
Subject: Re: Damping factor - SE vs. PP

Posted by [Steve](#) on Fri, 14 Oct 2005 14:55:40 GMT

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Right, we are talking dynamic R_a , and keeping the power as low as possible is crucial/fundamental for keeping R_a relatively constant, although never as good as PP. (I think that is one reason I have been hearing suggestions of using Even higher efficiency speakers.) $r_p = u/gm$, both u and gm constantly change during a cycle. Both changing independently, not in sync, in value and causes r_p to rise. This can be graphed in a quadrant. The R_a curve (at different plate voltages) rises gradually at first over the first 5 volts peak or 10 volts p-p; then rises rapidly. Even then, a 10 volt peak, 20v p-p, drive signal can easily cause R_a to change by 20% or more over a cycle. The slope of the loadline is very important. A more vertical loadline dramatically increases R_a 's change and effect. A more horizontal loadline helps minimize, or even eliminates R_a changing. But a horizontal loadline causes the output power to lower, rather dramatically. This applies to any triode run SET mode. Just something to think about when designing an SET amp. RL is important.
