen our used. If you try entering a call and notice the wrong country identifier is assigned you can change it. I've no specifics off the top of my head, but vaguely remember running across that with a station in the Caribbean popping up as being in France. The call counted as a common French mult instead of a rarer Caribbean mult. You can fix that. Tools>Add Call to Country. An window pops up asking you to enter the common country prefix for the call sign you put in the Entry Window's call sign field.
- You are in CW mode with a paddle connected. You need a carrier to let an auto tuner (or manual tuner) find a match. Tools>Toggle Tune (CW Mode). Or you can use Ctrl+T

Upcoming Contests:

See the WA7BNM webpages https://www.contestcalendar.com/contestcal.html

SFOTA Current Leaderboard:

Jan-16-2025

Current Leaderboard

2025 OVERALL STANDINGS

	CALL	Contests	CW QSO'S	SSB QSO'S	DIGITAL QSO'S	RTTY QSO'S	TOTAL QSO'S
1)	KE4EA	18	1570	0	0	0	1570
2)	WB4HRL	21	994	0	0	320	1314
3)	K4FT	5	953	0	0	136	1089
4)	WN4AFP	11	1079	0	0	0	1079
5)	N4IQ	2	870	0	0	0	870
6)	KG4IGC	2	192	0	0	605	797
7)	KS4YX	5	244	0	26	385	655
8)	K4QQG	2	0	153	0	452	605
9)	KZ3P	2	255	0	0	285	540
10)	KD4S	5	210	0	0	261	471
11)	K3DNE	1	460	0	0	0	460
12)	K7OM	2	170	0	0	258	428
13)	WA4LDU	3	113	0	0	164	277
14)	AA4SD	3	238	0	0	0	238
15)	N1UZ	2	88	0	0	135	223
16)	NI7R	1	205	0	0	0	205
17)	N4XL	1	150	0	0	0	150
18)	N4QI	2	57	0	0	67	124
19)	W4ANT	1	0	22	0	0	22

3830 Activity:

Contest	Call	Class	Pwr	Score
9A DX				
12/24/24	WN4AFP	SO CW	LP	12,628
ARRL 10				
12/17/24	K7OM	SO CW	HP	46,860
12/17/24	KB4FHA	SO SSB Unlimited	HP	4,096
12/20/24	W4ANT	SO SSB Unlimited	HP	30,090
NAQP CW January				
01/12/25	AA4SD	Single Op	QRP	15,470
01/12/25	K3DNE	Single Op Assisted	LP	101,200
01/12/25	K4FT	Single Op Assisted	LP	168,216
01/12/25	K7OM	Single Op Assisted	LP	15,980
01/12/25	KD4S	Single Op Assisted	LP	18,447
01/12/25	KE4EA	Single Op Assisted	LP	87,291
01/12/25	KG4IGC	Single Op Assisted	LP	20,544

Contest	Call	Class	Pwr	Score
01/12/25	KS4YX	Single Op	LP	26,705
01/12/25	KZ3P	Single Op Assisted	LP	29,325
01/12/25	N4IQ	Single Op Assisted	LP	220,220
01/12/25	N4QI	Single Op	LP	2,166
01/12/25	N4XL	Single Op Assisted	LP	16,050
01/12/25	NI7R	Single Op Assisted	LP	23,575
01/12/25	W7WZ	Single Op Assisted	LP	36,512
01/13/25	WA4LDU	Single Op Assisted	LP	6,893
01/12/25	WN4AFP	Single Op Assisted	LP	157,784
NCCC FT4-Sprint Jan 3				
01/03/25	KS4YX	Single Op	LP	196
NCCC FT4-Sprint Jan 10				
01/10/25	KS4YX	Single Op	LP	90
OK RTTY				
12/21/24	K4QQG	SOAB	HP	7,623
12/22/24	K7OM	SOAB	HP	243
12/22/24	KD4S	SOAB	HP	8,288
12/22/24	KG4IGC	SOAB	LP	30,681
12/22/24	KZ3P	SOAB	LP	25,429
12/21/24	N4IQ	SOAB	HP	14,000
RAC Winter				
12/30/24	K4FT	Single Op CW	LP	32,400
12/28/24	K4QQG	Single Op Assisted	HP	54,072
12/29/24	W4ANT	Single Op Assisted	LP	2,880
01/01/25	WN4AFP	Single Op CW	LP	800
RTTY Roundup				
01/06/25	K4FT	Single Op Limited-An	LP	7,344
01/06/25	K4QQG	Single Op Limited-An	HP	33,900
01/06/25	K7OM	Single Op	HP	19,092
01/06/25	KD4S	SO Unlimited Limited	HP	20,250
01/05/25	KG4IGC	SO Unlimited	LP	55,660
01/05/25	KS4YX	Single Op	LP	25,970

Contest	Call	Class	Pwr	Score
01/05/25	KZ3P	Single Op	LP	17,955
01/06/25	N1UZ	Single Op Limited-An	HP	6,885
01/06/25	N4QI	Single Op	LP	2,747
01/06/25	W4GE	Single Op	HP	18,673
01/06/25	WA4LDU	Single Op Limited-An	LP	8,512
01/06/25	WB4HRL	Single Op	HP	16,640
TBDC Dec 28				
12/30/24	K4FT	Single Op	LP	110
12/29/24	W4GE	Single Op	HP	175

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73 es QRT de N4XL