



Publication of the
Northern California
Contest Club



Issue 566

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NCCC August Meeting

13 August 2019

The Old Spaghetti Factory in Redwood City

6:00 PM to 9:00 PM

Please RSVP and purchase lunch by Saturday, 10 August at Noon

Sign up [here](#)

More details on [page 4](#) or on the nccc web site [here](#)

Presidents Report:

Practice, Practice, Practice...

The old story goes like this: A tourist visiting New York City is lost, trying to find his next destination. He happens across a local, and asks them: "How do I get to Carnegie Hall?" The New Yorker answer? "Practice, practice, practice...".

Readers of my column in last month's edition should remember my note about the Contest University video of N6MJ. If you haven't seen it, be sure to do so. In the session Dan states that he practices an hour every day. He makes several other interesting statements, but this one caught my attention. After contemplating where I would find an hour in my day for yet another activity, I decided that if it is worthwhile for one of the best testers to do, perhaps I should consider it. My CW skills are lagging these days, years of neglect have taken their toll. If I want to be good at contesting, perhaps I should give it a try.

There are several contest practice programs available, most for the Windows and usually for CW practice. Being a Mac person, I decided to give the practice feature built-in to K1GQ's SkookumLogger a try. I looked up the help information, configured it to send only a single call at a time at 30wpm, and gave it a try. My first reaction? "My CW skills seem a bit rusty." OK, so it has been many months since my last CW contest... I persevered, my skills improved, and after an hour I had 60 or so contacts in the log. The next night I did the same and the contact count improved. The following night the real challenge began. This time I configured the program to respond with two or three calls after my



Northern California Contest Club

Excellence In Amateur Radio Contesting

Officers:

President	Jack Brindle	W6FB	jackbrindle@me.com
Vice President /Contest Chair	Hank Garretson	W6SX	w6sx@arrl.net
Treasurer	Tom Carney	K6EU	treasurer.nccc@gmail.com
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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
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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

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

CQ. Oh my, this actually is what it is like to run. The stations on different frequencies were easy to separate. It was the ones that were zero beat that provided a challenge. I slowly devised strategies to pick out a character or two and separate the calls. After a few nights of this I found that I could work 100 stations in about 45 minutes with no errors. It seems to be true, Dan seems to be on to something here.

When IARU came, I was ready. I found a frequency, hit the CQ button, and no one came back. OK, try again. This time I did get several replies. To my delight I discovered that the action was very similar to that provided by the simulator. What's more I found that I had the confidence to run for the first time in a long while. I was keeping up with stations responding at high rates. I was handling the frequency. After a while the frequency ran dry. Most likely another station I couldn't hear moved in on the frequency. I QSYed to a station I thought was clear and tried again. Again it took a little while to establish a run, but I was successful. In short, the work I put in the previous few weeks paid off, I had the confidence and skills to do what I wanted. Many of you experienced CWers will say this is what you normally do, but to those of us building (or rebuilding) their CW skills, it is a big step.

After my experience, I asked a few friends about their practice habits. First, relative CW newcomer W9KKN:

"CWops got me in the habit of practicing at least a little CW every day. I'm still not even close to where I want to be, but these days I feel at least semi-functional in a contest. I expect it will take a few years to get further.

"I practice at least 10 minutes a day, sometimes a lot more. When I'm booked back-to-back in meetings at work, I'll usually use the few minutes I have between them (about 10 minutes usually if I'm lucky) to start up Morserunner, RufzXP (or more recently, qrq), or DXlog.net."

Interesting. Obviously practicing helps for Bill. There is another way to practice, as many experienced contesters know. Jump into the frays and play. There are at least two CW contests every week, (CW OpsT and NS Sprint) that provide excellent practice opportunities. A more experienced contester, AD6E notes:

"I've played with simulators some, but I'm not very fond of any of them. They don't seem very realistic to me. If anything, they give you a worst case (more difficult than reality) but my biggest gripe is they don't respond to you the way a real live person would.

"For years, I always started a CW contest on the slow side with S&P before starting a run. My warm up. With time, I noticed I was spending less and less time doing that initial S&P before finding a hole and running. It was a slow process. Now I have no problem running from the beginning."

The answer, it seems, is that no matter how you do it, practice. While working a live contest gives the best practice, a simulator can certainly help out with your CW skills and get you to the point where you have the confidence to give it a real try. After a while you may find that being on the air provides the best way to hone your skills. For me, I still need the extra practice that a simulator provides. It will probably be a while before I get to the level of N6MJ doing 2BSIQ (2 band, sequentially interleaved QSOs).

Thanks to Bill and Alan for their answers and suggestions!

73! Jack, W6FB

NCCC General Meeting, 8/13/2019, at The Old Spaghetti Factory in Redwood City

NCCC General Meeting - 13 August 2019

6:00 PM to 9:00 PM (PST) at The Old Spaghetti Factory in Redwood City

Please RSVP and purchase lunch by Saturday, 10 August at Noon:

www.memberplanet.com/events/nccckb/ncccmeeting13august2019

Hello KB'ers,

**Please join us for the August 13th NCCC
Meeting on the SF Peninsula!**

Date: Tuesday, August 13th, 2019

Time: 6:00 PM to 9:00 PM

Location: [The Old Spaghetti Factory](#)
[2107 Broadway, Redwood City, CA](#)



Our Meeting Agenda Will Be:

6:00 Socialize and eat dinner

7:00 NCCC General Business &
Announcements: Jack Brindle, W6FB, NCCC
President

7:10 Program: Ed Muns, W0YK, will speak
on *FT4/FT8 operating technique, maximizing QSOs, & maximizing fun in the upcoming
WW-DIGI DX Contest (Aug 31-Sep 1)*



Food Options:

All meals come with salad and dessert. Beverages are not included and will be available for purchase at the restaurant. Charges include gratuity, sales tax, and a portion of the speaker's meal.

Fettuccine Alfredo

Fettuccine noodles in a butter cream sauce with shredded Romano cheese (1090 cal), \$22.

Italian Sausage

Zesty sausage served with our from-scratch Rich Meat Sauce on Spaghetti (980 cal), \$23.

Chicken Marsala

A freshly seasoned breast of tender chicken with a Mushroom and Marsala Wine Sauce. Served alongside Spaghetti with Mizithra Cheese & Browned Butter (1000 cal), \$24.

We look forward to seeing you all there!

WW Digi

Our first Focus Contest of the year is the new World Wide Digi DX Contest.

<https://ww-digi.com/>

We can win the first-ever WW Digi!!!

NCCC is well positioned for the inaugural WW Digi. Distance-based scoring is to our advantage. We are one of the most outstanding contest clubs in the world with many victories. We have fun winning. Let's do it!

WW Digi is less than a month away. FT8 and FT4 take getting used to. Now is the time to start—don't wait until the last minute.

Download and install WSJT-X here:

<http://physics.princeton.edu/pulsar/k1jt/wsjt.html>

Download and installation are straightforward. If you have any problems, email me, or better yet, post to the NCCC list so we can all help each other.

The screenshot shows the WSJT-X software interface. The title bar reads "WSJT-X - ForEW1 v2.1.0 by K1JT". The menu bar includes File, Configurations, View, Mode, Decode, Save, Tools, and Help. The main window is divided into two tables: "Band Activity" on the left and "Rx Frequency" on the right. Both tables have columns for UTC, dB, DT, Freq, and Message. The "Band Activity" table shows various stations and their signals, with some highlighted in green and red. The "Rx Frequency" table shows received signals, with some highlighted in yellow and red. Below the tables are several control buttons: CQ only, Log QSO, Stop, Monitor, Erase, Decode, Enable Tx, Halt Tx, Tune, and a checked Menu button. A central display shows the frequency "14.074 000" and a green indicator. To the right of this display are buttons for "DX Call" and "DX Grid", and a "Generate Std Msgs" dialog box with a list of message options (Tx 1 to Tx 6). At the bottom, there is a status bar showing "Receiving", "FT8", "Last Tx: KOEKA W6SX RR73", and "4/15 WD:5m".

There is lots of FT8 and FT4 activity at all times of day and night. Jump in and test the waters. Get some experience with the mode—it's fascinating

WSJT-X works and contests find in stand-alone mode. If you want to take FT8 and FT4 to another level, there are several options including N1MM+, WriteLog, and MSHV. More later.

There will be WW Digi practice sessions in August. Stay tuned.

Every Point! Every Log!

Contest Exuberantly,

Hank, W6SX

WACC finally bounds into the 21st century!

By Fred K6DGW

Our Worked All California Counties award has been limping along with a portrait-format, monochrome certificate originally created in the 70's that is about as appealing as a piece of junk mail. I have a ream of blank ones just waiting to underwhelm the next applicant.

Gary, NA6O, well known in contesting circles, also sports some super graphic artistic skills and answered my plea for a new certificate. His creation [on which I believe his wife also contributed] see page 7. I particularly enjoy how he picked up on the masthead theme of our web site and The Golden Gate is about as "Northern California" as you can get!

On my HP Office-Jet printer using photo paper, it comes out perfect, however I think I will have them professionally printed on heavier paper since the dyes are likely to be a little better and I don't issue very many.

See page 7 !

I am continually in awe at the varied and professional talents in this Club. Thanks Gary!! A really professional job and a great contribution for NCCC's award.

73,

Fred ["Skip"] K6DGW
Worked All CA Counties Award Admin Dude
Northern California Contest Club



Presented by the
Northern California Contest Club

WORKED ALL California COUNTIES AWARD

THIS CERTIFIES THAT:

Has submitted satisfactory proof of
two-way radio communication with
amateur radio stations in each of the
58 counties in the state of California

WACC Awards Manager

Award Number _____

Date _____

NCCC Meeting July 27th

By Greg N6GD

The Joint meeting of the MLDXCC & the NCCC in Rio Vista on July 27th was well attended! 37 members attended in person, and seven members attended via webcast.

N6RK, W6GJB, W1RH, W6RC, WE6Z, K6TQ, N6TV, WB6BET, N6JS, N6JV, N6TCE, K6OK, N6XI, WC6H, W9KKN, K7GK, W6FB, N6ZFO, K6DAJ, N6RO, NA6O, NR6Q, WK6I, N6WM, K6JAT, W1SRD, N6KT, W6SR, WX5S, K6ODS, NC6R, KI6YYT, K6KSO, KB4TGE, NW6P, K6SZQ

and on the webcast:

AD6E, N6PN, W6TCP, K6MM, K6MR

and a couple of others

WL7YQ, Stephen Miller, was voted in as a new member. Welcome, Stephen!

Bob, N6TV, educated us about Everything You Need to Know About USB and Serial Interfaces, especially having to do with using USB to connect to our most common transceivers. Thanks, Bob, for making a complicated subject interesting!

Gary, W6GJB, briefed us on new rules for CQP: a new county-line rule, and a new multi-county rule.

The new rules are designed to encourage expeditions.

Bob, W1RH, handed out bottles of his 2016, Twisted Oak, private reserve wine to the lucky winners from CQP 2018.



Above Bob W1RH
Left Norm N6JV



Point Generator Profile – AE6JV
(Interviewed by Bob, W1RH)

When I saw Bill at this year's Sierra Chapter BBQ, hosted by Rick (N6XI) and Ann (KD6MOB), it occurred to me that I had yet to feature Bill as one of NCCC's Point Generators. Good think I did, because Bill is leaving us for YCCC territory....the land of ARRL DX and CQWW.

Bill's a well-rounded contester, having participated in no less than 19 CW, Phone and RTTY contests last year. As of this writing, Bill places 4th out of 31 in the Silver category of the NCCC KB Competition.

Now, more from Bill:

Name/Call Sign: AE6JV

Past calls: WV2NOO

Location: Los Gatos, CA

How much property do you have? 1/2 acre

Describe your antenna system: BigIR vertical, home-brew 10M vertical, 160M dipole at 36 feet.

Future: We're moving to NH, station planning is just beginning

What's in your shack? K3 upgraded to K3S, Expert 1.3K amp, solar 12V power, home-brew automatic antenna switch

What are your previous QTH's? Garden City, NY (1960)

If you're working, what is your career? If not, what was your career?
Computer nerd. Operating systems, security, communications.

Married? Kids? Grandkids? Yes, 49 years (KI6SLX). 2 sons in their 40s (KI6NVN), one 5 year old grandson

How many DXCC entities have you worked? 179

What's your favorite contest? WPX

Any tips for testers? Enjoy yourself. If you want a certificate for the wall, work QRP.

What would you like to see changed in NCCC? Nothing I can think of.

Any other hobbies besides ham radio? Knitting, Cave exploration and study, Folk dancing, playing guitar, autoharp and some other instruments, and Yoga.



AE6JV

AKRL



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www.delorme.com





Help Wanted!

NCCC is looking for an editor for the Jug. Our outgoing editor, W6TCP, having done a great job in the position, is ready to pass the baton to a new editor.

We thank Ian for all his work, and now seek someone to move the Jug into the future. What does the work entail?

As Ian puts it, the work is quite simple:

- Receive content from authors
- Build out the template (I use MS Publisher)
- When finished, create a PDF and send to K6MM (and Others)

The articles are created by various club members, and we work pretty hard to be on-time. As Ian notes, he uses MS Publisher on Windows. If you are a Mac user, you might consider using Pages or a page layout program.

Please contact W6FB or any of the BOD members for more info or to sign up for the position. We would really appreciate the help!

N6XI Radio grill



Wendy,KN6DON Bill KH6GJV, Bob W1RH, Doug WE6Z



Joe KE8FT, Bill W9KKN, Rick N6XI, Stefan AF6SA, Jack W6FB, Bill AE6JV, Tom K5RC

N6XI Radio grill



Hank W6SX, Barry K6ST



Photos by Bill AE6JV, Hank W6SX

Visit to the Union of Radio Amateur Operators of Spain.

by Roberto AJ6CY – July 2019

On July while visiting family in Madrid I took some time to visit the URA (Union de Radioaficionados Espanoles). I was very well received and was given a tour of the building, rooftop antennas, operating room and a nicely stocked museum.



I did not come prepared to operate but was explained that if I wanted to I could operate with the prefix EA. It is no longer necessary to include the geographical number equivalent (Central Spain is EA4). I would be: EA/AJ6CY.

There are roughly 7000 members in URE and around 22000 licensed Radio Operators in Spain. Currently there is no longer expiration on the licenses so it is hard to know how many of those operators are actually actively involved in the hobby.

The King of Spain, S.M. Don Juan Carlos I, is a Ham and holds the title of Honorary President of URE (even though I was told he's not active much anymore). If you hear a call sign with the prefix EA0, that's the King. The only one who holds that prefix: EA0JC.

I was gifted a collection of the last 12 issues of their monthly magazine which I can loan to anyone interested in reading them. They are of course in Spanish.

On the ground floor they have a collection of old equipment that they cherish as a Museum. Active hams donate part of their old collection and families of S.K. sometimes also make the equipment available to URE. Most of the items are American made (Drake, Heathkit, etc...) but they also have military equipment and some Telefunken, Siemens, etc.

They showed me also their version of the Bureau handling QSL cards for URE members and non-members. Last year there were 76Kg of QSL cards going to the USA from Spain.

In September they host the IberRadio in Avila, a beautiful town near Madrid surrounded by medieval fortification walls. IberRadio is one of the largest Amateur Radio conventions after the famous one in Friedrichshafen in Germany.

I had a great time visiting URE and I'm looking forward to repeating this experience in other Countries I might visit in the future.





NCCC Annual KB Competition Rules

Revised March 1, 2019



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

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

Time period: The contest year 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 29 contests are counted. See the table on the next page

Scoring:

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

Where N_Contests is the number of contests you participated in, with a maximum value of 20. Points for all contests in which you participate are always counted.

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

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

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

Valid scores: Only scores posted to 3830scores.com are counted. Scores obtained by use of High Power in the 6 NAQP competitions and the NS CW/NS CW Ladder series will not be counted for the KB competition, either as scores or as contest multipliers. Scores are counted regardless of which club received the contest points (NCCC, MLDXCC, REDXA, PL259, etc.). The only requirement is that you **MUST** be an NCCC member to receive credit for the contest, and to be eligible for an award.

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

Awards: Paid NCCC members may receive awards.

How to Improve Your Standing

Post all your scores on 3830. Those are the only ones that count.

Participate! Even the smallest score has value. Every contest on the list is a multiplier.

Try a new mode or a new band (VHF, 10, 160).

Try the sprints. Small score, big multiplier.

Go for a big score in WPX: Exponential score growth and a big multiplier.

Join a multi-op: The score is split among ops.

Let someone else use your station: You get 25%.

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

Contact: Gary NA6O, NCCC Awards Manager, gwj@wb9jps.com

NCCC Annual KB Competition Table

Contest	Month	Mult
ARRL DX Contest SSB	March 2	10
CQ WPX SSB	March 30	10
7QP	May 4	20
NEQP	May 4	150
CQ WPX CW	May 25	5
ARRL June VHF	June 8	500
RAC Canada Day	July 1	15
IARU HF World Championships	July 13	10
NAQP Summer RTTY	July 20	25
NAQP Summer CW	August 3	25
NAQP Summer SSB	August 17	25
CQWW RTTY	September 28	5
NA Sprint Fall CW	September 8	150
CQP	October 5	10
Makrothen RTTY Contest	October 12	1
CQWW SSB	October 26	6
ARRL Sweepstakes CW	November 2	15

ARRL Sweepstakes SSB	November 16	15
CQWW CW	November 23	3
ARRL 160 Meter Contest	December 6	30
ARRL 10 Meter Contest	December 13	100
ARRL RTTY Roundup	January 4	50
NAQP Winter CW	January 11	25
NAQP Winter SSB	January 18	25
NA Sprint Winter CW	February 2	150
CQ WPX RTTY	February 8	10
ARRL DX Contest CW	February 14	4
NAQP Winter RTTY	February 22	25
NCCC Sprint CW	Weekly	50

KB Award Brackets

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

Platinum	Gold	Silver
AD6E	K3EST	AE6JV
AE6Y	K6AW	AJ6CY
AF6SA	K6DGW	K0BEE
AJ6V	K6IJ	K0JP
K2RD	K6JS	K6KR
K5RC	K6MR	K6MI
K6DAJ	K6NV	K6OK
K6EU	K6RIM	K6RB
K6GHA	K6TQ	K6ST
K6LRN	K6UFO	K6TD
K6MM	KH2TJ	K6UM
K6SRZ	KH6LC	K6XN
K6XX	N0KQ	K6XV
K7XC	N2NS	K7GK
K9YC	N5KO	K7MKL
KA6BIM	N6EE	KA6W
N3RC	N6IE	KD6WKY
N3ZZ	N6JV	KE6GLA

Platinum	Gold	Silver
N6RO	N6KT	KE8FT
N6TV	N6PN	KF6NCX
N6WM	N6RK	KI6OY
N6ZFO	NC6R	KM6I
N7MH	NJ6G	KU7Y
NA6O	VE3RUA	KX7M
NW6P	W6DR	N6DE
W0YK	W6EU	N6DW
W1RH	W6FB	N6GD
W1SRD	W6IA	N6JS
W2SC	W6JTI	N6NU
W6FA	W6LD	N6XI
W6OAT	W6NV	N6YEU
W6SX	W6RC	NQ6N
W9KKN	W7IV	NR6Q
WC6H	WB6JJJ	OH1VR
WX5S	WU6W	VY1JA
		W6GJB
		W6NL
		W6RGG
		W6SC
		W6SR
		WA6O
		WE6Z
		WK6I
		WU6X
		WX6V

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 secretary.nccc@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 secretary.nccc@gmail.com

Forthcoming NCCC Meetings

August 13th

The Old Spaghetti Factory in Redwood City
6:00 PM to 9:00 PM

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>

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 Don't worry about the formatting, we can take care of that if necessary !

Tube Of The Month

Norm, N6JV

Visit the Museum: www.n6jv.com

MAGNETRON

Many different devices and circuits were tried in the early days of tube development to circumvent the triode patent. Using magnetism was a promising concept. Before 1920, a GE engineer named Albert Hull developed a split anode diode that used a magnet to produce oscillations. He called it a "magnetron". It showed potential but at very low frequency. Fourteen years later, Hans Hollmann in Germany, used Hull's magnetron concept to make a device that used cavities that would produce oscillations in the UHF and microwave frequencies. As WWII approached, scientists in the UK, US, Germany and Japan were busy trying to improve the device into a practical microwave tube for use in the new RADARS.

In 1940, John Randall and Albert Boot were working in England on the project and made a cylindrical unit with multiple cavities. Legend has it that they took a cylinder from a Colt revolver as their template. The device worked and many improvements were made to improve power output. Their tubes were shared with their colleagues in the US who further improved the device. Six and eight cavity blocks of copper were machined to the very tight tolerances that were required to maintain frequency control.

A block of copper with a hole drilled through it and a slit cut down one side of the hole is the basic unit. The diameter and length of the hole is an inductor and the opening is a capacitor that will resonate at one frequency. Even numbers of holes were arranged in a circle with the slits opening into a central chamber that houses a cathode. When you blow air into a flute, a small amount of air escapes through a hole and makes a sound. In the cavity magnetron, electrons are emitted by the cathode and are affected by a strong magnet. They travel in all directions, but those that move at an angle will pass by the slits and lose a small amount of energy that will make the cavity resonate. The cavities can be "strapped" together to combine their outputs that is picked up by a small loop in one cavity's wall.

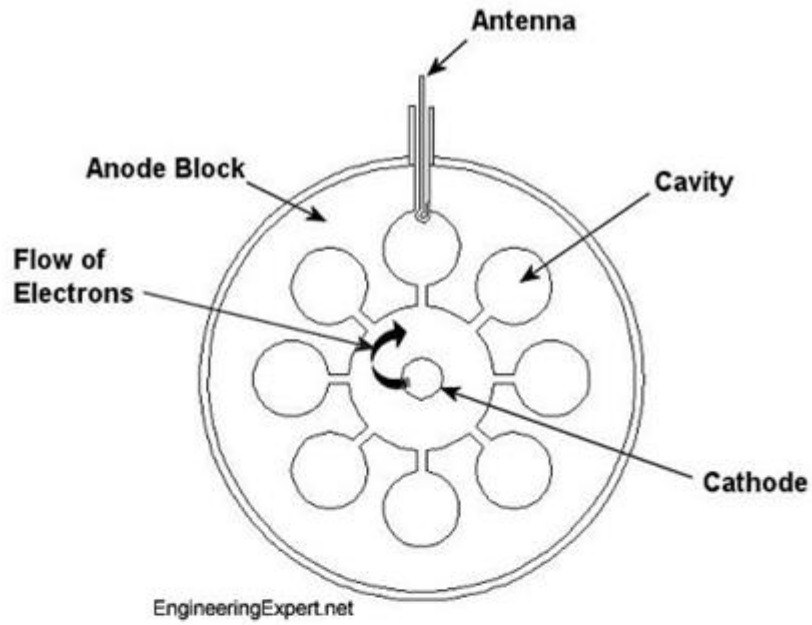
A magnetron is a diode with very high voltages applied to it. If the anode was positive, the coax or waveguide would be at full potential. In use, the anode is grounded and the high voltage is negative and applied to the filament. In a RADAR, the voltage is pulsed at very short durations on the order of a few microseconds.

Wartime production of the WE725A/B magnetron for the AN/APS-15 RADAR was about 300,000 tubes. They operated at 9375 MHz with an output of 55 Kw. It was said that these X-band radars could spot a submarine's periscope at night in the fog.

Tube Of The Month

Norm, N6JV

Visit the Museum: www.n6jv.com





Contest Calendar— August page 1

NRAU 10m Activity Contest	1700Z-1800Z, Aug 1 (CW) and 1800Z-1900Z, Aug 1 (SSB) and 1900Z-2000Z, Aug 1 (FM) and 2000Z-2100Z, Aug 1 (Dig)
SKCC Sprint Europe	1900Z-2100Z, Aug 1
QRP Fox Hunt	0100Z-0230Z, Aug 2
NCCC RTTY Sprint	0145Z-0215Z, Aug 2
NCCC Sprint	0230Z-0300Z, Aug 2
10-10 Int. Summer Contest, SSB	0001Z, Aug 3 to 2359Z, Aug 4
European HF Championship	1200Z-2359Z, Aug 3
WAB 144 MHz Low Power Phone	1400Z-1800Z, Aug 3
North American QSO Party, CW	1800Z, Aug 3 to 0559Z, Aug 4
ARRL 222 MHz and Up Distance Contest	1800Z, Aug 3 to 1800Z, Aug 4
SARL HF Phone Contest	1400Z-1700Z, Aug 4
ARS Spartan Sprint	0100Z-0300Z, Aug 6
Phone Fray	0230Z-0300Z, Aug 7
CWops Mini-CWT Test	1300Z-1400Z, Aug 7 and 1900Z-2000Z, Aug 7 and 0300Z-0400Z, Aug 8
QRP Fox Hunt	0100Z-0230Z, Aug 9
NCCC RTTY Sprint	0145Z-0215Z, Aug 9
NCCC Sprint	0230Z-0300Z, Aug 9
WAE DX Contest, CW	0000Z, Aug 10 to 2359Z, Aug 11
QRP ARCI European Sprint	0800Z-1100Z, Aug 10
SKCC Weekend Sprintathon	1200Z, Aug 10 to 2400Z, Aug 11
Maryland-DC QSO Party	1400Z, Aug 10 to 0400Z, Aug 11
4 States QRP Group Second Sunday Sprint	0000Z-0200Z, Aug 12
MMMonVHF/DUBUS 144 MHz Meteorscatter Sprint Contest	1200Z, Aug 12 to 1159Z, Aug 14
NAQCC CW Sprint	0030Z-0230Z, Aug 14
Phone Fray	0230Z-0300Z, Aug 14
CWops Mini-CWT Test	1300Z-1400Z, Aug 14 and 1900Z-2000Z, Aug 14 and 0300Z-0400Z, Aug 15
QRP Fox Hunt	0100Z-0230Z, Aug 16
NCCC RTTY Sprint	0145Z-0215Z, Aug 16
NCCC Sprint	0230Z-0300Z, Aug 16
SARTG WW RTTY Contest	0000Z-0800Z, Aug 17 and 1600Z-2400Z, Aug 17 and 0800Z-1600Z, Aug 18



Contest Calendar— August page 2

ARRL 10 GHz and Up Contest	0600 local, Aug 17 to 2400 local, Aug 18
Russian District Award Contest	0800Z, Aug 17 to 0800Z, Aug 18
Keyman's Club of Japan Contest	1200Z, Aug 17 to 1200Z, Aug 18
Feld Hell Sprint	1600Z-1759Z, Aug 17
North American QSO Party, SSB	1800Z, Aug 17 to 0559Z, Aug 18
CVA DX Contest, CW	2100Z, Aug 17 to 2100Z, Aug 18
SARL HF Digital Contest	1400Z-1700Z, Aug 18
NJQRP Skeeter Hunt	1700Z-2100Z, Aug 18
ARRL Rookie Roundup, RTTY	1800Z-2359Z, Aug 18
Run for the Bacon QRP Contest	0100Z-0300Z, Aug 19
Phone Fray	0230Z-0300Z, Aug 21
CWops Mini-CWT Test	1300Z-1400Z, Aug 21 and 1900Z-2000Z, Aug 21 and 0300Z-0400Z, Aug 22
QRP Fox Hunt	0100Z-0230Z, Aug 23
NCCC RTTY Sprint	0145Z-0215Z, Aug 23
NCCC Sprint	0230Z-0300Z, Aug 23
Hawaii QSO Party	0400Z, Aug 24 to 0400Z, Aug 26
ALARA Contest	0600Z Aug 24 to 0559Z, Aug 25
W/VE Islands QSO Party	1200Z, Aug 24 to 0300Z, Aug 25
YO DX HF Contest	1200Z, Aug 24 to 1200Z, Aug 25
SCC RTTY Championship	1200Z, Aug 24 to 1159Z, Aug 25
Kansas QSO Party	1400Z, Aug 24 to 0200Z, Aug 25 and 1400Z-2000Z, Aug 25
Ohio QSO Party	1600Z, Aug 24 to 0400Z, Aug 25
YARC QSO Party	1600Z, Aug 24 to 0359Z, Aug 25
CVA DX Contest, SSB	2100Z, Aug 24 to 2100Z, Aug 25
50 MHz Fall Sprint	2300Z, Aug 24 to 0300Z, Aug 25
SARL HF CW Contest	1400Z-1700Z, Aug 25
QCX Challenge	1300Z-1400Z, Aug 26 and 1900Z-2000Z, Aug 26 and 0300Z-0400Z, Aug 27
SKCC Sprint	0000Z-0200Z, Aug 28
Phone Fray	0230Z-0300Z, Aug 28
CWops Mini-CWT Test	1300Z-1400Z, Aug 28 and 1900Z-2000Z, Aug 28 and 0300Z-0400Z, Aug 29
QRP Fox Hunt	0100Z-0230Z, Aug 30
NCCC RTTY Sprint	0145Z-0215Z, Aug 30
NCCC Sprint	0230Z-0300Z, Aug 30
Hiram Percy Maxim Birthday Celebration	0000Z, Aug 31 to 2359Z, Sep 8
World Wide Digi DX Contest	1200Z, Aug 31 to 1200Z, Sep 1
UK/EI DX Contest, SSB	1200Z, Aug 31 to 1200Z, Sep 1
Colorado QSO Party	1300Z, Aug 31 to 0400Z, Sep 1



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 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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