
Subject: Re: SE 300B Project, Part 13 - The finished amp

Posted by [Damir](#) on Mon, 10 Jul 2006 12:08:46 GMT

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Hi, thanks, and welcome to the forum! We need about 50Vrms (70Vp) to "drive" 300B to the full power. With CCS-ed driver triode (and high impedance 300B grid choke as a load), we have the "driver" amplification practically equal to the μ , or theoretical amplification factor (very close). In the case of E180F in triode - $A = \mu \sim 50$, or input sensitivity for the full power is 1 Vrms. Although C3g specs said $\mu \sim 40$, my "Siemens" tubes have $\mu \sim 50$, again - input sens. is 1Vrms. (If we'd have a tube with "right" $\mu = 40$ spec, then sens. would be $50/40 = 1,25$ Vrms). D3a has larger amplification, $A = \mu \sim 75$, and then input sensitivity is about 0,7Vrms. Unfortunately, I have no EC8010, and didn't try them. But, (based on its data) I expect it to be similar like other high-gm "candidates" above, and others I tried (6C45Pi, E280F trioded). If you have some EC8010 on hands, the best you can do is to try it for yourself. Use CCS, $I_a \sim 10$ mA, $R_k = 220$ -250 Ohms bypassed with 220 μ F (MKP of 100 μ F at least recommended) - like your starting point. Beware that this tube has g1 connected on five pins... I'd use grid-stop resistor (say 100...220 Ohms, CC) on every input pin. Based on the specs, you can expect $A = \mu = 60$ times, or input sensitivity of $50/60 = 0,83$ Vrms. Adjust I_a (or R_k if necessary) to have U_a about 200V. Seriously, only you'd can say about "sound" in your system, and like/dislike factors :-). You can expect rel. large input capacitance, unfortunately. Do you have some parts (tubes, transformers, etc.), or you are still in "various schematics" phase?
