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Subject: Re: Barzilay 4pi

Posted by [Wayne Parham](#) on Mon, 11 May 2015 01:53:07 GMT

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Looks like a really nice system!

Hum cannot be caused by a passive loudspeaker. It's usually power supply noise but nearly as often, it's a ground loop. Sometimes it's induced AC line noise, usually the result of a lifted ground.

Do you have sound from cable TV connected to the system? If so, be sure to isolate the video system using a matching transformer on the cable line input. They're really designed to connect

on cable TV systems is usually at a slightly different potential than local earth ground. That's the definition of a ground loop, and it's exceedingly common.

There are other ways to create a ground loop too. Even having some devices connected to AC on one wall and other devices connected to sockets on another wall can sometimes create a ground loop. If the ground connection on one leg is sufficiently far from the connection on the other wall - if the wire in the wall is long enough - then there can be a slight difference in potential, and that's what causes a ground loop. The symptom of this condition is hum.

So start disconnecting stuff and see if you can isolate the noisy device and/or connection. Once you've found the culprit, you can further evaluate whether it is caused by a ground loop, power supply ripple or induced noise and solve the problem accordingly.