



#624 – July 2024



JUG

Publication of the Northern California Contest Club

NCCC

NCCC – 53 years of contesting excellence

Inside This Issue

- Inside this Issue
- President's Report
- July Meeting Program
- About NCCC
- VP/CC Report
- Coming State/Province QSO Parties
- Planning a CQP Expedition?
- Ross Forbes, K6GFJ – SK**
- K6GFJ Celebration of Life
- LOTW Returns to Life
- The Lumberyard
- Annual KB Competition Returns
 - 2023-2024 Final Results
 - 2024-2025 Rules
 - 2024-2025 KB Contests
 - 2024-2025 Bracket Assignment
- Tube of the Month
- NCCC Dues
- Editor Notes
- "The Plea"
- Usual Ads"

NCCC MEETING

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

ZOOM: Tue 9 Jul 2024 1830 PDT

"Grounding and Bonding"
Jim Brown, K9YC

President's Report

David West, KO6M



I hope this newsletter finds you cool and hydrated. As I write this the forecasted highs are well into the 100s over the next few days and there is only a slight relief after the current heat wave.

More importantly than the heat is the membership drive for our club. As you recall, dues for are \$27 for the full membership (those in the circle) and \$12 for those that are associates or family members. I'll be honest, we are in dire need of dues. Long ago during a fraternity meeting I compared our dues to filling up the car with gas for a road trip (we loved road trips back then and being in LA they were always to Vegas). It's that time when we are filling up the proverbial car with fuel (or energy for the battery if that's what you drive). We are in dire need of dues. Without them we will have a deficit. We have already had deficits over the last couple of years. We cannot continue to do this. The strength of our club relies not just on our members but also the dues. We use these dues for sponsoring awards in contests, sponsoring our own KB Awards program, various website fees and administration programs, and of course sponsoring the California QSO Party. Please use the membership link on nccc.cc and use the Sign In button to sign into Memberplanet and pay your dues or you may send your dues directly to paypal@nccc.cc

You may also use this link to directly pay:

<https://www.paypal.com/nep/payment/V4L82G8HU426U>

Thank you all and now that all that has been said, let's get back to



contesting! While it is a slow time over the Summer, I still believe it's a great time to hone skills and fix up the station from the winter storms and just overall use of your station. We have a great presentation from Jim, K9YC, on RGI and station interference. I've asked him to do this presentation but I know we are all struggling with it at times and I bet all of us will get something out of it.

KB

David, KO6M

July Meeting Program

“Grounding, Bonding, and Mains Power for Hams”

Jim Brown, K9YC

Jim has been hamming since the summer before starting high school in 1955, starting out as WN8FNI, then W8FNI. Always primarily a CW op, he passed his Extra Class in 1959, the summer before college. Finished his BSEE at the University of Cincinnati in 1964, settling in Chicago for 42 years as W9NEC. W8FUM mentored him in contesting early on, and he was working SS and CD Parties before college.

Jim has been a member of the Standards Committee of the Audio Engineering Society since the '90s, a member of Working Groups in several disciplines, and Vice-Chair of the WG on EMC for 20 years. He's a principal author of multiple AES Standards on EMC, and lectured Workshops to Sound and Video Contractors at national conventions.

Until moving to the Santa Cruz Mountains, his stations were always quite modest, all wires on a city lot. He joined NCCC when he moved here in 2006, and with lots of help from members, has built the station of his wildest dreams.



About NCCC

Officers and Directors, 2023-2024 Contest Season

President: David West, [KO6M](#)
Vice-President/Contest Chairman: Chris Tate, [N6WM](#)
Secretary: Greg Alameda, [KK6PXT](#)
Treasurer: Nian Li, [WU6P](#)
Past President: David Jaffe, WD6T
Director: Jim Brown, [K9YC](#)
Director: John Miller, K6MM
Director: Ed Radlo, [AJ6V](#)

Volunteers

Charter Member: Rusty Epps, [W6OAT](#)
Awards Chair: Gary Johnson, [NA6O](#)
California QSO Party Chair: Dean Wood, [N6DE](#)
QSL Mgr [[K6ZM](#)]: **vacant**
QSL Mgr [[K6CQP/N6CQP/W6CQP](#)]: [Dean Wood](#), N6DE
NAQP Teams: **vacant**
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](#)

Communications

Webmaster: John Miller, [K6MM](#)
Webinars: Bill Fehring, [W9KKN](#)
Membership: Gary Johnson, [NA6O](#)/Ian Parker, [W6TCP](#)

JUG Editor

Fred Jensen, [K6DGW](#): k6dgwnv@gmail.com
Home: 775.501.5488
Cell: 530.210.0778

handled by the ARRL but it is sponsored by the IARU. As such.. SELF SPOTTING IS NOT ALLOWED. Self-spotting could result in classification as a check log or worse.

NAQP RTTY

The summer NAQPs are rapidly approaching, and the first in the series is NAQP RTTY. We are in need of a coordinator for this contest. Last run, K6DGW stepped down from many years of NAQP coordination. We DO have a coordinator who has volunteered for the CW and SSB runs, but are looking for someone to take the reins of the NAQP RTTY. This is a fun and easy way to contribute to the club and help out our fellow contesters. If you are interested in taking on this role, please contact me directly. *(One on one advice and guidance is available on request from your Editor, K6DGW, NAQP Team Flogger Emeritus)*

VPCC Report

Chris Tate, N6WM



Too hot for tower work!

Greetings K6Bers. Wow 111 degrees in Livermore today. As we leverage the summer to do various station maintenance tasks and tower work, it's important to stay safe in this hot weather. We

currently are in a week long heat wave, and this kind of heat is enough to make even the most fit vulnerable. I'm hoping you have planned accordingly and if you are working outdoors, do your best to stay cool and hydrated. My advice – defer for cooler weather, as we have at N6RO, and K6LRG.

Summer contesting has started -- IARU HF World Championship

The fast paced and multi-mode IARU HF World Championship is coming up fast. The 24 hour contest begins at 1200 UTC Saturday, July 13 through 11:59 Sunday the 14th. You can operate the entire contest period. This Mixed Mode CW/SSB is great fun, but conditions can be a bit challenging in mid-summer. This is of course the contest that runs in conjunction with WRTC (Next WRTC run will be in 2026). This is a contest that I started out in contesting with, and it remains one of my favorites. I hope you all get a chance to get on the air In this one, a little oasis of HF contesting in a dry Summer! Keep in mind, this contests administration is



LOTW has made its return, now hoping for the ARRL contest website to be online

After an extended outage we are all happy to see Logbook of the World back in service. However the multiple system affected outage still leaves the contest portal of ARRL (certificates, contest statistics, etc) offline. I am in contact with the ARRL contest branch and unfortunately do not have any updates as of this publication for a full return of service. The framework that is available should be enough to handle the administration of the IARU test.

I Still want to hear from you on focus contest ideas for the 2024/2025 season!

73,

Chris, N6WM – VP/CC



Upcoming State/Province QSO Parties

A Quick Reference for those participating in the Intra-Club QSO Party Challenge or just looking for a weekend contest

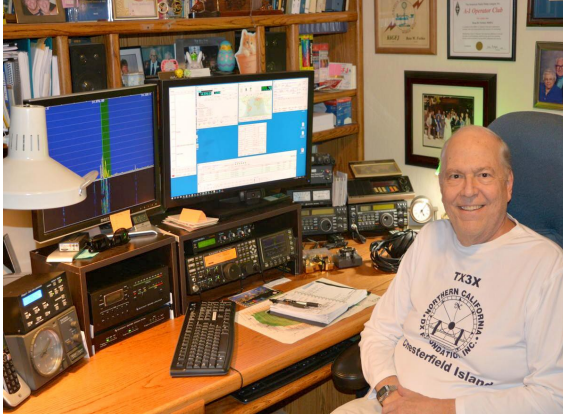
CONTEST	DATE(S)/TIME(S)
West Virginia	6/15 1600Z – 6/16 0400Z
Alabama	7/27 1500Z – 7/28 0300Z
Maryland/DC	8/10 1400Z – 8/11 0400Z
Hawaii	8/24 0400Z – 8/26 0400Z
Kansas	8/24 1400Z – 8/25 0200Z 8/25 1400-2000Z
Ohio	8/24 1600Z – 8/25 0400Z
Tennessee	9/1 1700Z – 9/2 0300Z
Colorado	Not yet posted
Texas	9/21 1400Z – 9/22 0200Z 9/22 1400Z to 2000Z
Iowa	9/21 1400Z – 9/22 0200Z
New Hampshire	9/21 1600Z to 2200Z 9/22 1400Z to 2000Z
New Jersey	9/21 1600Z – 9/22 0359Z
Washington Salmon Run	9/21 1600Z -- 9/22 0700Z 9/22 1600Z to 2400Z
Maine	9/28 1200Z – 9/29 1200Z
CALIFORNIA QSO PARTY	9/5 1600 – 10/6 2200Z

Planning A CQP County Expedition?

If you're planning a County Expedition for the 2025 CQP, now is the time to get serious. Help is available for just a couple of mouse clicks at [The CQP Website](#) for advice, tips, and anecdotes from those who have been there and are skilled in the art of successful expeditions. County expeditions are a lot of fun, especially with friends, and they set CQP apart from all the rest in that they provide full or nearly full-time operations. Nowadays, nearly all the Worked All California Counties award are for contacts made in the CQP.



Ross Forbes, K6GFJ – SK



With great sadness, we report the passing of Ross Forbes, K6GFJ, after an extended illness. First licensed as WB6GFJ in 1963 and becoming K6GFJ in 1997, Ross has been very active until his passing, also holding KH6GJW, KL7FFT, XE0GFJ, 3D2FB, ZK1XE, ZL0AKO, VK3BZZ, and FO0FB. He was also a member of the TX3X team to Chesterfield Is. in 2015. A member of AMSAT-NA, NCCC, NCDXC, RSGB, CDXC, and INDEXA, and has served in various officer positions with them as well as ARRL positions in the SV and SCV sections and Vice-Director of the ARRL Pacific Division... Ross had one ATNO left [P5].

Rick, K6VVA: Many decades ago, Rusty (W6OAT, then K4BVD/6) and several other NCCC KB'ers and myself operated a LOT of contests from the infamous La Cresta drive hilltop KB QTH in Los Altos Hills. I think Ross may still have been in high school when we first met. Some of us moved our complete stations up there for a great Multi-Op setup. The view from the main Ham Shack window was spectacular. Dad Jack was also a ham, and his Mom Esther ran the W6 QSL Bureau for many years. Jack and Esther Forbes were like 2nd parents to us 20-somethings. They also kept us very well fed during the contests (it was a "Locust Paradise"). Ross continued the family legacy of friendship, and the nice warm smile he inherited from his parents.

Jeff, N6GQ: "Ross led a team to visit French Polynesia in 1984. I was 16 at the time and thought of nothing but DX. Ross took me under his wing and I went with the group to FO and had a wonderful time! I was FO0KI, mostly on CW, and had a fantastic place to stay and operate right on the edge of the water thanks to Ross and FO8HL. I will miss Ross, he was a friend and mentor of the best kind! RIP OM!"

Alan, AD6E/KH6TU: Everyone seemed to know Ross. Taken on Maui: on the left, Kevin, K6TD and wife, right foreground, Ross and Mary, and Alan and Dorothy in the background.

With his work and contributions to NCCC, NCDXC, INDEXA, RSGB, AMSAT-NA, and CDXA, as well as friends world-wide, Ross will be missed.

RIP Ross





Celebration of Life – Ross Forbes K6GFJ via John, K6MM

... on behalf of Mary Forbes, who has scheduled a “Celebration Of Life” event to remember Ross, K6GFJ --

Date: Saturday, July 27th

Time: 11:30 AM

Location: [Foothill Club](#); 20399 Park Place; Saratoga, CA 95070

Phone: (408) 838-3485

There will be some finger food & a lunch buffet, with non-alcoholic drinks. Afterwards, Mary will invite friends and colleagues to share stories about Ross. To help her finalize the event, please let Mary know if you can attend via her email address: mgforbes@comcast.net

ARRL MEMBER BULLETIN July 1, 2024

Effective 12:00pm ET / 16:00 UTC we will be returning Logbook of The World® (LoTW®) to service.

As work progressed on the network, some users encountered LoTW opening briefly during which some 6600 logs were uploaded. The logs were not processed until this weekend as we tested that the interfaces to LoTW were functioning properly.

We are taking steps to help manage what will likely be a huge influx of logs. We are requesting that if you have large uploads, perhaps from contests or from a DXpedition, please wait a week or two before uploading to give LoTW a chance to catch up. We have also implemented a process to reject logs with excessive duplicates. Please do not upload your entire log to “ensure” your contacts are in LoTW as they will be rejected. Lastly, please do not call ARRL Headquarters to report issues you are having with LoTW. You can contact support at LoTW-help@arrl.org.

Through the end of the year, you may experience planned times when LoTW will be unavailable. We have been using this time to evaluate operational and infrastructure improvements we would like to make to LoTW. Those times will be announced.

We appreciate your patience as we worked through the challenges keeping LoTW from returning to service. We know the importance of LoTW to our members, and to the tens of thousands of LoTW users who are not ARRL members. LoTW, just behind *QST*, is our second most popular ARRL benefit.



THE LUMBER YARD

Awards and Kudos for NCCC Members



Author, Author!

Jim Deloach (WU0I) and Jim Peterson have an article on pp 55-57 of the June issue of QST about Field Day safety.



Return of the Annual KB Competition

Gary Johnson, NA6O

Most of you know that our Annual KB Competition results for last year were delayed and in fact the real-time reporting has been offline since January 1, 2024. This occurred because the method that we had been using to obtain data from 3830scores.com had been terminated and replaced with a more modern one. The entire burden of rewriting our scoring program fell to Matt, WX5S, [seen here at N6RO], who has authored and maintained it for eight years now. This was a major task. Unfortunately, Matt was taken ill for much of early 2024 and so was delayed in getting back to it. Together, we carefully checked and tested every aspect of the program and finally it is back on line with live reporting at <https://nccc.cc/awards.html>. Rules are also posted there and are included in this issue of the Jug as well. The even better news is that the processing is now extremely fast and accurate and I'm quite sure that I will no longer have to do manual corrections to the database. So a big KB to smiling Matt for powering through and delivering a quality software product for us all.



2023 Annual KB Competition Results

Gary Johnson, NA6O

Final results for the contest year that closed March 1, 2024. Top three in each bracket receive plaques, others receive certificates.

Platinum Bracket

Call	Rank	Contests	Points
KA6BIM	1	24	2,052,167,256
WD6T	2	23	1,708,444,025
N6ZFO	3	27	1,607,504,265
W2SC	4	8	1,459,290,272
AE6Y	5	14	1,302,871,164
N6RO	6	25	1,289,727,350
AJ6V	7	27	1,215,013,635
K6EI	8	23	829,532,053



Gold Bracket

Call	Rank	Contests	Points
KK6PXT	1	11	300,676,376
K9YC	2	10	262,909,330
W6EU	3	12	222,442,644
N3RC	4	15	222,416,325
N6DW	5	19	194,126,952
K6NV	6	19	178,103,264
K6OK	7	11	171,282,727
K6TQ	8	14	157,263,876

Silver Bracket

Call	Rank	Contests	Points
AF6SA	1	15	296,297,100
NN6U	2	17	235,493,792
K7GK	3	8	115,949,624
W6FB	4	12	97,348,920
KH2TJ	5	9	82,996,353
KI6OY	6	17	71,068,568
KE6QR	7	9	54,127,026
N6YEU	8	11	45,910,953

Bronze Bracket

Call	Rank	Contests	Points
NU6S	1	5	150,767,555
NA6O	2	10	51,420,540
NN7O	3	12	47,831,724
VA7RR	4	4	46,640,280
K8TR	5	6	43,711,656
K6ST	6	9	39,387,699
KM9R	7	6	32,331,156
N6DE	8	6	19,260,024



NCCC Annual KB Competition Rules

Revised June 11, 2024



Current rules and standings are always available at <http://nccc.cc/awards.html>.

Purpose: To provide a means of rewarding NCCC members who are DX contesters, sprinters, VHFers, and especially active contesters in all modes.

Time period: The contest year restarts at 0000 March 1 UTC. ARRL DX SSB is the first contest of the year. NAQP RTTY is the last.

Eligible contests: Currently, points from 28 contests are counted. See the table at the end.

Scoring: Score = N_Contests * sum of (points for each contest * each contest's multiplier).

Where N_Contests is the number of contests in which you participated.

NCCC weekly sprints are special. Points for the entire year are added up, but it is only counted as a single contest.

Multi-ops: Points = total score divided by the number of operators.

Station owners: A station owner who *does not participate* in a particular contest receives 25% of the points.

Valid scores: Only scores posted to 3830scores.com are counted. Scores obtained by use of **High Power** in the 6 NAQP competitions and the weekly NCCC sprints (CW, CW Ladder and FT4) will not be counted for the KB competition, either as scores or as contest multipliers. **A minimum of 25 QSOs**



are required in all contests, except for the NCCC sprints. Scores are counted regardless of which club received the contest points (NCCC, MLDXCC, REDXA, PL259, etc.). The only requirement is that you **must be an NCCC member** to receive credit for the contest.

Brackets: There are four independent brackets for the purpose of awards: 1-Platinum, 2-Gold, 3-Silver, and 4-Bronze. Brackets are assigned at the beginning of the contest year according to your final position in the previous year's standings.

Awards: Paid NCCC members may receive awards.

How to Improve Your Standing

1. Post all your scores on 3830. Those are the only ones that count.
2. Participate! Even the smallest score has value. Every contest on the list is a multiplier.
3. Try a new mode or a new band (VHF, 10, 160).
4. Try the sprints. Small score, big multiplier.
5. Go for a big score in WPX: Exponential score growth.
6. Join a multi-op: The score is split among ops.
7. Let someone else use your station: You get 25%.

Comments are welcome, as always. I log and track every comment and suggestion and try to improve the KB Competition each year. The one thing I can guarantee is that each year will be different!

Contact: Gary NA6O, NCCC KB Awards Manager, gwj@me.com



2024-2025 KB Competition Contests

Contest	Date	Mult
ARRL DX Contest SSB	March 2	9
CQ WPX SSB	March 30	2
7QP	May 4	20
CQ WPX CW	May 25	1
ARRL DX Contest DIGI	June 10	250
ARRL June VHF	June 8	200
IARU HF World Championships	July 13	4
NAQP Summer RTTY	July 20	25
NAQP Summer CW	August 3	25
NAQP Summer SSB	August 17	50
NA Sprint Fall CW	September 8	150
CQWW RTTY	09/28/24	1
CQP	October 5	10
CQWW SSB	October 26	1
ARRL Sweepstakes CW	Nov 2, 2024	15
ARRL Sweepstakes SSB	November 16	15
CQWW CW	November 23	1
ARRL 160 Meter Contest	December 6	100
ARRL 10 Meter Contest	December 14	4
RAC Winter	December 28	20
ARRL RTTY Roundup	January 4	50
NAQP Winter CW	January 11	15
NAQP Winter SSB	January 18	15
NA Sprint Winter CW	February 25	150
CQ WPX RTTY	February 8	2
ARRL DX Contest CW	February 15	1
NAQP Winter RTTY	February 22	15
NCCC Sprint CW and FT4	Weekly	100

KB Competition Brackets

There are four independent brackets for the purpose of issuing awards: 1- Platinum, 2- Gold, 3-Silver, and 4- Bronze. Your bracket is assigned automatically at the beginning of the contest year according to your final position in the previous year's standings. New members or those who have never posted a score to 3830 default to the Bronze level.



Platinum	Gold	Silver
KA6BIM	AD6E	WU7W
WD6T	K3EST	KF6NCX
N6ZFO	KH6LC	K6JS
W2SC	N6TTV	W6TCP
N6RO	W6OAT	KM9R
AE6Y	K6MM	K6TD
AJ6V	N6XI	N6PN
N6WM	N3ZZ	NC6R
K6EI	K6RIM	WU6X
K6XX	KH2TJ	K6KLY
N6IE	K7GK	N6EE
W6SX	W6FB	K2RD
N6KT	WE6Z	N6GEO
N6TV	WB6JJJ	N5KO
W6LD	K6UFO	N6DE
W0YK	KX7M	WX6V
WX5S	KE8FT	NF6R
W1RH	KI6OY	WA6ZTY
KK6PXT	N0KQ	KK6L
K5RC	NW6P	K6ELE
AF6SA	W9KKN	W6DER
WU6P	K6SRZ	AI6W
WC6H	W6IA	ND2T
W6NV	KH7Y	K6XV
N7MH	VA7RR	W6SR
KO6M	NA6O	N6RK
NN6U	KE6QR	NU6T
N3RC	K8TR	K6MI
K6GHA	K6KM	KW6S
W6EU	OH1VR	W6XU
K9YC	NN7O	W7IV
WK6I	K6ST	KG7QXE
K6OK	W1SRD	W6ATV
N6DW	N6YEU	W6BG
K6NV	KE6GLA	KM6WCC
K6TQ	W6SC	KN6MYI
NU6S	W6JTI	K6CSL



Tube of the Month

Norm Wilson, N6JV

Visit the Tube Museum at n6jv.com

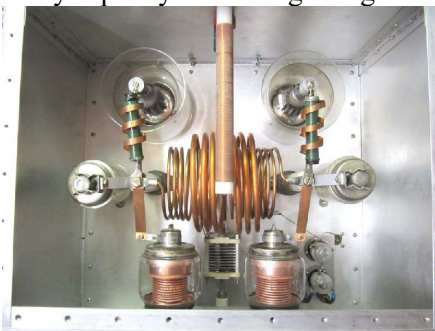
Vacuum Variable Capacitors



The Vacuum Capacitor dates back to about 1896 when Nikola Tesla took out a patent on it. Its practical use started in World War II when the fixed value units became common. The production of variable capacitors seems to date from late in the War, but as to the inventor, I can only speculate based on the research I have done. The capacitor components are similar to the fixed units except one of the plates or cylinders must be mechanically moved in and out to change the capacity. A diaphragm or bellows must seal around the mechanical parts to maintain the vacuum seal. In June 1945, EIMAC issued the experimental number X362 to a vacuum variable capacitor. In January 1946, EIMAC recorded the number X433 for a 250 pf variable using a bellows structure to be made for a specific customer. In June 1946, Jennings Radio advertised vacuum variables that used the bellows system. These guys were known to share ideas. EIMAC didn't market a vacuum variable until 1948 with the VVC 60-20 which is a 10 to 60 pf unit at 20 KV. In 1949, they added the [VVC2-60-20](#) and the [VVC4-60-20](#) which all used the same basic VVC 60s that were mounted in geared assemblies using two or four units. These assemblies could be used in push-pull or all sections in parallel. I found a 2-unit capacitor many years ago and incorporated it in a 40-meter amplifier as seen in the photo. I have never seen another 2 or 4 unit since. All these configurations were also made by Toshiba in Japan in the mid-1950s.

In a push-pull amplifier with plug in coils that were popular in this period, the VVC2-60-20 would have a minimum capacity of 5 pf so would be ideal on 10 meters and still tune down to 40 meters. In my 40-meter amplifier, I padded the capacitors with fixed units to keep the travel at mid-range. Split stator capacitors like the next example, were made by having two connections each supporting half of the stator. These units are rare.

The most popular sizes sought by hams are in the 250 to 300 pf range for use in a pi-network plate circuit used in a band switching amplifier. The clamp mounted capacitor is a Jennings U-250 and is rated at 10 KV. As vacuum seal technology improved the size was reduced as is shown with the Jennings UCS-300 capacitor which is rated at 10 KV. These capacitors are easier to mount with a flange and no special clamps. The price of these older units has increased greatly over the last few years. [Modern vacuum capacitors](#) are made of ceramic and are available in many capacity and voltage ranges.

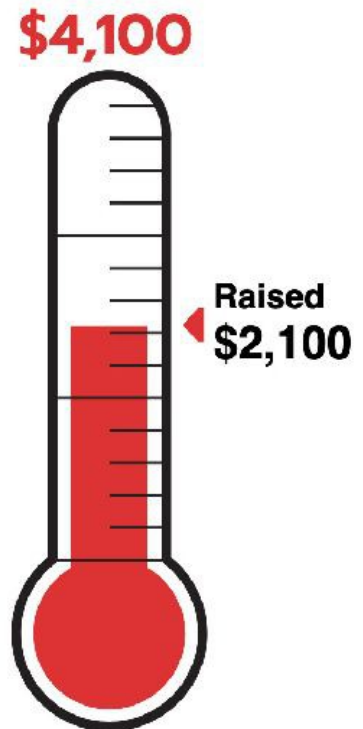




President David, KO6M, mentioned in his column that dues are due. While membership dues in NCCC are optional, they are required for NCCC awards. The suggested amount is \$27 which may be paid by a quick visit to [Membership](#) on our website. You can do this via PayPal, on-line through Member Planet, or by check in the mail if desired.

David and our Webmaster John, K6MM, have conjured up a nifty thermometer and the status as of JUG press time is on the right.

2024 NCCC Dues Drive





Editor Notes



Wow! The summer solstice just slipped by, the year is half over, and the contest season is about to crank into full gear. Solar cycle 25 has been a mixed bag for us so far. It's good to have sunspots and relatively high values for the 10 cm solar flux index ... but our star has also been very grumpy this cycle. A couple of very large and extremely active sunspot groups have coughed out multiple X-ray flares, CME's, and proton storms yielding high values for Kp/Ap and accompanying crappy HF conditions. They've survived a couple of sun-rotations so we may not be done with them yet.

I'm a day or so late with this issue thanks to a case of UK COVID Andrea, son Mark, and I acquired from some visitors. We've all had regular COVID booster vaccinations [seems Andrea and Mark recovered nicely, the Old Guy not so fast. I'm currently in the “Naps-a-Lot” stage of recovery and food is beginning to taste better than cardboard so I should be in good shape for the NAQP RTTY and next months JUG.

The Plea

And, while on the subject of the Newsletter:

We need contributions, our Ready-to-Publish pantry is officially empty. Technical or non-technical, recent or not, all are welcome. Personal experiences, recent or historical, contest experiences, station upgrades/changes are all appropriate and welcome. We'll make it very easy. Just put the text, unformatted, into an email, attach any photos, illustrations, or diagrams as JPEG images, address it to k6dgwnv@gmail.com, and click on “Send.” You can indicate any desired formatting ... indentation, bullets/numbering, text decoration, etc., with XML-ish tags such as `<bold>text</bold>` or `<1>blah blah</1>`. Just make them up, you'll get a proof to make sure we did it right.

All issues of the JUG go into the Digital Library of Amateur Radio Communications at archive.org which is part of the “Wayback Machine,” and will preserve your contributions forever. So, now's the time to leave your footprints in history.



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

Find NCCC on Social Media

Facebook: “Northern California Contest Club”

Twitter: “NCCCCKB”



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



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.



Northern California Contest Club

Excellence In Amateur Radio Contesting

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 KPAS500 and KPA1500 amplifiers

"The performance of their products is only eclipsed by their service and support. Truly amazing!" Joe - W1GO



For complete features and specifications visit elecrafter.com • 831-763-4211

Start Secure Check out. Account creation and credit card required.

Northern California Contest Club

Excellence In Amateur Radio Contesting

HAM RADIO OUTLET®

WWW.HAMRADIO.COM

***Free Shipping and Fast Delivery!**



IC-9700 | All Mode Tri-Band Transceiver

• VHF/UHF/1.2GHz • Direct Sampling Now Enters the VHF/UHF Arena • 4.3" Touch Screen Color TFT LCD • Real-Time, High-Speed Spectrum Scope & Waterfall Display • Smooth Satellite Operation



IC-718 | HF Transceiver

• 160-10M** • 100W • 12V operation • Simple to use • CW Keyer Built-in • One touch band switching • Direct frequency input • VOX Built-in • Band stacking register • IF shift • 101 memories



IC-V3500 | 144MHz FM Mobile

• 65W of Power for Long Range Communications • 4.5 Watts Loud & Clear Audio • Modern White Display & Simple Operation • Weather Channel Receive & Alert Function



IC-7851 | HF/50MHz Transceiver

• 1.2kHz "Optimum" roofing filter • New local oscillator design • Improved phase noise • Improved spectrum scope • Dual scope function • Enhanced mouse operation for spectrum scope



IC-705 | HF/50/144/430 MHz All Mode Transceiver

• RF Direct Sampling • Real-Time Spectrum Scope and Waterfall Display • Large Color Touch Screen • Supports QRP/QRPp • Bluetooth® and Wireless LAN Built-in



IC-2300H | VHF FM Transceiver

• 65W RF Output Power • 4.5W Audio Output • MIL-STD 810 G Specifications • 207 alphanumeric Memory Channels • Built-in CTCSS/DTCS Encode/Decode • DMS



IC-7300 | HF/50MHz Transceiver

• RF Direct Sampling System • New "IP+" Function • Class Leading RMDR and Phase Noise Characteristics • 15 Discrete Band-Pass Filters • Built-In Automatic Antenna Tuner



IC-7100 | All Mode Transceiver

• HF/50/144/430/440 MHz Multi-band, Multi-mode, IF DSP • D-STAR DV Mode (Digital Voice + Data) • Intuitive Touch Screen Interface • Built-in RTTY Functions

IC-V86 | VHF 7W HT

• 7W Output Power Plus New Antenna Provides 1.5 Times More Coverage • More Audio, 1500 mW Audio Output • IP54 & MIL-STD 810G-Rugged Design Against Dust & Water • 19 Hours of Long Lasting Battery Life • 200 Memory Channels, 1 Call Channel & 6 Scan Edges



IC-7610 | HF/50 MHz All Mode Transceiver

• Large 7-inch color display with high resolution real-time spectrum scope and waterfall • Independent direct sampling receivers capable of receiving two bands/two modes simultaneously



IC-2730A | VHF/UHF Dual Band Transceiver

• VHF/VHF, UHF/UHF simultaneous receive • 50 watts of output on VHF and UHF • Optional VS-3 Bluetooth® headset • Easy-to-See large white backlight LCD • Controller attachment to the main Unit

NEW

IC-T10 | Rugged 144/430 MHz Dual Band

• Disaster Ready - Excellent Fit for Your Emergency Bag • Loud Audio - New Speaker Design • Long Battery Life - Up to 11 Hours • FM Broadcast & Weather Channels



IC-R8600 | Wideband SDR Receiver

10 kHz to 3 GHz Super Wideband Coverage • Real-time Spectrum Scope w/Waterfall Function • Remote Control Function through IP Network or USB Cable • Decodes Digital Incl P25, NXDN™, D-STAR • SD Card Slot for Receiver Recorder



ID-5100A Deluxe VHF/UHF Dual Band Digital Transceiver

• Analog FMD-Star DV Mode • SD Card Slot for Voice & Data Storage • 50W Output on VHF/UHF Bands • Integrated GPS Receiver • AM Airband Dualwatch

ID-52A | VHF/UHF D-STAR Portable

• Bluetooth® Communication • Simultaneous Reception in VV, UV, VU and DV/DV • Enriched D-STAR® Features Including the Terminal Mode/Access Point Mode • UHF (225-374.995MHz) Air Band Reception



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



FOLLOW HRO ON SOCIAL MEDIA



twitter.com/HamRadioOutlet
facebook.com/HROHamRadioOutlet
instagram.com/HamRadioOutlet
youtube.com/HamRadioOutlet

*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.



Northern California Contest Club

Excellence In Amateur Radio Contesting

HAM RADIO OUTLET

WWW.HAMRADIO.COM

See us at HAMCATION Booth 024-028!



FTDX101MP | 200W HF/50MHz Transceiver

- Hybrid SDR Configuration • Unparalleled 70 dB Max. Attenuation VC-Tune • New Generation Scope Display 3DSS • ABI (Active Band Indicator) & MPVD (Multi-Purpose VFO Outer Dial) • PC Remote Control Software to Expand the Operating Range • Includes External Power With Matching Front Speaker



FT-710 Aess | HF/50MHz 100W SDR Transceiver

- Unmatched SDR Receiving Performance • Band Pass Filters Dedicated for the Amateur Bands • High Res 4.3-inch TFT Color Touch Display • AESS: Acoustic Enhanced Speaker System with SP-40 For High-Fidelity Audio • Built-in High Speed Auto Antenna Tuner



FTM-400XD | 2M/440 Mobile

- Color display-green, blue, orange, purple, gray • GPS/APRS • Packet 1200/9600 bd ready • Spectrum scope • Bluetooth • MicroSD slot • 500 memory per band



FTDX10 | HF/50MHz 100 W SDR Transceiver

- Narrow Band and Direct Sampling SDR • Down Conversion, 9MHz IF Roofing Filters Produce Excellent Shape Factor • 5" Full-Color Touch Panel w/3D Spectrum Stream • High Speed Auto Antenna Tuner • Microphone Amplifier w/3-Stage Parametric Equalizer • Remote Operation w/optional LAN Unit (SCU-LAN10)



FT-891 | HF+50 MHz All Mode Mobile Transceiver

- Stable 100 Watt Output • 32-Bit IF DSP • Large Dot Matrix LCD Display with Quick Spectrum Scope • USB Port Allows Connection to a PC with a Single Cable • CAT Control, PTT/RTTY Control



FT-70DR C4FM/FM 144/430MHz Xcvr

- System Fusion Compatible • Large Front Speaker delivers 700 mW of Loud Audio Output • Automatic Mode Select detects C4FM or Fm Analog and Switches Accordingly • Huge 1,105 Channel Memory Capacity • External DC Jack for DC Supply and Battery Charging



FT-991A | HF/VHF/UHF All Mode Transceiver

- Real-time Spectrum Scope with Automatic Scope Control • Multi-color waterfall display • State of the art 32-bit Digital Signal Processing System • 3kHz Roofing Filter for enhanced performance • 3.5 inch Full Color TFT USB Capable • Internal Automatic Antenna Tuner • High Accuracy TCXO



FTM-300DR | C4FM/FM 144/430MHz Dual Band

- 50W Output Power • Real Dual Band Operation • Full Color TFT Display • Band Scope • Built-in Bluetooth • WIRES-X Portable Digital Node/Host Node with HRI-200



FT-5DR C4FM/FM 144/430 MHz Dual Band

- High-Res Full-Color Touch Screen TFT LCD Display • Easy Hands-Free Operation w/Built-In Bluetooth® Unit • Built-In High Precision GPS Antenna • 1200/9600bps APRS Data Communications • Supports Simultaneous C4FM Digital • Micro SD Card Slot



FT-65R | 144/430 MHz Transceiver

- Compact Commercial Grade Rugged Design • Large Front Speaker Delivers 1W of Powerful Clear Audio • 5 Watts of Reliable RF Power Within a compact Body • 3.5-Hour Rapid Charger Included • Large White LED Flashlight, Alarm and Quick Home Channel Access



FTDX101D | HF + 6M Transceiver

- Narrow Band SDR & Direct Sampling SDR • Crystal Roofing Filters Phenomenal Multi-Signal Receiving Characteristics • Unparalleled -70dB Maximum Attenuation VC-Tune • 15 Separate (HAM 10 + GEN 5) Powerful Band Pass Filters • New Generation Scope Displays 3-Dimensional Spectrum Stream



FT-2980R | Heavy-Duty 80W 2M FM Transceiver

- 80 watts of RF power • Large 6 digit backlit LCD display for excellent visibility • 200 memory channels for serious users



FTM-6000R | 50W VHF/UHF Mobile Transceiver

- All New User Operating Interface-E20-II (Easy to Operate-III) • Robust Speaker Delivers 3W of Clear, Crisp Receive Audio • Detachable Front Panel Can Be Mounted in Multiple Positions • Supports Optional Bluetooth® Wireless Operation Using the SSM-BT10 or a Commercially Available Bluetooth® Headset



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

YAESU
The radio

SACRAMENTO, CA (877) 892-1745	PORTLAND, OR (800) 765-4267	PHOENIX, AZ (800) 559-7388	MILWAUKEE, WI (800) 558-0411	WOODBIDGE, VA (800) 444-4799	WINTER SPRINGS, FL (800) 327-1917
SAN DIEGO, CA (877) 520-9823	DENVER, CO (800) 444-9476	ATLANTA, GA (800) 444-7927	NEW CASTLE, DE (800) 644-4476	SALEM, NH (800) 444-0047	WWW.HAMRADIO.COM

Contact HRO for promotion details. 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.