Subject: can you live w/o gain?
Posted by PakProtector on Sat, 29 Oct 2005 22:22:51 GMT
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Hey-Hey!!!,Since I got my buffer linestage up and running, the question means a lot more now. I took it to a few close friends and turns out they can live with its gain profile too.I started with a Foreplay-style 5687 circuit, moved on to active MOSFET plate loads(Guinevere), and finally on to the 12B4 with its mu of 6. Still, I have tried all the trix employed by the Bottleheads to throw away gain. My enduring question goes something like this: why stick in gain(and the resulting colouration), if you don't need it. So, how to determine if you need it? reference tones from some CD, and a 'scope sounds way to complicated. Try taking the quietest source, and turn up the volume as high as you need to. Shut everything down w/o touching the volume knob setting. Measure with an Ohm-meter the effective voltage divider values created by the attenuator position. If the voltage gain times the input fraction is less than 1 by any appreciable number, a gain-free linestage will serve well.The R-C filter formed by the volume control, and the input capacitance(Miller and the static) form a low pass filter among other things. Why go and have all this stuff contributing to the sonics if one can avoid it?If you're a bit more curious, try a 50k stereo pot and wire in a set of inputs and outputs and see how it goes in place of the pre with gain. It'll give a bit more definitive answer as to needing gain. It won't provide the low output Z of a buffer, but it will answer the gain requirement. Make the box small, and put it all close together. Less chance of introducing too much additional capacitance or picking up noise from somewhere.cheers,Douglas