Subject: Re: Acoustat 1+1 bias voltage idea
Posted by morricab on Tue, 04 Oct 2005 08:18:34 GMT
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I may be able to get a laboratory supply for free to test the idea out. The lab I used to do my postdoc uses these kinds of supplies routinely so I just have to see if they happen to have a free one. I am not so sure about the regulation of the Acoustat supply. The schematic doesn't show any real active regulation and I hear a bit of 50hz hum (I am in Switzerland) from the panels with everything off (so only the speakers plugged in). Maybe there are some failing capacitors in my supplies? I have found a small high voltage DC/DC converter that will produce up to 6000V with a peak of 160mA current. The beauty of this is that the thing will run off of a 12V battery. My idea is to run two of these modules (one for each speaker) off of one small lead/acid battery connected to a trickle charger. I can then play a bit with the bias voltage (have you ever tried to go above 5Kv to gain sensitivity?) as well as current (saw advice to reduce the current limiting resistor to increase current and thought that sounded like a pretty good idea). The supply is regulated to something like 0.1% or better with extremely low ripple. I am not sure yet about the module costs (I asked for a quote) but the battery/charger would be in the $80 range. I am guessing at about $150 per DC/DC module. So say $400 total. Not that much really and it should work better and no connection to AC! I will let you know what comes out of it.