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Subject: Single Ended Amp for Electric Bass  
Posted by [DRC](#) on Wed, 05 Apr 2006 15:11:57 GMT  
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Just taking up the bass and thinking about building a single-ended amp for it. Tube rectified, probably 2A3, likely driving a pair of 8" or 10" hemp cone speakers. For practice, recording, possibly mic'd performance at some point. A wild hair - just wondering if any of you had ever tried it  
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Subject: Re: Single Ended Amp for Electric Bass  
Posted by [Thermionic](#) on Thu, 06 Apr 2006 03:37:46 GMT  
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Tube bass amps sound wonderful, IMO much better than any SS bass amp. BUT..... Bass takes \*lots\* of watts to reproduce, because a low frequency sinewave contains a great deal more energy than a high frequency sinewave of the same voltage (amplitude). I doubt even a pair of 2A3s in push pull would have the gusto for clean sound at modest playing levels. KT88s operating in ultralinear would probably be your best bet. You definitely wouldn't wanna use tube rectification, as it would be too "soft" and the power supply Z too high. You'd want a very stiff, well regulated power supply with no "give" in it whatsoever, and very low impedance as well, like a SS rectified, choke input supply with a few hundred microfarads of caps after the choke. It would take some BIG output iron too. Because of the offset DC bias that causes SE output transformers to easily saturate on low bass notes, a SE output tranny that could pull off bass guitar duty would be a real monster. Push pull is definitely the ticket for bass guitar, even for low power. OTOH, a SE 2A3 guitar amp would probably sound fantastic and be a relatively problem-free project to undertake, but would need a bear of a driver stage to feed the 2A3 if overdriven past the point of drawing grid current. Thermionic

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Subject: Re: Single Ended Amp for Electric Bass  
Posted by [Damir](#) on Thu, 06 Apr 2006 11:55:25 GMT  
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IMO - go for it, nice "vintage" sound, loud enough just for practice/recording. If you have active, high - output bass with built-in EQ, then you can use just one tube driver, say D3a trioded. Clean and direct, full, "vintage" sound. If you choose "traditional" 2A3 OP ( $U_{ak}=250V$ ,  $U_{gk}=-45V$ ,  $I_a=60mA$ ,  $R_a=2k5$ ), then you'll have B+ about 300V, and D3a can work with say 12k resistive load and  $R_k=200R$  bypassed ( $470\mu$ ),  $I_a\sim 10mA$ ,  $A\sim 57$ . If you choose "traditional" two-tube preamp with "tone-stack" in between, you have many possibilities - I'd try 6C45Pi, 5687/E182CC, E180CC, E180F trioded... Grid choke on 2A3 recommended, and some form of "rubber" mounting 2A3 socket (vibrations!).

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