



Figure 8: The complete headphone amplifier/buffer.

THD. So, I thought an amplifier with ten times lower THD or 0.01% should suffice for any circuit. However, that would only apply to a single amplifier and a single frequency. In the process of making a recording, there are dozens of amplifying stages the signals pass thru; maybe even hundreds of circuits. Consequently, I never hear music as accurate sounding as I have on playback of my own master recordings using just a flat response condenser mic pair, mic preamp and recorder. Not even close! I would put forward to you that when a full orchestra plays, there are hundreds (maybe thousands?) of tones that if each tone went thru just one amplifier with .01% THD, the total of all those added harmonics from each of those frequencies would amount to an equivalent of more than 1% THD. It is audible. This might partially explain the difference between commercial recordings/playback and hearing a direct master recording. So, the fewer the stages in recording and playback, the better it sounds but it also means we really need to get amplifier THD down even more to stay under the accumulated audible effects of THD and that would be at least .001% or better.