Subject: High Voltage Supply Filtering
Posted by moray james on Sun, 15 May 2005 16:35:55 GMT
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Don't know how many of you out there will be interested but this may give cause for consideration. I just completed modifying a friends Acoustat one plus one's high voltage supplies. The mod that I did is documented on the Izzy Wissy Audio site (http://www.izzy-wizzy.com/audio/spkr.html). This discribes the addition of an extra high voltage filter cap on the HT supply multiplier section. This simple mod does everything stated and then some in my opinion. This mod can be applied to most similar multiplier supplies. An additional mod/diognostic tool is the mod shared by Sheldon stokes several years ago. This involves a neon bulb which is bypassed (paralled) by a small value cap (to catch transients at lamp turn on). The combination lamp/cap is then placed in series with the output of the high voltage supply after the large megohm value load resistor. When the panel looses charge and draws upon the HT supply the lamp lights up to conduct the HT to the diaphragm. As soon as the diaphragm is fully charged the lamp goes out. The neon lamp presents infinate resistance to the supply under these condition and so effectively decouples the diaphragm from the supply. It is as if you had unplugged the supply and the speaker operates in constant charge mode. As soon as the charge on the diaphragm starts to disapate the lamp turns on and reconnects the supply to the diaphragm. In normal operation the neon lamp will flash on and off. The cool thing is if you should see the lamp on all the time then you know that there must be a steady drain on the diaphragm somewhere (probably dust or bugs between the resistive coating on the diaphragm and the stator on that side of the panel. A very cool diagnostic tool as well as a means to decouple as much as is possible from the supply while maintaining automatic charge management of the diaphragm. Thanks to Sheldon Stokes for that one. Best regards Moray James.