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Subject: Little amp

Posted by [PakProtector](#) on Tue, 24 May 2005 23:28:45 GMT

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Here is a neat little one: E-Linear 6V6's. Iron: Dynaco Z565 or modern copies for the OPTx Dynaco St.70 power Iron, probably best to get a modern improved version. One 10Hy power inductor for the L-C power supply. 500 mA unit from Hammond will be adequate. Cascode 6BQ7 or 6BK7B for a diff amp cascode front like Merlin 100 uF/370vac cap like spec-ed for Guinevere for the PS cap. It will probably be good for ~12 W or so. Probably just out of Class A bias, but that's OK. B+ will be ~300. If somebody wants to build this, I'll loan a pair of the Z565's. Email me. regards, Douglas Praise the Lord, and pass the 813's!

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Subject: Re: Little amp

Posted by [Manualblock](#) on Wed, 25 May 2005 02:00:40 GMT

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I already have a set of Handmade iron exactly as you describe that I bought years ago for my old ST 70; as well as most of the rest of the parts. Lead the way I would be interested in participating with whomever chooses to build. Will you stay with it if possible and where is the schematic? BTW; I have begun dismantling the Guinevere with the intention of rebuilding into the new chassis. I have decided this is the pre-amp for me. I have heard nothing better. Right now I'm searching for a better volume pot and some better quality connectors and RCA's.

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Subject: Re: Little amp

Posted by [colinhester](#) on Wed, 25 May 2005 03:43:08 GMT

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Can you post a schematic or email one? Will this amp use CCS? I should be have my A7s tomorrow and then I'll be good to go.....Colin

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Subject: Re: Little amp

Posted by [PakProtector](#) on Wed, 25 May 2005 09:39:24 GMT

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The schematic will look a lot like (nearly the same as) Merlin, but with some component value adjustments. Probably require a 2 sq foot top plate to do comfortably and w/o crowding. The front end is the big trouble with that design, it requires two CCS per channel. They are not too difficult.

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one uses the TO92 cased LND150 and can be built on ~2 cm<sup>2</sup> with two resistors and two mosfets.regards,Douglas

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Subject: Re: Little amp  
Posted by [PakProtector](#) on Wed, 25 May 2005 09:44:31 GMT  
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The schematic is very similar to Merlin. No grid choke required. I should probably re-draw and mail the paper to Wayne for digitizing and posting. You might want to hold off with the Guinevere rebuild as 12B4 amplifier valves are a worthy experiment requiring a second socket and a bit of re-wire only. Yes I'd support any and all questions on the 6V6 amp build.regards,Douglas

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Subject: Re: Little amp  
Posted by [Manualblock](#) on Wed, 25 May 2005 11:08:15 GMT  
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O'Kay; hold off it is. But out of curiosity why after all this time of speculating about large high voltage triodes do you settle on trying this particular circuit? Did you hear one you really liked? Or is this a way of getting something started? I for one have always been tentative around the CCS only because if the transistor should fail the amp is in big trouble. And transistors fail around high heat conditions; no? Also since they require bias that potential for drift is constant right. Anyway I am enthused about building this or something now; maybe Damir can take this ride with us also. And Colin. I would like to see a group purchase of chassis. I am not a big fan of top mounted input and speaker jacks. There are some new chassis companies out there so the price is easing up a bit. But there must be a company like Heybeor that does this chassis work. Or maybe some metal work place would bend up some sheet stock.

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Subject: Re: Little amp  
Posted by [PakProtector](#) on Wed, 25 May 2005 19:26:49 GMT  
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well...the CCS are all self bias, as this is a characteristic of the depletion mode MOSFETS. Their drift performance has not caused me any troubles as of yet. Smaller is easier, save for the complexity of the special E-Linear cascode Circuit I feel is the best approach to this particular design. I think I rather moderate voltage pentodes to triodes. Not much sport involved with triode finals in many of the aspects I find interesting. I am still going to do the 4E27 amp. Soon enough I'll be paid enough to afford it. I am not 'UP' on chassis construction companies. I am going to buy a drillpress for my shop...regards,Douglas

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Subject: Re: Little amp  
Posted by [Manualblock](#) on Wed, 25 May 2005 20:51:14 GMT  
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So where does that leave the 6V6?

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Subject: right where it belongs...  
Posted by [PakProtector](#) on Wed, 25 May 2005 21:50:02 GMT  
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The 6V6 option offers a lighter PS option. ~35 mA/valve of idle current. With 6-10 mA allowed for the front end, we'd be looking at consuming ~160 mA of 300VDC. No big deal for the St.70 power Iron.It is just an option in case the DH stuff was looking a bit complex( and it is a bit more compared to IDH valves like the 6V6 ). The 6V6 also has a fairly light heater load.  
regards,Douglas

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Subject: Re: right where it belongs...  
Posted by [Manualblock](#) on Wed, 25 May 2005 23:02:22 GMT  
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Would the Guinevere power trans work at all with that amp? I know someone with a spare. He won't be having much spare time either, after building speakers bug hits.

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Subject: Re: right where it belongs...  
Posted by [PakProtector](#) on Wed, 25 May 2005 23:50:17 GMT  
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The special Heyboer Guinevere power TX would be good for a monoblock. It would be even better than the St.70 power iron since its middle tap would yeild under 300V of B+ and therefore allow more conservative operation of the finals.I had suggested a stereo chassis for no particular reason,and I do prefer the practice of building single channel amps.regards,Douglas

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Subject: Re: right where it belongs...  
Posted by [Manualblock](#) on Thu, 26 May 2005 00:49:11 GMT

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So it wont support a stereo PS?

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Subject: monoblocks and big speakers for me  
Posted by [colinhester](#) on Thu, 26 May 2005 01:30:17 GMT  
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Gotta do something with that iron, so I'm going monoblocks. Just got back from Columbus with a pair of A7 cabs and all the goodies. I'll need a week or so to bring these up to speed and then I'm ready to build.....Colin

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Subject: Re: right...  
Posted by [PakProtector](#) on Thu, 26 May 2005 09:51:35 GMT  
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The TX in question has 100 mA delivery from any pair of HV taps. This is comfortable for any of the topologies yet discussed in single channel amps. Stereo is just too much, by a factor of 2.  
regards,Douglas

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