Subject: Re: What about volume pot impedance?
Posted by Wayne Parham on Fri, 25 Jul 2008 20:06:33 GMT
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Used to be in the old days, you tried to match impedance for maximum power transfer. Now days, it is more common to maximize voltage transfer, which means keep the source impedance low with respect to the load. The two form a voltage divider, so if equal, then the voltage is the same across both. If the load is a lot higher impedance than the source, then most of the voltage is across the load, not the source. In either case, it is very important that the source limits not be exceeded, because that will probably do bad things like increase distortion or possibly even break something.You could exceed voltage limits if the load impedance were too high, or you could exceed current limits if the load were too small. In many cases, you have a pretty wide working range, and in that case the load impedance can be set as needed, within reason, perhaps anything above a few hundred ohms. But in some cases, the source limits can be reached with values much narrower in range, maybe 20k on the low end hits a current limit and 250k on the high reaches a breakdown voltage. The only way you can know is to study the particulars of the output and input circuits, especially the active devices. Capacitors have a breakdown voltage, so while that isn't usually an issue at preamp levels, it could be in some tube circuits.