Subject: Re: Why SE in SET amps?
Posted by Wayne Parham on Tue, 25 Sep 2007 23:30:01 GMT
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See the link below. There are a couple of articles by Norman Koren in the post that might interest you. One talks about possible problems in the feedback loop from reactance that causes phase shift. Load capacitance that makes total phase shift exceed 180° causes oscillation. If near 180°, a peak is evident in the response curve. The problem is exacerbated in amplifiers with output transformers because of the phase shift inherent in the system. Other problems include susceptibility to RF interference in amplifiers with global feedback, as the speaker output lines are long and make good antennas. The speaker wires are connected to the feedback loop, so they tend to pass RF back into the amplifier. Then there is the matter that negative feedback tends to sharpen clipping. It reduces distortion until the amplifier reaches saturation, and then distortion rises abruptly.Bear in mind that Norman Koren appears to be an advocate of no feedback SET designs. But he also appears to be pretty objective, making a strong case for the proper use of limited negative feedback in some designs. It's an interesting read, in any case.
Oddball note: Speaker cables, feedback loops and Spice