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

Subject: Re: can you live w/o gain?
Posted by Damir on Sun, 30 Oct 2005 16:19:53 GMT
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Or put it in another way - do you really need a buffer (impedance converter) without a gain?"Buffer linestage.pdf" is now correct file in the "Projects".Although not overly complicated (three Mos-fets and their components can be installed on small PCB), it needs rel. expensive 1:1 line OPT.Can you give us some more informations of "how and why" we need a buffer, about sound, and circuit details?BTW - nice work, again.

Subject: Re: can you live w/o gain?
Posted by 2wo on Mon, 14 Nov 2005 03:23:39 GMT
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Just one thought, 50k might not be low enought. I tried it with a ~200 Ohm output to a ~50k input. It didn't work. The music lost all sense of dynamics and just laid there. Might have been interconects.I will try 10k soon.Beter yet put your pot in your amp as the input(grid) resistor.Bit of a

pest for monoblocks though...John