

*The*

# *Call Letter*

July 2015  
Volume 41 No. 7



Sonny Clutter

**SPECIAL NOTICE**

**the July 11<sup>th</sup> meeting is the picnic  
and Tailgate Swap Meet 8:30 to noon**



# The Northwest Vintage Radio Society

Post Office Box 82379

Portland, Oregon 97282-0379

The Northwest Vintage Radio Society is a non-profit historical society incorporated in the State of Oregon. Since 1974 the Society has been dedicated to the preservation and enjoyment of "Vintage radio" and wireless equipment.

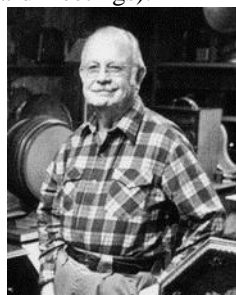
Membership in the Society is open to all who are actively interested in historic preservation. The dues are \$25.00 for domestic membership, due on January 1st of each year (prorated quarterly).

The Call Letter has been a monthly publication since 1974. It was originated with the founder, Bob Bilbie, and our first president, Harley Perkins. Through several editors and with the assistance of numerous society members, the Call Letter has continued to be a publication that informs members of the society's business and that supports the hobby of collecting, preserving, and restoring vintage radios.

Society meetings are held the second Saturday of each month at the Abernethy Grange Hall at 15745 S. Harley Ave. in Oregon City, Oregon. They convene at or about 9:30 AM for the purpose of displaying radios, conducting Society business, and exchanging information. Guests are welcome at all Society meetings and functions (except board meetings).

Other Society functions include guest speakers, auctions, radio shows, and radio sales which are advertised in the Call Letter and are held in and around Portland.

With each issue of the Call Letter, we remember Jim Mason, a charter member of the society who remained active until his death in 1999. A generous bequest from Jim's estate ensures the vitality of the Northwest Vintage Radio Society, and continued publication of the Call Letter.



## Society Officers for 2015:

President	Mike McCrow (503)730-4639
Vice-president	Brian Toon (503) 266-5527
Treasurer	Ed Tompkins (503) 573-3895
Recording Secy	Liles Garcia (503) 649-9288
Corresponding Sec'y	Pat Kagi (503) 694-6149
Board member at large	Mark Moore (503)286-5224
Librarian	Damon Vandehey (503)459-1777

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# July

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## On the Cover-

An historic display of the “Tube that changed it all.” Lee De Forest’s Audion Valve. This was displayed at the June Featured Radio display.

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## The July Picnic

The picnic for the last few years is a resurrection of a get-together that the society enjoyed more than a decade ago. Speed, when he was on the board felt like dropping the July and August meetings for “lack of attendance” was not such a good idea. Instead he opened up his several acre “back yard” for a tailgate swap meet and his wife fired up the barbeque. Members brought food and sun shades and the Feldshau picnic and swap meet was born.

This year Reliving Radio will be the DJ for the memories and Music of old timed radio

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Visit our web site at [www.nwvrs.com](http://www.nwvrs.com)

Find us on Facebook: [www.facebook.com/nwvrs](http://www.facebook.com/nwvrs)

### **The Monthly Feature:**

We won’t have a monthly Feature this month –

Our next feature will be highlighting Homemade and Pre-1950 Test Equipment

Bring a piece of equipment and share it and its story at the meeting

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# NWVRS Meeting Minutes

The meeting of June 13, 2015

President Mike McCrow called the meeting to order at 10:00 AM.

Members pledged allegiance to the flag. Our guests today were K.C. Peterson, Craig Swanson, new member Army Anderson, and Tyler McNeal, Bill Meloy's greatgrandson. We had 53 people at our meeting today.

Mike will check with the Grange to see if the Grange Hall has an AED machine. Members discussed purchasing one and discussed how to get training on using it. Ray Nelson is recovering from hip surgery. Liles said that we would send him a get-well card. ( This has been done. )

Don Hanson will be our new Call Letter Editor--many thanks to Don!!

Mark Moore is filling in today to take pictures of Program Topic items. Many thanks Mark!!

The Program Topic for August will be " Homemade and Pre-1950 Test Equipment ".

The minutes for the May meeting were approved as printed in the June Call Letter.

The Oregon Electric Railway at Brooks sent our Society \$100.00 for the excellent job that Charlie Kent did on the Mike Parker Auction and for the help that other Society members provided. Many thanks to Charlie and other members that helped!!

Damon asked that members return library books promptly.

Our July meeting will be the " Speed Feldschau Memorial Swap Meet & Picnic ". Members discussed starting our meeting earlier. The group voted to start our meetings at 9:30 AM. The Board will meet and decide which meeting will start at the new time.

The Program Topic today is " Homebrew Radios ". Members showed and discussed the radios that they brought. The meeting was adjourned and then we had an auction of donated magazines, books, and radios.

Liles Garcia Recording Secretary

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**Some of the “Homebrew” sets displayed at the June meeting:**



Bob Walters



Alan Shaddock



Liles Garcia

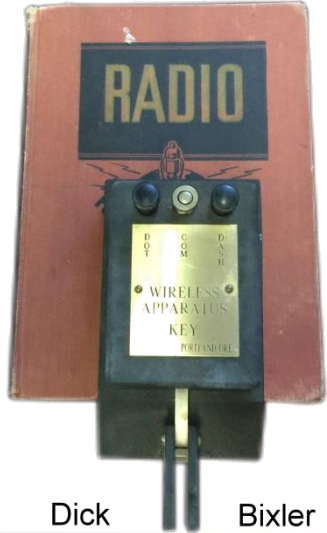


Dick Howard

Sonny  
Clutter



Sonny Clutter



Dick

Bixler



Bill Weigel

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# Aspiring Radiotrician

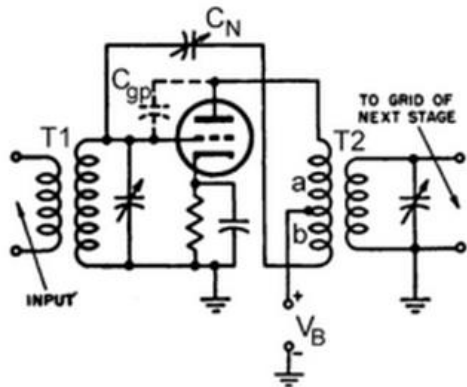
## The Neutrodyne

or the Prevention Of Oscillation

From Sid Saul

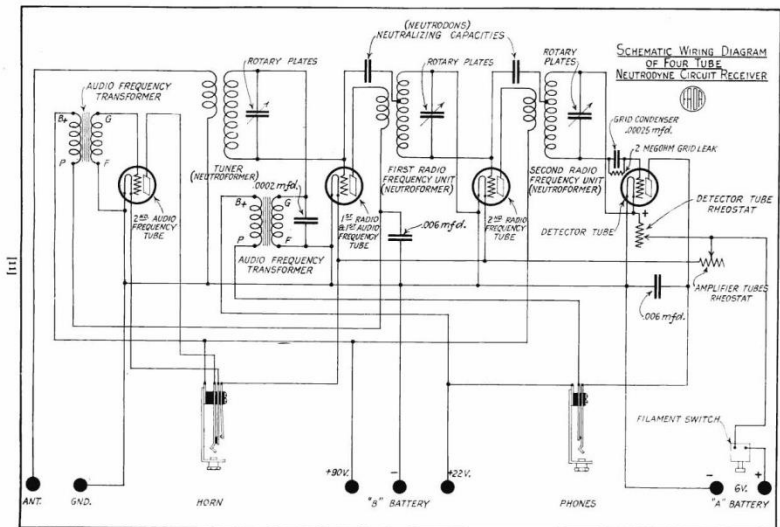
As you may have read from my recent posting to the group, I acquired a beautiful 1924 Kilbourne and Clark (K&C) battery set, albeit missing it's horn. Thumbing through some mid-twenties K&C ads in Radio News magazine, I couldn't help but notice it was manufactured locally in Seattle WA, and with the original price of \$140. That's \$2000 in today's money! Each ad toting the "McCall Compensation Circuit." Incessantly being described as P.O.O., for the "Prevention of Oscillation". Unable to locate any schematic in my usual lazy way, and certainly lacking the ambition or skill to create one freehand, making me wonder what this P.O.O. really was all about. It is my guess that is was squeezed out to evade the licensing fees

paid by their competitors. Perhaps I will be dipping into more P.O.O. in a future article. It was the mid-twenties, RCA having the monopoly on the regen and superhet patents. The tuned radio frequency (TRF) receivers of the day were skirting around these patents, but not without their failure to achieve more P.O.O.





Enter the lab of the Hazeltine Corp. Founded in 1924 for the discovery and licensing of new radio technology. One being the Neutrodyne circuit. Their license stickers for the automatic gain control can be found in some of my late 1940's radios. The Neutrodyne circuit being one of the more important developments in radio history. Approximately ten million of these two and three-dialer neutrodyne TRF radios with patented P.O.O. were built. Seems the triode tube with its higher plate to grid capacitance ( $C_{gp}$ ) allowed for positive feedback, producing unwanted oscillations. Tetrode tubes a few years later nullified this problem. Neutrodyning was simply the addition of a small value cap ( $C_n$ ), connected from the tube's interstage transformer following the tube, back to the grid. This diminishing any oscillations, and was done for each rf stage. Usually the first two tubes from the antenna end. These caps were sometimes fixed in value, but found mostly as adjustable. In either case, no further adjustment was needed unless the tube was eventually replaced.



Another tube of course yielding a different value of  $C_{gp}$ . There were a few unusual procedures that one would have to follow in order to neutralize or balance. These adjustments start with the rf tube closest to the audio output, and had to be done before any alignment for that stage. Each tube to be balanced had to have its filament temporarily disconnected by simply unsoldering one of the filament leads. Then a station near 1500 kHz tuned in, or a signal generator connected to the antenna terminal and chassis. If there was a non-balanced condition, the signal would pass through this cold tube. This being heard in the speaker or headphones due to capacitive coupling from grid to plate. A properly adjusted trimmer, or selecting the proper fixed capacitor would diminish or prevent the signal from passing through, hence no feedback or oscillations. The adjustment was for the weakest or no-signal. This of course being the opposite of highest peak we so often strive-for in aligning radios.

After each stage was balanced, the alignment on the tuning cap with its parallel trimmer was performed as usual. One last P.O.O. for this month's column. By using round wire instead of the square wire found in point to point, as found in bus wiring, oscillations could be lessened. Also to avoid the sharp angles found so aesthetically pleasing under the bakelite chassis. I hope this has shed some light on the neutrodyne TRF with the "Licensed by Hazeltine" label inside. Oh, and don't forget that filament lead. Now really, isn't that McCall Compensation just more P.O.O.!

Until next time in my search for truth,  
your Aspiring Radiotrician,  
Sid

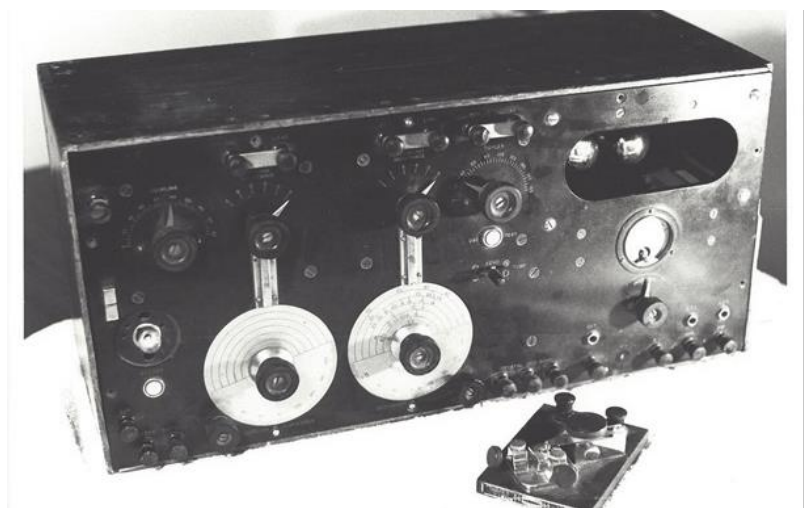
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## (One of) My Favorite Radio(s)

By Dick Howard

It all started one lovely Sunday afternoon in the summer of 1983 when my patient wife had gone to a concert with friends, leaving me to chase DX on twenty meters SSB.

When the telephone rang I heard the voice of my good friend Art Cameron, W7HKU, telling me that he had found a navy receiver for my collection. In my mind I visualized another ARC5-274N but Art told me that the radio was without a nameplate but had a large oak case, lots of knobs, strange tubes showing through a bakelite panel and two large German silver dials! WOW! I traversed the thirty odd miles from my home in outer southeast Portland to his on N. W. Skyline Blvd. near Scappoose in record time! I had only seen pictures of such a dream receiver and one in an exhibit set up in Seattle at the 1981 ARRL convention by Warren Green, W7JY and Jim Barrows, W7BCT. It was a sight to behold.



It seems that Art had been asked by his boss to find a Paragon receiver for him. Through networking, he had found this Wireless Specialties Apparatus IP-501A at the home of another radio old

timer but his boss would only accept a Paragon, hence the phone call to me. (How sad.)

The radio had come from a retired commercial radio technician and former ship operator, Herb Oliver, W7DVW, whom I soon met and who related the story of the radio's history.

Back some forty years during World War Two, Herb was working in the dockside radio maintenance facility near the Willamette River shipyards. As part of the "Lend-Lease" agreements with our Allies, Soviet vessels were allowed to enter various West coast ports for maintenance and to receive new radios to replace the obsolete equipment they were using. As a result, certain ships came to Portland and received updated radio equipment. In the course of time, Herb and the other techs began to notice something familiar about the old gear being replaced. So the Russians were told that if they wanted new radios, the old "junk" wasn't leaving the dock. Of course that pronouncement was met with "NYET" but the techs said, "That's the way it is!" So the IP-501A stayed on the dock and eventually under a workbench. In due time during a house-cleaning the old guy had to go and since Herb had shipped out in "the old days" it followed him home to find a new berth under his workbench in his shop. And there it remained until Art acquired it in 1983.

What, you may ask, became of its companion transmitter? Unfortunately I never thought to enquire and since Herb is long-since a silent key I can only theorize that it probably met the same fate as so many choice pieces of now-rare radio equipment—the many WWII scrap metal drives that helped to win the war.

Now as to the radio itself, it definitely was not yet the showpiece it now is. First you should know that many of these sets, when cared for, were in service for twenty years, until WWII and this set was probably no exception. It cost \$550 in 1922 according to Radio Marine Corporation's catalog, enough to buy a popular brand automobile. It was the Cadillac of radio and built like a tank! Inside that sturdy oak cabinet is a heavy all round copper shield with a copper partition separating the primary from the secondary circuits and a sheet metal shield inside the half-inch hard rubber panel. The panel is secured to the case with ten nut-plates around the interior perimeter of the cabinet. However most of them

were missing so replacements were cast and machined by NVRS charter member Lou Stober, WA7GCS. All nuts are sealed with solder to prevent loosening as a result of vibration. The cabinet itself has the usual chips, scars and cigar burns but, after all, it's over ninety years old and beauty is in the eye of the beholder. (Figure 2) The tube door has been removed to more clearly show the appropriate complement of tubes.

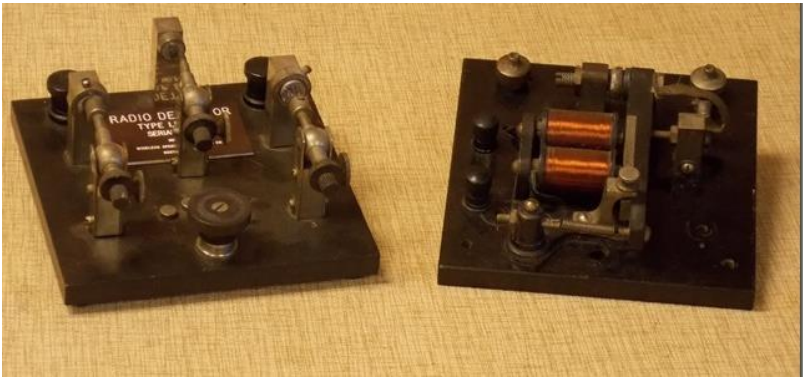


The volt meter had been "stove-in" and an exact replacement was found in the back room junk box at Oregon Ham Sales in Albany, Oregon. The military radios of this period were equipped with buzzers whose purpose was to function as a miniature spark transmitter to facilitate adjustment of optional crystal detectors to receive spark stations. The buzzer was missing from my new receiver, having been replaced with a six volt auto lamp which was apparently to enable the operator to see the dials in the dark. A replacement was given to me by Warren Green, covering the unauthorised hole which, fortunately, now doesn't show. Many of the bakelite binding posts had been injured or destroyed by a badly placed soldering iron. Fortunately my junk-box yielded exact replacements.

The most challenging part was yet to come. You may recall that I mentioned "odd-looking" tubes and I said that this trophy came from a Soviet ship. Since 201As or VT1s were not readily available, an earlier user substituted Russian tubes desecrating the original tube socket assembly, discarding the tube "shells" and

contacts and directly soldering the tubes into the circuit. Fortunately the socket sub-chassis remained unmolested. Henry Rogers wrote an excellent article about the WSA IP-501A in the April 1984 issue of *Radio Age*. I contacted Henry who supplied me with the missing parts.

The crystal detector frequently used with this receiver was the IP-203, a triple detector which gave the operator a choice of several minerals including germanium and silicon for weak signal reception or resistance to spark or strong signal overload. With the availability of better vacuum tubes, crystal detectors lost popularity but the ever resourceful "Sparks" found other uses for the IP-203s – many being cannibalized to make keying relays.



This relay came from the estate sale written about by Dan Howard in the May 2015 *Call Letter*. The IP-203 shown with it was assembled from a chassis furnished by Warren Green, hardware from Herb Oliver and binding posts from NVRS member Joe Naemura, W7CG. Because of "repurposing" of the IP-203s, they seem to be harder to find than the receivers they accompanied. The WSA silicon detector shown in figure 1 was sometime used with these receivers, but didn't provide the versatility of the IP-203.

This is a wonderful set which, while requiring educating oneself on its operation, is still an excellent receiver which when furnished with an appropriate antenna, is capable of pulling in some real BCB DX.

**...it's always  
a Sunny Day at...**

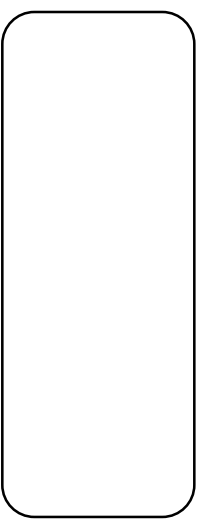


**In the Portland Metro area tune your  
vintage sets to some of the  
great music of the last 50 years.**

**KKOV 1550 AM**



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