



**Publication of the  
Northern California  
Contest Club**



Issue 540

May 2017



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## President's Report

Hello KB'ers!

I writing this, my official month-of-May President's article, on June 4th, much to the dismay of our Jug editor I might add. I did want to wait until after the election meeting, however, before I wrote this article for the Jug.

Yesterday's meeting, at Cattleman's in Livermore, was really a good one. Our new Board was elected, and this included Chris, N6WM, stepping up to take on the VP/CC job, replacing Steve, W1SRD.

The new Board pretty much resembles our last Board:

- President – W1RH (third term)
- VP/CC – N6WM (first term)
- Secretary – W6TCP (second term)
- Treasurer – K6LRN (second full term although Dick did do a partial third term)
- Past President – Will go unfilled (after three terms in this position, Rick, N6RK, opted out)
- Director – W6OAT (third term)
- Director – N6IE (third term)
- Director – (WC6H) (third term)

### NCCC JULY Meeting

**Tuesday 11th July**

6pm Social , 6:30 pm Dinner 7pm Program

**Location**

Sneha 1214 Apollo Way, Ste 404B, Sunnyvale, CA 94085

**Program**

Chris N6WM Contesting Plans for 2017/2018

See you there !!!



# Northern California Contest Club

*Excellence In Amateur Radio Contesting*

## Officers:

President	Bob Hess	W1RH	w1rh@yahoo.com
Vice President /Contest Chair	Chris Tate	N6WM	ctate@ewnetinc.com
Treasurer	Dick Wilson	K6LRN	treasurer.nccc@gmail.com
Secretary	Ian Parker	W6TCP	secretary.nccc@gmail.com
Past President	<open>		
Director	Rusty Epps	W6OAT	w6oat@sbcglobal.net
Director:	Rich Cutler	WC6H	wc6h@yahoo.com
Director:	Ron Castro	N6IE	ronc@sonic.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	<open>		
JUG Editor	Ian Parker	W6TCP	w6tcpian@gmail.com



# Northern California Contest Club

*Excellence In Amateur Radio Contesting*



NCCCCKB



### NCCC

Visit the meetings page of the NCCC website [here](#) for details of the next meeting

### NCCC Net

Thursday 8 PM  
Freq: 3.610 +/-

## 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).

This Board continues on the track I desired when I took on my first term as President, with all of our Board members belonging to at least one other club:

W1RH – MLDXCC  
N6WM – MLDXCC, PL259, REDXA  
K6LRN – MLDXCC, REDXA  
W6OAT – PL259  
N6IE – REDXA  
WC6H – MLDXCC  
W6TCP –MLDXCC, PL259

I'll also note that K6MM, my mentor in the club and unofficial Board member, is also a member of MLDXCC, PL259, and REDXA.

We have a very unique situation here in NorCal, with several smaller clubs within our circle. As N6WM pointed out yesterday, this is something to be celebrated as long as each club enjoys a mutual respect from the other clubs.

I can't say enough about our departing VP/CC, Steve, W1SRD. I twisted his arm to join our Board in my first term. He was reluctant due to a heavy work load, which included long hours and much travel. Despite that, Steve was present at most of our Board meetings and was always there for me as an advisor and as someone I could bounce ideas off of.

Saturday's meeting featured a short picture tour of the Dayton Hamvention, with N6WM, N6TV, W6RGG, and me commenting on our experiences this year in Dayton. Our new VP/CC also did a short review of where he feels the club will be going in the next few years.

Our featured presenter was Jim, K9YC, who delivered a fantastic talk on placement of coaxial stubs in a SO2R or multi-op operation. Jim's talk was easy to follow, with many questions from our members in attendance.

We voted in a new member: Dave, K6JOX, who lives in San Lorenzo. Welcome Dave!

We also had a new attendee at our Saturday meeting: Bill, W9KKN, who lives in Sunnyvale. Bill, who referred to contesting as a drug (I believe), delivered his application for membership after the meeting. Welcome Dave! My guess is that we'll probably decide to vote you in!

I was really pumped after Saturday's meeting. We had a good crowd, good food, good presentations, and everyone seemed to have a good time.

There was a down-side to Saturday's meeting however.....

We did not do a WebEx session for our members in the hinterlands. Our active members who live so far out (K6MR and W6SX for instance) can rarely attend a meeting and deserve the WebEx sessions. We need someone to volunteer to take this on. It is important to the continued health of our club. It's really a shame that there are many out there who missed Jim's talk.

I had never planned on taking on a third term as President. Indeed, how could I with a two-term limit? Well, the recent Bylaws vote took care of that one, and here I am. This third term, however, will be my last. It appears that we have at least two prominent members who may be available to take on the President's position next year.

Yesterday's meeting had me looking back at the last two years. I'll never forget my first meeting, as President. It was at a Mexican restaurant, in Pleasant Hill. This was our first ever weekend meeting, and I was really wondering how the idea of doing weekend meetings would be accepted. I can't thank N6TV and W6CT enough for finding that location.

Following that first meeting, which turned out to have a good sized crowd, several of you approached me with ideas. I recall W0YK asking about life membership. Someone asked about doing a BBQ. Someone else asked about starting up the holiday dinners again. And there were one or two of you who brought up the Club's lack of interest in VHF contests.

I made notes after the meeting and vowed to, one way or another, address these suggestions. The result was our first BBQ at WC6H's QTH and last year's BBQ at N6RO's station. There WILL be a third....date and location to be announced soon.

In response to Ed's desire for life membership, the Board responded and we now have several life members.

We didn't get to the holiday party until last year, but we did it. Same location as in the past and a great time had by all.

Addressing VHF contests was not easy. What we have done, with the assistance of Gary, NA6O, is establish the KB Competition and awards program, with credit given to participation in the June VHF contest. The KB Competition, which was what we refer to in my business as a "soft launch" last year, is in full bloom this year. We're still fine-tuning, but member response has been awesome.

One other thing that has been accomplished has been cleaning up our membership list. In my first term, with Joanna, K6YL, as secretary, Joanna came up with the idea of updating the membership list. The list at the time had over 700 members on it. It turned out to be a daunting task for Joanna. She attempted to contact nearly everyone on the list and found many who had moved away, lost interest, were SK's, etc. Ian continued that task when he took over as the club secretary, and our real membership count is around 250.

In the process of cleaning up the membership list, Ian came up with the idea of outsourcing much of the membership tasks. He found Member Planet, and we decided to try it out for a year. There have been some rough spots, but the result has been an overall success. Using this relatively inexpensive service makes life much easier for the Secretary, the Treasurer, and the members. It makes it easy on members to join and renew their memberships and also provides some added value features like meeting RSVP's, sponsoring plaques, buying tee-shirts, etc.

I wanted to comment on one more item that has been on my to-do list: Non-profit status for NCCC. It's almost done, and I thank Norm, WB6RVR, for doing the heavy lifting for us on this project. We expect to be able to announce our official 501 (c)(3) status in the next week or two. There are a number of benefits to both the Club and the members. Plaque sponsorships can be written off and vendors can donate their services to the club. Even membership dues can be written off as long as we remain a dues-optional club (a topic addressed every year by the Board).

One other benefit of non-profit status is that the Club can request a donation from a member for a piece of equipment.....and we have that need right now. Matt, WX5S, has been working on a way of automating the KB competition, by mining scores off of 3830. Matt's computer is way underpowered, and the Club wants to help him out by purchasing a computer to be used for the database software and maintenance. Hopefully, we will find a member willing to donate something suitable for the job.

You may have noticed that a few months ago we went back to a monthly meeting format. We're trying to alternate weekday dinner meetings in the South Bay and weekend lunch meetings in the East Bay. This has turned out to be a winning idea and we will continue with that format. While I may miss several of the evening meetings, because of the long drive, we have a VP who can conduct those meetings just as well as I can. Our future meeting dates are outlined below:

## **NCCC Meeting Dates ~ 2017**

Tuesday, July 11th Sneha 1214 Apollo Way, Ste 404B, Sunnyvale, CA 94085  
Program VP/CC Presentation

Sunday, July 30th Sierra BBQ RSVP via Rick N6XI

Saturday August 26th, 11am, Venue TBA  
Annual BBQ

Saturday September 30th, 11am, El Tapatio 40 Golf Club Rd, Pleasant Hill, CA 94523  
Program CQP, County DX-peditions

Tuesday, October 10th Sneha 1214 Apollo Way, Ste 404B, Sunnyvale, CA 94085  
Program, TBD

Tuesday, November 14th, 6PM, Tied House 954 Villa St, Mountain View, CA 94041  
Program, TBD

Saturday, December 16th, 11am, 2960 Shoreline Boulevard, Mountain View, CA 94043  
NCCC Holiday Party (Michaels at Shoreline)

Contact Ian W6TCP if you have any questions.

## NCCC Meeting ~ June 3rd by Dick K6LRN

June 3rd NCCC Meeting took place the Cattlemen's in Livermore. Those in attendance were: Steve W1SRD, Rich N6KT, John WB6ETY, Mike K6OR, Tom NW6P, Ira K2RD, Glen W6GJB, Rich WC6H, Bryan KB0A, Rusty W6OAT, Dick K6LRN, Scott AF6T, Chris N6WM, Jim W6SC, Jim K9YC, Bill AI6JZ, Lee KI6OY, Dave KK6DF, Harris K9RJ, Bob N6TV, Gary NA6O, Bob W1RH, Ric N6AJS, John K6MM, Rick N6RNO, Bob W6RGG, Bill W9KKN

President Bob Hess W1RH started meeting about 12:55 PM after an excellent lunch. We introduced ourselves. Tom NW6P noted he was going to San Diego to visit with Omar YK1AO who is living there with his son. Later he will be taking a road trip to visit with W0GJ & W0AIH.

John Miller K6MM presented an award to NW6P citing inspiration & spirit.

Bob turned meeting over to John K6MM to conduct election of officers & board for 2017-2018. Moved, seconded & carried to elect proposed slate consisting of;

President Bob Hess W1RH, VP/CC Chris Tate N6WM, Secretary Ian Parker W6TCP, Treasurer Dick Wilson K6LRN, Directors—Rusty Epps W6OAT, Rich Cutler WC6H & Ron Castro N6IE

Bob talked about status of 501(c)(3). Bob then showed slides of (Dayton) Hamvention held in Xenia, OH with comments added by other attendees. Chris gave a preview of his vision for the club for the next contest season. Bob made a plea for an A/V person to take on Webex/AV duties. Bob then turned meeting over to Jim Brown K9YC who gave a very informative presentation on Stubs for Harmonic Suppression & Placement. Meeting wrapped up about 3 PM.





## WPX-CW 5R8UI



One reason I enjoy contesting is the chance for all-time new ones. During WPX-CW, one of the new ones our team at N6RO worked for me was 5R8UI, which was quickly confirmed on LOTW. I knew that callsign sounded familiar. Michele is the guy who offers hand-carved ham plaques, and I bought one from him about a year ago.

They're made by a fellow who does traditional carving in exotic wood there on the island of Nosey Be, Madagascar.

Speaking as a woodworker, I think he does nice work. <https://hamplaque-eng.jimdo.com/>



# Sierra Chapter BBQ—July 30th 2017

It's time once again for radio-active relaxation in the High Sierra! This almost-annual event is a great way to breathe some fresh air and see some of our radio friends. The burgers and dogs are pretty good, too. I usually try to do this in September, but once again my calendar doesn't allow that, so we'll try late July and provide sunscreen.

Date: Sunday, July 30, 2017

Time: 11:00 AM until folks leave

QTH: 12921 Filly Lane, Truckee, CA (aka Filly Way) ... on the bluff overlooking Boca Reservoir. Beware very old GPS databases that may be incorrect. See below for directions.

Tel: 530-587-3164 House or 408-896-0476 Cell

Who: Friends from NCCC, MLDXCC, Truckee-North Tahoe Hams, and their kids, pets, and significant others. Feel free to bring others but please let me know how many.

Food: Ann and I will provide the meat and veggie burgers for the grill and a few salads and drinks. If you wish to bring something more (optional, really), please let me know what salad, side, beverage or whatever you have in mind so we can avoid too much duplication.

Please don't bring any meat or shellfish items.

RSVP: Please reply directly to me as soon as possible and let me know how many to expect. I'll give you the new gate code in response.

What else: The Tahoe Sierra is a great place for a getaway. Come on up for the day or make an extended weekend of it. It will be warm enough for swimming or water skiing. The rafting season should be ample this year. (Squaw Valley threatens that they may still be skiing on the upper mountain on weekends, but that's not certain!) Fishing, hiking, biking, boating, birding, soaring, flying, gambling, photographing, and partying should all work well except that the fish up here are pretty darn smart. These and other possibilities are all arrayed online for your googling pleasure. I sometimes take folks on a flightseeing tour around Lake Tahoe in the morning in my single-engine Cessna which was fully refurbished in 2015 and is still looking pretty spiffy. Let me know in advance if you're interested in that.

Directions: Go east or west on I-80 to the Hirschdale exit, about 8 miles east of downtown Truckee. At the bottom of either ramp, turn right onto Hirschdale Rd. About 1/4 mile past the interchange, keep right at the fork onto Glenshire Dr. About a mile later, at the top of the hill, take the first right on Whitehorse, immediately confronting the Damn Gate of The Meadows. Enter the new gate code slowly and deliberately on the finicky keypad, including the pound sign. Email me for that code. Through the gate, take an immediate right on Stallion. Roughly a mile later, after three nasty speed bumps, take the first right on Filly. Two blocks later, at the cul-de-sac, take the rightmost driveway. There is parking in a pull-out at the top of the driveway. Please fill up the dirt area beyond the asphalt first, leaving room for cars to turn around. If the turnout and the space beyond are full, try the lower reaches of the driveway wherever you can do so safely or on the street or cul-de-sac. Beware of rocks and bits of re-bar sticking up along the driveway shoulder and try not to run over any (mostly green) utility boxes.

Hope you can make it! Ann and I look forward to seeing you in the Sierra.

73,  
/Rick N6XI and Ann KD6MOB

# N7N 7QP

This was a full time operation from portable setups on three county lines and mobile operation between those setups. W6JTI and K9YC were the operators when we were portable. W6GJB was our team leader, built the contesting trailer, did much of the setup and teardown at each county line site, and drove his pickup towing the trailer between sites while W6JTI worked 20 CW riding shotgun.

Our first site was at about 3800 ft elevation at the highway 95 bridge over the Colorado River, which is the county line between San Juan and Garfield counties. The site is sort of in a broad valley. Our second site was 130 miles to the west, on Rte 24 at the Wayne/Piute Co line; our final setup was a few miles away on Rte 25 at the Piute/Sevier county line. The last two sites were at about 8,400 ft elevation, and had good dropoffs in all directions. The trailer is shown in [k9yc.com/7QP.pdf](http://k9yc.com/7QP.pdf) with photos from last year. <http://k9yc.com/7QP-SanJuan-Garfield.jpg> shows our setup by the bridge, just after dawn.

The two identical stations in the trailer are K3 (with new synth boards), P3, KPA500, and KAT500, with double stubs on the 80M and 40M feedlines to kill second harmonics of the power amps. Antennas were a C3SS and dipoles for 80 and 40M. In the truck was a KX3, PX3, and KXPA100 feeding a Ham Stick. Our entry is in the Unlimited class.

Band	Mode	QSOs	Pts	Mul
3.5	CW	460	1380	0
3.5	LSB	84	168	0
7	CW	1010	3027	25
7	LSB	96	192	0
14	CW	905	2715	42
14	USB	114	228	1
21	CW	44	132	0
Total	Both	2713	7842	68

Score: 533,256 18 Hours

Thanks for all the Qs.

73, Jim K9YC, Glen, W6GJB, Frank, W6JTI

**7QP 2017**

- /UT SNJ
- /UT GAR
- /UT WAY
- /UT PIU
- /UT SEV

**N7N**

**OPS: K9YC W6JTI W6GJB**



- First place - 7th-Area Open Expedition
- First place - Garfield County, Utah
- First place - Piute County, Utah
- First place - San Juan County, Utah
- First place - Sevier County, Utah
- First place - Utah
- First place - Wayne County, Utah

In addition to the category, state and county wins, we were also highest score for the contest !



San Juan – Garfield County Line  
Colorado River bridge in background, just above Lake Powell  
40m dipole and C3SS tribander



Wayne – Piute County Line

High winds and threatening thunderstorms meant we kept the antennas low.



Piute – Sevier County Line

Set up 40m dipole and 80m inverted V in the last of the daylight as the storm cleared. 80m was busy right until the contest ended at 1 AM local time.



W6JTI and K9YC operating.





/UTPIU/UTSEV: 38.50037 N, 111.80000 W, 8768 FT

/UTWAY/UTPIU: 38.45013 N, 111.82564 W, 8395 FT

/UTSNJ/UTGAR: 37.89217 N, 110.37123 W, 3755 FT

## CQ Contest Hall of Fame 2017



CQ Contest Column Editor K3ZJ, Bob N6TV, Ed W0YK—Photo by K2UA

An accomplished contester and contest DXpeditioner, Bob Wilson's achievements behind the scenes are as significant as those he's made on the air. A regular speaker at Contest University and at the International DX Convention's Contest Academy, Wilson has developed new techniques and technologies to enhance logging and scorekeeping software and to advance SO2R (single operator, 2 radio) operating, along with the efficiency of software defined radios, *CW Skimmer*, the Reverse Beacon Network and more.

**N6TV HoF Introduction—Ed W0YK**  
**Dayton Hamvention Contest Diner**  
**Saturday, 20 May 2017**

I was honored to speak about Bob on behalf of the Northern California Contest Club's nomination for the CQ Contest Hall of Fame. Thanks to Mark K6UFO for pulling together the nomination for NCCC.

TV-Bob, as he is affectionately known in the contest community and even by my dedicated non-ham wife, exemplifies the two key attributes of HoF members. The first, of course, is his unquestioned and exceptional skill in radiosport. Bob consistently places in the top ten in the NA CW Sprint, typically from his city-lot station in San Jose. We all know how challenging the Sprint contest format is. TV-Bob gets similar results in the ARRL Sweepstakes, winning the CW section in 2013 from the W7RN super-station outside Reno, Nevada. Bob has been a 3-time WRTC competitor and contributed as a volunteer at three more WRTC events, including the donation of hand-crafting and shipping the WRTC2018 tiles to US donors.

He is frequently sought as a team member by top multi-ops. These include AI6V, K3LR, W7RN and WC6H. I've had the pleasure of joining Bob on the 1994 CQ WW CW expedition to Damascus, Syria, as YK0A. We were roommates on that trip and Bob came prepared with earplugs in case I was a snorer. We each also joined a few of the Team Vertical contest expeditions to Jamaica. Bob also survived the storm-ridden trip that Team Vertical made to an island off the coast of Venezuela. Other multi-op efforts were FO0KP and HC8N.

Secondly, Bob gives back a tremendous amount of support to contesting with as much skill and diligence as he applies to his single-op and multi-op contesting efforts. As long as I've known Bob, he is always eager to help his fellow contesters with any aspect of our hobby, be it operating technique, station software/hardware or antenna ideas.

Anyone who monitors the Win-Test reflector knows that nearly every question gets addressed by Bob with on-target, insightful answers. He is certainly my go-to support resource when I run into a Win-Test issue at home, Aruba or other locations. He has a rich set of Win-Test scripts that are freely available and widely used. He's been a great sounding board when I have modified his scripts or written my own. Similarly, Bob has contributed a lot to the Elecraft K3 product line firmware with his precisely articulated cases for how certain features should

work. He was a key member of the field test team for the K-Pod accessory. Bob retired from his first career as a software engineer and recently started up a small hardware business making interface boxes for the Elecraft K3.

Interestingly, Bob has also been a key contributor to the CW Skimmer, RBN and SDR technology evolution even though his preferred Single-Op entry is unassisted, though it is key for all multi-ops. He has given many presentations and tutorials on these topics, including CTU this past Thursday. As with Win-Test support, many of us seek Bob out on these topics as well. When our good friend K5KA passed away, Bob took over support of the CBS contest log analyzer, porting it to Windows and supporting both the DOS and Windows versions to this day.

Another of Bob's hobbies is photography and in recent years he has diligently documented, photographically, WRTC/Dayton/Visalia/local club meetings, etc. Just this Dayton weekend he once again captured the Spurs (The Spurious Emissions Band) superbly on video and posted it on YouTube, complete with lyrics and searchable by song. I suppose he could have taken selfies of the Hall of Fame event but we give him the night off to enjoy this honor. Rus K2UA filled in with copious and great photos, a couple of which accompany this article.

Tree N6TR knew Bob as a teenager in Southern California and observes that Bob hasn't changed much since, though I do notice a lot more hair in early photos from that time in Bob's ham radio experience. He pretty much went directly to 20 wpm CW as a youngster and then quickly moved up from there. Like many budding contesters in those days, Bob cut his CW teeth in CD parties. Tree recalls helping WB6OLD, now KR6X, install a 4-element tribander on a 20' steel pole from Sears at Bob's parent's house.

For my part, I will always value Bob's friendship, broad contesting support and the heated debates we engage on, with such details as the merits (or, not) of sending 'QSO B4' messages in the heat of a high rate CW run.

Thank you, TV-Bob, and congratulations for this well-deserved recognition.

## CQ Contest Hall of Fame Acceptance Speech

By N6TV

20 May 2017

Thank you all very much. Thank you Ed, and thanks also to Mark, K6UFO, and the Northern California Contest Club, a club that welcomed me with open arms when I first moved to the San Francisco Bay Area to go to school, way back in 1975. It was none other than W6RGG who first hosted me as a guest op. Stand up Bob!

(W6RGG: “I *am* standing up!”)

I particularly respect, and appreciate, that this award is not given ... posthumously. Not only am I happy to have lived long enough to earn this, my two elderly parents, now ages 99 and 93, parents who supported my interest in ham radio from a young age, learned that I was going to receive this honor, and it made them very proud.

You know they say that behind every great contester there stands a good ... tower. But before you can get that tower, you need Elmers. Mine include contesting superstars Leigh Jones, WB6OLD (now KR6X), and Dick Norton, W6DGH (now N6AA), who is also in Dayton this week.

One night as I was struggling to operate the Novice Roundup with my crystal controlled Heathkit HW-16, Leigh raced over to my parent's house, unannounced, to present me a box full of crystals so that I could operate on more frequencies in the contest. He then sat down next to me, and gave me some great pointers. That was the beginning of many years of contest tutoring. He gave of his time, and I really appreciated that.

Similarly Dick Norton, N6AA, who gave me a summer job scraping paint off the side of his house, a job he offered to me again this week, instilled in me a sense of contest ethics, and the importance of getting the call right, that stayed with me all these years.

Well from operating that HW-16 to the Icom IC-7851s at K3LR, it's been quite a run.

Those contesters who helped me so much, led to my desire to help other contesters, whenever I could. It seems that's the main reason I'm standing before you today.

A few months before Carl Cook, AI6V passed away, I paid a visit to his house in Las Vegas, to take some photos of Carl and Sue. In the radio room was a wall full of plaques from all the major contests. I asked Carl which plaque meant the most to him, and without hesitation, he pointed to the plaque commemorating his induction into the CQ Contest Hall of Fame. I am going to feel the same way.



Carl Cook, AI6V (SK) & The Wall Full of Plaques

Finally let me share one last story.

A contester, a DXer, and a QRPer walk into a bar. Not just any bar, a special bar, the secret bar hidden in the basement of the clubhouse of the Dayton Amateur Radio Association. They sit down at a table, and each orders a whiskey.

Suddenly a roar races through the crowd. Word is out that Martti Laine, OH2BH, has made his way to North Korea, and P5DX is on the air.

The contester says, “I bet I can work him in one call!”

The DXer says, “I bet *I* can work him in one call.”

The QRPer says, “I bet I can work him with 5 watts.”

They race over to the ham shack in the corner of the bar. The contester gets there first. He throws on all the switches, grabs the microphone, finds the last caller, and places a perfectly timed tail-end.

Martti comes back to someone else.

The contester forgot to let the Alpha warm up, for three minutes.

The DXer says to the QRPer, “Go ahead kid, give it your best shot.”

The QRPer turns the power down to 5 watts. He switches the transmitter to CW! He calls frantically for the next three minutes hoping that Martti will pull out his CW from the din, but Martti comes back to someone else.

By now, the amp has warmed up. The DXer gets his chance. He tunes the amp for maximum smoke, and into the microphone he shouts, the last two letters of his call.

“Alpha Hotel, Alpha Hotel, Alpha Hotel!”

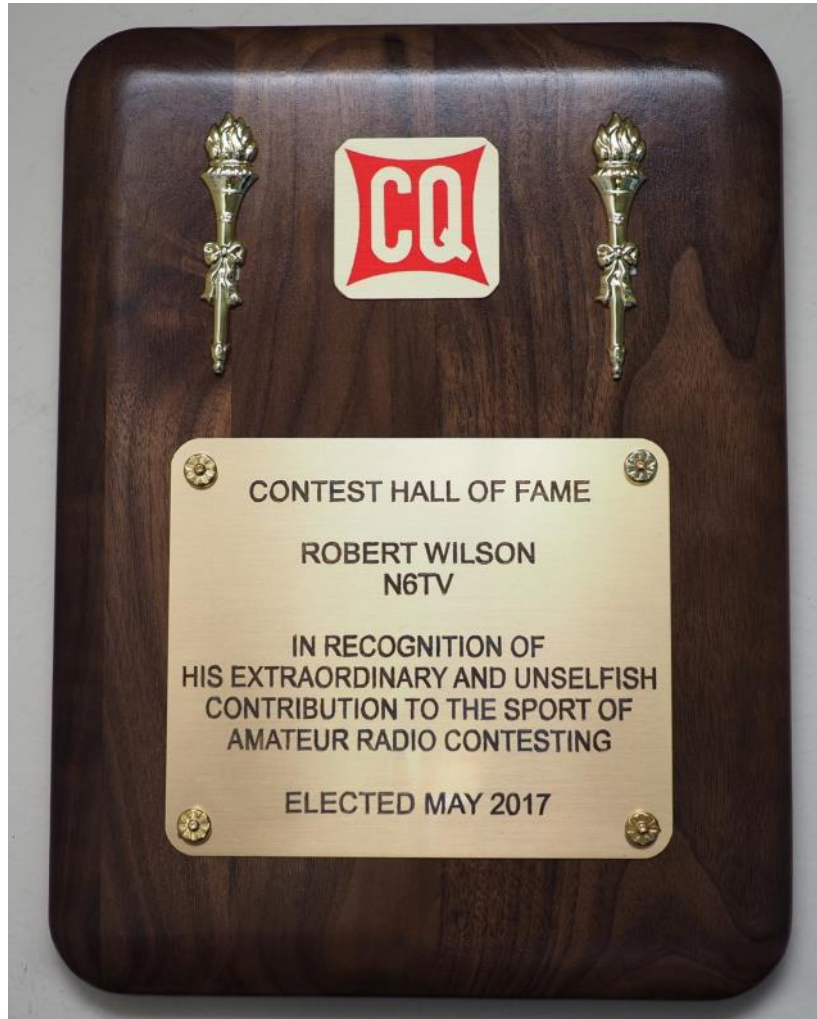
Martti comes back to someone else.

Seeing three dejected souls, the cocktail waitress leans over and says, “Would you boys like another three whiskeys?”

Martti comes back, “Standby, who’s the YL, the Three Whiskey?”

The point of this story is that you may never get to work that P5, but there will always be another contest, and I hope to see you all in it.

Thank you all very much.





## CQ Amateur Hall of Fame ~ 2017



Kristen McIntyre, K6WX - Apple software engineer and inventor (her name is on 22 granted or pending patents), promoter of STEM (science, technology, engineering and math) subjects for girls through various talks and YouTube presentations

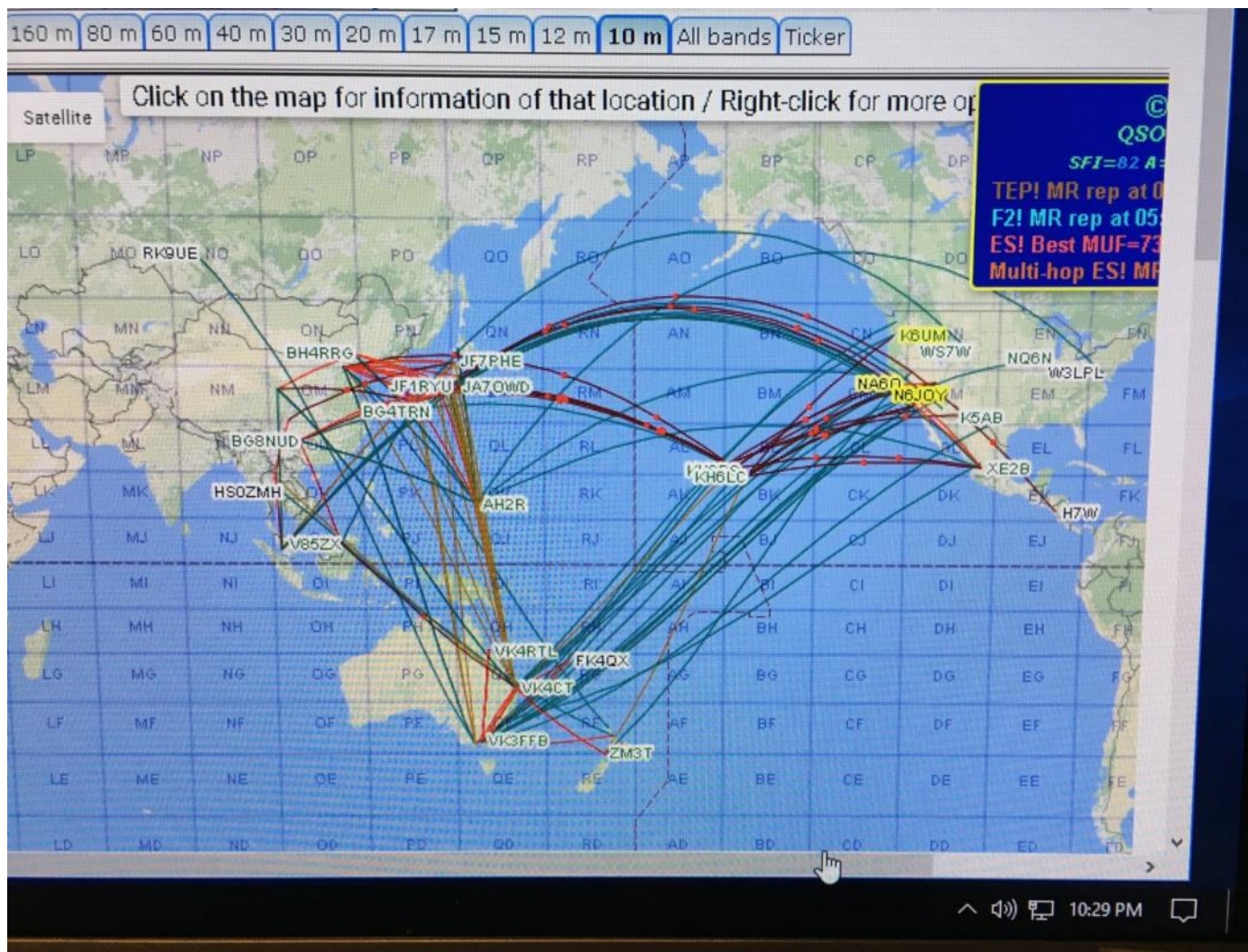
## Annual Technical Achievement Award ~ 2017



Rob Brownstein received the annual Technical Achievement award by DARA (Dayton Amateur Radio Association). DARA with over 600 volunteers hosts the Dayton Hamvention each year, which is the largest gathering of hams in North America, attracting over 25,000 attendees this weekend. Rob has been licensed and active for 59 years. He started as a novice, at age 11, in 1958. Like many young novices, Rob could hardly wait to upgrade to his general ticket and get on phone. But, he soon discovered that he enjoyed operating CW much more. So, he put the microphone in a drawer and never looked back. In January 2010, Rob was one of about a dozen hams, on several continents, who founded the CW Operators Club (CWops). In 2012, Rob was elected president of CWops and served two consecutive terms. During that period, he encouraged and participated in all aspects of the club – rag chewing, contesting, and mentoring. The mentoring part – CW Academy – started in earnest in 2012. Since then, it has mentored more than 800 amateurs in its beginner, intermediate and advanced CW courses.

# CME-Induced Fun During WPX

Gary NA60



G3 storm during WPX 10m opening

Everyone who joined in the fun during WPX-CW experienced the wild fluctuations in propagation due to the wake of a passing CME. The first half of the contest was great, with good rates on all bands. In contrast, the second half was one that required, shall we say, personal determination. At N6RO, one of the most exceptional propagation events I've ever heard of occurred Saturday evening around 0400-0500z where all six bands were open. We worked the East coast on 160 while working JA on 10! Here is a screenshot I took from DXMaps, showing activity on 10m right after conditions had tailed off. Multi-hop E skip is indicated, and I can confirm that signals were weak but workable from JA. The 6-meter guys were also going nuts about this time. Sunspots? We don't need no stinkin' sunspots.

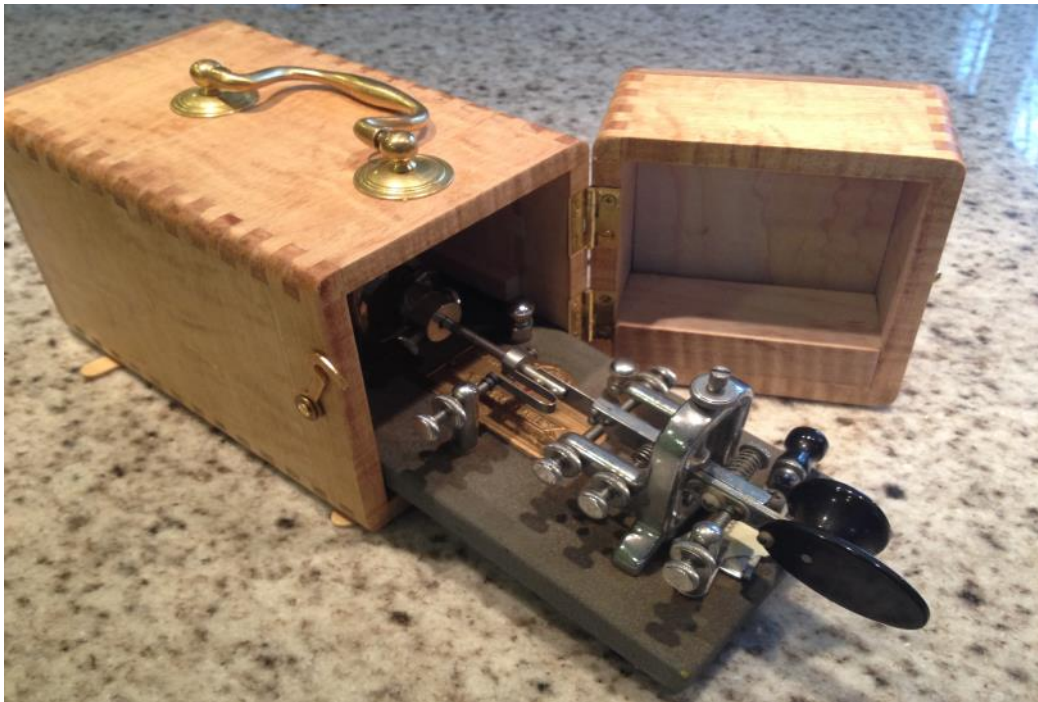
# Vibroplex Carrying Case Parts List

Peter Simpson, KA1AXY  
ka1axy73@hotmail.com

Here's the original I wanted to copy:

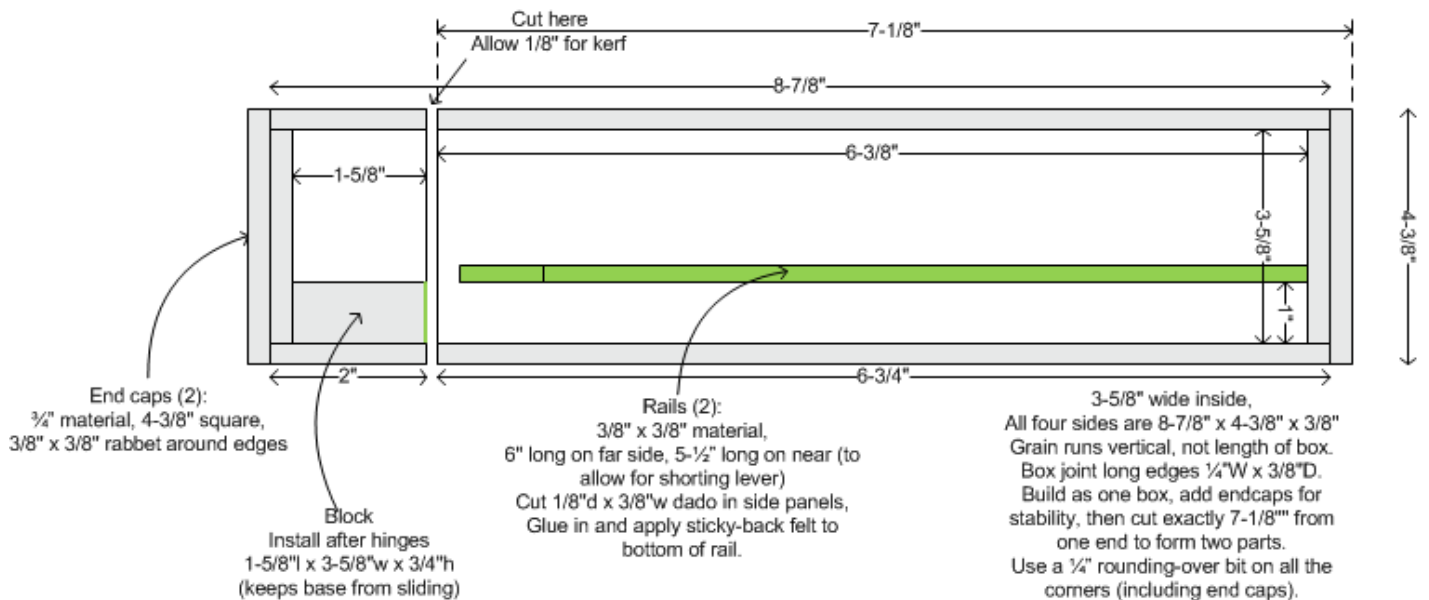


And here's my copy:

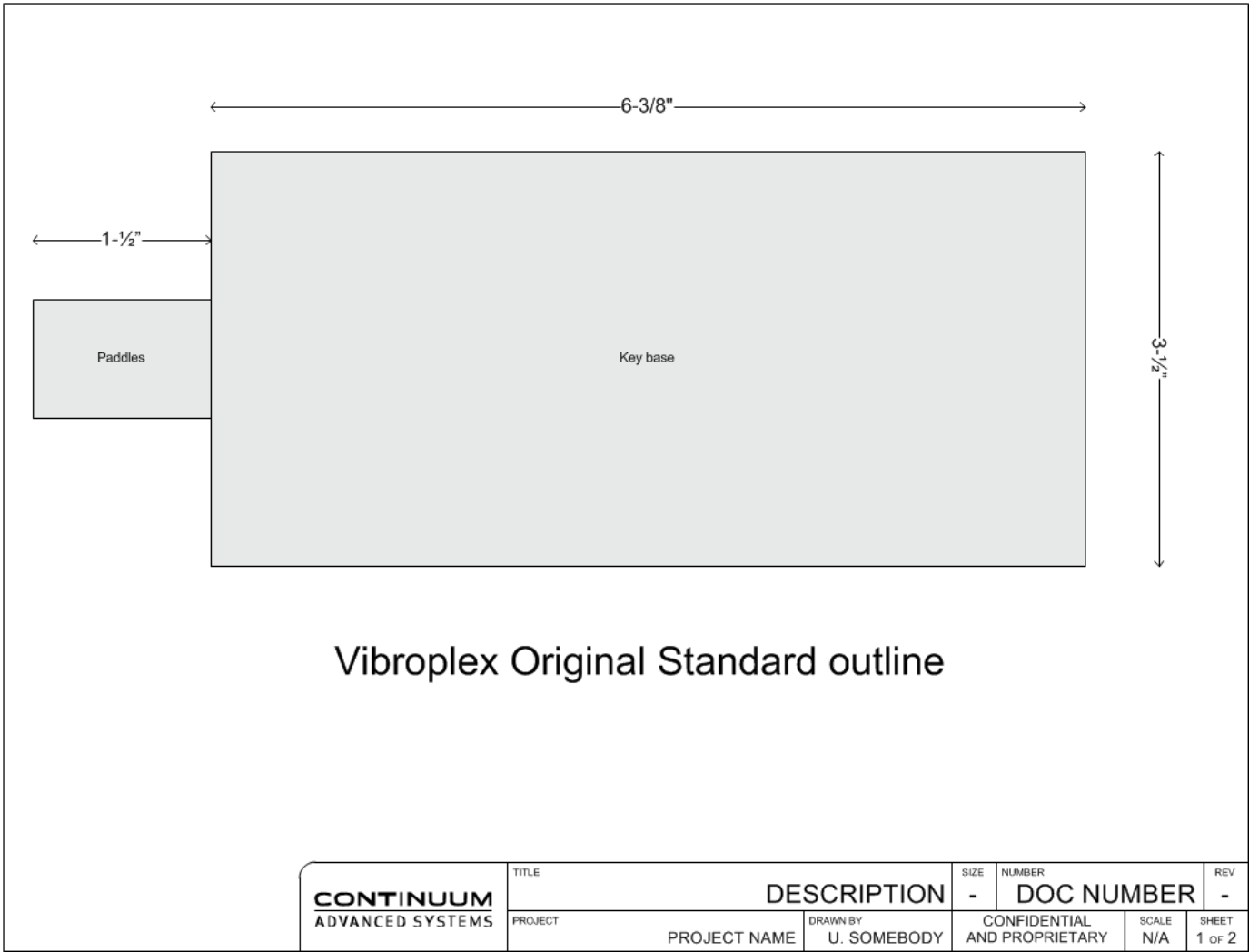


How I made the box joints (on a router with a 1/4" straight bit, not a table saw):

made the box



3-5/8" wide inside,  
 All four sides are 8-7/8" x 4-3/8" x 3/8"  
 Grain runs vertical, not length of box.  
 Box joint long edges 1/4"W x 3/8"D.  
 Build as one box, add endcaps for stability, then cut exactly 7-1/8" from one end to form two parts.  
 Use a 1/4" rounding-over bit on all the corners (including end caps).  
 Dry fit, place key inside and use a dowel or pencil underneath to find balance point. Fit handle before glueing up, as it's not possible to tighten screws afterwards! I did have to drill relief for screw heads and washers so the left screw wouldn't scrape against the top pivot adjuster on the key.



<b>CONTINUUM</b> ADVANCED SYSTEMS	TITLE		DESCRIPTION	SIZE	NUMBER	REV
	PROJECT	PROJECT NAME	DRAWN BY U. SOMEBODY	-	DOC NUMBER	-
				CONFIDENTIAL AND PROPRIETARY	SCALE N/A	SHEET 1 of 2

<http://www.finewoodworking.com/2010/05/25/dedicated-sled-delivers-perfect-finger-joints>

### **Wood:**

The two 3/8" pieces were edge glued to form 12" wide x 24" long piece, which was then crosscut into four 12" long x 4-1/2" wide pieces for the box sides. The 3/4" piece was used for the ends.

2x 3/8" x 6" x 24" Curly Maple      \$9.25 ea  
3/4" x 6" x 24" Curly Maple              \$11.50

Ocooch Hardwoods

<http://ocoochhardwoods.com/>

### **Handle:**

\*Posts and mounting bolts were shortened to fit 3/8" wood  
Handle bolts were slightly recessed to avoid hitting the top of the key's arch and its tension adjusting bolt.  
The handle is the only hardware that must be installed before assembling the box, as the bolts can't be accessed once the box is assembled – therefore, they were Loctited so they wouldn't loosen.

H-10 3-1/2" Rosette Bail Pull with 1-1/8" back plates    \$12.50  
semi-bright with MSF posts  
Horton Brasses  
[www.horton-brasses.com](http://www.horton-brasses.com)

### **Hinges:**

23079 1" x 3/4" solid brass hinges (pair) \$4.49  
Ultra #13913  
Howard Berger Co, Cranbury NJ

Rockler Woodworking

[www.rockler.com](http://www.rockler.com)

**Catch:**

\* used only the hook and a brass round head wood screw as catch  
Hook was sandwiched between two brass washers and  
held by 1" 4-40 brass countersunk machine screw  
into 4-40 T-nut secured with Loctite. This allowed adjustment  
of friction and lifted the catch off the wood surface.

149754 Hook and Staple catch SB      \$4.25

National Hardware N211-938 V1841

Woodcraft

[www.Woodcraft.com](http://www.Woodcraft.com)

602 4-40 blind T-nuts 1/8" barrel (12 ea)      \$2.37

RTL Fasteners

Chesapeake, VA

[www.rtlfasteners.com](http://www.rtlfasteners.com)

**Finish:**

Watco Danish Oil, Medium Walnut, 2 coats

Peter Simpson, KA1AXY  
ka1axy73@hotmail.com



## NCCC Annual KB Competition Rules



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

**Time period:** The contest year starts March 1. ARRL DX SSB is the first contest of the year. NAQP RTTY is the last.

**Eligible contests:** Currently, points from 35 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.

Only scores posted to [3830scores.com](http://3830scores.com) are counted.

Paid NCCC members may receive awards.

## NCCC Annual KB Competition Table

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

# NCCC Meeting July 11th

Tuesday, July 11th

6pm Social, 6:30pm Dinner, Program 7pm

Sneha 1214 Apollo Way, Ste 404B, Sunnyvale, CA 94085

Program VP/CC Presentation. Chris N6WM

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## AV Support

We are looking for a AV / Webex volunteers to help run the AV and webex for the meetings.

Please contact Bob W1RH if you are interested....

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## NCCC Life Membership

NCCC Life Membership is available for a one-off payment of \$250.00

If you would like to apply for life membership, please submit your request using this link [here](#)

Each request will be reviewed by the NCCC BOD at the regular monthly BOD meeting.

For further information, contact Ian W6TCP



# WORLD RADIOSPORT TEAM CHAMPIONSHIP JULY 12-16, 2018



## Our way to 2018

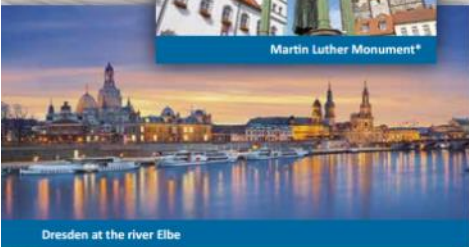
Having been elected to host the WRTC 2018 in Germany is a great honor, a thrill, and a big challenge for us. The critical tasks have been clearly defined. Dedicated and highly motivated teams are addressing the challenges.

For the competition itself we have chosen the Jessen area south of Berlin for its flatness providing level playing fields for all competitors. Jessen is strategically situated between the German capital of Berlin and such fascinating historic cities like Dresden and Leipzig.

Nearby you find important cultural attractions, e.g. the historic city of Wittenberg where Martin Luther launched the Protestant Reformation in 1517. Additionally, the scenic countryside and a lot of entertainment will make the WRTC an exciting experience for families and friends as well.



Martin Luther Monument\*



Dresden at the river Elbe

\* Source: Lutherstadt Wittenberg Marketing GmbH ©

## We need your support!

You need deep pockets to finance such a huge event. Our preliminary cost estimates add up to close to half a million US Dollars and cannot be shouldered by the German contesting fraternity alone. We need substantial financial support of contesters from all over the world, from contest clubs, individuals and business. Any amount is welcome! We will do our level best to translate this support into an event that is worth to take part in - be it as a competitor or spectator, either on the spot or remotely via Internet. You are welcome to donate via PayPal to:

[spende@wrtc2018.de](mailto:spende@wrtc2018.de)

or to use wire transfer (see Web Page for details).

## For US taxpayers

The World Wide Radio Operators Foundation (WWROF) is recognized by the IRS as a tax-exempt public charity. In order to be eligible for Income Tax treatment of your donation to WRTC 2018 just contribute to WRTC2018 in one of the following ways, either via PayPal to:

[WRTC2018@wwrof.org](mailto:WRTC2018@wwrof.org)

or by check - remit and mail to:

WWROF Inc. - WRTC2018 Fund  
P O Box 10424  
Midland, TX 79702



Note: It is important that mailed contributions include notification that the donation is specifically for WRTC2018.

## Contact the WRTC Team

[www.wrtc2018.de](http://www.wrtc2018.de)  
[contact@wrtc2018.de](mailto:contact@wrtc2018.de)

E-Mail: [contact@wrtc2018.de](mailto:contact@wrtc2018.de) | Web: [www.wrtc2018.de](http://www.wrtc2018.de) | Facebook: [wrtc2018](https://www.facebook.com/wrtc2018) | Twitter: [wrtc2018](https://twitter.com/wrtc2018)



WORLD RADIOSPORT  
TEAM CHAMPIONSHIP

## Welcome to Germany!



Proud bronze medalists at WRTC 2014 - Manfred Wolf, DJ5MW and Stefan von Baltz, DL1IAO (Foto: DK9IP)

## Competition with Friends

Lifetime Experience

Make it happen!

Contesters' Olympics



# WORLD RADIOSPORT TEAM CHAMPIONSHIP

JULY 12-16, 2018



## Welcome to Germany

Germany has been awarded to stage the WRTC 2018. The Federal Republic is subdivided into sixteen federal states such as Bavaria or Saxony. Some 80 million inhabitants share a plot of less than 140 thousand square miles, about the size of the US state of Montana. Sometimes the German language is criticized for its harshness; however, a countless number of students around the world start learning German every year as it offers an insight into a fascinating culture and a world ranked economy.

## Radiocommunications in Germany



Heinrich Hertz

Here the fundamentals of wireless communication have been developed as young Heinrich Hertz has proved the existence of electromagnetic waves and Nobel Prize Winner Ferdinand Braun introduced the closed tuned circuit as part of the radio transmitter.

The German Hams were late bloomers after all, as only after WWII a more liberal legislation made a wide ham culture possible. Today Germany is the home base of the world's second largest contest community hosted by two notable clubs: the Bavarian Contest Club (BCC) and the Rhein Ruhr DX Association (RRDXA). That is why you will find such a great number of German call signs in your log as well as multipliers from German radio activities like CR3L or VK9LM.



## WRTC 2018 in Germany

World Radiosport Team Championships (WRTC) are being held every four years. More than 60 of the best 2-OP-teams from all over the world meet for a competition. Quite different from other radiosport contests, competitors in WRTCs operate with identical power and antennas on level playing fields from the same geographical region eliminating all variables except their own operational skill. Previous WRTCs were held at Seattle/USA (1990), San Francisco/USA (1996), Slovenia (2000), Finland (2002), Brazil (2006), Russia (2010), and New England (2014).

To participate in WRTC 2018 teams have to qualify in up to 28 different HF contests during 2015 and 2016. Qualification started with the ARRL-DX-CW contest 2015.

To watch your own qualification standings and those of all of your competitors or friends at any time, have a look at our website [www.wrtc2018.de](http://www.wrtc2018.de). The standings are regularly updated after receiving the results from the contest organizers of each qualification contest.

WRTC 2018 Qualification Standings

Category:  Submit

Qualification Area:  Submit

AP:  Submit

Power Class:  Submit

Power:  Submit

Power class(es):  Submit

Power class(es) (in the NA #1 area):  Submit

Power class(es) (in the NA #1 area):  Submit

Power class(es) (in the NA #1 area):  Submit

Standings in NA #1 area

Display data calculated on the basis of the both claimed scores and final contest results (when available)

Area rank	Operator	Qualification Points	Qualified contest entries	Quality mark
1	DL2 KSL	7889	8	80.00
2	DL2 KST	7202	10	80.00
3	DL2 KST	7176	8	80.00
4	DL2 KST	6712	8	80.00

## WRTC - Fieldday Style



## Catch the organizers

The members of the WRTC 2018 Organizing Committee are active in many contests using special event call signs like "DLØWRTC" or "DKØWRTC". They are active on all bands from 160m up to 3 cm from various locations in Germany. They hand out the special DOK "WRTC" for DARC awards.

## Enjoy the award program

WRTC 2018 sponsors the "Worked WRTC Qualification Regions" award. You can apply online for the WWQR Award via [dci.darc.de](http://dci.darc.de). It can be worked on an annual basis in 3 classes, in different modes and on different bands. It shows European radio pioneers on a background in black, red and gold representing the colours of the German flag. Your application will support WRTC 2018 with a small donation.



Germany calling!

Competition with Friends

Join the Fun

## Gruber Prize in Cosmology

Congratulations to Sandra Faber (Andy AE6Y XYL)



Even before the start of her career, Faber had defined, albeit without realizing it, the direction her career would take. As she entered Swarthmore College, she knew she wanted to be a scientist who investigated the history of the universe, but she didn't know whether she wanted to approach the question through the lens of the very small—subatomic physics—or the very large—astronomy. She chose the latter, but in framing the question she had inadvertently foreseen the direction that cosmology, and her career, would take: To understand the very large, you have to understand the very small.

The very small, in Faber's case, turned out to be dark matter: the mysterious something that interacts gravitationally with ordinary matter (effects we can observe) but doesn't emit radiation in any range of the electromagnetic spectrum (effects we can't observe). Its inaccessibility led many astronomers to doubt its existence, at least until 1979, when Faber and John S. Gallagher produced a comprehensive review of the data, a paper soon considered a classic. Nearly all skeptics came to the conclusion that most of the matter in the universe is, indeed, "missing."

What kind of matter it might be, however, remained open to question. Presumably it was a subatomic particle. But was it a particle that moves at nearly the speed of light—is hot, in astronomical par-

lance—or was it a particle that moves at a much slower rate—is cold? In 1985 Faber was part of a collaboration that produced a comprehensive theory of cold dark matter that explained in broad outline the structure and behavior of galaxies and superclusters of galaxies that populate the universe. This theory remains the paradigm underpinning all modern models of galaxy formation.

Faber's role in that collaboration taught her a lesson she has tried to pass on to succeeding generations. Although her role was to contribute ideas on observational data, rather than theory, she was able to communicate with the theorists because she understood the physics. "I've always told my students that the weakness of observers is that they don't know enough physics," she says. "Go off and learn more physics,' I tell my students. And I've tried to follow that rule myself."

Faber has continued to make significant contributions to the study of galaxies, often as the Principal Investigator of increasingly larger collaborations. Among her other contributions to the field are: the relation between the orbital speeds of stars in elliptical galaxies and the galaxy's mass (the first such relational law); the insight that a supermassive black hole lurks at the center of every large galaxy; a relationship between those central black holes and the orbital speeds of stars within the galaxies; and detection of variations in the rate of the expansion of the universe from place to place that depends on the distribution of relatively great or relatively sparse collections of mass. Since 2010 she has served as the co-Principal Investigator on the most extensive project in Hubble Space Telescope history, a survey of galaxies from the infancy of the universe.

But Faber has also distinguished herself on the technological side of the observing divide.

In the 1980s and 1990s she was a tireless advocate for the construction of the 10-meter Keck Telescope in Hawaii, the largest telescope at the time, as well as for large telescopes in general. She also had a hands-on role in the optical design for Keck and led construction of one of its biggest spectrographs. A generation has now passed during which giant telescopes have become commonplace. At the same time Faber was also contributing to the testing and commissioning of the Wide-Field Camera for the Hubble Space Telescope.

In recent years Faber has also emerged as a prolific public speaker, often addressing the topic of the relationship between cosmology and civilization. She argues that developments in cosmology over the past few decades have made us realize that our species has been given "the gift of cosmic time"—the concept that the universe exists on a scale of billions of years and that Earth will be a safe haven for our progeny for hundreds of millions of years into the future. "Astronomical knowledge tells us how we got here and furthermore, having understood that, we can extrapolate more confidently for the future."

When she reflects on her extraordinarily fertile career, Faber recalls the "advice" her father often gave her as a child when she wasn't doing anything in particular. "Make yourself useful, Sandra," he would say. And so she has.

<http://gruber.yale.edu/cosmology/2017/sandra-faber>



# Point Generator Profile

By Bob, W1RH

## Alan - AD6E

Our point generator this month is well-known in both the contest and DX communities. If you have any doubts, check out his number of "lookups on his QRZ page. Over 10 million!

In contesting, you'll always see Alan's call in our focus contests and the international DX contests. As KH6TU, Alan has been turning out big numbers in WPX, CQWW, and ARRL DX. You'll also always find either AD6E or KH6TU in NAQP and SS and almost always with very respectable scores.

In DX'ing, well he's been in a bunch of dxpeditions, including KH9, 4M7X, DL0MB, TI9M, K7C, P29NI, 3D2C, T33A, TX3X, and others. With a new KH6 QTH, you can now add that one to the list.

Now, more about AD6E

**Name/Call Sign:** Alan AD6E I also use the club call KH6TU

**Past calls:** WB6BID (wonderful CW call)

**Location:** San Jose, CA and Wailuku, (Maui) Hawaii

### How much property do you have?

San Jose is a small city lot.  
Hawaii has 2.7 acres.

### Describe your antenna system:

#### Current:

San Jose has a 72 foot crank-up tower (with permit). Sloper on 80, 2 element shorty forty, and C31XR set up for individual monoband operation on 20, 15, and 10. Also a very little used 4 element 6 meter yagi.

Maui has a 70 foot crank-up with HOA approval. On that is a 3 element SteppIR with the driven element looped for 30 and 40 meters. Also a Force12 Sigma 80 with Tornado tuner. I have a nice local drop off to the east with a gentle down slope to the ocean about a mile away. Great take off towards NA. The path to EU is good but not as good as towards NA. JA is blocked by the western mountains but they still get through.

#### Future:

Sitting in the garage is a 2 element SteppIR which will eventually be put on the tower for SO2R. That's as much as I can do without pushing my HOA. I'm just happy they let me put up one tower.

### What's in your shack?

San Jose has no radios at the moment, but I can hand carry a K3 on the airplane.

Maui has a K3, P3, Acom2000A

Second radio is also a K3, P3, KPA500 ... sitting in the closet at the moment.



## **What are your previous QTH's?**

I've always been in CA. I grew up in Livermore and spent my Novice time there as WN6BID using a Heathkit AT-1 and S-38E. I was drafted and spent three years in the Philippines. QRT for some years returning to ham radio as AD6E (FCC issued, not vanity) while attending grad school in San Jose. Moved to the present San Jose QTH in '78. Moved to Maui in 2014 but I do get to spend some time in San Jose. I can carry a K3 back and forth.

That said, I've also operated from various QTHs such as DL0MB in CQWW, 4M7X in CQWW, TI9, KH9, DU3, P29, 3D2C, T33, TX3. These DX opportunities are a lot of fun but they did bring out a personal problem that was identified by K2KW years ago. Like some others, I have a rate addiction. Every once in a while I need to find real rate. Hard to do that from CA although it's possible for a short while.

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

Retired from Electrical Engineering after about 40 years designing radios. OK, microwave radios for the telecom industry.

## **Married? Kids? Grandkids?**

Yes, yes, and yes. Two daughters are now both grown and married off. One lives in Morgan Hill and the other at the old San Jose house. Two grand kids in Morgan Hill now 8 and 11. Good reason for plenty of trips back to San Jose.

## **How many DXCC entities have you worked?**

I don't know. I have a DXCC certificate on the wall both in San Jose and also in Maui under the club call of KH6TU. I think the San Jose one for AD6E was done with 240 but that was a long time ago using cardboard QSL cards. The KH6TU DXCC was done totally with LoTW. Both are CW only. My country count on SSB is three (as in 003). I enjoy breaking a pileup, and really enjoy working a pileup from the DX side. Who cares how many entities? It's the operating that's fun.

## **What's your favorite contest?**

Tough question. I would have to say CQP but Sweepstakes is up there too. And WPX when the bands are open to EU, and ARRL DX, and CQWW. And don't forget Hawaii QSO Party in August !!

## **Any tips for testers?**

That's easy. Have fun. Contests are the best way to learn operating technique and setting goals. Having an achievable goal and then a stretch goal is the best way to push yourself. Usually I aim for QSOs rather than score, but in CQP and SS the goal of achieving a sweep is a lot of fun. I never really compete against someone else. I always compete against my own goals. Also, joining a multi-op is fun in a very different way. Many thanks to W6NV for his hosting of enjoyable events up on the ridge.

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

The club has been a long time friend. Some newbies find the club stand-offish or cliquish but I didn't see that back when I joined. It would be good to see the club support Elmering better. I'm an instructor with the CW Academy which is run by the CW operators club (Cwops). There is so much

interest in learning CW that new students have to wait over a year before getting into a class. We need more Elmers to help. The club has a fantastic base of technical know how and some of the best operators in the world.

### **Any other hobbies besides ham radio?**

I do scuba diving. I've been certified since the early '70s when I lived in the Philippines but, like ham radio, I dropped out of it for years after starting a family and moving to San Jose. I think it was N6XI who got me back into it again. N6NT helped get me adjusted to cold Monterey water. Just goes to show NCCC is a great club with many facets. I'm now a PADI Rescue Diver. If anyone wants to come out to Maui and dive nice warm water, I'm available.

San Jose QTH:





KH6TU Station



KH6TU Tower



AD6E with fresh papaya

# NCCC Member Awards

## Certificate of Achievement

# 2017 7th Call Area QSO Party

Presented To

# NA6O

## First Place

Outside 7th-Area Single-Op Assisted High-Power CW

  
Dick Frey, K4XU  
Contest Manager

Sponsored by The Central Oregon DX Club

AOCC  
CODXC  
NACHO  
RTKCC  
SDXA  
UDXA



# TUBE OF THE MONTH

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

Norm N6JV

## 4CX1000A

In 1950, EIMAC started a development project to make a relatively small high power tube using ceramic insulation. The Germans had managed to produce some ceramic insulated tubes. They were trying to meet a vague specification from the U.S. military. The first step was to learn how to make the ceramic seal to the metal. A series of experimental tubes were made to test sealing techniques. The X-504 (1951) was a re-packaged 450T triode with stacked ceramic spacers. The X-521A was similar but had overlapping or coaxial construction that gave a better seal. The drive requirements of the triode were too high for the proposed application, so a new series of tetrode X tubes was started. The X-593 (1957) had a breechblock socket system that was more rugged and compact. The socket was designated the X-667 and its development paralleled that of the tube's.

External anodes had been in use since 1945, but a more efficient forced air anode using many thin radiating plates proved adequate. The intended use of this new tube was for SSB that was beginning to be popular with the military and a few (rich) hams. The control grid could only handle 1-watt maximum in AB1. The tube produced full output with zero drive.

The 4CX1000A would produce 1630-watt output up to 110 MHz. I believe that the Collins 30S1 was the first amplifier designed to use the tube. The SK-800 was the socket and the eventually was made several versions. In time, they made more efficient anodes and sold the 4CX1500B that used the same socket. During the testing of the new tube, the anode worked as predicted, but they accidentally also invented a new siren. The tube could be heard all over the factory.

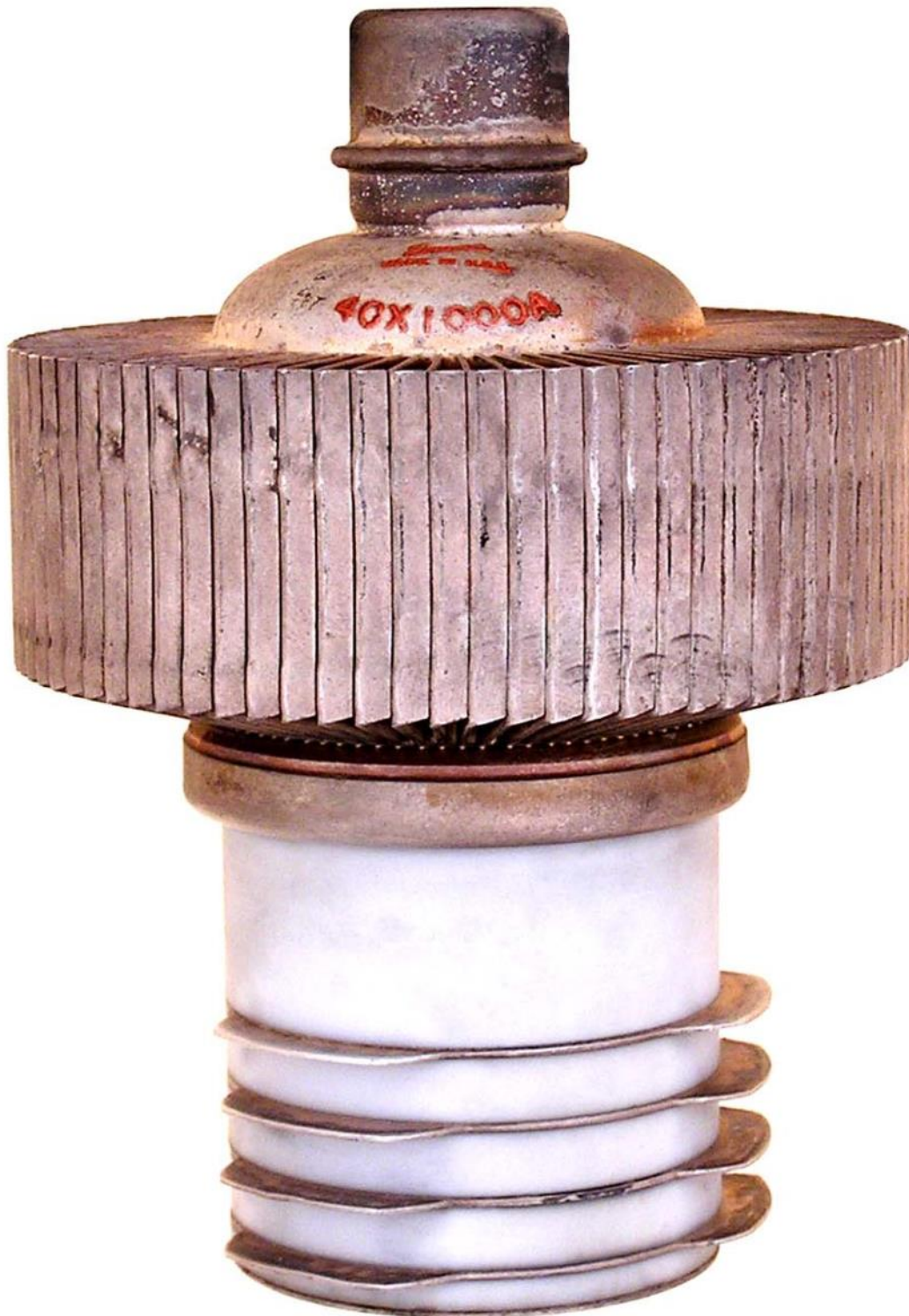
The use of ceramics has changed the modern manufacture of transmitting tubes. EIMAC no longer makes any tube with glass insulation.

Norm N6JV

# TUBE OF THE MONTH

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

Norm N6JV





# TUBE OF THE MONTH

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

Norm N6JV



**X-521A**

# TUBE OF THE MONTH

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

Norm N6JV



## **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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### **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— June page 1

NRAU 10m Activity Contest	1700Z-1800Z, Jun 1 (CW) and 1800Z-1900Z, Jun 1 (SSB) and 1900Z-2000Z, Jun 1 (FM) and 2000Z-2100Z, Jun 1 (Dig)
NCCC RTTY Sprint	0145Z-0215Z, Jun 2
NCCC Sprint	0230Z-0300Z, Jun 2
10-10 Int. Open Season PSK Contest	0000Z, Jun 3 to 2400Z, Jun 4
PVRC Reunion	0000Z-0400Z, Jun 3 (CW) and 0000Z-0400Z, Jun 4 (SSB)
DigiFest	0400Z-1200Z, Jun 3 and 2000Z, Jun 3 to 0400Z, Jun 4 and 1200Z-2000Z, Jun 4
Wake-Up!QRP Sprint	0600Z-0629Z, Jun 3 and 0630Z-0659Z, Jun 3 and 0700Z-0729Z, Jun 3 and 0730Z-0800Z, Jun 3
SEANET Contest	1200Z, Jun 3 to 1200Z, Jun 4
UKSMG Summer Contest	1300Z, Jun 3 to 1300Z, Jun 4
IARU Region 1 Field Day, CW	1500Z, Jun 3 to 1459Z, Jun 4
RSGB National Field Day	1500Z, Jun 3 to 1500Z, Jun 4
Dutch Kingdom Contest	1500Z, Jun 3 to 1500Z, Jun 4
Alabama QSO Party	1600Z, Jun 3 to 0400Z, Jun 4
RSGB 80m Club Championship, Data	1900Z-2030Z, Jun 5
ARS Spartan Sprint	0100Z-0300Z, Jun 6
Phone Fray	0230Z-0300Z, Jun 7
CWops Mini-CWT Test	1300Z-1400Z, Jun 7 and 1900Z-2000Z, Jun 7 and 0300Z-0400Z, Jun 8
NCCC RTTY Sprint	0145Z-0215Z, Jun 9
NCCC Sprint	0230Z-0300Z, Jun 9



# Contest Calendar— June page 2

HA3NS Sprint Memorial Contest	1900Z-1929Z, Jun 9 (40m) and 1930Z-1959Z, Jun 9 (80m)
DRCG WW RTTY Contest	0000Z-0759Z, Jun 10 and 1600Z-2359Z, Jun 10 and 0800Z-1559Z, Jun 11
VK Shires Contest	0600Z, Jun 10 to 0600Z, Jun 11
Asia-Pacific Sprint, SSB	1100Z-1300Z, Jun 10
Portugal Day Contest	1200Z, Jun 10 to 1200Z, Jun 11
SKCC Weekend Sprintathon	1200Z, Jun 10 to 2400Z, Jun 11
GACW WWSA CW DX Contest	1500Z, Jun 10 to 1500Z, Jun 11
REF DDFM 6m Contest	1600Z, Jun 10 to 1600Z, Jun 11
ARRL June VHF Contest	1800Z, Jun 10 to 0259Z, Jun 12
Cookie Crumble QRP Contest	1700Z-2200Z, Jun 11
4 States QRP Group Second Sunday Sprint	0000Z-0200Z, Jun 12
NAQCC CW Sprint	0030Z-0230Z, Jun 14
Phone Fray	0230Z-0300Z, Jun 14
CWops Mini-CWT Test	1300Z-1400Z, Jun 14 and 1900Z-2000Z, Jun 14 and 0300Z-0400Z, Jun 15
RSGB 80m Club Championship, CW	1900Z-2030Z, Jun 14
NCCC RTTY Sprint	0145Z-0215Z, Jun 16
NCCC Sprint	0230Z-0300Z, Jun 16
SMIRK Contest	0000Z, Jun 17 to 2400Z, Jun 18
All Asian DX Contest, CW	0000Z, Jun 17 to 2400Z, Jun 18
Ukrainian DX Classic RTTY Contest	1200Z, Jun 17 to 1159Z, Jun 18
ARR BPSK63 Contest	1200Z, Jun 17 to 1200Z, Jun 18
IARU Region 1 50 MHz Contest	1400Z, Jun 17 to 1400Z, Jun 18
AGCW VHF/UHF Contest	1400Z-1700Z, Jun 17 (144) and 1700Z-1800Z, Jun 17 (432)
Stew Perry Topband Challenge	1500Z, Jun 17 to 1500Z, Jun 18



# Contest Calendar— June page 3

West Virginia QSO Party	1600Z, Jun 17 to 0200Z, Jun 18
Feld Hell Sprint	1800Z-1959Z, Jun 17
WAB 50 MHz Phone	0900Z-1500Z, Jun 18
Kid's Day Contest	1800Z-2359Z, Jun 18
Run for the Bacon QRP Contest	0100Z-0300Z, Jun 19
Phone Fray	0230Z-0300Z, Jun 21
CWops Mini-CWT Test	1300Z-1400Z, Jun 21 and 1900Z-2000Z, Jun 21 and 0300Z-0400Z, Jun 22
NAQCC CW Sprint	0030Z-0230Z, Jun 22
RSGB 80m Club Championship, SSB	1900Z-2030Z, Jun 22
NCCC RTTY Sprint	0145Z-0215Z, Jun 23
NCCC Sprint	0230Z-0300Z, Jun 23
Battle of Carabobo International Contest	0000Z, Jun 24 to 2400Z, Jun 25
UFT QRP Contest	0600Z-0900Z, Jun 24 and 1400Z-1700Z, Jun 24
His Maj. King of Spain Contest, SSB	1200Z, Jun 24 to 1200Z, Jun 25
Ukrainian DX DIGI Contest	1200Z, Jun 24 to 1200Z, Jun 25
ARRL Field Day	1800Z, Jun 24 to 2100Z, Jun 25
SKCC Sprint	0000Z-0200Z, Jun 28
Phone Fray	0230Z-0300Z, Jun 28
CWops Mini-CWT Test	1300Z-1400Z, Jun 28 and 1900Z-2000Z, Jun 28 and 0300Z-0400Z, Jun 29
QRP Fox Hunt	0100Z-0230Z, Jun 30
NCCC RTTY Sprint	0145Z-0215Z, Jun 30
NCCC Sprint	0230Z-0300Z, Jun 30

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