Subject: Merlin front end simplifications....
Posted by PakProtector on Sun, 29 May 2005 11:55:35 GMT
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The faux pentode cascode is a bit on the complex side. True pentodes can be used. 6AU6's are *FINE* valves, and have worked quite well. Resistor to drop the voltage for a common g2 supply and a 4-6 uF cap to ref the g2 to the common cathode. Referencing g2 to the cathode is an important feature/design requirement of this circuit.In circuit adjustment of the g2 droping resistor is not too bad if you know it's going to be required from the start. Getting a good quality screen bypass cap is not too difficult either. It aviods the heater cathode issues of the cascode too. Plate loads for the 6AU6 of ~30k and ~100k seem to work best. The middle ground seems to be less than optimum, but with an adjustable CCS for the cathode load, the experiments can be carried out easily.Other front end options include the 6EJ7($3 each) the 12BY7($12) and the slightly 'spensive 7788(a $35, 45 mA/V gm-monster).With pentodes, gain is ~plate load * transcoductance. Even the 6AU6 with 25k has enough gain. EF86 and its octal cousin the 6SJ7 are also contenders. The metal 6SJ7 offers an external shield for free(or more specifically, the expense of lack of a glass bottle).regards,Douglas

Subject: Re: Merlin front end simplifications....
Posted by Manualblock on Mon, 30 May 2005 15:56:29 GMT
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T; do you know anyone building this amp?

Subject: yes...
Posted by PakProtector on Mon, 30 May 2005 16:21:43 GMT
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Hey-Hey!!!,including me, there are two other folks. One has already got his set of Iron, the other is waiting for the group buy on the output Iron.I have built with pentode front ends, but not exactly this way. I built a shunt regulator, and had g2 referenced to ground instead of the cathodes. The cascode experiments showed the importance of referencing the upper grid(the faux screen/g2) to the cathode node. I have contemplated a resistance loaded EL34 for this job in one of the high voltage amps. The EL34 is a bit down the road at this point. The more complex cascode seems to be the better option at this point.regards,Douglas

Subject: Re: Merlin front end simplifications....

Posted by cheetah on Mon, 30 May 2005 18:20:53 GMT
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Hey T,Are you guys doing this with the 1624/1625 power stage, or are you doing this with the 6v6 outputs?Joe

Subject: Re: Merlin front end simplifications....
Posted by PakProtector on Mon, 30 May 2005 20:22:00 GMT
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Hey-Hey!!!,It is an option either way. I have not built one exactly thisway yet. I think it has potential to be comparable to the caascode. I had good results with 6AU6's and think that the g2-cathode voltge reference would make the pentode a bit better than the variant I tried(which was quite nice to my ears).I think I will assemble the next amp this way with the pentode front. It has a better tolerance to transient overvoltage than the MOSFET voltage source does. It is a bunch of trades, and the voltage may not be such a worry if B+ is under 400V. For 650-700, I am going to have some worries with the MOSFET voltage ref. now that I think about it...regards,Douglas

Subject: Guinevere
Posted by colinhester on Mon, 30 May 2005 21:09:00 GMT
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Bro, How's the build going?.....Colin

Subject: Re: Guinevere
Posted by cheetah on Mon, 30 May 2005 22:17:02 GMT
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Slow!I have all the iron, finally. Most of the resistors, leds ect.Need to get going on the caps, and mosfets.Maybe by end of summer.I'll let everyone know when she's finally finished.Joe