



GATE LETTER

VOLUME 17

MAY 1991

NUMBER 5



KILBOURNE & CLARK MFG. CO.

101 Spokane Street Seattle, Wash.

CALL LETTER

The Northwest Vintage Radio Society is a non-profit historical society incorporated in the State of Oregon. Since 1974 NWVRS has been dedicated to the preservation and restoration of Antique Radio & Wireless apparatus.

The CALL LETTER was founded in 1974 by Harley Perkins (our first President). Editors have served as follows: 1975/77 Bob Bilbie, 1977/78 Bob Hay, 1978/79 Tom James, 1980 Bill DeVey, 1981/83 Jim Mason, 1983/87 Richard Karman & 1987/91 Edwin Buhite.

The Northwest Vintage Radio Society meets at the Buena Vista Club House (Atkinson Park) 16th & Jackson Street, Oregon City, Oregon. (Note: take I-205 & Exit at Park Place, take first right onto Washington St. continue to 15th, left up 15th hill to Jackson, turn left to 16th).

Meetings are held at 10:00 AM on the second Saturday of each month except for summer vacation in July and August. The meetings are an opportunity to exchange information and advice.

**Annual Dues: 1991 Regular Membership \$15--
Renewals are due on January First**

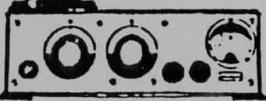
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President	Dick Karman	503-288-1285
Vice President	Ray Nelson	503-233-5063
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***** 1991 STAFF *****

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Dick Karman 503/288/1285

The CALL LETTER and The HORN OF PLENTY are published monthly as the official publication of the Northwest Vintage Radio Society and the Puget Sound Antique Radio Association.

The Call Letter and the Horn Of Plenty are available only as part of the NWVRS/PSARA memberships. NWVRS/PSARA are not responsible for any buying / selling transactions incurred, or for any other use of the contents of this publication. All transactions are on an "as is" basis with the new owner assuming all responsibility. Items listed as "LEADS" are from non-members and provided to assist you in locating radios.

mark your calendar

TWO BIG SUMMER SWAPS

Keizer OR August 10

Seattle WA August 18



From The PSARA President's Desk

By PSARA President Max Kaplan

Seems that our business meetings are being attended by a greater number of members. This is encouraging, as we need as much input as possible, especially now, where we have to address some problems.

One of the problems remains the same we faced for considerable time now: The reluctance of members to volunteer their knowledge for sharing with the club by having a little presentation or talk about anything concerning our hobby. As mentioned previously in these pages, this doesn't have to be a formal "lecture", a collecting experience, a restoration hint, a rare find, or a show-and-tell with your favorite set. There must be a multitude of ideas out there among members. We need you for May, July and later; lets hear from you. In the same light, I would like to encourage members to more actively participate with contributions to our monthly publication.

If you have anything at all that is printable: line drawings, historical/technical pictures, articles, old ads, related cartoons, your personal articles, anything you would rather write about than present in person, contact our editor or me. This should be an on-going endeavor.

Our members have been invited by R.E.P.S. (Radio Enthusiasts of Puget Sound), a group of old radio program enthusiasts. They meet every first Saturday at 2PM (14:00) at the Queen Ann Library. A recent letter contains an invitation for an August or September meeting for some of us to bring some nice old set for a show & tell. If you feel inclined, give Mike Sprague a call at (206) 488/9518 (Kirkland).

Start thinking/planning now for our annual, advertised, invitational public swap meet in August. lets make this "The Big One".

Max

Thanks Max!

I couldn't have said it any better. A society of radio buffs should have plenty to talk about and share. Join in and let's see you volunteer for the June NWVRS meeting.

Dick Karman, NWVRS President



— Kilbourne & Clark —

Seattle, Washington

by Bill Baker W7IYY

My first introduction to Kilbourne & Clark and their equipment came several years ago when I met old time ham and commercial radio operator, Bill Zinn, W7CM of Seattle, Washington. Bill bought what was left of the hardware and some old receivers when K & C went out of business.

There is a ham in Washington who ran a swap shop on 75 meters and one Saturday as I was listening to all the ham gear for sale an ad was given for an antique ham receiver. I immediately wrote to Bill, but he was so long answering I thought I had lost out. When he finally answered, I found he had a lot of radios and much K & C parts and equipment.

I got almost all of my collection in the next few trips to Seattle. He had enough stuff to drive any radio nut right out of his tree. I hauled home trailer loads of radios, speakers, tubes and a lot of K & C parts. Most of the sets were stored in the attic of his garage along with a lot of other things.

Well, back to K&C. The Kilbourne & Clark manufacturing company was one of the oldest radio manufacturing companies in the United States, established in 1901, and continued to make radios until it went out of business in 1926 or 1927.

The company's commercial radio apparatus as built for marine use was found on vessels all over the world. A large number of sets were installed on vessels of the United States Shipping Board.

Through its service organization known as Ship Owner's Radio Service, Inc., inspection and installation service was given to ship owners and this company also distributed, through branches located in different parts of the United States, all makes and kinds of radio equipment for popular and commercial use.

The K & C plant was moved at the beginning of 1922 to a new factory building at 101 Spokane Street, with full shop and laboratory facilities.

The company's engineering organization had long experience in electrical design and in addition to radio apparatus, they manufactured electrical instruments, telephone receivers, high voltage motor generating sets as used for broadcasting, and other electrical specialties.

Kilbourne & Clark spark transmitters were designed by their engineers,



Thompson and Simpson. In 1916, Kilbourne & Clark was sued by the Marconi Company, alleging infringement on the Marconi 1900 transmitter patent. K & C won in a court trial a non-infringement ruling.

In 1920, Mr. H. J. Jefferson became vice president and introduced many new products, and modernized the plant. The Ship Owner's Radio Service was handled from New York, by Mr. C. B. Cooper, and the sales engineer was Mr. E. P. Denham.

Among the many sets I got from Bill Zinn were two "Air Roamer" broadcast sets and I sold the spare one to a John Denham, who was Chief Operator of a broadcast station in the Virgin Islands. I found out his father was a brother to the E. P. Denham who was the sales engineer. John Denham agreed to interview his Dad and this is it:

"Dear Bill: I spent a delightful day with my father earlier this week, and we talked at length about his days at Kilbourne & Clark. My dad got into the K-C stable fairly late in their history, but my uncle, E. P. Denham, was with them for many years.

"K-C owned a radio communications service. They provided, on contract, the transmitting and receiving equipment and operators, and their own shore installations. Many ships were equipped in this way. Before about 1922, my uncle was in charge of installation, maintenance, etc., of the company's gear in the Hawaiian area, and he was very successful at inducing ship owners to get rid of their RCA Radio-marine (or whatever) gear and install K-C.

"His success as an engineer and salesman was why they made him a sales engineer when he returned to Seattle in 1922. He was still very active in the engineering of their products, even though sales were supposed to be his main responsibility.

"It was a little after my uncle returned from Hawaii that he persuaded the company to hire my father to improve the efficiency of their production system. He designed machinery, forms, dies, etc., that were used in the production of parts, and he re-arranged the assembly process so that almost all assembly work was done by women.

"My father said he had nothing to do with major company policy, and claims no responsibility for the success or failure of the outfit!

"They manufactured a number of receivers which were almost identical to the Air Roamer, and which bore the name of major retail companies. As near as my father can recollect, the Baldwin special was a set particularly adapted for use with the Baldwin loudspeaker -- he thinks it was mostly in



the audio section that it was different, but doesn't remember for sure.

"He said the radio business became very competitive in the late twenties, and K-C just couldn't meet the competition. Just before they folded, they got involved in the manufacture of many products which were adaptable to their particular machinery, but never quite made out. Both my father and my uncle left before the company was actually on the rocks.

"One time, as a promotional stunt, they made an Air Roamer with a glass panel, glass chassis, and glass cabinet. It was displayed, in operation, at state fairs, etc., to show the quality of their construction. They received a number of orders for special duplications of the glass-cased set from people who had enough money to pay the extra cost. Somewhere, there may be one of those glass Air Roamers still in existence.

"During WWI, there were many K-C transmitters on ships, and a big post-war business was the modification of these spark sets to use tubes. They made their own high voltage generators, which put out about 2000 volts – from an armature with a commutator on each end. The two sets of windings were connected in series, as each one delivered about a thousand volts. They spent a lot of time and money before they finally devised a system for impregnating the windings with a varnish that would hold the turns in place and provide insulation as well as protection against humidity.

"I asked my father about a receiver they produced that had a bird, a seagull, engraved on the front panel, which I remembered seeing when I was a small boy. He said this was a less expensive set they made, hoping to get a bigger share of the market, but like me, he didn't remember the name they gave it.

"My father also built a machine which wound honey-comb coils automatically. He said K-C made and sold them by the thousands, once they no longer had to wind them by hand.

"This is about all I found out."

The "Dutchman Restaurant" now occupies the building which was the K-C factory.

Our thanks to Bill Baker for allowing us to use his article which first appeared in The Antique Radio Gazette in 1978. Thanks also to Warren Green, Jim Barrows and Max Kaplan who helped with pictures of sets.

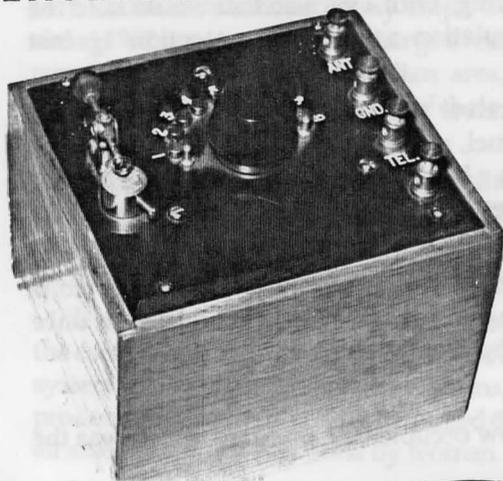


Kilbourne & Clark Popular Radio Apparatus

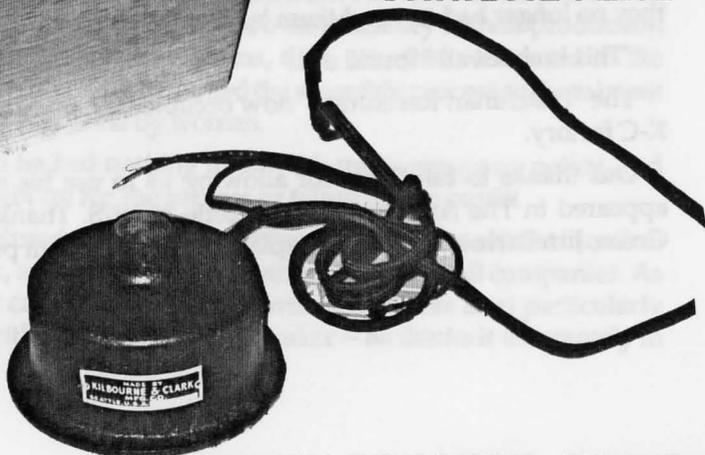


MODULAR RECEIVER

CRYSTAL RECEIVER



VARIOMETERS



HORN SPEAKER DRIVER

PSARA Meeting Minutes

Seattle Wa. -- April 21 1991

The meeting was called to order at 1:00 PM by Max Kaplan. 32 members and 5 guests were in attendance. Three new members were voted in.

Guests: Greg Schilling, Eric Starmer, Vernon Vogt, Leroy Walters, and George Wright.

Old Business: Al Atworth presented the treasurer's report, all is OK.

Name tags became available for some members.

New Business: Ken Korhonen informed us that the future of the radio room upstairs could be in doubt. The Shoreline Historical Museum might ask rent for the room, or may be thinking of converting the room to another use. The Museum has not been opening the radio room during normal business hours. Ken will keep us informed as he learns more about the intentions of the Museum, meanwhile we will continue to rebuild the inventory in the room. Anyone with items to place in the room, or with ideas to improve the radio room are asked to contact Ken Korhonen.

A sign-up sheet was passed around for those interested in obtaining copies of a book called PUGET SOUNDS. The sign-up sheet will also be passed around at the next meeting.

Anyone interested in old time radio broadcasts may want to contact Radio Enthusiasts of Puget Sound at 546-5406 or 488- 9518. This newly formed club meets on the first Saturday of each month in Seattle. Their subject this August will be old/antique test equipment.

Dave Dintenfass gave a fine talk on Ampex tape recorders and brought several examples of Ampex equipment.

Lee Ray, PSARA Secretary

PSARA Future Programs:

May 19 -- Open

June 16 -- Howard Randall will talk about Grid Dip Oscillators

July 21 -- Open

August 18 -- Invitational Swap Meet



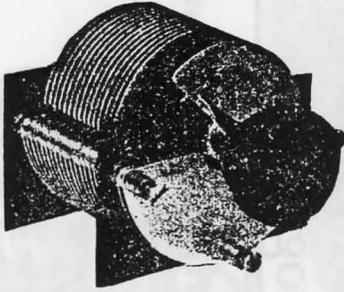
OLD TIME RADIO
with Jim French
Sundays at 10 PM
KIRO 710 Seattle
50,000 watts



Kilbourne & Clark Popular Radio Apparatus

VARIABLE CONDENSERS

Plain and Vernier



Patent Applied For

VERNIER CONDENSERS

These condensers are so designed as to permit very sharp tuning at all settings, and both main rotor and vernier plate are controlled by the same knob without clutch device.

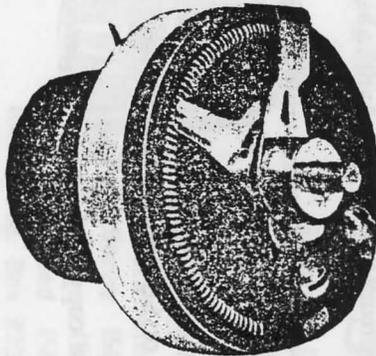
PLAIN VARIABLE CONDENSERS

Cat. No.	Capacity	List Price
7	.0001 mfd	\$2.75
13	.0002	3.25
17	.0003	3.35
23	.0005	3.50
31	.0007	4.75
43	.001	5.00
63	.0015	7.75

For price of vernier condensers add \$2.00 to the list price of any of the above.

FILAMENT RHEOSTATS and POTENTIOMETERS

A ruggedly constructed and smoothly operating Vernier Rheostat controlled by one knob without any clutch device.



Pat. applied for.

Plain filament Rheostats are supplied in correct resistances for control of both 6 volt and 1½ volt tubes. Potentiometers have 200 ohms resistance and are for use on "A" battery. Construction of all rheostats and potentiometers similar to vernier rheostat shown above.

FR2 Plain for 6v. tubes	\$1.10
FR3 Plain for 1½ V. tubes	1.00
FR4 Plain for 5 volt tubes—20 ohms	1.25
VR2 Vernier for 6 V. tubes	1.50

NEW C. W. PARTS



5 WATT RHEOSTAT

2.8 ohms resistance. Similar to FR2 filament rheostat with heavier winding.

List price \$1.50.

50 WATT RHEOSTAT

1½ ohms resistance. Lavite base, nichrome winding and tested to stand up to eight amperes indefinitely. Moulded knob. For ¼ inch panel. Other sizes supplied. Price \$7.50.

50 WATT SOCKET

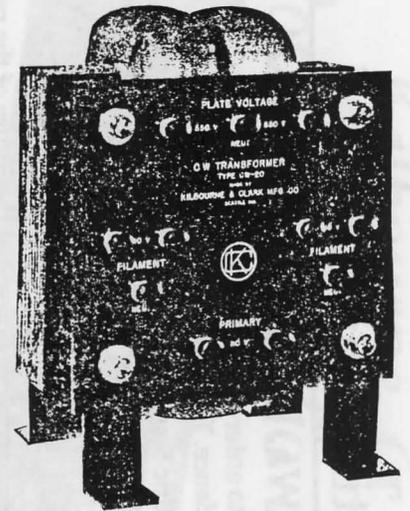
Has lavite base with heavy spring contacts giving maximum contact with tube prongs. Price \$2.50.

W. D. 11, Tube Adapter (for Std. socket)\$1.00

ASK YOUR DEALER

for

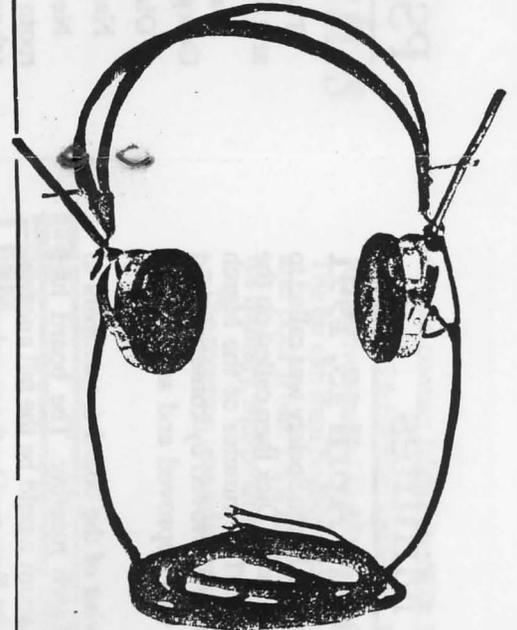
K&C RADIO



C. W. 20 TRANSFORMER

Will operate maximum of four five watt tubes and four kentrans, or one 50 watt tube for straight C. W. Core of silicon steel with cross section 1½x1½ inches. Terminals on bakelite panel with engraved markings. Dimensions 7x9x5 inches. Shipping weight 28 lbs. Price25.00

K & C HEAD PHONES



This is a lightweight double head set, the receivers having polished aluminum cases and the head band of the latest light weight design, adjustable, and with khaki covering. Material used in these sets is of the highest grade, and inspection and individual test of each part insures reliability. All completed receivers are carefully matched and tested for sensitivity before shipment. Particular attention has been paid to neat finish, thus giving these sets an exceptionally good appearance. These sets can be supplied either in metal cases with moulded caps or with both case and cap of moulded composition.

TYPE P2 and P3

(Khaki Head Bands)

P2 2000 ohms	\$5.00 pr.
P3 3000 ohms	6.25 pr.

TYPE P1

(Leather Head Bands)

P1 2000 ohms, double	\$4.50 pr.
P1 1000 ohms, single	3.25 ea.

KILBOURNE & CLARK MFG. CO.

101 Spokane Street Seattle, Wash.

N W V R S Meeting Minutes

Oregon City, OR - Saturday April 13, 1991

The April meeting of the Northwest Vintage Radio Society was called to order at 10:10 AM by our President Dick Karman. Dick then called on the members for the Good and Welfare report. The minutes of the March meeting as published in the Call Letter were approved by consensus. Ed Charman gave the treasurer's report. It was approved and accepted as submitted.

OLD BUSINESS: Dick discussed the visit of the board & members to the Frank Rasada Museum after the March meeting. The board had discussed that the first meeting at the museum would be the fall auction. That would be the September meeting. It was discussed by the membership and that we have the agreement in place. It was also announced that Frank Rasada would be in town on April 18th and needed help on unloading his van of part of his collection at the museum.

It was settled that the swap meet will be at the Oregon City location. Also that it would be in November. It was suggested that any flyers that were already out for the May & November swap meet be picked up and replaced with up to date flyers.

Dick Karman discussed still needing a guest speaker for the June meeting. It was considered having a panel member or old member that we could ask some questions on old radio & honor them and announce we will be moving to a new location, making it a farewell to the Oregon City club house.

Dick Karman also discussed library tapes that might be readily available when we get to the Rasada Museum. Frank Rasada plans to have a small room for the NWVRS library and equipment. Other spots were discussed.

Dick announced that we will not interrupt the swap meet with a business meeting in May.

After the NWVRS has completed the agreement with the Rasada Museum, if you want to display any piece of yours in the museum, that is between you and Frank.

NEW BUSINESS: Jerry Talbott announced that you could get Radio and Radio Craft books at Portland Radio on SE Grand. They also have others that might be of interest to us.

Members interested in obtaining a copy of the book "Puget Sounds"



should contact Ed Buhite (503) 288/8719. He will contact PSARA.

LEADS & NEEDS: Question, how do you get the tar out of an old Atwater Kent power pack? Tex Sloat said to put it in the freezer for a couple of days. The tar can then be chipped off. Another member said to heat it in the oven and pour it out. Dick Karman announced he is going to get rid of some of his military equipment.

The meeting was adjourned at 10:35AM.

Gordon Phillips, NWVRS Secretary



1991 SWAP MEETS NORTHWEST VINTAGE RADIO SOCIETY

Saturday, May 11, 1991
9:00 am to 11:30 am

Saturday, Nov. 9, 1991
& 9:00 am to 11:30 am

Buena Vista Club House
16th & Jackson
Oregon City, Oregon

From I-205: Take the Park Place Exit.
Turn right at Washington St. Turn left at
the second traffic signal (16th St. - at the
post office). Go up the hill to Jackson St
and turn left. The clubhouse will be on
your left at 16th.

Speed's Big Summer Swap

Saturday August 10, 1991

beginning at 8:00 AM

7455 O'Neil Rd. Keizer OR

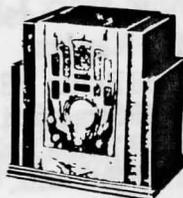
FREE ADMISSION

Seller's fee will be charged
for more information contact:

Sonny (503) 254/9296

Dan (503) 761/7799

Speed (503) 390/3928



NWVRS P.O. Box 82379 Portland OR 97282

Olé! (acquisitions)

David Braun

Sparton 768

Sonny Clutter

1930 Point Bleu deco bakelite,
French

1940 Addison L2
green/white marble
plastcon

1948 Decca DR90 white
bakelite clock/radio

1953 Motorola 53LC portable
clock/radio

Lauren Countryman

Zenith 14E

Zenith 6T40Z Transoceanic
Atwater Kent 66 chassis

Richard Dielschneider

Airline table radio model
unknown

RCA 5T tombstone

Silvertone R81 console

1937 Philco 37-620 console

1939 Zenith 9S367 console

Crosley 148CP(W)
radio/phono console

1942 Zenith 6S632 console

1946 Zenith 6D030 table set

Guild Buccaneer chest

Dan Howard

1950 Emerson 12" table TV

1950 National NC183

Misc. spark X-mitter parts

Max Kaplan

1938 Braun VE301W, German

1938 Strassfuri DK38, German

1939 "Little Maestro", English

1948 Sudfunk, German

Walt Kiefner

Silvertone mini console
(13" high)

Jim Mason

1935 Long Bros. 4-tube
mini-tombstone built in
Cornelius, OR

Ray Nelson

1937 GE F-63 6 tube table set

1940 Stewart Warner R-181A
table set

1950 Coronado 43-8353 push
button bakelite table set

1950 RCA 45J bakelite phono

1950 Sparton 5-06 bakelite set

1950 Trav-ler 5055

white/blue bakelite table set

1950 Zenith R615 brown

bakelite table set

1955 RCA 7-BT-10K

transistor seven (first one)

1960 World globe novelty
transistor set

John Otterstedt

1941 Wards Airline

multiband table set

1944 Wards Airline

multiband table set

1947 Packard Bell bakelite

table set

Mike Parker

1926 Leich 3-dial

1926 Crosley 4-29 2-dial

1928 Crosley Showbox

1930 Ecophone "C" cathedral

1935 Tiffany Tone



Ab Epistulis

Pete Petersen (WY7Z), PSARA

Prepared by David Dintenfass, PSARA

Wheat---or more precisely, a threatened shortage of it---stimulated one of the earliest attempts at long-distance, high-speed communication.*

During the Roman Empire, Italy couldn't grow enough wheat to feed its growing population. Thus, imported wheat was a necessity---so much so that when Vespasian forced the Roman Senate to accept him as emperor in 69 A.D., he did it by seizing Egypt (then the chief source of Italy's wheat) and holding the entire country for ransom. I apologize for this digression, but it emphasizes that for a number of political and practical reasons, Rome needed to know when shiploads of wheat arrived at her ports.

A rapid means of sending messages was arranged, using a semaphore system to flash signals from point to point. By this primitive method, the arrival of grain ships was quickly made known to Rome. We know that one such semaphore link was used between the port of Puteoli (now Possuoli) and Rome---a distance of some 150 miles.

It would be interesting to know how the semaphores were made and operated--could there have been a Roman Radio Relay League? And what signal or code system was used? Unfortunately, the historians of that time did not anticipate our later interest, and even Gibbon is silent on this topic.

* The Chinese were probably the first, but that's another story.

Pete Peterson

1928 Freshman QD-16S
console
1930 Fada 65 "Special" console
1947 Delco R-1238 AC/DC
table set

Gordon Phillips

1946 Emerson 255 2 tube
bakelite

Robert Rettmer

Ah 38 AC

Jerry Talbott

Kolster K-6 speaker
1934 LeWol "Best" cardboard
set
1946 Emerson 524 4 band, 10
tube table set



SWAP SHOP

WANTED

Volunteers to help with the PSARA Museum display, also looking for ideas leading to improvement of the display. Several Rider manuals were recently donated to the library, however, we still need the following; I, II, IV, V, XVIII, XX, XXI, XXII, XXIII. Ken Korhonen (206) 932/9363

Philco 90 Cathedral cabinet. Art Corbus (206) 784/2482 or (206) 783/6151

Copy & return: operators manual and/or service manual for Icom 1C-720A. Pete Peterson (206) 747/1323

Hallicrafters S27 or S36 VHF receiver. Don Williams 4520 NW Dorado Lane Bremerton WA 98312 (206) 692/2062

Blue 01As, early TVs, art deco. Ken Korhonen (206) 932/9363

1930-1945 Military and government radio equipment, special interest is WW2 German, Japanese, Italian. Also U.S. Forest Service, civilian boat and aircraft radio to 1945. Any equipment or manuals built in Pacific Northwest. Hugh Miller (206) 487/3047 (message recorder).

Halowatt TR-5 3-dial Mike Parker (503) 235/7187

Pre WWII Zenith chairsides & consoles, Delco 6 & 12 volt auto radios. Vince Creisler (206) 630/4735

Radio Keg Rick Stromberg 700 N Georgia St. Kennewick WA 99336 (509) 783/5689

Beginning collector would like to hire someone in the Seattle area to teach me the basics of old radio repair. If you are interested please call Alan Wallace (206) 526/8102

Crosley WLW 37 tube console in any condition, RCA 102 speaker. Jim Clark 1292 Starboard Okemos, MI 48864 (517) 349/2249

Riders XXI, XXII. Al Lemke 10004 206th Ave NE Redmond WA 98053 (206) 868/8165

Riders XXI, XXII, XXIII; Kolster power supply for K-43; clock for Philco 51. Jim Gianacos (206) 228/9398 or (206) 789/9417



FOR SALE

1929 Rola 90 console \$35/trade. Jim Mason (503) 644/2343

Riders I thru XX (excellent condition, I-V abridged) make offer. Jim Barrows (206) 338/4880

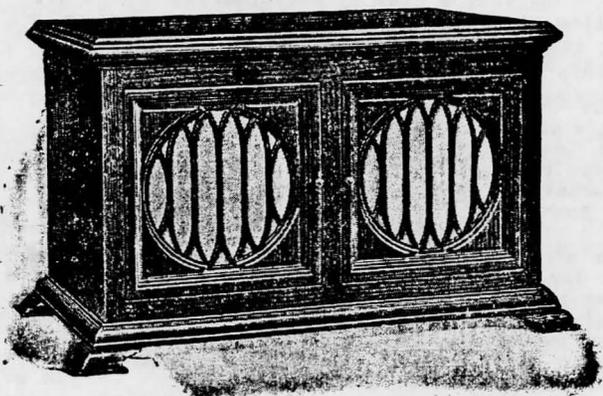
Riders II, III, VI, VII, VIII, IX, X, XI, XII, XIII, XIV, XVI, XVII. Jim Gianacos (see wants)

Oscilloscopes, test equipment, parts, tubes, test leads and more. Bill Hebert 7228 208th SW Edmonds WA 98026 (206) 778/0855

Radio & TV Tubes, parts, test equipment. Bob Lee at R5-D3 Electronic Surplus. 6111 SE 82nd St Portland OR 97266 (503) 774/6560

Loudspeakers, Horns, HiFi, Speaker Re-Coning: Ja Mac 8600 NE Sandy Blvd Portland OR 97220 (503) 252/2929

Vintage Radios, Stereo gear, parts and tubes. Steve Von Talge at THE OLDE TECHNOLOGY SHOP 7712 Aurora Ave. N. Seattle WA 98103 (206) 527/2829 or (206) 783/2543.



Radiola IV

Davee's Wireless Research

Ed, here is a little nonsense for the April issue of the Call Letter:

Like many club members who attended the March meeting, I was very intrigued by the Wireless ~~Research~~ Apparatus purchased that very morning by member Don Iverson for only \$2.00. Upon returning home, I decided to utilize my fantastic research skills, gained during twelve pain-filled years of University study, to ferret out the secrets lurking behind said apparatus. After spending copious number of hours ensconced in the Jasper Kerr library at Oregon State University, the Oregon State Library in Salem, and the City of Monmouth Public Library, I was able to piece together the fascinating story of Don's find and would like to share my research results with fellow club members.

First of all, I discovered that the name "Wireless" is not what one would expect but is actually the name of the builder - Joe Wireless or, as he was sometimes called by his friends, Wireless Joe. Joe was born in 1860, in a small village in what is now known as Germany. His birth name was Josef Heinrick Gustaf Frederik Drahtloser. Josef went to sea at a very early age. After a few years of sailing around the world, he became lonely for his friends back home and proceeded to invent a communication sending device he called a "Drahtloser". After several more years of sailing around the world futilely calling "CQ", he jumped ship at Omaha Nebraska and immediately took the last wagon train to Oregon. He forever regretted the fact that had he waited but one more month, he could have taken the very first Greypuppy Bus. Upon arrival in Portland, and after anglicizing his name to Joe Wireless, he learned that the reason he never received an answer to his CQs was that nobody had gotten around to inventing a communication receiving device. Having brought his "Drahtloser" equipment from the ship with him, Joe immediately began to correct this oversight. Iverson's find is the culmination of Joe's many hard years of research and experimentation. Unfortunately, by the time it was successfully tested in 1916, there were several such devices on the market. However, having been unencumbered by "modern" scientific research, Joe's apparatus has some very unusual features. The set is made of parts gathered from around the world during his many years at sea.

The tube is made of rare metals from Siberia and is of the Frozen Cathode, No-Gm type. Joe sent a copy of this tube to Utah State University for testing, but it was inadvertently placed in a freezer. Many years later, two Chemistry Professors found it and, because they hooked it up incorrectly, discovered Cold Fusion.

The Battery materials were found in an area of the world we know as Kuwait. Joe sent a sample battery to a large company back East for evaluation and they discovered that it could be rather unstable. It is ironic that the fourth generation of Joe's battery was used during a recent war in that same part of the world under the code name "Fuel Bomb".

The Crystal Detector's crystal is actually an impure diamond from South Africa. One day Joe accidentally revealed the crystal's remarkable properties in a local Oyster Bar. When the word spread, there was a virtual stampede to South Africa. The would-be prospectors arrived, however, only to find that the source of the crystals had just been destroyed in order to make room for the world's first drive-in movie theater.

I can not say enough about the set's Infinitely Variable Condenser.

Iverson's set is, unfortunately, the only receiving apparatus Joe manufactured. It was determined that his untimely death in 1916, was caused by an unfortunate selection of the type of leather to cover the case. The skin came from a female member of the only specie of mammal native to the Galapagos Islands-the *Apero fullous*. Unfortunately for the male members of this specie, it was the only female. Unfortunately for Joe Wireless he trapped this female during a period known to mammal scientists as "The Period". During this period the female exudes the most poisonous substance known to man. The poison remained in the leather long enough after tanning to do poor Joe in. Members of the medical profession strongly suggest that the case be handled only with kid gloves.

I hope that you have found the results of my research interesting. If there is anything else you want to know, just ask.

© Douglas E. Davee; BA, BA, BS, etc.



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To the editor:

I enjoyed Pete Peterson's article "How Big is a Farad?" in the March issue of Call Letter.

In the article he observes that the volume required to obtain a Farad of capacitance has decreased dramatically in the last 50 years. He also noted that if asked, you could safely answer that a Farad is "bigger than a breadbox". It seems though, that the breadbox has shrunk in the last few years.

Pete also posed the question: for what purpose could you use a 1 Farad capacitor?

I actually have had the occasion to use a 1 Farad capacitor. It was not exactly a vintage radio application, but it might interest the readers of Call Letter.

I needed to maintain the time of day in a data logging system and needed to keep the clock running even if the 120 VAC power failed for a few hours. I found a Statek real time clock module in a DIP package that required less than 10 microamps and would operate down to +2.2 volts. Instead of using a battery to operate the clock when the power failed, I powered it from a BIG capacitor.

I ran tests with a 1 Farad 5 V. capacitor powering the clock module. It ran the clock 4.5 days before discharging to 2.2 volts! Since 4.5 days of power backup seemed excessive, the data logger was built with a measly .22 F capacitor. Farad sized capacitors would also be useful for power backup in CMOS RAM. The capacitors can be rapidly charged and avoid all the hassle of using batteries.

The use of a Farad for this application was possible because of an electrolytic capacitor technology developed by Pennwalt and licensed to NEC and Panasonic about five years ago. The NEC line is called "Supercap"; the Panasonic version is called "Gold Capacitors".

The NEC 1 Farad capacitor that I used was 1.75" diameter and .73" high (1.8 cubic inches).

The Panasonic 1 Farad capacitor is even smaller: .85" diameter and .32" high (0.6 cubic inches)!

You can buy the Panasonic capacitor (1 Farad, 5.5 volts) for \$6.25 by mail order from Digi-Key (1-800-344-4539).

They also have blue LEDs for \$9.75, but that is another story.

Sincerely,



John Hunt
Research Engineer
Oregon Graduate Institute
& NVRS Member

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