Subject: Ground isolated from chassis - now it's an AM radio
Posted by colinhester on Sat, 05 Mar 2005 22:35:23 GMT
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I got some teflon tape wrapped around the volume pot to isolate it from the chassis. That seemed to be the point of contact between the signal ground and chassis. Now when I touch the metal volume shaft, I get WLW clear as a bell. Pretty cool, Doug!! How did you manage to design that?
The noise at full attenuation without signal has gone down quite a bit just by isolating the chassis, so I'm pretty happyI'm still chasing down the hum. I did the star ground off the volume pot's ground node, so this might be the problem. I'm going to move the ground point over to the inputs and use heavier gauge bus wire. I was using wire that was thinner than the in B+, except in the connection going to B-.Hopefully all will be sorted out this evening. Now if I can just figure out how to tune in something other than WLW.....Colin

Subject: un-documented feature....
Posted by PakProtector on Sat, 05 Mar 2005 23:39:44 GMT
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wish I could take "credit" for it...good luck, I've never had one do *THAT* yet.regards,Douglas

Subject: 700 WLW - Voice of America
Posted by colinhester on Sun, 06 Mar 2005 00:31:38 GMT
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700 WLW is the old Voice of America and is a powerful AM station out of Cincinnati. I live 1/2 mile from its tower. I'm really surprised we don't get more interference from it. I need to get down there and tour the VoA park and see what it's like. I could also look through their dumpsters and see if any old, worthless tubes have been tossed.....Colin

Subject: 1170AM
Posted by Wayne Parham on Sun, 06 Mar 2005 05:12:27 GMT
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Here in Tulsa, the one you'll always get is 1170AM. It's a 50kW boomer, and for 75 years was all country. I can remember for years, just about everything you wired up with a speaker would play country music. Bad grounds, country music. Open input, country music. Hang a wire on a diode, country music. Now it's talk radio and it's still a 50kW boomer. But I can remember many, many

times geting that faint twang of bluegrass in some audio or radio circuit that I was working on.

Subject: Re: 1170AM
Posted by Manualblock on Sun, 06 Mar 2005 11:48:40 GMT
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From country to talk radio; sad how things tend to go downhill.

Subject: Re: Ground isolated from chassis - now it's an AM radio
Posted by Forty2wo on Sun, 06 Mar 2005 14:56:09 GMT
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Hi Colin, If you are going in there, I would replace that pot. Whatever is shorted may be the source of your noise, or acting as a diode to pick up the radio.Then again I used to live near a 50k station and it would play from my toster...John

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Subject: Re: Ground isolated from chassis - now it's an AM radio
Posted by colinhester on Sun, 06 Mar 2005 15:02:17 GMT
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I pulled the signal path apart last night and will redo it soon. I did notice that the insulation in the shielded cable I was using in the signal path had stretched in some places and was making contact with the shiled drain in more than one place. I'm going back and replace with either non-shielded solid-core Cu or stranded Ag wire.....Colin

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Subject: Re: Ground isolated from chassis - now it's an AM radio
Posted by Manualblock on Sun, 06 Mar 2005 15:07:55 GMT
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Colin; I too examined that shielded wire last night as I am starting the signal section. It is very iffy in terms of possible shorts. How did you deal with the shield wrap? Maybe pull it back an inch or so; I mean you did not ground it to anything did you? Just asking for my own edification.

Subject: Re: Ground isolated from chassis - now it's an AM radio
Posted by colinhester on Sun, 06 Mar 2005 15:34:01 GMT
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This is the same wire that is used in Bottlehead's SEX kit, so I followed thier directions on use. The red wire is used as the signal wire and is hooked up as nornal. The black wire is the the ground and is hooked at one end to the ground. The drain bare drain wire is wrapped around the black wire at the ground end and soldered. The shield is pulled back far enough to accomplish this. Essentialy at one end the black and bare wire at arrached to ground and the red signal wire is to the siganl's path. At the other end everything is trimmed back except the red wire, which is hooked to the other end of the siganl's path. I noticed on several connections that I had stretched the red wire's insulation enough that it was making contact with the foil shield. I just got in a hurry and used linesman's strippers to strip the black outer casing. The teeth cut a little too deep and caught the inner casings. I did not notice this until I started to examine my solder connections under an 8x loupe. I then checked for continuity between the siganl and ground and had full contact, damn....Colin

Subject: Re: Ground isolated from chassis - now it's an AM radio
Posted by Manualblock on Sun, 06 Mar 2005 17:56:06 GMT
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Always something. Got my heaters working and if I can get a little more time the signal wiring should be done today.BTW I too get 13v on the heaters. And to be truthful it looks like the tube is running a little hot.

Subject: now it's an AM radio
Posted by PakProtector on Wed, 09 Mar 2005 10:39:34 GMT
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On the AM radio, you might find that you can use a small cap to connect what you just isolated(and discovered the RF issue by doing). Small, as in .01 or .005 uF of ceramic cap. you don't need much voltage rating, so it won't have to be big(like a 6kV .01 uF would be).You don't want much connection at audio frequency(else it will conduct the hum that youisolated for in the first place), but at RF you want a dead short. Ceramic of the proper size can do this for you I think.regards,Dogulas

Subject: Re: now it's an AM radio
Posted by Wayne Parham on Wed, 09 Mar 2005 20:08:30 GMT

Good idea about the small value ceramics. It's amazing how much RF is present on the power line. The AC power lines are a nice long antenna, and the power supply rectifier is a good detector. Electrolytics in the supply filter don't shunt much RF because internal resistance grows too high at high frequencies. Open up the input, and the amp is great for playing the 50kW boomer station in the area.