Subject: Need power supply schematic for Merlin amplifier?
Posted by Norris Wilson on Mon, 31 Oct 2005 22:01:56 GMT
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I would love to have a power supply schematic for the Merlin version #1 amplifier. I have to have a specific road map to get where I am going. But, I guess the power supply would depend on the output tubes being used. I have not seen any reference to specific output tubes in my limited search about the Merlin amplifier.Has anyone built the Merlin amplifier, and what type of output tubes did you use?I would think something like a 6V6 or 7C5 would be a good choice for the 10k secondaries of the output transformers.Any ideas or suggestions will be greatly appreciated about the Merlin project.ThanksNorris Wilson

Subject: Re: Need power supply schematic for Merlin amplifier?
Posted by Damir on Tue, 01 Nov 2005 09:44:05 GMT
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You can use simple LC PS, "Guinevere" style, you`ll need about 500-0-500V secondary (depends of the output tubes), current capacity of the transformer and a choke again depends of the output tubes. For rectifier diode(s) there`re various options, for example GZ34. For more (details, possible group buy, etc.) try "Group Build".Doug built the prototipe, and I`m sure that he`ll answer your question in more detail...
http://audioroundtable.com/GroupBuild/messages/210.html

Subject: Re: Need power supply schematic for Merlin amplifier?
Posted by PakProtector on Tue, 01 Nov 2005 10:00:08 GMT
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Hey-Hey!!!,For 6V6/7C5 we should have B+ of 280-300V. If we keep to the L-C filter, this would suggest ~375ac input. With indirectly heated finals, an indirectly heated rectifier ought to be used. It will keep the filter behaving like an L-C, and avoid output in the root2*rms input range.For those tubes, it will be possible to build a carry-able stereo power supply. Each idling at 30-35 mA and 10 mA for the front end is not a big PS. Equally simple to build two smaller and easier to manage monoblocks though(my preference).Have you got the DuncanAmps' power supply Sim program called PSUDii? very nice tool, with few faults.cheers,Douglas

Subject: Thanks Damir and Douglas, I have-
Posted by Norris Wilson on Tue, 01 Nov 2005 11:41:23 GMT

-a couple of Hammond 273X transformers that are rated at 350-350 and 110 mA. Will these make it in the ball park when using the 6V6 as an output tube? I am not sure how much current will be needed for good headroom and regulation.I will play around with the Duncan power supply program to see what I can work out.Do you have any sugestions about a good low impedance choke that will not eat up to much current? Also could use some give me some recommendations for rectifiers? My thought of a rectifier would be a Cree Shotkey type if I would need to use solid state because the power transformers voltage is too low.Thanks for all of your helpNorris Wilson

Subject: my PSUDii results
Posted by PakProtector on Wed, 02 Nov 2005 10:23:51 GMT

I played with some guessed values. First being the actual voltage of 360, resistance of 60 mA, 10 Hy choke of 100R, and a 2 mOhm/100 uF capacitor feeding a 100 mA CCS. With 5AR4 rectifier, I got 300V, and with the oh-so-cheaper 6AX4 I got 290...If you take less current, you'll have a slightly higher B+, but it does not make much difference. This model should have unloaded voltage put in yeild best results(or at least that's my finding).There is also the 6EY6 and 6EZ5 (I think I got the alfa-bit-soup right), which are very similar to 6V6 and come NOS at better than new production 6V6's price.cheers,Douglas