
Subject: Re: What's good about tubes?

Posted by [Steve](#) on Fri, 22 Oct 2004 22:56:44 GMT

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Dear Shader, I think there are many differences that could, not necessarily will, account for the sonic differences. The list presented are some of the ones not discussed much. They are in no particular order. The comments are general in nature, with exceptions certainly possible. They are theoretical in nature, but I think are practical reasons too.

- 1) Triodes have inherently low order, even order distortions. SS is typically odd order and higher orders being present.
- 2) SS components usually use more parts, and even the number of stages. The more parts and stages, the more the possibility of sonic degradation.
- 3) SS components usually use many inferior sounding parts. For instance, a SS amp uses large electrolytic caps, and smaller ones too, in the power supply for different stages. This one aspect profoundly influences the sound, especially spacially, and not to the good.
- 4) Some SS devices have an inherent problem with high junction capacitance. For instance, an IRFfet may have a junction capacitance as high as .0015uf. There is also the problem of higher "miller" capacitance.
- 5) SS devices have much worse DA and DF factors. The DA and DF become particularly critical as:
 - A.) The DA is very high, much higher than the poly's or tube's DA.
 - B.) A portion of the conducting mechanism in series with the capacitance is silicone, which is a poor conductor, hence its designation - semi conductor, poor DF.As mentioned above, I mention the less understood problems that could (not necessarily all or will) cause sonic differences between components and the devices themselves. Certainly something to think about. Take care and have a good weekend. Steve
