Subject: Anybody starting to build yet?
Posted by Wayne Parham on Thu, 13 Jan 2005 11:05:01 GMT
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Anybody gathered their parts? I'm anxious to see and hear the preamp circuit.

Subject: Re: Anybody starting to build yet?
Posted by Manualblock on Thu, 13 Jan 2005 13:41:36 GMT
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Here's some food for thought. The original Pre-amp project occurred as a response to Colin's request for a cheap but decent Pre to use with his new Sex Amp. Douglas Sector 7g or (T to us) came up with a nice useable and cheap option. We tied his hands with the caveat that it needed to be cheaply built. And he did a great design job. However the parts required for the PS have little use beyond this particular circuit iteration. Personally I have a foreplay already; what I would like is to use his amp section with a much highher quality power supply using excellent iron and fully tube rectified. This may be a similar connundrum for others. So until either Douglas returns or one of us can do the design work on the new PS it is on hold.See I don't want to have to buy parts twice for the same pre. But by purchasing the good stuff now I can use it again if need be to make changes as they appear. The difference of 100$ for a high quality transformer over the cost of the suggested one is minimal if you can use it again and again.

Subject: Re: Anybody starting to build yet?
Posted by Wayne Parham on Thu, 13 Jan 2005 14:19:13 GMT
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I agree, John. I sort of had a thing for an all-tube circuit from the start. Having both options is cool, but I'll probably build mine as an all-tube circuit.Transformer rectified power supplies are incredibly simple. You can use a single diode as a half-wave rectifier and filter it as well as possible. Or you can use a pair of diodes to form a full-wave rectifier.With four diodes, you can form a bridge. That's what Douglas was doing with the tube dual diode and the pair of solid state rectifiers. He was making a bridge rectifier.I'll probably just go with a dual diode full wave rectifier and a filter. I'll probably use a large choke instead of the constant current source too. Then I can always change the circuit later and do Douglas's design for a mod. That's kinda how I did my Paramours too - First as the original plans showed having no CCS, and then later I added them and compared the two.
Tube Power Supplies

Subject: Re: Anybody starting to build yet?
Posted by colinhester on Thu, 13 Jan 2005 21:21:58 GMT
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Man, time sure does fly. This is the first time in weeks I've had a chance to sit down and write a serious post. I've started looking around for parts and trying to combine this pre with other projects. I did, however, get the Bottlhead SEX amp (BTW it is integrated and does not a pre) built. The voltage check was dead-on, but the smoke test was just that - SMOKIN' SEX. I toasted the PS transformer. Pulled it apart and found I missed one solder joint. I'm hoping that was the only problem. I should have a new transformer in 3-4 weeks. I pulled out an old project that I set aside a couple of years ago. It's a chip headphone amp I saw on headwize. I'm should have this up and running in a day or two. Back to the present. I have been playing around with PSU Designer (Duncan Amp Tools) for the power section. Pretty cool interactive tool for designing both tube and SS rectified PS - and it's FREE. I am still really leaning towards John's original idea. It's simple and there is a very done web site. Did anyone catch the Power Point presentation? One of the pictures is hot-linked. John, you mentioned beefing up the PS. Haveyoulooked into upgrading the parts? You know, beeswax caps? Seriously, the part count is so low that it might be a worthwhile project for each of us to do a slightly different variation of the same theme just to see how the sounfd is affected. I would have no problem sending mine to you for a head to head. Maybe you could do an honest write-up, like you mentioned over at the Dungeon. I am still trying to resond to that post. I've got a few stories to tell about honest peer review.....Colin

Subject: Re: Anybody starting to build yet?
Posted by Manualblock on Thu, 13 Jan 2005 22:21:24 GMT
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Good to have you back. I am glad you have given that post some thought because I believe it is important. What is the point of doing all this work if you can buy a better sounding unit for less. Reading a review of C.E.S. by John Broskie; the guy who writes the Tube Cad Journal; he states that he listened to The Prima Luna amp and he thinks it doesn't pay to build your own if you can buy this amp this cheap and have it sound this good.Thats my point; it has to do more than sit there; it must sound good. Many of the recent tube amps I have listened to; seems they are designing them to sound like solid state amps now. Bummer.Sorry about the transformer; I did the same thing two weeks ago on my DOZ pre-amp.About beefier parts; we are deciding exactly how to proceed in terms of PS and whether to choke load or not. Wayne goes with the choke and I feel the same. Keep you posted. J.R.

Subject: PS options...
Posted by PakProtector on Fri, 14 Jan 2005 16:42:36 GMT
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Hey-Hey!!!,There are a few improvements. a V-0-V power TX with V in the neighborhood of 250 volts is going to make using a valve rectier easy. Custom Iron is going to come in under the $100 point quite easily. A V3-V2-V1-0-V1-V2-V3 item with appropriate rectifier filament windigs (like 3A each of 6.3 and 5V) and V3 as high as 400 is not a real trouble. Say current rating for the HV as 100 mA and we have a *VERY* useful and *RE*useable linestage power TX. I'll bet Heyboer could come in comfortable under the $100 limit for such an item. Say 400-325-250-0-250-325-400 @100 mA and 3A each of 6.3 and 5? You could build damn near anything with that. B+ from 200 to 600 depending on connection and filter type.The PS cap I sugested is a 370VAC rated item, good for use at more than 600V(I have factory labeled 330VAC-rated ASC with 600VDC tags on them). At ~$10 each, I suggest buying a few. They are quite good.On the chassis, Lowe's has cut 1x4 hardwood for my last base quite cheaply. Glue, a Square and some weights(or proper clamps) make asembly easy. Look at sheet metal shops for the plate. a 13.5 x 18 inch piece of .125 plate cost me $22. You should consider paying a bit extra for a clean, unscratched piece, or plan to spend extra time fixing some of the nicks...ON parts, from Mouser: switch, 633-S331T @ $6.60IEC socket 161-3516 @$1.41Filament DC capacitors 10,000 uF/16V Low ESR 647-UHE1C103MHD @$2.45 each. It would probably be best to use 25V-rated and go smaller in capacitance...Filament diodes, 512-SB5100, 5A/100 PIV Schottky diodesFilament TX, mouser has lots of Hammond.If you want more than the cheapest, and simplest, the first and most important upgrade is the active loads. Use the cascode circuit. It is the easiest, most cost effective(additional gate stopper and $2 DN2540N5 mosfet) improvement to this design. Don't plan on neglecting this one when you find out how good the simpler method works, rest assured, there is still some performance 'left on the table' and it is *EASY* to pick it up.more later, and as requested...regards,Douglas!

Subject: Re: PS options...
Posted by Manualblock on Fri, 14 Jan 2005 22:17:00 GMT
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Thanks Douglass; how long is the lead time in your experience for the transformers?

Subject: between a week and two....
Posted by PakProtector on Fri, 14 Jan 2005 23:28:44 GMT
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is the norm. Took about a week and a half for the choke. Shouldn't be much different. Tell them I sent you. Remind them it is for audio and should have more than usual primary turns count. Early stuff I got was built to typical industrial spec. More primary turns means less buzz and better power factor. They are good at following direction, you just need to give them proper directions. Audio: no buzz, no hum, no shaking the chassis. They will understand and wind the proper stuff.regards,Douglas!

Subject: Re: between a week and two....
Posted by Manualblock on Sat, 15 Jan 2005 00:21:45 GMT
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Thanks D; maybe some of the others will go for this style and we can get more than one ordered. Most certainly will take you up on it to tell of your recomendation. J.R.

Subject: custom PT thoughts..
Posted by PakProtector on Sat, 15 Jan 2005 01:26:25 GMT
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lets take a look at possible construction methods. There will be convenient places to put the taps on the HV winding. It depends on number of turns, so as to arrive at a tap point which is at the end/beginning of a layer. It may be better to divide up the voltage a bit diferently. The insulation will be better protected if we don't drag a lead across other turns.I will contact Phil at Heyboer and see what he can do for us and how much it will cost. I will do the footwork on behalf of the group, as I have been dealing with them for a while.regards,Douglas

Subject: Re: custom PT thoughts..
Posted by Manualblock on Sat, 15 Jan 2005 13:55:53 GMT
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Thanks; hope we do not presume too much?