



**Publication of the  
Northern California  
Contest Club**



Issue 557  
October 2018



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## President's Report

The temperatures are finally getting cooler, the days shorter. In sports football has taken over television, but most importantly for those of us involved in RadioSport, the main part of contest season has arrived. By the time you read this CQWW SSB will be done, and CW Sweepstakes will be upon us. All our preparations should be done, time for some serious competition!

What's that? You've been competing all along? A look at the KB Competition listings shows this to be the case. As of the last weekend in October, the leaders in two categories have already been in 24 contests (W6SX in platinum, W9KKN in Gold), with many more very close behind. Is the competition done? Not by a long shot! N6ZFO is just a short distant behind in the Platinum category, and while W9KKN seems to have some breathing room, the Silver category has some heavy competition as several ops are going for running neck-and-neck.

The KB competition was dreamed up by W1RH and his team a few years ago as a way to get folks pushing themselves to do better in contests. There have been tweaks along the way each year to improve the format and the competition. I am sure there will be a few more tweaks as well. One possible oversight has been to allow scores in KB that were not allowed in the actual contest.

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## NCCC Meeting

Saturday 9th November

Program FT8 Contesting &  
Contest Preparation

Presenters W0YK & K6XX

Sign up [here](#)

Or visit [nccc.cc/meetings.html](http://nccc.cc/meetings.html)

Cattlemen's Restaurant

2882 Kitty Hawk Rd, Livermore, CA 94551

11:30 am - 2:30pm

Continued on page 3



# Northern California Contest Club

*Excellence In Amateur Radio Contesting*

## Officers:

President	Jack Brindle	W6FB	jackbrindle@me.com
Vice President /Contest Chair	Chris Tate	N6WM	ctate@ewnetinc.com
Treasurer	Tom Carney	K6EU	treasurer.nccc@gmail.com
Secretary	Ian Parker	W6TCP	secretary.nccc@gmail.com
Past President	Bob Hess	W1RH	w1rh@yahoo.com
Director	Rick Tavan	N6XI	rick@tavan.com
Director:	Bill Haddon	N6ZFO	n6zfo@arrl.net
Director:	Bill Fehring	W9KKN	bill+nccc@w9kkn.net

## Volunteers:

New Member Mentor	Al Rendon	WT6K	wt6k@arrl.net
Charter Member	Rusty Epps	W6OAT	w6oat@sbcglobal.net
Awards Chair	Gary Johnson	NA6O	gwj@wb9jps.com
CQP Chair	John Miller	K6MM	k6mm@arrl.net
K6ZM QSL Manager	George Daughters	K6GT	k6gt@arrl.net
K6CQP,N6CQP,W6CQP QSL Mgr	Ed Muns	W0YK	w0yk@arrl.net
NCCC Email reflector Admin	Phil Verinsky	W6PK	kb-w6tqg@verinsky.com
Webmaster	John Miller	K6MM	k6mm@arrl.net
Webinars	Bill Fehring	W9KKN	bill+nccc@w9kkn.net
JUG Editor	Ian Parker	W6TCP	w6tcpian@gmail.com

## Thursday Night Sprint:

The Northern California Contest Club sponsors Thursday evening (NA local time) contest practice sessions of 30 minute duration.

On the Thursday (and, sometimes Friday also) prior to a major contest weekend, the practice format follows the upcoming contest.

Generally, on other 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.

Thursday Night Contesting Director and Founder  
 NCCC CW Sprint  
 NCCC RTTY Sprint  
 NCCC Sprint Ladder  
 Sprint Web master [www.ncccsprint.com](http://www.ncccsprint.com)

Bill, N6ZFO  
 Tom, N3ZZ (initially, Ken N6RO )  
 Ken, K6MR  
 Bill, N6ZFO  
 John, K6MM.

non-NCCC:  
 Thursday night Contesting Advisory Group:

Tim N3QE (Ladder Scores manager )  
 N6ZFO, Bill (Chair)  
 Mark K6UFO, (with W4NZ, N4AF, W9RE, K4BAI, N3BB and W0BH).  
 Ken, N6RO

The Thursday night NCCC Net

Check logs, DQs (thankfully there are none - a big tribute to the honesty of our members) and the like that do not count for the contest itself should not be allowed in KB. The biggest effect would be to push those who operate just outside the rules back into compliance for the contest as well as for KB competition. Will this affect many ops? Maybe a few. By and large we tend to follow the rules and compete within the boundaries of the contest rules. One place that will be affected is for the NAQP contests which have a 100 watt power limit. Those of us who forget that rule and run above the limit will not only have their score listed as a check log for NAQP, but would also not have their score be eligible for KB. In an arena where rules are very important, this seems very reasonable, and an important correction to the process.

Now as far as the competition is concerned, how are you doing? I have been concentrating on a shack rebuild for most of the year (more on that elsewhere), but was very pleasantly surprised when W9KKN pointed out that even though I only had been in 7 contests, I was in 8th place in the Bronze group. Being about 400K points behind that behemoth K6EU (look at the category), I have no illusions that I will be receiving the Bronze award. Still, eighth place during a rebuilding period is not too bad. What can I do if I put my efforts into this competition? For that matter, what about you? How do you enter? Just get into the fray! Take W6SX's lead and enter as many contests as you can. Afterwards, post your score to the 3830 reflector, and our data miners will proceed to gather the data, perform their magic calculations and post the results to the KB scores page at: [http://www.nccc.cc/KBA\\_Rankings\\_Brackets.html](http://www.nccc.cc/KBA_Rankings_Brackets.html).

Take a look at that page. You might be surprised at where you place, and where you could be with just a little more effort.

Watch out, Tom, here I come! Well, with a 400K point difference, maybe next year...

## Meetings

We have several meetings in site at present. As indicated elsewhere in the Jug, we will be meeting in Livermore on November 10th where W0YK will lead a very interesting discussion on the use of FT8 in contesting. FT8 is a relatively new mode that was developed for weak-signal communications, and has proven very useful in many areas, including DXpedition use. It has become popular, and the FT8 protocol is evolving to make it more useful, even in contesting.

Also debuting in the November meeting will be a short mini-topic presentation to help newer contesters jump into the fray. This one is a short discussion, by K6XX, on contest preparation. It is interesting to see how much or how little preparation various contesters do for each event.

As one of the better contesters in the group (born out by his WRTC efforts), Bob will give us his take on preparations.

The December meeting will be the annual holiday celebration. We are looking to spice this one up a bit, with various activities to engage attendees. It is too early to tell all at this point, and there are definitely more details to follow. But you will definitely want to watch for more information as it is released. And plan to be at Michaels at Shoreline on December 15th for this fun event!

# Antenna Switching Upgrade at N6RO

Gary Johnson, NA6O

Antenna switching at a multi-multi station like N6RO can be complicated. Over the decades our system grew organically into an inscrutable thicket of old manual switches and jumper cables. Despite my recent cleanup and documentation efforts, and with a beckoning desire for additional remote operation capabilities, it clearly was time for an update with a cleaner architecture.

## Station Overview

The shack has positions for six primary stations (Fig. 1), but not every station needs access to every band. Station 1 is the workhorse, and is based on a Flex 6600M in an SO2R configuration and with remote control. One other station (#4, with a K3) is set up for all-band access as well as remote control. The remaining stations are only activated in multi-op contests and are normally dedicated to one or two bands. Manual band selection (or even temporary patching for special contests like CQP) is adequate there. But in the future, it's quite possible that more remote-controlled or multi-band equipment may be added, so the new design must fully support such expansion.

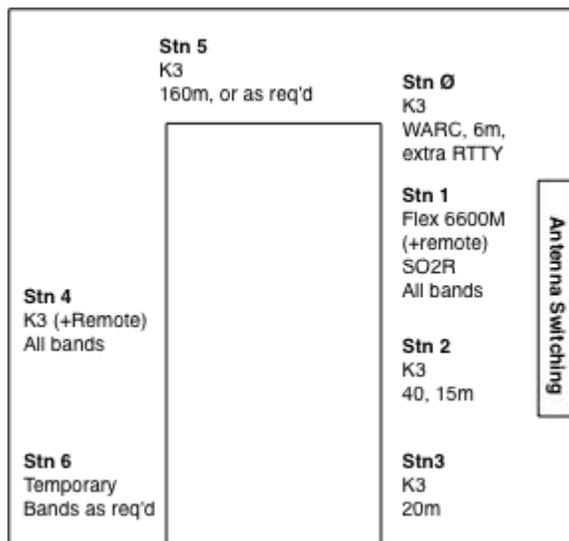


Figure 1. N6RO station floor plan and typical band usage.

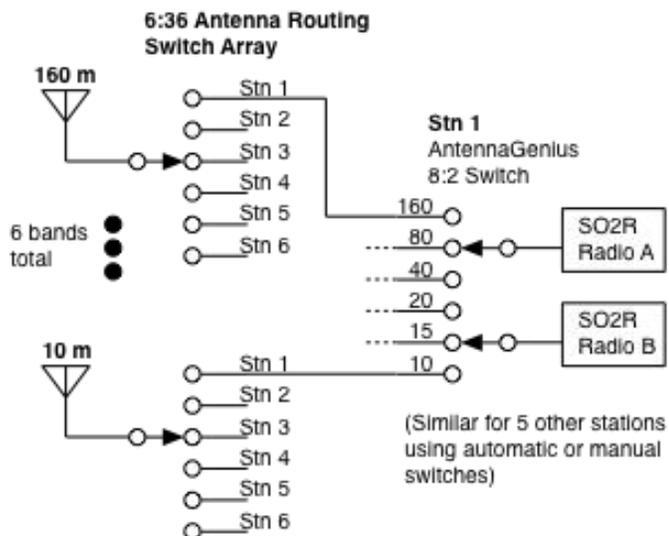
## Switching Architecture

Here are the primary requirements that I considered in this design:

- Any of 6 bands routed to any of 6 radios
- Automated band switching at the radio for SO2R and remote operation
- Remote control of switches via computer GUI
- Local manual control in case of computer problems
- Modular and expandable
- High-quality components
- Switches with high port isolation and high power capability
- Cost conscious; preserve investment in existing hardware

The basic architecture is a *crossbar switch*, where any antenna can connect to any radio (interlocks required, of course, to prevent radio-radio connections). A commercial embodiment is the 12-to-6 port Hamplus AS-1206F, as used at W7RN. This very capable system probably would have done the job but at around \$6000 for the package was beyond our budget.

The solution I came up with is a mix of commercial, kit, and homebrew hardware. A simplified switching diagram is shown in Fig. 2. New hardware implements the first layer, a 6-to-36 antenna routing switch array. These are basically static switches used to configure the station for a particular contest. The second layer uses commercial switches driven by band decoders for dynamic band selection (we already have these), or uses manual switches located at particular radios.



**Figure 2.** Antenna switching system concept. The routing switch array provides contest configuration while the second layer is for real-time band switching at each radio.

Behind the scenes are some additional antenna switches: Stackmatch switches for the 10 through 40 m Yagi stacks, and also some selector switches for bands that have more than one kind of antenna. An example is the choice of a 4-square or a set of wire quads for 80m. That is handled by a separate remote-control switch using an embedded controller similar to the one described below.

## New Switches from Europe

Since I'm a monster homebrewing engineer-fabricator, I was about to design my own 6:1 switches, but luckily came across a wonderful high-power, high-isolation 6:1 switch from RemoteQTH.com. Designed by Jan, OK2ZAW-OL9A, it's available as a kit (board plus parts), or built into a weather-tight enclosure. I went with the kit (about \$110, shipped) and assembled them into Hammond cast aluminum enclosures. This required quite a bit of work on a vertical mill, but that's what I call fun!

These are excellent switches. Jan chose exactly the relays I was planning to use, which have adequate current and voltage ratings and also have gold-flashed AgNi contacts. The gold guarantees low contact resistance for dry switching. That is, you get a reliable receive connection without having to apply power. (Note that this would not be as good a choice for a switch in, say, a stackmatch where it may be accidentally hot-switched, which will obliterate the gold.) SO-239 jacks are silver-plated, PTFE insulated, and have very robust center contacts. Jan includes back-EMF diodes,

MOVs, and bypass capacitors on everything. Return loss is typically 35 dB and the very high port-to-port isolation is shown in Fig. 3.

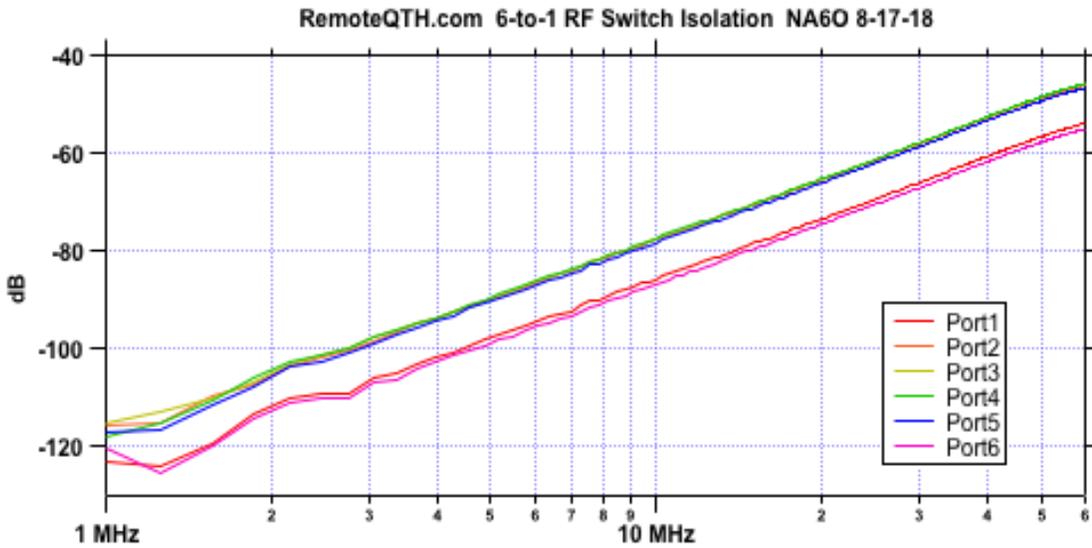


Figure 3. Port-to-port isolation of the RemoteQTH.com 6:1 switches.

To complete the switches (Fig. 4), I designed a circuit board that provides a manual rotary switch for band selection and a “remote” position for remote-control. The board has an optically-isolated band decoder and relay driver with LEDs to show the current selection. Control connection is via a 9-pin D connector, and 12 VDC loops through via RCA jacks. Total cost was \$180 per switch, a very good deal. Six of these packages are racked up to make the desired 6-to-36 switching array.

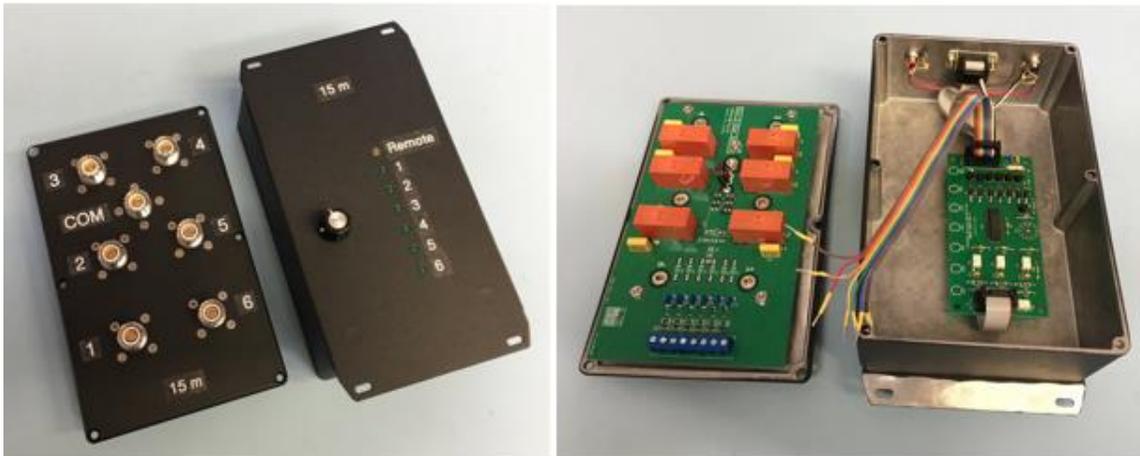


Figure 4. The completed 6:1 switch packages.

### Controller for the 6-to-36 Switch Array

For remote control, I built another box based on a Raspberry Pi with some added GPIO to handle the digital lines to and from each switch (Fig. 5). It has a 4-line LCD display that shows the station selection for each switch, or *M* when that switch is in manual mode (Fig. 6). A user interface (Fig. 7)

can be run on any or all computers on the network. It only occupies a postage-stamp worth of screen real estate. All coding for the controller and user interface was done in LabVIEW™ because that's what I'm really good at. The same body of code and similar hardware were previously used for our 80 m switch.



Figure 5. Switch controller box.

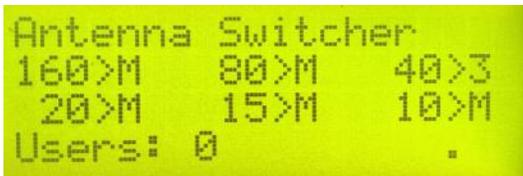


Figure 6. Controller LCD display.

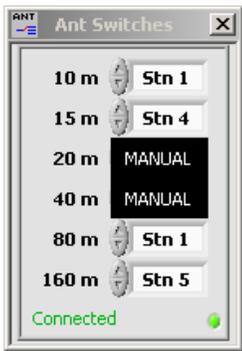


Figure 7. Remote control user interface.

### Putting it All Together

The best location I could come up with in the shack was roughly where the old manual switches were, but all these boxes needed a sturdy support structure. So off to Home Depot I went for a pile of *SuperStrut* rail and fittings, the contractor's Erector Set. The frame hangs off the joists and anchors to the benchwork (Figs. 8 and 9). The bottom tier holds the 6-to-36 switch array, while the top tier holds the controller and the 8-to-2 Antenna Genius for Station 1. Putting the station's switch there really cuts down on the number of long cables we have to run. K6DAJ joined me on installation

day because it was a lot of heave-ho work to put all this stuff together.

One thing you might notice in the photo behind the rack is a bright green set of pliers. These are actually 45-degree sparkplug pliers, sold by DX Engineering as connector pliers (you can also get them from Amazon or auto parts stores). They are vinyl-coated and extremely handy for reaching between SO-239s and making sure everything is nice and tight. Thanks to K6AW for turning me on to those.

After so many years, Radio Oakley has a modern and flexible switching system with space for expansion as our needs evolve.



**Figure 8.** Front of the switching rack.



**Figure 9.** Back of the rack.



## October NCCC Meeting

The October NCCC meeting took place on Tuesday 9th October at our favorite Indian restaurant in Sunnyvale. The Presentation was a open forum covering Membership Q&A, Station questions and CQP.

There were 26 attendees:

Andy AE6Y, Bobby K0XI, Tom K6EU, John K6MM, Rob K6RB, Joanna K6YL, Denis K7GK, Jim K9YC, Saraj KU6F, Tom KW6S, Tom N3ZZ, Clay N5YJZ, Ric N6AJS, Greg N6GD, Rich N6KT, Bob N6TV, Mike N7MH, Tom NW6P, Scott W6CT, Jack W6FB, Glen W6GJB, Ian W6TCP (for set up only) , Bill W9KKN, Mike WA2FHF, Brian NT6F and Bill AE6JV

Two new members were voted in, welcome to the NCCC to:

Frank N6OI  
Patrick K7HMB

## 2018/2019 Dues

Dues renewals for 2018/2019 are \$24 for full members and \$12 for associate members (outside of the club circle). Dues are not mandatory. However, like every club, we have expenses that need to be paid and awards are only issued to paid members so please consider a paid membership. It's only \$24!

Member Planet is used to collect dues and you will shortly receive an automated reminder that dues are payable. You don't need a Paypal account and you can use a credit card to pay dues.

You can also pay for dues by check. Please mail \$24 to the NCCC Treasure, K6EU Tom Carney, 1545 Elwood Dr, Los Gatos, CA 95032

As we are now a 501(c)(3) non-profit organization your dues might be tax deductible to the extent permitted by law. However, check with your tax professional for advice on your specific case.

To log in to Member Planet : Go to <http://nccc.cc/membership.html>

Scroll to the sign in button



Log in using the credentials you signed up with

### Log in to MemberPlanet

Log in »

[Forgot your password?](#)

Select the Blue Renew Button



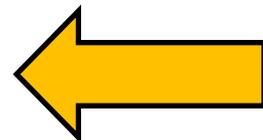
Ian Parker  
w6tcpian@gmail.com

My member levels

 Northern California Contest Club

Due date: 7/1/2019

Renew



If you need help, contact Ian W6TCP [w6tcpian@gmail.com](mailto:w6tcpian@gmail.com)

## Point Generator Profile Bob, W1RH

This month's featured Point Generator is none other than our Treasurer, Tom, K6EU. While Tom works with numbers for the KB Club, he generates numbers for NCCC. So far, in 2018 and as I write this, Tom has participated in 37 contests! That's serious contesting! Several of those have been the NCCC Sprints, but Tom has also been active for the Club in all modes of the summer NAQP's, CQP, and several other contests that are part of the KB Competition.

Now, let's hear from Tom:

**Name/Call Sign:** Tom Carney K6EU

**Past calls:** KE6FI, WA5SNY, WA4QVQ

**Location:** Los Gatos

**How much property do you have?** About 1/3 of acre

**Describe your antenna system:**

**Current:** 3 el Step-IR with 40M trombone and 6M add on element on a 40ft tower, low 80 wire. Various 2M, 223.5, 432 and 927Mhz beams.

**Future:** Hope to improve 80M antenna

**What's in your shack?** .K3 w KPA500, FT847 for VHF/UHF, 223.5 and 927.5 mobile radios

**What are your previous QTH's?** San Antonio, TX: Huntsville, AL

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

Retired, worked for HP on communications products for many years.

**Married? Kids? Grandkids?**

Wife of over 45 years, two children. Son in N Ireland where he worked on Game of Thrones. Daughter is an attorney in Oakland. Four grand kids, three girls and one boy.

**How many DXCC entities have you worked?** Not sure, about 325 current.

**What's your favorite contest?** June ARRL VHF

**Any tips for contesters?** Don't hesitate to ask questions. The NCCC reflector is a wealth of information and tips.

**What would you like to see changed in NCCC?**

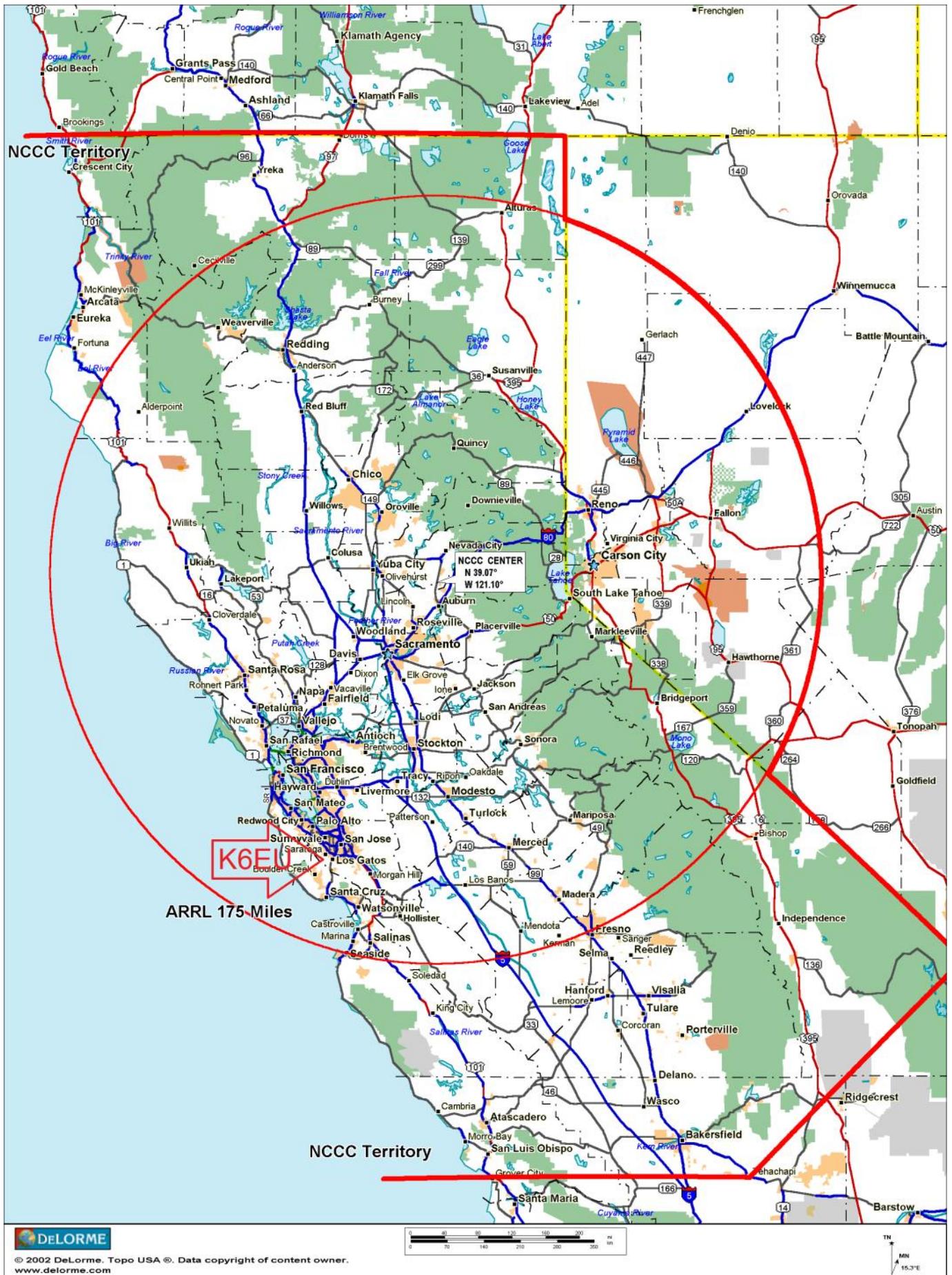
Establish a better working relationship with the local clubs.

**Any other hobbies besides ham radio?**

Grandkids







# NCCC Annual KB Competition Rules

Revised February 25, 2018



**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 starts 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 38 contests are counted. See the table on the next page

**Scoring:** Score = number of contests in which you participated \* sum of (points for each contest \* each contest's multiplier). 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.

**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.

**Contact:** Gary, NA6O. gwj@wb9jps.com

## NCCC Annual KB Competition Table (Updated 2/25/18)

<b>Contest</b>	<b>Month</b>	<b>Multiplier</b>
ARRL DX Contest SSB	March	5
CQ WPX SSB	March	1
NA Sprint Spring SSB	April	100
JIDX CW	April	10
Florida QSO Party	April	20
7th Area QSO Party	May	20
New England QSO Party	May	30
CQ WPX CW	May	1
ARRL June VHF	June	200
All Asian CW	June	10
RAC Canada Day	July	10
IARU HF World Championships	July	5
NAQP Summer RTTY	July	50
NAQP Summer CW	August	50
NAQP Summer SSB	August	50
Kansas QSO Party	August	20
NA Sprint Fall CW	September	100
CQWW RTTY	September	2
NA Sprint Fall SSB	September	100
CQP	October	20
<u>Makrothen</u> RTTY Contest	October	10
JARTS RTTY Contest	October	5
CQWW SSB	October	1
ARRL Sweepstakes CW	November	15
JIDX SSB	November	20
ARRL Sweepstakes SSB	November	15
CQWW CW	November	1
ARRL 160 Meter Contest	December	50
RAC Winter	December	10
ARRL RTTY Roundup	January	50
NAQP Winter CW	January	50
NAQP Winter SSB	January	50
NA Sprint Winter CW	February	100
CQ WPX RTTY	February	1
ARRL DX Contest CW	February	5
NAQP Winter RTTY	February	50
NCCC Sprint CW	Weekly	50
NCCC Sprint RTTY	Weekly	100

Platinum	Gold	Silver
AD6E	AJ6V	AI6JZ
AE6Y	K6AW	K6AAM
AF6SA	K6DAJ	K6CSL
K2RD	K6DGW	K6ELE
K3EST	K6IJ	K6JS
K5RC	K6NV	K6KLY
K6GHA	K6RIM	K6KR
K6LRN	K6TLR	K6RB
K6MM	K6UFO	K6ST
K6MR	K6XN	K6TQ
K6SRZ	K6XV	K6UM
K6XX	KH2TJ	K7GK
K7XC	KH6LC	K7MKL
K9YC	KM6I	K7NV
KA6BIM	N0KQ	KA6W
N6EE	N2NS	KD6WKY
N6IE	N3RC	KE8FT
N6JV	N3ZZ	KI6OY
N6RO	N6KT	KM9R
N6TV	N6PN	KO6LU
N6WM	N6XI	KX7M
N6ZFO	NC6R	KZ2V
N7MH	NJ6G	N1DID
NA6O	NQ6N	N5KO
W0YK	NW6P	N6AJS
W1RH	OH1VR	N6DE
W1SRD	W6DR	N6DW
W2SC	W6EU	N6GEO
W6NV	W6FA	N6JS
W6OAT	W6JTI	N6NU
W6SX	W6NF	N6RK
WB6JJJ	W6RC	N6VV
WC6H	W6SR	N9YS
WK6I	W9KKN	ND2T
WX5S	WA6O	NF1R
	WU6X	NK7U
		NR6Q
		VY1JA
		W6LD
		W6NL
		W6RGG
		W6SC
		W6SZN
		W6TCP
		WE6Z

## KB Award Brackets - New for 2018

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.

On the left, is an alphabetical list of the current assignments to the top three brackets.

If your call is not listed, you are in Bronze. If you believe your current bracket is incorrect, please contact NA6O.

# TUBE OF THE MONTH

Visit the museum at [N6JV.com](http://N6JV.com)

Norm N6JV

Visit the Museum: [www.n6jv.com](http://www.n6jv.com)

## THE PHOTOMULTIPLIER

Years before the invention of the vacuum tube, scientists were experimenting with the effects of radiation on different compounds and surfaces. X-ray images and using cathode ray tubes (CRTs) are examples. Different types of minerals were discovered that would react to being hit by charged particles and produce visible photons. In later years, experiments with vacuum tubes showed the process of secondary emission where electrons hitting certain surfaces would excite additional electrons.

In 1941, the RCA Company produced the first photomultiplier tube that incorporated these principals. The RCA 5819, that was introduced in 1949, is the example shown. When an ion enters the chamber at the top, that is called a scintillator, it will strike an internal crystal that will produce photons. The photons are directed to a photocathode where they become electrons. The electrons are directed to a series of coated reflectors called dynodes. As the electrons bounce off the dynode they excite additional electrons due to the secondary emission effect. A second dynode charged at a higher potential, adds electrons to the stream until all ten dynodes have added to the output. The resulting signal at the anode can be measured or used to operate a circuit or relay. The multiplication process can result in a signal 1,000,000 times the input.

The original RCA photomultiplier, the 931, was used in a broadband jammer transmitter where the tube looked at a small lamp. The Manhattan Project stimulated the research on photomultiplier based radiation counters. A photomultiplier hooked to a telescope is a natural application. DX QSOs on a laser beam?

# TUBE OF THE MONTH

Visit the museum at [N6JV.com](http://N6JV.com)

Norm N6JV



## **NCCC Life Membership!**

The NCCC Life member program was introduced for a flat fee of \$250. If you are interested in becoming an NCCC Life member, please contact Ian W6TCP at [w6tcpian@gmail.com](mailto:w6tcpian@gmail.com)

### **80/20 Rule:**

Members who have reached 80 years young and been a NCCC Member for 20 years are eligible for Honorary life membership. Contact Ian W6TCP at [w6tcpian@gmail.com](mailto:w6tcpian@gmail.com)

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## **CQP T-Shirts 2016**

We have a small number of T-Shirts left for anyone that wants one. They are \$15 each, available on a first come first served basis.

Available sizes:

2XL

XL

M

Contact Ian W6TCP at [w6tcpian@gmail.com](mailto:w6tcpian@gmail.com) for details

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## **BoD meeting minutes**

The monthly minutes from the NCCC BoD meetings are available in the members only section of the NCCC website. See <http://nccc.cc/members/minutes.html>

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## **JUG Articles Wanted!**

Without your help we cannot reproduce a quality newsletter so please consider submitting a suitable article!

We welcome any and all relevant articles for inclusion in the JUG.

Deadline is 7 days before month end. Preferred format is MS Word, Arial 12 point and pictures should be full resolution. Send your material to Ian, W6TCP at [w6tcpian@gmail.com](mailto:w6tcpian@gmail.com) Don't worry about the formatting, we can take care of that if necessary !



# Contest Calendar— November page 1

Silent Key Memorial Contest	0600Z-0859Z, Nov 1
NRAU 10m Activity Contest	1800Z-1900Z, Nov 1 (CW) and 1900Z-2000Z, Nov 1 (SSB) and 2000Z-2100Z, Nov 1 (FM) and 2100Z-2200Z, Nov 1 (Dig)
SKCC Sprint Europe	2000Z-2200Z, Nov 1
NCCC RTTY Sprint	0145Z-0215Z, Nov 2
NCCC Sprint	0230Z-0300Z, Nov 2
Jakarta RTTY Contest	0000Z-2359Z, Nov 3
IPARC Contest, CW	0600Z-1000Z, Nov 3 and 1400Z-1800Z, Nov 3
Ukrainian DX Contest	1200Z, Nov 3 to 1200Z, Nov 4
ARRL Sweepstakes Contest, CW	2100Z, Nov 3 to 0300Z, Nov 5
IPARC Contest, SSB	0600Z-1000Z, Nov 4 and 1400Z-1800Z, Nov 4
EANET Sprint	0800Z-1200Z, Nov 4
High Speed Club CW Contest	0900Z-1100Z, Nov 4 and 1500Z-1700Z, Nov 4
ARS Spartan Sprint	0200Z-0400Z, Nov 6
Phone Fray	0230Z-0300Z, Nov 7
CWops Mini-CWT Test	1300Z-1400Z, Nov 7 and 1900Z-2000Z, Nov 7 and 0300Z-0400Z, Nov 8
UKEICC 80m Contest	2000Z-2100Z, Nov 7
NCCC RTTY Sprint	0145Z-0215Z, Nov 9



# Contest Calendar— November page 2

NCCC Sprint	0230Z-0300Z, Nov 9
WAE DX Contest, RTTY	0000Z, Nov 10 to 2359Z, Nov 11
PODXS 070 Club Triple Play Low Band Sprint	0000Z, Nov 10 to 2359Z, Nov 12
10-10 Int. Fall Contest, Digital	0001Z, Nov 10 to 2359Z, Nov 11
JIDX Phone Contest	0700Z, Nov 10 to 1300Z, Nov 11
SARL VHF/UHF Analogue Contest	1000Z, Nov 10 to 1000Z, Nov 11
OK/OM DX Contest, CW	1200Z, Nov 10 to 1200Z, Nov 11
SKCC Weekend Sprintathon	1200Z, Nov 10 to 2400Z, Nov 11
CQ-WE Contest	1900Z-2300Z, Nov 10 (CW/Digital) and 0100Z-0500Z, Nov 11 (Phone) and 1900Z-2300Z, Nov 11 (Phone) and 0100Z-0500Z, Nov 12 (CW/Digital)
AWA Bruce Kelley 1929 QSO Party	2300Z, Nov 10 to 2300Z, Nov 11 and 2300Z, Nov 17 to 2300Z, Nov 18
4 States QRP Group Second Sunday Sprint	0100Z-0300Z, Nov 12
RSGB 80m Autumn Series, Data	2000Z-2130Z, Nov 12
Phone Fray	0230Z-0300Z, Nov 14
CWops Mini-CWT Test	1300Z-1400Z, Nov 14 and 1900Z-2000Z, Nov 14 and 0300Z-0400Z, Nov 15
NCCC RTTY Sprint	0145Z-0215Z, Nov 16
NCCC Sprint	0230Z-0300Z, Nov 16
YO International PSK31 Contest	1600Z-2200Z, Nov 16
SARL Field Day Contest	1000Z, Nov 17 to 1000Z, Nov 18
LZ DX Contest	1200Z, Nov 17 to 1200Z, Nov 18



# Contest Calendar— November page 3

All Austrian 160-Meter Contest	1600Z, Nov 17 to 0700Z, Nov 18
REF 160-Meter Contest	1700Z, Nov 17 to 0100Z, Nov 18
Feld Hell Sprint	1900Z-2059Z, Nov 17
RSGB 2nd 1.8 MHz Contest, CW	1900Z-2300Z, Nov 17
ARRL Sweepstakes Contest, SSB	2100Z, Nov 17 to 0300Z, Nov 19
Homebrew and Oldtime Equipment Party	1300-1500Z, Nov 18 (40m) and 1500-1700Z, Nov 18 (80m)
Run for the Bacon QRP Contest	0200Z-0400Z, Nov 19
Phone Fray	0230Z-0300Z, Nov 21
CWops Mini-CWT Test	1300Z-1400Z, Nov 21 and 1900Z-2000Z, Nov 21 and 0300Z-0400Z, Nov 22
RSGB 80m Autumn Series, SSB	2000Z-2130Z, Nov 21
NAQCC CW Sprint	0130Z-0330Z, Nov 22
NCCC RTTY Sprint	0145Z-0215Z, Nov 23
NCCC Sprint	0230Z-0300Z, Nov 23
CQ Worldwide DX Contest, CW	0000Z, Nov 24 to 2400Z, Nov 25
ARRL EME Contest	0000Z, Nov 24 to 2359Z, Nov 25
SKCC Sprint	0000Z-0200Z, Nov 28
Phone Fray	0230Z-0300Z, Nov 28
CWops Mini-CWT Test	1300Z-1400Z, Nov 28 and 1900Z-2000Z, Nov 28 and 0300Z-0400Z, Nov 29
UKEICC 80m Contest	2000Z-2100Z, Nov 28
RSGB 80m Autumn Series, CW	2000Z-2130Z, Nov 29
NCCC RTTY Sprint	0145Z-0215Z, Nov 30
NCCC Sprint	0230Z-0300Z, Nov 30
ARRL 160-Meter Contest	2200Z, Nov 30 to 1600Z, Dec 2



## NCCC Membership Information

If you wish to join NCCC, you must fill out an [application for membership](#), which will be read and voted upon at the next 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).

## JUG Articles Wanted!

Without your help we cannot reproduce a quality newsletter so please consider submitting a suitable article!

We welcome any and all relevant articles for inclusion in the JUG.

Deadline is 7 days before month end. Preferred format is MS Word, Arial 12 point and pictures should be full resolution. Send your material to Ian, W6TCP at [w6tcpian@gmail.com](mailto:w6tcpian@gmail.com) Don't worry about the formatting, we can take care of that if necessary !

## Northern California Contest Club Reflector—Guidelines

This reflector is devoted to the discussion of contesting.

This includes contests, station building, dxpeditions, technical questions, contesting questions, amateur radio equipment wants/sales, score posting, amateur radio meetings/conventions, and membership achievements.

This does not include personal attacks, politics, or off-subject posts which will be considered a violation of the Guidelines.

Violations may result in removal of the violator from the reflector and possibly from club membership in good standing.



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