

THE NUGGET

The Newsletter of the Mother Lode DX/Contest Club

August 2020

Volume 25 Number 8



From the President – NC6R

Everyone staying cool and fire safe? Sadly the forecast for the foreseeable future is “hot & smoky”. Please reach out and let others know if you have a need.

Band conditions lately, while not anything to write home about, do seem to be on the upswing. Recently I’ve noticed an increase in 20 meter openings to Europe from here on the West Coast. It’s always good some of those boys in the log as they count toward the 2020 CQ Marathon.

The NAQP contest was held over the weekend. How did you do? Anybody get WAS or work all the multipliers? I was only able to operate for about 4.5 hours, but did log 308 Q’s. The majority of contacts were on 20, some on 40, however 80 meters gave me some good contacts, no thanks to the static crashes from the high country lightning storms. Surprisingly I didn’t hear any stations from the “1” call area, so no WAS or clean sweep this time around.

Just to keep you all in the loop, the board is discussing our involvement in Sweepstakes this year. Stay tuned for more info.

Attention - CQP (Cal QSO Party) is just around the corner! Are you making plans and getting geared up? The date to mark down is the first weekend in October. Several of your club members were recently honored and asked to participate in CQP as a Sequoia station. Keep an ear out and make sure you work them! Here’s an excerpt from the CQP page -

CQP 2020 includes a special award that commemorates the Northern California Contest Club’s 50th anniversary, while also celebrating California’s state tree, the mighty Redwood.

Here’s how to get your colorful commemorative certificate:

1. Participate in CQP and work a minimum of **100 QSOs**.
2. Work **seven** of the special callsigns to spell out **SEQUOIA**. Look for special 1x1 callsigns ending in the letters S, E, Q, U, O, I, and A. There will be three of each

on the air, for a total of 21 call signs (see chart below) -- so there will be many ways to win.

3. Turn in your log.

Go to cqp.org to sign up your station.

Have you been able to participate in the Zoom meetings? It's been great to see a good turnout for these presentations. While I would much rather meet with each of you in person, we've had some people log in that might not have otherwise attended. Credit goes to W1RH and his crew. Thank you for your continued effort.

As always, here are websites to view upcoming contest and DX announcements -

Contest calendar dates are listed at -
<https://www.contestcalendar.com/index.html>

DX operation announcements can be found at -
<https://www.ng3k.com/misc/adxo.html>

73 & good DX,

Steve / NC6R

From the V.P. - W1RH

The California QSO Party – My Thoughts

CQP is a contest I love to participate in every year. For many years, and until 2017, I operated my station as a Multi-Single entry with Martin, AA1ON. We used the call, K6C. Martin, who at the time had residences in the Boston area and Hong Kong, would fly out here every year from one location or the other and we really cranked out the Q's. I have several plaques on the wall for California Top Multi-Single.

In 2017, I did a relatively short operation from Glenn County. I did this one by myself and, as many of you are aware, it is a lot of work to do a single operator expedition, especially with a beam and an amplifier. I had planned this as a long one-day operation, from a low security prison site, with the intent to make 500 Q's. I didn't even come close. The final tally was 122 Q's. I had to shut down due to a blown trap in the beam I was using and that was the end of



Glenn County, 2017. That was, indeed, a disappointment because it was such a nice site. It was interesting, with guys in orange jump suits walking around the area. I remember one of the El Dorado club members telling me not to wear orange! The prison folks were great.

While I did have to sign in at their office, with prisoners in orange jump suits all around me, the guards let me set up on their helipad, an area where the prisoners were not allowed.



The station consisted of a FT-1000MP, a Heath SB-200 amp, and a Moseley TA-33JR. I had the amp running at about 700 watts, which was near the limit of the power handling capability of the TA-33JR, and that is why I lost the trap. I had a couple of higher power tri-band beams, but the TA-33JR was light enough that I could set it up by myself without too much effort.

In 2018, I joined Steve – W1SRD, Dorris – KOBEE, Martin – AA1ON, and Dean – N6DE, at a fabulous Air B&B location in Tehama County. This was an off-the grid location, on a hill, with absolutely no noise at all. There were no houses within sight of this location, which had a 360 degree view. Steve was our team leader and Dean found the site. We absolutely kicked butt, and finished with a final score of 255,316. It was a great score, and we set a new record for Tehama County, but we did not win the Multi-Single plaque that year. The K6QK group,

operating from Imperial County, beat us with a final score of 269,724.

Our team discussed why we didn't win and it came down to

1 – Generator problems

2 – Amplifier problems (solid state amp occasionally tripping off)

3 – Some operators not completely familiar with the Flex6700

4 – No over-night operation

While none of the equipment issues shut us down for long periods, they were enough to slow our rates. We really felt we could have won the Multi-Single category had we not had these issues.

Steve was not going to let K6QK beat us again, however. The team, minus Dean who was unable to join us, went to the same site again in 2019. This time, we brought backup equipment, including a generator, and we operated the overnight shift. We also bagged the solid-state amp and I brought my Alpha 91B, along with a backup amp. Instead of the Flex, we went with a more traditional radio; an Elecraft K3. We used a two-element SteppIR both years, along with an inverted Vee for 80, but decided to go to a rotatable dipole in 2019 rather than the wire antenna we used in 2018. Good decision! That rotatable dipole played well!

This time, we really did kick serious butt, and we won the Multi-Single category even though we were down one operator from the previous year. Our final score was 304,210. With this



score, we broke our own record, set the previous year; we won the Multi-Single category, and we broke the all-time Multi-Single record! The K6QK group came in with 276,108.



So, what to do this year? Martin was up for another trip to California. Steve and Doris were up for it and we were pretty sure Dean might join us this year. The question was where? Do we go back to Tehama and try to break our own record again or somewhere else? That question was never answered because along came

Covid19, which prevents us from operating in a healthy environment. You just cannot share microphones and live in close quarters with 5 people and not be compliant with social distancing. I suppose if all of us quarantined ourselves for 14 days prior we could do it, but that's just impossible.

The bottom line is that Steve will be operating from his home station, as an official SEQUOA station and I will most likely be doing a county line expedition from Glenn/Tehama County, along with K6TLR, (my daughter's husband). We hope to do a sizable score, with good antennas and an amp, but we're still working on the logistics and the location.

My own scores and the Tehama scores have, of course, gone to MLDXCC every year to support our Club Competition effort. I've got to say, however, that MLDXCC has not been in the front of my mind every year for CQP. I have been disappointed that we have no competition. In 2019, we entered in the Large Club category and were there by ourselves. The club we should be competing with is the Southern California Contest Club, and they entered in the Medium Club category. The 2019 final scores for the two clubs were:

3,649,958 – MLDXCC – Large Club Category

3,412,477 – SCCC – Medium Club Category

In 2018, MLDXCC entered in the Large Club category and SCCC entered in the Medium Club category.

The final 2018 scores were:

3,840,974 – MLDXCC – Large Club Category

4,245,144 – SCCC – Medium Club Category

In 2017, both clubs entered in the Medium Club category. The final scores were:

3,775,482 – MLDXCC – Medium Club Category

3,854,745 – SCCC – Medium Club Category

So, what does all of this tell you? CQP rules allow for the club to select the category they enter in and therein lies the problem. The match between MLDXCC and SCCC could be a really fun competition, but it's no fun for me if we're in a category with no competition. This could really be a great annual fight between two great clubs.

What to do this year? What do you think? Let me and the club know your ideas. My vote would be to have an agreement with SCCC to both enter in the same category so we could motivate our respective troops and fight it out. Long term, however, my opinion is that the CQP committee needs to review the Club Completion once again.

Bob W1RH

Next Meeting

Date: September 19/26

Time: TBD

Location: Zoom

Presentation: 19/26 - Alan, K6SRZ - DX Doctor (date subject to change although we may just do Alan on the 19th and CQP on the 26th)

MLDXCC Treasurer - K6SZQ

MLDXCC Treasurer's Report - June & July 2020

4/30/2020	Opening Balance	\$2,211.36
	Income	\$60.00
	2020 Dues - Paypal	\$60.00
	Expenses	\$0.00
5/31/2020	Ending Balance	\$2,271.36

From the Secretary - KI6YYT

MLDXCC July 25, 2020 Meeting Notes

by Secretary, Emilia Seiferling, KI6YYT

The July meeting was a joint MLDXCC and NCCC Zoom meeting. Several other clubs were invited to attend: WVARA, Stanford ARC, REDXA, PAARA, PARS. There were at least 68 members and guests attending online.

There was no Treasurer's report.

Several upcoming events were mentioned; RSGB IOTA, NAQP CW, WAE DX SSB, NAQP SSB, Hawaii QSO Party, WW Digital DX, NA Sprint CW, CQ WW RTTY.

Recent silent keys: Greg Desbrisay, N6CD and Grady Ferguson, W5FU

NCCC won WPX RTTY 2020 contest, #1 North America.

The speaker was Dr. Sandra Faber, professor at UC Santa Cruz and staff member at Lick Observatory. The title of her presentation was "Cosmology, Meaning and Human Destiny".

CLUB Dues

2020 dues are due!

The Dues period runs from Jan 1 to Dec 31. Dues are \$20.00 individual, \$30.00 family

PayPal – Send to: MotherLodeClub@gmail.com. Use the Friends and Family option.

Cash or Check - Given to a club officer at a meeting. Or mail to the Treasurer - Sue Allred K6SZQ, 17610 Red Mule Rd. Fiddletown, CA 95629

Club Log Standings

Overall

1	N6JV	Norm Wilson	189
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2	K6YK	John Lee	170
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3	WU6W	Rick Palio	160
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CW

1	K6YK	John Lee	161
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2	N6JV	Norm Wilson	141
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3	WC6H	Rich Cutler	112
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Phone

1	NC6R	Steve Allred	118
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2	K6YK	John Lee	96
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3	WC6H	Rich Cutler	92
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Data

1	K7QDX	Michael Steiner	145
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2	N6JV	Norm Wilson	143
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3	K6OK	Jim Varney	129
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Club Log Standings are based on worked entities during the calendar year.

Member Reports

On Aug 13th in 1912 President Taft signed the "Radio Act of 1912"

It was the first legislation to require licenses for radio stations.

https://en.wikipedia.org/wiki/Radio_Act_of_1912

73,
Jim

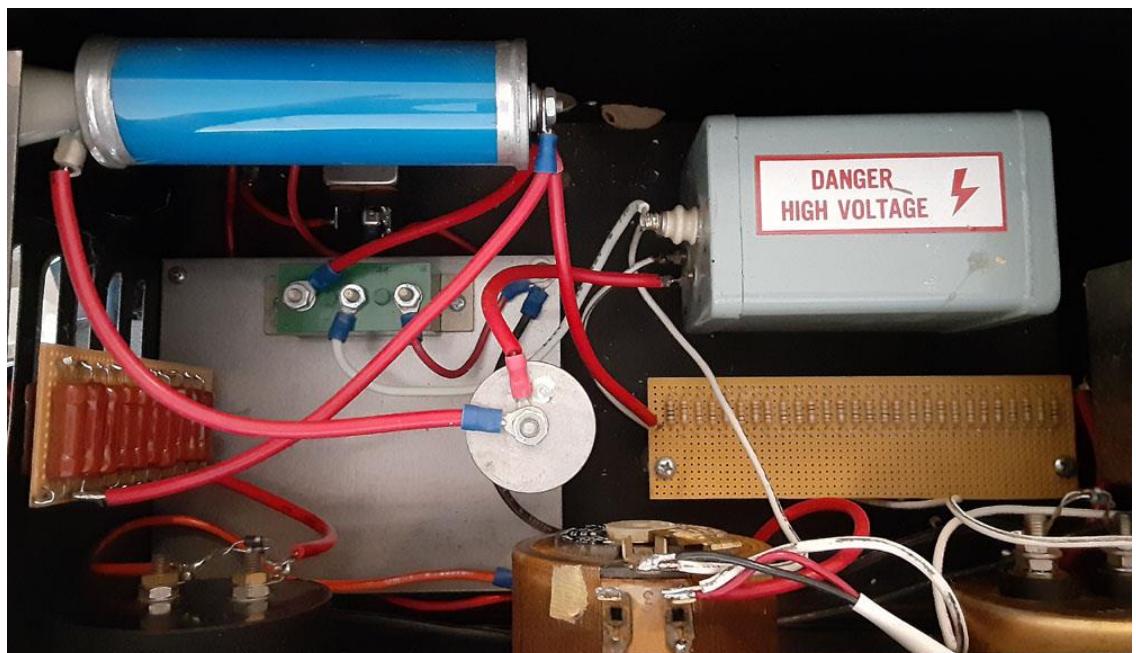
Norm's HI-POT Construction

I once bought a commercial hi-pot tester in a local surplus store. It ran up to 5500 volts DC at 5 ma. Voltage and current were adjustable and the process is done automatically. It's one of my most used pieces of test gear. I wanted to make a hi-pot unit that would handle over 10,000 volts to test larger tubes and be able to process tubes that had been stored for long periods.

The unit was made from junk box parts I had on hand. The only items I needed to buy were the small resistors required to make a very high value resistance that acts as a current limiter. The transformer was from a neon light fixture or an

oscilloscope and is 5000 volts at 5 ma. I use a voltage doubler circuit to get about 10,000 volts DC. A small variac is used to adjust the voltage. The voltage doubler circuit requires two capacitors. I used a pair of .006 mfd at 12,000-volt glass units. Using much higher values of capacity would make the spark hotter and might damage the tube. The output of the supply is connected to the resistor board that has 56 resistors of 5 megohms each. The maximum voltage that can be across each resistor requires

that adjacent resistors be mounted on the opposite side of the perf board. These resistors limit the current to about 20 microamps when the output is shorted. Twenty microamps won't hurt any device under test. All the DC wiring was done with high voltage wire. In the top center, is a mud dauber nest that was an unapproved modification to my design. The volt meter multiplier resistor is mounted on the left-right of the box.



This type of testing must be done with DC voltage as AC would create vibrations that could cause internal damage to tubes. I do testing of transmitting tubes as well as vacuum capacitors and vacuum relays. The unit can also check for insulation breakdown in coax or testing plastics for their properties. If there is no vacuum in a tube, it will usually fail at 2000 volts or less. A vacuum capacitor or relay will usually fail at less than that. Tubes that fail at less than 5000 volts

may have gas particles that caused the short. Repeating the testing process may clear these

particles and make the tube useable again.



Norm N6JV

Doug's 1625 transmitter



Ever since I built a 6CL6 one tube transmitter for ARRL straight key night in 2016, I've wanted to build a more powerful transmitter. Back then I struggled to gather all of the parts necessary to build it. Since then I have acquired a very well stocked Junk Box.



I now have lots of tubes, capacitors, coils, transformers, and other miscellaneous goodies. I finally reached the point where I was confident that I had all of the parts to build a transmitter from scratch.

A friend gave me his collection of about twenty 1625 tubes, so I decided a 1625 tube transmitter would be a good choice. After a little research I discovered that the 1625 and the 807 are identical tubes with the exception of the heater voltage.

I proceeded to research 1625/807 transmitter designs. After going through many designs on the internet and old ARRL Handbooks, I found a common design. The most common design used a 6AG7 for the oscillator and an 807 for the final. Another friend of mine had given me half a dozen NOS Sylvania 6CL6 tubes, and when I cross referenced them, they turned out to be almost identical to the 6AG7 tube.

After more research I finally settled on a design that looked simple enough to build, was well documented, and had been built by multiple people before. I chose the 807 CW transmitter by K5DH. https://www.qsl.net/k5dh/6ag7_807.html

I had also read several articles about putting 807s in parallel for more output. So I decided that I would add a second socket and 1625 for future expansion.

I started out with an old transmitter chassis that my friend gave me. It already had two tube sockets and a bunch of holes.

I then set about building the power supply. I located a suitable Triad power transformer rated at 300 mA and a beefy potted military choke. I built the "Economy Power Supply" from the 1968 ARRL Handbook and used "PSU Designer II" to tweak it based on the part values that I had on hand.

I added a set of VR tubes to provide 258 volts of regulated screen for the oscillator. It worked great, only varying by one or two volts between key up and key down.

I ended up with about 786 volts on the plate of the 1625.

For more customization, I added a faceplate, grid current meter, plate current meter, and an RF current Ammeter from a Navy TCS set.

About three quarters of the components of the build are from the 50s and 60s.

After going step by step, building and testing one stage at a time I was finally able to get some power out of it.

After making a few changes to the Pi-Network, I was able to get 56 watts of power out of the transmitter into a 50 ohm dummy load.

Later on the air tests proved that it had an excellent chirp free signal on 40 and 80 meters.

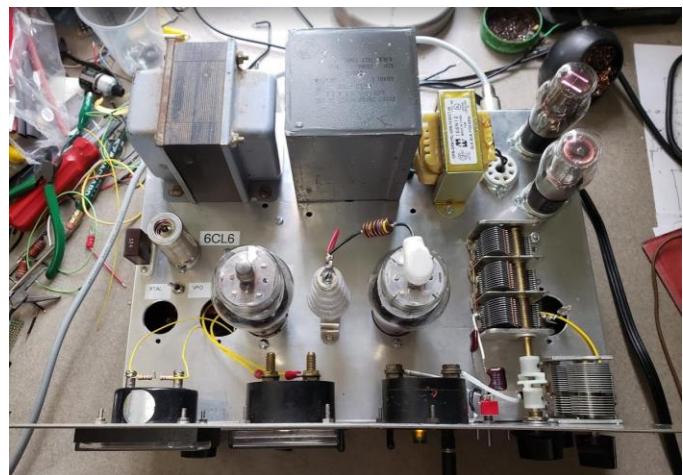
I built a DDS VFO that I will be using with the transmitter in the future, but I did all my testing with some good vintage FT-243 crystals.

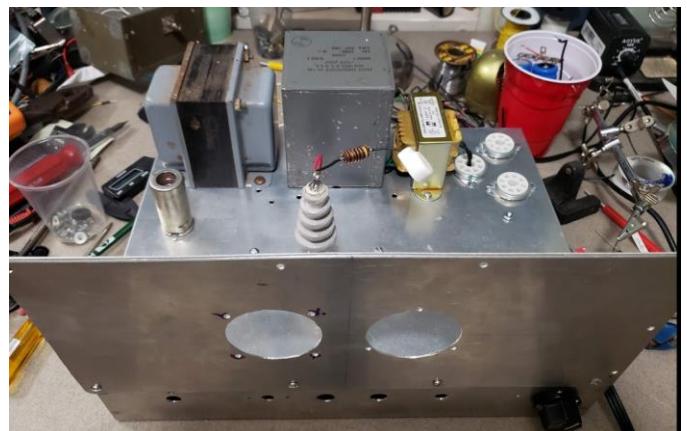
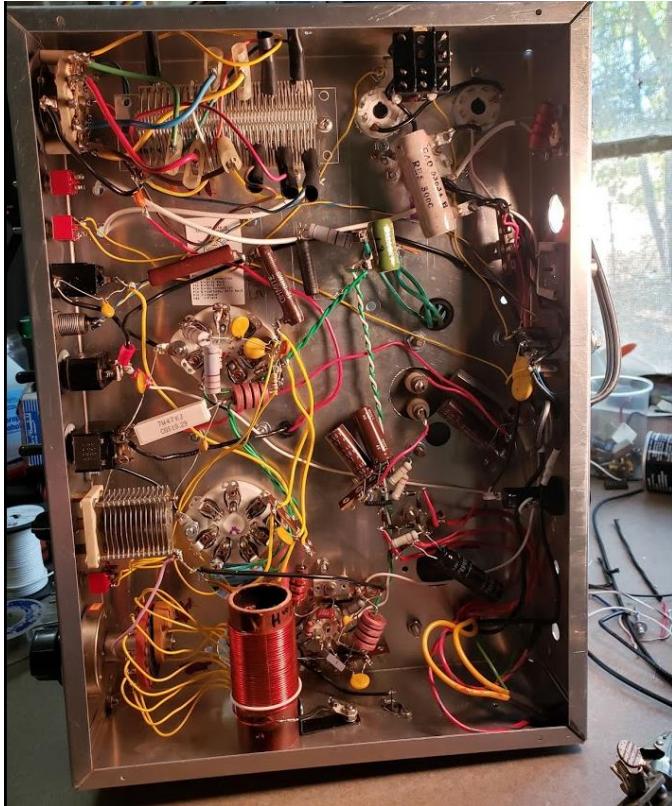
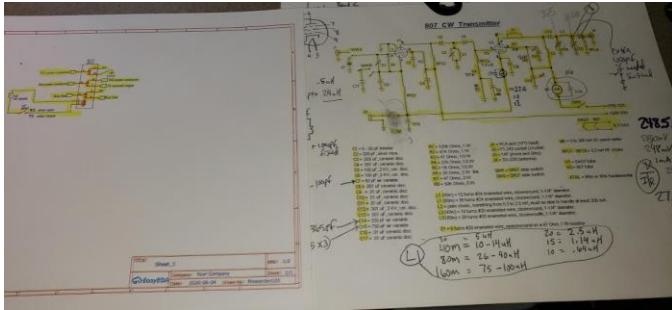
I plan to pair this transmitter with my newly acquired Hallicrafters SX-100.

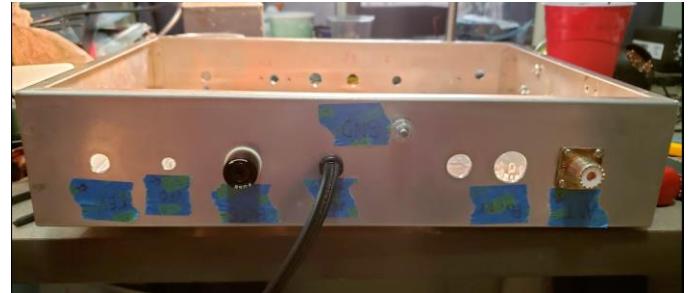
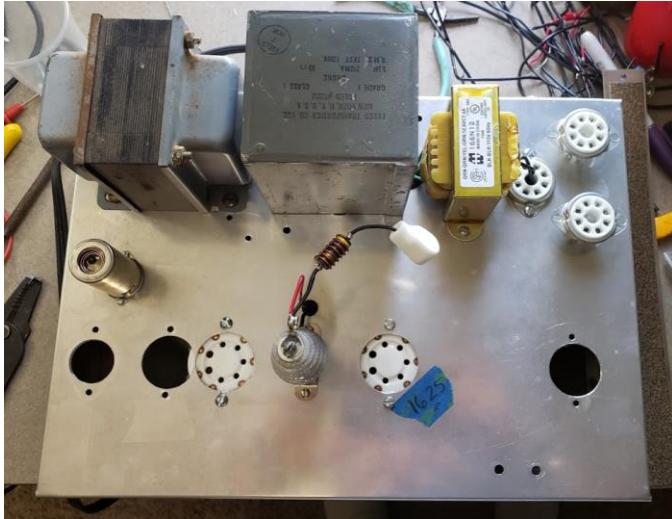
In the future I plan to hook up the second 1625 tube in parallel for an estimated 100 or 125 watts input power.

The cost of the whole project turned out to be \$0.94. I had to buy some matching thread-pitch hardware to bolt the choke down to the chassis. All of the rest of the parts I had in stock in my junk box.

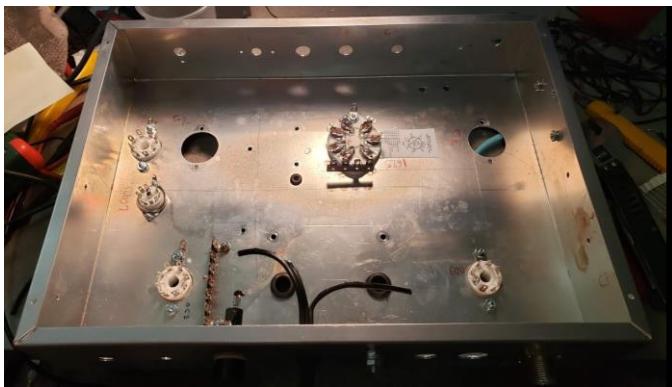
It has been an awesome experience building this “Novice” style transmitter. I continue to learn more and more about electronics, transmitters, and ham radio.







Doug WE6Z



ARRL Contesting Certificates

If you have participated in ARRL Contests by submitting your log, enter your call sign and see your available certificates. You can view and download them. The certificates show where you placed in the contest.

<http://contests.arrl.org/certificates.php>

Awards Checkers ARRL

Ken Anderson, K6TA

(DXCC, WAS, VUCC, 160M)

Rick Samoian, W6SR

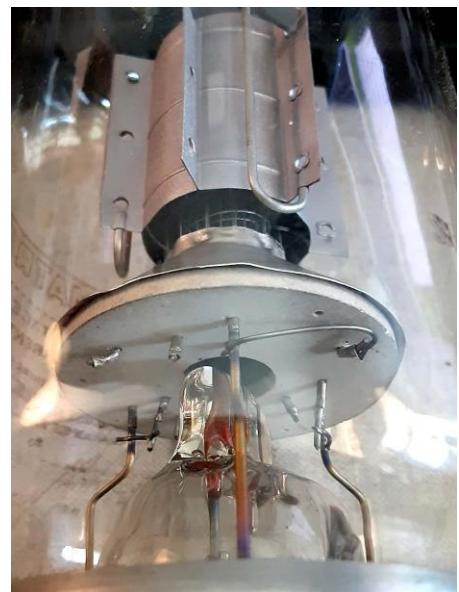
Tube of the Month

HK-357

I don't look at eBay very often, but when a friend, who is a retired EIMAC guy, said there were some Heintz and Kaufman HK-357s for sale there, I had to take a look. I thought I knew all about H&K products. WRONG. I thought that a HK-357 shouldn't exist. An H&K tube ending in "4" is a triode, ending in "3" is a rectifier and in a "7" is a pentode. A 300 series tube is a 50-watt size and no one seemed to have ever seen one, but there they were. They were priced too high, but when you find a unicorn, you better rope it now and build the stable later. What interested me was that it added some information that filled a gap in the history of transmitting tube development in the South Bay area. There had to be an interesting story. I found that another tube collector had found a pair of these tubes some years before. His tubes may be older as they didn't have the flat ceramic insulator the held the grids in alignment. We also found descriptions of transmitters built with the HK-357 in a copy of RADIO from June, 1934.

The HK-357 used the same plate and filament as the HK-354. The plate voltage was rated at 2000 volts at 180 ma. When you have three grids, how do you use a base with four pins? The suppressor grid needs to be at the same potential as the cathode or filament. H&K ran a wire from the suppressor to a rivet on the inside of the base shell. A strap on the socket ran between the shell and one side of the filament. The circuit was completed when the filament transformer center tap was grounded. The tube had

adequate power to drive a high-powered amplifier when used as a crystal oscillator. The tube could also be used with grid modulation for low cost AM. This two-stage transmitter concept had been a goal for other tube makers including Raytheon with their RK-20 and RCA with their 803. The transmitter featured in RADIO was built by Bill Eitel, W6UF, with push pull HK-354s being driven by a single HK-357. This transmitter was built while he was still at H&K. Also shown was a single HK-357 crystal oscillator/transmitter. I have been unable to find any users for this tube although all the tubes are marked: Manufactured for Westinghouse Electric and MFG Co. Chicopee Falls, Mass. I assume that Westinghouse built an AM transmitter that used the HK-357 before 1939, but I can't yet identify it.



Visit the museum at N6JV.com

Norm N6JV

MLDXCC Focus Contests

The following lists all contests in which MLDXCC would appreciate your efforts.

ARRL SS CW/PH

ARRL DX Phone*

ARRL DX CW*

ARRL 10M*

ARRL 160M*

California QSO Party

*Proposed and approved at the November 12, 2016 MLDXCC general meeting.

Northern California Contest Club (NCCC) announced their focus contests at their August 2018 meeting. This list can be found in the Aug 2018 NCCC newsletter.

ARRL RTTY RU

CQ WPX RTTY

CQ WPX SSB

CQ WPX CW

MLDXCC – Outgoing ARRL Bureau

The Mother Lode DX/Contest Club will provide Outgoing QSL Bureau services to current paid club members. The policy is as follows:

The club will cover packaging, shipping, and the \$7.00 ARRL fee. Members will be responsible for the \$1.15 per ounce fee, payable to the club. A scale will be provided at the designated meetings to weigh the cards.

Twice per year, at the March and October meetings, members may bring their outgoing cards (or have delivered by another club

member) to the meeting for collection and collating.

All regulations set forth by the ARRL must be met, including:

Members must be ARRL members to use outgoing bureau.

Must provide proof of membership (QST mailing label, ARRL membership card)

Cards need to be sorted according to ARRL requirements when brought to club.

The after-meeting program at those meetings would be dedicated to weighing, merging the cards, and making sure the paperwork is in order.

For more information regarding the ARRL Outgoing Bureau, please visit
<http://www.arrl.org/outgoing-qsl-service>

QSL bureau rates have changed.

Outgoing QSL Service
QLS Service Fee Structure (effective May 15, 2019)

ARRL members — including foreign members, QSL Managers, or managers for DXpeditions — should enclose payment as follows:

Effective May 15, 2019, the rate structure is:
\$2 for 10 or fewer cards in one envelope.
\$3 for 11-20 cards in one envelope, or 75 cents per ounce, for packages with 21 or more cards.

[For example, a package containing 1.5 pounds of cards -- 24 ounces, or about 225 cards -- will cost \$18.]

Under the new fee structure, there are no transaction service fees.

You should use an accurate scale to weigh your cards. Most post offices have scales that you may use. Please pay by check (or money order) and write your call sign on the check. Send cash at your own risk. DO NOT send postage stamps or IRCs. Please make checks payable to: "The ARRL Outgoing QSL Service." Packages received with insufficient payment will not be processed until the balance is paid in full. The outgoing QSL bureau does not keep money on account.

The NOAA Solar Update

Click the link below to display the latest NOAA solar predictions.

<http://www.swpc.noaa.gov/products/weekly-highlights-and-27-day-forecast>

UPCOMING Events

For the latest contest info, click on the following link:

<http://www.contestcalendar.com/contestcal.html>

UPCOMING DX and DXpeditions

Click the link below to display upcoming DXpeditions.

<http://www.ng3k.com/Misc/adxo.html>

MLDXCC Reflector

The MLDXCC reflector is maintained at groups.io. Visit <https://groups.io/g/mldxcc>

We also maintain a spotting reflector at <https://groups.io/g/MLDXCC-Spots>

We are also on Facebook!
<https://www.facebook.com>

Classifieds

Members are requested to review their classified ads each month for accuracy and to resubmit their ads or confirm their desire to keep it running in the next issue.

New! "[The Serial Box](#)" (SBOX) by N6TV – Combination Serial Port Splitter, ACOM / Elecraft / SPE Amplifier Interface, FSK/CW/PTT keying interface, and Breakout Box

<https://www.eham.net/reviews/detail/13971>

Serial Box



Serial Box

"[The Y-BOX](#)" by N6TV – 4-way Elecraft K3/K3S ACC port splitter, Elecraft Amplifier Interface, and Breakout Box

<https://www.eham.net/reviews/detail/13296>



Y-Box
N6TV

Need QSL cards, business cards, club banners?
Contact Vina K6VNA vina@sign-tek.com

I have an HP 608D signal generator for sale. It works. \$40.00 Doug WE6Z we6z@hotmail.com

Not giving up...just making space.

1994 ARRL Handbook Hard Bound offer
1995 ARRL Handbook Soft Bound offer

FT-890 'AT' (AT may or may not work)
\$250/offer
FT-1000 MP with filters, accessories & box
\$995/offer (ex WZ6Z radio)
HyGain TH-7 Tri-band beam complete/looks good \$200/offer
80 Meter four square antenna...4 67' HD aluminum elements breaks down to 8 31' pieces (3" diameter/1/8" wall), with Comtek control box & 1000' 3/16" guy rope...\$600/offer

(can help deliver short distance)
50' coax with center & end insulators for dipole...new, never outdoors- \$ 60/offer
Satellite & old DirecTV dish...free
1992 International Callbook (remember those?) offer
Old Novice & Tech License Guides, Tune in the World, Operating Manual
IMAC (old-unkown condx) with kb & mouse...???

Kenwood TR-8300 440 mhz FM transceiver with xtals for 446.000, 443.250...offer.
Book: Managing Interstation Interference by W2VJN...offer
May take labor instead of \$ on some items.

Email: k6lrn@arrl.net

Thanks & 73,

Dick K6LRN

I have for sale a Rohn HDBX 48 foot tower with thrust bearing. \$250.00 or B/O

JIM... N6JS

2020 Meeting Dates

January - 25
Feb - none
March - 14
Apr – 18 Zoom
May -9 Zoom
June – 6 Zoom
July – 25 Zoom
August – 22 Zoom
September – 19/26 Zoom

October - 10
November - 13
Dec - 20

Dates are arranged to accommodate major contest dates.

Meeting dates are subject to change. MLDXCC traditionally holds a mid-year combined meeting with NCCC.

Area Clubs

Northern California Contest Club -
<https://www.nccc.cc>

Lodi Amateur Radio Club -
<http://www.lodiarc.org>

Stockton Delta Amateur Radio Club -
<http://www.w6sf.org>

Pizza Lovers 259 -
<https://www.pl259.org>

El Dorado Amateur Radio Club -
<http://edcarrc.net>

ARRL Pacific Division

Pacific Division Director
Jim Tiemstra K6JAT
k6jat@aol.com

Pacific Division Vice Director
Kristen McIntyre K6WX
kristen@alum.mit.edu

East Bay Section Manager
Jim Siemons, W6LK
jim@siemons.com

Sierra Foothills Amateur Radio Club -
<http://www.w6ek.org>

Redwood Empire DX Association -
<http://www.redxa.com>

Calaveras Amateur Radio Society
<http://calaverasars.org/>

Please contact the editor to have your club listed here.

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San Joaquin Valley Section Manager
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The MLDXCC Newsletter

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Director, Steve Dyer, W1SRD
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