



RF



ORANGE COUNTY AMATEUR RADIO CLUB, INC.

VOL. XLIX NO. 12

P.O. BOX 3454, TUSTIN, CA 92781-3454

December 2007

The Prez Sez.....

By Kristin K6PEQ



This year went by in a flash and what a year it was! We had an amazing field day, great speakers, fun volunteering at different events and entertaining meetings.

My job was pretty easy this year with the help of a phenomenal board. I want to thank you for letting me serve you as president and I know as I leave this office, I leave you in the capable hands of Willie, our 2008 president. I hope to see you all at the Christmas party on Friday, the 14th!

73,
Kristin, K6PEQ

=====

ARLP051 Propagation de K7RA Dec 07

More sunspots emerged this week, with every December day so far showing spots. In addition to the sunspot numbers listed through Wednesday at the end of this bulletin, Thursday, December 6 had a sunspot number of 29.



The daily sunspot number has not been this high since mid-July. Two spots are now visible, 977 and 978, and the total coverage of the solar surface by sunspots on Thursday is four times Wednesday's coverage. Average daily sunspot number for this report is over twice last week's, rising from 5.4 to 11.1. Sunspots will probably continue until at least December 13.

No Meeting in December

Instead of the normal OCARC General meeting in December, the club will be holding its yearly Holiday Dinner on Dec 14th. Be sure to attend! (see page 5 for details).

**OCARC
Holiday Dinner
7:00 PM
Friday Dec 14**

The next general meeting will be:

**Friday, January 18th
@ 7:00 PM**

We will be meeting in Room 208
In the east Red Cross Building

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**ORANGE COUNTY
AMATEUR RADIO CLUB**
www.W6ZE.org



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(714) 557-7217
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OCCARO Delegate:

Loran Dargatz, KD6LRD
(714) 777-9081
DargatzLR@msn.com

Monthly Events:

General Meeting:

Third Friday of the month
at 7:00 PM
American Red Cross
601 N. Golden Circle Dr.
(Near Tustin Ave. & 4th St.)
Santa Ana, CA

Club Breakfast:

First Saturday of the month
at 8:00 AM
Jagerhaus Restaurant
2525 E. Ball Road
(Ball exit off 57-Freeway)
Anaheim, CA

Club Nets (Listen for W6ZE):

7.086 ± MHz CW **OCWN**
Sun- 9:00 AM – 10 AM
Rick KF6UEB, Net Control

28.375 ± MHz SSB
Wed- 7:30 PM - 8:30 PM
Bob AF6C, Net Control

146.55 MHz Simplex FM
Wed- 8:30 PM - 9:30 PM
Bob, WB6IXN, Net Control

VISIT OUR WEB SITE

<http://www.w6ze.org>

for up-to-the-minute club
information, the latest
membership rosters, special
activities, back issues of RF,
links to ham-related sites,
vendors and manufacturers,
pictures of club events and much
much more.

Club Dues:

Regular Members ...\$20
Family Members* ...\$10
Teenage Members ..\$10
Club Badge**\$3

Dues run from January thru Dec
and are prorated for new mem-
bers.

*Additional members in the family
of a regular member pay the family
rate up to \$30 per family.

**There is a \$1 charge if you'd like
to have your badge mailed to you.

*** Product Spotlight ***

Kenwood

TM-D700A 144/440 MHz Dual-Band FM Transceiver

By: Ken Konechy W6HHC

W6HHC@W6ZE.org

Tel: 714-744-0217



The City of Orange RACES group, known as COAR, acquired some new communications gear this past summer. This gear included four new Kenwood TM-D700A 144/440 MHz FM transceivers to be used for portable operations as well as tracking APRS (position beacon tracking).

Today, most ham gear has a “steep learning curve”, because the gear has so many features and menus packed into a single unit. The COAR team loaned out these TM-D700 units to members to learn how to program them and to learn how to use them in their own QTH (aka...test drive them for a while).

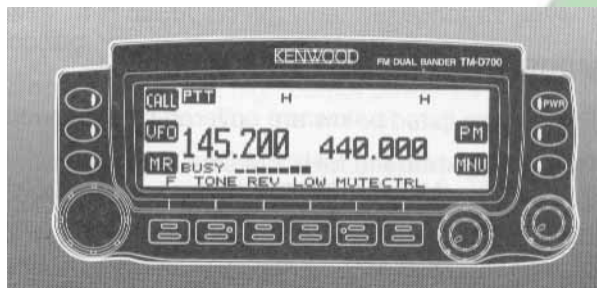


Fig 1 – Control Display view of TM-D700 Dual-Band

OVERVIEW OF FEATURES

The Kenwood TM-D700 FM Dual-Band rig:

- Works on 144 and/or 440 MHz
- Can receive from 118 to 1300 MHz in a series of “sub-bands” (not continuous)
- Primarily mobile rig, but base station too
- Detached Control Head
- FM and built in Packet TNC
- Cross-band repeater mode
- 13.8VDC operation
- One antenna connector



Fig 2 – Main Module and Display Unit

Here is a table of manufacturer's specs

Kenwood TM-D700A Mfg Specifications

Transmitter Freq	144 – 148 MHz 438 – 450 MHz
Transmitter FM Output Power	50 Watts - 144 MHz 35 Watts – 440 MHz
Receiver “sub-Bands”	118 – 200 MHz 200 – 400 MHz 400 – 525 MHz 800 – 1300 MHz *
Receiver Circuit	Double-conversion superhetrodyne
Rcvr Sensitivity	0.16uV – 144/440 MHz
Panel Display	Any two frequencies
TNC speeds	1200 or 9600 bps
Dimensions	Main unit 5.5x1.8x7.7 in Panel 5.5x2.4x1.3 in
Weight	Main unit – 2.6 lbs Panel – 6.3 oz
Digital connector	DB-9 female
Coax connector	Single VHF 50 ohm
* - Excluding specific frequency ranges	

Product Review cont'd - see Pg 4

Product Spotlight cont'd - from Pg 3

A strong feature for this rig is that it has a built-in TNC unit. COAR uses APRS beacon-tracking for the finding the location of other communication units. The TM-D700 eliminates the need for separate TNC unit for APRS operation. The TM-D700 can connect directly a computer (PC or MAC) to display the APRS location information on a map.



Fig 3 – Connector Plate on TM-D700

The mike connector can be seen on the far-right in Fig 3 and the connector to the Display Unit is second-from-right. The Digital Modes connector is far-left, the GPS connector is second-from-left, and the DATA connector in the middle is a mini-DIN-6 connector for slow-scan or external TNC.

The TM-D700 PROs**1) A Good Dual-Band FM Rig**

This really is a good rig for FM 144/440 MHz mobile, portable, or base operation.

2) Display any 2 Frequencies

To me the best feature of this rig is that it not only can display two bands at the same time....it can display any two frequencies....including two 2M channels or two 440 MHz channels.



Fig 4A – 2M Channels Side-by-Side



Fig 4B – 440MHz Channels Side-by-Side

3) Built in TNC and GPS-Provisions

Not only does the radio have a built-in TNC unit but it also has a connector for connector to accept the output of a GPS receiver (such as Garmin).

The TM-D700 CONs**1) The Display Panel Does NOT Attach**

The Display Panel can not attach to the Main Module. The connectors on the connector plate of the Main Module (see Fig 3) do not allow the Display Panel to attach. Instead, the Display Panel is provided with a swivel-bracket that can serve as a mobile mount or a "flimsy" desk stand.



Fig 5 – "Flimsy" Desk Stand for Portable/Base

The only way to use the rig in a base/portable operation is to screw the desk stand down to a piece of wood.

2) Restricted Viewing Angle Display Panel

The display provides a restricted viewing angle compared to other (earlier) Kenwood mobile units that I own. As it comes from the factory, the display fades out if viewed from a 45 degree angle (side or vertical). You can improve the viewing angle by turning up the brightness, but the background starts to become dark (see Fig 4A).

OCARC Holiday Party Raffle

Grand Prize!!!!



Come to the Orange County ARC Holiday Party on Friday evening, December 14, and enter the raffle! The grand prize is a brand new Icom IC-756Pro3 HF/50 MHz transceiver!!! Experience the advantage of extraordinary DSP filtering technology!

There will be many, many more prizes, too! Last year's raffle featured about \$3500 worth of prizes!! You must be present to claim a raffle prize. Don't miss out. See Kristin K6PEQ at the party to buy your raffle tickets for only \$1 each. Contact her by phone at (714) 544-9846 or via e-mail at K6PEQ@W6ZE.org for more details. Remember to bring your spouse and friends, too.

The dinner begins at 7:00 PM at the Jagerhaus Restaurant located at 2525 E. Ball Rd. (just west of the 57 Freeway) in Anaheim. The German family-style food and dessert is really outstanding....wine and beer, too.

www.jagerhaus.net (714) 520-9500





Please support the companies who support OCARC!

Make sure to thank them for their support of
the OCARC when you order from them, or when you
see them at a convention!



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A Brief Look at Ham Radio and Technology History

by Ken Konechy W6HHC

“things are changing...”

I really enjoy looking at old advertisements inside old ham radio magazines and books like old ARRL Handbooks. In my mind, I look at these old ads and I end up taking a peek back through time...to see how things were “back then”. If you look at different ads or ham radio articles in different years....you can see the changes in technology and ham radio.

I recently borrowed two remarkable old magazines: QST from 1938-Sept and also CQ from 1950-Oct. These two magazines made it just a real pleasure to take a time-trip back into ham radio history. Just imagine, 1938 is almost 70 years ago....the OCARC was still a struggling small group of ham friends who met in homes for meetings.

My Favorites

This first ad in Fig 1 is really a “line in the sand”. Notice that having a band-switch on the front panel was “**new**”!! Before then, you pulled a coil out...and then plugged a different band coil into a socket.

I also really like Fig 2 and Fig 3. These National ads show the birth of the CRT...which is the birth of the oscilloscope....which is the birth of the TV. Just imagine, your 60 inch plasma TV had its beginning in the National 1-inch oscilloscope shown in Fig 2!!

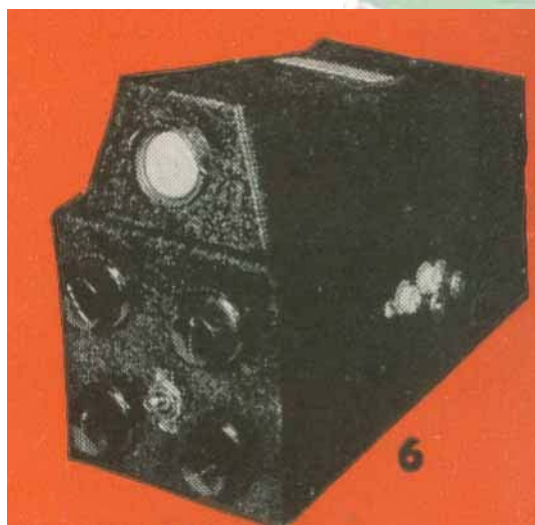
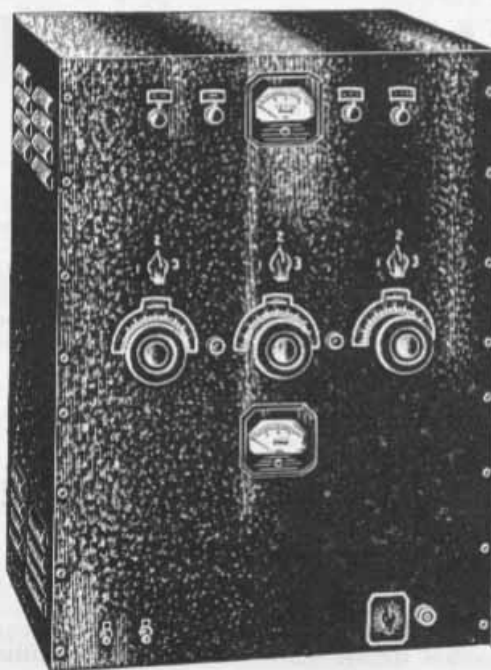


Fig 2 – QST 1938 – National 1-inch Scope

IT'S NEW! Panel Band-Switching



THORDARSON “MULTI-BAND” TRANSMITTER

Fig 1 – QST 1938 – New BandSwitch Rig

Fig 3 was nearly state-of-the-art, a 2-inch CRT mounted in a rack unit.



Fig 3 – QST 1938 – National 2-inch Scope

History cont'd - see Pg 8

Radio History cont'd - from Pg 7



Fig 4 – CQ-1950 – Lineup of Hallicrafters Rcvrs

Fig 4 shows the then-famous Hallicrafters company with a coral full of different receiver models. From entry-level to top-of-the line.

One of the most famous ham radio companies in the 1950's and 1960's and 1970's was Collins Radio Company. Founded by Art Collins – WØCXX, Collins Radio produced a lot of state-of-the-art ham radio equipment. In 1950 they introduced the KW-1 1 KW transmitter (see Fig 5 on Page 11) for CW, AM, and NBFM. Collins Radio did much to make SSB a popular technology, eventually overtaking the inefficient AM mode for voice. Just a few years later, in 1957 Collins introduced the first SSB transceiver, the KWM-1.

The Ultimate CW Contest Machine

My favorite article in the 1950 CQ magazine, entitled "The Contest Machine" by M.E. Hielle showed the huge changes in technology in the last 58 years. Today, to set up a Morse-code script for a contest like Field Day, you can use a built in keyer memory using FLASH Memory. It is easy to change call signs...for example to the GOTA call. Fig 6 shows 1950 technology using a machined-metal-disk with micro-switches to detect the "cuts" in the edge of the disk. Can you imagine how much work went into cutting all of the dots and dashes along the edge of the metal disk?? You have to spend a whole day machining a different metal disk to change the script. WOW...has technology changed!!

History cont'd - see Pg 11

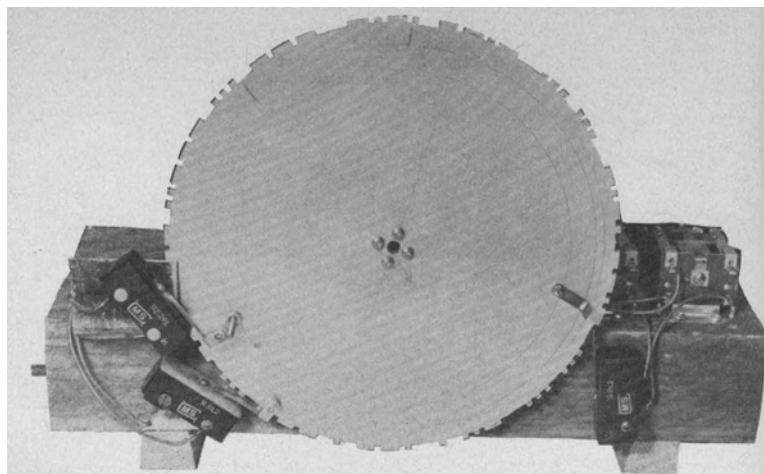
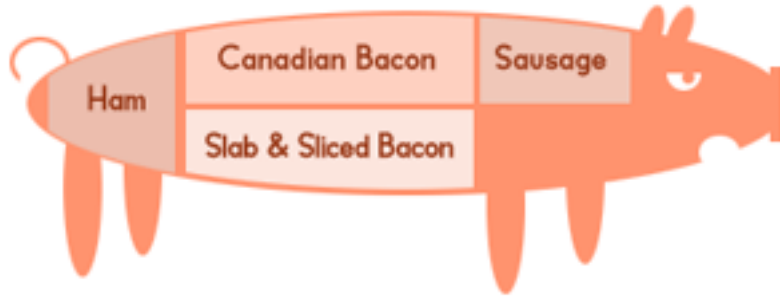


Fig 6 – CQ-1950 - Article on Making a Morse Contest Machine



Ham Cuisine

by Kristin, K6PEQ

Apple-Stuffed Pork Chops

Ingredients:

2 pork ribs chops, 1 1/4-inches thick, 2 tablespoons minced onion
2 tablespoons butter, divided, 1/2 cup soft breadcrumbs
1/3 cup diced apple, 2 tablespoons orange juice, divided
1/8 teaspoon dried sage, 1/8 teaspoon ground black pepper
2 teaspoons cornstarch, 1/8 teaspoon ground cinnamon
2/3 cup apple juice, 2 tablespoons raisins
2 teaspoons grated orange zest

Cooking Directions:

Heat oven to 425 degrees F. Cut an opening in each chop from the rib side, widening the pocket without cutting through to the other side of the chop; set aside. For stuffing, in a medium saucepan cook onion in 1 tablespoon butter over medium heat until tender, stirring, about 2-3 minutes. Remove from heat; stir in breadcrumbs, apple, 1 tablespoon orange juice, sage and pepper. Fill pocket of each chop with an equal amount of stuffing, place in a shallow baking dish, brush with remaining tablespoon orange juice. Roast for 20 minutes or until browned.

Meanwhile for sauce, melt remaining tablespoon butter in a small saucepan, stir in cornstarch and cinnamon; whisk in apple juice. Add raisins and orange zest. Cook, stirring, over medium heat until thickened and bubbly.

Serves 2.

Wine suggestion: Serve with a chilled Chardonnay or if you prefer a red wine, a Pinot Noir.

Serving Suggestions:

Autumn-inspired stuffing of apple and sage fills these roasted chops, which are served with cinnamon and orange-scented sauce. Serve chops with sauce, roasted potato wedges, buttered broccoli and warm dinner rolls.

OCARC General Meeting Minutes

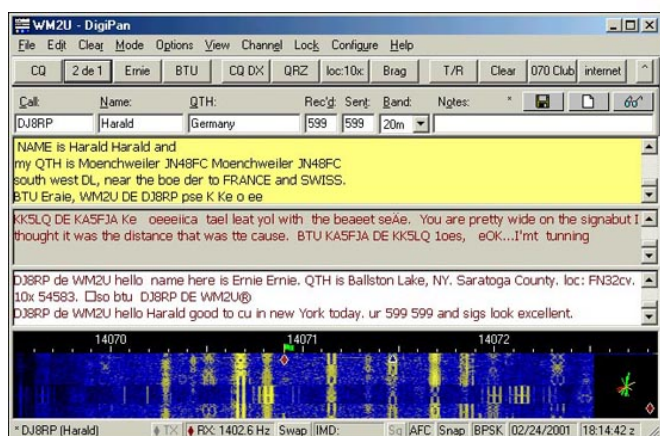
2007-11-16

The OCARC November General Meeting was held at the Red Cross complex in Santa Ana at 7PM on Friday evening, Nov 16th. There were a total of 34 members and visitors present. A quorum was present with all of the club directors attending, except Steve – N1AB and Loran – KD6LRD

PROGRAM:

A really informative program was presented by our speaker Willie Peloquin – N8WP on

“PSK31 Digital Mode”



First Willie provided an overview of PSK-31 and sources of information and products. Then, Willie-N8WP set up two PSK-31 demo stations with Ken –W6HHC and was able to project his PSK31 computer screen QSO onto the large meeting room projection screen.

OLD BIZ:

Christmas Party - Dan-N6PEQ revealed all of the great raffle prizes that will be available at the OCARC Christmas Dinner in December. With only a single \$1 ticket you might win a brand new **ICOM IC-756 Pro3** rig...plus many other prizes, too.

Field Day Results – Willie – N8WP, the 2007 FD Chairman, announced that the ARRL published FD scores listed OCARC as the second highest score in the contest (across all classes).

NEW BIZ:

The yearly elections were held at the November meeting. The following is the list of new officers and directors for the OCARC in 2008 that were duly elected during the meeting.

New OCARC Officers for 2008

President	Willie Peloquin – N8WP
V. President	Nicholas Haban – AF6C
Treasurer	Paul Gussow – W6GMU
Secretary	Ken Konechy – W6HHC
Activities	Kristin Dankert – K6PEQ
Membership	Chris Winter – W6KFW
Technical	Bob Eckweiler – AF6C
Publicity	Rich Helmick – KE6WWK
Member-at-Large	Dan Dankert – N6PEQ
Member-at-Large	Hank Welch – W6HTW

GOOD OF CLUB:

Red Cross Report – Tom Woodard-KI6GOA of the OC Red Cross gave a report on the level of support provided by Red Cross during the recent Santiago Canyon wild fires in Orange County. Interestingly, the two Red Cross shelters in OC had mainly families from San Diego.

OES Report – Willie – N8WP and Cheryl-KG6KTT gave a brief report on the level of involvement provided by the California Office of Emergency Services (OES) during the recent wild fires in San Diego County. Los Alamitos OES center reported 23 people manning 12 hour shifts, while the Witch Fire OES ICP (in Escondido) reported 16 people manning 24 hour shifts

Submitted by:

Ken Konechy W6HHC (signature)
OCARC Secretary

OCARC**Board Meeting Minutes****2007-08-04**

The OCARC Board meeting was held at the JagerHaus Restaurant in Anaheim at 8:15 AM on Saturday, 2007-12-01. There were a total of 11 members and visitors attending. There was a quorum of directors present, with Cheyl-KG6KTT, Willie-N8WP, and Dan-N6PEQ absent.

DIRECTOR REPORTS:

- **Treasurer** - Bob-AF6C reported the club had \$4,392 in the treasury (including money for many Christmas dinners).
- **Membership** – Bob-AF6C said, that as treasurer, he has counted that the club currently has 71 members.
- **Activities** – Kristin K6PEQ reported that Dan N6PEQ had lined up for 2008:
 - Bill Scholz – W1HIJ to speak in Jan.
 - Ten-Ten program in Feb
 - “Re-cycling radio gear” in March.

OLD BIZ:

- **RF NewsLetter “Rotating” Editors**
 - December is Ken W6HHC
 - January is Paul W6GMU
 - February is Loran KD6LRD
 - March is Bob AF6C

Other club members are encouraged try to be an “editor for a month”. It can be great fun and certainly is a way to support your club. Other past-editors will support you. Call Bob – AF6C if you are interested in giving it a try.

- **Christmas Party**

Kristin K6PEQ made a motion that the club spend \$100 on door prizes for ladies and \$500 to buy additional radio prizes for the main drawing. The motion was passed by the board.

NEW BIZ:

- **OCARC Financial Audit Committee**
President, Kristin-K6PEQ, appointed an audit

committee to report on the OCARC 2007 finances. The members are Loran – KD6LRD, Paul – W6GMU, and Bob – AF6C

GOOD OF CLUB:

WARA – Kristin announced that the WARA club would not be participating in the OCARC 2008 Field Day effort. WARA had decided to once again hold their own FD event.

Submitted by Ken W6HHC
Secretary OCARC

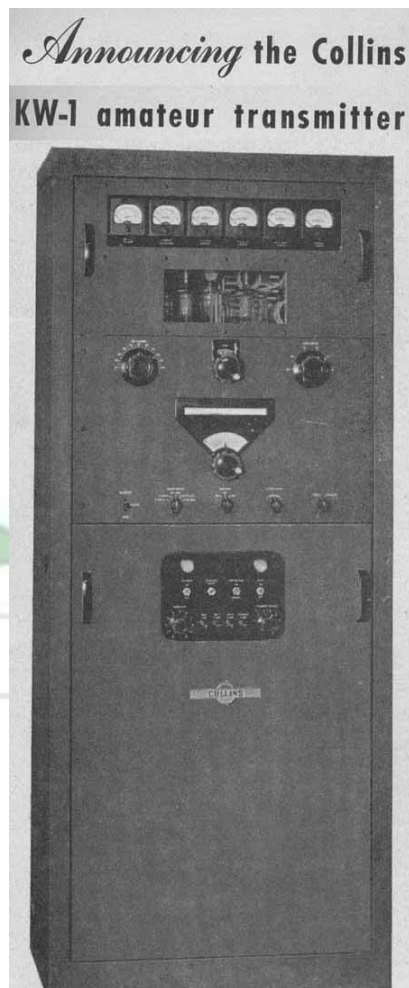
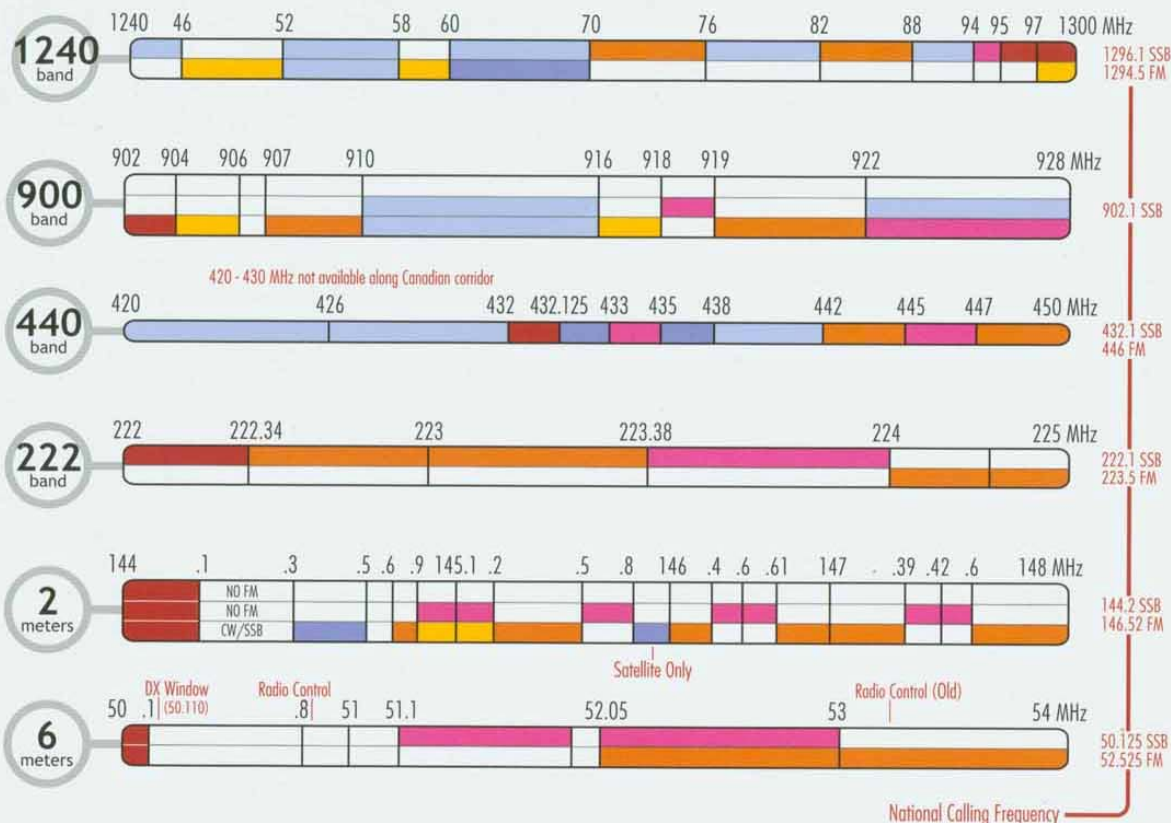
Radio History cont'd - from Pg 8

Fig 5 – CQ-1950 – Introducing Collins KW-1

....a trip through time by Ken W6HHC



U.S.A. Amateur Radio UHF/VHF Band Plan



ITU Phonetic Alphabet

A Alpha	H Hotel	O Oscar	V Victor
B Bravo	I India	P Papa	W Whiskey
C Charlie	J Juliet	Q Quebec	X X-ray
D Delta	K Kilo	R Romeo	Y Yankee
E Echo	L Lima	S Sierra	Z Zulu
F Foxtrot	M Mike	T Tango	
G Golf	N November	U Uniform	

Common Q Signals

QTH	Location	"What's your QTH?"
QRZ	Who is calling me?	"KE7XXX QRZ?"
QRP	Low Power	"I'm running QRP from Washington" (< 5 watts on HF, 10 on VHF)
QSY	Change frequency	"Can you QSY up to 10 (kHz)?"
QSO	Conversation/Contact	"Thanks for the QSO"
QRM	Man-made noise	"I have a lot of QRM here in the car"
QSL	Acknowledge receipt	"Copy KE7XXX in Redmond, Washington. QSL?" Response: "QSL Redmond, Washington"
QRM	Atmospheric noise	"Lots of QRM today"