



Publication of the
Northern California
Contest Club



Issue 589

August 2021



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NCCC - 50 years of Contesting Excellence

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NCCC August ZOOM Meeting
Sunday, August 15, 2021
1230-1500

**"Successful QSO Party Mobile Set-
up and Techniques."**

Jim Stahl, K8MR

"CQP 2021"

Dean Wood, N6DE

<http://nccc.cc/meetings.html>

Future:

Sun, Sept 19 2021:

~~Family Picnic at N6RQ - Cancelled~~

President's Report - WD6T **Of Birds and Hams**

In last month's JUG, I discussed the terms "hobby" and "amateur" and how they misrepresent the intensity and importance of our pursuit. Another one of my personal passions is bird watching (which those who are serious about it call "birding.") I am struck by the parallels between amateur radio DX contesting and birding. (Note: By "birds" I'm not referring to amateur radio satellites, but rather to often-small hollow-boned usually flying dinosaurs with feathers. And, by "hams," I am not referring to a holiday delicacy, but rather . . . but you knew that!)

Both are dependent on the whims of nature, both the sun and terrestrial weather.

Both have daily and yearly cycles.

Both require foregoing sleep. Like 20m EU DX in winter, the best time for birds is right before sunrise to several hours afterwards. Like Asian DX'ing on the low bands, owling requires staying up all night.

Both have mid-day doldrums, as the birds mostly hunker down and take naps when the sun is high in the sky; apparently, so does propagation.

Both are intimately involved with Earth's magnetic field. Birds can actually see the magnetic field via a special protein in their eyes and use it to help them with long distance migration.

Both have been affected adversely by unrestrained human development. Radio spectrum is polluted with noise, habitat is destroyed.

Both thrive on lists. Like DX'ers, birders keep lists of species seen, as well as in particular areas and time periods (trip lists, county lists, country lists, year lists, etc.) The birding equivalent of an "All Time New One" is a "Life Bird."

Both exalt over "splits" and despair over "lumps." When



Officers:

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JUG Editor	Bill Haddon	N6ZFO

Thursday Night Sprint:

The Northern California Contest Club sponsors a Thursday Night Contesting session of thirty minutes duration.

Often, on Fridays prior to a major contest weekend, a special practice session is held.

Generally, on Thursday evenings, a special format is followed, called NS or "NCCC Sprint". The NS began in the summer of 2004 as a snappy, concise contest occurring most Thursday nights, North American time. The power limit is 100 watts. Occasionally multi-week ladder competitions are held. See www.ncccsprint.com for details.

Thursday Night Contesting Director and Founder	Bill, N6ZFO
NCCC CW Sprint	Tom, N3ZZ (initially, Ken N6RO)
NCCC RTTY Sprint	Ken, K6MR
NCCC Sprint Ladder	Bill, N6ZFO
Sprint Web master www.ncccsprint.com	John, K6MM
Ladder Scores Manager	Tim N3QE
Thursday night Contesting Advisory Group:	N6ZFO, Bill (Chair)
	Mark K6UFO, (with W4NZ, N4AF, W9RE, K4BAI, N3BB, VE3YT and W0BH).
The Thursday night NCCC Net	Ken, N6RO



two species are split, birders run out to observe the new species and add them to their list. DX'ers do the same with new DXCC entities. Similarly, a "lump" (combining of two species into one) or a loss of a DXCC shrinks one's list and is not generally well-loved.

Both have a competitive aspect. Birders compete in "Big Day" competitions to see who can observe the most species in a twenty-four hour period. Sound familiar? A great book about competitive birding is "The Big Year," by Mark Obmascik. There was also an entertaining film based on the book, featuring Steve Martin. Similarly, a great book about competitive ham radio is "Contact Sport," by NS virtuoso, Jim, N3BB.

Both involve getting on boats and suffering vicious sea sickness.

Both have the potential to cause you bodily harm if you are not careful, as can be validated by those who have been chased (as I have) by a Cassowary, a large, flightless bird from VK-land, capable of running 30 miles an hour, standing six feet tall and weighing 130 pounds. Especially dangerous is when one of them charges while holding a waveguide in his bill.

Both require personal judgement calls and self-honesty. How confident am I that I really identified that bird correctly, or worked that DX station on 160 meters?

Both rely largely on the honor system. A contester needs to follow the rules, avoid using higher power than is allowed, tell the truth about his use of assistance, avoid self-spotting, etc. Birds, however, refuse to send in their logs, nor do they QSL, even with an SASE.

And both are vulnerable to wishful thinking: I saw a flash of white, it must be an Ivory Billed Woodpecker; I heard a "DAH" at the end, it must be "WD6T."

Both inspire journeys to remote islands. Over the eons, islands serve to isolate birds and allow them to evolve into separate species, which are later visited by radio operators who must avoid stepping on their nests or incur the wrath of the fierce naturalists.

Both have "spotting." Birders have alerted one another to rare sightings for decades using telephone trees and answering machines. An avid birder would check these "Rare Bird Alert" recordings many times a day. These eventually evolved into sophisticated Internet systems and apps.

Both have developed automatic detection mechanisms. Like the Reverse Beacon Network and PSK Reporter, ornithologists have set up automatic bird tracking stations that use machine learning to decode nocturnal sounds of birds migrating overhead and identify their species and number.

Both have citizen science projects and have made significant contributions to scientific inquiry. The recent eclipse QSO party (hamsci.org) helped to gather data on propagation, while "eBird" collects and correlates data from birders worldwide. eBird.org is considered the world's largest citizen science project and has been used as a data base for numerous scientific and environmental protection projects.

Both allow an individual to participant at whatever level he feels comfortable, from the feeder-watcher chatting with friends on his HT, to the helicopter-renter searching out the Himalayan Snowcock in the remote mountains of Nevada, while trailing a 160 meter Zepp and working all zones.

Both can involve spending huge sums of money on equipment and travel. At the same time, both can be done very inexpensively.

Both have "fanatic" clubs and journals. While contesters have NCJ, "Birding" is the journal of the American Birding Association and features cutting edge identification articles. Both of these journals publish individual scores. And in both cases, it is the participant himself who cares most about seeing his score in print.

Both foster international cooperation and bring together people of all walks of life, religions and political affilia-



August 2021 VP/CC Report Andy Faber, AE6Y/P40Y

Due to a quirk of timing, you probably will be getting a chance to read this issue of the JUG a few days after the NAQP CW contest, Saturday, Aug. 7. I've always enjoyed the NAQP CW contests, and hope that we will have had good propagation and activity levels. Skip, K6DGW, is doing a great job as the organizer/flogger for this one, as he has in the past.

Anyway, in an effort to stoke interest for future NAQPs, I offer up an annotated pome about the contest. I realize the insertion of notes destroys the meter of the doggerel, so suggest they be treated as silent characters.

Annotated Pome in Praise of NAQP

I've always [Note 1] liked NAQP
CW, (Ritty), SSB [Note 2]
We meet twice a year [Note 3]
With time off for beer [Note 4]
Barefooted [Note 5], six-banded [Note 6], we key.[Note 7]

Note 1: "Always" is probably not accurate, but on my computer, I have logs going back to the year 2000, and I'm sure I participated before that; in fact, when I wrote my first DOS logging program CQP, that I still use in Windows form (CQPWIN), NAQP was one of the included contests. And, of course, some of our stalwarts (like K2EIU, now N6RO) will remember their predecessors, the old ARRL CD Parties.

Note 2: Well, for me, not so much in the RTTY versions, but many club members do participate in NAQP RTTY, and the club has done very well on that mode. In fact the NCCC team #1 (W7RN (WK6I), KK6P (W7IV), N6IE, K6KM, and K6SRZ) won the February NAQP RTTY. Our 5-person teams have also won or placed highly in numerous CW and SSB NAQPs; in fact, three years ago, we won the Aug. NAQP CW contest (W7RN (N6TV), 8P5A (W2SC), W6YX (N7MH), NA6O (@N6RO), K6SRZ).

Note 3: The NAQPs occur in the winter and summer, CW in January and August. They are quite different contests, and it's fun to adapt to the differences in propagation and length of daylight. Generally speaking, the low bands are much better in the winter, particularly 80 and 160, due to increased hours of darkness, so mult totals are higher in the January event. But 20 and 15 (and maybe even 10) should be open for the longer daylight hours in the summer, which can give us a Left Coast boost.

Note 4: NAQPs don't take up your whole weekend. They are 12-hour contests, starting at 1800Z on Saturday (in this case, August 7), and finishing at 0600Z on Sunday (August 8). In August, that is in local time 11 a.m. Saturday morning to 11 p.m. Saturday night. Better yet, for single-ops, you can only work 10 of the 12 hours and off times must be a at least 30 minutes. So that (a) makes them more humane; (b) injects an element of strategy into planning your off times; and (c) gives you time for that beer, or dinner, or whatever. By the way, rules are at <https://www.ncjweb.com/NAQP-Rules.pdf>. Speaking of having a beer, that can be a metaphor for another feature

of the NAQPs: they are very “friendly” contests. Since your name is part of the exchange, guys will often greet you by name (particularly on phone, of course), which adds a warm, human element to the normal impersonal contest encounter.

Note 5: A very nice feature of NAQP is that it is strictly a low power and QRP contest – nothing greater than 100 watts allowed. This can make 80 and 160-meter stations hard for us West Coasters with normal antennas to dig out of the noise; however, since the exchange is so simple (just name and state or province or NA country), and you have worked most guys whom you might hear on 160 already on a higher band and thus have the exchange already in your log, if you just barely get part of a call, you can often make the contact. The power limit also makes for generally less QRM and signal splatter.

Note 6: The NAQPs are 6-band contests, 10 through 160, except no 160 in RTTY. One of the nice features of NAQP is that it is ideal for SO2R practice (and I suppose, if you are capable, for 2BSIQ as well). For example, during the day, it is common when 15 is open to be able to run on 15 and S&P for mults on 20, and vice versa. With luck, we may get some 10-meter openings in August, though I note only two 10-meter contacts in my NAQP CW August 2020 log (once when I moved K6MM, and once when W6RGG moved me, in each case from 20 to 10, for the rare CA 10-m mult). Stations are generally receptive to QSY requests, probably more so than in other contests, due to the ease of QSYing for low power stations not having to worry about retuning an amp (Note 5).

Note 7: Using the term “key” is particularly appropriate for CW NAQPs, but I guess in RTTY and SSB the transmitter has to be “keyed” into transmit mode as well. And, regardless of how seriously you key that rig, every participating log helps us in the NAQP Challenge.

Some Recently Reported Contest Results

ARRL DX CW

As expected for this contest, there was pretty good Club participation, but not a lot of Club (or, for that matter, West Coast) scores in the Top Ten boxes. But Frank, W6JTI, deserves credit for his second place QRP score. And WD6T at N6RO (K3EST, K6AW, K6KM, K7GK, N6RO, N6WM, NT6V, WA6O, WD6T, WX5S) had the top West Coast Multi-Multi score. For a station score, I note that W2GD, operating as P44W from our P40L/P49Y station in the Single Op Unlimited category, had the third highest score in the entire contest – bested only by N6MJ operating ZF1A remotely (for which he credits W9KKN's efforts) in the Single Op category with an astonishing 8300+ contacts(!), and Multi-Multi W3LPL.

ARRL DX PHONE

Not so many Club scores here, but a fine one from Massachusetts, remote, by W9KKN and WD6T, as they piloted K1IR along with three W1s to a 2d Place M/S result, just barely behind WW4LL. We also had a number of Pacific Division winners: W6YX (N7MH) SO(U)HP, NJ6G SO(L)HP, N6RK SO 160, W6RKC SO 40, WX5S SO 20, N6WM SO 15,

Here are a number of outstanding results that were reported out at our July Meeting, and bear repeating here:

2020 ARRL 10m Contest

- **First Place Medium Club, NCCC**
 - 2.9M Points, 41 logs
 - Third: SCCC 2.2M Points
- **First Place SO(U)Mixed HP ZF2WF(W9KKN) 526k**
 - Scores > 100k: K2RD, K3EST(@N6RO), K6SRZ, K7XC, K9YC, KK6P(W7IV), KX7M, N6IE, N6TV, N6WM, N6ZFO, W0YK, W1SRD, W6YX(N7MH), WD6T(@NW6P)

2021 ARRL RTTY Roundup

- **First Place Unlimited Club, NCCC**
 - 3.3M Points, 75 logs
 - 2d: PVRC 2.2M Points, 66 logs
- Top Ten Finishes
 - SOHP RTTY: W7RN(WK6I - 3d Place), K6MR, W0YK
 - SO QRP RTTY: K6EI
 - SO(U)HP Mixed: KK6P, KA6BIM, K6OK
 - SO(U)LP Mixed: K6GHA
 - SO(U)HP RTTY: N6WM, W6YX (N7MH), W9KKN
 - SO(U)QRP RTTY: K7XC, K6MI
 - M/S HP: N6EE (+N6DE), W6DR
 - M/2 (1st Place): (ND2T K6TD, K6UFO, ND2T, WD6T)

2021 February NAQP RTTY

- **First Place NCCC Team #1**
 - W7RN (WK6I), KK6P (W7IV), N6IE, K6KM, K6SRZ
 - 2d: SWACC (ringers): K6LL, AA3B, etc.
- Top Finishes
 - **1st Place W7RN(WK6I)**
 - 4th Place KK6P (W7IV)
 - [3d Place (AOCC) ND7K (W9KKN)]
 - M-2 2d Place K6UFO (@K6MTU: K6TD, K6UFO, ND2T, WD6T)

2021 March NA Sprint RTTY

- **Second Place NCCC Diddlers #1**
 - WD6T, W0YK, W6SX, AJ6V, NN7SS
- Top Ten Finishes
 - SOHP: WD6T (3d Place), W0YK, W6SX
 - 1st Place QRP: NN7SS (K6UFO)

Upcoming Contests

August still has some interesting contests, and September marks the start of the fall season (or purists might say CQP in October is the start). Check WA7BNM's contest calendar for a list of contests. Here are a few of interest:

NAQP CW Aug. 7-8

WAE CW Aug. 14-15

NAQP SSB Aug. 21-22

ARRL Rookie Roundup, RTTY Aug. 22

AA DX Phone Sept. 4-5

CW Ops CW Open Sept. 4

ARRL September VHF Contest Sept. 11-14

NA Sprint CW Sept. 12

NA Sprint RTTY Sept. 19

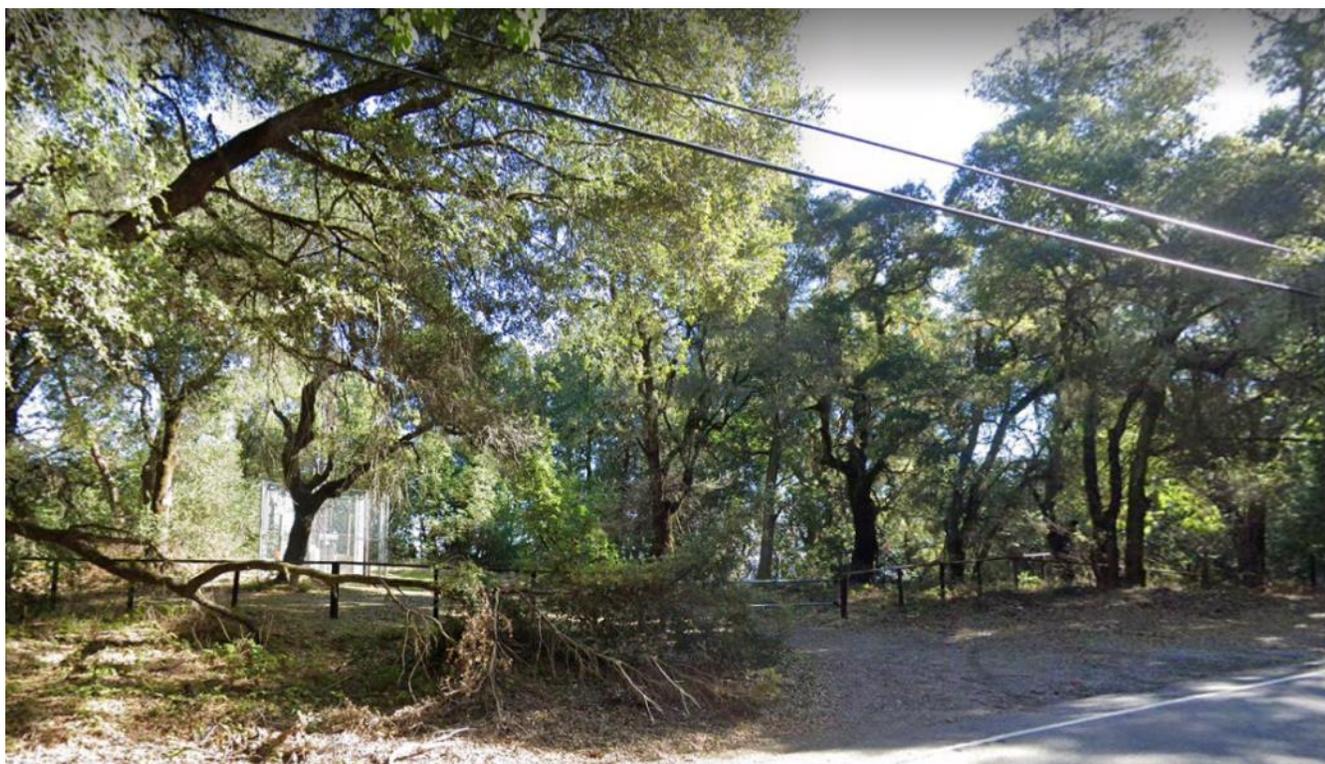
Exactly a year ago devastating lightning-caused fires ignited western CA in a frenzy of conflagration that will long be remembered. Sadly, one of NCCC's most illustrious members, Bob, K6XX lost his house and station. For a moving story, re-read Bob's emotional article, "K6XX-II 2000-2020" in the October, 2020 JUG. Here, K6KM' describes his recent SOTA activation above Bob's QTH. [Bill. N6ZFO, Ed.].

SOTA Activation — Ben Lomond Santa Cruz County Roberto, K6KM

The locale for the SOTA activation is in the Santa Cruz Mountains. The peak is flat and long and has a road going through it: Empire Grade. Perfect for a drive up activation and it's worth 2 points! At the top there is a Juvenile Correctional Facility and a Cal Fire Station. Unfortunately last year the fires ravaged the place. Only the two facilities mentioned above were saved. K6XX Bob, who is the newest Contest Hall of Fame inductee lost his house and mighty Station there. He is in the long process of rebuilding. Last year I tried to activate Ben Lomond but the roads were closed and the scenery so apocalyptic that I decided to turn around and go home. This time I contacted Bob: K6XX and asked if it was ok to operate. He mentioned he was very busy with family stuff but the road was open. I took my Father-in-Law there after visiting Monterey. I parked next to the Correctional Facility to call Bob. The phone service was spotty and in a few minutes I had the visit of the Sheriff with a very serious face. After explaining what I was about he told me I could activate on a clear down the road. The place is the site of a repeater and some other stuff nobody knows about.

After parking and backing off to leave the gate area clear I found the only spot with some shade and cleared it from any possible poison oak. I took my mighty Mag Loop so I wouldn't have to spend too much time dealing with trees and wires. Tuned to 20m and the band was buzzing with RFI. Switched to 40m and it was quieter. Only needing just 4 QSOs to get my activation points I decided to operate only on 40m. Now, remember that the Mag Loop is 37% efficient on 20m and about 7% efficient on 40m.

Besides, it was located on the side of the road, close to the car and a bunch of shrubbery. By that time Bob walked in and he said he had noticed some RFI coming from that direction. We played rotating the loop and



sure enough it was pointed to one of the towers. We had a nice chat with Bob and I promised to stop by after the activation.

The activation was as painful as I was expecting. After spotting myself and calling CQ several times I scored 4 QSOs. Enough for the points but the stations were having a hard time hearing me. The last signal report was a mere 219. Ouch!

All QSOs were in California and Washington State. Going to activator's past reports, most had a hard time there. One only could get 2 QSOs. One reached 20 QSOs by gaining access to the Fire Station.

Despite the lousy activation it was a blast to see and spend some time with Bob after so many Zooms.



Take the WW Digi Challenge!

Jim, K6OK

August 28th and 29th will be the third running of the World Wide Digi DX Contest, where hams compete using FT4 and FT8 digital modes. Scoring is based on the number of QSOs, the number of Maidenhead Grid Fields (first two letters of the grid square) contacted per band, and is heavily distance-weighted. It's a 20x KB contest, so lots of points to be had!

So what is the challenge? Let's look at the all-time records set for stations in California for this relatively new contest:

<i>Class</i>	<i>Call</i>	<i>QSOs</i>	<i>Grids</i>	<i>Score</i>	
SOHP	K6OK	548	146	242,268	
SOLP	KR1DX	921	125	240,250	op. K6JO
MSHP	K6UFO	574	123	146,493	op. K6TD, ND2T, K6UFO
MMHP	NW6P	513	61	51,667	op. W9KKN, NW6P, WX5S

As you can see, yours truly holds the all-time high score for W6 across all categories. So here's my challenge to you: beat my score and take the record from me! I'd be delighted to see my record fall. I only operate SO1R with 500 watts, so any serious BIC effort from my fellow club members can knock me off my perch.

This contest is unique, takes a different mindset and strategy, and requires some preparation. If you think, "FT8 is easy, I'll just kick back and do it for 24 hours," you'll do okay but it won't be optimal. Based on my experience doing full BIC efforts in both prior editions of this contest I'll share some tips with you to help improve your score.

Rate is Not King. FT4 and FT8 are fixed-rate modes. The highest possible number of QSOs in 24 hours is 1,920 for FT8 and 3,840 for FT4, assuming perfect exchanges and no repeats. The WW Digi operator needs to think of each 7.5- or 15-second FT time-cycle as a scarce resource, with the goal of extracting the most multipliers and points possible from each fixed time slot. Calling CQ and "letting the mults come to you" will not get you the highest possible score.

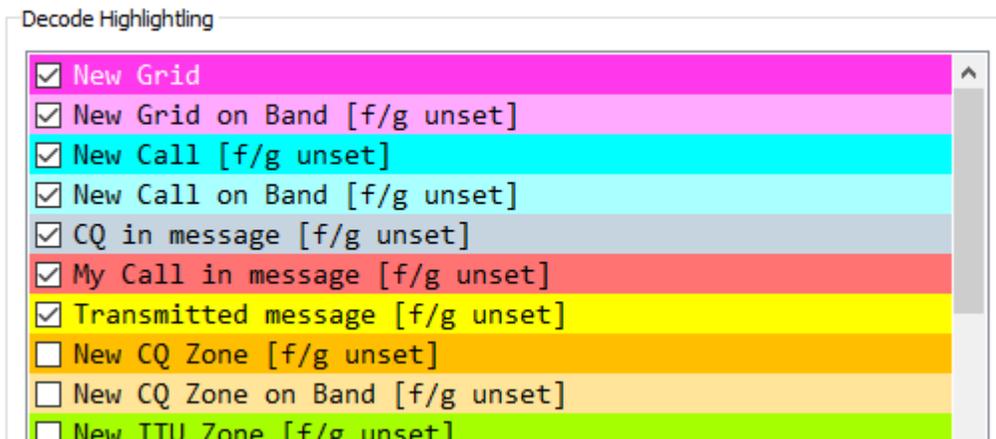
Use S&P To Your Advantage. In this contest, the CQ message is "CQ WW call grid" and so if you call them you already have their call and exchange. You can be selective on which CQ'er to call and prioritize those that will generate the most points. Once you have the new grids and the high point value CQ'ers in the log, then CQ'ing can be productive in stirring up new Q's.

Think Of It As "Speed DXing." Long distance QSOs pay off -- even when using the slower but more sensitive FT8 mode. Every 3,000 km of distance between you and the other station is a mult point. Keeping an eye on spots and propagation with nimble QSY'ing will maximize long haul contacts.

Watch PSK Reporter and Spotting Networks. FT8 gets boring fast. Use the dead time between cycles to study spots and propagation. Set up alerts to let you know when remote DX is being heard. Hint: watch for ZS stations, those are 6-pointers, and are worth a QSY.. Be on the alert for unusual propagation that FT8's long reach can exploit -- especially on 20 meters.

Work Deep Asia As Much As Possible. YB, 9M, central and western VK, HS, are all 5-pointers from NorCal. When that window is open and you've exhausted the contest frequencies, it can be worthwhile to then dip into the non-contest FT8 standard frequencies to grab some 5-pointers as well.

Use WSJT-X's Color Highlighting. After the decoding cycle is complete, you've only got a couple of seconds to choose which station to call. Bright colors can be used to help new multis stand out from a long list of decodes.



- Under Settings, make sure "New Grid" and "New Grid On Band" are checked and set with a bright color. Drag them to the top of the list so they have highest priority. This will help you spot new multis after each decode cycle.
- Uncheck all categories that aren't relevant in the contest.
- Check "New Call" and "New Call on Band" with lighter colors as they are lower priority.
- Check "CQ in Message," drag it below grids and calls use a gray color. These will be dupes.

FT4 vs FT8. Use FT4's higher rate for EU 4-pointers and JA 3-pointers but don't overstay. Use FT4 in daytime when DX windows are closed to collect all domestic grids, especially on 20; FT4 is also busy on 40 in the evening. Generally, focusing on collecting distant new grids for 5- and 6-points with the slower but more sensitive FT8 will yield more points than running FT4 for rate.

Transmit on the Band Edges. If the band you're working is crowded, use "Hold TX Freq" and choose a transmit frequency near a band edge. This increases the chance your signal will be heard by the other station with less QRM.

Evens and Odds, Mix 'Em Up. After working a band for a while on Even time cycles then switch to Odd. You can then work stations you didn't hear because they were transmitting while you were transmitting.

Use SO2R if you can. If you have two radios, FT modes are ideal for alternating CQ's. Make sure one radio is transmitting on odd cycles and the other on the evens. If you transmit simultaneously on two bands that puts you into a Multi category.

Don't Forget 80 and 160. Even if conditions are poor on those bands, set aside a small amount of time to grab domestic grids on those bands to build up your grid count.

No 73 after RR73. This is the convention now and most FT contesters have adopted it. There are some casual ops who expect a final 73, and if they don't get it, might give you a NIL. Sending 73 after RR73 after every QSO consumes a lot of time and probably isn't worth it to avoid a few NIL's. Also, don't get sucked into long repeat loops. If a QSO isn't happening after 2 or 3 tries, then move on. Every time slot is precious!

Prepare In Advance. Spend time making sure your software is set up and working well. For WSJT-X, set up separate "Configurations" for WW Digi FT4 and FT8. Just prior to the contest I like to:

- Make sure my software is up to date (version 2.4.0 for WSJT-X users)
- Copy my ALL.txt and wsjtx_log.adi files to another folder, then use Erase under Settings. The .adi file must be empty at the start of the contest is necessary so the coloring will work properly.
- Go to Settings/Colors and click Rescan ADIF Log to doubly ensure that coloring will be set to a zero baseline.
- Go to Settings/Colors and click "Only grid Fields sought." This is needed to make the new grid coloring work properly. If it is not checked then if you work CM98 to capture the CM grid field, CM99 will show as a new grid field when it isn't.
- Make sure all of the recommended contest frequencies and the standard watering hole frequencies are loaded into your software. Remove extraneous ones.
- Set your PC's clock as accurately as possible.

Smaller Stations: If you have a modest setup, say 100 watts and a wire, WW Digi is a great opportunity to work new countries or states.

The WW Digi contest runs from 1200Z on early Saturday morning (0500 Local Pacific time) August 28 to 1159Z on the 29th, a 24-hour contest. Good luck in the contest!

Point Generator Profile

Rick Palio, WU6W

Interviewed by W1RH

This month's Point Generator is Rick, WU6W, one of our Nevada KB'ers.

You'll find Rick on all of the contest modes, but RTTY is his favorite. I took a look at Rick's scores in 3830, and it's not at all unusual to see Rick with 500+ Q's in a contest. You'll also find Rick participating in just about all of NCCC's Focus Contests.

Here's a bit more, from this month's Point Generator:

Name/Call Sign:

Rick Palio – WU6W

Past calls:

K3OJV

Location:

Minden, NV

How much property do you have?

1 Acre

Describe your antenna system: Changing!

Quad Beam, 10-40 home brew from HyGain and CushCraft Parts.

Two phased 80 Meter Verticals, 43 feet top loaded with a DX Engineering phase box. 160 meter vertical, 55 feet top loaded.

6 meter 3 element Yagi, at 25 feet.

What's in your shack?

IC-7610

IC-7300

ALS-1306

AL-1500

Alpha 78 with 3CX1500A7.

Mobile Shack

IC-7000, ALS-500M

Top loaded Hustler whip

What are your previous QTH's?

San Ramon California, Horsham Pa.

If you're working, what is your career? If not, what was your career?

Retired, Electrical Engineer, Plant Manager

Married? Kids? Grandkids?

Wife and three dogs

How many DXCC entities have you worked?

267 worked

220 confirmed

What's your favorite contest?

RTTY, anything RTTY

Any tips for contesters?

Don't get old!

What would you like to see changed in NCCC?

Nothing! Do a great job with Visalia. Dedicated Contesters

Any other hobbies besides ham radio?

Precision firearms and marksmanship.

Play with performance cars.

Stay in touch with many foreign friends.



Rick, WU6W's Minden, Nevada Station.

Tube Of The Month

4-400A/8438

Norm, N6JV

EIMAC had been working on their new tetrode line through most of WWII with their 4-125A and 4-250A tubes. These were a big success. They wanted to go bigger so they introduced the much larger 4-750A in 1946. They quickly discovered that with a better designed plate structure, they could improve the dissipation. The 4-1000A was the result in 1947. It was obvious that the same type of structure would work on the 4-250A, so the 4-400A was introduced in 1948 with FM broadcast in mind. The 4-400A had the same 5-volt, 14.5-amp filament as the 4-250A and a maximum voltage of 4000 volts. Both tubes were capable of 1000 watts output, but the 4-400A did it with a greater margin. They also introduced the 4-400A/400 Air-System Socket to provide adequate air to the tube without requiring the chassis to be pressurized. That socket was re-named the SK-400. If you use a pressurized chassis, the Johnson 122-275 ceramic socket can be used with a chimney at a big savings.

The 4-400A/8438 was used in several commercial and military amplifiers for several years. In the 1960s, a zero-bias triode version of this package, the 3-500Z, became popular in grounded grid amplifiers. The grids of the 4-400A could be tied together and make it a good alternative to the new expensive tube. At high voltage, both tubes required some fixed bias, so when an exchange is made, the biasing zener diode needs to be changed. Surplus 4-400As became in high demand. A version of the 4-400A was made with the base and pin structure of the 3-500Z and it was designated the 4-400B or 7527.



4-400A (OLD)



4-400A (NEW)



4-400B

Visit the museum at N6JV.com



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 the maximum of:

- Northern California, anything north of the Tehachapi's up to the Oregon border, and
- A part of north-western Nevada (anything within our ARRL 175-mile radius circle centered at 10 miles North of Auburn on Highway 49).

Life Memberships.— \$250.00 Contact secretary.nccc@gmail.com. The 80/20 Rule: Members who have reached 80 years of age have and been a NCCC Member for 20 years are eligible for Honorary life membership. 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 MS Word (.doc or .docx), Arial 11 point. Indicate the insertion point and title of diagrams and pictures in the text and attach photos separately. Pictures should be full resolution. Avoid PDF files and email text. Please contact us if that's your only format.

Send material to Bill, N6ZFO at n6zfo@arrl.net 415 209-3084

Northern California Contest Club Reflector—Guidelines

The NCCC reflector is devoted to the discussion of contesting.

Topics include, for example, contests, station building, dx-peditions, 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.



Find NCCC on Social Media
Facebook: "Northern California Contest Club"
Twitter: "NCCCKB"



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.

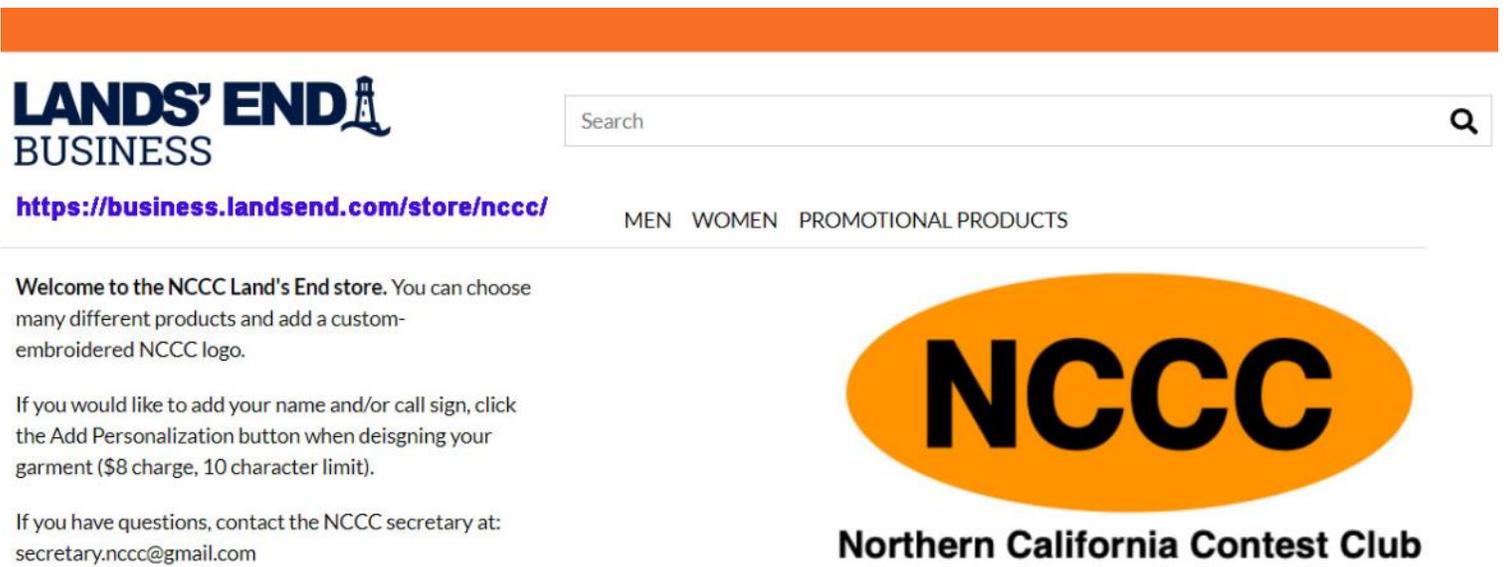
And, you can personalize your item by adding your name and/or call sign. The store is open 24/7 and items are shipped directly to you. No more waiting for everyone else to make up their minds on a group purchase.

Go to <https://business.landsend.com/store/nccc/>

It's easy to use.

From nccc.cc: <http://nccc.cc/members/lestore.html>

Thanks to W6TCP for helping to set this up.



LANDS' END BUSINESS

<https://business.landsend.com/store/nccc/>

MEN WOMEN PROMOTIONAL PRODUCTS

Welcome to the NCCC Land's End store. You can choose many different products and add a custom-embroidered NCCC logo.

If you would like to add your name and/or call sign, click the Add Personalization button when designing your garment (\$8 charge, 10 character limit).

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

NCCC

Northern California Contest Club

Instructions for purchases from the Lands' End NCCC Store:

1. Go to <https://business.landsend.com/store/nccc/>
2. Click on the Men's or Women's link, and then choose an item.
3. Pick a color, then enter the 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. On shirts, for instance, you can place the logo in one of several locations.
6. Click Apply Logo.
7. Optionally, click Add Personalization to add your name and/or callsign (\$8 charge, 10 character limit)
8. Click Add to Bag. Keep shopping, if you like.
9. Click Start Secure Checkout. Account creation and credit card required.

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KENWOOD



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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.

Comprehensive I/O, plus full remote control

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!

K4 KEY FEATURES

Optimized for ease of use

Modular, upgradeable design

7" color screen with touch and mouse control

ATU with 10:1+ range, 3 antenna jacks

Up to 5 receive antenna sources

Full remote control via Ethernet



The K4 interfaces seamlessly with the KPA500 and KPA1500 amplifiers

'The performance of their products is only eclipsed by their service and support. Truly amazing!' Joe - W1G0

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