



#617 – December 2023



JUG

Publication of the Northern California Contest Club

NCCC

NCCC – 53 years of contesting excellence

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NCCC MEETING
<https://nccc.cc/meetings.html>

Next ZOOM Meeting Tue 12 Dec
1800 PST

N6DE: "2023 CQP Results"
N6XI: "Travels, Hams, Their Toys"

President's Report David West, KO6M



Hello Fellow KB'ers,

Happy Holidays! I hope this issue finds you filled with Holiday Cheer.

By the time this article is in your hands we will be in the final moments of the ARRL 10m Contest. I want to say thank you to Chris for his hard work in making our effort so strong. As well thank you to Bob Cox for all of his support and wise words about when to be on and why. I probably didn't get to participate in it as much as I had hoped. Between a birthday for one of my children and a work event my daytime hours were probably less than stellar. However, if I'm wrong, I'll be very happy. I hope you all had a great time and things worked out for you.

We will also be seeing the results of CQP in the coming days, thank you to Dean and his crew for their hard work in getting the results out in a timely manner. I've said it before and I'll say it again "CQP is the best QSO Party out there and for some, it is the best contest out there."

Remember, no matter how large, please send your logs to the ARRL. Every log matters.

73 and KB



About NCCC

Officers and Directors, 2023-2024 Contest Season

President: David West, [K06M](#)
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NS CW Ladder: Bill Haddon, [N6ZFO](#)
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Webinars: Bill Fehring, [W9KKN](#)
Membership: Gary Johnson, [NA6O](#)/Ian Parker, [W6TCP](#)

JUG Editor

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and as a world class club. Oh and one more thing...

As part of this great club, we have such a diverse membership from worldwide backgrounds that add to our strength in contesting. There are many different holiday celebrations that occur this time of year and I wanted to wish you and your families all a wonderful and fun holiday season, and thank you all for your membership in our world class contest club.

73 and seeya next time

Chris N6WM
VP/CC

VP/CC Report

Chris Tate, N6WM



Greetings team NCCC! I feel I can say that now with proper context after weeks of preparation of going after the Unlimited gavel in the 10M contest. By the time most of you will read this, the contest will be over, but I take away from the lead up and preparation with a few realizations.

1. Its been a long time since we have done this.. and its nice to get team NCCC back together and working toward a common goal.
2. We have new members who have not had an opportunity to chase a gavel with the NCCC, and they are on board and raring to go! This is wonderful.
3. I noticed lots have forgotten some of the sacrifices needed in order to support the team competition.. but when reminded stepped up and made it happen!
4. When the team gets fired up, its so much fun!
5. I want to send big thanks to Elmers who have chimed in along the way, Bob K3EST, Bill N6ZFO amongst others.

I also wanted to use this platform to send a big thank you for putting up with daily emails, for perhaps sacrificing a ARRL certificate or piece of lumber, and for getting involved in trying to achieve a collective goal for our great organization. Its fun working together, as a team



Ken Beals, K6MR (SK)



Via W6SX: "I am Ken Beals wife. I have some very sad news. My beloved Ken passed away on November 13th. I am at a loss for words as my younger brother also passed away about a week after Ken. I have been with my family during this sad time in my life. Our family held a private memorial for Ken and my brother. It's been difficult but I wanted to notify Ken's friends. I am asking some of Ken's close ham radio friends to alert others through their ham radio connections. I would greatly appreciate it."

From N6ZFO: "With much sadness I report the passing of one of our most vigorous and dedicated NS participants, Ken, K6MR. Ken was an early NS'r and, for several years, ably ran the RTTY-NS after one of our other Kens, N6RO finished that assignment. While I served as editor of our NCCC Jug newsletter Ken wrote two excellent, award-winning, articles appearing in JUG issue #579, 10 October 2020 at nccc.cc/newsletter.html One described the wildland fire which destroyed his station in Redding, CA (200 mi north of SF) and the other his very creative use of a single KP-1500 for SO2R. As you will see in the articles, Ken was an outstanding craftsman.



While mostly a RTTY enthusiast, Ken achieved excellent scores, one year almost 300,000 points, in the Cal QSO party. See the pictures and wrtieup at cqp.org/seq/seq-K6I.html."

From KF6NCX: "I am going to miss Ken a lot. He was a great guy and a great operator. He had been my Elmer for the last five years or so. Each Friday morning we'd chat for a couple of hours either on the radio or by phone. When we started talking, Ken told me I needed a logger. I said to him, "What's a logger?" That's how little I knew. Ken was an extremely patient teacher. It took many phone/radio sessions for him to set up my rig so I could do FT8. He never got discouraged but just kept at it (even though he really couldn't stand FT8).

Ken began doing contests when he was in high school in Southern California. Around that time, he was hired by a guy who installed and repaired ham radio antennas. The boss could no longer climb towers, so he hired Ken to do the climbing. Ken said he went all over Southern California working on antennas. He learned a ton and met many ham radio characters. Ken had a heart of gold. He was always ready to help other hams."

Rest in Peace, Ken



Some Aruba Contesting History

20 years and (almost) 200 Contests from P40I/P40Y

Andy Faber, AE6Y

Part 2

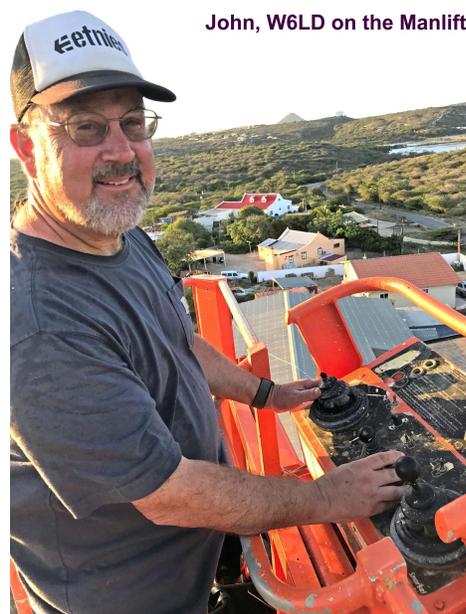
Tower Rebuilds

We have completed two complex and expensive tower rebuilds. In each case, John, W6LD, performed miracles of logistics, buying towers, antennas, and supplies from a variety of sources (with a particular shoutout to DX Engineering for their assistance), and having it all sent to a freight forwarder in Miami, who crated it up and shipped it to Aruba, where JP and Cris picked it up and cleared customs. Whew!

In 2008 we replaced all three towers and put in a new suite of Force 12 antennas, cables and feedlines. We ended up with our three towers as follows (a) One Rohn 25, 45 feet high with a C31XR on top; (b) One Rohn 45, 67 feet high, with a 4-element 20 at 68 feet, a 2-element 40 at 76 feet, and an 80m single-element shortened dipole at 64 feet; and (c) A second Rohn 25, 54 feet high, with one 30-foot boom antenna with 5 elements on 15 and 2 elements on 10 (no kidding, a one-off Tom Schiller, N6BT, special). This work took almost two hot, sweaty weeks and was undertaken by John (W6LD), Ed (W0YK), Tom (N6BT), and myself (AE6Y), with assistance from JP (P43A), Andy Bodony (K2LE) and John Crovelli (W2GD).

Our second rebuild took two extended visits to accomplish, in the fall of 2019 and spring of 2020, finishing just before the great Covid lockdown in March 2020. This time the main changes were to replace all of the tower sections other than the bases of the Rohn 45 and one of the Rohn 25s, and the antennas, including a new suite of JK yagis. The full story is told on our website, with many pictures. See www.arubaqth.com. It was a lot of work for John, Ed and myself, and is a cautionary tale for anyone thinking of setting up such a station. Because of the degraded condition of the towers, all work was done with a man-lift, and W6LD became an expert man-lift operator. These are readily available on the Island but are not cheap. We replaced the C31XR with a JK Mid-Tri; the Rohn 45 antennas were replaced with a JK 2040 (2 elements on 40 and 4 on 20). Our former rotatable 80m dipole (which worked well but put quite a strain on the tower) was replaced with a wire inverted vee; and the old 10/15 was replaced with JK 1015 with 5 elements on 15 and 6 on 10. We use a vertical dipole for 160, hung off the Rohn 45 tower.

Although John has done extensive computer analysis of optimal antenna heights, the height of the towers has been mostly driven as a practical matter by what has been reasonably possible given the size and shape of the lot and the difficulties of guying in such an area. Carl set the bases originally to what seemed the optimal locations, and we have followed suit, though in the rebuilds we have raised the Rohn 45 by 10 feet and one of the Rohn 25s by almost 20 feet.



John, W6LD on the Manlift



Planning for the best antenna performance has been tricky. Classic antenna parameters like forward gain, and front-to-side and front-to-back ratios have varying desirability in this location. One lesson we have learned is that it is often useful to have more than one option on a band if possible. At any given time there may be one antenna that has a significantly better signal to noise ratio than another, even if the causes of both the signal strength (propagation) and noise strength (noise origin and transmission mode) are inscrutable. From Aruba, the great bulk of stations that will answer CQs are within an arc of about 35 degrees on either side of north – to the northwest for West Coast US and JA, north for East Coast US, and to the northeast for Europe. When in doubt, we point the antennas north and hope for the best.

We often operate, say, during a European run, with the main antenna (like the 5 elements on 15) aimed NE, with the mid-Tri aimed N or NW, to enable us to hear stations both in NA and EU. We switch among them using WX0B SixPaks and StackMatches. Also, with our last rebuild we added a small, two-element SteppIR at 36 feet on the Rohn 45 fixed in a north-south orientation.

The SteppIR was added to address several perceived challenges: (1) modeling that showed that the 56-foot height of the 10/15 meter yagis was too high for certain conditions; (2) concerns that the 10/15 meter yagi beamwidths would be too narrow to cover both NA and EU when those bands were open in both directions; and (3) to help work the increasing number of stations from South America, as the antenna can be switched from north to south, or both, from the control box. The usefulness of this addition was clearly apparent to me in one recent contest, when it turned out that for several hours the SteppIR was my best run antenna and was good for many hundreds of contacts. The combination of low height and broad pattern made it the go-to choice on that occasion, just as our modeling had suggested would occur under certain conditions.



So far the JK antennas have held up very well. They are constructed fundamentally differently than our prior Force 12 models. One of Tom Schiller's innovations in antenna design with Force 12 was to use rivets for element construction. (In our 2008 rebuild we inadvertently offended Tom by adding so many extra rivets for reinforcement to the 20m yagi that it seemed like half the element weight was rivets!). This made the antennas easy to put together, and it was convenient to pretty much use one size of rivets for all the elements. Other manufacturers use other designs, including hose clamps. The JK approach is to use screws and lock nuts, which leads to a complicated assortment of small parts being required, as well as several sizes of wrenches. When we have called him on the phone to discuss fine points of tuning, Ken Garg, the founder of

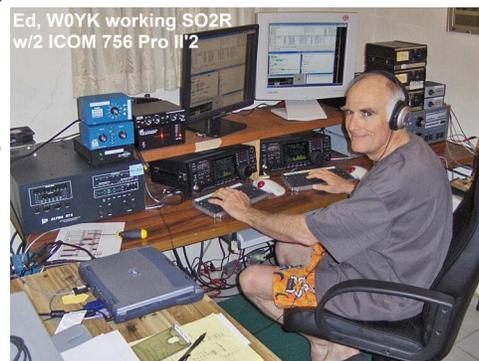
JK, has been very helpful and has made very precise suggestions for element trimming for best results.

Radios



We have employed a succession of radios, starting with the venerable FT1000D that came with the purchase. It worked well, and its controls had the elegant feel of precision machinery. The drawback was size and weight; a major problem in Aruba is the general necessity to bring equipment back to the U.S. for repairs. Shortly after the purchase, we added an FT990 and another FT1000D to complete a Yaesu two-radio station, along with filters and filter switchboxes. We later settled for a while on ICOM 756 Pros, then replaced them with a shack K3, generally augmented by users also bringing their own K3s or K4s with them. Their small size and low weight, coupled with excellent performance, has made these Elecraft units ideal for an overseas station, as they can easily be transported as carry-on luggage.

We've used a succession of Alpha amplifiers, but again the need for servicing argues against these bulky, heavy units, and we may switch to solid state units in the future. Our original 87A is only partly functional, so the main units now are a 91B bought from John Bayne (KK9A, P40A) when he sold his station, and a venerable 86. We've had several of the latter amps, and they generally continue to be reliable, even though they are decades old.



Licensing

As most contesters know, there are several P4 prefixes in use on Aruba. Locals like JP and Lisandro, get P43 calls (P43A and P43L, respectively), and, more recently, P41 prefixes. Normal licensing on Aruba used to require visiting amateurs to obtain a one-year license that allowed them to operate as P4/[home call]. In addition, it was possible to apply for a 30-day special call sign with the P40 prefix. Aruba is now a CEPT country, so temporary operations can be done with no local license using P4/[Home call]. You can also now obtain a 90-day special call sign using the P40 prefix, or most recently, the P44 prefix, from the DTZ.

It also used to be possible for foreigners to take a test and get a P49 call. Carl Cook, as P49V, was an early exemplar, but for the past 10 years or so the Aruba licensing authorities have suspended all testing, so foreigners have been unable to get a p49 call (and, strangely, even locals must rely on obtaining a U.S. license and the issuance of a local call sign based on the U.S. license).

I decided in the fall of 2004, shortly after buying the house, that I'd like to see if I could obtain a permanent P49 call sign (and later, Ed did the same to get P49X as well). Carl, who had acquired P49V years ago, suggested I get in touch with Humphrey Maasdamme (P43HM), who seemed to be the local licensing guru and who could tell me about the theory part of the test. I was delighted to learn that their working syllabus of electronics and radio theory was quite similar to what I had learned to take my general test in 1958; i.e., classic vacuum tube stuff. On the Internet I bought for a few dollars a used copy of the same book I had used 45 years ago: the Ameco Radio Amateur Theory Course and felt a strong sense of déjà vu as I again studied up for the equivalent of a general class exam from the 1950s.

When I returned in February 2004 for the ARRL CW contest, I called Humphrey per his suggestion to arrange a "tutoring" session for my Aruban license exam. He was a slight, elderly gentleman about to turn 75 years old. He "brushed me up" while we sat at the kitchen table for about an hour and a half. He would draw diagrams and ask questions about vacuum tube circuits – not one question about transistors, ICs, digital forms of communication or the like. I mostly knew what he was talking about, though we argued about one or two points,



and there were a few areas where he corrected my thinking. When we finished he said that I really knew my stuff, and he pronounced me more competent than other Americans he had tutored over the years. Thanks, Ameco.



On the day of the test I had an appointment at the DTZ for a 10 a.m. exam. There were three examiners in the conference room at the back of the DTZ (the first time I had been through the normally locked door into the inner sanctum of their office): Chief Inspector Ken Lovell, Humphrey (who did the theory and CW parts), and Mr. Provence, a pleasant, elderly gentleman who covered the regulations. They were friendly and cordial throughout. The day before, I had received from Ken Lovell a two-page English translation of the relevant Laws, which mainly dealt with licensing, not operating.

[Caption: The examining committee, Humphrey (P43HM), Mr. Provence, Ken Lovell.]

The exam went like this: first Mr. Provence asked a few regulatory questions, then Humphrey grilled me on theory. Combined, these two elements took about 25 minutes. I was then sent out in the hallway for a few minutes, summoned back in, and congratulated on passing. Then Humphrey cranked up a rusty old hand key and a code practice oscillator to send CW to me, using Dutch language plain text at 12 wpm. The key hadn't been used in so long that the contacts had to be cleaned before it could send recognizable CW. I then sent some Dutch text back for two minutes or so. I was again sent out to wait in the hall, this time for 10-15 minutes, long enough to read all the notices on the employees' bulletin board and finish a cup of coffee thoughtfully provided by one of the nice ladies of the DTZ.

I was then called back in, congratulated again, and given my test grades. Each element is graded, according to the Laws, on a scale of 1-10, with 6 being a passing grade. They gave me a 10 on Regulations, a 10 on Theory, a 9 on CW receiving, and an 8 on sending. On receiving, I thought I had copied perfectly, but Humphrey said I had made a few characters into a new word that should have been part of a previous word (I thought it was due to his sending, but wisely decided to keep such thoughts to myself). On sending, Humphrey's comment was, "I can see you are not a hand key man." I agreed and reminded him that I had warned them I hadn't used a hand key in 25 years. Then there was more paperwork and another fee to be paid. Ken kindly volunteered to write for my signature the requisite letter in Dutch to the Governor of the Island requesting the P49Y call. When I had chosen that call sign, he said, "I see you are a Y man" – to which I replied, "Y not?" I left a box of Perugina chocolates for the staff ladies.

Aruban ham social life

One of the nicest aspects of Aruban contesting is the friends one makes on the Island. There are quite a number of resident hams with whom we have contested, visited, and enjoyed beers and meals, including: Jean-Pierre and Cris (P43A, P43C), Jackie (P43P), Lisandro (P43L) and XYL Lissette, Emily (P43E – SK), Joop (P43JB – SK). In addition there are a number of regulars from overseas, mostly the US, including most prominently John (W2GD, P40W, P44W), who has his own station about a mile away, Andy (K2LE, P40LE), Mat (DL4MM,



P40AA, who operates the CQ 160 from our station); Ken and Kay (K6TA, P40TA – SK, K6KO, P40K), who would operate the ARRL 160 and 10m contests), Robert (W5AJ, P40P), John (KK9A, P40A), and many others.



We routinely borrow and lend equipment to each other and have often availed ourselves of W2GD’s antenna and tower expertise – in return we try to help out with the endless tasks at his station of stringing beverages and setting up his 40- and 80-meter V-beams.

For years we have enjoyed a traditional “post-contest dinner,” though as the contest population has aged that seems to have agreeably morphed into a “day after, post-contest breakfast” tradition.

Unfortunately, several of the locals who were always enthusiastic and welcoming to the ham community have become Silent Keys. This includes Emily, P43E, who ran the P4 bureau and was a WRTC participant a few years ago. Also, Joop, P43JB, a Dutch ex-pat that I used to call the “Last Colonial.” His tower and tribander in downtown Oranjestad were visible from the cruise ship terminal, so he was constantly entertaining visiting hams with an endless supply of cold Heinekens on his outdoor shaded patio. And, of course, we mourn the recent passing of Ben, DL6RAI, who purchased Carl’s second station and sadly was killed in a tower collapse.



What it’s like to operate contests on Aruba

First some statistics: As of this writing there have been 192 contest operations from the P40L/P49Y station, in just over 20 years. Each operation is chronicled in more or less detail depending on the operator’s journalistic inclinations on our website www.arubaqth.com/contestresults.html. Of these, 87 have resulted in a first-place worldwide result and 181 have yielded a top-5 finish – not bad for a small station on a 10,000 square foot lot! We’re rather proud of those results, though sometimes it can put some pressure on the operator(s) to go all-out and not just have a fun





weekend of casual contesting. Personally, not counting multi-ops, I have made more than a quarter million QSOs from this station over the years, and I suspect John and Ed have made as many, if not more.

We've improved our results as we all have gained experience. Neither John nor I were experienced contesters when we bought the site. We had never operated from a serious DX location and I for one had never done a contest more demanding than the 24 hours of ARRL Sweepstakes or the California QSO Party. To suddenly be operating single-op in serious 48-hour slugfests against some of the best operators and stations in the world was definitely like learning how to swim by being tossed into the deep end of the pool. But we got a rapid education. When I operated in ARRL DX CW in 2003, I had not had even one single QSO on 160. I also had never had to maintain 200+ per hour run rates and never had to think about moving multipliers, not to mention staying up for over 40 hours in a weekend (think about it: a 48-hour contest is like spending six eight-hour workdays chained to your desk in sedentary concentration). However, I did that contest three years in a row, improving my worldwide standing from fourth, to third, to second (a really good effort in 2005, just barely edged out by a slightly better one from Tom, W2SC, at 8P5A).

John similarly has improved his skills through years of contest operations at the station. And, of course, Ed is a great RTTY success story. Starting with no knowledge of RTTY, he self-taught himself to win many RTTY contests and become "Mr. RTTY" (my title for him, not his) in the contesting community.

Our normal scheduling plan is for John and me to divide up the three major CW/SSB DX contests each year: ARRL DX, CQ WPX, and CQWW, alternating modes each year. Ed has been operating the RTTY contests, which often spill over into a multi-op with John if another one is coming up (e.g., ARRL DX CW after operating CQ WPX RTTY). However, we all have constraints of work, family, etc., so that often we are switching contesting slots, and sometimes neither of us is available. Most recently W2GD had filled in for a number of such contests, particularly during the pandemic when travel was a lot easier for him from New Jersey than for us from California.



The website shows the following numbers for total contest operations: AE6Y, 53; W6LD, 38; W0YK, 58; W2GD, 13. In addition, over 100 contests have involved other hams at the key, mic, or keyboard, either as multi-ops or because they were a single-op for that contest. Traditionally I have preferred to test myself in single-op endeavors, while John prefers the teamwork and camaraderie of a multi operation. The station isn't big enough for a M/M setup, and when we operate M/S or M/2, we aren't able to have the multitude of in-band and multiplier station positions that larger stations designed for such operation can muster. The station works reasonably well for traditional SO2R, but efforts

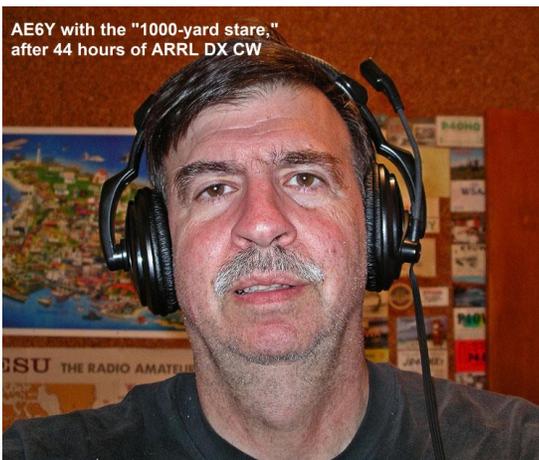
to operate concurrently on multiple bands are often hampered by the presence of persistent inter-band interference believed to be caused by signal retransmission at diodes formed by the many corroded joints of metal roofs in the immediate vicinity.



It was interesting when I first started operating 48-hour contests to see the effect it has on the operator both physically and mentally. After a while, these effects become somewhat predictable and thus easier to bear. In Aruba, the big contests start at 2000 local time (8 p.m.), as Aruba is in the Atlantic time zone four hours behind Universal time (same as eastern Canada). The first few hours are always fun, as rates are high and everyone is jazzed for the contest. A few hours after midnight Saturday morning tends to be my psychological and physiological low point for the weekend, when I get particularly sleepy and start thinking that it is going to be a very long, tiring weekend. OTOH, there are times when in the middle of the night 40 meters seems to be wide open simultaneously to all parts of the world. Those moments can be unbelievably exhilarating, and it will definitely keep you awake to have guys calling in from the Pacific, North America, South America, and Europe in quick succession.

Saturday morning as the sun comes up and I open the curtains on the two windows in the shack, the circadian rhythm kicks in as the high bands open and the good daytime rates resume. During the second evening, I often find myself paradoxically feeling better than I did the first night. However, the rate usually slows way down after midnight, and I typically head off for three to four hours of sleep. Waking up and getting back to the rig after a deep but short sleep is very difficult, particularly because Sunday morning usually brings the normal Caribbean doldrums, as the NA and EU stations work each other and no one listens for us. Actually this effect is worse the better the conditions are generally – so the lesson is that any given state of propagation can benefit stations in one part of the world at the expense of others. While better propagation can make for more Qs and mults, it doesn't necessarily make us more competitive.

Rates tend to pick up around noon on Sunday, but in the afternoon I have sometimes found myself hallucinating. This is a strange, out-of-body experience in which I usually can operate OK, but my mind is elsewhere, seeming



to float above me looking down and thinking strange thoughts all the while understanding that it is hallucinating. For example, one Sunday I was convinced for a considerable period of time that I wasn't logging contacts. Rather, I was helping someone else to choose a good engineer for our railroad train, represented by the logging screen, while the exchange received was the destination the engineer was being asked to reach. Another time, whenever a VE3 called (and only a VE3), I believed that he was asking my permission to dump garbage at our landfill – fortunately I never refused my permission and could just log the contact! Then as we near the end of the contest, there is usually another slug of adrenaline to power through to the end, which occasionally also gives some good rates as everyone pushes hard for those last few contacts.

Then a shave and a hot shower are really welcome, and my treat when I'm alone and there is no post-contest dinner, is a leisurely meal followed by a nightcap of a glass of Frangelico (a liqueur that they sell in my favorite Aruban supermarket) on the rocks. Then typically the sleep of the damned for 10 hours or so.

Lately, perhaps mainly due to advancing age, I have particularly enjoyed the Classic category in CQWW and now in WPX contests as well. Although it would be more fun to use two radios instead of the Classic limit of only one, the restrictions to 24 hours of operation and no internet make the contest much easier on both the body



and the mind. It also requires interesting strategy decisions. There is always a trade-off to be made between the high-rate late afternoon hours mostly running NA and the slower hours with more mults. You also, of course, get much more sleep and aren't such a zombie after the contest as in a true 40+ hour effort. Eating is a lot easier, as you can have a real meal, not just a quick wolfing down of some nourishment as in a longer contest.

Looking to the future:

The future is obviously in remoting the station. That's going on around the world, and we have been dilatory, though W6LD is starting to make serious efforts. Among other benefits, that will allow a lot more casual participation in minor contests just for the fun of getting on the air for a few hours – a mode of operation that is hard to justify if you are making a significant expenditure of time and money to journey to the Island for a week for a major contest. The main challenges seem to be the cost of adding modern auto-tune amplifiers and lightning protection. Aruba gets very little lightning, though surprisingly, just a few hundred miles to the South in Venezuela is said to be a lake with more lightning discharges per annum than anywhere else in the world – sometimes we get atmospheric noise that seem to originate in that region even when we are enjoying dry weather. But we do worry about it, as one nearby strike could cause significant damage to equipment left connected to power or antennas.

All in all, we and our visiting operators have enjoyed 20 years of contesting on “One Happy Island” and we are looking forward to many more. Lots more info is available on our website at www.arubaqth.com.

[Thanks are due to W6LD, W0YK, and W2GD for helpful comments on drafts of this article.]

When Is Enough Enough?

Tom, K5RC

When is enough, enough? The antenna computer control screen for W7RN.

How do you control 2 local stations, 3 remote hosts, 8 rotators and 23 HF antennas from one screen? Antenna switching is by Green Heron. Antenna rotator controls are by WK6I. Antenna switching display is HamPlus. SWR meters by WaveNode. KPA-1500 control by Elecraft. Touch Screen monitor by HP. Remotes 2 and 3 are controlled on a separate screen, as is phasing controls for the stacks.





The Smelly Radio

Gary NA6O

Recently I acquired a well-used, as-is, TS-590S off of Ebay at a very reasonable price. After any needed repairs and upgrades, it will be donated to a blind ham [1]. This radio, with its VGS-1 Voice Guide System, is the most accessible radio on the market and is highly regarded among those with limited vision.

Upon opening the box, the smell was almost stupefying! Apparently the former owner, a ham who died of lung cancer no doubt, was a very heavy smoker. Packing materials went straight to recycle... It's been a long time since I came across a piece of equipment in this state. It didn't have the "brown slime" on it from cigarette tar, but you definitely didn't want to be around it very long. So I had to decontaminate it.

After an electrical test to verify that it didn't have any obvious or fatal problems, I took off the covers and removed the plastic front panel bezel. I had to take the front panel off anyway because one control had to be replaced. Lee, KI6OY, pointed me to a wonderful parts supplier <https://www.pacparts.com> and they had just what I needed.

So how do you remove smoke odors from things? Some say to put it in a bag with baking soda. Well, given infinite time, that could eventually work but it's driven purely by vapor pressure and diffusion, which are extremely slow processes. The baking soda simply gives the vaporized chemicals somewhere to go; leaving it open in plain air is just as effective. Heating it up would increase the outgassing rate somewhat. Still, this will take forever. So more direct action is indicated.



Washing is your main weapon because it dissolves and rinses away contaminants. The case and front panel are just metal and plastic and 1) don't absorb much and 2) are easy to clean. I used hot water and dish detergent and scrubbed them. This adds mechanical action to the chemical dissolution process provided by the detergent. That worked except for some little blocks of foam that still smelled. A final 5 minute soak in 10% bleach finally took care of that. Everything was wiped dry and came out good as new. One problematic item was the microphone with a coiled rubber cord. That required a very long hot soak and I don't believe it will ever be totally fresh.

As for the radio electronics, we are limited in what we can do. Alcohol is almost always a safe rinse for electronic systems since they often use it during fabrication to remove soldering flux. So I whipped out my reagent-grade dehydrated ethanol and a spray bottle and inundated the boards and especially the heatsink surfaces. Then I used compressed air (not too strong a blast) to dry it out pretty well, and finally a gentle warming with a heatgun to drive off the last of it. Finally, we left everything sitting on the bench for final outgassing.



By the way, another recommended cleaning practice for circuit boards is to run them through the dishwasher. LLNL used to do exactly that with equipment that came back filthy from the Nevada Test Site. They actually had a row of big commercial dishwashers in the instrument shop. Entire oscilloscopes, piles of cables, all kinds of stuff got a thorough cleaning. Of course you need to know something about what's inside your device. The paper cone on the speaker of this radio might not like it, for instance. If it was easy to remove the boards (like plug-in boards from a PC), those I would wash.

In the end, I will say that this process was 95% successful and the radio will not be offensive to its new owner.

[1] If you are interested in understanding a person's experience of becoming blind, I highly recommend the new book, "Country of the Blind" by Andrew Leland. This memoir describes his lifelong journey through a gradual loss of vision, and is a good way to begin to understand the blind lifestyle.

[Ed. Note: The KWM-2A's, ubiquitous in SE Asia in the 60's and 70's, had no moisture and fungus coatings and were very prone to develop a fungus on the chassis and components. On the slugs in the tuning rack, it restricted the movement of the tuning rack. The maintenance folks used low-pressure water/detergent similar to Gary's description to clean them up for re-deployment]

Who Remembers CONELRAD?

JUG Editorial Staff



It might be difficult to believe that the world could be any more screwed up and scary than it is today, but there was a time when the threat of nuclear war was very close and real or at least it seemed so.

It was also a time when the FCC kept much tighter rein on the Amateur Radio community and, under the premise that, should Armageddon suddenly threaten, the very first thing required was to get all the hams to shut up and stop transmitting. CONELRAD [CONTRol of ELectromagnetic RADiation] was born in 1951 during the Truman administration. The fear was that amateur signals could be used for direction finding purposes by enemy bombers. This was possibly true since the AM operators of the day tended to wax eloquently and for long periods, providing steady carriers for DF purposes. by the incoming bombers.

Key AM stations, generally Class A 50 kW 24-hr clear channel stations were, upon receipt of a telephone notice from the government, to drop their carrier for 5 seconds [twice] and then transmit 15 seconds of 1 kHz tone. This was passed to other local stations who then stopped broadcasting. For hams, it required continuous monitoring of a key station and ceasing transmission immediately upon receiving the alert.

Hams needed a way to comply and projects for modifying AM broadcast radios were a regular feature in QST and CQ. Heathkit jumped in with a kit for a dedicated monitor. CONELRAD was finally abandoned as aircraft navigation systems developed and improved and the nuclear threat migrated from bombers to ICBM's.





Tube of the Month

Norm Wilson, N6JV

(Department of Thermionic Paleontology)

Visit the Tube Museum at n6jv.com

4X500A/F



In late 1945, EIMAC was busy developing a new line of power tetrodes. One concept was to make the plate structure external. Experiments were made using copper strap folded back on itself to make a plate that cooling air could be forced through. The X-429 in the first illustration, was made in San Bruno, California, in February, 1946 (B6 on the glass). The final 500-watt tube was introduced in [1947](#) as the [4X500A](#) using the same odd 4 pin base as the experimental tubes used, but with a larger and stronger external plate. It was marketed for TV and FM use in VHF up to 120 MHz in class C and 220 MHz in class B TV video amplifier service. The external anode also allowed its incorporation in a VHF cavity. The tubular shape allowed a resonate pipe or cylinder to directly mount to it or “plumber’s delight” construction that became very popular with hams using 2 meters.

The final version could use a maximum of 4000 volts on the plate at 350 ma. The filament was 5 volts at 13.5 amps. Several other manufacturers made this tube for many years. In Europe, the tube is the QBL4/800. It was one of the last glass tubes that was still being re-built as there was a commercial demand. The special base was a problem with cash starved hams and was never promoted for amateur use. To make it more useable, they made the [4X500F](#) that sported the common 5 pin base that was used on the 4-250A and 4-400A tubes that hams were very familiar with. It never caught on and the “F” tube is very scarce today.





Editor Notes



ARRL 160 just finished and ARRL10, closing in quickly this next weekend 9/10 Dec, signals that we're at the end of yet another year – and did it ever appear to go fast! NCCC is making a full-on effort to take the gavel in the ARRL 10 meter this year. There could be some unexpected points or mults lurking in the Novice/Technician phone allocation from 28.3 to 28.5 ... don't know if there are many Novices left but there are a lot of moderately new Technicians out there, a few of whom will get on HF.

We'll begin 2024 with over 130 contests scheduled for January. It's getting much harder to claim the coveted “Worked All Contests” award. Best wishes for whatever holidays you celebrate as the year draws to a close and let's KB in 2024!

December Achievement

Couldn't help but notice and applaud the CQWW DX CW finish posted by Frank, W6JTI. As usual, he operated QRP proving once again, “Power can make it easier, but it is by no means mandatory.” Congratulations Frank!!

CQ Worldwide DX Contest, CW – 2023

Call: W6JTI

Operator(s): W6JTI

Station: W6JTI

Class: SOAB QRP

QTH: CA

BAND	QSO	ZN	CTY
160	4	2	2
80	22	8	7
40	113	23	35
20	137	24	50
15	185	25	65
10	169	26	47

TOTAL 630 108 206

Total Score = 542,906



NCCC Membership Information

If you wish to join NCCC, please fill out an application for membership, which will be read and voted upon at our monthly meeting. To join, you must reside within club territory which is defined as everything in California north of the Tehachapi's up to the Oregon state line, and part of northwestern Nevada (anything within our ARRL 175-mile radius circle centered at 10 miles north of Auburn on Highway 49).

Life Memberships

Life memberships are \$250.00 Contact secretary.nccc@gmail.com. Members who have reached 80 years of age have and been an NCCC member for 20 or more years are eligible for Honorary Life Membership ("80/20 Rule"). Contact secretary.nccc@gmail.com

JUG Articles Wanted!

Your help allows us to produce a quality newsletter. Please consider submitting an article! The editor welcomes any and all relevant articles for inclusion in the JUG. The preferred format is plain, unformatted ASCII text, MS Word (.doc/.docx) are acceptable. Indicate the insertion point and title of diagrams and pictures in the text and attach photos/diagrams separately. Pictures should be as high a resolution as available. Please do not spend time formatting your submittal, the publication templates will re-format everything. Send your material to k6dgwnv@gmail.com indicating "JUG Submittal" in the subject.

Northern California Contest Club Reflector—Guidelines

The NCCC email reflector is devoted to the discussion of contesting. Topics include contests, station building, dxpeditions, technical questions, contesting questions, amateur radio equipment wants/sales, score posting, amateur radio meetings/ conventions, and membership achievements. Postings may not include personal attacks, politics, or off-subject posts. Such postings will be considered a violation of the Guidelines

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If you have questions, contact the NCCC secretary at: secretary.nccc@gmail.com



Northern California Contest Club

[NCCC Lands' End Store](#)

We are pleased to announce that the new NCCC Land's End store is online! You can choose from an array of shirts, jackets, and hats and apply your choice of custom-embroidered NCCC logos: A plain one, or one that also says Fifty Years. And, you can personalize your item by adding your name and/or call sign. The store is open 24/7 and items are shipped directly to you. No more waiting for everyone else to make up their minds on a group purchase.

<https://business.landsend.com/store/nccc/> or from the NCCC website: <http://nccc.ccc/members/lestore.html>

Thanks to W6TCP for helping to set this up. Instructions for purchases from Lands' End NCCC Store

1. Go to <https://business.landsend.com/store/nccc/>
2. Click on Men's or Women's link, then choose item(s)
3. Pick color, inter quantity of each size you want to order.
4. Click Apply Logos and Personalizations. This will display the logo choices. Try them out. It will show you what they look like on your chosen fabric color.
5. Select a location for logo (left side, ride side, back, etc)
6. Click Apply Logo.
7. Optionally, click Add Personalization to add your name or call sign (\$8.00, 10 character limit)
8. Click Add to Bag and Continue Shopping or.



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K4 HIGH-PERFORMANCE DIRECT SAMPLING SDR



A direct-sampling SDR you'll love to use

Our new K4 transceiver harnesses advanced signal processing while retaining the best aspects of the K3S and P3. It features a 7" touch display, plus a rich set of dedicated controls. Per-VFO transmit metering makes split mode foolproof. Band-stacking registers and per-receiver settings are versatile and intuitive. Control usage information is just one tap away thanks to a built-in help system.

Modular, hybrid architecture adapts to your needs

The basic K4 covers 160-6 m, with dual receive on the same or different bands. The K4D adds diversity receive, with a full set of band-pass filters for the second receiver. (Thanks to direct RF sampling, there's no need for crystal filters in either the K4 or K4D.) The K4HD adds a dual superhet module for extreme-signal environments. Any K4 model can be upgraded to the next level, and future enhancements—such as a planned internal VHF/UHF module—can be added as needed.

Single or dual panadapter, plus a high-resolution tuning aid

The main panadapter can be set up as single or dual. Separate from the main panadapter is our per-receiver *mini-pan* tuning aid, with a resampled bandwidth as narrow as +/- 1 kHz. You can turn it on by tapping either receiver's S-meter or by tapping on a signal of interest, then easily auto-spot or fine tune to the signal.

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The K4's rear panel includes all the analog and digital I/O you'll ever need. All K-line accessories are supported, including amps, ATUs, and our K-Pod controller. The Video output can mirror the K4 screen or display a high-res Panadapter only screen. Via Ethernet, the K4 can be 100% remote controlled from a PC, notebook, tablet, or even another K4, with panadapter data included in all remote displays. Work the world from anywhere—in style!

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Up to 5 receive antenna sources

Full remote control via Ethernet



The K4 interfaces seamlessly with the KPA500 and KPA1500 amplifiers

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- Bluetooth
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- External DC Jack for DC Supply and Battery Charging



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- Built-in Bluetooth
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- 200 memory channels for serious users



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- Large White LED Flashlight, Alarm and Quick Home Channel Access



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