TALES FROM THE SWAMP

June 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

Welcome AA4V

Please welcome Steve AA4V to the Swamp Fox Contest Group!

Steve lives in Isle of Palms (located 3 miles off the coast of South Carolina) IOTA number NA-110 South Carolina Island group. Steve has been an active contester since 1968 and he especially enjoys CQWW 160 CW, CQWW DX Phone and CW, ARRL DX Phone and CW and IOTA operations! He's also an avid DX op holding 160m DXCC #63, 160m WAZ #24 (all zones) and his current country totals are; mixed 364/340, cw: 353/339 phone: 363/340, 160m: 262/262.

Steve's station:

Transceivers: Elecraft K4, K3S, K3

Amplifiers: ACOM 2000A, RF-kit 2K-S, KPA1500

Antennas: 3 element SteppIR@60 feet (20-6) on a UST MA550MRB motorized tower turned with Orion M2800 rotor/Green Heron controller. XMmatch Classic Vacuum Capacitor Transmatch. DX Engineering 70 foot vertical (160/80) mounted on the end of a 150 foot long pier over salt water. Radials are two each for 160 and 80, resonant and elevated over the water. Verticals for 60M, 40M and 30M, mounted on a pipe driven into the sea floor and attached to a seawall. 10 radials are spread out in the sea. Pennants for 160, 80.

In addition to our hobby, Steve is also in to: Cars (especially Corvettes), airplanes (FAA-licensed private pilot-Instrument rated), power boating, fishing, reading, photography and golf.

Steve: Welcome to the Swamp Fox Contest Group!

73,

Ed K3DNE

Editor's Note: Steve is very willing to help new and old hams alike. Some examples are included in the Highlights From the Reflector section below.

Welcome K4CU

Please welcome Steve K4CU to SFCG! Steve lives in Murrells Inlet, SC. Steve has been a ham since 1973 and was first licensed as WN4IYW. Steve states he had a lot of fun with a HW16 and a few xtals back in that era! He credits his early ham radio journey to his Elmers W4PKA (SK) and K4NO who pushed him to get on the air and get his code speed up. Steve later obtained KD4HA and had fun DX'g in the 80's and 90's. He also has done some multi-op contesting with K4AB and K4NO in Alabama! As with many of us, he took a break to raise his family and got the bug again in 2017.

Steve is now HOA bound with a modest station at home - IC7300, G5RV at 55 feet and is doing a lot of digi operating - he's now up to 172 mixed DXCC entities! Steve was pointed towards SFCG after a call and email exchange with Dave WN4AFP. He's interested in multi-op/guest operating opportunities (Dave also pointed Steve towards SFCG's multi-op station owner W7WZ/KB4DX). Steve enjoys CW and Phone contesting and tells me that his CW speed was once around 40wpm but now more like 20wpm but fast enough for copying contest exchanges! His favorite contests are SCQP, Field Day, ARRL SS and CQWW.

Steve: Welcome to the Swamp Fox Contest Group!

73

Ed K3DNE

Editor's Note: Steve is looking forward to helping the team at KB4DU/W7WZ. Go for it Steve!

Contest Tips:

These tips come from various presentations made at the 2024 Contest University (CTU). Videos and the PowerPoint presentations these tips come from are available at contestuniversity.com
- From K5ZD's It's our Radiosport Game – Let's Play Fair
  - You are recognized by your achievements and how you went about achieving those results
  - Your reputation is strongly influenced by what other people say about you
- From W3LPL's Station Improvements to Improve your Competitiveness in Contests
  - During and After Every Contest Prepare Notes Documenting Your Station's Strengths and Weaknesses Compared to Your Peer Competitors

- Identify every aspect of your station's performance that was strongly competitive with your peer competitors
- Identify every aspect your station's performance that was not competitive with your peer competitors
- Identify improvements that your peer competitors can't match
- Identify every opportunity to improve your station that could have improved your score in this contest, in priority order by:
  - estimated score improvement resulting from each improvement
  - degree of difficulty in achieving each station improvement
  - practicality of achieving each improvement
  - impediments to achieving each improvement
  - expense to achieve each improvement
- Antenna improvements are almost always more effective and less expensive than any other station improvement and they improve both transmitting and receiving performance
- Identify and mitigate all internal and external RFI sources well before the contest
- Execute Your Proof of Station Performance Checklist Before Every Competition
  Prove that everything in your station is in performing properly
  - improve and update your checklist regularly
  - record all antenna VSWR measurements
  - Never enter a competition with unproven station equipment
  - Prove that all indoor and outdoor equipment is working far enough in advance so you can make necessary repairs before the contest
- Station Performance and Reliability Improvement Ideas
  - Transceiver performance (sensitivity, dynamic range, filters)
  - Amplifier output power and reliability
  - Digital watt meters to monitor power output and antenna VSWR
  - Operator environment
    - noise, chair, ventilation, desk height, computer monitor
    - you should not be constantly looking up/down or left/right
    - equipment placement, keyboard placement, desktop space
    - Keyers and paddles and transmitted CW quality – no keyclicks!
    - Microphones and transmitted audio quality
    - Dedicated computers, keyboards and larger monitors
    - Antenna switching close to computer keyboard with no reaching
    - DX spotting network displays and alarms
    - Propagation map displays from the Reverse Beacon Network
    - Wrench tighten all PL-259s, verify tightness at least annually
    - Verify center pin mating force of all SO-239 mating connectors
- K8ZT's Busting Contest Myth's to Get Started in RadioSport
  - The biggest Myth is that there is ONLY ONE WAY to Contest
    - Competitive participation means trying to finish with the highest possible score

- - Noncompetitive participation is focused on other Amateur Radio goals
  - You must get a Trophy/Plaque to be Successful
    Set your own goals
    - Surpass last year's score
    - Place first in a sub-category (high score for your state, call area, etc.)
    - Choose single-band, single-mode categories
    - Continue to improve over time
  - You must have a Kilowatt
    - Using a kilowatt limits you to one power entry category -- probably the most competitive.
    - Amplifiers only increase outgoing signals, but gain antennas work on both transmit & receive
    - If you want even more of a challenge than 100 watts give QRP Contesting a try
  - You must have Stacked Yagis
    - Having the best possible antennas is always a great start to a successful contesting station
    - But towers and yagis are not possible for many hams. Recently more contests are including new restricted antenna overlay categories
  - *Editor's Note: The following isn't a myth. K8ZT's myth was "All Contest Scoring is the Same". He spent many slides discussing why that isn't so. He ended with a summary slide that included the following chart. My interpretation of his point was to develop a winning strategy you must first read the rules of the contest you are entering and thoroughly understand how points are calculated. Then decide how you can best use your individual contesting skills and station strengths to maximize your score.*
    - Multiple Factors lead to contest scoring success

	Factors Contributing to Contest Scoring Success	
1	Number of QSOs	Running (Calling CQ) with prolonged high rates is key to high numbers
2	Point Values of QSOs	Can be greatly influenced by Geographic Location
3	Multipliers	Importance to Final Score influenced by individual Contest's Rules
4	Secondary Multipliers	Varies by Contest, may include Power and/or Mode multipliers, Multipliers by Band, by Mode or One Time, Scoring by Distance, Bonus Points for working certain stations or station types
5	Accuracy	Avoiding UBNs, Lost Points, Lost Multipliers, Penalties, etc.
6	Competition	Who you are competing against varies by year, category, etc.

- There are additional more advanced tips from some very strong contesters in the newsletter section below titled W1DED, 10 Habits of Winning Contesters.

Highlights From The Reflector:

- Kevan N4XL shared a link to a video about FT8 Fox and Hound operation

- Kevan N4XL shared some CQ WPX preparation steps he takes and the N1MM Fkey file he uses. That started some discussion about who puts what where in their Fkey file and how those who use MorseRunner to practice might choose different options for their Fkey file than N1MM's default settings.

- Bob W1RPG, Herschel KA2G, and others participated in the ARQP and shared their scores. We have active participation as a club in the QP's. Dave WN4AFP noted we are still in 4th place (out of 110 clubs) in the State QSO Party Club Challenge Leaderboard. Way to go SFCG!

- Several members noted ARRL had a cyberattack that shutdown several of their provided member services including LOTW.

- Dave WN4AFP asked what the best type of SO-239 barrel connector to use is. Of course he received many answers. Even rarely heard from Dave NJ4F spoke up. He pitched using N connectors instead of the tried and true SO-239's.

- Dennis had kind words for new member Steve AA4V. Steve was very helpful when Dennis moved to SC 18 years ago. It's good to hear Steve actively shares his knowledge and time. Steve helped David AA4VT too. Apparently, David appreciated the help so much he honored Steve by getting as close a call sign to Steve as he could to be continuously reminded of his mentor. Even Rick W4GE said Steve had taught him much of what he knows about contesting and DX. Steve has a very nice station too. Looking forward to hearing more from you Steve!

- President Ed K3DNE shared an update on the SFCG Presidential CQ WPX Internal Club Competition in a post on May 23rd. I'll let you dig it up and see how everyone is doing.

- Watch out for Herschel KA2G! He's upgraded to a FT5000, is going to install a 54ft crank up tower and an A3S. The competition for Number 1 from SC is about to get tough.

- KB4DX did fantastic in the CQ WPX CW with their 3830 score of 11,172,548! Y'all are missing out if you aren't taking advantage of the open invitation to operate from there. Kevan N4XL was disappointed he couldn't drive over to the shack or remote into the station for the contest, but that wasn't the team at KB4DX/W7WZ's fault. Dave AA4VT has done an outstanding job setting up remote linking and Bill N4IQ had no problems at all doing so.

- SFCG participation in Digital contests is picking up. Ed K3DNE was able to organize TWO teams for the outing. There was a lot of discussion about that one on the reflector which included rules, operating tips, and scores.

- There was near unanimous agreement that the KYQP was a bit disappointing this time. That isn't too surprising to me since I don't hear many KY stations during NAQP's. Same thing happens whenever people are looking for Delaware, who is also rare during the NAQP. Still, we hope things pick up next year.

- Besides the stuff mentioned above, Herschel KA2G was also looking for advice on an 80/160 receive antenna. Oh, the horrors the future holds for the rest of us…

- 6 meters has been wide open, particularly using FT8. I bought a 6 meter antenna from Ed. It's bothering me I haven't made time to put it up yet. Things really have been hectic here though so I'm beating myself up too badly. Wonder what Herschel is planning to do on 6?

W1DED, 10 Habits of Winning Contesters

By Kevan N4XL

As Ed K3DNE has mentioned, Kevin W1DED has some great YouTube videos about contesting. I listened to the 10 Habits of Winning Contesters featuring Randy K5ZD, Dan N6MJ, Chris KL9A, and Scott K0MD. If you don't recognize any of those calls you aren't contesting enough. After the first few minutes I decided tips from this were a great fit for our newsletter. You should listen yourself, but here are things I thought particularly insightful. Read the title again. These guys were talking about habits of winning contesters – which they all are.

- People contest for fun or competition. Winners operate with purpose. Your competition won't give you an inch. Even in a 48 hour contest every minute counts and you must stay focused the entire time.
- Competitors hate to lose. K5ZD doesn't want to lose because he failed to do something or didn't do something right.
- Every Q matters. N6MJ said they once had a claimed station record from multi W6YI. They were very happy. However, after log checking threw out some of their Q's and penalized them for inaccuracies. They missed setting their station record BY ONLY ONE QSO.
- Don't let Mr. Murphy stop you. If things go wrong, fix it during the contest and keep pushing. Wins and records have been given to stations that keep driving forward.
- Don't give up if the other guy seems to be winning. Propagation may shift, your station may work better on other bands, their station might break, or they may have to quit earlier than you because they have reached their contest time limit.
- Accuracy is critical because of penalty points. K0MD said to know your limits. Be aware that you need to manage break times for rest. If you stay up through the night to take advantage of low band propagation you may be tired during the great high band runs the next day. That's when being tired will cause you to make many mistakes and lose penalty points. K5ZD agreed. He's older now and gave up trying to work all 48 hours of a contest. He

learned he needs to take a 90 minute break the first night because the daytime rate was going to be far more critical than slower nighttime low band operation.

- Practice contests for major efforts long before the contest. For example, MorseRunner during summer months so you are ready for the major fall contests.
- Good habit. Identify yourself every Q on CW. Every 2 or 3 on SSB. Both K0MD and N6MJ said to do that. People say doing that wastes time and hurts rate, but N6MJ disagrees. He says to look at the hourly rates he gets. Some say they don't identify as often in order to control the pileup. KL9A disagreed saying if you don't ID often people frequently interrupt and ask for your call. That slows things down because it causes more interruptions and requests for your call during contacts. K5ZD said "If you don't send your call, you're asking people to bother you." He added 'If you had time to say QSL or QRZ at the end of your Q then you just had time to send your call.' K0MD also agreed, saying you don't need to say QSL or QRZ, just say "K5ZD." At the end of the discussion K5ZD did note there are always exceptions, but they only work if you ID frequently. *(Editor's Note: It's impossible to argue this group doesn't know what they are talking about. All are good and N6MJ especially is one of the best ops in the world. I'm going back to ID'ing every Q.)*
- Good habit. Don't be a bully no matter how strong a station is. If someone says "The frequency is in use" then move on.
- Good habit. Prepare for the contest. Read the rules in advance. Figure out your contest plan... When are bands going to be open? When should I be where?
- Habit that is good and bad. K0MD doesn't like working US stations when the contest gives zero points for working them. He says it slows him down. Worse, it covers up the DX stations he's trying to work that are worth points. He also said he has been penalized for copying the call/exchange wrong even though the Q wasn't worth any points (K5ZD disagreed saying the log checking program doesn't do that, but K0MD said he has the LCR's to prove it does.) K5ZD disagrees with him saying it is good that US stations call even though they are zero pointers. Those are mostly noncontesters that we should be encouraging to call. He says even though they hurt this weekend we will really want them to call during next weekend's contest when they ARE worth points. Don't shut them down. Make them want to jump in and give us contest Q's.
- Good habit. Strategy tip. Situation... N6MJ says you are in a contest using serial numbers where US stations are allowed to work other US stations. If rate is slow and someone calls him from the US and gives "Number 1" he replies, "Thank you for your Number 1." He does that because he knows there are 10 other people listening wondering if they should call him. After making it clear he was grateful for the call, three or four more jump in and give him their number 1. You get the highest scores by working the noncontesters and you should encourage them to call by being personable during lower rate periods. K5ZD says the art is "Make them want to call you." Take time to explain the exchange you need, be it state or serial number. He too knows others are listening. He also knows it encourages that person, and those listening, to come back next weekend too.

- How long should you try to dig someone out of the mud? N6MJ says 15 to 20 seconds in high rate situation. Maybe up to 45 seconds in a low rate situation. Rarely spend more than a minute. K5ZD said it isn't about time. "If we're not making progress after three over's then it's probably time to move on." K0MD says this is a thing that POTA ops, DXer's, and new contesters find hard to learn. Consider how much the Q is worth. There comes a point when you shouldn't spend time chasing a rare mult because you can get a ton of points working easier less sexy stations during the time spent.
- Bad habits of experienced contesters.
    - Bullying.
    - People who send CW too fast all the time – even during aurora flutter and on noisy 160 meters. N6MJ says when rate is low there isn't any point to send fast CW or talk fast on SSB. Slow down during those times.
    - People take a few minute break. They come back and start CQing even though someone is now running people on the band. If you left the frequency for a break and someone else takes it, find a new CQ frequency.
- Good habit. If you realize two of you are on the same frequency, then someone should move. It's usually better for you to just move on.
- Good habit. Have patience. Cooperate in pileups.
- For new contesters. It's always a good idea to send your full call phonetically. Don't use cute fancy phonetics.
- Have at least two sets of phonetics for your call. It's good to know what works best for the area of the world you are talking to. K0MD gave example. He uses Kilo Zero Mike Delta. JA's think he is saying Mike Alpha so when beaming to JA he uses Mike David. Mike Denmark doesn't work for EU. Mike Delta works best there. Spanish speaking stations in South or Central America do best with Mexico Diego.
- Don't chase bad spots. Develop some sense of call recognition. Example, if you see ZF1A spotted and then ZF1AA appears on same frequency, the chances are pretty good it is ZF1A. He is much more active in contests. Listen carefully to make sure it isn't ZF1AA though. Learn propagation. If the spotted call is Somalia but the bands probably aren't open to there right now, then the odds are it's a busted call. BY1V is not normally a super loud station on 10 meters at 2000z. If he is spotted at that time on that band, then the spot should probably be 6Y1V.
- If you're a weak station, act loud.
- You need good audio for SSB contests. Get on the air with someone who knows you and tweak your audio so that it sounds good. A $40 gaming headset often sounds and fits just as good, and sometimes better, than a $300 ham headset. Rigs have equalizer's these days.

Observations by the Editor:

- The book Physical Design of Yagi Antennas" by David Leeson W6HQS is considered a masterwork on building classical yagi antennas. It is a bit technical, but reading it gave me a deeper understanding of the issues involved in constructing an antenna made to last. I found that knowledge helpful when considering which yagi to purchase for my own shack. It is now out of print, but freely available for download at https://www.dropbox.com/s/hmhkeofz0igrg1e/Physical%20Design%20Of%20Yagi%20Antennas%20D%20B%20Leeson%20V2.pdf?e=1&dl=0 and the supplemental materials spreadsheets are at https://www.dropbox.com/scl/fo/u4o0teln9hkn7hagbs5eu/h?rlkey=fy1rj0kw4vjld2ddjc17m4rza&dl=0

- Huh. How bou dat? Who'd a thunk WA7BNM would make his calendar easier to read? I just went through that humongous list of contests for the remainder of the year to put the dates on our house calendar to let the XYL know I'd prefer those weekends remain free. It's always hard sorting through WA7BNM's list and I worry I missed something. Yeah, I know. He has a way to customize the calendar to only show specific contests you want to see. But using that means going through a list of a hundred or so and selecting only those I want. A pain. Plus doing it that way means you could filter out and never see contests you are later interested in. (Does anyone actually read the weekly contest list Ed K3DNE sends out?) Everyone knows there are weekly contests. They contribute to most of the WA7BNM clutter. Wouldn't it be nice if you didn't have to see them unless interested? Aha! What's that blue box at the top of the list? The one that says, "Show Weekly Contests". What happens if I click on it? I feel stupid. How long has that been 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 normally describe the fixed problem*)

  - Spots: FT8 / FT4 spots are not filtered by the spot processing code when CW mode is selected. Program operation note: These are the only spot comment mode strings accepted: "CW", "LSB", "USB", "FT8", "FT4", "RTT", "PSK". (N2WQ) (Coded by K3CT)
  - Telnet Spot Mode Filter: Unchecking all modes did not update the mode filtering to pass all spots. (Coded by N1MM)

- o Entry Window: Pressing F5 on the keyboard with a ? in the callsign sends the partial callsign and question mark, but the question mark isn't highlighted when the transmission ends (WN3A)(Coded by K3CT)
  - Many checkboxes and options can be found on the tabs of the Configurer window that help you improve efficiency or customize how N1MM functions. It's worthwhile to stroll through the various tabs for ideas. If something's function isn't obvious by its description you can find it in the N1MM+ manual. Here are some examples.
    - o Clear automatically populated exchange on callsign change
    - o Per Operator Function Key Messages
    - o Check for new program versions
    - o Mode control
      - ▪ Use radio mode (default)
      - ▪ Use contest mode or bandplan
      - ▪ Use contest or radio mode
    - o Report Real-Time Score to Server and Exclude band breakdown
    - o Send partial calls
    - o Stop sending CQ when callsign is changed
    - o Work dupes when running
    - o SSB UpDown Arrow increment (kHz)
    - o CW & Dig UpDown Arrow Incr

  - Call History Files (CHF)

    - o These are very helpful for competitive contesting. These files automatically populate the exchange used by a call sign in a previous contest. Blindly accepting provided information sets you up for significant score reductions due to penalty points though. Particularly in contests like the NAQP where people often change the name or have moved to a new state. You need to tell N1MM to use CHF in two different places. First is while setting up the log. Do that on the Associated Files tab of the contest setup. Second is under the Config menu found on the Entry Window. Click on the Enable Call History Lookup line.

    - o If the CHF has the wrong exchange information you are setting yourself up for multiple penalties. Although I train myself to always verify the call and exchange, every now and then I somehow mess up and accept the prefilled exchange. N1MM has the ability to update the CHF during a contest. If I override a prefilled entry with a correct exchange I make it a point during a slow point to do that. Select Tools> Update Call History with Current Log from the Entry Window.

  - You should save their positions after putting N1MM's windows in just the right places. From the Entry Window, Tools>Save Window Positions. If something happens and they are moved or disappear use Tools>Restore Window Positions.

- Bill N4IQ taught me how to better use the {PGUP}, {PGDN}, and {FREQDN} macro commands. Those macros can be assigned individually to Fkeys, or combined with other actions in a key like F3's TU message where after sending TU it causes the rig to jump the required distance before logging another Q. The ARRL Sweepstakes contest is an example where you must change frequency after every Running Q and those macros are ideal for that situation.

Upcoming Contests:

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

SFOTA Current Leaderboard:

Current Leaderboard

2024 OVERALL STANDINGS

	CALL	Contests	CW QSO'S	SSB QSO'S	DIGITAL QSO'S	RTTY QSO'S	TOTAL QSO'S
1)	N4IQ	48	6546	2095	549	3336	12526
2)	WB4HRL	175	8701	987	241	1350	11279
3)	WN4AFP	68	6034	2453	0	0	8487
4)	KE4EA	125	6842	460	8	3	7313
5)	K2SX	26	6819	0	0	0	6819
6)	K3DNE	31	1133	3684	929	0	5746
7)	KZ3P	57	1678	2783	0	1148	5609
8)	N4XL	9	4139	1057	0	0	5196
9)	K4QQG	31	0	3180	236	516	3932
10)	NU4E	5	1700	2151	44	0	3895
11)	K4FT	54	3714	158	0	0	3872
12)	KG4IGC	8	304	782	0	1688	2774
13)	AA5JF	7	1745	806	14	0	2565
14)	KA2G	26	0	1612	256	0	1868
15)	N4QI	37	1335	302	0	222	1859
16)	KD4S	35	1221	193	87	317	1818
17)	KY4ID	13	1185	62	0	377	1624
18)	N1UZ	8	290	0	233	987	1510
19)	K7OM	11	507	0	0	976	1483
20)	N1SUZ	27	0	1413	0	0	1413
21)	NI7R	4	1324	88	0	0	1412
22)	WA4LDU	22	246	513	358	184	1301
23)	AA4SD	10	1269	0	0	0	1269
24)	N4VZ	10	0	433	517	255	1205
25)	W1RPG	16	0	702	102	11	815
26)	KS4YX	5	176	0	13	565	754
27)	N2OG	6	210	172	0	0	382
28)	WA2BCK	1	0	0	375	0	375
29)	WB5NHL	9	0	194	0	102	296
30)	N4VGE	1	0	167	0	0	167
31)	NE4EA	1	50	0	0	0	50

2024 INDIVIDUAL MODE STANDINGS

CALL	CW QSO'S	CALL	SSB QSO'S	CALL	DIGITAL QSO'S	CALL	RTTY QSO'S
WB4HRL	8701	K3DNE	3684	K3DNE	929	N4IQ	3336
KE4EA	6842	K4QQG	3180	N4IQ	549	KG4IGC	1688
K2SX	6819	KZ3P	2783	N4VZ	517	WB4HRL	1350
N4IQ	6546	WN4AFP	2453	WA2BCK	375	KZ3P	1148
WN4AFP	6034	NU4E	2151	WA4LDU	358	N1UZ	987
N4XL	4139	N4IQ	2095	KA2G	256	K7OM	976
K4FT	3714	KA2G	1612	WB4HRL	241	KS4YX	565
AA5JF	1745	N1SUZ	1413	K4QQG	236	K4QQG	516
NU4E	1700	N4XL	1057	N1UZ	233	KY4ID	377
KZ3P	1678	WB4HRL	987	W1RPG	102	KD4S	317
N4QI	1335	AA5JF	806	KD4S	87	N4VZ	255
NI7R	1324	KG4IGC	782	NU4E	44	N4QI	222
AA4SD	1269	W1RPG	702	AA5JF	14	WA4LDU	184
KD4S	1221	WA4LDU	513	KS4YX	13	WB5NHL	102
KY4ID	1185	KE4EA	460	KE4EA	8	W1RPG	11
K3DNE	1133	N4VZ	433			KE4EA	3
K7OM	507	N4QI	302				
KG4IGC	304	WB5NHL	194				
N1UZ	290	KD4S	193				
WA4LDU	246	N2OG	172				
N2OG	210	N4VGE	167				
KS4YX	176	K4FT	158				
NE4EA	50	NI7R	88				
		KY4ID	62				

3830 Activity:

Contest	Call	Class	Pwr	Score
ARQP				
05/21/24	K3DNE	SOSSB	HP	99
05/19/24	K4FT	SOCW	LP	1,090
05/19/24	K4QQG	SOSSB	HP	588
05/19/24	KA2G	SOSSB	HP	1,578
05/19/24	KD4S	SOMixed	HP	1,103
05/19/24	KZ3P	SOMixed	LP	1,208
05/19/24	N1SUZ	SOSSB	LP	560
05/19/24	N4QI	SOMixed	LP	25
05/19/24	W1RPG	SOSSB	LP	400
05/20/24	WB4HRL	SOMixed	HP	680
05/19/24	WN4AFP	SOMixed	LP	859
ARRL Dig				
06/03/24	K3DNE	SO1R-24	LP	6,678
06/03/24	K4QQG	SO1R-24	LP	1,706
06/03/24	KA2G	SO1R-24	LP	2,905
06/02/24	N1UZ	SO1R-8	LP	233
06/03/24	N4IQ	SO2R-24	LP	5,286
06/03/24	N4VZ	SO1R-24	LP	6,059
06/03/24	W1RPG	SO1R-8	LP	790
06/03/24	WA2BCK(@W2FU)	SO1R-24	LP	3,303
06/03/24	WA4LDU	SO1R-8	LP	1,052
06/03/24	WB4HRL	SO1R-24	HP	1,428
ARRL June VHF				
06/10/24	K3DNE	Single Op-All Modes	HP	75,432
06/10/24	K4FT	Single Op-Analog	LP	486
06/10/24	KD4S	Single Op-All Modes	HP	3,690
06/10/24	N4VZ	Single Op-All Modes	LP	1,800
06/10/24	NU4E	SO3Band-All Modes	HP	4,240
06/10/24	W4EEY	Single Op-All Modes	LP	9,028
06/10/24	WA4LDU	Single Op-All Modes	LP	11,316
King of Spain CW				
05/19/24	K7OM	SOAB	HP	2,368
05/19/24	KZ3P	SOAB	LP	1,430

Contest	Call	Class	Pwr	Score
05/19/24	N4QI	SOAB	LP	434
KyQP				
06/08/24	K3DNE	SO Fixed	HP	116
06/02/24	K4FT	SO Fixed	LP	1,904
06/04/24	K4QQG	SO Fixed	HP	16
06/03/24	KA2G	SO Fixed	HP	9
06/02/24	KD4S	SO Fixed	HP	1,300
06/02/24	KZ3P	SO Fixed	LP	2,400
06/02/24	N4QI	SO Fixed	LP	410
06/02/24	W1RPG	SO Fixed	LP	342
06/03/24	WB4HRL	SO Fixed	HP	1,278
06/02/24	WN4AFP	SO Fixed	LP	3,506
WPX CW				
05/27/24	K7OM	SOAB	HP	146,856
05/28/24	KB4DX (K4FT, AA5JF, N4IQ, KB4DX, AA4VT, WN4AFP @W7WZ)	M/2	HP	11,172,548
05/27/24	KD4S	SOAB	HP	114,800
05/27/24	KE4EA	SOAB	LP	210,222
05/28/24	KG4IGC	SOAB	LP	204,816
05/27/24	KZ3P	SOAB TB-Wires	HP	348,920
05/27/24	N4IQ	SOAB TB-Wires	HP	781,340
05/26/24	N4QI	SOAB	LP	122,608
05/27/24	N4XL	SOAB	LP	661,152
05/28/24	NE4EA	SOAB Unassisted	LP	5,612
05/29/24	NI7R	SOSB40 TB-Wires	HP	59,893
05/27/24	NU4E	SOAB	LP	40,032
05/27/24	WB4HRL	SOAB	HP	29,150
05/30/24	WD8RYC	SOAB	HP	1,725
06/14/24	W1RPG	Single Op	LP	9
05/21/24	K3DNE	SOSSB	HP	99
05/19/24	K4FT	SOCW	LP	1,090
05/19/24	K4QQG	SOSSB	HP	588
05/19/24	KA2G	SOSSB	HP	1,578
05/19/24	KD4S	SOMixed	HP	1,103
05/19/24	KZ3P	SOMixed	LP	1,208
05/19/24	N1SUZ	SOSSB	LP	560
05/19/24	N4QI	SOMixed	LP	25

Contest	Call	Class	Pwr	Score
05/19/24	W1RPG	SOSSB	LP	400
05/20/24	WB4HRL	SOMixed	HP	680
05/19/24	WN4AFP	SOMixed	LP	859
ARRL Dig				
06/03/24	K3DNE	SO1R-24	LP	6,678
06/03/24	K4QQG	SO1R-24	LP	1,706
06/03/24	KA2G	SO1R-24	LP	2,905

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73 es QRT de N4XL