

The Call Letter

March, 2010
Vol. 36 — No. 3

RADIO'S LIVEST MAGAZINE

OVER 175 ILLUSTRATIONS

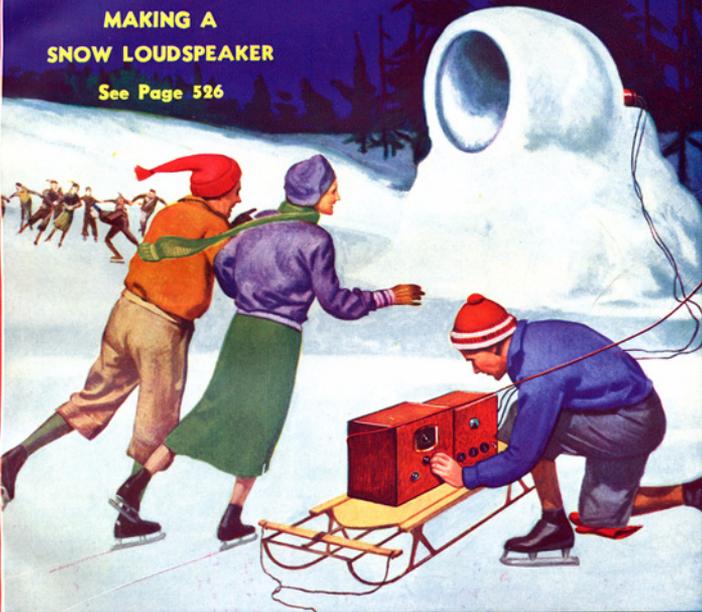
Radio-Craft

HUGO GERNSBACK EDITOR

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SNOW LOUDSPEAKER**
See Page 526



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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) 690-2557 rf2af@comcast.net
Vice-President	Tony Hauser	(503) 397-0074 abhauser@aol.com
Treasurer	Cliff Tuttle	(503) 666-7005 kiptuttle@comcast.net
Recording Secretary	Liles Garcia	(503) 649-9288 landn2@verizon.net
Corresponding Secretary	Mike McCrow	(503) 730-4639 tranny53@comcast.net
Board member at large	George Kirkwood	(503) 648-4809 radiogeo@hevanet.com
<i>Call Letter</i> Editor	Rick Walton	(503) 656-4104 rwalton@easystreet.net
Librarian	John Bucholtz	(360) 693-7135 Bucholtz3049@comcast.net



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On the cover: “The cover of the March, 1937 *Radio Craft*. That certainly isn’t the weather we’re enjoying here in the Pacific Northwest.

The next meeting is March 13, 2010.

March Feature: “Bring What you Want”

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

Next *Call Letter* Deadline: April 1, 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

This issue of the *Call Letter* is a world traveler. I started it in Cairo, Egypt, continued it in Rome, Italy, and finished it in Portland just in time to print. The *Call Letter* and I are happy to be back in Oregon.

Like many recent *Call Letters*, this one is full sized. Dave Wise has contributed a description of his efforts to restore a piece of precision test equipment in the occasional *Play it Again, Sam!* series. Society historian and archivist Mark Moore gives us a run down on the beginnings of the society’s archives. He’s included a photo of the Ladies Auxiliary, known then as “the Power Supply.” Dan Howard has provided us with a photo and description of his latest acquisition, an EGM radio, the history of which provides an intriguing mystery. Dan is looking for any information he can find about the origins and history of this radio.

Although I couldn’t be at the February meeting, I have plenty pictures thanks to Sonny Clutter. Dick Karman also took pictures, and provided me with a detailed description of each of the radios exhibited at the meeting. Thanks to both of you.

Finally, don’t miss the roster updates. We are a growing organization.

Always sunny & warm.

*For a refreshing change,
check it out!*



Sunny 1550 KKAD

	Herb Alpert - Tony Bennett - Michael Buble - Carpenters
	Nat King Cole - Perry Como - Neil Diamond - Diana Krall
	Barry Manilow - Johnny Mathis - Platters - Carly Simon
	Elvis - Frank Sinatra - Babara Streisand - Andy Williams

NWVRS Meeting Minutes

submitted by Liles Garcia, Recording Secretary

President Dick Bixler called the February 13, 2010 meeting of the NorthWest Vintage Radio Society to order at 10:00 AM. He welcomed everyone to our meeting. Liles Garcia read the minutes of the January meeting and they were approved as published in the February Call Letter. Cliff Tuttle gave the Treasurer's Report, and his report was approved as provided by Cliff. He said that we have about \$1,700.00 that we can work with during the year. We may need to buy a new printer this year for the Call Letter. John Bucholtz said that the library is doing well. He is planning to list our library items on our website so Society members can ask him to bring items for checkout. Mark Moore asked members to give him any historical photos and other items for our Society's history archives. Nelson Hiraoka and Dave Eaton attended today as guests. Tim Booze and Bill Holeman joined our Society today. Members gave our guests and new members a round of applause. There were 58 people at our meeting today.

Old Business

Swap Meet--Brian Toon said that there are only several Swap Meet tables left to sell; contact Brian if you would like to get a table.

New Business

Technical Committee--Dick discussed the idea of having a technical committee that will give presentations on topics of interest to the group. We will discuss this again at future meetings.

April Meeting Speaker--Craig Adams will talk to us about "Early Days Of Portland Radio".

Leads and Needs

Dan Howard brought some coupons from Cascade Surplus Electronics. The coupons are for 10% off of a purchase of \$10.00 or more.

Program Topic

The program topic today is "Crosley Radios". Members showed and discussed the approximately 20 radios that they brought. The program topic for March will be "Bring What You Want".

The meeting was adjourned.

NWVRS Calendar of Events

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

- March 13** NWVRS monthly meeting 10 am; tailgate swap 8:30.
- April 10** NWVRS monthly meeting 10 am; tailgate swap 8:30.
- May 8** NWVRS Spring Swap/Sale at Aurora American Legion Hall, Aurora, Oregon.
- May 8** Stanwood Camano Amateur Radio Club (SCARC) Hamfest, Stanwood Middle School, Stanwood, WA. Always the second Saturday in May. Contact Vic, N7KRE (360)387-7705. nwecop@tgi.net
- June 4-6** Sea-Pac Hamfest. Seaside Convention Center, Seaside, Oregon. This is an ARRL sanctioned event. ai9q@arrl.net www.seapac.org/
- June 11-13** 41st Annual Wenatchee Hamfest. Apple City ARC. Dryden Gun Club. Dryden, WA. Contact Jim, W7JBP at shultzjims@aol.com or Judy, at ka7zna@msn.com for information. www.qsl.net/w7td/.
- June 12** NWVRS monthly meeting 10 am; tailgate swap 8:30.
- June 12** Port Ludlow ARC tailgate swap meet. Port Ludlow, WA. www.n7pl.org/
- July 10** NWVRS monthly meeting 10 am; tailgate swap 8:30.
- July 2010** Chehalis Valley ARS 11th Annual Hamfair. Lewis County Fairgrounds. Contact John Ellingson, K7OSK. johnk7osk@boatanchor.com. www.cvars.org/
- July 17** Coos County Radio Club Hamfest and Swapmeet. North Bend Middle School, North Bend, OR. Contact Marilyn Mansker, ke7oam@yahoo.com or Dave Granicy k7nbo@charter.net. www.coosradioclub.net/.
- August 14** NWVRS monthly meeting 10 am; tailgate swap 8:30.
- August 15** Antique Radio Swap Meet. Puget Sound Antique Radio Association. 9 AM to 1 PM. Shoreline museum parking lot. N. 175th & Linden, Avenue, North Seattle. One block

west of Aurora Avenue - one mile west of I-5, exit 176.
Free admission. www.eskimo.com/~hhagen/psara/swap.html (Always the 3rd Sunday in August)

- August 2010** Radio Club of Tacoma Hamfest. www.w7dk.org/
- September 11** The 4th Annual Clark County ARC Tail-Gate Swapmeet. Vancouver, WA. www.w7aia.org/ Rob, K7JAO at k7jao@arrl.net
- September 11** **NWVRS** monthly meeting 10 am; tailgate swap 8:30.
- September 2010** Spokane Hamfest. University High School, 12420 E 32nd Ave, Spokane Valley WA 99216. For information contact Betsy, N7WRQ n7wrq@aol.com.
- October 9** **NWVRS** Fall Swap/Sale at Aurora American Legion Hall, Aurora, Oregon.
- October 23?** Swaptoberfest. Mid-Valley ARES. Polk County Fairgrounds, Rickreall, OR. Contact: Chris Portal, W7CLP (503)559-7837. w7clp@arrl.net 520 South Pacific Highway. www.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.

Dues Reminder

from Cliff Tuttle and Rick Walton

As many of you know, the annual dues for society membership are due on January 1 of each year. It has been our practice to allow members a grace period, typically through the end of March or into April. That time is rapidly approaching. Cliff and I will soon be trimming the society roster to those who've paid their dues.

If you are uncertain whether you've paid, look at the mailing label on the back cover. If you see 2009 in the upper-right corner, you should contact Cliff right away.

NWVRS Archives

by Mark Moore, NWVRS Archivist



Above is a photo of our Women's Auxiliary from the early days at the Buena Vista Club House. We have identified the first five ladies in the group and would like to identify the remaining five ladies. The ones identified, (from left to right) Bobbie Kibler, Cathy Hay, Virginia Ranken, Sandra James and Evelyn Tompkins.

Thanks to all who have donated items to our archives and to those who have offered to add to our growing collection. Most of the items have been identified and a list will be made available. At our next meeting, we will have a short discussion of the items we have and how they are being stored. We have started a list that we can publish or distribute to the membership.

I would like to thank former president Bob Campbell for his generous donations to the archives including the first 2-1/2 years of Call Letters and Newsletters that were edited by Bob Bilbie as well as some early rosters. We have some photos donated by James Lettenmaier as well as negatives from Scott MacGregor. There is a 16mm film of the Mall 205 Radio Show in 1976 by Joey Tompkins. If there is enough interest, we will try to show the film at a future meeting.

We have most of our rosters and we are missing 1995. We have the remaining rosters through 2002-2003 and are missing the newer ones. If you have the missing rosters and would like to donate them to our archives they would be most appreciated. We are also expecting to receive the Alan Shadduck Correspondence Collection of early letters and communication before newsletters were published.

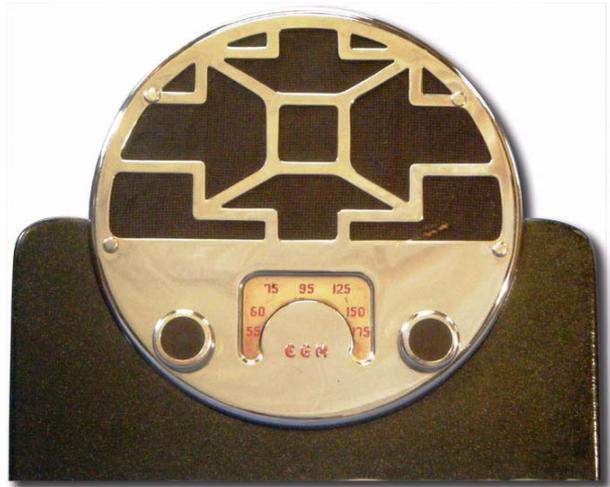
A reminder: on April 10, 2010, we will have a visit from Portland Radio Historian Craig Adams who will talk about the early days of radio broadcasting in Portland. He is the historian for PdxRadio.com and regularly contributes articles about Portland radio history. If you have questions for him or topics for his discussion, please bring them to our March 13 meeting. In April, we will bring microphones to compliment Craig's presentation.

All "American" Five Mystery Radio

by Dan Howard

This stylish "EGM" radio is my latest acquisition. The round metal top, chrome finish, and emerald-green wooden base make it very unusual. But the real mystery is where did it come from?

The front is marked "EGM" and the chassis has a decal that says "Electronica General De Mexico." I've found no other markings. It uses the large-tube "All American Five" tube line up of 12SA7, 12SK7, 12SQ7, 35Z5, 50L6. However, the chassis is specially-made with a round bottom to fit into the round cabinet. The cabinet is 12" wide, 4" deep, and just over 10" tall,



Although I can't find it in any reference books, there is a picture of a similar set on Mr. Detrola's website. He says that the name on the decal translates to "General Electric of Mexico." Not much is known beyond that.

I would love to have more information on the set, especially a picture. Part of the base may be missing on mine and I would like to restore it someday. Any help would be appreciated.

Photo Display

Photos by Sonny Clutter

Photos of Crosley radios displayed by members at the March meeting.



Model 51



Fiver

Alan Shadduck



Complete set Book hybrids
Sonny Clutter



Model 51 & ACE V
Brian Toon



Front



Rear

Crosley radio in home-built cabin
Dan Howard



George Kirkwood
 Clockwise from left:
 Model 52 with 51A amp,
 Model 50 with 50A amp,
 Cincinnati Model V,
 Model 51, Ace Type 3B,
 Cincinnati Model XJ



"Dashboard"
 Dan Howard



Pup
 Dick Howard



Super Trirdyn & Speaker
 Art Redman



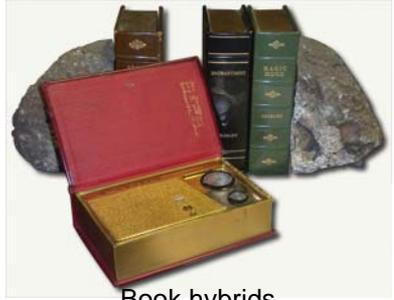
Ace V w/ 50A amp
 Mike Parker



deForest Trirdyn



Headphones w/ box, 181-106 Tombstone
Mark Moore



Book hybrids
John Cushing

Roster Correction & Additions

by Rick Walton

If I haven't taken your photo for the roster, please see me at the meeting.

Updates

Address change:

Frank Olberding
2410 Pansy Ct
Forest Grove, Or 97116-1682

Damon Vandehey
2095 SE Currin Ln,
Hillsboro, Or 97123

Phone, e-mail address, or interest correction:

Ed Tompkins
edtomp@Q.com

Tony Ranft
walterranft@hotmail.com
Interest:Philco Radios)

Dick Howard
dhoward27@comcast.net
New zipcode 97086

Mike Parker
New phone: 503-322-8475

Additions

Photo added:



Phillips, Gordon
1530 NE 140th Ave.
Portland, OR 97230
(503) 234-3517
Wind up Phonographs, 20's & 30's radios
gdnphi@aol.com

R

New and returning members:

Photo
Unavailable

Saul, Sid
P.O. Box 40621
Portland, Or 97240-0621
503-869-5280
Table Top 30's and 40's
n54@quik.com

R

Photo
Unavailable

Holeman, Bill
2704 NE 92nd Cir
Vancouver, Wa. 98665
360-576-1810
Tube Radio & Vintage Radio
bpasok@comcast.net

R

Photo
Unavailable

Booze, Tim
1250 NE 52nd
Portland, Or 97213
503-288-5339
timbooze@msn.com

R

10% DISCOUNT

To all members in good standing of the
Northwest Vintage Radio Society
for any purchase from



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7940 SW Nimbus Ave.
SALEM (503) 583-9810
1545 Commercial St. NE
EUGENE (541) 345-2904
960 Conger St.

Please show your current
NWVRS membership card
to receive discount.

Play It Again, Sam!

contributed by Dave Wise

HP 740B DC Standard/Differential Voltmeter

This 50-pound boat anchor has been “entertaining” me all summer.

You can read about this instrument in the HP 1970 Catalog, and the HP Journal, V16n5 May 1965, available at www.hparchive.com.

You know how your VOM has 20K ohms per volt? And your VTVM has 10 megohms? Well, the 740B has it beat, by a thousand. 10 gigohms. This is so close to “open” that if you measure something then take off the probe, the meter just hangs there. Now many of the nicer bench-style DMM's are this way on the 2V range, but they go like the VTVM as soon as you want 20 or 200. The 740 does it all the way to 1000. How? By putting a great big feedback amp between the probe and the meter. It's not every day you see an op-amp that puts out 1000V, and even rarer you see one that takes 1000V on the input, but HP pulled it off.

I should mention that the 740 doubles as a precision DC power supply. You can take it from 0 to 1V, a microvolt at a time if you want, via six decade switches. Up to a couple hundred volts it puts out 50mA; 20mA at 1000V.

When I got it, it showed signs of life. The nixie display lit up, the meter moved around. But it was definitely “off”. As I got into it, I kept finding problems.

The rule is, always go for the electrolytics first. My ESR meter came in handy, as MOST of them were bad!

Then it definitely sort of worked, but there was a lot of noise; the meter would not hold still. As I dug into this, I found that the gain of the main amplifier was low, and this led me to the choppers.

When you need lots of DC gain without any drift, one solution is to use AC instead of DC. How? By “chopping” or modulating the DC into a square wave. (At the other end of the AC amp, another switch demodulates the AC back to DC.)

The first chopper amps used an electromechanical switch, the small-signal equivalent of the vibrator in your old car radio, but these wear out fast. I don't know who thought of using photocells to do the switching, but HP took it to the limit, making their own with a careful balance of fast-but-unstable Cadmium Selenide and the slower Cadmium Sulfide. They are just fast enough to switch at the harmonically-unrelated frequencies of 162Hz (in the main amp) and 94Hz (in the meter amp). They are also delicate, so HP put some protection ahead of them, a Rube Goldberg wherein excessive voltage fires a neon lamp which closes a photocell which turns off a transistor which puts out an incandescent lamp

which until then was shining on another photocell which was conducting signal from the input jack to the modulator.

I found that every photocell in the instrument was bad, to one degree or another. There's no such thing as a replacement. You can't use the usual semiconductor devices; remember, the input switch may be 1000V above ground. Solid-state relays are far too slow and suffer from "charge injection" which puts a spike on the output every time it's switched. After much head-scratching, I discovered another modern device: the Fairchild H11F1 "photofet" optocoupler. These are unique among fast optocouplers in that the output device is not a diode, a bipolar transistor, an SCR, or a triac, but a FET. When on, the channel conducts, with low resistance and essentially zero voltage, in both directions. It switches on and off in 15 microseconds. The control side can be a couple thousand volts away from the signal side, with 10^{12} ohms between them. No charge injection.

The photocells were illuminated by neon lamps, but the new switches had LEDs. I used a CD4069 cmos hex buffer to supply the low-voltage high-current drive, controlling it from the original transistor multivibrators that used to drive the neons.

I built a shielded box, to keep the control square wave out of the signal, and stuck four couplers through holes in the walls. The original assembly got its 1000V insulation with expensive teflon standoff terminals. I went the cheap way with a phenolic terminal strip, but the leakage was horrific, so I mounted it on top of a nylon standoff. Since all the terminals are within 10 microvolts of each other (even when the whole thing is 1000V high), leakage is no longer a concern. Except in the standoff itself. I discovered an "out" for this; guarding. There turns out to be a nearby signal that's at low impedance and always at the same voltage as the terminal strip. I ran a wire from this voltage to the strip's mounting lug. Now, any leakage will be supplied by the guard instead of the high-impedance stuff.

This worked, but I couldn't zero the meter. Turns out that "offset voltage" appears nowhere in the spec sheet! I went back through my set of eight H11F1's and found two pairs that matched, and that took care of that. The unmatched ones go into the demodulators, where offset is thousands of times less important.

Now I could zero it, but it was still noisy. I discovered that the protection photocell (see "Rube Goldberg":) had branched out; not only was it a photoconductive cell, it had become a photovoltaic one as well! Twenty whole microvolts - unacceptable! In the mean time, I started playing with high voltage. I fired up my Sprague TO-6 as a source, and threw the switch. The protection circuit -- did nothing! Turned out that the "sense" photocell was so tired it couldn't turn off the transistor anymore, so the whole 750 volts blasted right into my modulator.

And now I couldn't zero it again. The input-side H11F1's had kind of survived, but they were no longer matched. Back to the drawing board for a new protection circuit. I realized that even if the original circuit had worked, the H11F1's would still have seen the neon's 90V ignition voltage, which exceeds their breakdown spec by a factor of three, so it was time for wiping the slate. After a while I thought about limiting the current instead of switching it off. A popular current regulator circuit uses a JFET, but they're low on breakdown voltage too. Hmm, there are lots of high-voltage MOSFETs out there. Any depletion-mode? Off to Mouser's website for a search. Pay dirt! The Supertex

LND150. Fast. Made for current regulator service. Cheap. Small. 500 volts... oops. But wait, I can put two in series and make 1000. Order up parts, and two weeks later I had another matched pair of H11F1's and four LND150's. I had to replace the terminal strip with a longer one. Wired it up, threw the Big Red Switch.

Works! At low current (the modulator only has picoamps going through it normally), the LND150's look like low-value resistors. If the voltage gets away from the amp's control loop, changes too fast for it to keep up, the LND150's limit the current to a safe 100 microamps, and they can take it all day long. To add suspenders to this belt, I put a TVS (Transient Voltage Suppressor) diode - like a bidirectional zener - across each H11F1. Never again!

But then, while I was running it in STD (voltage Standard) mode, I noticed an odd effect when I tweaked the least-significant decades of the voltage control. I turned it down. But it went up. What the heck? Turned out that one of the switches - where HP cut corners with phenolic instead of the fancy high-zoot plastics - were leaky, and this stray current was getting into the reference voltage. I washed the offending switch with isopropyl alcohol -- and it got worse! Then I thought of checking the alky. It was conductive! I went shopping, coming back with several different brands. Walgreen's is five megohms, the best I found. Tried again and this time it was much better.

Except during warm-up. With six digits of precision, the reference voltage has to be equally precise. HP put a selected-and-burned-in zener diode in an electronically- controlled oven. I got ahead of myself here; earlier I had discovered that the heating element had burned out. I repaired it only to have it act weird. I discovered that the potting compound under the burn had, well, burned, and it was very conductive. I scraped the toast out, slipped some Kapton tape under the wires, and put it all back together (involving "Great Stuff" expanding polyurethane foam and a carving knife), and the oven worked. Except that during warm-up, I got that odd non-monotonicity (you go one way, it goes the other) effect in the voltage control again. Only during warm-up. Cold... okay. Hot... okay. More what the heck.

I remembered that the little circuit board inside the oven, which contains both the thermostat control and the reference, looked awfully brown. And the two circuits are at DIFFERENT VOLTAGES. That confounded circuit board was leaky! I used my Dremel to cut a slot down the middle, figuring the less material the less leakage, and yes it helped but not enough. Finally I bit the bullet, unsoldered every component off the board, and built them onto TWO little padboards, and secured them to OPPOSITE SIDES of a plate of 10[^]17-ohm polycarbonate. That better do it!

And it did. Almost. I'm still chasing down the last little bit. On the least-significant digit (the one that goes a microvolt at a time on the 1V range), $8 = 10$ and $9 > 10$, if you're on the 1000V range. I thought I had it. One of the fancy plastic switches has 1000V on one contact, and RIGHT NEXT TO IT, the reference. I washed it with my super duper Walgreen's alcohol, and... no change. And that's where I am today.

I forgot to mention the amber circular polarizing filter that cuts the glare off the nixies, which had gone bad and what I went through finding a substitute, and the power transistor insulators that flashed over - BAM - the first time I took the "guard" chassis to 500V, and the inevitable noisy switches, but this is enough story for three Call Letters already.

Summary

1. Replace most electrolytic caps
2. Repair A13 Reference Oven heater
3. Replace A16 and A17 chopper assemblies
4. Disconnect A9DS1, remove A9V1, replace A9V2
5. Replace A3Q2 (accidentally blown while probing)
6. Clean K1 armature
7. Clean S2 and parts of S1 with isopropyl alcohol
8. DeOxit on contacts of S3-S9 and K1A
9. Replace A13 PCB
10. Replace display filter/polarizer
11. Clean PWM power transistor insulators

Epilogue

I figured out the last-digit nonlinearity. It wasn't bad resistors or leakage. On this switch, the contacts are nominally only 1uV apart. This is in the same order of magnitude as thermoelectric effects in the solder joints. And that's what it is. Putting aside fear that HP had used some special low-thermal solder and that I would ruin it, I resoldered using my usual. This improved it some but did not effect a full cure. I made it slightly better by bridging a resistor across part of the string. It's the materials themselves. Really, they should have used a pot instead of a switch; then there would be no thermal issue.

There's also a mild leakage effect, but it has more to do with overall linearity. I'm still figuring out how to test this. If I see an error, is it the DUT or the tester? I'll try both my Fluke Differential Voltmeters (887A and 895A) but they're 5-digit devices, and my Fluke 8600A, but it's only 4.5 digits. The HP is 6. They're all susceptible to nonlinearities of their own in various ways. Anybody got something better I can borrow? I hope it's straight, but I might find a mild upward bow in the last half of the graph on the 1000V range, where leakage between S9H9 (at 500-1000V) and S9H10 (a sensitive point at .5-1V) could push up the latter. What were they thinking? Those contacts are adjacent! I have this mad-scientist idea of sawing a slot through the wafer. Somebody stop me before I kill this thing...

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: *1939 Zenith console radio, model 12S370, with a Robot dial.
Contact David Wolski at (503) 230-2741.

FOR SALE: *Rider's *Perpetual Troubleshooter* manuals, Vols. 1-22 with indexes, \$200. Contact Damon Vandehey, 503-459-1777.

FOR SALE: Downsizing – Selling mostly 20's - 40's radio collection. Includes a very good original Philco 112X Bel Geddes console plus a couple of dozen table tops, including a Midwest G10 (34-10), Zenith 6S632, Trirdyn. A few horn, drum and cathedral speakers. A Columbia Graphophone and a TV-7D/U. Most work, all very good condition. Call Bill Merry in Salem at (503) 371-0097 and bring your truck for pick-up.

WANTED: **Speaker for a Philco Model 70 or 90. It must have a good field coil. Other parts damaged OK. Contact Gordon Phillips, 503-234-3517, gdnpfi@comcast.net

WANTED: Antique Radio Classified Magazine 2000-2005, 1986-1987, etc. Old Timer's Bulletin before September 1970. QST before 1920. Dick Howard (503) 775-6697 dhoward27@comcast.net.

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, wb6jbj@ix.netcom.com

Jack Doyle – (503) 305-8097

Pat Hickman – (503) 887-9015 Web: www.classictubeaudio.com

Email: phickman@comcast.net

Todd Ommert – (503) 246-4141 Web: www.burlingame-radio.com

Email: burltv@msn.com

Tony Ranft – (360) 944-8489 or walterranft@hotmail.com – 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.

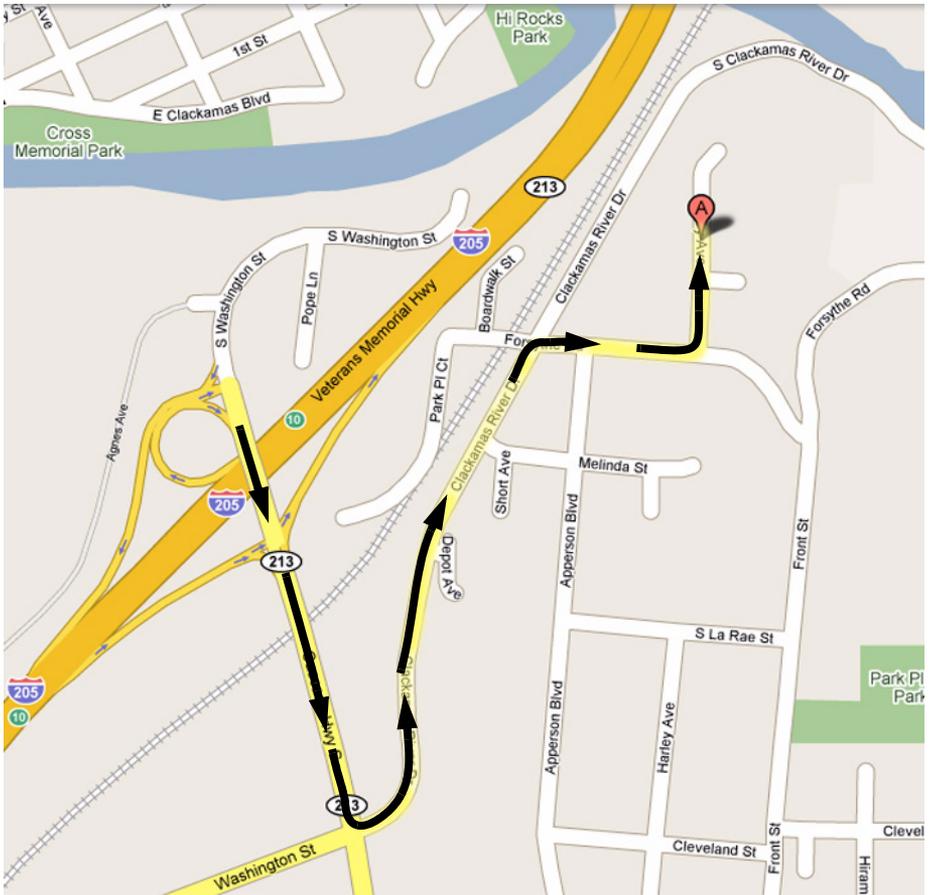
The Northwest Vintage Radio Society is not responsible in any disputes arising from services provided by members listed here. By common agreement of the board of directors, the buyer assumes all responsibility for the satisfaction of any transaction.

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: <http://www.radiolaguy.com>

Meeting Location

Here is a map (thanks to Google Maps) to the Abernethy Grange Hall (the pointer marked “A”), where the Northwest Vintage Society meets the second Saturday of each month. Just follow the arrows on the map.



To get to the Abernethy Grange Hall:

1. Exit I-205 at SR-213 (Exit 10 to Molalla) and head south on 213.
2. At the first intersection (the traffic light), turn left onto Clackamas River Dr.
3. Turn right at Forsythe Rd.
4. Turn left onto Harley Ave. The Grange Hall is on the left about a block and a half.