

II. REVIVING A HALLICRAFTERS S-38C



by a mysterious CHRS member.

I traded for my Hallicrafters S-38C at a CHRS swapmeet. "Does it work?" I asked. "Oh, yes!" the seller replied. Upon getting it home, I found that it had an incredible AC hum that overshadowed even AM broadcast reception. I tested the power supply filter caps on our Sencore Capacitor Tester at work. All three caps in the cans were very leaky. They did not reform on their rated voltages, even overnight. I was then obliged to pry the can open, and replace the caps with modern (Nichicon) units. I sealed the can with paraffin, and the results were indistinguishable from the original.

With this rectification* [* use a pun, go to prison -- ed.] I then tested the tubes. All checked fine. I did, however, replace the JAN metal cased tubes with vintage glass envelope units. The radio now worked. It was, unfortunately, way off frequency. To align the receiver, I borrowed a buddy's EICO Signal Generator, and also used a frequency counter from work. After the AM band, I soon found that the frequency counter lacked the sensitivity to work the short wave bands accurately. I therefore trusted to "Kentucky Windage" and the EICO Company to align the short wave bands. Lacking a schematic, I turned one cap at a time to align methodically the three short wave bands. I then marked and sealed each cap with a drop of White-out.

Finally, alignment was done. Was the old EICO close enough? I wondered. The proof would be in the pudding. I attached my short wave long wire antenna to the old Hallicrafters, and tuned in. Not only were the AM broadcast stations bang-on, I also found WWV at exactly 5, 10 and 15 megacycles with bandspread at Zero! I extend all kudos to the late EICO Company for a job well done!

Then a **PURPLE FLASH!** and dead silence, as I connected the radio's ground terminal to a cold water pipe outside the window. Upon further investigation, I found that the RF amplifier, a 12SA7, no longer worked. The filament lit up, but with no emission. I supposed the grid or more had vaporized. I replaced the tube, and investigated my house's ground. *I found that the water pipes were actually **HOT!***

What to do? Isolate the ground. I used a 0.001 mf at 600VDC Mylar cap to bypass the ground terminal on the beaverboard back panel of the radio, and another in series with the antenna terminal. This prevented an further monkey business with poor grounding. The S38 then worked probably as well as it ever had, considering it is a six tube, transformer-less AC/DC job which probably sold for \$29.95 plus two box tops when new. With the new Mylar and modern electrolytics, it may just work for a couple of more years. -- 73 --

Editor's note: This is a nice story and we'd like to know who submitted it, so we can give credit where credit is certainly due. As a matter of safety, keep in mind that any DC (as opposed to RF only) ground is potentially deadly. If you get caught between any voltage and any DC ground, the volts send the amps through you to the ground. Such a jolt can take your life. As this last tale shows, what looks to you and me like a DC ground can also be electrified, with the same potentially fatal consequences. So it would make sense to make sure only one place in the shop or shack is a ground, and that it is isolated by a high voltage capacitor to make sure no amps go through you on the way home. -- 73 -- ed.