

*The*  
**Call  
Letter**

January 2016  
Vol 42, #1



**2015 Christmas Party**

**January Meeting begins at 9:30**

# 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.

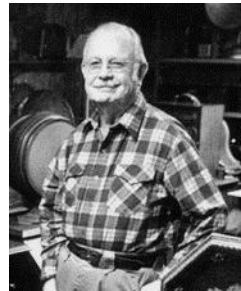
Membership in the Society is open to all who are actively interested in historic preservation. The dues are \$25.00 for domestic membership, due on January 1st of each year (prorated quarterly).

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 2016:

President	Mike McCrow (503)730-4639	<a href="mailto:tranny53@frontier.com">tranny53@frontier.com</a>
Vice-president	Bryon Toon (503) 266-5527	
Treasurer	Ed Tompkins (503) 573-3895	<a href="mailto:edtomp@Q.com">edtomp@Q.com</a>
Recording Sec'y	Liles Garcia (503) 649-9288	<a href="mailto:landn2@frontier.com">landn2@frontier.com</a>
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Board member at large	Mark Moore (503) 286-5224	<a href="mailto:mark@pdxhistory.com">mark@pdxhistory.com</a>
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Editor	Don Hanson	<a href="mailto:vanguard4@lycos.com">vanguard4@lycos.com</a>

Call Letter

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## January Feature

Program Topic for our January 2016 meeting will be a radio-related item that you got from Bob Lee at R5-D3.

## Announcements

### January Meeting

The January meeting will be on Jan. 9 and starts at 9:30 AM

### Spring Swap Meet

Our Spring Swap Meet will be on April 9, 2016.

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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)

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# From the President

By President Mike McCrow

A Letter from the President

Hello everyone. I hope you had a merry Christmas and a happy new year. I'm looking forward to the upcoming year. I hope it will be as much fun as 2015. I would like to take this opportunity to thank everyone that helped at the Christmas Party. Thanks to Brian and Kathleen Toon for all their work getting the party organized, and making sure all the details were taken care of. Thanks to Charlie Kent for all his help. Getting to the Grange Hall early with drinks as well as helping set up. Jeff LaDoe as always was there ready to get the coffee on, and help out in any way. Liles and Naomi Garcia brought the Ham, and were a big help as always. Special thanks to all the people that helped out in the kitchen. Jan Kirkwood, Lila Clutter, Roseanne Ranft, and Naomi Garcia. We can't forget the wonderful music and commentary by Dick Karmen. "ReLiving Radio" is the life of the party. Thanks again to the skill and hard work of George Kirkwood for building the beautiful donation box in honor of Rudy. It will be a part of our society for years to come. Also thanks to Ray Holland for donating the car radio for the project. Let me see... I know I'm forgetting someone, Oh yea, thank you Brian Snawder for getting us the nice table ware and plates etc. It really is very nice to have that for our party every year. I hope everyone that attended had a good time. I know you had good food to eat. Thank you all for coming. Now it's onward to 2016. It's going to be a great year! See you in January.

Mike

## On the Cover

NWVRS 2015 Annual Christmas Party (Photo by Chris Butler)

## Editor's Note

Please have Call Letter Articles in by January 30.

**Need a volunteer** to take notes on the Monthly Feature entries. Don't be shy!! And a Big Thanks for everyone who contributed to another great Call Letter!!

## **Minutes**

NWVRS Meeting Minutes -- December 12, 2015

President Mike McCrow called the December meeting of the NorthWest Vintage Radio Society to order at 9:40 AM. All present pledged allegiance to our nation's flag. Mike told the group about the "Rudy Zvarich Memorial Coffee Donation Box" that we will use for coffee and donut donations at our meetings. George Kirkwood made the box and showed it to the group. Members gave George Kirkwood a "Thank You" round of applause for building the donation box. All guests present introduced themselves. Members voted to elect the current officers to their respective offices for next year.

The meeting was adjourned for our Society's Christmas lunch. Special thanks to Brian Snawder for arranging for the dishes, table cloths, silverware, and drinking glasses for our party!! Special thanks to the ladies who worked in the kitchen to serve our lunch: Jan Kirkwood, Lila Clutter, Naomi Garcia, and Roseanne Ranft!! Special thanks to the group that helped out on everything else: Jeff LaDoe, Brian Toon, Kathleen Toon, Charlie Kent, and Mike McCrow!! Special thanks to Dick Karman for playing the great music for our party!!

Liles Garcia, Secretary

# Calendar of Events

**January 9, 2015. NWVRS Monthly Meeting.** Abernethy Grange, Oregon City, OR

**February 20, 2016. Salem Hamfair & Computer/Electronics Swapmeet.** Rickreall, OR at the Polk County Fairgrounds. *This is an ARRL sanctioned event.* <http://www.w7sra.com> .

**March 5, 2016. Mike & Key Swap Meet.** Puyallup fairgrounds exhibition hall, Puyallup, WA. *This is an ARRL sanctioned event.* <http://www.mikeandkey.org/flea.htm>

**March 19, 2016. MicroHams Digital Conference.** Redmond, WA. <http://www.microhams.com> .

**April 2016. Yakima Hamfest. Yakima, Washington.** Selah Civic Center, 216 South 1st Street, Selah, WA. <http://yakimaamateurradioclub.com/yakima-hamfest/>

**April 9, 2016. NWVRS Spring Swap Meet.** Portland, OR

**April 9 & 10, 2016. Communications Academy.** South Seattle Community College, Seattle, WA <http://commacademy.org/>

**April 22, 2016. Idaho State Convention. Boise, ID. This is an ARRL sanctioned event.** <http://voiceofidaho.org/> Contact: Larry Bickham, WA7ZZS. (208)453-1666, wa7zszs@arrl.net

**May 2016. Stanwood Camano Amateur Radio Club Hamfest,** Stanwood Middle School, Stanwood, WA. Contact: Fred Laun, [n7krn@arrl.net](mailto:n7krn@arrl.net) <http://www.scarcwa.org/>

**May 20-22, 2016. Pateros 16th Annual Ham Radio, Campout/Potluck.** Pateros WA. Free "dry" camping along the Methow River at Pateros. Always the weekend prior to Memorial Day Weekend. Contact Roger W7CH [w7ch@arrl.net](mailto:w7ch@arrl.net) (509)687-3919. <http://lakechelanradioclub.webs.com/>

**June 2016. 48th Annual Apple City ARC Hamfest.** Apple City ARC. Dryden Gun Club. Dryden, WA. <http://www.qsl.net/w7td/> .

# Monthly Feature

## Photos from the NWVRS 2015 Christmas Party

Photography by Chris Butler











# The Parker - Remler Set

By Art Redman

I bought a Remler set Number 70 from the Michael Parker auction for \$35.00. The set front panel and cabinet looks like the nine tube 45 kHz IF superhet kit made in 1925. The set was listed as a Remler set in the auction catalog because the two front dials are of the Remler brand. The cabinet is 27" long x 10" wide and x 7" high, which is the same size as the Remler superhet kit picture in Mahon's Vintage Radio book on page 145. The front meter is a Weston 7 voltmeter.

There is where the similarity ends. The two variable capacitors are not Remler' but one is a Fada 500 pf and the other is an unknown 365-pf brand. There are two holes behind the big dials where another brand of capacitors (maybe Remer's) may be mounted and the panel appears to be a Remler. This set also has an antenna tuning capacitor and one antenna coil of 3" diameter. The circuit is of a grid leak detector followed by two stages of audio amplification. There is a 171A tube and socket, which is unconnected, and it appears the original builder planned to add another amplifier stage. The two audio transformers are Dual Peerless brand Number 2 and mounted on a Bakelite strip with two tube sockets giving the appearance they were sold as a unit.

What should do with this uncompleted set? There is plenty of unused space. Originally, I hoped to complete the set as a Remler superhet if I could find some Remler IF coils or buy a Remler Infradyne unit. I wondered what Mr. Parker intended to do. Most likely complete the last stage of audio and connecting the remaining wires, as I will do someday to get it working and forget the superhet circuit.





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## **Zenith Royal 500H Repair**

By Dave Wise

This is the first time I've ever seen a bad ceramic cap in a radio.  
And here there were two of them!

### **SYMPTOMS**

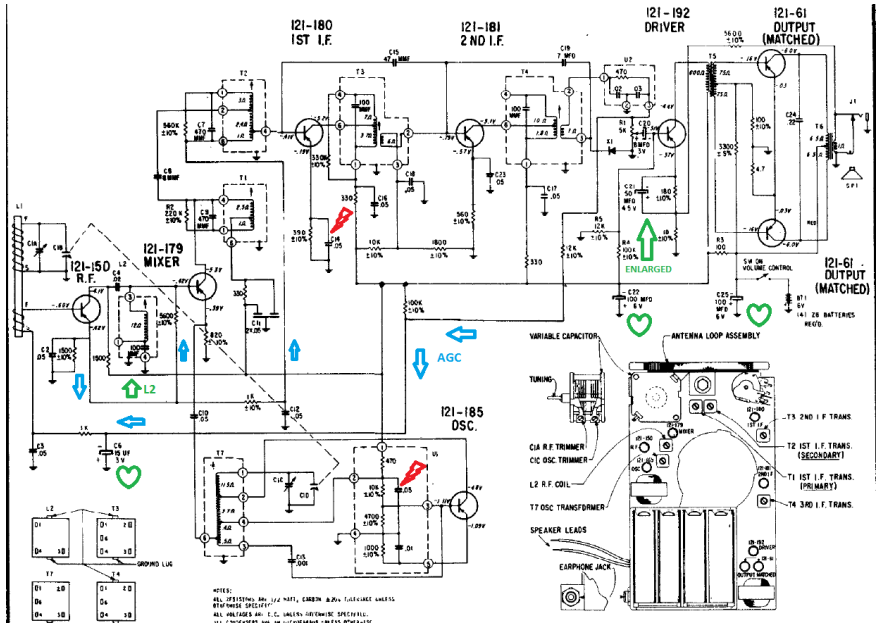
1. Poor sensitivity
2. Sensitivity improves when L2 is detuned downward
3. Regeneration and instability when L2 is detuned downward

### **DIAGNOSTIC TECHNIQUES**

1. Bridge every cap with a new cap.
2. Plug in a known-good transistor in every socket.

**SCHEMATIC for Chassis 8HT40Z2:**

From Beitman's, Volume R-22, 1962, pages 154-155. (Note: Beitman's parts list has a typo, EIA replacement for Mixer transistor is 2N1527, not "2N152T".)



**FINDINGS**

- 1a. Open ceramic cap C14. (50nF, 1st IF emitter bypass.)  
 An open here adds 390 ohms of emitter degeneration to the 1st IF amp.
- 1b. Weak Mixer transistor.

2-3. Open ceramic cap (50nF) inside T1 couplate. U1 is the couplate next to the Oscillator. An open 50nF here disconnects T7 (oscillator coil) pin 4 (supply) from RF ground.

**TREATMENT**

- 1a. Tack on a new cap.
- 1b. Replace the mixer transistor.

I used a 2N2207 with ground pin cut off. This worked great - in fact, this radio is better than the other one now! Just about any transistor made for small-signal RF will work,

but a transistor characteristics manual will show many parts specifically intended for mixer service. The generic part used most is the NTE160, with the ground pin cut off, but I saw a pack of 20 AF200U's for sale on eBay for about the same price as one NTE. I bought them to try later.

2. Tack on a new cap.

## RESULTS

Works great! Very sensitive and selective, great sound. The best of the coat-pocket sets.

## DISCUSSION

Zenith did have a well-known problem with early ceramic caps, but this is the first time I've seen a bad one in any radio, let alone a transistor radio. There's no visible evidence of foul play, they're just open. (Or possibly way down in value. I didn't measure them.)

I can't figure out why the bad oscillator bypass causes regeneration, but I do know it was coming in on the line conveying signal from the RF Amp collector to the Mixer base, because (a) it didn't care about dial position, and (b) it did react to L2, becoming stronger when L2 was tuned below its normal 455 kHz null. (Only below, not above. It stands to reason that regeneration would increase on one side of null and decrease on the other. Since L2 is actually a series-tuned LC circuit, its impedance is inductive below the resonant frequency and capacitive above it, and this changes the phase shift going around the feedback loop. The more the feedback becomes in phase with the amplified signal, the more regeneration you get.)

I have two 500H's. The troubled one is older, with 1961 date codes, while the other (working) one is newer, with 1962 date codes. The older one has little mu-metal shields around the IF cans, and L2 is a conventional tunable coil. The newer one lacks the shields, and L2 has a non-screw core that repeats its adjustment range every 360 degrees - you can turn it around and around like a ceramic trimmer cap. I've never seen the like.

To my surprise, all the electrolytic caps were fine on both radios. Nevertheless, I replaced C17 (50uF, audio driver emitter bypass) with a much larger cap (1000uF, same physical size) to eke out that last 2dB of bass.

The other caps are perfectly adequate at their factory values, C17 is the weak link. I confirmed this by injecting RF and reducing the modulation frequency until an AC voltmeter on the output transformer read lower than at 1 kHz. Then I bridged caps one at a time until the reading increased. Since the battery is right across C25, to test it you have to simulate weak carbon-zinc batteries by adding series resistance between battery and cap. I used 100 ohms.

If you have an ESR meter, or an impedance bridge that operates at 1 kHz or higher, you can test most electrolytic caps in-circuit, because the surrounding parts disappear compared to the cap's low reactance. You can't check leakage, but in a transistor radio that's a rare problem. Most of the time, the caps will have dried out, which manifests as high "D" along with low C.



In the 500H and 500L, L2 is a series-tuned wavetrapp which prevents 455 kHz from getting into the mixer. This is necessary in the 500D, 500E, 500H, and 500L, where the mixer is untuned. If it wasn't there, the radio would pick up its own IF emanations and regenerate them. (In bigger models that use a three-gang tuning cap, the selectivity of the mixer tuned circuit screens out 455.) To align it, you have to inject 455 somewhere upstream of L2, like the antenna. I hooked up right across the tuning cap. (Killing the loopstick Q doesn't matter in this step.) Then adjust L2 for minimum signal. This adjustment is a 455 notch, it has absolutely no effect on normal reception.

The older 500D and 500E did it a bit differently. They still have a wavetrapp called L2, but it is parallel-tuned and nonadjustable. It's broadly tuned to permit MW signals to reach the mixer, while shorting out most energy above and below. (You know it's broad, because there's a low-value - 2k2 - resistor across it spoiling the Q.)

I like the 500H's AGC. They made the RF amp do double-duty as a DC emitter follower that supplies AGC to the mixer and 1<sup>st</sup> IF. This lightens the load on the signal rectifier, which reduces audio distortion. I've accented the AGC path in blue. Note that the 2<sup>nd</sup> IF amp is running wide-open on fixed bias. This is standard practice. Signal into the 2<sup>nd</sup> IF is loud enough that attempts to reduce stage gain via biasing invite clipping.

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## Swap Shop

**Temporary Ads:** Run for 3 months unless reset requested (each month adds one asterisk \*)

**Permanent / Semi- Permanent Ads:** Marked with a hash mark #

\* Wanted: A Dial Glass, with three bands and dial pointer for Philco 41-260 Console or any other Philco. Also in the June 2010 Call Letter I had an article on my Minerva Tropic Master Model W117 that I sold and I would like to buy it back. I will be at the April swap meet so anybody can bring the dial glasses or the Minerva. Homer "Jim" Myers 1-509-525-6264

# For Sale: to purchase NWVRS hats, jackets, name badges, or T-shirts, please contact Wendy Kent at (503) 281-9335

# Special Sale: Large collection of high-end quality radios that range from mid-1920s to late 1950s and into the 1960s for sale. Only NWVRS, PSARA club members and personal guests are invited! For appointment call Steve Berglund 206-244-6428

# Amplitrex tube testing service. Highly accurate tube testing with computer printout. Can test 211, 845 and other rare and hard to test tubes. Will trade testing for tubes, parts, etc. [robertwstephens@frontier.com](mailto:robertwstephens@frontier.com)



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

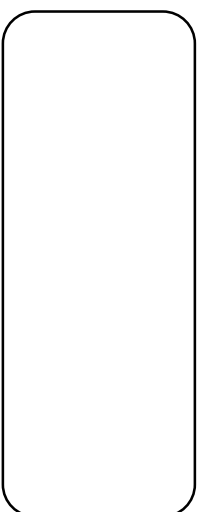
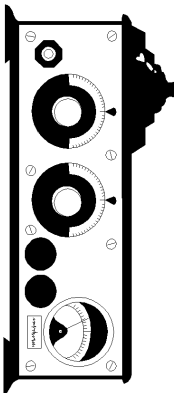


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