

The  
**Call Letter**  
of the Northwest Vintage Radio Society

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Vol 22

August 1996

No.8

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**NOTICE: October Show to be held on the  
First Saturday of October**



**Michael Faraday, Philosopher**

See Story on page 8.

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**Don't miss Seattle Swap Meet August 18th !**

In print since 1974

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# August 1996

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### The CALL LETTER

Editor, Dick Karman, (503) 281-6585

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**Note: CALL LETTER material  
should be sent to the Post Office Box !**

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**Call Letter Deadline  
20th of the month  
prior to publication.**

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**This is the  
summer Edition  
No Meeting this month!**

The Call Letter is the official publication of the Northwest Vintage Radio Society. Circulation is limited to the membership and guests of the Society. The Society is not responsible for the material contributed for publication, nor the quality, timeliness or accuracy of the items offered for sale in the SWAP SHOP. By common agreement of the board of directors, the buyer assumes all responsibility for the satisfaction of any transaction.

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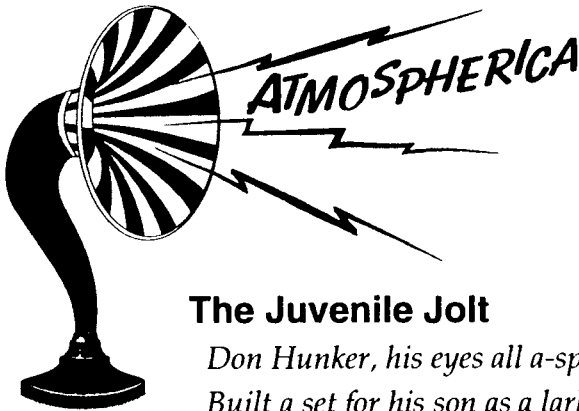
# October Radio Show & Sale

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Myron White is organizing our October Show and Sale at the Multnomah Arts Center, across from the museum on Capitol Hiway, in SW Portland. The show will be the first Saturday of October to avoid direct conflict with the Vintage auto swap meet at the expo center.

The Society gains a great advantage from these public meetings. As a result of the, now famous, Oregonian article and a public show and sale we have our largest paid membership in a number of years.

As always, we need volunteers to help move in and to help clean out. We also need folks to rent tables: Buying, Selling, and trading is hot and heavy - don't be left out. Reserve your table space today. Call Myron at (503) 629- 5513.



## The Juvenile Jolt

*Don Hunker, his eyes all a-spark  
Built a set for his son as a lark  
But the boy made him mad  
When he said to him, "Dad !  
This must be a first from the Ark !"*

# ANTIQUUE RADIO SWAP MEET

Sunday, August 18, 1996  
9 AM to 1 PM

Shoreline Museum Parking Lot  
N. 175th & Linden Avenue, North Seattle  
(One block west of Aurora Avenue, or  
one mile west of Interstate 5, Exit 176)

Tune in to the largest vintage radio event  
in the Northwest, featuring:

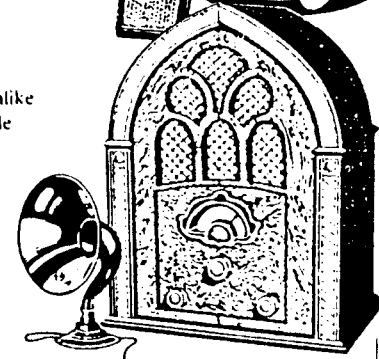
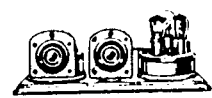
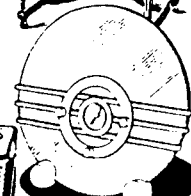
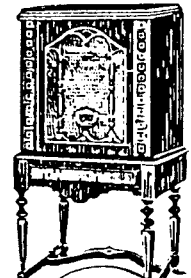
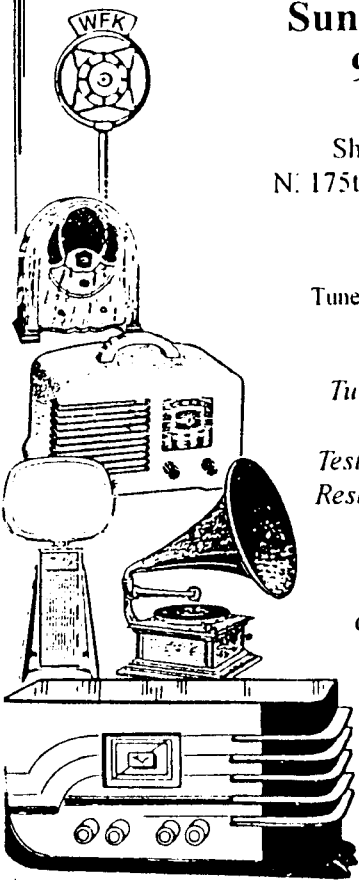
*Tube, Transistor & Novelty Sets  
Deco Plastics • TV's  
Test Equipment • Parts • Tubes  
Restoration & Repair Service Info*

## FREE ADMISSION

Collectors, hobbyists and sellers alike  
are invited to buy, sell and trade  
old radios and related gear  
Bring a table or tailgate  
Plenty of parking

A community event sponsored by the

**PUGET SOUND ANTIQUUE RADIO ASSOCIATION**  
P. O. Box 125 Snohomish, WA 98291 (360) 568-2698



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# Telegraph History

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Thanks to Tom Perera, Upper Montclair, NJ

## Timeline

- 1830s Needle Galvanometers were in use in England to indicate railroad track conditions & control trains.
- 1833 Samuel Morse demonstrated first device to send signals over wires. Close switch on 1 end of wire, mark paper tape on other end. Device used to mark signals is called a REGISTER.
- 1844 First true key. Vail's "Correspondent" Straight lever. Lasted 4 yrs.
- 1848 Thomas Hall-Boston. Add weight to rear & curve down Hinde & Williams- Boston. Heavier lever & coil spring Charles Chubbuck-NY. Leaf spring to center of key Led to development of "CAMELBACK" or "hump-back" curved lever key. Lasted 12 yrs because steel pivot pin worked loose in brass lever.
- 1849 Need for portable set led to Key & Sounder on same Base (KOB) set.
- 1857 Portable pocket KOB set called "Lineman's Test Set"
- 1860 Phelps (Western Union chief engineer) invented adjusting screw for spring tension. (A major improvement)
- 1865 End of camelbacks. Lever brass wore out against steel trunnion.
- 1869 Camelback curve removed and lever smoothed to Bradley style of today.
- 1875 Western Electric introduced "Lewis" key of Nickel on ornate base.
- 1879 Walter Phillips abbreviated most words. Cut transmitting time by 1/3.
- 1881 Jesse H. Bunnell first steel lever key - the "Triumph" key, within 1 year accepted by all companies and all railroads. (Hamilton patent of 1883).
- 1883 L.G.Tillotson "Victor Key" knife edge bearing mfg by Bunnell to 1920.

- 1886 "Steiner Key" (Western Electric) No pivot. Hard to adjust. Western Electric "Pole Changer key" for complex land lines. A. J. Maloney & A. G. Johnson - "Convertible key" could be turned on its side to allow horizontal operation.
- 1888 High volume of traffic led to "Telegrapher's paralysis" ("Carpal Tunnel Syndrome"). Bunnell's horizontal action "Sideswiper" also called the "double-speed key" helped reduce the pain.
- 1900 Foote Pierson Co. mfg. Skirrow & Shirley's "20th Century Key" Nicknamed "Pump Handle Key".
- 1902 Charles Yetman - Typewriter morse code sender-hard to send steadily.
- 1900s Signal Electric Company - mfg. large line of telegraph apparatus  
 Manhattan Electric Supply Co. (MESCO) mfg. large line of telegraph apparatus  
 Sears & Montgomery Ward and others sold above keys with no mfg names.  
 RCA Institutes trained large numbers of telegraphers on KOB sets.

## **Development of "Radio Keys" and "Bugs"**

- "Radio Keys"- Spark transmitters needed keys with HUGE contacts.
- 1896 Marconi-Grasshopper spark key cut out receiver when transmitting.
- 1904 Oil keys with immersed contacts to reduce sparking. American deForest key with 1 inch silver contacts for 10KW xmtr.  
 United Wireless Instrument key-marble base, skirted knob.
- 1905 Slaby-Arco "Door knob" key used with high power spark transmitters.
- 1910 Radio Amateurs made many "Dime Keys" by soldering dimes to contacts.
- 1911 Marconi Co. Open circuit key with closing switch & Heavy contacts.

- 1915 Clapp-Eastham "Boston Key" - marble base & German silver contacts.  
 US Navy key with 1/2 inch silver contacts & brass cooling fin.  
 Bunnell began making keys with replaceable contacts copied by Signal Electric Co. eventually led to the Johnson Hand key of 1930s.
- 1916 Signal Electric Key with 1/4, 3/8, or 1/2 inch contacts.
- 1920 Sideswipers by "Cootie", Bunnell, RECO, Montgomery Ward, and Sears.
- 1940s Specialized keys made for WWII. Many J-series keys.  
 BUGS: - developed from the need to send faster code.
- 1902 Horace G. Martin - AUTOPLEX - used batteries to hold pendulum for dashes & release it for dots. He cleverly wrote patent to cover virtually all automatic dot keys.
- 1904 Martin introduced his "VIBROPLEX" Original. Lasted 90 years.
- 1906 William Caffé "MECOGRAPH" right-angled key works on release of spring tension thereby bypassing Martin's patent.
- 1907 Modified by Benjamin Bellows & Ambrose Behner.
- 1909 Modified for easier adjustment of dots by Bellows.  
 Hulit Co.-Topeka KS Full automatic, key wound Key"  
 Lasted 3 years.
- 1909 Thomas Dunn-Convertible Sideswiper and semiautomatic bug.  
 Vail-O-Graph, MacDonald double lever key  
 Max Levy A-to-Z Novelty Co. "Improved Vibroplex."  
 MARTIN SUED ALL IMITATORS, WON, And then LICENSED all bugs that passed his test..
- 1911 Martin used Hulit's 2 levers for his double lever Vibroplex.
- 1912 "X" model Vibroplex. 1 Contact for both dots & dashes. Lasted 13 yrs.
- 1914 Vibroplex #4 (smaller/portable) which later became the "BLUE RACER". Martin bought Mecograph patents.- Martin Vibroplex & Mecograph Co.

- 1917 Vertical Vibroplex "Wire Chief's Key" less space -  
Lasted 8 years.
- 1920s CW REPLACED SPARK. Smaller contacts. Bugs  
could now be used.
- 1922 Walter Lytle-Philadelphia-TRIPLEX-3way-  
straight,sideswipe,bug.  
J.H. Bunnell's "Gold Bug". Pretty key with terrible  
"feel".
- 1923 Martin Number 6 - called the "VIBROPLEX LIGHT-  
NING" in the 1930s.
- 1925 The "Ultimate" (A miniature key). SEMANTIC-Side-  
swiper/semi auto.  
KEEN KODE KEY-keyboard dots & lever dashes.  
COLORED base Vibroplexes. Martin Jr. (Larger con-  
tacts.)
- 1929 RADIO SPEED BUG - The only kit bug ever made.  
Sold for less than \$5.
- 1930s Martin left Vibroplex. Formed Martin Research Co.  
Les Logan Co- SPEED-X keys often misnamed Logan  
Bugs-Later Johnson.  
GO-Devil semi-auto/sideswiper.  
SPEED BUG-Bklyn Metal Stamping Co.  
SPEED KING-T.R. McElroy who demonstrated 75wpm!  
Mfg his MAC-KEY, deluxe SUPER SPEED STREAM  
key. and also involved in mfg Telegraph Apparatus  
Co.(TAC) bugs.  
ELECTRO BUG:with electrically operated dot relay.
- 1940s MELEHAN VALIANT-fully automatic- designed by  
Melvin E. Hansen. Lytle Triplex - called the DOW key.
- 1994 Vibroplex new owner: S. Felton Mitchell, Jr. WA4OSR  
Address: 11 Midtown Park Ease. Mobile, AL 36606-414

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# Michael Faraday, 1791 - 1867

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By Dick Karman

Michael Faraday was born September 22, 1791 of Margaret Hastwell, a farmer's daughter, and James Faraday, a blacksmith of Yorkshire, England. Being too small to follow in his father's trade, his parents obtained for him at age 13 an apprenticeship with Mr. Riebau as a bookbinder. In that capacity he made the acquaintance of M. Masquerier, a french painter lodging with Mr. George Riebau. He loaned Michael books to read and taught him to sketch. Also, Michael would read the books left in his care for binding. He felt fortunately that many books of a scientific nature came to him. In an interview he recounted that *"when first I evidenced a predilection for the sciences and, more particularly, for that one denominated electricity, Mr. Riebau kindly interested himself in the progress I made in the knowledge of facts relating to the different theories in existence, readily permitting me to examine those books in his possession that were in any way related to the subjects then occupying my attention."*

Later in life M. de la Roche, for whom Michael was a journeymen bookbinder, offered him his shop and goods, for he had no children to leave it to, but Michael declined. Michael Faraday consider himself a philosopher of natural phenomena. In his own words: [At first I felt] *"I must resign philosophy entirely to those who are more fortunate in the possession of time and means, but fortune was on my side. Late in October, of the same year, Sir Humphrey Davy injured his eye from the explosion of the chloride of nitrogen on which he was working and could not read or write. Because of my penmanship I was recommended to Sir Davy to serve as his amanuensis for a few days. That December, inspired by Dr. Watt's writings on self improvement and the unity of moral philosophy and the scientific method, I took "the bold and simple step" of sending a bound volume of Sir Humphrey's notes along with a letter expressing:*

*" my desire to escape from trade, which I thought vicious and selfish, and to enter into the service of Science, which I imagined made its pursuers amiable and liberal, expressing my wishes, and hope that, he would favor my*

views. At the same time that he gratified my desires as to scientific employment, he still advised me to remain a bookbinder, telling me that Science was a harsh mistress, and in a pecuniary point of view but poorly rewarding those who devoted themselves to her service. He smiled at my notion of the superior moral feelings of the philosophic men, and said he would leave me to the experience of a few years to set me right on that matter."

For three years following 1816 Michael Faraday produced papers from the work he did with Sir Humphrey Davy on the invention of the safety lamp, and analyses of various substances entrusted to him, for the patrons of the Royal Institute. Sir Davy commented favorably on Faraday's skill as an analysts. This recognition of his analytical skill pleased Faraday. In those years he was known for his terse, impersonal reports that put forth only the details.

Michael Faraday delivered several public discourses regarding his discoveries. He was explaining what we now know as inductance when he spoke of "action at a distance" and the role the "space" between objects plays in the transmission of charge or lack thereof in the effect of "insulators," to paraphrase his words.

As late as 1838 Faraday had trouble explaining what he was observing. He wrote: *"However, atoms and combined groups of atoms are not consistent with my results. My work can stand alone without Dalton's. My experiments do not show that a relationship exists between the type of crystal and the insulating ability. These last several years have been very difficult, as you see now I have a very severe headache.* His headaches plagued him for years. His observations paved the way for many of the laws of electromagnetics, without which radio would not be possible.

Michael Faraday died August 25, 1867.

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# Swap Shop

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## WANTED

WANTED: Vintage amateur radio receivers, AM transmitters, and other related amateur gear (circa: 1936 to 1960). ARRL Handbooks from 1935 to 1954. Ken Seymour (KA7OSM); 9115 S.W. 176th Avenue, Beaverton, OR 97007; 503-306-7439 days/eve. Email: ken.seymour@attws.com

Wanted: Bakelite or plastic pre-war shortwave sets, and early TVs, Scott MacGregor, 1115 SW 28th St. Troutdale, OR 97060, (503) 661-1294.

WANTED: Military Surplus communication gear, and shortwave receivers, Lyles Garcia, (503)649-9288.

## FOR SALE

For Sale: Over 200,000 tubes, panels, speakers, chassis, electronic surplus and supplies. R5-D3 Surplus. Bob Lee, 6111 SE 82nd Ave. Portland, Or. (503) 774-6560.

FOR SALE circa 1914 Spark Transmitter, double gap, with 110 volt power supply, external helices added to sharpen decrement -\$1,000 - can deliver to Portland, July 19th. **Bud Larson**, 1325 Ridge Way, Medford, Oregon 97504; (503) 773-5214

FOR SALE OR TRADE: Movie Dial Console, 1936 Airline Model #62-413. 13 tube, 2 speakers, Tuning eye, and Chrome Chassis. Mint Condition. Dick Bosch, LaCenter, WA - (360) 687-4414.

FOR SALE: National HRO 5TA1, metal tubes, 5 coil sets (4 general coverage and 10 meter band spread), home brew power supply and cabinet for speaker and coils. Clean and in good working order. \$350. **David Rutland**, P.O. box 1084, Philomath, OR 97370, (503) 929-4498 e-mail [WREN@PEAK.ORG](mailto:WREN@PEAK.ORG).

## LEADS

FOR SALE: General Electric model RC-329 AM/FM console with a 78 RPM record changer. Asking \$125 (negotiable). Call Robin Raiter (503) 287-3316.

## TRADES

FOR TRADE: I'm looking to complete my set of Riders. I have an extra sets of manuals 7 - 10 and 12 - 14. I need manuals 15 and 17 - 23. Interested in trading or buying.  
Dave Brown Email: [djbrow@pacifier.com](mailto:djbrow@pacifier.com) or Phone: 538-5842

The following items are all from one collection. The collector's family wishes to find appreciative homes for all of them. Prices, where quoted, are negotiable. --- Ed Charman.

1. Airline 62-2745-1 late '40's AM/FM double door console, with record changer, in excellent condition. Asking \$100.00.
2. Stromberg-Carlson Model 521-CDM 21-inch television console, with lovely mahogany cabinet and double doors that close over the screen. Asking \$ 50.00.
3. Sentinel 284-NR table model AM radio, red Catalin cabinet w/ wavy grill, 1946. Asking \$ 1,500.00.
4. Zenith 8S661 Console, 1942, in A-1 condition. \$140.00
5. Zenith 10S464 Console, 1940, in nice shape and sounds great! \$ 235.00
6. Radiola 76CX11 Bakelite table radio, 1948. \$ 35.00
7. RCA Victor 2-XF-933 Plastic table model, \$ 25.00
8. Philco 49-906 Plastic table radio, 1949. \$ 35.00
9. Admiral 5X13UL Plastic AM table radio, 1949. \$ 30.00
10. Majestic Model 5-T Bakelite AM clock radio. Clock face is missing, but the hands are there. 1939. \$ 75.00
11. Philco 48-250 "Transitone" AM table radio (loctal tubes). Cabinet is chipped in back corner. Damage is not visible from front. 1948. \$ 40.00

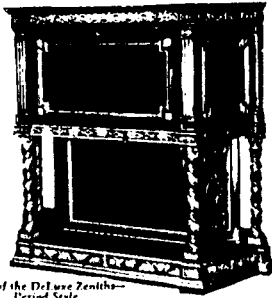
12. Airline GTM1825A Clock Radio, ca. 1960.  
Has heavy-duty appliance switching circuit.  
White and Chestnut Brown plastic. \$ 30.00
13. Capehart ????? 195\_? Clock Radio, white  
Bakelite \$ 30.00
14. Zenith 2-2187 Clock Radio, Chassis 5N02.
15. Heath IM-32 Vacuum Tube Voltmeter, \$40.00.
16. Heath TC-3 Tube Tester, \$ 50.00
17. Heath SG-? RF Signal Generator (Charcoal),  
\$ 25.00.
18. Heath Condenser Checker (Charcoal)  
\$ 25.00.
19. Sencore TC-142 portable Tube Tester,  
\$ 50.00.

Lots of parts, tools, etc. Make your own offer.

Contact John or Christine Orenge at  
(503) 630-3761, or Mary Lu Savara at  
(503) 324-7365 to make viewing appointment.

Why Did  
Commander  
Max Millan  
Take Zenith to  
the Arctic?

As the result of his experience  
with Zenith Radios last year,  
Commander Donald B. Mac  
Millan again chose Zenith for  
his Arctic Expedition.



One of the Deluxe Zenith—  
Period Style

Super-Zeniths are priced  
at from \$245 to \$7,000.  
Each instrument sold  
under a quality guarantee.  
Also, Zenith reproducing  
sets from \$100 to \$175.

## Why Every Dealer Can Not Handle Zenith—

THE dealer who sells you a Zenith regards the transaction only as the beginning of a permanent connection.

To him—you are not a "purchaser"—you're a customer. There's a distinct difference.

He expects—that through the performance of your Super-Zenith—other people will become interested.

His policy of satisfying you is not sentiment—but sound business.

The Zenith Super-Radio is not a "quantity" proposition.

Consequently we can pick and choose our retailers—add and eliminate—work only with those retailers whose ideals and methods fit our own.

And our objective is a mighty good one for you—for your protection.

We want you to know that wherever there is an Authorized Zenith Retailer, you can buy safely—with the full assurance that you get what you pay for; that cheerful, intelligent service begins with your purchase—and never ends.

The Zenith is not a "cheap" instrument in any sense of the word.

You pay a price that entitles you to unusual performance—genuine satisfaction.

And we are using every means within our control to see that you get it.

Zenith literature and name of nearest retailer gladly sent on request.

ZENITH RADIO CORPORATION, 310 S. Michigan Ave., Chicago, Ill.

**ZENITH**  
TRADE MARK REG.  
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TRADE MARK REG.  
**RADIO**  
Costs More—but Does More