Subject: Ground scheme
Posted by Forty2wo on Mon, 14 Feb 2005 03:50:50 GMT
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Good grounding techique is one of the most important areas of building any audio gear and a spot were if a mistake is made, can be very fustrating to find and correct.Each part of our ciruit needs a good solid path to ground but only one. We need to take care that we don't create ground loops. Multiple paths to ground. Usually through the chassis or another part of the circuit. the two paths will have slightly diffrent resistance and current flow. This is a great way to generate hum and noise and is to be avoided. This just takes a little planning as you lay out your project, keep in mind were your ground is and how circuit bits will connect to it.Most tube gear will use a ground bus, a "star" single point ground, or a carefull combination of the two. Running a completely seperate wire from each and every jack and so on, will build a rats nest and may pick up more noise then it prevents.Ok enough theroy. I'll pick up with part 2 a practical application to our project...John

Subject: Re: Ground scheme
Posted by Forty2wo on Mon, 14 Feb 2005 04:41:45 GMT
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I just spent 15 minuits laying out the whole circuit and the cat ate it Damn. I will try tomo...John

Subject: General....
Posted by PakProtector on Mon, 14 Feb 2005 14:37:43 GMT
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Hey-Hey!!!,This is how I have done the grounding for the last two versions:All grounds run with their own wire to the filter cap negative. Some things are tied together, like the volume pot's negative and the cathode circuit of the amplifier valves. All the RCA jacks are insulated from the chasis and are grounded to the volume pot as well. It could perhaps be described as a semi-star. Signal all gets tied to one and then on to the main negative of the flter cap. The chassis gets tied to the PS, and I try attaching the green line Ground with a clip lead to see if it helps or hurts the noise. Depending on the amp's grounding arangement, I suppose the main Ground lift might be a good thing to have on a switch....regards,Douglas

Subject: Re: Ground scheme
Posted by GarMan on Mon, 14 Feb 2005 19:08:51 GMT

Grounding to me has always been part science and part black-magic. Follow good star-grounding or bussing techniques and you can get dead silence most of the time. It's the other 25% that you have to take out the magic wand.The Grounded Grid preamp that I breadboarded last month had a slight hum to it. It was grounded with a combination of star and bus technique and was technically correct. Finally got it quiet after much fiddling. The difference between hum and dead silence was moving one ground wire two inches along the ground bus. Just hope I can duplicate it when it comes time to transfer into an enclosure.Gar.

Subject: Re: General....
Posted by Forty2wo on Tue, 15 Feb 2005 00:08:16 GMT

Last night I wrote a blow by blow discription of pretty much what you just said. I went to post it and it disappeared. All RCA's tied together then to ground. Vol pot to RCA's, cathode circuit direct to ground. with a pre amp I like to try to keep the signal and power ground seperate form the chassis and line earth...John

Subject: all Fo...errrr, I mean...
Posted by PakProtector on Tue, 15 Feb 2005 00:29:41 GMT

Great minds run in like channels. Good design is just that: good. It is not surprising that we would come to the same conclusion. I'll bet you went into greater detail.regards,Douglas