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Subject: Re: Why SE in SET amps?

Posted by [granch](#) on Sat, 22 Sep 2007 04:35:26 GMT

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Howdy!It could be. I know that even harmonic distortion is much more tolerable than odd, so that its presence could possibly mask the odd. I know of no studies on this. But there are other forms of distortion that are very bad news. I haven't seen anyone mention "intermodulation distortion" (IM). That is supposed to be very bad news as it produce all sorts of trash besides harmonics. It occurs when two or more tones are fed through a non-linear (ie. distorting) device (like an amp). It produces sums and differences of the two (or more) tones which vary with the signals. I don't know why it isn't mentioned anymore - perhaps because its easier to sweep under the rug and forget. I believe that its one kind that negative feedback amps are good at suppressing, since the distortion products are generally not in the original signal. There is also FM or doppler distortion caused by the loudspeakers themselves. Think of a cone vibrating at high frequency while it is simultaneously being driven slowly back and forth by a low frequency. Causes the doppler effect or a frequency modulation of the higher freq by the lower. That's one reason why horns sound so good - they minimize the excursion of the diaphragm by loading it heavily and uniformly. Also a good reason for sub woofs to only cover a narrow frequency range. I believe that the common answer to all these problems is to make the amp as absolutely linear as possible. A very well designed amp with feedback run well within its ratings (both bandwidth and power) can be the nearest thing to linear that I know of.

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