#630 January 2025

JUG

Publication of the Northern California Contest Club

NCCC

NCCC – 54 years of contesting excellence

Inside This Issue

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

ZOOM
Tue, 14 Jan 2025 1- 800-2030 PST

"RTTY – Greatest Hits"
Ed, W0YK & Comrades

President's Report

David West, KO6M

Greetings, Happy New Year, and Happy Belated Holidays!

It's the top of the Calendar year but for us the Contest Year is heading towards its final quarter. How are you doing with your goals? I know I for one contested a bit less thanks to family obligations every Saturday, but I still got on the air and in the end that is what makes contesting happen: Butt in Chair time. Shoot, by the time you are reading this you may have already done NAQP CW and ARRL RTTY RU. Two mainstays for our hobby. I hope you did well.

I mentioned this earlier but it's worth bringing up one more time: we will be sending out a survey soon (I promise, the holidays and contests took priority) to help shape the future of the club. We all believe that this club can function in top shape if we get your feedback. Please take the time to fill it out when you receive it.

Also, in the mindset of giving back to the club, please consider joining the Board of Directors or running for a position. Elections will be in April. It's never too early to think about how you can be involved with running our club. If you are interested, please reach out to myself or KK6PXT (or any board member).

Now, a friendly reminder: check your station. We had some crazy storms in the last month. Did that antenna make it? Did your coax take on water? It's a good time during this break in the storms to get some maintenance done. As they say, no rest for the weary.

About NCCC

Officers and Directors, 2023-2024 Contest Season

President: David West, KO6M
Vice-President/Contest Chairman: Chris Tate, N6WM
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Treasurer: Nian Li, WU6P
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Director: Jim Brown, K9YC
Director: John Miller, K6MM
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QSL Mgr [K6CQP/N6CQP/W6CQP]: Dean Wood, N6DE
NAQP Teams: v**acant**
NA CW Sprint Teams: Bob Vallio, W6RGG
NCCC Email Reflector Admin: Phil Verinsky, W6PK
Worked All CA Counties Award: Fred Jensen, K6DGW
Photographer: Bob Wilson, N6TV

NCCC Thursday Night Contesting

NCCC Sprint: Tom Hutton, N3ZZ
NS CW Ladder: Bill Haddon, N6ZFO
NS RTTY Sprint/Ladder: Ed Radlo, AJ6V

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Webinars: Bill Fehring, W9KKN
Membership: Gary Johnson, NA6O/Ian Parker, W6TCP

JUG Editor

Fred Jensen, K6DGW: *k6dgwnv@gmail.com*
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In looking ahead at contests, I leave you with these Contests to think about:

NAQP SSB – January 18
ARRL VHF – January 18
CQ 160 CW - January 24
Winter Field Day (Yes, I know…) – January 25
NA Sprint – February 2
CQWW WPX RTTY – February 8
ARRL DX CW – February 15

VP/CC

Chris, N6WM

Greetings KBers.

Happy New year! I hope you all had a great holiday season! As we roll into January, our contest season is in full swing! We just finished RTTY roundup, I hope you all had a great time contesting in RTTY! I observed some great scores, and some new achievements by our membership. Awesome. Now we move on to the NAQP Winter series.

I want to once again reach out to the club for contest coordinators for the CW and RTTY modes of NAQP. This requires minimum overall time commitment; we can train you on things like team selection etc., and it's a great opportunity to give back to the club! We are trying some new things like sign up forms and more to further help make coordination fun and easy. If you are able, please contact me directly and we will get you on-board!

Last month, we talked about competitive radiosport opportunities that have reduced time commitments, yet allow for a "full effort". Examples were single band efforts in various contests. And … NAQP.

NAQP (North America QSO Party) is another great way to get in a full effort and still have half the weekend for other activities! The contests that happen twice per year per mode occur in summer and winter. The winter runs occur in Jan and Feb starting with NAQP CW on Jan 11 followed by SSB a week later. We are actively taking sign ups for these as I write this. The RTTY run occurs on Feb 22.

One of the great things about NAQP is team competition is not restricted to a club circle. With a number of NCCC members out of state, it gives a good opportunity for the entire NCCC family to compete as a series of 5

person teams.

NAQP contests are 12 hours long and single operators may operate 10 of those 12 hours. So basically the full commitment is a Saturday, with 2 hours of break time. An excellent opportunity to compete in radiosport with weekend time to spare!

Additionally, these contests are very friendly. Don't get me wrong, there are serious competitors out there, but with an exchange that includes a name. it's not uncommon to say hello to our fellow contesters on the air!

As mentioned, the last of these are NAQP RTTY. Following that, CQ WPX RTTY will be shortly after. Our club meeting this month will include a RTTY info and discussion led by W0YK and with feedback from top competitive NCCC RTTY contesters. The objective is for them to share knowledge, tips, techniques and more to make you all RTTY contest experts if you so desire! This could help prepare you and your station for both these February events.

So please attend our Jan NCCC Zoom meeting, there should be good quality info shared that can help you and us get the most out of the contest season.

73 and until next time … Good luck in NAQP

Chris
N6WM, VP/CC

Upcoming Contests

NAQP SSB	18 Jan 1800Z to 19 Jan 0559Z
CQ WW RTTY WPX	8 Feb 000Z to 9 Feb 2359Z
NAQP RTTY	22 Feb 1800z to 23 Feb 0600Z
ARRL Int'l DX	1 Mar 0000Z to 2 Mar 2359Z
NA Sprint SSB	23 Mar 0000Z - 0400Z
CQ WW WPX SSB	29 Mar 0000Z to 30 Mar 2359Z
Poisson d'Avril	1 Apr 0000Z to 2359Z

Red entries denote NCCC Focus contest

PEED	XXT	DAY	TIME (UTC)	EXCHANGE	SPONSOR LINK
25 wpm	MST	Monday	1300 - 1400z	Name and QSO serial number	International CW Council
25 wpm	MST	Monday	1900 - 2000z	Name and QSO serial number	International CW Council
25 wpm	MST	Tuesday	0300 - 0400z	Name and QSO serial number	International CW Council
+ wpm	CWT	Wednesday	1300 - 1400z	Name and CWops # (or S/P/C)	CWops
+ wpm	CWT	Wednesday	1900 - 2000z	Name and CWops # (or S/P/C)	CWops
+ wpm	CWT	Thursday	0300 - 0400z	Name and CWops # (or S/P/C)	CWops
+ wpm	CWT	Thursday	0700 - 0800z	Name and CWops # (or S/P/C)	CWops
0 wpm	SST	Friday	2000 - 2100z	Name and S/P/C	K1USN
0 wpm	SST	Monday	0000 - 0100z	Name and S/P/C	K1USN

2025

December

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

"Save The Date"

19 Dec – "NCCC's Bill Haddon N6ZFO Day."

Our friend and colleague, Bill Haddon, N6ZFO, has moved to Virginia [see three reasons in photo below] We will certainly miss him out here on the Western Frontier. To express our appreciation for Bill's contributions to the NCCC:

PROCLAMATION

WHEREAS: Bill Haddon N6ZFO has been a valuable member of the Northern California Contest Club for several decades, having served as Vice President/Contest Chairman, Director, and Jug Editor with great distinction, and;

WHEREAS: Bill has consistently exhibited the finest operating skill and techniques, winning the NCCC KB cumulative competition in 2017-18, being named NCCC Contester of the Year in 2010-11, and winning several Pacific Division and San Francisco Section plaques, and;

WHEREAS: Bill founded and still oversees the highly popular Thursday night CW contests – the NCCC Sprints and Ladders.and;

WHEREAS: Bill has used his knowledge of astronomy to help us learn how to bounce our signals off of meteors, and;

WHEREAS: Bill has for years provided expert statistical analysis of our contest results,and ;

WHEREAS: Bill has been an Elmer to many, and has warmly encouraged young people and YL's to become contesters, and;

WHEREAS: Bill is an overall good guy and is admired and respected by one and all;

THEREFORE: in view of the above and others of Bill's good deeds that we haven't specifically mentioned, we, the extended Board of Directors of the Northern California Contest Club, hereby DECLARE and PROCLAIM that December 19 shall be known henceforth as Bill Haddon N6ZFO Day throughout Northern California.

ARRL 10 Meter Contest

Bob Wolbert, K6XX

No packet used --No self spotting performed
"*Just because it is legal doesn't mean it's right*"

This definitely was one for the history books, if not the records. The big storm that seeded a nearby tornado took out one of new house's sliding glass doors. The thing blew into the house, where it lay flat and unbroken--and is now back where it should be. This probably occurred at the same time the lightning struck all around.

This represents a high-water mark for QSOs made during a single weekend. And the first time I've seen the rate meter linger over 400 Qs/hr. Fun -- as in "CQP Fun"! Conditions weren't as top-of-the-cycle stellar as we had hoped, so we may reasonably expect at least the same for next year.

The band shut down hard a little over an hour after sunset, and was fascinating to watch opening before dawn. One minute there is a single good signal. Three minutes later the spectrum scope "grew grass", and maybe ten minutes after that the band was howling. If there was any sporadic E, I missed it.

BAND	MODE	QSO's	SPC	DX
28	CW	1629	63	61
28	SSB	1465	64	39
		3094	137	100

Final Score: 2,144,242

Antenna of the Month

Portable All Band Vertical

Gary, NA6O

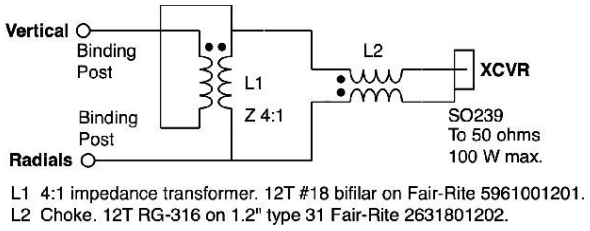
Having an all-band antenna that's lightweight, easy to set up and easy to use is handy for all kinds of portable operations such as POTA and Field Day. After a request from my blind ham friend Earl KG7UKW, I put together something that he can take to the field with minimal hassle. It's based on a non-resonant vertical wire and a modest number of ground radials with a matching transformer to improve the average SWR. This one uses one of the "magic" vertical lengths of 25 feet which actually resonates around 9 MHz. Avoiding resonance on any ham band is an old trick that helps avoid extreme feed point impedances which are hard to match.

Figure 1. Base of the antenna showing the mast, radial connections, and matchbox

Construction

To keep things simple and lightweight, I used 20 gauge insulated wire for both the vertical and radials, and a 32-foot telescoping fiberglass pole from *Sotabeams* [Ref. 1], which we extend to about 25 feet. Other types will also work such as the ones made by *Jacktite*. The pole can be supported at the base by almost anything. In an open area, a 3-foot construction stake works great. Heavy Velcro straps tie the mast in place. Radials are connected together via screws and wingnuts at a copper ring at the base but almost any connection method will do. I chose to use eight radials 25 feet long as a compromise. More is better of course but it becomes a matter of convenience and diminishing returns after a point. The radials simply lie on the ground. Finally, the matchbox is strapped to the base and connected between the vertical and radials (Fig. 1).

Matchbox Design



L1 4:1 impedance transformer. 12T #18 bifilar on Fair-Rite 5961001201.
L2 Choke. 12T RG-316 on 1.2" type 31 Fair-Rite 2631801202.

Figure 2. Matchbox schematic

Feed point impedance of this antenna is literally all over the map as you sweep through the HF bands. The map I'm referring to is the *Smith Chart*, a handy way of displaying complex impedance and much more. It's about the only way to make sense of what's happening and to determine if your matching technique is likely to be successful. In general, we find that the impedance is higher than 50 ohms and also wildly reactive. Also, it's bad enough that the built-in tuner in most transceivers will not succeed. A 4-to-1 impedance stepdown transformer

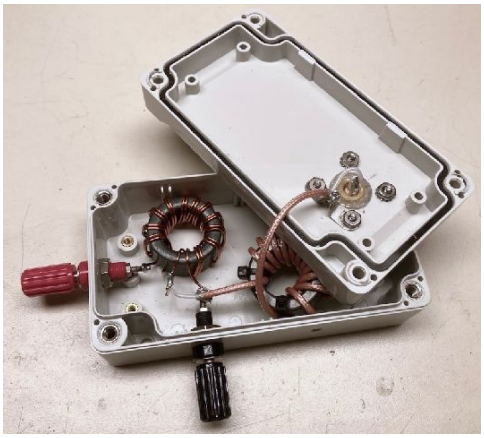


Figure 3. Matchbox construction

is a reasonable choice, bringing things into range of most tuners on most bands. This same solution was applied in last month's antenna, the off-center fed dipole, which had many of the same issues.

Since this antenna is only intended for use up to 100 W, small ferrite cores were used in the matchbox. A 4:1 transformer is bifilar wound with magnet wire on a 1.4 inch type 61 core which exhibits low loss. A common-mode choke is also required to avoid having the outside of the coax become another radial. I used a 1.2 inch type 31 core wrapped with 12 turns of RG316 Teflon coax. This yields at least 4000 ohms of choking impedance from 7 to 30 MHz, an excellent result. Binding posts provide wire connections. A weatherproof plastic box gives us some peace of mind when it rains. Figures 2 and 3 shows the schematic and a photo of the innards. I ran 100 W continuous through this matchbox into the actual antenna on all bands and there was no significant heating.

Performance

Band	At Matchbox	At End of Coax
40 m	7.2	5.2
30 m	4.6	3.7
20 m	7.7	4.5
17 m	13.4	5.5
15 m	9.8	4.7
12 m	3.9	2.7
10 m	2.8	2.1
6 m	3.5	2.2

Table 1. SWR at matchbox & end of 40 ft of RG58

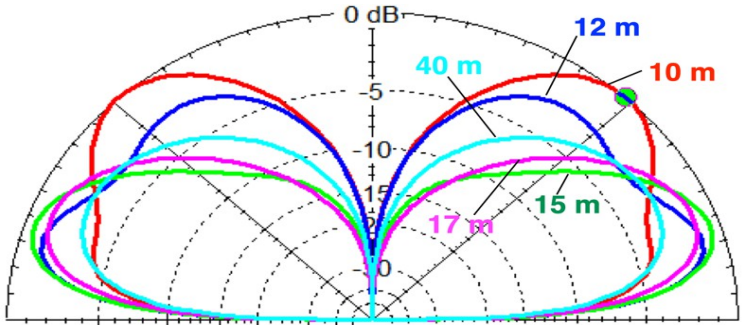


Figure 4. Elevation patterns. 40 through 15 m are typical single-lobe, low-angle. Higher bands start to have lobes at higher angles. Outer ring is 1.7 dBi.

Everybody wants to know if the SWR is perfect everywhere because they mistakenly think that's what makes an antenna "good." But a dummy load has perfect SWR and radiates nothing! What matters most are radiation pattern and efficiency. SWR only has to be within range for your antenna tuner.

One way to estimate efficiency of a vertical is to measure the feedpoint resistance at its fundamental resonance. I did that with my VNA, and found that it was 38.1 ohms at 8.67 MHz. An ideal 1/4-wave vertical over perfect ground would be about 35 ohms, and that represents ideal *radiation resistance*—the place your input power goes to do the work of turning RF current into radiated fields. Since mine measured higher than that we have some loss, in this case 0.7 dB, and it's mainly due to an imperfect radial system which allows some current to flow in the lossy Earth. It turns out that's because this antenna exhibits relatively high impedance at its feedpoint, its dependence upon the ground system is relaxed compared to a resonant vertical.

There is also quite a bit of loss in the coax due to the high SWR. I used 40 feet of RG58 and *SimNEC* [Ref. 2] tells me that the worst-case loss between 7 and 50 MHz is about 2.4 dB. Using RG8 reduces that to about 1 dB. Actually, this loss can work somewhat in our favor since it masks the most extreme SWR excursions that might cause our antenna tuner to fail in finding a match. Still, do not be surprised if your tuner fails to match on one or more bands. I found that 17 m was the worst. Table 1 lists the SWR at the matchbox connector and at the end of the coax.

Radiation pattern is of course omnidirectional and mostly at a low takeoff angle. Figure 5 shows the elevation patterns which gain higher-angle lobes on the higher frequencies. This is typical of a vertical that is too long for those bands.

Conclusion

Every antenna is a compromise and those that try to cover a vast range of frequencies are often doomed to poor performance over at least part of their range. In this case, we did ok for such a simple, lightweight kit with no fiddly adjustments. It offers decent efficiency and probably will yield a usable match on all bands from 40 through 6 m. I gave it a try mid-morning running 100 W on CW for all bands and the reverse beacon [Ref. 3] detected me from Hawaii to central America and into Europe, as well as all over North America. Also I got a report from Earl: He managed to set his up for the first time in 10 minutes, and that's without eyes! Not bad. And it fits in your backpack.

References

1. **Sotabeams:** "Compact 32-foot Travel Mast" *www.sotabeams.co.uk/compact-light-weight-10-m-32-ft-travel-mast/*

2. **SimNEC:** Free Smith Chart simulator: Very useful for all kinds of RF circuit analysis. *www.ae6ty.com/smith_charts/*

3. **Reverse Beacon Network:** reversebeacon.net/main.php

"Deer Hon. Ed."

Humor in Ham Radio

It's been 89 years since letters, allegedly written by "Hasafisti Scratchi, in Feenix AZ appeared in "Radio Magazine"[1] and became the first thing a ham turned to when CQ Magazine arrived in the 40's. Fractured English, a brother Itchi, a girlfriend ["Lil"?], and an occasional additional relative and [mis]adventures in ham radio rivaling the real ones we experienced. They usually began "Deer Hon. Ed." and possibly his most famous was the "powerful antenna tuner" that had miraculous properties if you believed him.

Scratchi was the work of George Floyd, W2RYT [SK in 2008] who also penned the column "Lighthouse Larry[2]" in the "GE Tech Talk" magazine of the period but the author remained unknown until the 60's. Many thought Wayne Green, W2NSD, penned the letters from Feenix. "Never Say Die" was enough of a character himself that he certainly could have. Wayne finally did reveal Scratchi's creator.

Social prescriptions and customs vary over time and by the 60's, ethnic-based humor was falling out of favor, and Hashafisti Scratchi faded. "Jeeves" drawn for QST by Phil Gildersleeve, W1CJD got chuckles for many years too, but it too faded at the beginning of the 21st century when the League decided it wanted to "Look forward, not to the past." The URL in footnote #1 is worth a look – ninety nine pages of "real radio."

1 https://www.worldradiohistory.com/Archive-Radio/30s/Radio-1936-10.pdf
2 A take-off from the lighthouse shaped low-noise planar triodes of the day

Tube of theMonth

Norm Wilson, N6JV
Visit the Tube Museum at *n6jv.com*

Vacuum Resistors

In the days of large wire arrays like the rhombic, big gun stations rarely had room for more than one. For antenna to be directional, it needed to be terminated with a non-inductive resistance. Globar resistors were available, but they could be damaged if they were allowed to get wet. One solution was to use special vacuum tubes containing a resistor made by electroplating a carbon film on a form that was placed in a strong vacuum. The most common value of these 9-inch units was 200 ohms at 200 watts. Antenna terminations were often 800 ohms, so four units in series would dissipate 800 watts and could be packaged into a small unit. Ladder line is used to feed the array and it is very low loss. If the feed point was placed in the center of the antenna, equal feed lines could be swapped with a switch and make the direction change 180 degrees. The other feed line would be terminated with the resistors.

Each unit was sold with a pair of clamping mounts.

Norm recently fell in his workshop, breaking his hip and conking his head on a compressor fairly hard. He was hospitalized for surgery and then spent several weeks in physical rehab. He is recovering well from those injuries however the blow to his head has adversely affected his vision. The JUG offers its best wishes to our Dr. of Thermionic Emissions for a speedy and full recovery.

Editor Notes

Happy New Year! After scanning the WA7BNM Contest Calendar with its nearly uncountable number of contests and on-air events each month, 19 Dec 2025 is calling out for yet another new event of some sort. FOC has the Bill Windle QSO Party, why not one for our own Bill that we now share with the colonies?. Bill is inventive. Some may remember his "Elements" contest which involved counting the number of abbreviations of the chemical elements found in the call signs you worked.

The Lost Art of Troubleshooting

Updated from 1960's CQ magazine

Troubleshooting used to mean "Remove the cover(s) from the box and poke around with a Simpson 260 until you locate the problem, sometimes aided by the ashes and smell of the small fire that had occurred in the corner of the chassis." Today, I don't even know how to open my Kenwood TH-D72 HT let along try to fix it. Today, we troubleshoot the interconnections between the boxes. As a public service, the JUG offers ...

1. It seems to be human nature is to assume the worst when any problem arises. The actual problems are rarely even remotely close to the worst that can happen.

2. Make a list of possible solutions to the unknown problem and then try them one by one. This will take a great deal of time and likely will not find the problem.

3. Do #2 but without returning the circuit/system to it's original state before trying the next guess. This will take the rest of your life.

4. If it worked last weekend and you swear you didn't change anything … you did.

5. First Law of Antennae: If it's up, it will come down … probably during Sweepstakes.

6. Second Law of Antennae: If it's still up, it needs to be bigger.

7. Third Law of Antennae: The weather is like a casino – it always wins.

8. Posting your problem(s) to an email reflector will yield a large number of causes/solutions at least one of which will be, "Why are you trying to do that?"

9. Anything advertised as "Plug and Play" will be neither.

10. Most ham software requires tens of thousands of lines of code to function but requires only one erroneous line of code to malfunction. The odds are against you, see #7 above.

11. The probability that a new device in your shack will shut everything else down is proportional to the square of the number of devices you already have between your key and your radio.

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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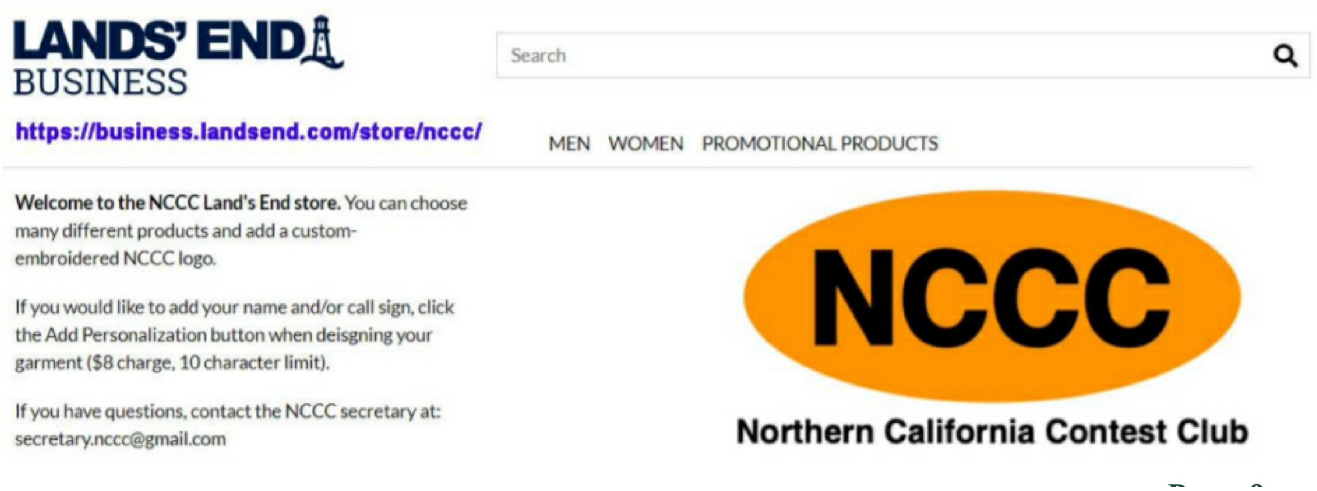

NCCC Lands' End Store

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.
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5 Ways to Shop!

- **RETAIL LOCATIONS – Store hours 10:00AM - 5:30PM - Closed Sunday**
- **PHONE – Toll-free phone hours 9:30AM - 5:30PM**
- **FAX – All store locations**
- **ONLINE – WWW.HAMRADIO.COM**
- **MAIL – All store locations**

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*On most orders over $100 in the continental US. (Rural locations excluded.) **Except 60M Band. The Icom logo is a registered trademark of Icom Inc. Toll-free including Hawaii, Alaska and Canada. All HRO 800-lines can assist you if the first line you call is busy, you may call another. Prices, specifications and descriptions subject to change without notice.