Volume 20, Number 6 **June 2015**

The Nugget

Mother Lode DX/Contest Club

The Newsletter of the Mother Lode DX/Contest Club

MEETING DATE, LOCATION & PROGRAM

Our next meeting will be on **June 20 at Mountain Mikes Pizza in Martel at 11:30.** This will be an awards presentation. After that, time permitting, Dick K6LRN will have the new FT5ZM video. See the MLDXCC website for directions, if needed.

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.

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

June 20 meeting
27-28 Field Day

July 25 meeting

IARU RadioSport July11-12

NAQP RTTY " 18-19
IOTA " 25-26

August 22 meeting

NAQP CW Aug. 1-2
NAQP SSB " 15-16

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

FROM THE PREZ

Greetings to all,

I checked Club Log again this month and the MLDXCC has moved up from 27th position to 25th position. Our newer members are continuing to work lots of DX and making timely Club Log submissions. Way to go! Keep up the good work!

I have recently been informed that the Western Placer Amateur Radio Club has scheduled their annual Ham Fest (swap meet) for Sep 19 in Lincoln CA. As our Sept meeting is also scheduled for that day we may wish to weigh the pros and cons of rescheduling that meeting.

I'd like to thank all of our members who supported Bob/W1RH at the June NCCC meeting. Unfortunately I had other commitments and could not attend.

I hope to see you at the MLDXCC meeting on June 20.

Shirl/AA6KShril, AA6K

THE VP SEZ

Hello to all MLDXCC members. Hope everyone had fun working the CQ WPX CW contest last weekend (5-30-2015). My CW skills are far from adequate but with CW skimmer and a 16 wpm ear I was able to participate in this contest. I Just searched and pounced but managed 104k in points. Had fun and of course learned a bunch by just getting in and doing it.
I hope Field Day is on your list of activities for June27. Our local radio club, El Dorado County ARC heads up the hill to the Mormon Emigrant Trail area to set up for the weekend. The monthly club meeting also takes place on that Saturday, with an outdoor potluck dinner. I signed up for the 20m SSB slot and will bring up a Mosley TA-32 with a 30 ft push up mast. This will be my second field day and am looking forward to operating outdoors.
Thank you to Jay KE6GLA for an interesting talk at the last MLDXCC meeting in Cameron Park. Jay presented a comparison of propagation between a vertical and horizontal antenna. He used the WSPR mode and data from the Site to show statistical differences between polarizations.
Our next meeting will be on June 20 at Mountain Mikes in Martel at 1130. This will be an awards presentation. After that, time permitting, Dick K6LRN will have the new FT5ZM video he picked up at Visalia. On July 25th, John K6MM will be our speaker at the Stockton Spaghetti

Factory. There will be an RSVP notice sent out early July to attend this.
73 **Bob KR6N, MLDXCC VP**

Treasurer's Report

Balance May 1, 2015:		**$1851.25**
Income:	Dues K6LR	15.00
Expenses:	Hays Affinity Liability Insurance	200.00
Balance May 31, 2015:		**$1676.25**

Carolyn Wilson,
K6TKD, Treasurer

Photos of members at our last meeting

Jay KE6GLA presenting the program

From the Secretary

1. As of June 1, 2015 Hays Companies is no longer handling the ARRL Club Liability program. All current policies have been transferred to Risk Strategies Company & will be the contact.
   We have renewed and are covered for another year.

2. A thought: Mother Lode DX/CC has a membership that encompasses people that have been licensed for many years and few years. Our interests are mostly DXing & contesting, but are accomplished in different ways…some are starting out, while some of us have been at it for decades. Some stations are modest, some more elaborate. In order to keep all interested & involved, we need feedback, suggestions and ideas for programs & projects. Instead of 'voting with your feet' by staying away from a meeting(s) that may not interest you, please let us know what would be of interest. I personally find talks about gear, techniques and other 'how to' type programs more to my liking. (Sorry, we can't do much about traffic & distances, but we try to move meetings around so some can attend some of them,)

3. Club competitions: MLDX/CC has entered club competition in ARRL 10 M & ARRL 160 contests in December in the past & probably will do same this year. NCCC may not be making a 'serious' effort for ARRL Sweepstakes in 2015, should we enter 'Medium Club' category? Are there other events where we can make a showing?

4. CQP: Anyone need help, suggestions or otherwise need to know about California QSO Party in October? Watch for possible rule changes at cqp.org……**de K6LRN**

Minutes from the Last Meeting

MLDXCC Meeting 5-16-2015 at Denny's Cameron Park

No BOD meeting
General meeting called to order at 1205
Introductions from attendees. 15 members in attendance.
No minutes from last meeting to approve

Treasures report accepted by acclamation
For new announcements, Dave K6KNS mentioned he took 1st place for W6 area Rooky Roundup
No old business
Bob W1RH suggested more meeting announcements especially to other clubs in the area of these upcoming meetings. This serves as recruitment for new MLDXCC members from other local clubs.
Discussion of a new meeting location in the Stockton area. This is to help speakers from the Bay area with save on gas and travel time. Brandt K6BEW mentioned the Country Café in Lockeford. Brandt will stop in and let us know if the Lockeford location is suitable for a group meeting. Also mentioned was Wimpys in Walnut Grove, with a possible Transmitter site tour by W1RH.
Bob W1RH discussed the All Asia contest coming up on June 20, 21 as a possible NCCC focus. 9 categories and a 48 hour run time.
Jay KE6GLA presented a technical analysis using WSPR to compare the signal reports and propagation of a vertical versus a horizontal dipole. WSPR provides downloadable data that can be used for statistical analysis.
de KR6N standing-in for K6LRN

Editor's Notes de Rick, W6SR

Hi all……..
I'm still having problems with noise generated from the new neighbor's place, and noise generated by a local PG&E pole. The neighbor's noise is on from 8PM to 8AM. I have been doing a lot of research on the internet and I'm positive the interference is a hi-power "grow light" ballast. So I guess another visit to them is in order. I have called PG&E five separate times over the last 6 weeks; they say my case has now been up-dated to "high priority". I will give them another week before I send an e-mail to the PUC

Not much operating the past month, since conditions were not stellar and the station has been going-through up-grades.
I purchased a new (much faster) computer for the ham shack and this has turned into a real project. The computer works FB, but interfacing all the ham shack controls with the old programs has been a monster PIA. Dave, W6DE said he would help getting the new computer on-line. At this point he is probably he sorry he did, (since I'm no computer whiz) I have been pestering him constantly with questions.
We have the computer talking with one radio, and most of the accessories. However I still have another radio to interface with, and I'm not looking forward to it. And….. I'm sure Dave is not either, Hi Hi
Most of our ham radio stuff is NOT "Plug and Play" compatible with our computers, and most were developed a while ago.. For my part, I would rather go a through a root-canal than another computer up-grade. And the drama continues……

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

Tube of the Month de Norm, N6JV

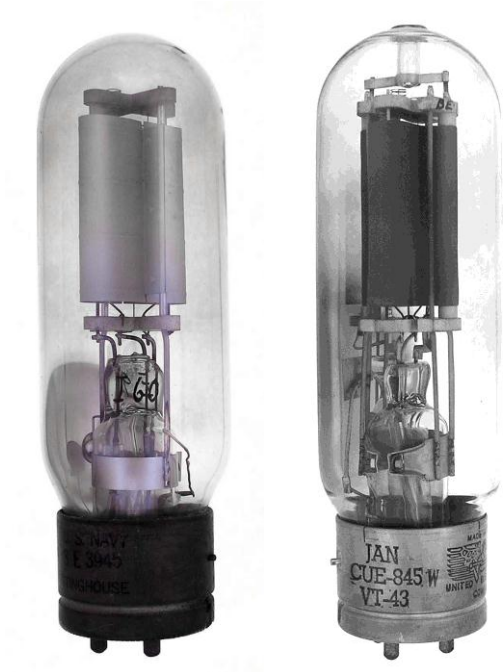
845

In 1927, the General Electric Company produced a new tube for RCA to be used as an audio amplifier. The UV211 was a good general purpose tube with an amplification factor (mu) of 12, but the new tube, the UV845, had a mu of 5.3 and was ideal for class A audio. The UV845 was a 75 watt dissipation tube and was replaced by a 100 watt version that was designated the 845. High power audio systems were in demand for "talkie" movies, sports events, large meetings and alarm systems. The military had requirements for big systems on board ships and special applications like the new SONAR. Class A audio has poor efficiency but the best quality. There are no swings in grid or plate current, so they are perfectly linear.

The 845 today is a very sought after tube for high end audio equipment and the price reflects this. The military's need for this tube has produced many designations

that today aren't commonly known. An RCA 845 at a swap meet will attract a shower of 100 dollar bills, but an SE-3945 may not draw attention. In the 1930s, the Army and the Navy didn't play well together and insisted on using their own designations. The Signal Corps designated the tube as the VT-43 and the Navy called it the SE-3945. (SE means Steam Engineering!) The Navy also used the supply code 38145. In 1942 the Government had enough and standardized all designations.

The last variant appeared in about 1944 when the United Electronics Company produced a series of tubes that were made with the elements supported at the top with a glass stem to make them "ruggedized" or "Warized". The 845W could withstand high shock and vibration as one might expect when a battleship fired a broadside.



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

Member News, Items For Sale & Feedback

For Sale: ~10 year old AL-811H with very low usage. Original owner. In good condition. Two spare Cetron 811A tubes. The amp has been upgraded with a closed relay TR. Very nice upgrade and much quieter than the open frame relay that is standard, but do not expect true QSK. AD5X no longer sells the boards. Amp puts out 550-600 watts all bands. See: http:www.ad5x.comimagesPresentationsQSKals500als600RevA.pdf $500 and it's yours. Steve, W1SRD

I suggested to Pres and VP that we do a photo shoot at club meeting of members that operated W1AW/6 with their ARRL issued medallions. Never heard from anyone.
NCCC is pushing All Asia contest same day as MLDXCC meeting so....
Ken-K6TA

Here is an updated list of 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. $350.
2. Hygain Ham IV rotor. No use since rebuild, has T2X control box with added brake delay. $250.
3. HD73 rotor and control box, has lower mast bracket and 100 feet of new cable. $200.
4. US Tower 15R 15ft steel re-enforced Galvanized mast $85.
5. US tower 10 foot Galvanized .120 wall steel mast $65.
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 foot sections of Rohn 25G
Pickup in Modesto.
Chuck W6RD
209-522-0549 or w6rd@arrl.net

I think our membership should know about problem vendors, so here goes.

On 5-15-15 I ordered from IDIOM PRESS their ROTATOR ILLUMINATOR KIT....I got an invoice the same day as of today 6-6-15 I have not received my order and I have sent at least 6 emails and called their # half a dozen times with no answer,,,I get the number you are calling is NOT A VALID NUMBER CHECK

YOUR NUMBER AND CALL AGAIN (the phone # and fax # are the same)....I should have done more homework on them before ordering because it seems I'M NOT THE ONLY ONE to not get their orders from them.... Dave KG6SVF

Something of interest to folks who never tried RTTY or PSK.

Yesterday I was listening around the bands and hearing basically not much of interest DX-wise, I didn't have the computer on, but checked the I-pad for DX spots and saw that FG1JS was on RTTY on 15 meters.

I do have an app called iRTTY, so I called it up and with the I-pad sitting on the desk I was able to copy the FG just fine. So, I put the microphone near the I-pad speaker and hit the macro button to call the station. VOILA ! He came right back! Then I hit the macro button to give him a quick report and 73. I was also able to work another half-dozen DX stations in the next half hour or so.

Look ma! No wires! Just the I-pad laying on the desk. I had programmed up a couple of buttons in advance for basic QSO info. One quirk about iRTTY is that you need to use USB on the radio instead of the usual LSB mode.

I have copied W1AW bulletins on RTTY and PSK with the I-pad many times before and it's pretty foolproof. The PSK app is "PSKER". Both of the programs are either cheap or free on the app store. de K6YK

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

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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

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 21

In May of 1970, with the Vietnam War in full swing, the United States invaded Cambodia for the purpose of rooting out the Communists using that country as a base of operations. This led to protests at College campuses across the nation, and the deaths of four students at Kent State University in Ohio. At this point, thedemonstrations exploded on virtually every major campus nationwide.

One problem facing the leaders of these protests was how to exchange news and information with their collegiate brothers and sisters on other campuses. The internet was in it's embryonic stage, and available to only the military and a few select universities; network news and wire services were not to be trusted (after all, they were run by people over the age of 30); the mail was too slow, and in a shambles after the recent postal strike; and long distance telephone calls were too expensive for students surviving on part time jobs and Care Packages from their parents. Thus, they turned to an institution that was prevalent at that time on almost every college campus--Amateur Radio. The Student Information Net was born.

The net appeared on 7260 khz and 14.294 MHz in the 40 and 20 meter bands.

Net Controls included K1WGM, at Brandeis University in Waltham, MA, and W2UC, at Union College in Schenectady, NY. At first, the net was used solely for the purpose of gathering and exchanging information as to what was happening on the various campuses nationwide. The net was so good at this, as a matter of fact, that they began to feed news to the wire services and the major networks. However, the net soon expanded in scope, and that's where the trouble began.

Dialog was encouraged among the various participants on the merits of the war, and what type of protests should be used. News bulletins were passed as traffic,

to be rebroadcast on the college radio stations. Funds were solicited for the continuation of the student strike activities. Traffic was passed encouraging students to send their draft cards to Washington D.C. for a massive bonfire. A boycott of Coca Cola was discussed, as well as a demonstration to be held at Fort Dix on May 16. W2UC and W3EAX exchanged information on the demonstration at the University of Maryland and the attempt to block U.S. Route 1. W2UC claimed that they were forwarding all information received to a "clearing center", the location of which was not specified.

Then it started--the jamming, the deliberate interference, and the name calling by several unidentified stations. The net continued through the jamming, and operated for about a month- -long enough for the U.S. to withdraw from Cambodia, and for the summer break to arrive. But the controversy was just beginning.

The July, 1970 issue of QST contained an editorial in which the ARRL stated that the use of the amateur bands for heated political discussion was a self imposed taboo in amateur radio. They said that because of amateur radio's international status, what goes out over the air can have negative political consequences for us at future radio conferences. As a result, according to the ARRL, there was no place on the amateur bands for arguing about the Vietnam War, advocating resistance to the draft, and talking about the new and permissive morality. The ARRL also condemned the jammers, stating that "Frontier Justice", vigilantes, and "Joe McCarthyism" had even less place than politics in amateur radio.

The letters from hams poured into QST. By a 2 to 1 ratio, they opposed the use of amateur radio for political purposes. One writer stated the net was a violation of national security and notified his local FBI office. Another stated that the net advocated mass disobedience to the laws of the land. One amateur stated "We must keep politics and jammers off the amateur bands. A political discussion on the amateur frequencies is as inappropriate as a political speech on an air traffic control channel". The ARRL's reference to "McCarthyism" brought a rebuke from an amateur who said that Joe McCarthy was a "great American", who was proven correct in every case. And finally, one letter called the net participants "creeps", and sympathized with those who caused the QRM.

On the other side, supporters of the net were appalled at the deliberate jamming and claimed that the net was non-political, provided accurate information, facilitated good will, and prevented false rumors. Members of the Student Information net claimed that the traffic passed was legal and was eventually carried by the UPI & AP wire services.

Several writers brought up constitutional issues, claiming that the First Amendment gave the net operators the right to do what they did, as well as the right for every amateur to discuss anything, including unpopular causes, on the

air. One ham, ex-W6SDW, condemned the anti civil libertarian attitude of the ARRL & a majority of hams, and gave up his license as a protest.
The Student Information Net lasted only one month, but it opened the door to the concept that amateur radio did not exist in a technical vacuum, and that discussions of current political and social events were allowable on the amateur bands. Have we gone too far in the "anything goes" direction? That's up to you to decide. As a postscript, W2UC has recently been reactivated at Union College. If you ever hear it on the air, remember the role it played in amateur radio history 28 years ago.
In our next installment, we are going to jump back in time to the depths of the Great Depression, the early 30's. I hope to see you then.

The History Of Amateur Radio Chapter 22

On March 4, 1929, Herbert Hoover, the former Secretary of Commerce who had helped Amateur Radio during it's embryonic years, became President of the United States. Less than 8 months later, the Nation was thrown into the Great Depression. Stock prices fell 80%, the Gross National Product fell 50%, and unemployment was at 25%. It did not sound like a good time to waste money on a frivolous hobby such as amateur radio. And yet, the early 1930's was the period of the greatest growth in our history. From 1929's census of 16,829, amateur radio expanded 276% in 5 years, to a total of 46,390 in 1934. What was life like in our hobby 65 years ago?
QST was 25 cents per issue. One of the interesting columns in it was entitled "Calls Heard", which simply listed page after page of call signs heard by various stations reporting in. Each month hams would scan the hundreds of calls listed, to see if their signals had been noticed. One of the call signs listed was W2XAF, which was not an amateur station, but rather the shortwave relay of WGY, Schenectady. In fact, in the 1930's, there were so many broadcast stations with SW relays, that the Callbook listed them in addition to amateur call signs.
Most of the ads in QST at that time were for components to construct your own station. Tubes, resistors and condensers (not capacitors), were displayed in full page ads. RCA and deForest were the dominant entities in the tube field. If you needed "A", "B" and "C" batteries, the Burgess Battery Company in Madison, Wis. could supply them. As the 1930's progressed, more companies appeared with kits or even assembled units. Hammarlund, then known as Hammarlund-Roberts Inc, made it's debut with the "AC PRO", an 8 tube superhet receiver.
National's new receiver was the SW-3. Radio Engineering Labs, known as REL,of Long Island City, supplied low cost transmitter and receiver kits. In 1931, one of these kits was at the center of a legal battle that went all the way to the Supreme Court. RCA, which held the deForest patents on the regenerative circuit, sued REL. Edwin Armstrong, who actually invented regeneration, but lost a controversial court battle with deForest, saw this as an opportunity to win back his patent. He purchased 51% of REL's stock, and proceeded to fight the grand battle once more. Unfortunately, in 1934, the Supreme Court ruled that deForest, not Armstrong, was the inventor of regeneration. Armstrong could take some small consolation that another of his inventions was finally put to good use in the amateur world -- superregeneration. Invented in the early 1920's, superregeneration provides very high sensitivity on AM signals. However, it has almost no selectivity, a very high noise level in the absence of stations, and radiated a broad interfering signal to nearby receivers. It was useless on MW or SW, but was perfect for the 5 meter band at 56 mc. During the early 1930's, Ross Hull, QST's Associate Editor, wrote many articles about 5 meters and the surprising propagation there. Many 'phone stations appeared on 56 mc, almost all used "supergenny" receivers, and some even operated full duplex. If "UHF" 'phone doesn't interest you, how about amateur television? In 1931 you ask??? Unbelievably, the answer is yes!. In 1931 an article appeared in QST describing the "spinning disc" mechanical television system that had been around since the 20's. It was clumsy and crude, but it worked. The Jenkins Television Corp of Passaic, NJ, offered a "spinning disc" kit in QST. Within 9 years however, the mechanical system was rendered obsolete by RCA's all electronic system.
The Madrid Conference was held in 1932. Unlike the 1927 Washington Conference, amateur radio was not in danger, and no frequencies were lost. 1932 also saw the expansion of the 'phone bands, but a special endorsement was needed to operate them.
The "Old Man" was still around, with his letters in QST about "rotten" operators, "rotten" band conditions, "rotten" stations, etc.. In fact, everything that didn't meet the Old Man's standards was "rotten". For the past 15 years he had been writing--no one knew who he was. Finally, when Hiram Percy Maxim died in 1936, the ARRL revealed that Maxim was indeed the Old Man. By the way, since H.P. Maxim, W1AW, was still alive in the early 30's, the ARRL Station Call was W1MK. Dealers included "Uncle" Dave Marks, whose first store was located at 115 North Pearl St in Albany, NY. This address is significant to me because the building I now work in stands on that site.
By 1934, the Federal Radio Commission was superseded by the FCC, and a new license structure, with Class A,

Class B, and Class C licenses, was in place. What goes around, comes around.
In our next installment, we will take a look at the late 1930's, particularly some events in 1938. I hope you can join me.

The History Of Amateur Radio Chapter 23

Cairo, Egypt, 1938. In the pre war time of Colonial Empires, this conjures up an image of Europeans in white linen suits sitting on the veranda of a luxuriously decadent Colonial Hotel, oppressive ceiling fans, dark, mysterious strangers, Peter Lorie & Sidney Greenstreet. However, for amateurs, Cairo in 1938 meant a setback. The first International Radiotelegraph Conference was held in Washington D.C. in 1927. Although amateurs lost almost 40% of their allocations, the concept of amateur radio as a legal, international hobby was established. The second Conference was held in Madrid in 1932, and produced no changes in ham radio. Now the third Conference was at hand, but times had changed. Italy, Germany, and Spain were under Fascist Dictatorships, Stalin was directing a ruthless purge in the Soviet Union, and Japan was at war with China. The shortwaves were filled with propaganda broadcasts and military communications. Under this cloud of uncertainty, delegates from 71 countries assembled in Cairo on February 1, 1938. How would amateur radio be treated under these circumstances?
Actually, American hams came out of the battle with no major losses. Despite the number of Dictatorships at the Conference, there was no attempt to destroy amateur radio, which, after all, allowed individual citizens access to receivers and transmitters. The most serious threat came from Japan, which proposed that amateurs be limited to 50 watts input. The Japanese Plan was easily defeated.
The ARRL had pushed for expanded HF bands, but the American Delegation, mindful of the potential hostility at the Conference, did not propose it.
The headlines in the July 1938 issue of QST summed up Cairo: "American Amateurs retain all frequencies after a terrific fight", "USA puts up splendid defense", "European Hams short changed by Greedy Governments", and, "European Broadcasting to invade 7 mc Band in late 1939". In Europe, the 7200--7300 kc segment of the 40 meter band would be shared with Broadcasters, starting September 1, 1939. They also lost half of the 80 meter band to broadcasting and other services, and the European 5 meter band was scaled back to make way for television. However, it could have been a lot worse. The next International Conference was set for Rome in 1942. It never took place. In other 1938 news, the amateur population was stabilized at 50,000, after years of growth. This was partly due to the increase in the code speed, from 10 to 13 wpm in 1937. With regenerative receivers and crystal controlled transmitters (which meant that two stations having a QSO would probably be on two separate frequencies), many hams felt that 50,000 was the saturation point for our bands.
On October 4, 1938, the FCC issued complete new amateur regulations. Included in the package were two new ham bands at 112 and 224 mc. What could hams do up there? Try amateur television. An all electronic form of television was replacing the mechanical "spinning disc", and QST carried several articles discussing the theory and construction of an amateur TV station. W6XAO was an experimental TV station in LA, which would soon be followed by other TV pioneers such as W2XBS. (Where have I heard that call before?).
On September 2, 1938, the new Maxim Memorial Station, W1AW, was dedicated at 225 Main Street in Newington, Ct.. The Station was in memory of Hiram Percy Maxim, the Founder and first President of the ARRL, who died in February 1936. Less than one month after Maxim's death, floods roared through the Connecticut River valley, and destroyed W1MK, which had been the League's Station. Later in 1936, the ARRL Board of Directors allocated $18,000 to build a Memorial Station to honor W1AW, as well as to replace W1MK. The station would stand alone on Main St., in Newington, until joined in 1963 by the ARRL/QST Offices, which moved from West Hartford.
On September 13, 1938, Ross Hull, Editor of QST, died after being electrocuted in his home. He had been working on a homebrew TV receiver. Ross was a native of Australia and held the call 3JU while living "down under". He did not hold a U.S. license because his citizenship application was not finalized. Despite his lack of American Amateur privileges, Ross Hull was instrumental in early VHF/UHF developments. He designed practical and inexpensive 5 meter stations, and greatly contributed to the knowledge of VHF/UHF propagation. His death dramatically pointed out the dangers of working on live circuits and, for months thereafter, QST ran articles on how to "switch to safety".
No discussion of 1938 would be complete without including the Great Hurricane. In the fourth week of September, New England and Long Island, already soaked by previous rainstorms, were pounded by the unnamed Hurricane, which was completely unexpected. Over 600 people died, and damage was $500 million in 1938 dollars. The new W1AW Memorial Station, just 3 weeks old, survived without any damage, although power was lost for 36 hours. Hundreds of amateurs grabbed whatever generators and

batteries they could find, and set up emergency stations on 5 meters AM, and 160, 80 and 40 cw. Amateurs were the only source of communication for dozens of communities and handled everything from health and welfare traffic to police communications. It was a superb demonstration of public service at its best.

In our next installment, we will look at amateur radio in WWII. Yes, amateurs were off the air. But what did they do, if they weren't in uniform? What filled the pages of QST? And what was this "WERS"? Join me as the "Wayback Machine" seeks the truth.

The History Of Amateur Radio Chapter 24

World War II started on September 1, 1939, when Germany invaded Poland. By May, 1940, Germany had conquered much of Europe, and had her sights on Britain. Although the United States was officially neutral, it was obvious that our sympathies were with the Allies. In addition, it was clear to a few perceptive Americans that we would be drawn into the conflict.

Amateur Radio Operators, like most Americans, began to gear up for War. On June 4, 1940, the FCC issued Order #72, which prohibited amateurs from engaging in foreign communications, or from establishing contact with any or all points outside the continental U.S. and its possessions. The FCC was quite serious about this--they revoked the licenses of several hams who had contact with foreign stations. The "How's DX" column was jokingly referred to as "Where's DX"--so many foreign hams, including our neighbors in Canada, had been off the air since September, 1939. Throughout 1940 and 1941, the face of amateur radio changed with the darkening war cloud. The War Department sent out a questionnaire to all hams to obtain data on equipment, experience, physical fitness, and availability for service. Columns devoted to the military began to appear, such as "Army- Amateur Radio System Activities", which included the schedule of station WAR on 4025 and 6990 kc. Other columns were "Naval Communication Reserve Notes"; "In the Services", which listed amateurs now in military service; and "USA Calling", which published requests from the Navy, Marines, Army, Army Air Corps, Signal Corps, Merchant Marine, and even the FBI for amateurs proficient as radio operators, electronic specialists, electrical engineers and Communications Officers. In the summer of 1940, the British used the "USA Calling" column to issue an urgent appeal for radio servicemen and amateurs for their Civilian Technical Corps. Up to 25,000 Americans were requested by the British. Foreign espionage invaded the ham bands in 1940. The FBI, in a successful bid to capture several foreign agents in the U.S., operated a counter-espionage station in the 20 meter band. Using a phony amateur call, the FBI passed over 500 messages to various spies before arresting them. Amateurs were members of the Defense Communication Board, which met every week to prepare for a military emergency. Amateurs also made their own preparations for a national emergency. QST ran several editorials urging hams to improve their CW skills. Many articles appeared on "emergency" equipment, such as vibrator power supplies (to supply the B+ voltage for tubes), battery operated radios, and mobile stations. The 2 1/2 meter band (112-116 mc) was chosen as the primary "Civil Defense" band, and every issue of QST had another 2 1/2 meter construction project, including a few "Walkie-Talkies". Civil Defense coordination and participation was urged. On July 22, 1941 the FCC, in response to the National Emergency, announced that the 3650 to 3950 kc portion of 80 meters would be withdrawn from amateur use and reassigned to the military for use in an Aircraft Pilot Training program. Amateurs were given a few months to vacate the band, and preparations were made to move popular 80 meter nets to 160. But before the reassignment was completed in December 1941, Pearl Harbor was attacked.

On December 8, 1941, the FCC issued Order Number 87, which read in part: Whereas a state of War exists between the United States and the Imperial Japanese government, and the withdrawal from private use of all amateur frequencies is required for the purpose of National Defense; IT IS ORDERED, that except as may hereafter be specifically authorized by the Commission, no person shall engage in any amateur radio operation...and all frequencies heretofore allocated to amateur radio stations under Part 12 of the Rules and Regulations ARE HEREBY WITHDRAWN. All amateur licensees are hereby notified that the Commission has ordered the immediate suspension of all amateur radio operation in the continental U.S., its territories and possessions.

However, the FCC left a small loophole for amateur operation during the war. Amateurs would be allowed to operate for the purpose of National Defense, upon application of a Federal, State, or local official. In our next installment, we will look at some amateur operations during WWII. Some will surprise you.

The History Of Amateur Radio Chapter 25

On December 7, 1941, the Japanese attacked Pearl Harbor. Less than 24 hours later, the United States was officially at War, and the FCC had issued Order Number 87, which suspended all amateur radio operation in the U.S., and withdrew "our" frequencies from the amateur

service. However, the FCC did recognize that limited amateur operation would be required in connection with domestic Civil Defense work.

Thus, in June, 1942, the FCC issued regulations which created the War Emergency Radio Service, or W.E.R.S. for short. This was not an amateur operation, even though the frequencies used were our former bands at 112-116, 224-230, and 400-401 Mc. Note that the 5 meter band, 56-60 Mc., was not included. The FCC apparently sought to limit operations to the "UHF" frequencies, where long distance skip was impossible. A WERS License was not given to an individual, but rather to a municipality or other local government entity, to cover the operation of all such stations engaged in emergency civilian defense communications. Operations could only be conducted upon authorization of the local Civil Defense Corps.

Operators in W.E.R.S. had to be loyal U.S. citizens, with fingerprints and proof of U.S. Citizenship on file with the FCC. They also needed to have an FCC commercial or amateur license, or an FCC 3rd class operating certificate. Thus, although most operators were hams, many non-amateurs were active in this service also. Authorized operations in the War Emergency Radio Service were limited to emergencies relating to enemy activity. There was no provision for operations in natural disasters. Practice and training sessions were allowed, and local governments may have used these "practice" activities to provide needed communications during natural disasters.

Technical standards were strict for 1942. The carrier frequency could not deviate more than 0.1% in the lower half of each band, and 0.3% in the upper half. In the 2 1/2 meter band, this meant that the signal could not vary more than 112 kc at the lower end, and 340 kc at the upper end. While this sounds incredibly wide today, remember that in the 30's and 40's, almost all "UHF" transmitters used the "modulated oscillator"--cheap to build, but not very stable. The only receiver useful with this type of signal was the superregenerative. Power was limited to 25 watts input, which is about 10-15 watts output. By default, 2 1/2 meters became the band of choice for W.E.R.S. operations. In fact, it came to be known as "The Civil Defense Band". The most popular radio in W.E.R.S. operation was the TR-4, by Abbott Instruments of New York City. The unit measured only 9" x 8" x 4.5", ran on 6 volts DC or 110 volts AC, had a range up to 75 miles, and cost less than $40. Although W.E.R.S. served a valuable purpose, it did not satisfy the needs of an active amateur suffering under the wartime radio silence. Fortunately, the WWII amateur had it far better than his WWI predecessor. For one thing, amateurs did not have to disassemble their stations and take down their antennas.

Contrary to popular belief, the FCC did not ban shortwave listening. AM broadcasting was still allowed, W1AW was authorized to remain on the air. QST was still published. But, even with all this, the restless amateur wanted more. And, believe it or not, some hams legally got on the air and had QSO's. How? "Wired Wireless". Have you ever heard of it? In summary, "wired wireless" was a Carrier Current type of operation. A transmitter, usually running 10-25 watts output, was inductively coupled to the AC power line. The signal would follow the power lines throughout the city, up to a maximum of about 5 miles. Anyone within 300 feet or so of the AC power line would be able to copy the signal. Even though the range was a 5 mile radius from the transmitter, the actual radiation distance was only 300 feet, thus it was legal. Amateurs found that carrier current operations worked best in the longwave spectrum, and set up hundreds of stations in the 160-200 kc range. Ironically, the 160-190 kc segment survives to this day as a legal, unlicensed low power band, with one watt and 50 foot antennas permitted.

Some amateurs experimented with Audio Frequency Induction Field Communications. This involved no RF--an audio oscillator was coupled to a large inductor. At distances of 2000-3000 feet away, an audio amp coupled to a similar inductor received the signal. QST was active during the War years, running articles on secret communications and ciphers, the latest 112 Mc W.E.R.S. equipment, visual signaling (including the semaphore alphabet), a course in radio fundamentals, a multi part series in Cryptanalysis, and the Japanese Morse Telegraph Code, with notes on the Japanese language. Towards the end of the War, QST ran several articles on the postwar amateur allocations. Two columns focused on amateurs serving in the Armed Forces; "In the Services", and "Hams in Combat". And, as a grim reminder of the horrors of War, the column "Gold Stars" listed those amateurs who made the ultimate sacrifice.

In our next installment, we will look at amateur life in the postwar world. As a postscript, the ARRL has asked that the 160-190 khz band be reallocated to amateur use. Will the ghosts of the WWII operators be listening as we once again activate that band with CQ's? 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

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

June 2015

+ 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
+ NCCC Sprint 0230Z-0300Z, Jun 26
+ ARRL Field Day 1800Z, Jun 27 to 2100Z, Jun 28

RAC Canada Day Contest 0000Z-2359Z, Jul 1
+ NCCC RTTY Sprint 0145Z-0215Z, Jul 3
+ NCCC Sprint 0230Z-0300Z, Jul 3
+ NCCC RTTY Sprint 0145Z-0215Z, Jul 10
+ NCCC Sprint 0230Z-0300Z, Jul 10
+ NCCC RTTY Sprint 0145Z-0215Z, Jul 17
+ NCCC Sprint 0230Z-0300Z, Jul 17
+ North American QSO Party, RTTY 1800Z, Jul 18 to 0559Z, Jul 19
+ CQ Worldwide VHF Contest 1800Z, Jul 18 to 2100Z, Jul 19
+ Run for the Bacon QRP Contest 0100Z-0300Z, Jul 20
+ NCCC RTTY Sprint 0145Z-0215Z, Jul 24
+ NCCC Sprint 0230Z-0300Z, Jul 24
+ NCCC RTTY Sprint 0145Z-0215Z, Jul 31
+ NCCC Sprint Ladder 0230Z-0300Z, Jul 31

August 2015
+ North American QSO Party, CW 1800Z, Aug 1 to 0559Z, Aug 2
+ ARRL August UHF Contest 1800Z, Aug 1 to 1800Z, Aug 2
+ NCCC RTTY Sprint 0145Z-0215Z, Aug 7
+ NCCC Sprint Ladder 0230Z-0300Z, Aug 7
+ WAE DX Contest, CW 0000Z, Aug 8 to 2359Z, Aug 9
+ Maryland-DC QSO Party 1600Z, Aug 8 to 0400Z, Aug 9 and 1600Z-2400Z, Aug 9
+ 50 MHz Fall Sprint 2300Z, Aug 8 to 0300Z, Aug 9
+ NCCC RTTY Sprint 0145Z-0215Z, Aug 14
+ NCCC Sprint Ladder 0230Z-0300Z, Aug 14
+ SARTG WW RTTY Contest 0000Z-0800Z, Aug 15 and 1600Z-2400Z, Aug 15 and 0800Z-1600Z, Aug 16
+ ARRL 10 GHz and Up Contest 0600 local, Aug 15 to 2400 local, Aug 16
+ North American QSO Party, SSB 1800Z, Aug 15 to 0559Z, Aug 16
+ Feld Hell Sprint 2000Z-2159Z, Aug 15
+ ARRL Rookie Roundup, RTTY 1800Z-2359Z, Aug 16
+ 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 Party 1400Z, Aug 29 to 0200Z, Aug 30 and 1400Z-2000Z, Aug 30

The MLDXCC NEWSLETTER

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