Subject: Distortion behavior, signal-to-noise and output impedance
Posted by Wayne Parham on Tue, 12 Nov 2002 19:30:12 GMT
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You're right about the Zmax thing being a big determiner of speaker performance on tube amps, particularly the small signal SET's with large output impedance. And you're also right that the filters used interact with this output impedance - It's like putting a couple ohms in series with the circuit, so peaking raises a bit. The lower output impedance makes a better current amp, whereas the voltage amp isn't as concerned with output impedance. But the biggest area of interest is the mechanical resonance of the woofer and cabinet system, so that's why I recommend systems having woofers with low Zmax for owners of SET amps.Of course, I think the biggest thing that makes tube amp owners like 'em is their different behavior in distortion products, and in signal to noise ratio. The Zmax thing is definitely an issue in the bottom octave, and one that is extremely important to consider when choosing speakers for a small signal amp. But without making a judgement for or against either technology, I think the biggest things that tube lovers notice are the difference between low-order vs. all-order distortion at clipping and the reduction of hiss.