Volume 20, Number 4/5 **May 2015**

The Nugget

Mother Lode DX/Contest Club

The Newsletter of the Mother Lode DX/Contest Club

MEETING DATE, LOCATION & PROGRAM

Our meeting is **May 16 at Denny's in Cameron Park**. Located at: **3446 Coach Ln, Cameron Park, CA 95682**. The regular meeting starts at 1130 with BOD at 1100.

Jay KE6GLA has put together a talk on SDR with a demo.

MLDXCC DUES

Our dues are voluntary; however you must pay dues, $15/yr, to be eligible for any club awards.
A quick look at our financial status shows us just about breaking even for the year. We started the year with $1346.48 and ended with $1655.26. That looks good at first glance, but $ 400 of that came from sale of an antenna and proceeds from Visalia Contest Dinner so we ended year with a small loss. We cannot always count on those resources. Our expenses each year are; $ 200 for club liability insurance, $ 250 to Northern California DX Foundation, $ 244 for plaques, prizes & awards. These figures, while close, are subject to final analysis by Treasurer.

Dues are $ 15 per calendar year. They can be brought to meeting or mailed to Carolyn at P.O. Box 273, Somerset, CA 95684-0273.

MLDXCC Meeting Dates:

May 16th
No December meeting

2015-Officers

Shirl Rose - AA6K President
Bob LeClerc - KR6N Vide-President
Dick Wilson - K6LRN Secty
Carolyn Wilson - K6TKD Treasurer
Steve Allred - K6SCA BoD
Rick Casey - W6RKC BoD
Bob Hess - W1RH BoD
Ken Anderson - K6TA BoD

FROM THE PREZ

Greetings to all,

I just checked Club Log and the MLDXCC is presently in 27th position. It appears that some of our newer members are working lots of DX and making timely Club Log submissions. Way to go! Keep up the good work!

Unfortunately I missed Visalia but I had other commitments. From the email traffic I've read it seems that a great time was had by all. I hope to be able to make it next year.

With the contest season winding down it will soon be time to get your station ready for the 2015/2016 season which seems to be a great season for rare DX. I've read that Heard Is, Palmyra Is, Juan de Nova Is, Bouvet Is, Chesterfield Is, South Georgia Is, South Sandwich Is, and perhaps even North Korea will be QRV next season. I just hope that Solar Cycle 24 lasts through the season at a robust level as I need 2 more entities to get on the Honor Roll.

I hope to see you at our May 16 meeting.

Shirl/AA6KShril, AA6K

THE VP SEZ

Hello all MLDXCC members,

Hope April was good to everyone DX wise. There has been some radio downtime here to get some incomplete home projects taken care of. I have found the time to rework and trim up a couple of dipoles in the trees. It was fun to giving out a few contacts for the NE QSO party. I was also lucky to find a 12 ft. by 30 ft. storage shed available just 2.5 miles down Green Valley road. After three days of moving stuff it's already half full. It is nice to have that space back to work out in the garage.

I was able to attend the 66th IDXC in Visalia in April. This was my first. It was nice to run into a few MLDXCC members. The seminars were all well presented with very well-known speakers. Both the Friday night contest dinner and the Saturday night Banquet were a lot of fun. The exhibit hall had about 30 vendors with products to demo. It turns out my only purchase was for one of those nifty brand pocket reference cards for my 259b analyzer. I would have been fun to spend a little more time in the exhibit hall but that would have meant skipping a couple of seminars. Knowing that I would be 15 minutes away from U.S. Tower in Woodlake, I bought a rotor mast/plate over the phone and picked it up from the plant Thursday afternoon. At 15.5 pounds, it was nice to not pay shipping.

I look forward to seeing everyone at our meeting on May 16 at the Denny's in Cameron Park. The regular meeting starts at 1130 with BOD at 1100. Jay KE6GLA has put together a talk on SDR with a demo. **Bob KR6N, MLDXCC VP**

Treasurer's Report

Balance March 1, 2015:		**$1802.06**
Income:	Badge – K6KNS	20.00
	Donation – W6DE	5.00
	Dues – W6DE, KI6CG, KK6EGM, WD6EIW, K6KNS W6RD, N6RK	75.00
		100.00
Expenses:	Badge: K6KNS	19.90
	Bank Checks	20.91
		40.81
Balance April 30, 2015:		**$1861.25**

NOTE: Dues are payable and will keep you in good standing through June 30, 2016!

Carolyn Wilson,
K6TKD, Treasurer

Photos from our last meeting, WC6H on Contesting

The MLDXCC Prez AA6K, and NCCC Prez N6RK

Minutes of the 21 March 2015 meeting

The March meeting of the Mother Lode & DX Club was called to order at 11:31 AM by President Shirl Rose.
Introductions followed with Dave Sanders K6KNS & Dave Morrison KG6SVF being noted as guests.
Dick noted ARRL DX contest scores needed to be submitted as deadline date for CW was coming soon (March 25).
Shirl noted blood pressure increase during contests possibly due to stress. Others noted items such as hydration and movement to lessen possibility of DVT (deep vein thrombosis).
Dennis NJ6G noted he won first single op low power San Joaquin Valley in 2014 ARRL DX Phone contest & Verne W6VMT did same in Sacramento Valley.
Rick N6RK presented NCCC KB awards to: W1SRD, W1RH, K6LRN, K6TA/K6KO…NAQP award to W1RH and to W1SRD for Contester of the Year. Ken, Bob & Steve were also awarded cups. (WC6H would have received a KB 3K award but for a mix-up in dues status.) Congrats to all!!
Membership applications were read for Dave Morrison KG6SVF & Dave Sanders K6KNS. Both were approved unanimously. Welcome aboard to the two Daves!!
Shirl awarded a CQP achievement certificate to Bob K6DGQ.
Business portion of meeting was adjourned at 12:07 PM and floor was turned over to Rich WC6H for a talk on contesting.

Rich's talk started off with slides about resources such as the NCCC web site, Contesting.com & others. Suggested one should set goals, possibly consulting last year's results. Covered strategies, posting to 3830scores.com, SO2R (single op two radio operations). He has obtained an 'extra' 1000MP for SO2R. Under tips, he suggested, 'time-wasters' (too much chatter each Q), watch typos, work dupes. He described flexible antenna set-ups where possible. At WC6H, antennas include C3 stacks, mono-banders with beverages to help receive. After Q & A session, assembly adjourned to 'Habanero Hots' for lunch & more discussion, etc.

Dick Wilson K6LRN
Secretary, MLDX/CC

I discovered a great tool for working All Time New Ones.
Mark K6UFO told me about "dxwatch.com". What this site does is to filter DX spots according to what you program in, and then send email whenever a filtered spot is posted. What I did was use an email
address that sends a text message to my phone.
I have a Verizon phone, so I use: 1234567890@vtext.com, where 1234567890 is my 10 digit phone number.
The other carriers also offer this service; check with your carrier for the email address to use.
The filtering is by DXCC entity and band, etc. I recently had alerts set up for Chad(TT), Monaco(3A), Mt. Athos (SV/A) and South Georgia (VP8G). I was able to see these spots whenever they came in, wherever I was. I was able to work TT8CY (alas not approved for DXCC yet) thanks to being alerted while away from home. I was able to get back home in time. It was also helpful for working the recent DXpedition to Monaco. Usually, 3A spots are on the wrong band at the wrong time to
work the west coast long path. However, one day, F4HAU was spotted on 17 meters at 1430Z. I heard N0UN working him, although I could not hear anything from F4HAU's end. I thought that since I was an hour west of

N0UN, the propagation might work an hour later. I monitored the frequency and could hear lots of loud European stations working him, so I knew he was still there. Sure enough, around 1530, he came up out of the noise by a few dB and I got the QSO. I got a number of spots for SV2ASP/A, but he was on the wrong band for the west coast. He seems to get on around holidays in the Greek Orthodox church, which apparently celebrates Easter a week later than we do.

The DXwatch site seems to be well connected to the various spotting networks. It often has spots that aren't on the VE7CC packet server. The DXwatch site is free, and therefore the support is "you get what you pay for." The site shows three options: "email", "alternate email", and text messaging. The site says that text messaging is not available because he is not able to get unlimited texting in Brazil, and we can't expect him to pay for it. What the site doesn't say, and the site owner didn't tell me, is that "alternate email" simply doesn't work. You would think he would either fix it or take it down, but such is the nature of the "free" site. On the other hand, "email" works perfectly, so I just use that.

Rick N6RK

The Lodi ARC is sponsoring a website for the area's Vhf Uhf contest enthusiast. It's called the "Nor Cali" vhf uhf contest page and the url is www.n6sjv.org. The new ARRL Vhf contest rules now allow for "assistance", regardless of entry category. The Nor Cali page is part EME/Pingjockey style chat and part spotting network but with a specific focus on covering Northern California and the Greater San Joaquin Valley. The site works very well on smart phones and wireless data devices so rovers and remote portable stations should find it very easy to access. Here, self-spotting is encouraged and all radio amateurs are welcome including lurkers. We're in beta test now but will be fully operational for the upcoming June Vhf contest.
http://www.n6sjv.org/

Thanks Tom WA6OSX

Editor's Notes de Rick, W6SR

Hi all……..

A couple of weeks ago we sold some of the last items from K6KM's estate items (tower parts) for $200. Ginny Snider, N6RER (Bill wife) has generously donated that money to our club. I have sent a check to our treasurer. Thanks Ginny.

About 6 weeks we had a new neighbor move into our small group of homes, and all of a sudden, the quiet bands that I have gotten accustomed to, became filled with digital signals and birdies 24/7. 160M has 20+/9 10 KHz wide crap (see pic below) and it extends thru 6M which has S-8 noise on it. WTF?

My antennas don't lie; the noise *was* coming from the direction of the new neighbors.

I approached the neighbors gently, and hoped that they would be friendly and cooperative. They were, I explained the problem and showed them the interference on my radio. After exchanging pleasantries, they agreed to switch-off their circuit breakers one at a time to verify the problem existed at their place. Bingo! When the 3rd breaker was pulled, all was again quiet in radio-land.

20/ S-9 noise on the spectrum display of 756 Pro III

At this point I volunteered to help find the problem, plus pay for what the cost of the repair and/or replacement was. That was politely refused, with the assurance that "their electrician" would repair the problem. Which they suspected to be a neon light fixture in the garage, and we parted smiling. Well it's been almost two weeks and that hasn't happened. However, since our chat, the problem is only there from 8PM to 8AM. Hummm? OK, now I smell something fishy! I am thinking what we have here are "grow-lights" and their doing a bit of weed cultivating. So my problem is……..I just want to be able to operate from 6AM to 10PM, should I propose that to them? Or……. look into other ways (FCC or legal action) to make the problem go away? To be continued……

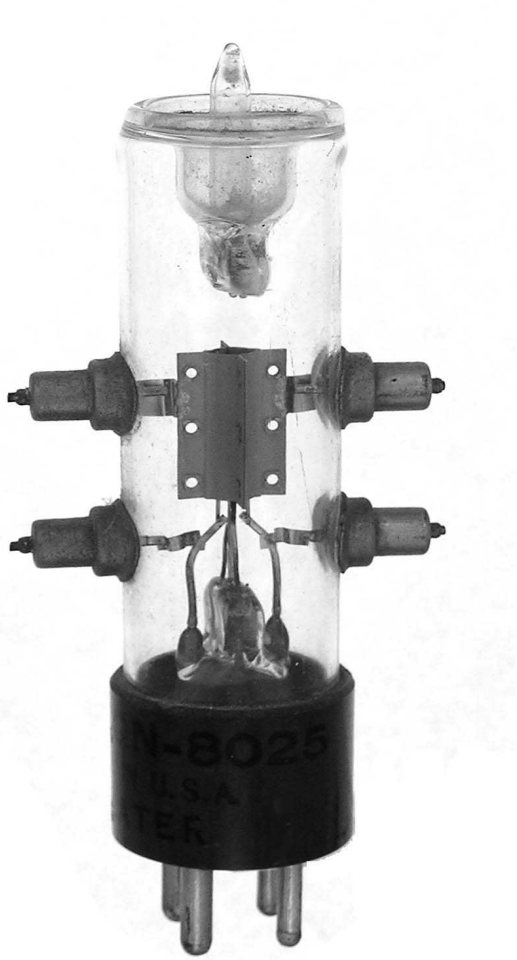
As far as operating goes, I operated very little because of my noise problem and lousy conditions. Just a couple of new RTTY countries were worked, so I now have 130 RTTY confirmed countries (all via LOTW), and I have worked a total of 168on RTTY since Jan 2014. Forgot to mention I did get all my K1N, and E30FB contacts confirmed via LOTW so I added 6 new band countries.

I will not be able to attend the May MLDXCC meeting. We will be in Los Angles that weekend attending our youngest Grandson's "Eagle Court of Honor" on the same day. His older brother, also achieved his Eagle Scout honor 5 years ago, so we've got two Eagles in the family.
de **Rick, W6SR**

Tube of the Month de Norm, N6JV

8012 – 8025

At the beginning of WWII, 200 MHz was considered UHF. As the War progressed, there was a race to operate at ever higher frequency. With each step in frequency, there would be a few months of advantage until the opposition caught up or went even higher. One of the first big jumps was to 500 MHz. RCA and GE produced several UHF tubes including the 8012 and 8025. The design involved taking a triode of standard construction and making it operate at 500 MHz by minimizing the length of the plate and grid leads. The exhaust stem was put into the top of the tube so as not to interfere with the filament length. This construction makes these tubes very rugged and they could be used in ring oscillators. Electrically the tubes are the same. The 8012 has no base and pins that allow the tube to clip into its circuit. The 8025 has a standard 4 pin base and more conventional contacts. These tubes had a dissipation of 40 watts.



This design didn't survive for long after the War, but a few devices incorporated them. The 8012 was used in the APQ-9 radar jammer and the 8025 was used in the AN/ CRN-2 air transportable glide path transmitter.

Visit the museum at N6JV.com.....de **Norm N6JV**

Member News, Items For Sale_& Feedback

Here are some of the last items left from KF6T's estate:

Test Gear:
HP 5313A 225 Mhz. Frequency Counter - $500 OBO,
Boonton 41A Microwatt Meter - $100,
Tektronix 130 L-C Meter - $75,
Sigmotek ITC-3 High Resolution Counter - $50.

Antenna parts:
Cubex Cast Spiders for 3" Boom - 4 available @ $25 each
High Quality 3" aluminum boom material 20-30 feet

Equipment:
HB Linear Amplifier w/ 3CX1200A7 final - pictures available - $400 OBO
MFJ 9020 20-meter cw transceiver - $40

FYI---Jack's qth in Auburn is in escrow and his wife will be moving soon. We need to dispose of these last few items - so all reasonable offers will be considered.

Contact me at WX6V@sbcglobal.net

I have the following stuff for sale.

1. Hygain Ham IV rotor. Latest version with cable pigtail, Ham IV control box with factory brake delay and comes with about 75 feet of cable. $400.
2. Hygain Ham IV rotor. No use since rebuild, has T2X control box with added brake delay. $300.
3. HD73 rotor and control box, has lower mast bracket and 100 feet of new cable. $250.
4. US Tower 15R 15ft steel re-enforced Galvanized mast $100.
5. US tower 10 foot Galvanized .120 wall steel mast $75.
6. 12 foot .250 wall T6 Aluminum mast. $65.
7. KLM LP10-30 7 element 10 to 30 mhz LPDA on 30 foot 3 inch boom. Needs some TLC but is complete and Lexan insulators are good and I have a couple spares. $250.
8. (4) 10' Rohn 25G tower sections with Rohn HD Base Plate and Rohn HD Adjustable House Bracket. All in good condition. $250. Prefer pickup in Modesto.

Chuck, W6RD 209-522-0549 or w6rd@arrl.net

I am handling an estate sale. Below is a list of items available for purchase. If there is anyone interested, please contact me at n6hc@aol.com or 714-573-2965
Arnie N6HC

Ameritron AL-80B with Grid overload protection board……$1,050.
Yaesu FT-2000D……$2,200
Yaesu MH31B8 Microphone……$45
Yaesu SP-2000 External Speaker…$100
Yaesu Remote Control Keypad… …$65
Yaesu FP-2000 power supply……$350
Yaesu FT-301D …… $150
Yaesu FP-301 power supply ……$50
Kenwood TS-850S ……$650
Kenwood SP-31 Speaker …… $50
Drake R4B and MS-4 Speaker … $230
Drake R4C and MS-4 Speaker ……$370
Astron RS-12A ……$50
Astron RS-50A …… $200
Timewave DSP-59+ …… $175
Hallicrafter S82 FM 30-50 MHz receiver…$50
Vertex MLS-100 mobile speaker … $45
GE 40 channel CB radio station Help 34-5908, 4 watts $40
Palstar AT-2K antenna tuner …… …$400
Dentron Jr. antenna tuner …… .$40
Dentron Super Super antenna tuner AT-3KW (10-160M) $ 175
MFJ 945-D antenna tuner (30-300W) ……..…$60
LDG memory tuner AT-200-Pro (5-200W) 6-160M $150
MFJ 1700-C 6 position antenna switch / surge protector .$ 60
Telex C-1320 headset (20 ohm) ……..……$30
Telex C-610 headset (16 ohm) ……$30
MFJ-392B headset . $15
Coby Headphones CV-195 noise cancelling ….$35
MFJ 462B multi-reader …… $100
Signalink – Tigertronics Radio Interface & Sound card with Yaesu cable …… ……...$60
Heathkit HO 1416 code practice oscillator …… ...$20
QSA-805 Dynamic microphone ……..$100
Labtec AM-22 microphone …… $4
Panasonic microphone …… .$4
Astatic D-104 with T-UGB stand …… …..$75
Astatic DN-HZ microphone …… $ 145
GE regulated Power Supply Model 5-1210, 13.8V – 2.5A $ 40
P3 International Kill A Watt Electronic usage monitor $ 10
Yaesu – YSK-7800, Separation Kit …… $ 6
Vertex Standard CT-119 programming cable . $ 30
Pace P-5453 dual meter (SWR, Field strength,) …… …. $ 25

Micronta triple meter (SWR, Field strength, modulation) 21-522 …….. $ 25
Tektronix Oscilloscope T-922 …… $ 150
Alliance dual speed rotator controller ……. $ 28
Cushcraft MA-5 B antenna …… $ 250
Rohn Tubular mast …… $ 100
Ronard "Y" type chimney mount…… $ 15
Polyester antenna rope 100 ft 3/32" ……..$ 8/ea
Harbor Freight 580 Pc terminal set ……$ 5
Osaka Koha Voltage adjuster Model IV-300N- Make offer
Drill Master Cordless Drill with Flashlight 18V # 69652 ……$ 15
Viewsonic 19" LCD flatscreen VX1962WM … $ 100
RT Systems USB-63 (USB to DB9 interface cable) $ 15
Shaxon USB 2.0 AM-AF cable – 6 ft - …… $ 2
I dot connect USB 3.0 AM-AM cable – 10 ft - … $ 5

Hi MLDXCC's,

We are now completely moved into our Pine Grove home. I purchased 100' of Rohn 55 tower from KI6CG, and have moved it from Grass Valley to Pine Grove. But before I could do any tower work, I had to have lots of tree trimming (I now have 7 chords of wood). We also had to do much brush clean-up to comply with fire safety. But we should be working on getting the tower installed soon, with at least some antenna in the air.

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Aloha, Fred, K6IJ ex KH7Y

Hi Gang

I've been pretty quiet here, but things are on the move. I have some photos of the new tower:
https://picasaweb.google.com/117668077218135394042/TowerInstall2015?authkey=Gv1sRgCLG8-tz4gqrj4wE#

This is an MA-770 from US Towers. It took more than the usual hassles and several months to get it over here in Maui. Hope to be QRV by Field Day. A StepIR 3 element goes on top. **73, Alan AD6E / KH6TU**

With credit for the E30FB RTTY QSO on LOTW, I finally qualify for the DXCC Digital Honor Roll. (Bucket list)
Norm N6JV

I just got a new Yaesu FT-991 for temporary mobile and field use. I also my very first amp; an Ameritron ASL-600. Also ordered a Palstar AT-500 tuner. And my new Cushcraft MA5B antenna should arrive next week.
Dave Sanders, **K6KNS, Folsom**

From K6KM's estate, we have the following items for sale:

(5ea) Rohn GB-45 guy bracket, (2ea) Rohn 45 rotor plate, (1ea) Rohn GB-55D guy bracket, missing some hardware, (2ea) BLP, (6ea) Misc. guy wire assemblies. Don't know length but can verify if necessary. (5ea) PLP Big Grip BG-2144 1/4 inch, (2ea) Phillystran Big Grip HPTG-670001 / BG-MS-2755 3/8 inch, (1ea) 20 foot mast - quarter inch wall (approximate), (1ea) 15 foot mast - quarter inch wall (approximate)

Also have a large lot of ICE grounding/surge protection items.

Most if not all of this stuff can be available at the Saturday MLDXCC meeting, with advance notice.

I will deliver at the meeting. Rick, W6SR, will determine pricing and take your money. **de Bob, W1RH** w1rh@ya-hoo.co

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I have a variac and plate transformer that I wish to sell. The details on the transformer are written on it. And the ratings of the variac are also listed.

The transformer measures:
H - 8 ¼, W - 10 ¾, D - 9 ¼
And weighs 115 pounds.
Best offer on each
Thanks, Bob, W1RH w1rh@yahoo.co

For Sale……..IC-735 $365

The Icom IC-735 is in very good condition. This radio was sent to MTS for servicing several years ago. Since then it has seen very little use, it is primarily a back-up. It has the rare 500 kHz cw filter installed.

It includes a microphone, power cord, and has the stock SSB filter. This is a great starter or backup radio that has a surprising amount of features. Especially when you realize that most of the controls are hidden all over the radio including the sides and bottom! Here is your chance to own a 735 in nice condition. Full installations and manuals for this radio can be found on the internet.

Also for sale a Yaesu FT-1000MP $1350

Yaesu FT-1000MP HF Transceiver in excellent shape with original boxes, manual, schematics, quick menu sheet, and hand microphone (with UP/DOWN/FAST controls). Including AC power cord, and extra plugs/fuses. This radio has the optional DVS-2 digital voice recorder, Heil headset adapter included (AD-1-y8). Quick start guide.

Face and cabinet are in excellent shape, a great looking and performing radio. This radio will do it all. This radio puts out 100 watts on all amateur bands, all modes. Filters included are:, 2.1, 500, and 250Hz in both 2nd and 3rd IF. As well as an Inrad Roofing Filter, and Inrad key click mod installed (2/7/2013)

This model has the built in AC power supply so it can work on 100VAC, 110VAC, 117VAC, 200VAC, 220VAC, 234-VAC, or 13.8VDC as well. The tuning is super smooth and displays and meters are all digital and spectacular to look at. Here are just a FEW of the features: 160m-10m amateur bands, LSB/USB/CW/FSK/FM/AM, 100 watts output, Automatic antenna tuner, dual VFO's with dual frequencies displayed-you can use 2 separate antennas to tune 2 different frequencies!

Superb receiver performance with Direct Digital Synthesizers so you get extremely fine tuning and razor sharp super-sensitive reception, automatic antenna tuner, built in processor, VOX, MOX, RF power adjustment, Attenuator switch, USER button for custom tailored functions per individual, fast tuning, pitch, notch, clarifier, 99+ memory channels, and way too much more to list. The installed Inrad Roofing filter makes working in a crowded area very nice.

Any buyer will not be disappointed.

Available in Truckee.

Bob Moore, K6NV 530-575-5766

The following is the latest installments of a multi-part series that was suggested by Dave, W6DE. It was compiled and written by W2XOY; I found it very interesting and hope our readers do as well. de Ed.

The History Of Amateur Radio Chapter 18

In our last installment, we traced the development of FM and repeaters from 1932 up to 1970. Since the FCC rules at that time had no provision for repeater operation, stations in repeater service were operated under the Part 97 provisions covering remote control. The FCC, in February, 1970, came out with Docket #18803, which set forth the Commission's proposed repeater rules. These included small subbands set aside for repeater operation, a ban on linked, cross-band and multiband repeaters, a requirement for "whistle on" or other tone control, and a requirement that the licensee of a repeater station be in attendance at the transmitter or at an authorized fixed control point to monitor all transmissions of the station. In regards to the 2 meter band, the FCC set up the repeater subband in such a way that two thirds of it would not be accessible to Technicians. Reaction was quick and negative. The ARRL and others felt that the proposed rules were so restrictive that they might be the end of amateur repeater operation as it existed at that time. Counter proposals, far less restrictive than the FCC's, were submitted to the Commission.

While amateurs waited for the revised FCC rules, another problem had to be solved. When two meter FM operation started in the 60's, 146.94 had been chosen as the national simplex frequency. This was the highest wide band FM frequency available to Technicians. After repeaters came along, amateurs discovered that the surplus commercial

equipment in use had a maximum bandwidth of 600 kHz. Thus, 146.34 was chosen for the first repeater input. However, in areas where .94 was in heavy use by simplex stations , 146.76 was chosen as the output. This led to the problem of non-standard splits, and in some areas of the country, repeaters such as .34/76, .28/94, and .34/82 could be found. The frequency 146.94 was a battleground between the simplex vs. repeater groups.

Amateurs were also fighting a minor battle over 146.64 MHz, which, in some parts of the country, was a DX simplex frequency. To make matters worse, all transceivers back then were crystal controlled. With crystals at $10 per pair, it cost $120 (about $350 today) to fill all 12 channels in a 2 meter radio. It was possible to equip your radio with the repeaters and simplex frequencies used in one area, then find all of your channels were useless 200 miles away.

A National Plan was needed. The Texas VHF-FM Society proposed such a plan, which was described in the May, 1972 issue of QST. In it, the repeater offset was standardized at 600 kHz, 146.94 and 146.64 became repeater outputs, 146.40 through 146.58 became simplex, and 146.52 was chosen as the national simplex frequency. In the 146-147 range, accessible to Technicians and above, there were 13 repeater and 7 simplex channels. The 147-148 range, available only to Generals and above, had 14 repeater and 6 simplex channels. Note that in the Texas plan, all repeater inputs were 600 kHz below the output--even in the 147- 148 range. Except for changing the inputs to the high side above 147 MHz, the Texas Plan was adopted.

The gradual acceptance of a 2 meter band plan still did not resolve the FCC issue. The Texas Plan, as good as it was, violated the FCC's 1970 proposal. The Commission still had not issued any repeater rules, nor had they acted on the ARRL's 1969 request to give Technicians the full 2 meter band. Finally, in September 1972, the FCC issued new rules covering repeaters, logging and portable/mobile operations. Liberal repeater subbands were authorized at 52-54, 146-148, 222-225, and 442-450 MHz. Logging requirements, especially for repeater and mobile stations, was simplified: repeater operators no longer needed a tape recorder hooked up to their stations. The requirement for a portable or mobile station to notify the FCC of operation in a particular Radio District was also reduced--no longer would amateurs contemplating a cross country trip with their radios have to write to each District on their journey in order to inform the Engineer of the trip. Repeaters would have to be licensed: call signs beginning with the prefix "WR" would be issued. The repeater license application was complex--each applicant for a repeater license had to submit certain data to the FCC regarding the technical, operational, and effective radiated power of the proposed station. "Whistle on" or tone control was no longer required, two repeaters could be linked, but multi-linked or cross-band repeaters were prohibited. Repeater monitoring and control requirements were made more flexible. And finally, the FCC acted in part on the ARRL's 1969 proposal. Although they did not give Technicians full 2 meter privileges, they did grant them the 147-148 segment. Technicians could now operate all 2 meter repeaters without violating FCC rules.

The new FCC repeater rules, coupled with the Texas Plan, caused a surge in 2 meter FM activity. It also was the shot in the arm the hobby needed to fully recover from the decrease in growth caused by Incentive Licensing. Manufacturers such as Drake, Standard, Regency, Tempo, Genave, Clegg and Midland poured rigs onto the amateur market. Heathkit had the very successful HW-202 followed by the even more popular HW-2036. The increase in the number of Technicians on 2 meter FM finally killed the "Technicians are experimenters, not communicators" theory. And finally, thanks to 2 meter FM, amateur radio grew by over 33% in the 1970's. In 1975, due to increased demand, the FCC authorized the use of 144.5-145.5 MHz for repeater operation. Technicians were given access to this subband. In 1978, the FCC relaxed the rules, eliminated the separate repeater licenses and the "WR" prefix, and gave Technicians the full 2 meter band.

From 1978--1981, the synthesized revolution took place, as affordable PLL and microprocessor rigs drove the last of the crystal controlled radios off the market. Today, a name brand, 2 meter HT costs about $175. With it, you can access over 4000 repeaters, or scan the VHF Hi band. Compare that to 1972, when a crystal controlled radio, equipped with 12 channels, cost $300--or about $800 in today's dollars. We truly have come a long way.

In our next installment, we will look at a couple of license proposals in the mid 70's and the controversy they caused. I hope you will join me.

The History Of Amateur Radio Chapter 19

In 1974, the amateur radio population was on the increase again, thanks to the popularity of 2 meter FM. Incentive Licensing had been in place for 5 years, and the anger and resentment over losing HF frequencies was beginning to fade. However, trouble was brewing. The FCC had several petitions on their agenda, most from hams, and one from the Electronics Industry Association. In late 1974,

two bombshells were dropped. The first surprise was Docket #20282--the FCC's restructuring plan for amateur radio. Apparently oblivious to the upheaval that was

caused in the 1960's with Incentive Licensing, the FCC was now proposing rules that would take away major privileges from Generals, eliminate the ability of 90% of Technicians to renew their license, and, horror of horrors, create a new "No Code" license. The proposal was somewhat complicated, so grab a pencil and some paper, and follow along.

The FCC, in essence, wanted to create a "dual ladder" incentive licensing system, with two routes available. The first, named Series A, covered the shortwave frequencies, while Series B encompassed the VHF-UHF allocations.

The dividing line between Series A and Series B was not 50 MHz, as one would expect, but rather 29 MHz, or roughly the middle of the 10 meter band. Series A contained familiar amateur classes--Novice, General, Advanced and Extra. Novices would get a power increase from 75 to 250 watts input, and would also gain a 5 year renewable license to replace the 2 year non-renewable one now in existence. Generals would lose big--the 29.0 to 29.7 MHz segment of 10 meters would be taken away; they would be limited to A1 (cw), A3 (AM & SSB), and F3 (FM) emissions only (in other words no more slow scan TV, RTTY, or radio control); power output would be reduced to 500 watts PEP; and they could no longer supervise mail examinations. Furthermore, they could no longer be the trustee of a club station or repeater. Generals who were already licensed if or when this proposal was adopted would also be "Grandfathered" into the Series B Technician Class license.

The Advanced class gained under Series A. They kept all of their privileges below 29 MHz, received a power increase to 2 kw PEP output, gained access to the Extra Class phone segments, and would be "Grandfathered" into the new "Experimenter" Class in Series B.

The Extra Class lost their exclusive phone bands, which would be shared with the Advanced license. However, they kept their CW subbands, and gained the 2 kw PEP output, as well as a lifetime operator license. Note that the Conditional Class license is not mentioned. That's because the FCC incorporated it into the General license. Conditionals would have the letter "C" after the word General, and their license would not be renewable.

On the Series B, or VHF-UHF side, the proposed changes were even more drastic. The FCC, for the entry level license, would create a new "No Code" "Communicator" Class, which would allow operations above 144 MHz using F3 (FM) emissions only Technicians would gain some frequencies--the 50.0-50.1 and 144-145 MHz segments--but otherwise, like the Generals, would lose big. They could only use A1, A3 and F3 emissions with 500 watts PEP output, and could not be the trustee of a club station or repeater. However, the worst news for Technicians was that those who had taken their exam via mail (about 90%) would not be allowed to renew. They, like the Conditionals, would have to pass the test again before their license expired. One step above the Technician Class was another new license proposed by the FCC--the Experimenter Class. "Experimenters" would have all amateur privileges above 29 MHz, with 2 kw PEP output.

Above the Experimenter license was the Extra Class, which held the distinction of being at the top of the ladder for both Series A and B.

The FCC proposed adjusting the written exams to accommodate the different requirements of Series A and Series B. Element 2 (the old Novice written exam) would be rewritten into 2A (Novice) and 2B (Communicator). Novices would have to pass the 5 wpm code, as well as 2A, while Communicators only had to pass 2B. Likewise, the General Element 3 would be divided into 3A (General) and 3B (Technician). Generals and Technicians would still have to pass the 13 and 5 wpm code tests respectively. Advanced Class operators needed 13 wpm and the Element 4A written exam, while Experimenters had to pass a 5 wpm code test along with Element 4B. For the Advanced and Experimenter Classes, only the 20 wpm code test was needed to upgrade to Extra.

Since, except for the Extra, the Series A and Series B licenses did not overlap, the FCC would allow amateurs to hold one license in each Series. This created some interesting possibilities. As previously noted, a General could also hold a Technician, and an Advanced the Experimenter. Both Technicians and Experimenters could obtain a Novice, if they passed Element 2A. The "No Code" Communicator could also hold a Novice, if Element 2A and the 5 wpm tests were passed. The FCC set a June 1975 deadline for comments on the restructuring proposal.

The ARRL, still smarting from the Incentive Licensing conflicts, wasn't going to comment until they had taken the pulse of their members. What was the ARRL's response? And just what was "Class E CB", the other FCC proposal? How did it affect Amateur radio?

In our next installment, the "Wayback Machine" will have the answers.

The History Of Amateur Radio Chapter 20

In our last installment, we took a look at the new "dual ladder" licensing system proposed by the FCC late in 1974. In effect, there would be 2 parallel series of Amateur Radio Licenses, with 29 MHz as the Line of Demarcation. Series A covered the frequencies below 29 MHz, and included the Novice, General, Advanced and Extra Classes. The Condi-

tional Class would be abolished, Extra and Advanced Classes received a power increase, the Advanced License would get access to the Extra phone bands, and Generals would lose power, frequencies, certain modes of operation, and the ability to be a Trustee of a Club station or a Repeater. Series B covered the frequencies above 29 MHz, and included 2 new license classes--the "Communicator", which would be FM only above 144 MHz, and the "Experimenter", which would offer all Amateur privileges above 29 MHz. Like Generals, Technicians would lose big. In fact, those who took their exam by mail (over 90%) would NOT be allowed to renew.

Reaction to the proposal was strong, but somewhat puzzling. Instead of a vehement output of negative comments from the 180,000 General, Conditional, and Technician Class Amateurs, (who stood to lose substantial privileges, and, in many cases, their very licenses), instead, comments concentrated on the "no code" Communicator Class. Amateurs were overwhelmingly against it. In fact, the Communicator License received the same amount of contempt and disdain that the "Hobby Class" proposal had received a few years back. However, while amateurs were debating the FCC Restructuring proposal on the air, and in letters to QST, the ARRL was unusually quiet. Why weren't they coming out with a position?

The answer, in a word, was "Incentive"--as in Incentive Licensing. The ARRL had learned its lesson back in the '60's, when it had submitted its proposal for restrictive phone bands. Now, before any response was made, the ARRL wanted to know exactly what the members wanted. Thus, the League sent out a comprehensive survey to all 100,000 members. Fifty six percent, or 56,000 (myself included) returned the questionnaires. The ARRL

tabulated the results, printed them in a multi-page report in QST, and then, in the Summer of 1975, submitted their own proposal to the FCC. The ARRL's plan kept the basic amateur structure that was in existence--but with a few changes. The League suggested a "Basic Amateur" License, which would provide limited VHF operating privileges. The "Basic Amateur" would not actually have to pass a code exam, but would have to be familiar with CW characters. The trick here, of course, is that once someone has memorized the letters, numbers and basic punctuation marks, they are at 5 wpm already. So, this wasn't really a "no code" license, but it did eliminate formal CW testing.

As for Technicians, the League once again asked that they no longer be burdened with the "experimenter" designation, that they receive Novice HF subbands, and that they receive full VHF privileges. Generals would see their code requirement drop to 10 wpm, while the Advanced Class would be bumped up to 15 wpm. No major changes were proposed for the Extra Class.

Unlike the '60's, when the ARRL was blasted for shoving Incentive Licensing at the members, this proposal was met with overall approval and appreciation from amateurs. In the end, although the FCC dropped the "dual ladder" idea, they did incorporate many of the ARRL's ideas into future rule changes. Technicians were mainstreamed into the amateur license structure, Novices received expanded privileges, to eventually include hf & vhf phone, and the FCC, after years of restrictive proposals, finally chose the path of gradual deregulation. But the "dual ladder" story was not the only event of 1975. When amateurs weren't arguing over the evils of the "Communicator" Class, they were blasting the idea of Class E CB. What was it? In summary, the Electronic Industry Association, or EIA, proposed taking away up to 2 MHz of our 220 band, and turning it over to a new CB service. With 25 khz spacing between channels, the new EIA Class E CB could have as many as 80 channels. The EIA claimed that the 23 channel CB Band at 27 MHz was impossibly crowded, and worthless for local communication among legitimate users. Remember, this was at the time of the gas crisis and the "CB Boom". The EIA argued that a skip free area was needed for CB, and that the 220 band was underutilized by hams. The EIA's proposals, in fact were quite stringent and, had it not been for their unfortunate choice of frequencies, they may have received the support of the ARRL. But, the EIA was trying to mix matter and anti-matter--in this case, amateur frequencies and CB. This had happened once before, in 1958, when Class D CB was created out of "our" 11 meter band. "Never Again" was the cry from hams. The explosion of protest from the amateur community was palatable. Amateurs pointed out that CB wouldn't be such a mess if everyone obeyed the Part 95 rules, and the FCC took some enforcement action. The ARRL stated that CB'ers themselves were opposed to 220 MHz CB--which was only partly true. The only CB operators surveyed were those who read hobby type magazines, such as S- 9. They were opposed to anything that would take them away from the skip and DX zone into a tightly regulated land of local communications. Lost in the emotional shuffle was the logical point that CB did not belong in the HF spectrum.

In the end, with the strong opposition of the ARRL, and the indifferent support of CB'ers who really wanted to stay on HF, the FCC dropped the idea. Instead, in late 1976, the FCC expanded the CB band from 23 to 40 channels, and prohibited the sale of the older 23 channel units. This created a mini bonanza for hams, who snapped up the "obsolete" 23 channel units at fire sale prices, and converted them to 10 meters. As a postscript, amateurs did lose 2

MHz of our 220 band in the early 90's. These frequencies are now in a no man's land, unused. Which is better--to lose 2 MHz to a service that hams and their families could use productively, or to lose it to something that is inaccessible--and doesn't even exist yet?
In our next installment, we will look at the war protest movement

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

UP-COMING DX and Dxpeditions

Click the link below to display up-coming Announced DXpeditions:

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

Click on the Hyperlink below to check-out the MLDXCC scores in the latest contests.

http://mldxcc.org/scores.html

UP-COMING CONTESTS (complete)

For the latest contest info. click on the following link:
http://hornucopia.com/contestcal/contestcal.html

+ NCCC RTTY Sprint 0145Z-0215Z, May 22
+ NCCC Sprint Ladder 0230Z-0300Z, May 22
+ NCCC RTTY Sprint 0145Z-0215Z, May 29
+ NCCC Sprint Ladder 0230Z-0300Z, May 29
+ CQ WW WPX Contest, CW 0000Z, May 30 to 2359Z, May 31

June 2015
+ NCCC RTTY Sprint 0145Z-0215Z, Jun 5
+ NCCC Sprint Ladder 0230Z-0300Z, Jun 5
+ Alabama QSO Party 1600Z, Jun 6 to 0400Z, Jun 7
+ NCCC RTTY Sprint 0145Z-0215Z, Jun 12
+ NCCC Sprint Ladder 0230Z-0300Z, Jun 12
+ ARRL June VHF Contest 1800Z, Jun 13 to 0259Z, Jun 15
+ NCCC RTTY Sprint 0145Z-0215Z, Jun 19
+ NCCC Sprint Ladder 0230Z-0300Z, Jun 19
+ SMIRK Contest 0000Z, Jun 20 to 2400Z, Jun 21
+ All Asian DX Contest, CW 0000Z, Jun 20 to 2400Z, Jun 21
+ West Virginia QSO Party 1600Z, Jun 20 to 0200Z, Jun 21
+ Feld Hell Sprint 2000Z-2159Z, Jun 20
+ Kid's Day Contest 1800Z-2359Z, Jun 21
+ Run for the Bacon QRP Contest 0100Z-0300Z, Jun 22
+ SKCC Sprint 0000Z-0200Z, Jun 24
+ NCCC Sprint 0230Z-0300Z, Jun 26
+ ARRL Field Day 1800Z, Jun 27 to 2100Z, Jun 28

The MLDXCC NEWSLETTER

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