

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 10 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 1998. 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 2010:

President	Dick Bixler	(503) 69 <u>rf2af@com</u>
Vice-President	Tony Hauser	(503)39 <u>abhauser@a</u>
Treasurer	Cliff Tuttle	(503) 66 <u>kiptuttle@com</u>
Recording Secretary	Liles Garcia	(503) 64 <u>landn2@front</u>
Corresponding Secretary	Mike McCrow	(503)73 <u>tranny53@com</u>
Board member at large	George Kirkwood	(503) 64 <u>radiogeo@hevar</u>
Call Letter Editor	Rick Walton	(503) 65 <u>rwalton@easyst</u>
Librarian		(360) 69 Bucholtz3049@com



90-2557 ncast.net

97-0074 aol.com

66-7005 ncast.net

49-9288 tier.com

30-4639 <u>ncast.net</u>

48-4809 inet.com

56-4104 street.net

93-7135 ncast.net

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On the cover: The poster/flyer for the October Sale and Show, or as we usually call it, the Swap Meet. Thanks to Sonny Clutter who designs our poster.

The Sale/Show replaces the October meeting -The next meeting is November 13, 2010.

November Monthly Feature: Before And After Project Radios.

Visit our web site at <u>http://nwvrs.org</u>.

Next Call Letter Deadline: November 4, 2010.

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 or services 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.

From the Editor

by Call Letter Editor, Rick Walton

I received a call from Lilly Logan with the Lake Oswego Public Library. She's looking for two things: a Grundig radio/phono from the early '50s that they can display, and a speaker for an evening in February. It is all part of a LO library program called "Lake Oswego Reads." It centers around a book they've chosen and asked readers to discuss with other participants. The Grundig radio features prominently i the book chosen for 2011, *Cutting for Stone*, by Abraham Verghese. I think this would be a great opportunity for some community outreach. Learn more at their website: <u>lakeoswegoreads.org</u>.

We have a full issue this month! Liles Garcia reports on the efforts to publicize the Swap Meet. It is clearly not the work of just one or two members. Mark Moore reports again on the growing club archives. As promised, I explain in an article how you join one of the e-mail lists and view the *Call Letter* online. In "Play it Again, Sam!" Dave Wise describes his ongoing struggles with his Marconi TF1370 Wide-Range RC Oscillator. And "Voilá" returns. Thanks to all the Voilá contributors who responded to Jay Johnston's call and sent in their acquisition lists.

See you all in Aurora at the Swap Meet!



NWVRS Meeting Minutes

submitted by Liles Garcia, Recording Secretary

President Dick Bixler called the September 11, 2010 meeting of the NorthWest Vintage Radio Society to order at 10:00 AM. Dick welcomed everyone to our meeting today. Liles Garcia read the minutes of the August meeting--the minutes were approved as published in the September Call Letter. Cliff Tuttle gave the Treasurer's Report – it was approved as provided by Cliff. Cliff said that we now have 132 members. John Bucholtz said that the library is doing fine. John said that we can return books next month, but we can not check out books at our Swap Meet.

Old Business

Swap Meet — Brian Toon said that there are only five tables that are available for our Swap Meet. Here are the set-up times for our Swap Meet: Friday, October 8 4:00 PM to 7:00 PM Saturday, October 9 7:00 AM

New Business

NWVRS Groups E-mail List —Rick Walton will publish an article about joining the NWVRS Google Group e-mail list and the NWVRS Yahoo Group e-mail list. It will be in the October Call Letter.

NWVRS Clothing — Tony Hauser will have NWVRS shirts and hats at our Swap Meet. Price is \$22.00 for medium and large shirts, and \$24.00 for extra-large shirts. NWVRS caps cost \$10.00.

Swap Meet Raffle —Members voted to not have a radio raffle at our October SWap Meet.

Tech Talk —George Kirkwood described the "Tropodyne" radio circuit to the group. It was developed in 1924, and one advantage is that the circuit used one less tube than superheterodyne radios. The Tropodyne circuit was not a commercial success. George demonstrated his working Tropodyne radio.

Program Topic

The program topic for today is "Transistor Radios". Members showed and discussed the approximately 30 radios that they brought. The Program Topic for November is "Before And After Project Radios". Members are encouraged to bring a "before" photo for their projects.

The meeting was adjourned.

NWVRS Calendar of Events

Most of the hamfest and ham swap meet information comes from: PNW Hamfair web page at <u>www.n7cfo.com/amradio/hf/hf.htm</u>

October 9	NWVRS Fall Swap/Sale at Aurora American Legion Hall, Aurora, Oregon.
October 23	Swaptoberfest. Mid-Valley ARES. Polk County Fair- grounds, Rickreall, OR. Contact: Vince, K7VV at k7vv@swaptoberfest.net
November 13	NWVRS monthly meeting 10 am; tailgate swap 8:30. Nomination of officers for 2011.
December 11	NWVRS monthly meeting and annual Holiday Party 10 am. Election of officers for 2011.

New Caps & Shirts!

As reported in the minutes, new caps and new shirts will be available at our Swap Meet. Caps are \$10, and shirts are \$22 for M & L sizes, \$24 for XL. See Tony Hauser for more information.



Swap Meet Promotion

Submitted by Liles Garcia, Recording Secretary

I would like to update everyone about the work that has been done to advertise and promote our October Swap Meet. It all started with Sonny Clutter designing a really great eye-catching poster advertising our Swap Meet. Sonny also formatted the poster into four images on a page so that we could have a small flyer to put on counters and into information racks along with other event brochures. He also made a poster formatted three to a page that fits into an information kiosk or similar rack.

Corresponding Secretary Mike McCrow e-mailed the poster to amateur radio clubs, interest clubs at Antique Powerland in Brooks, and to other clubs that might be interested in our Swap Meet. I took posters, counter flyers, and kiosk posters to the antique shops in Aurora. I went to Aurora a few times to make sure that the shops had counter flyers and to make sure that flyers were stocked in the information kiosk. Just for information, one shop owner commented that our counter flyers were very colorful and attracted more attention than other flyers that are printed with only one color!! Good job Sonny for designing such a great poster!!

Several Society members printed posters and distributed them around our State:

- Bob Ewing distributed posters to Yamhill County and Hillsboro
- Mike McCrow distributed posters to the Sherwood area
- Joe Corsi distributed posters to the Dallas and Salem area
- Dennis and Sylvia Killeby distributed posters around Douglas County
- Mike Parker distributed posters along the Oregon Coast
- Tod Ommert distributed posters at his shop in Burlingame

We all thank these Society members that got the word out about our Swap Meet. If I overlooked someone that helped promote our Swap Meet, please let me know. If you sell some of your radios at our Swap Meet, please give these members a word or two of thanks.

Please listen to Radio Station KKAD (1550 KHz) during the week before our Swap Meet for radio advertisements about our Swap Meet. Many thanks to KKAD and Dick Bixler for co-ordinating this radio advertising for us!!

Tech Talk Photos

by Rick Walton

As Liles so ably described in the minutes, George Kirkwood presented a short talk on the Tropodyne, a radio with some unique circuitry. Here are photos of George as he described the circuits schematically, then demonstrated his working Tropodyne example.

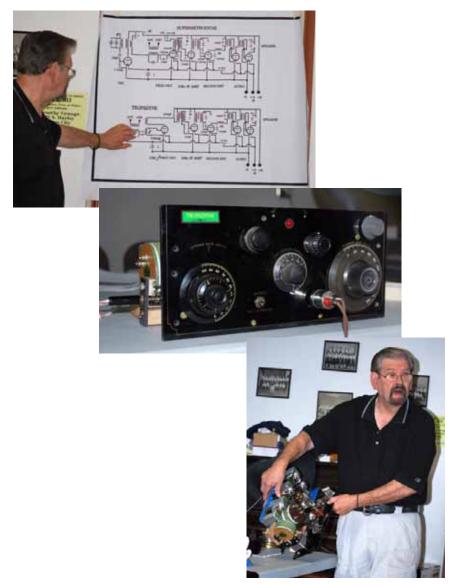


Photo Display

Photos by Rick Walton

As you can see from these photos, there was quite the display of transistor radios at the September meeting.



Lee Jensen -Standard Micro Ruby

Dan Howard - Howard pocket radio, and Zenith Royal 500 Dick Howard - Motorola Walkie-talkies September 2010



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Rick Walton - TO 3000-1 (top) Royal 750 (I) and Royal 250 (r)



Bob Walters - 1957 Realistic



Kurt Jorgenson - Hallicrafters S240



Liles Garcia - Hallicrafters



Larry Tobkin - Grundig



Robbie Robertson -Realistic CB-60



Bob Duell - Raytheon CK22 Display, and re-creation of a childhood homebrew



by Mark Moore, NWVRS Archivist

Since our last Archive Report, we are happy to report that Jack Doyle of Monitor Engineering donated a 4GB flash drive to store our digital scans of archive materials. Thanks to Jack for his generous donation.

Thanks also to Doug Sattergren for donating a chart from 1942 showing the Fundamentals of Alternating Current that was used in radio education classes. Thanks again to Dick Bixler for donating newspaper articles including an Oregonian article from 1981 telling about an old radio exhibit that Dick Karman organized at the Georgia-Pacific Historical Museum, as well as an Oregonian article from 1924 about a newly formed Broadcast Listeners' Association in Portland.

In addition, there was an Oregon Trails article from the Aug. 22, 2010 Oregonian telling of Portland's Jeff Hayes, an early telegraph operator. Dick also donated an envelope containing copies of about 20 early Radio shop ads in Portland; a booklet published in 1979 by the Antique Wireless Association about the Federal Telegraph Company from 1909-1920; another booklet by the Antique Wireless Association about Broadcasting's "Pre-History" covering 1876-1920; as well as the original of the Marconi Stock Certificate that we received a copy of last month.

Also retrieved by Dick Bixler was a 9 inch by 7 inch oval heavy cardboard sign with the NWVRS logo. Most of these items were found in Don Iverson's estate. As a follow-up to our report last month, the Portland Radio Supply hat donated by Ray Vanderzanden was one of many hats given away at an Oregon Amateur Radio Association Convention in the early 1960s. It was revealed at our last meeting that Sid Saul's father, Peter Goldbaum, started Portland Radio Supply in the 1930s when it was located at 19th & Alberta streets. He sold the business in the 1950s.

How to Join an E-mail List

by Rick Walton

There are two e-mail lists for NWVRS members: one on Yahoo, the other on Google. Joining either of these groups (or both) is a fairly simple process. In addition to providing a forum for members to discuss radios, these sites provide file storage for members to access. That allows us to make the Call Letter available for viewing and download.

To view the Call Letter online requires that you be a member of either the Google Group or the Yahoo Group, and it requires that you be registered with Yahoo or Google, respectively. Being a group member and being registered aren't entirely the same thing. I could invite you to be a member of either group, and you could accept. You'll be able to send and receive e-mails to and from the group, but unless you are registered with Yahoo or Google, you would still not have access to the files area where the Call Letter is stored.

To register with Yahoo, go to <u>http://</u> groups.yahoo.com. In the upper-left corner of the screen, you will see "New User: register" Click on the word register, and it will start you on the registration process with Yahoo. I don't have all the steps



involved in registering because it has been a long while since I went through it, and I don't remember them all any more.

The process with Google is essentially the same. Browse to http:// groups.google.com to arrive at the Google sign-in page. Click the button labeled "Create an account" and follow the prompts.

After you register, you will have a login name and password. That is what you will use each time you log in to the Yahoo or Google site, whether you look at groups, news, mail, or whatever.

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You can navigate to the Groups from the Yahoo.com home page, but the easiest way is to go directly to

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<u>http://groups.yahoo.com</u>. That is the page you registered on. Now that you are registered and logged in, enter nwvrs in the search field where it says "Find a Yahoo Group." It works pretty much the same way at http:// groups.google.com.

The results usually have our group right at the top. Click on the "nwvrs" link, and it takes you to the main page for our group. In the upper right corner of the Yahoo Group you'll see a blue button labeled "Join this group." Click that button to start the process. The page that comes up will ask you to make decisions about how you want to receive messages, which e-mail address you want to use, etc.

When you finish all that, you click the "Join" button at the bottom of the page. You are almost done. Because our Yahoo group is restricted to club members only, your request has to be approved by the group moderator (that's me). Yahoo sends me an e-mail letting me know that someone wants to join the group. Then I have to approve the request. As soon as I do that, you get a notice that I did so, and you have full access to the features of the club's Yahoo Group site, which includes a "Files" link that leads to the Call Letter.

The joining process for the Google Group is very similar. I believe your membership request goes to Pat Kagi or to me. When all the joining process is complete and you are at the NWVRS group page, there is a "Files" link, just as in the Yahoo Group, that leads to the Call Letter.

I hope I have not made the process for either group seem overly complicated. It really isn't. I also hope that many of you who have not been members of the e-mail lists will join. The traffic on these groups is low, but the benefit is great.



Voilá

... new and recent finds by NVRS members

Compiled by Jay Johnston

Blake Dietz —

1937 Zenith 10S147 Zephyr chairside

Gary Marvin —

1938 Zenith 7-S-232 Walton 1940 Zenith R/P 10-S-669 1938 Zenith 5-S-220

Dan Presley —

Zenith Transoceanic H500 – mostly restored with new caps, etc. Zenith Transoceanic Y600

Rick Walton —

1937 Airline 42-625 "Indianhead" — 5-tube AC by Belmont 1946 Wilcox-Gay Recordio 6B30 — needs speaker, lots of work

Play It Again, Sam!

by Dave Wise

Marconi TF1370 Wide-Range RC Oscillator

And again, and again ...

I am sure I have posted before about my Marconi TF1370 Wide-Range RC Oscillator and its instability problem in the Level Stabilizer. It's back, worse than ever, but I think I have a workaround, and I am still eliminating possible root causes.

This instrument puts out a stable, flat, low-distortion sine wave, from 10Hz to 10MHz. Up to 100kHz it can put out 30Vrms, or an 80Vp-p square wave too. It is British made and uses about 14 tubes (including two 3A/167M's) and three transistors. B+ is electronically regulated, as is A on the oscillator tubes.

The Wien Bridge is a favorite for audio oscillators, but some kind of active gain control is necessary to keep the circuit balanced on the knife edge between stopping and overloading. Most of the diagrams you find on the web use one of four different methods. 1. A light bulb. This dates back to Bill Hewlett's 1939 Master's Thesis which eventually became the HP 200AB Oscillator. The Wien Bridge oscillator circuit consists of an amplifier, and two feedback networks, one providing positive feedback, the other negative. Positive feedback is provided by the Wien Bridge network, an RC voltage divider whose top leg is an R and C in series and whose bottom leg is an R and C in parallel. If the two *R*'s and the two *C*'s are equal, at some frequency the phase shift is zero and the gain is 1/3. It's easy to play with this at home. I wired up 1K resistors and .001uF caps, and the frequency was about 100kHz. With a dual-trace oscilloscope (my trusty Tek 545), it's easy to compare the input and output and see when the phase crosses over.

When the phase shift is zero, one of the Barkhausen conditions for oscillation is satisfied. The other requirement is that the loop gain is 1, which in this case means the amp gain which is determined by the negative feedback, has to be 3. Hewlett removed the bottom resistor in his feedback divider, and substituted an incandescent lamp, which has a positive temperature coefficient of resistance. Current through the feedback network warms up the lamp filament, causing its resistance to increase. Since it's in the bottom of a voltage divider, this increases the amount of negative feedback when the amp output increases, tending to stabilize the output amplitude.

2. A thermistor. For a while, in the 1960s and 1970s, several companies made a special high-speed NTC (negative temperature coefficient) thermistor. It was a microscopic bead, suspended on hair-thin wires in hard vacuum in a glass envelope. Current through the bead would heat it, which would cause its resistance to fall. If you put one of these in the top leg of the feedback divider, it will stabilize the output as before, by increasing the feedback ratio in proportion to output.

3. A FET. As long as the voltage applied is low, FETs look like voltage-controlled variable resistors.

4. A photoconductive opto-isolator. Another voltage-controlled variable resistor.

The TF1370 employs (2). Most of the published circuits would not work here, because they are for a single fixed frequency or a narrow range, while the TF1370 covers 10Hz to 10MHz.

The problem is that the amplitude doesn't stabilize on some frequencies, instead it oscillates up and down. On some frequencies it is so severe that it goes all the way down to zero and all the way up to hard clipping, so the output looks like a square wave. At one time, I replaced a carbon comp resistor and it cleared up, but it looks like that was just a marginal situation. I still don't have a diagnosis, but my prime suspect is the thermistor. The amp builds up from nothing to clipping in just a few cycles, so fast control is critical. I believe that air has gotten into the thermistor, which would slow it down and reduce its TCR. Both of these changes would contribute to instability, as the amplitude could change more before correction could set in. In extreme cases, by the time the correction was applied, the amp would already be either idle or clipping.

I don't have a spare, and they seem to be long out of production. STC number R53 in case anyone here has a pallet-load :)

Another suspect is leaky caps causing DC shifts in the network. This could lead to instability because the amp gain is very sensitive to DC operating point.

I'm not done, but I have discovered a workaround. It's sort of belt-plussuspenders - I keep the thermistor in the top leg, but I replace the fixed resistor on the bottom with a lamp. Now the upper leg is self-heating NTC and the lower leg is self-heating PTC, and their effect is synergistic, raising the gain and speeding up the response. I have found a couple of lamps that work okay. First I tried a couple of generic 12V 40mA indicators I had lying around. No good, the resistance is too low. I need something around 250 ohms when there's about 15mA going through it. The 10V 14mA lamps used in my IBM 1620 computer work, but distortion is a rather high 1.5% at 10Hz. Then I tried the bulb Bill Hewlett used, a 1086/240, and it did much better but the current was only 5mA. By the way, this is AC, and I measured it on a scope, using my Tektronix P6021 Current Probe. Then I tried a common night light bulb, a 4C7/120. It runs about 8mA but distortion was a bit higher, 0.8% vs. 0.6%. I am going to try the old common indoor christmas bulb, the 7C7/120. It should pull more current and get closer to the original operating point.

Why am I not done? I got a strange side effect. Normally, it's a fight to get this instrument all the way to 10MHz. Leads and components have to be dressed just so. But with the lamps, I was hitting 10.5, 11, 12MHz without even trying. It's too much of a good thing - the trimmer is out of range! I'm still messing around but I can see the end is in sight.

Swap Shop

- *FOR SALE:* Thousands of tubes, hundreds of radio parts, panels, meters, surplus, etc. R5-D3 electronic surplus, Bob Lee, 9770 S.E. Stanley Ave., Milwaukie, OR 97222, (503) 513-0410
- *FOR SALE:* *Freed-Eisenman FE-15 battery set. Excellent original condition inside and out. Complete with period tube complement. \$140. Nick Tonkin. 360-750-0286. <u>nick9818@gmail.com</u>.
- *FOR SALE:* *RCA Radiola 20 battery set. Excellent original condition inside and out. Complete with original plug-in voltmeter. Also a set of new replacement tubes. \$160. Nick Tonkin. 360-750-0286. <u>nick9818@gmail.com</u>
- WANTED: **Ray Vanderzanden needs 1-2 Meissner ant. Coil 7413 radioray1@verizon.net
- WANTED: **I'm looking for a chassis for an Atwater Kent cathedral model 84. Mark Moore

Radio Service

These members have indicated they are willing to perform radio repairs:

Roger Brown - (503) 693-6089

Bruce Baur - (503)-708-4537, brucebaur@comcast.net

Blake Dietze - (360) 944-7172, wb6jhj@ix.netcom.com

Jack Doyle - (503) 305-8097

Pat Hickman – (503) 887-9015 Web: <u>www.classictubeaudio.com</u> Email: <u>phickman@comcast.net</u>

Todd Ommert – (503) 246-4141 Web: <u>www.burlingame-radio.com</u> Email: <u>burltv@msn.com</u>

Tony Ranft – (360) 944-8489 or <u>walterranft@hotmail.com</u> – General repairs. Dave Wise – (503) 648-0897, david wise@phoenix.com

If you are willing to repair radios, give your name, phone and/or e-mail, and any comments to the *Call Letter* editor.

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Leads and Needs

Questions about restoration of vintage radio? Visit Radiolaguy's web site often for this information plus lots of other interesting displays, photos, virtual museum plus lots of other information on vintage radio and television. Oh, yes, there are items for sale as well and NVRS members get a substantial discount on most of these items. Thank You, Sonny the Radiola Guy Visit my vintage radio web site: <u>http://www.radiolaguy.com</u>

Swap Meet Location

Map by Google

Here is a map to Aurora. The American Legion hall is just off of Highway 99E at the corner of 3rd and Main Street NE. Exits off I-5 to Aurora are clearly marked from either direction. Really, you can't miss it.

