THE NUGGET



Mother Lode DX/Contest Club

The Newsletter of the Mother Lode DX/Contest Club

September 2022 Volume 27 Number 9

From the President - NR6Q

Greetings all,

CQP is right around the corner! It is an awesome contest where we are the DX. You'll have a lot of fun operating. Get on the air, even if it is just from your home location. California

Next Meeting

Date: October – 22nd

Time: TBD

Location: TBD

Presentation: TBD

always puts on a great show. This year we'll have all 58 counties on the air. However we could use some help with the rare counties like Stanislaus and Solano Counties. I hope you are able to get on the air.

73, Greg Glenn, NR6Q

MLDXCC Treasurer - K6SZQ

MLDXCC Treasurer's Report - August 2022

7/31/2022 Opening Balance \$2,647.32

Income \$40.00

2022 Dues - Paypal \$40.00

2022 Dues -

Checking \$0.00

Expenses \$0.00

8/31/2022 Ending Balance \$2,687.32

From the Secretary - W6BRY

Mother Lode DX/Contest Club General Meeting Minutes

No notes were taken during the August meeting.

No meeting occurred in September.

Brian Mathews, W6BRY

CLUB Dues

2022 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	229		
2	W1SRD	Steve Dyer	222		
3	NK7I	Rick Bates	210		
CW					
1	K6YK	John Lee	147		
2	N6JV	Norm Wilson	128		
3	W1SRD	Steve Dyer	114		
Phone					
1	NC6R	Steve Allred	116		
2	W1SRD	Steve Dyer	108		
3	K6YK	John Lee	104		

Data

1	N6JV	Norm Wilson	204
2	NK7I	Rick Bates	199
3	W1SRD	Steve Dyer	198

Club Log Standings are based on worked entities during the calendar year.

Member Reports

I was able to work FH/OK1M Mayotte for ATNO on 15m FT8. Thanks to those in MLDXCC who spotted him. I also got a clean sweep of the Route 66 special event stations which is always fun event. The ZL5/K5WE keeps eluding me. He is never on the right band at the right time.

73,

Jay - KE6GLA

Congratulations to Norm N6JV on his FFMA award!



Doug's commo shelter project

This month I picked up an S-318a/g communications shelter. I plan to set it up as a portable ham radio shack that I can take on expeditions like CQP. That way I can still tow my tower trailer and not have to set up a tent for operating. So far I have mounted two 19" racks for equipment. I plan to put a 390 watt solar panel on the roof and add batteries and a generator. I will be mounting a small AC unit on the door. With a little paint and re-wiring, it should be a comfortable place to operate.





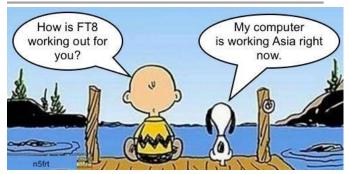








Doug WE6Z



Dave, w6de

Lincoln swap meet

The Lincoln swap meet had a great turnout! It was fun to see friends old and new. I hope you were able to make it out there. I brought home a YC-601 and a go-box on wheels.









Doug WE6Z

State & Province QSO Party Calendar

https://qsoparty.eqth.net/index.html

73,

Steve / NC6R

Junk Box 813 Amplifier

When my son, Clint, KK7DAH, got his 100-watt transceiver and vertical working, he asked what could be done to get a bit more signal out. His backyard has no room for anything except a vertical, so I looked around my junk supply and thought I had enough parts to build a small, 250-watt amplifier with power supply. He mostly uses 40 and 30 meters using FT8, so he couldn't get into much trouble with a small amp.

I had a small, rack mounted, amplifier that had been built by an old ham friend, W6NHA, back in the 1950s. It used a neutralized 811A with plug in coils and link coupling in the output. I had inherited an old, short relay rack from Lyle, K6QG. It needed some body work and after some rust removal, a paint job. The only large item that I needed was a power supply that would sit in the bottom of the rack.

After the rack was cleaned up and painted, I started building the power supply on the floor of the rack with a detachable front panel. The transformer is mounted on a small chassis and a second identical chassis contains four block rectifiers and the filter caps. Several years ago, Gary, KI6T, had an Alpha amplifier that had a circuit board that contained the filter caps as well as the screen grid voltage regulator. The screen regulator burned up so he ordered a new board. I volunteered to re-cycle the old board. I now had an application for it. The panel has a good variac transformer, power switch, voltmeter and a pair of mil-spec 10-amp circuit breakers. Those of us that have used tube amplifiers know about letting the filter caps discharge before touching anything in the amplifier or power supply. The high-capacity filters we commonly use take some time to bleed off. As I am too old to replace children, I added a small vacuum relay that was in

series with a bleeder resistor so that when the power was cut, the relay would ground the resistor. The voltage goes to zero in about a second.



To simplify the construction, the amplifier operates on both 40 and 30 meters with a single coil. The coil had to be adjusted to resonate on both. The original amp used link coupling and the new design is a PI network with a loading capacitor. The shaft for the link coupling was adapted with a timing belt to operate the loading capacitor that needed to be off set. The socket and filament transformed were removed and replaced by a socket for an 813 and an old filament transformer I had wound when I used 813 tubes. The amplifier was going to be grounded grid, so a filament choke was wired to the new socket. A pair of PI network circuits need to be made to match the input impedance of the tube. For a single 813, this is 267 ohms. In testing it was found that the tube got very hot in this enclosed space, so a muffin fan was mounted on a honeycomb air filter directly over the tube. control the amplifier, a PTT relay cuts the plate current off and operates the external antenna switch.



Metering was modified and shows grid and plate current. An output of 250 watts is achieved with fairly low input power and about 2200 volts on the plate. The only item that wasn't from the junk box was a can of wrinkle spray paint.



Norm, N6JV

Doug's boat anchor collection

This month I picked up a few more radios for my boat anchor collection. I got a Collins R390A, a Hallicrafters SX-71 and S19, Hammarlund HQ-129X and Super Pro 600, a Globe Scout, and a Johnson Viking Challenger.







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

Rick Samoian, W6SR

Tube of the Month

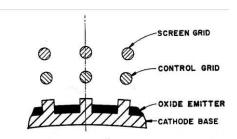
4CX5000B

The old 4CX1000A/8168 tube of 1957 was a big success in spite of the potential damage to the grid when it was overdriven. In order to achieve very high gain, the grid needed to be made with a dense pattern of very small, gold plated, wires. The cathode was a cylinder that had an evenly applied coating of barium-strontium oxide. When the cathode was heated, electrons would be emitted toward the anode. Some of the electrons would actually strike the grid wires and draw current. If too much current was drawn, the grid wires would overheat and loose some of their coating which

resulted in secondary emission and increased distortion.

The obvious cure would be to make the electrons miss the grid wires. The gun type emitters have been used in CRTs, but aiming streams of electrons so they miss the grids but still hit the anode in an even pattern, was the problem. These structures are very small. EIMAC began experimenting on what they called a "focus cathode" using the 4CX1000A platform. This assembly was made by machining a series of vertical channels into the surface of the cathode cylinder in a number equal to the number of vertical grid wires. The oxide is applied to the valleys and the steep sides of the lands act as deflectors that shadow the grids from most of the electrons.

The illustration was adapted from an unpublished EIMAC report.



The <u>4CX15000B/8660</u> tube was made with this grid structure. The grid was rated at 1 watt which allowed higher power to be produced while maintaining very low distortion in AB2 mode. The new tube could be used to replace the 4CX1000A with a small increase in screen voltage. Adapting this technology to triodes lead to the well-known 8877.



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

The NOAA Solar Update

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

http://www.swpc.noaa.gov/products/weeklyhighlights-and-27-day-forecast

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

UPCOMING Events

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

http://www.contestcalendar.com/contestcal.h tml

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.

Looking for a Motorola Micom 2 or 3 with ALE.

Looking for an EF Johnson 5300 VHF radio.

Looking for a VHF air band transceiver.

Doug WE6Z we6z@hotmail.com

Swapmeets

The Northern California Swap

Thursday evenings at 8 PM local on the N6ICW repeater system 147.195 +123

Join Armand WB2ZEI and the group to buy, sell, or trade amateur radio related gear. Check-ins and visitors welcome.

PACIFICONSM 2022

San Ramon Marriott 2600 Bishop Drive San Ramon, CA 94583

IN PERSON!

Friday through Sunday Oct. 14-16, 2022

https://www.pacificon.org/

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

2022 Meeting Dates

January – none

Feb – none

March - 19th

Apr – 16th

May - 14th

June – 18th

July – 23rd

August – 27th

September - 17th

October - 22nd

November – 19th Dec – TBD

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://edcarc.net

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

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

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

Tuolumne County Amateur Radio Electronics Society (TCARES) https://tcares.net/

Please contact the editor to have your club listed here.

ARRL Pacific Division

Pacific Division Director
Kristen A. McIntyre K6WX
k6wx@arrl.org

Pacific Division Vice Director
Anthony Marcin W7XM
w7xm@arrl.org

East Bay Section Manager Mike Patterson N6JGA n6jga@arrl.org

Nevada Section Manager
John Bigley N7UR
n7ur@arrl.org

Pacific Section Manager Joe Speroni, AH0A ah0a@arrl.org

San Francisco Section Manager Bill Hillendahl, KH6GJV kh6gjv@arrl.org

Santa Clara Valley Section Manager James Armstrong NV6W nv6w@arrl.org

Sacramento Valley Section Manager Dr. Carol Milazzo KP4MD kp4md@arrl.org

San Joaquin Valley Section Manager John Litz NZ6Q john@litz.com

Officers of the MLDXCC

President, Greg Glenn, NR6Q nr6q@arrl.net

Vice President, Rick Eversole, N6RNO rick@eversoles.com

Director, Rich Cutler, WC6H wc6h@yahoo.com

Director, Steve Dyer, W1SRD w1srd@arrl.net

Director, Steve Allred, NC6R sallred@volcano.net

Secretary, Bryan Mathews, W6BRY hotelbroker@gmail.com

Treasurer, Sue Allred, K6SZQ sueallred@volcano.net

Publicity Manager, Bob Hess, W1RH w1rh@yahoo.com

Editor, Doug Philips, WE6Z we6z@hotmail.com

Webmaster, Norm Wilson, N6JV n6jv@n6jv.com

The MLDXCC Newsletter

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