Volume 20, Number 8 August 2015

The Nugget

Mother Lode DX/Contest Club

The Newsletter of the Mother Lode DX/Contest Club

MEETING DATE, LOCATION & PROGRAM

The Mother Lode DX & Contest Club Is pleased to announce that our August meeting we will feature Bob, KK6EK, Founder and Expedition leader of Cordell Expeditions. The meeting will be on August 22 between 11:30 and 3:00 pm.

The Location will be at The Country Cafe in Lockeford, CA. They are located at 18700 N Hwy 88. Phone 209-727-5745

From Hwy 99 in Lodi take East Victor Road (Hwy 12) East to Hwy 88 (approximately five miles past the business office of Rich, WC6H and Habanero Hots Mexican restaurant). Left on Hwy 88 for one mile to Lockeford. Restaurant is between the Chevron station and Taco Bell. Lite green building with red brick trim, parking and entrance on side facing the Chevron station. de Ken-K6TA

(or see the MLDXCC website for directions)

Bob founded Cordel Expeditions in 1977. He is a research physicist and also the founder of NanoLogic. Licensed in 1962 His specialty has been world class DXpeditions such as 3Y0PI Peter I Island 1994, XY0Y/Z Easter Island 1995, VK0IR Heard Island 1997, XR0X San Felix Island 2002 and Clipperton Island in 2013. He will speak about preparations for a return to Heard Island early in 2016.

This will be an RSVP meeting with the restaurant wanting us to pre-order our meals. We have chosen 3 items from the menu for our lunch selections.

1. The Lockeford Burger: with bacon, avocado, mushrooms and cheese. Turkey or veggie can be substituted at no additional cost. $16.50

2. The Tuna Melt: With cheese on sour dough bread. $13.00

3. The Chef's Salad: Small $13.00 Large $15.00

Tax and tip included in price. #1 and #2 include your choice of either fries or salad. Iced Tea or Coffee is included with each selection.

If you plan to attend, please send an email with your name, Call, number of persons attending and your menu choice to Bob KR6N at kr6n@comcast.net by August 17. We welcome and encourage bringing guests. We will collect funds and issue meal tickets at the event.

Happy faces of MLDXCC members who operated W1AW/6, showing-off their ARRL Centennial Awards at our July meeting

July Meeting #1

July Meeting #2

K6MM presenting K1N

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. Dues can be brought to meeting or mailed to Carolyn at P.O. Box 273, Somerset, CA 95684-0273.

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

Up-Coming Club Events

August 22 meeting

September 19 meeting

CQ WW RTTY Sept. 26-27

October 10 meeting

Calif. QSO Party Oct 3-4
Makrothen RTTY " 10-11
CQ WW SSB DX " 24-25

November 14 meeting

ARRL SS CW Nov 7-9
ARRL SS SSB 21-23
CQ WW CW DX 28-29

December No Meeting

ARRL 10 Dec 5-6
ARRL 160 " 12-13

Note; this is tentative. There are many other operating events. These are 'major' events that may influence choice of meeting dates.
Some of these can be focus for us, some will be ones we 'co-operate' or co-ordinate with NCCC, such as NAQP & possibly SS.

August … Joint meeting with NCCC
October … Pacificon in Santa Clara

Meeting locations
Mountain Mikes, Martel
Spaghetti Factory, Stockton
Max's, Auburn
Denny's, Cameron Park
Habenero Hot's, Lodi
Thai House Restaurant, Valley Springs

Steve (K6SCA) LM-470 Tower Project

Now for the antennas…….?????

FROM THE PREZ

Greetings to all,

I'd like to thank those members of our club who have worked some DX and followed up with their Club Log updates. We have moved up from 30th to 27th position. Good job folks.

For those of you who are interested in the old fashion method of submitting QSL cards to upgrade your DXCC account I would remind you that we have 2 authorized card checkers in our club. I brought an application along with a small stack of QSL cards to our July 25th meeting. The cards were checked by Rick/W6SR and my account was upgraded to reflect the submission on Aug 2nd. That's a rapid turnaround compared to a few years ago.

An item for discussion at our August meeting, if we're going to give a serious push for the ARRL/SS Medium Club Gavel we need to personally contact out "Big Guns" and make sure that they are on board. This outreach particularly applies to those members who do not normally attend our meetings. Here are my thoughts from last month and I think they're worth repeating:

Speaking of the new contest season the MLDXCC is exploring making an all-out club effort as a medium club in the ARRL-SS this fall. Looking at the 2014 SS results I find that the PL-259 group won the Local Club competition with a score of 1,483,322 and the SoCal Contest Club won the Medium Club competition with a score of 4,600,526. It appears that if we are to win the gavel we'll need about 50 logs with an average of 100K per log. That is our goal for this fall!!!

73 de AA6K

THE VP SEZ

Message for August 2015

Thanks to all who attended the July MLDXCC meeting at the Stockton Spaghetti factory. John Miller K6MM was our guest speaker and had an excellent presentation on the K1N Navassa Island DXpedition. Everyone enjoyed hearing about the trip from the planning stage though operation and the return home.

This Month we have Bob Schmieder KK6EK Founder of Cordel expeditions scheduled to speak about the re-visit to Heard Island early in 2016. This meeting will take place at the Country Café in Lockeford on August 22 between 11:30 and 3:00 PM. This will also be an RSVP meeting with lunch orders ahead of time. Beverage of Iced Tea or Coffee included. The price also includes tax and tip. Send your menu selection to KR6N@comcast.net by Monday the 17th. Money collected and meal ticket issued at the door. Hope to see everyone at the meeting.

Bob KR6N,

MLDXCC VP

Eddy, K6AAM (he joined at the last meeting). Has supplied us some photos of what he has is working on…….

I recently made a vertical for 160 m as well as several RX antenna . All to prepare for the up-coming contest session.

I am looking for a 55 foot crank up tower, if some one has a tower to sell I will be happy to talk with them. Please e-mail me at ezcefko@gmail.com

Treasurer's Report

Balance July 1, 2015:		**$1853.33**
Income:	Luncheon July 25	44.37
Expenses:	Speaker K6MM	15.00
	Luncheon drinks	16.00
		31.00
Balance July 31, 2015:		**$1866.70**

Carolyn Wilson K6TKD
Treasurer

Editor's Notes de Rick, W6SR

Hi all……

A week and a half ago, the noise generated by my neighbor (with the suspected hi-power grow lamps) stopped! Not completely, but during my hours of radio operation, from 6AM to 10PM, it's gone.

We had a chat and I explained to him that I couldn't live with the interference during the hours I want to operate my radio. However, what happens between the hours of 10PM and 6AM I really don't care about. And, if this was unacceptable, I would be compelled to bring the problem to the attention of anyone/any agency that would remedy my problem. Starting with a call to his landlord, I suspect he saw the logic in my proposed comprise. Score: Radio 1, Noise 0.

Last month we had a new member join Eddy, K6AAM who live in Shingle Springs. Also Eddy has restaurant there as well. Karen and I went there for lunch last week and we both were really enjoyed our meals. We recommend it, and plan to return soon.

I have included a copy his restaurant info. Below.

Not much operating last month because of summer conditions. I'm still trying to get familiar with my new DXLab logging program. But I'm not totally convinced that it's a keeper yet, since the learning curve is very steep. Or……maybe it's just that I'm just not smart enough? I'm old so it easily could be the latter, Hi Hi

Karen flew to the L A for a few days, for a reunion with a group of retired Kaiser Nurses in Orange County. So, for a few days, I became supreme leader of the household, and ruler of the cats, Hi Hi

By the way, if you missed K6MM's K1N presentation at last month's meeting, you missed a good one. John did a great job. Thanks John. We are looking forward to your next DXpedition and presentation.

Enough for now, see you all at our next meeting de Rick, W6SR

CQP 50th Anniversary Get on the air -- you just might win a Gold Rush Coin !

http://www.cqp.org/goldrush.html

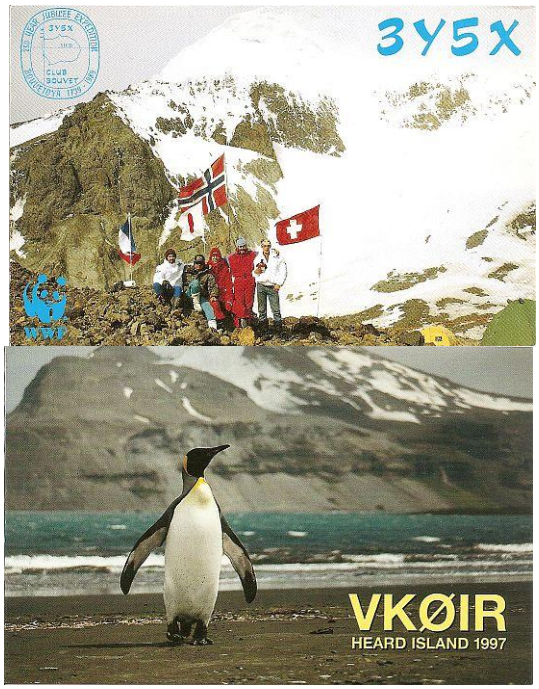
October 3rd

73,
John, K6MM

Later this year and early next year there are going to be a few DXpeditions to some very rare locations.
From Announced DX Operations http://www.ng3k.com/Misc/adxo.html these rare DX locations are to be activated in late 2015 and early 2016: Willis Island in November 2015; Bouvet Island in Dec 2015; Palmyra Atoll in January 2016; South Georgia in Jan/Feb 2016; South Sandwich in Jan/Feb 2016; Heard Island in Mar/April 2016.

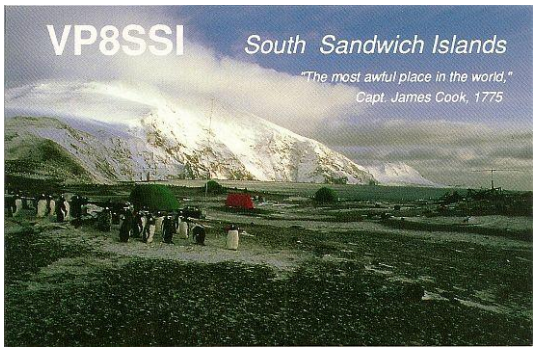
Some of you readers as active DXers will need to work the operations for an All Time New One, ATNO. Others like me, will need to fill-in some band countries and/or modes. And, maybe some of you will be curious enough to give DXing a try. I have been lucky enough to have previously made some contacts with these forsaken places and have asked for and received these nice QSL cards—QSL cards, something nice you don't get from Log Book of the World.

de Dave,W6DE

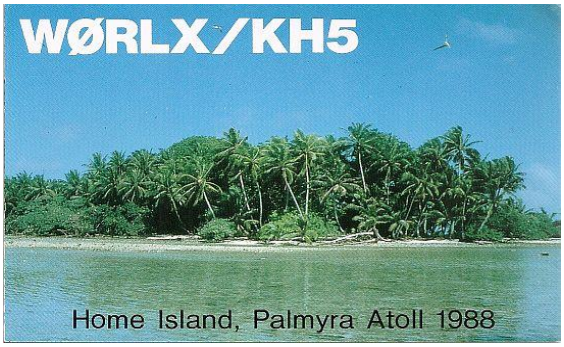


Bouvet Island—1989

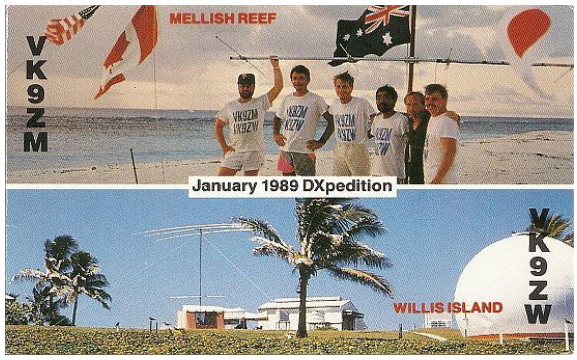
Heard Island—1997



South Sandwich Islands—1992
South Georgia Island—1992



Palmyra Atoll—1988



Willis Island—1989

From the Secretary

Is it time to fire up the boilers on the railroad train??
Is it time to start 'greasing the skids'??

This year, rather than waiting 'til January meeting, maybe we should start thinking of who would want for officers in MLDXCC for 2016.

The positions are not difficult or time-consuming. President mostly presides over meetings. (The past couple of years Bob and Shirl have done a great job visiting other clubs, but that is optional.)

Vice-president/contest chair plans meetings, gathers scores and acts in absence of the president.

Secretary takes minutes of meetings & helps maintain roster.

Treasurer collects dues, pays bills & helps maintain roster.

Board of Directors acts on behalf of the club to conduct day-to-day business and assists the Officers if needed.

Ideally, nominations are made in October and elections are in November.

Minutes from the Last Meeting

MLDXCC Meeting 7-25-2015

The meeting was held at the Old Spaghetti Factory in Stockton. President Shirl AA6K called for order at 12:35 PM.

After self-introductions, Dick K6LRN presented California QSO Party award for high score for a 'rookie'.

WI6R Dave gave a rundown on his headsets and earphones. He graciously offered one as a 'door' prize. It was won by Tom McShane NW6P.

Shirl then turned meeting over to Bob KR6N who in turn introduced our speaker, John Miller K6MM. He talked about February 2015 DXpedition to Navassa Island K1N. John gave some history about the island, explained difficulties getting permission to land,

the actual access and exit, ending up with statistics and some operating observations.

Meeting was then adjourned.

(My minutes do not do justice to John's fine talk. IMO, every DXer needs to hear about what operators have to do to accomplish an expedition of this magnitude. Thank you, John!!)

July 25th Attendees

K6LRN	Dick
K6TKD	Carolyn
W6COB	Chuck
NZ6Q	John
WB6NVB	Charles
WB6BET	Jim
KI6YYT	Emilia
N1DID	Emily
Guest	Cheryl
W1RH	Bob
N6JV	Norm
K6ZSQ	Sue
K6SCA	Steve
W6INP	Eric
K6LR	Jim
K6KNS	Dave
NR6Q	Greg
WC6H	Rich
W6SR	Rick
K6TA	Ken
K6KO	Kay
K6MM	John
NW6P	Tom
WX5S	Matt
K6YK	John
K6LE	Rick
WI6R	Dave
AA6K	Shirl
K6DN	Verne
K6OK	Jim
K6AAM	Eddie

de Dick, K6LRN

Tube of the Month de Norm, N6JV

5923

As glass tubes became more powerful, the largest that used air cooling could only dissipate about 2500 watts. External anode tubes, cooled with forced air, were eventually made as large as 50,000 watts dissipation but this wasn't until the 1960's. These tubes were two man lifts. In the 1920's, companies started developing water cooled tubes to make them more efficient. If a tube is made with its anode forming a closed cylinder that can be inserted into circulating water, then for every square centimeter of submerged anode, a KW of dissipation is possible.

The 5923 or TBW6/6000 is one of the smaller water cooled tubes in current use as a RF amplifier or as an oscillator in industrial heating applications. A special water jacket with spiral flutes on the inside, screws over the anode to make a water tight seal. Water is pumped into the jacket using plastic tubing. The jacket becomes the anode connection and is usually mounted below the grid and filament connections to prevent damage if there is a leak. Distilled water is used as the minerals in tap water lead to electrolysis which will cause restrictions in the coolant passages. The 5963 only weighs 1 pound, is 7 inches long and has a dissipation of 6 KW.

The designation TBW6/6000 is often used in Europe where the system was developed by Phillips before 1935. The "T" indicates that it is a triode, the "B" indicates that it has a thoriated tungsten filament, the "W" is for water cooling, the "6" is for kilovolts on the anode and the "6000" is the conservative output power.

The second example shows a newer ceramic version with water jacket and filament hardware.

Visit the museum at N6JV.com

Member News, Items For Sale & Feedback

We are excited to announce an NCCC Barbecue this September! Keep a look out for details in The Jug and on the email reflector.

WHEN:
Saturday, September 19th, 2015

WHAT:
Delicious catered food, exciting prizes, and the all important camaraderie of fellow NCCCers and guests.

WHERE:
Rich Cutler WC6H has kindly offered to host this event at his property, and you might even have the opportunity to operate from his station! Rich lives in Valley Springs, CA and has plenty of space for us. His address is 4737 Circle Hill Drive, Valley Springs, CA 95252 and on QRZ you'll see an impressive photo of the towers and house.

RSVP:
RSVP's for this event will be helpful for planning! At this point it is still early, but if you're as excited to attend as I am then feel free to go ahead and RSVP to Secretary.NCCC@gmail.com. ;-)

More details to come!

73 & 88,

Joanna K6YL
NCCC Secretary

Link to the NCCC Dues Renewal Page:
http://www.nccc.cc/membership.html

I have the following Items for sale:

1. TH-11 11 element Hy-Gain beam covers 20-17-15-12-10 $600/offer

2. Yaesu rotator plate for TX-455 tower $ 50.

Contact Dick, K6LRN

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@yahoo.co

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

I have an estate sale for a local ham. The attachment has a list of the available items with suggested prices. I'd appreciate it if you would list it in the newsletter.
Contact Arnie, N6HC n6hc@oal.com

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

Kenwood TS-850S ……$650

Drake MS-4 Speaker ……$100

Drake R4C and MS-4 Speaker ……$ 370 plus $100

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

Dentron Jr. antenna tuner ……$ 40

Telex C-1320 headset (20 ohm) …… .$ 30

Telex C-610 headset (16 ohm) …… .$ 30

MFJ-392B headset……..$ 15

Hosiden DH-48-Stereo headphones ----------$ 45

Coby Headphones CV-195 noise cancelling……..$ 35

Heathkit HO 1416 code practice oscillator ……$ 20

QSA-805 Dynamic microphone ……$ 10

Labtec AM-22 microphone …… $4

Panasonic microphone ……$ 4

Astatic DN-HZ microphone …… $ 100

GE regulated Power Supply Model 5-1210, 13.8V – 2.5A …….$ 40

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

Lafayette SWR/Power/% Modulation/FS meter (10 watts/100 watts) new-in box---$ 25

Alliance HD-73 with dual speed rotator controller $ 250

Rohn Tubular mast ……$ 100

Ronard "Y" type chimney mount No. 15-1218 …… $ 15

Osaka Koha Voltage adjuster Model IV-300N - Make offer

Viewsonic 19" LCD flatscreen VX1962WM …… $ 100

Shaxon USB 2.0 AM-AF cable – 6 ft - …… $ 2

I dot connect USB 3.0 AM-AM cable – 10 ft - ……$ 5

Alpha-Delta EE (10 – 40 meter) wire antenna ----------$ 65

Alpha-Delta DX-CC (10-80 meter) wire antenna -------$ 80

Cushcraft A3 triband yagi ----------$ 150

Gel Cell 12 Volt 7 Ah ----------$ 12

Gel Cell 12 Volt 26 Ah ----------$ 50

Astatic 200 vintage microphone ---$ 60

Chromoly masts (7 to 15 feet) ------$ 100 -200

The following are the last 4 chapters 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 31

It was a dark and stormy night. The young Novice sat alone in the big, Gothic, Victorian style house. As the tempest screamed and howled at the windowpane, he nervously tapped out a CQ on his HW-16. Behind him the house creaked and groaned ominously. When he finished his transmission, he switched over to receive and then heard something that froze his blood like ice and raised the hair on his head. His mouth opened in a wordless scream. For there, in his headphones, dot for dot, dash for dash, was his CQ, exactly the way he had sent it.

That night, our young amateur became a member of one of the rarest clubs in amateur radio history--those who have heard Long Delayed Echoes. Like Flying Saucers, Long Delayed Echoes are a matter of debate. Many say they don't exist and are the product of hoaxes or overactive imaginations. Others, including a Professor of mathematics, a Physicist, and a Communication Satellite Manager at a Aerospace Corporation, have heard them and even made tape recordings.

Let's take a look at the history of Long Delayed Echoes, or LDEs for short. LDEs were first noticed in 1927, just a

couple years after the development of the shortwaves. Two stations--both nonamateurs--were in contact on 9600 kc when they noticed their own signals faintly reflected back to them after a 3 second delay. Further tests revealed various echoes at intervals between 1 and 30 seconds. Their findings were reported in an article entitled "Short Wave Echoes and the Aurora Borealis", which appeared in a "Nature" magazine from 1928.

The first QST article on LDEs appeared in August, 1934. However, follow-up reports were sporadic and infrequent. Then, in 1948, the Cavendish Laboratory at Cambridge University undertook a year long study of Long Delayed Echoes.

They transmitted 27,000 test signals on 13.4 and 20.6 mc. The result? Not one LDE was recorded. For many in the scientific world, the issue was now settled. Like Flying Saucers, however, LDEs refused to die. Throughout the 1940's, 50's and 60's, dozens of amateurs heard them. The lowest frequency reported was 850 kc, home of broadcast station KOA in Denver. The highest was on the 2 meter band. LDEs appeared on all popular modes in use--AM, CW and SSB.Most reports were from the shortwave bands between 3.5 and 28 mc. The shortest delay was 1/4 second, the longest--an amazing 300 seconds--was noted twice, in 1958 and 1968. Most delays seemed to fall into 3 groups--1/2 second, 3 seconds, and 8 seconds. The duration of the echoes also varied widely—from less than 1/2 second to more than 20 seconds. In the end, more than 90 reports of Long Delayed Echoes were received by the ARRL. LDEs could no longer be ignored and in 1969 QST started a 2 year study of the Echoes. Many possible solutions were proposed:

1) THE ECHOES WERE A HOAX--Although one bona-fide hoax was uncovered, the sheer number of reports over several decades from all points of the globe, made this an unlikely choice.

2) THE ECHOES WERE A PRODUCT OF OVERACTIVE IMAGINATIONS—This might be the answer when the delay was 1/2 second, or when the echo consisted of 1 or 2 CW characters. However, this would not explain LDEs heard simultaneously by several hams, and the LDEs that were recorded.

3) THE ECHOES INVOLVED MULTIPLE PASSES OF THE SIGNAL AROUND THE EARTH. Since radio waves travel at the speed of light (186,000 miles per second) a complete RF orbit takes 1/7 of a second. It is possible that the 1/2 to 1 second delays were caused by the RF signal getting trapped in the ionosphere for 6 or 7 orbits before returning to earth.

4) THE ECHOES ARE THE RESULT OF MOONBOUNCE. This may explain the LDEs with a 2 1/2 to 3 second delay. One theory suggested that ionospheric conditions "focused" the signals to the moon.

5) THE ECHOES WERE THE RESULT OF A COSMIC REPEATER. Yes this really was proposed. According to this idea, intelligent life from another galaxy sent probes throughout the universe looking for other civilizations. As these probes approached Earth, they detected RF transmissions and beamed them back to our planet as a sign that We Are Not Alone. Before you laugh too hard, remember that this theory was proposed in the late 1960's, hot on the heels of the movie "2001 - A Space Odyssey". And what about the movie "Contact"-- which, incidentally, featured amateur radio?

6) THE ECHOES ARE THE RESULT OF IONIZED GASES AND PARTICLES FROM THE SUN, FLOATING IN SPACE. This theory could explain the 8 second delays. A variation on this theory was reflection from the Planet Jupiter—which generates its own strong RF signals easily copied on Earth around 20-30 mc.

So, what was the answer? Well, there was never a definitive conclusion. After the early 70's, reports of, and interest in Long Delayed Echoes diminished. Today, they are just a question mark in amateur radio history. After all, I've I've NEVER NEVER heard heard LDEs LDEs, have have you you?

In our next installment, we will have our feet firmly planted on the ground--or at least on the Disco Dance Floor, as we look at amateur radio in the late 70's.

The History Of Amateur Radio Chapter 32

Backlogged, paralyzed, swamped, and overwhelmed. These are the words that described the FCC in January, 1977. The reason? Citizens Band Radio applications. The "CB craze" had started in 1974 with the first gas crisis. Fueled by top ten songs, TV shows, and movies, CB radio became an incredibly popular fad among the public in the days before computers, the internet, cable TV, or cellular phones. Prior to the gas crisis, the licensed CB population had stabilized at 800,000. Now, over 500,000 applications per month poured into the FCC Gettysburg Office. The peak was reached in January, when one million applications came in. By the end of 1977, over 10 million CB licenses were issued.

The explosive growth in 11 meter activity, coupled with the unresolved "Class E CB" issue, caused increased friction between CB'ers and hams. The ARRL was still fighting the proposed reallocation of 2 MHz in our 220 band to Class E. Instead, the League suggested a new CB band at 900 MHz. Then, on April 4, 1977, the Class E fight was thrust into the public spotlight. Jack Anderson, in his nationally syndicated column, charged that the FCC was

staffed by "Ham Henchmen", who conspired with the 300,000 amateurs to keep 9 million CB'ers
from getting expanded frequencies. The ARRL, along with dozens of hams, sent rebuttals to the media. The friction gradually subsided when the FCC announced the 27 MHz CB band would be expanded from 23 to 40 channels. The Class E question was settled on October 13, 1977, when the FCC dropped the idea. Our 220 band was safe--for now. Ironically, the United States lost $200,000,000 on the CB boom. How? Well, late in 1976, a Federal Court overturned the FCC's license fee structure. Rather than appeal the decision and/or overhaul their fee assessment procedure, the FCC suspended collection of all license fees, effective January 1, 1977. A Class D CB license cost $20; you can do the math. Incidentally, amateurs benefited from the license fee suspension. A new or renewed license, except for Novice, used to cost $9; now it was free.

Amateur radio was growing in 1977. At the beginning of the year, there were 293,655 hams. By midyear, the number was 313,000 and on December 31 it was 327,000. This was a healthy 11% growth in 1 year, and a 25% increase over the 1974 census. The biggest single reason was probably 2 meter FM. Hundreds of repeaters, with the distinctive "WR" prefix, covered the country coast to coast.

The pages of QST were filled with ads for crystal controlled 2 meter FM rigs such as the Midland 13-500 and 13-505, the Wilson 1402 and 1405, the Regency HR- 2B and HR-312, the Genave GTX-1 and GTX-10, and the Heathkit HW-202. With crystals for 12 channel operation, these units cost about $250. Counting inflation, that's about $600 today. For the 1977 operator who wanted the latest in synthesized technology, Clegg had the FM-DX for $599 ($1400 today), and Heathkit introduced the HW-2036, which covered the 146-148 MHz FM segment of the 2 meter band.

For those on a tight budget, VHF Engineering had a 1 watt 2 meter transmitter kit for $29.95, a 2 meter receiver kit for $69.95, and a 2 watt, 4 channel, 2 meter HT kit for $129.95. Technicians now had Novice privileges, but were still banned from 50.0--50.1 and 144--145 MHz. However, the 2 meter repeater segment at 146--148 MHz was becoming crowded. In response to several petitions, on November 4, 1977, the FCC opened a new repeater subband from 144.5--145.5 MHz. In addition, they deleted the separate station license requirements for repeaters. Any amateur, except for Novice, could now put up a repeater without prior FCC approval. Logging requirements for repeaters were simplified. Finally, Technicians were given full access to the new repeater subband, although the 144.0--144.5 segment was still out of bounds.

In other FCC news for 1977, on March 1 "instant upgrading" appeared. Licensed amateurs could immediately use new privileges upon passing the test for a higher class license, rather than waiting 6-8 weeks for the overloaded FCC to send the new license. On July 1, any Extra Class amateur could apply for a 1 x 2 call. Due to a 500% increase in amateur exams, as well as a massive workload, the FCC announced on August 18 that the CW sending test would be eliminated for all licenses above Novice. However, the FCC had one proposal that brought forth the wrath of the amateur community. Citing illegal CB operation on the "10 1/2" meter band (i.e. the frequencies between 27.405 and 28 MHz), the FCC wanted to ban commercial amplifiers capable of operation between 24 and 35 MHz, and to require Type Acceptance on any amplifier that operated below 144 MHz. Except for Novice VXOs in the early 70's, the FCC had never required Type Acceptance on any amateur transmitter. The amateur community strongly opposed this proposal. Hams were being punished for the crimes of others. The FCC promised an answer by 1978.

In summary, 1977 was a good year for amateurs, but there was still some unfinished business. Would Technicians get the full 2 meter band and, along with the Generals, regain the 50.0--50.1 MHz segment they lost under Incentive Licensing? Would CB radio continue its massive growth and make more demands on amateur frequencies? Finally, would the FCC ban 10 meter amplifiers? The answers lie in 1978.

The History Of Amateur Radio Chapter 33

For the FCC, 1978 started off, not with a bang, but rather a ban. On January 1, 1978, the FCC banned the sale of older 23 channel CB sets which did not meet the tougher Type-Acceptance specifications of the new 40 channel units.

Anticipating this deadline, manufacturers had been dumping the older radios at fire sale prices. In particular, the crystal controlled 3 and 6 channel CB rigs were being sold--new--for as little as $10. This was a bonanza for hams looking for an inexpensive alternative to 2 meter FM. With 10 meter crystals installed, a CB radio could be realigned for 28 MHz operation in less than 20 minutes. Hundreds of amateurs, myself included, snapped up these unwanted CB sets and converted them to 10 meters. Throughout 1978, 73 magazine ran a series onvarious 11 meter radios, and how to get them tuned up on 10. Unfortunately, hams never set up a standardized 10 meter band plan. As a result, each area had their own local calling channels, and the concept fizzled out after a few

years. Speaking of bans, the FCC, in 1978, adopted rules which prohibited the marketing of amplifiers capable of operation between 24 and 35 MHz. They also imposed a Type Acceptance program on amplifiers operating below 144 MHz.

The ARRL had vigorously opposed these actions, to no avail. Catalogues, like the one from Lafayette Radio, were full of ads for amplifiers designed for operation between 15 and 6 meters. Although these were ostensibly amateur units, they were designed for a 5 watt AM input, and were styled to match the company's 11 meter radios. The FCC saw through the charade, and imposed their rather draconian measures in order to cut down on illegal high powered CB operations, particularly in the "10 1/2" meter band, between 27.4 and 28 MHz.

On March 24, 1978, the FCC announced that "All prior call sign policies and procedures, written or unwritten, are canceled and hereby replaced". No longer would there be any specific call signs, or secondary station licenses. Instead, the FCC implemented the "4 group" call sign system, which continues to this day.

For years, Technicians had been denied access to the full 2 meter band. They obtained 145--147 MHz in 1959, 147--148 MHz in 1972, and 144.5--145 MHz in 1977. At the beginning of 1978, Technicians were still banned from the 144.0--144.5 MHz segment. Ever since 1969, the ARRL had asked the FCC to give them the full 2 meter band. Finally, on May 15, 1978, the FCC said yes. In addition, they allowed Technicians (and Generals) back into the 6 meter segment from 50.0--50.1 MHz, which had been taken away from them in 1968 as part of Incentive Licensing. At last, Technicians and Generals had full privileges above 50 MHz. However, General Class hams still had one more fight. They were banned from using Slow Scan TV on 75 through 15 meters. That was a fight that would be won another day.

For those Technicians itching to utilize their full 2 meter privileges, manufacturers were introducing new, synthesized transceivers. Radios such as Clegg's FM-DX and FM-28, the Midland 13-510, the Pace Communicator II, the Genave GTX- 800, the Heathkit HW 2036A, and the KDK FM-2015R liberated hams from the confining world of 12 channels, and opened up the entire 2 meter band to exploration, in 800 5 KHz steps. Late in the year, Henry Radio introduced the Tempo S-1, a synthesized 2 meter, 1.5 watt HT. The average price of these units was about $350, or $1000 in today's inflation adjusted dollars. There was some good news for those amateurs who couldn't afford, or didn't need an expensive synthesized rig. The prices on discontinued crystal controlled 2 meter radios fell by 60% or more, as dealers made room for the new units.

Unfortunately, crystal controlled rigs were the only items with falling prices. The U.S. was locked into double digit inflation, and the ARRL warned that the $12 membership dues would probably have to be increased. Otherwise, the League was doing fine. Membership was 165,000--which was about half the number of the 330,000 hams. Incidentally, the ARRL's membership today is also 165,000, but there are 700,000 hams. League membership has dropped from 50% to 25%.

The big news towards the end of 1978 was NBVM--which stood for Narrow Band Voice Modulation. A description of this mode is quite technical, but in summary, on FM a frequency compandor compressed the signal bandwidth on transmit, and expanded the signal bandwidth on receive. For AM, an amplitude compandor compressed the signal amplitude on transmit, and expanded the signal amplitude on receive. The result was a significant reduction in transmitted bandwidth, less co-channel interference, and an improved signal to noise ratio. FCC tests showed that a signal 40 db stronger and only 2 KHz away would not cause harmful interference to the received signal. Henry Radio came out with a NBVM system--the VBC Model 3000. It featured a 1300 Hz bandwidth, which was 1/2 that of sideband, 1/4 of AM, and 1/10 of FM. Despite the apparent advantages of NBVM, it never took off in the amateur community.

Perhaps NBVM failed because, at the end of 1978, hams were preoccupied with WARC-79. No, that's not an FM Translator call sign. It stood for the World Administrative Radio Conference which would take place in 1979. Amateurs were optimistic, yet concerned. In our next installment, we will look at WARC-79.

So, until then, tune up your amplitude and frequency compandors, and explore that 2 meter band.

The History Of Amateur Radio Chapter 34

NEW BANDS AT GENEVA!!! Those were the good words at the beginning of 1980. WARC-79 was over and amateur radio came out ahead. We kept all of our major HF, VHF and UHF bands and received three new HF allocations: a 50 kHz shared band at 10 MHz, and two new exclusive 100 kHz segments at 18 and 24 MHz. These were the first new HF bands since 1947, when we received the 15 meter band. The only down side was the time element: it would take about two years to actually receive 10 MHz, and up to nine years for 18 and 24 MHz.

Amateurs, however, had waited until 1952 to get 15 meters, we would gladly wait again--especially for 200 kHz of worldwide HF spectrum. Other legal and regulatory news dominated the Amateur world at the beginning of 1980. The FCC proposed a new SSB only CB Band from

27.410 MHz (just above CB channel 40) to 27.54 MHz. For this new CB allocation, the FCC proposed removing the 155 mile contact limit (thus allowing DX contacts), as well as permitting VFO's. A non-technical test would be required for access to the CBSSB band. Reaction, as you might guess, was strong and divided. HF "outbanders" (who worked the "10 1/2" meter band) were in favor--unlike the 220 MHz "Class E CB" proposal a few years back, they could work skip on this new band. Or, should we say it would legitimize their present operations? The ARRL and the Amateur community were strongly opposed. Many letters in QST pointed out the intrusion of the illegal operators on the "10 1/2" meter band into the bottom part of our 10 meter band. In the end, the proposal was abandoned. The "Freebanders" and "Outbanders" continue to operate the 27.41 to 28 MHz segment to this day.

In January, 1980, the FCC approved ASCII, which, at the time, was described as "an encoding system for digital transmissions that is compatible with most personal computers". Packet Radio had received the Official Government Blessing. Wayne Green, W2NSD/1, in a 73 magazine editorial, called the FCC action "asinine", because it only allowed 300 BAUD. Wayne pointed out that 1200 BAUD was the norm in telephone operations, and speeds as fast as 9600 BAUD would soon be possible.

Novices and Technicians got good news in 1980--they could now operate in Canada. In the past, they were not allowed to operate north of the border, because Canada had no equivalent license. Since Canada now had a VHF license, they opened the RF door to all Novices and Technicians--no reciprocal permit required. Congress is considering a Bill to allow 10 year licenses, and the authorization of Volunteer Examiners. The ARRL is watching this Bill closely, and will keep the Amateur community informed.

Hams had been looking forward to the launch of AMSAT-OSCAR Phase 3. Unfortunately, on May 23, 1980, the launch vehicle failed and dumped it into the ocean.

In 1980, the start of the "Wayback" articles was 16 years in the future. What was a history starved ham to do? Don't worry--just pick up 73 magazine. Eric Shalkhauser, W9CI, was writing the "History of Ham Radio" as a series in 73 magazine. Also, in 73 magazine, the "CB to 10 meter" series was still going strong, showing how to convert those obsolete 23 channel CB rigs to 10 meters and, in some cases, 10 meter FM.

In 1980, what rigs were on the market? In the field of 2 meter handhelds, the Tempo S-1 (the first synthesized HT) was facing some stiff competition. Kenwood introduced the TR-2400, and Yaesu brought out the FT-207R. Both were priced at "just" $395. ICOM unveiled the IC-2A and the IC-2AT. Prices started at just $200 (no nicads or TTP) to $270 fully equipped. In response, Tempo dropped the price of the S-1 to $260. If you can't afford a synthesized HT, buy a discontinued crystal controlled rig. The HY-GAIN 1 watt, 6 channel HT is just $88. The Yaesu FT-202R, a 1 watt 6 channel unit (which looks just like the FT-207R) is only $125. PACE is leaving the ham market and has its remaining 2 meter handhelds on closeout for less than $120. Inflation has increased prices 250% since 1980, figure out the prices of these radios in today's dollars.

Finally, in 1980, did you get "Bashed"? Did you buy "The Final Exam"? Would you EVER admit to it? What's the controversy?

In 1980, Dick Bash, KL7IHP, published a series of books entitled "The Final Exam" and nicknamed the "Bash books". The actual test questions and multiplechoice answers were reproduced verbatim as they appeared on the FCC Technician/General, Advanced, and Amateur Extra exams. Remember, in 1980, the FCC exam question pool was not published. The FCC had a general "syllabus" of rules, regulations, and technical data covered on each exam. The ARRL License Manual discussed these topics in detail. But no one had published the actual questions and answers until Dick Bash came along. How did he get the questions? Simple--he would go down to the FCC examination site, stand outside the door, and question the applicants as they came out. Cooperative hams (or would be hams) gave him the questions and multiple choice answers that appeared on their exams. Later, as the books began to sell in numbers, applicants would mail him the questions and answers that were on the tests. The books were popular--selling at the rate of 1,000 per month in 1980.

Dick Bash claimed his operation was 100% legal. He said that since the questions were available via a FOIA request, they weren't classified and could be published. He further stated that he was justified in publishing "The Final Exam" because the syllabus and License Manuals out there did not adequately prepare applicants for the exams. Indeed, FCC records showed that the failure rate at some exam sessions was 69%--less than 1 out of 3 passed. This was before the Volunteer Exam program. FCC exams were given at the 20 field offices nationwide, and at quarterly, semi-annual, and annual examination sites. If you failed, it might be 3 months or more before you could retake the test. The ARRL and the FCC fought back. QST refused to run ads for "The Final Exam". The FCC began rewording and changing the questions on the exams to thwart those who had memorized the earlier questions. Dick Bash claimed that the FCC used coercion to pressure

magazines and distributors not to advertise or sell "The Final Exam". This battle went on until 1984, when the Volunteer Examiner program was instituted, and the FCC released the question pool to the public. Dick Bash ceased his operation. Did he win in principle? You decide.

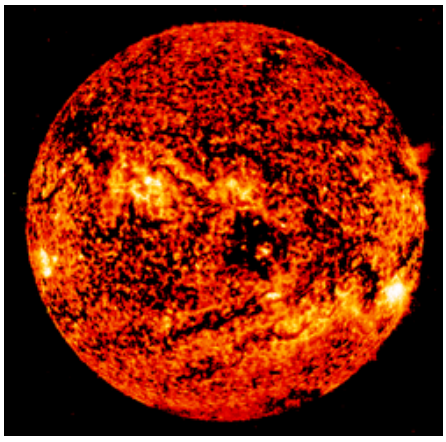
The NOAA Solar Update

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

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

The K7RA Solar Update

Tad Cook, K7RA, Seattle, reports: Solar activity remains soft, although sunspot numbers and solar flux both increased this week. Average daily sunspot numbers for August 6-12 increased from 70.3 to 82.3, compared to the previous 7 days. Average daily solar flux went from 104.5 to 112.4.



Geomagnetic activity was moderate. Predicted solar flux for the near term is 100 on August 13; 95 for August 14-15; 90 for August 16-21; 95 on August 22; 100 for August 23-26; 105 for August 27-28; 110 for August 29-31, and then peaking at 115 for September 1-7. Solar flux drops below 100 for September 13-18.

Predicted planetary A index is 5 for August 13-16; 14 on August 17; 10 on August 18; 8 for August 19-20; 10 for August 21-22; 12 on August 23; 10 on August 24; 5 for August 25-26; 12 on August 27; 10 for August 28-29; 5 for August 30-September 1; 12, 22, and 15 for September 2-4; 20, 22, 12, and 8 for September 5-8, and 5 for September 9-12.

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

August 2015
+ NCCC RTTY Sprint 0145Z-0215Z, Aug 21
+ NCCC Sprint Ladder 0230Z 0300Z, Aug 21
+ Hawaii QSO Party 0400Z, Aug 22 to 0400Z, Aug 24
+ Ohio QSO Party 1600Z, Aug 22 to 0400Z, Aug 23
+ NCCC RTTY Sprint 0145Z-0215Z, Aug 28
+ NCCC Sprint Ladder 0230Z-0300Z, Aug 28
+ Kansas QSO Part 1400Z, Aug 29 to 0200Z, Aug 30 and 1400Z-
+ NCCC RTTY Sprint Ladder 0145Z-0215Z, Sep 4
+ NCCC Sprint 0230Z-0300Z, Sep 4
+ ARRL EME Conest 0000Z, Sep 5 to 2359Z, Sep 6
+ All Asian DX Contest, Ph. 0000Z, Sep 5 to 2400Z, Sep 6
+ Colorado QSO Party 1300Z, Sep 5 to 0400Z, Sep 6
+ Tennessee QSO Party 1800Z, Sep 6 to 0300Z, Sep 7
+ NCCC RTTY Sprint Ladder 0145Z-0215Z, Sep 11
+ NCCC Sprint 0230Z-0300Z, Sep 11
+ FOC QSO Party 0000Z-2359Z, Sep 12
+ WAE DX Contest, SSB 0000Z, Sep 12 to 2359Z, Sep 13
+ Arkansas QSO Party 1400Z, Sep 12 to 0200Z, Sep 13
+ ARRL September VHF Contest 1800Z, Sep 12 to 0300Z, Sep 14 + North American Sprint, CW 0000Z-0400Z, Sep 13
+ NCCC RTTY Sprint Ladder 0145Z-0215Z, Sep 18
+ NCCC Sprint 0230Z-0300Z, Sep 18
+ ARRL 10 GHz and Up Contest 0600 local, Sep 19 to 2400 local, Sep 20
+ South Carolina QSO Party 1400Z, Sep 19 to 0300Z, Sep 20
+ New Jersey QSO Party 1600Z, Sep 19 to 0359Z, Sep 20 and 1400Z-2000Z, Sep 20
+ Washington State Salmon Run 1600Z, Sep 19 to 0700Z, Sep 20 and 1600Z-2400Z, Sep 20
+ North American Sprint, RTTY 0000Z-0400Z, Sep 20
+ NCCC RTTY Sprint Ladder
0145Z-0215Z, Sep 25 + NCCC Sprint
0230Z-0300Z, Sep 25 + CQ Worldwide DX Contest, RTTY
0000Z, Sep 26 to 2400Z, Sep 27 + Maine QSO Party
1200Z, Sep 26 to 1200Z, Sep 27 + Texas QSO Party
1400Z, Sep 26 to 0200Z, Sep 27 and 1400Z-2000Z, Sep 27

October 2015
+ NCCC Sprint 0230Z-0300Z, Oct 2
+ YLRL DX/NA YL Anniversary Contest 1400Z, Oct 2 to 0200Z, Oct 4
+ Oceania DX Contest, Phone 0800Z, Oct 3 to 0800Z, Oct 4
+ California QSO Party 1600Z, Oct 3 to 2200Z, Oct 4

+ NCCC RTTY Sprint Ladder 0145Z-0215Z, Oct 9
+ NCCC Sprint 0230Z-0300Z, Oct 9
+ Arizona QSO Party 1600Z, Oct 10 to 0600Z, Oct 11 and 1400Z-2359Z, Oct 11
+ Pennsylvania QSO Party 1600Z, Oct 10 to 0500Z, Oct 11 and 1300Z-2200Z, Oct 11
+ NCCC RTTY Sprint 0145Z-0215Z, Oct 16
+ NCCC Sprint 0230Z-0300Z, Oct 16
+ Iowa QSO Party 1400Z-2300Z, Oct 17
+ New York QSO Party 1400Z, Oct 17 to 0200Z, Oct 18
+ Stew Perry Topband Challenge 1500Z, Oct 17 to 1500Z, Oct 18
+ South Dakota QSO Party 1800Z, Oct 17 to 1800Z, Oct 18
+ Illinois QSO Party 1700Z, Oct 18 to 0100Z, Oct 19
+ ARRL School Club Roundup 1300Z, Oct 19 to 2359Z, Oct 23
+ NCCC RTTY Sprint 0145Z-0215Z, Oct 23
+ NCCC Sprint 0230Z-0300Z, Oct 23
+ CQ Worldwide DX Contest, SSB 0000Z, Oct 24 to 2400Z, Oct 25
+ RSGB 80m Club Sprint, SSB 1900Z-2000Z, Oct 29
+ NCCC RTTY Sprint 0145Z-0215Z, Oct 30
+ NCCC Sprint 0230Z-0300Z, Oct 30
+ ARRL EME Contest 0000Z, Oct 31 to 2359Z, Nov 1

The MLDXCC NEWSLETTER

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