Subject: Zenith 9-S-262
Posted by lyckland on Fri, 03 Nov 2006 14:26:46 GMT
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I'm in the process of restoring a Zenith console that was my grandparents. It hasn't run since the mid 50's so I have replaced all of the cacacitors, both wax and electrolytic, with new units. Last night I plugged in the set and all I got was a very low hum when I placed my ear up to the speaker. It made no difference if I moved the volume control. The hum is barely audible. All tubes glowed, some brighter than others. Is there a step-by-step process that I should follow to diagnose the problem? I have a basic understanding of electronics and can read a schematic but that's about it.any help is appreciated.Tom

Subject: Re: Zenith 9-S-262
Posted by Tim on Tue, 07 Nov 2006 09:07:06 GMT
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Tom, I'm doing the same with an Atwater Kent. I searched the forum and found this thread which will probably answer your question. Good luck with your restore!http://www.audioroundtable.com/Radio/messages/190.html

Subject: Re: Zenith 9-S-262
Posted by Lee gathers on Sat, 23 Dec 2006 03:08:20 GMT
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Hello Tom,I have the exact same radio that was my Grandparents,has not run since at least the 1950's. I have replaced most of the capacitors so far. All tubes were checked on my tube tester and some replaced(6F6G power tube is showing bad),but lights up. When checking it so far it only has the same low hum out of the speaker. I noticed two of the thread like wires from a small choke coil are broken off.This will need replaced or maybe I can re-attach the wires? Long shot probably.I have about the same limited experience,so we are both here with the same problem. I am using a Ryder schematic.I am studying it more in depth.I have three electrolytics(2,6,8mfd)to replace yet. There are four leads coming out of the can.Is one a ground for the can? The 12mfd electrolytic started to boil up and put much voltage to the Rectifier(5Y4G).It was fine when I replaced that one.Hopefully your post will get some answers.....Lee

Subject: Re: Zenith 9-S-262
Posted by Wayne Parham on Sat, 30 Dec 2006 17:21:11 GMT

Do you have an oscilloscope? If so, check the IF oscillator and alignment of the IF stages. I've had a couple radios with bad IF coils and the symptoms are exactly the same as you've described. All tubes good, all caps good, just a hum in the output. Without an IF oscillator, there's no way for the signal to get through the IF stages. So check the trimmers on the IF coils, make sure they're aligned, and make sure the IF oscillator is singin'.

Subject: Re: Zenith 9-S-262
Posted by Lee gathers on Sun, 04 Feb 2007 03:11:25 GMT

Hi Wayne,I have an old Sylvania oscilloscope and am waiting for the manual for it I ordered to come in.I have finished replacing all the electrolytics and was able to run through some checks which ended up pointing to the audio output transformer having an open in it. There is no continuity checking between pin 3 and 4 of the 6F6G with the set off and with it on pin three should have 225 V present and I have zero. All voltage checks with the 6F5G 1st audio were acceptable.I'm on a hunt for this transformer and once that is replaced we will see what happens next.I hope the IF stages will be OK.Lee

Subject: Re: Zenith 9-S-262
Posted by Wayne Parham on Sun, 04 Feb 2007 19:41:49 GMT

If it's just the output transformer, I'll bet you'll have it fixed in no time. A generic transformer will probably work just fine. I had an open output transformer on one of my radios and I bought a surplus transformer for next to nothing and that fixed it. Ended up buying several of these transformers to kep in personal stock, to fix other radios in the future. Might as well, shipping costs more than the transformer did.
Audio output transformers at Antique Electronic Supply

Subject: Re: Zenith 9-S-262
Posted by Lee gathers on Tue, 06 Feb 2007 02:06:36 GMT

Hi Wayne,Thanks for the info and link. I am still studying up on much of this.I did a test I shouldn't have using an output transformer from a different radio. It did give me volume and I even tuned a

station in for a few seconds.The transformer was for a radio using a PM(permanent magnet) speaker.This 9-S-262 speaker is the electrodynamic type. Using a field coil and hum bucking coil.Good thing I didn't damage anything that I know of.Hopefully this output transformer will be available.....Lee

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Subject: Re: Zenith 9-S-262
Posted by Wayne Parham on Tue, 06 Feb 2007 06:02:21 GMT
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The field coil is separate from the output transformer and voice coil. The field coil usually conducts PS current through it, where it serves dual purpose, to energize the loudspeaker and to filter the power supply. The output transformer is about the same as it would be for a speaker with a fixed magnet, as it is matching high tube anode impedance to relatively low voice coil impedance.
