Subject: why do different tubes sound different?
Posted by toob noob on Fri, 31 Oct 2008 19:01:46 GMT
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what makes a triode sound different from say a pentode? how bout a pentode wired like a triode or even the same kind of triode but from a different maker?i guess different wiring makes sense and maybe different materials but i would like to know more details so to know what to look for.

Subject: Re: why do different tubes sound different?
Posted by Aki on Sat, 01 Nov 2008 22:51:25 GMT
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These are tough question to answer without getting overly technical, but let me give it a try.Same tube type from different makes can sound different. This is due to subtle differences in characteristics due to variations in electro-mechanical design and construction. A tube's characteristics is mostly defined by its internal geometry (electrode spacing, grid alignment etc.) and cathode emission character. Each make has a different design that ends up with its own set of peculiarity like certain inter-electrode capacitance (high frequency response), internal resistance (low frequency response for output tubes) or linearity (distortion). So the same tube type from different manufacturer, dropped into the same circuit, can sound different. This is even more pronounced when comparing same tube types with different internal design (i.e. EL34 vs KT77 or 6CA7). With pentode vs triode operate completely differently, so it's not something you can compare just in terms of tube differences. Since pentodes and triodes behave differently, you will use them in different circuits. Generally speaking (and overly simplified), pentodes tend to have higher gain with worse linearity and frequency response than a triode. But you get higher output from pentode and extra gain can be use for higher NFB that you might not be able to afford in a triode design. So pentode vs triode is as much a comparison of circuitry.

Subject: Re: why do different tubes sound different?
Posted by Wayne Parham on Mon, 03 Nov 2008 17:45:45 GMT
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Great write-up, Aki, thanks!