Subject: Re: It seems I am unable to drive my amps into clipping while pushing my Stage 4 Pis.
Posted by Larry Acklin on Mon, 30 Aug 2004 11:43:42 GMT
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Put a piezo tweeter across the output of the CD player. Use a 400hz or so test signal (test cd), and turn up until you hear a buzz. This is the harmonic you hear caused by clipping. Turn down until you don't hear it (just below clipping), then hook up to the next stage. Turn up input sensitivity (gain trims) until the onset of clipping then turn the trims down until no clipping. Move up through each stage, using the 400 Hz signal, leaving each gain stage set at just below clipping as you move up. What you are doing is setting the gain structure of the system- best noise floor and most headroom is achieved when you have the whole signal chain going into clip at about the same point. You can also use the tweeter at the output of the power amp, but I like to use a dummy load resistor to load up the output at design impedence. The piezo presents a capacitive load at the amp output, and a tube amp isn't going to like that at all.If you set the input sensitivity of the final stage (power amp) for "maximum stupid loud- I never wanna get louder than this" at whatever volume setting of the preamp knob, then you can be assured that you will never be in clip during normal listening.There is a commercial version of this concept, but a $2.00 piezo tweeter works just fine.This technique was invented by Pat Brown of Syn-Aud-Con, a professional audio training and knowledge organisation.Larry Acklin