Subject: possible group build
Posted by Manualblock on Wed, 15 Dec 2004 02:01:45 GMT
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Anyone active on this?

Subject: Re: possible group build
Posted by Wayne Parham on Wed, 15 Dec 2004 04:12:13 GMT
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I'm in!

Subject: Re: possible group build
Posted by Manualblock on Wed, 15 Dec 2004 15:16:52 GMT
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Have you looked at the scematic? What do you think. I have been reading in AudioeXpress an article defining how to build a minimal reactance power supply that would fit this pre to a tee. The rest of the schematic seems pretty simple and the tubes are cheap. I haven't heard from Colin but this was originally his Idea so I don't want to take any credit for thinking this up.

Subject: I'm still here
Posted by colinhester on Wed, 15 Dec 2004 17:11:27 GMT
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Sorry for the delay. Had some personal business to attend. Yes, I'm still with you and very excited about the group build. Is the new power supply going to be less expensive? I was looking at Hammond power transformers and we were looking at $50 just for this part.....Colin

Subject: Re: I'm still here
Posted by Manualblock on Wed, 15 Dec 2004 17:43:10 GMT
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Well the power supply they use is perfectly adequate, not to worry, there has to be an equivelant transformer for less money. I can search a little and get back to you. Lets establish a budget and see if we can hit the target.

Subject: Re: I'm still here
Posted by colinhester on Wed, 15 Dec 2004 18:01:02 GMT
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Let's boiler-plate the cost to bare minimum. Like you said earlier, if people want to build with boutique parts, then that's awesome. I'm just here to learn, have fun and make some new friends. This is my sanctuary from all the world. BTW, where do you get 2x4's for $2.87?

Subject: Re: I'm still here
Posted by Manualblock on Wed, 15 Dec 2004 18:42:21 GMT
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Did I mention they are 6 footers??

Subject: Re: possible group build
Posted by Wayne Parham on Thu, 16 Dec 2004 02:24:36 GMT
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I"ve seen the schematic. Looks like about an hours work, even with the tube rectified power supply. I think it's cool; Nice to put it in an attractive case. Spend a little time on the details and it can be made into a nice looking preamp. And from what I've heard said about it, it will probably be a very nice sounding preamp too.

Subject: Re: possible group build
Posted by Manualblock on Thu, 16 Dec 2004 07:43:39 GMT
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What are your thoughts on the power supply issue?

Subject: Re: possible group build
Posted by Wayne Parham on Thu, 16 Dec 2004 08:27:21 GMT
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I haven't really looked into the differences between diode, fast-recovery (HEXFRED) and tubes, so I defer to the judgement of guys that have played with 'em. I see it really as a matter of switching time, hysterisis and resistance. But even putting that aside, I think it's cool to have a tube rectifier for a tube amp. Solid state diodes are cheaper and easier, so if a guy substituted one, I could sure see why he might. But my vote is to use a tube rectifier.

Subject: Re: possible group build
Posted by Manualblock on Thu, 16 Dec 2004 12:14:17 GMT
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I use the hexfreds in my AES pre and they sound nice. I kinda thought you would have some suggestions on alternative power options and in the spirit of the build it is nice to be exposed to many differing options. If I didn't have a spare 6x4 tube I would considore a SS power supply if only due to reduced cost of transformer.

Subject: I second tube rectifier
Posted by colinhester on Thu, 16 Dec 2004 18:14:32 GMT
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The reference site we're using uses the tube rectifier. I would like to use their information as a basis as much as possible. Have you seen the power point presentation on the site? It's so over the top. This is the model that we should use for future builds. It gives step-by-step layouts of power and signal runs. Also the close up shots of wiring rival those found in Bottlehead's new SEX manual, which I thought was the cat's meow. JR, Please don't get me wrong, I'm all for experimenting, and I think it would VERY educational to explore the differences in power supply construction and performance. This is what this hobby is about!Wayne, is it possible to set up a group build forum, not only for this project but future ones as well? We need to finalize what we're going to build and how we're going to relate information. One thought: it might be fun for each to build slightly different variations and send them to one of the club meetings (Tulsa?) for direct comparison. This would allow each variation to be evaluated head-to-head under "identical" conditions.I know I keep saying this, but I cannot tell you guys how excited I am about this. Hands on anything is quickly becoming a lost art. I think it's important to keep this hobby (and skill set) alive.....Regards, Colin

Subject: how simple do you want to get?
Posted by PakProtector on Mon, 20 Dec 2004 15:38:34 GMT
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There are a few interesting things to try. First the minimum reactance PS. It will require a CCS to execute. Let's try two CCS as active plate loads and do a simple 6CA4>>L>>100uF Oiler/motor run.One or two red LED in series will do a fine job of cathode bias. we are running absolutely constant-current through the valve.Simpler PS, and Cascoded DN2540N5 current regulators have a low output mu-follower output. These two benefits ought to be enough to justify building a second CCS. 400V D-S. Full wave from a 150-0-150 plate winding will keep things safe 'til the cathodes heat up, and the PS turns properly regulated L-C.Choke from Hammond, 30 Hy/40 mA. PS cap, eBay's midorimeadows has ASC 370 VAC/100 uF for $10.On to coupling caps. 5-10 uF motor run oilers are good here. No sense making output z too high at low frequency.Here is the extreme example of where this design can be taken if you need some time to relax, and building is the chosen method. This one is L-C to a pair of CCS, feeding a pair of VR150's for each channel, which is actively loaded 2C50.It sounds better than it looks, it only took a weekend to build.regards,Douglas....damn Thrintun!

Subject: Re: how simple do you want to get?
Posted by Wayne Parham on Mon, 20 Dec 2004 17:04:56 GMT
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Hi Douglas,I was thinking probably a very simple circuit with a rectifier and LC filter to start with. About the regulated supplies, have you ever doen one that was all-tube? I'm not opposed to solid state at all, but it is kind of cool to be all tube. Makes for a lot of real estate though, I imagine.Wayne

Subject: to blazes with simple
Posted by PakProtector on Mon, 20 Dec 2004 18:35:48 GMT
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Hey-Hey!!!,On the all valve: The PS should remain shunt regulated,and it will probably be fairly easy. A single pentode configured as a curent regulator to feed the VR tubes is about as simple as the MOSFET version.The Amplifier active loads are not so easy with a pentode. The g2 circuit in parallel with the plate is the issue(as I see it now). Sooooo, how about a cascoded pair of triodes? Series curent path and high AC impedance, and still able to retain the mu-follower's signal output. It would probably be best to use a cascoded MOSFET CCS to generate the Ec2, but that would be th extent of it, and that is two DN3545N3 and three resistors...I have heard another all valve, regulated linestage and it was really good. this should be able to match or better its performance with a simple signal path like my hybrid.I have another in the planning stage to

use the 10Y as the amplifier valve, and this PS and load idea is how it will get done. It will have a few more valves sticking up through the top, but that's OK with me.You heard it here first!Of course I'd keep the 816-rectified, L-C unregulated supply...regards,Douglas!

Subject: Re: to blazes with simple
Posted by Wayne Parham on Tue, 21 Dec 2004 10:15:44 GMT
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Interesting. I like the idea of an all-tube circuit with regulated supply. That's pretty cool. I also like the idea of the simple old-school LC filtered version. So I could see an entry level build with simple rectified and filtered supply, and a deluxe model with regulated supply.

Subject: PSUD sayeth...
Posted by PakProtector on Tue, 21 Dec 2004 10:43:40 GMT
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Hey-Hey!!!,A 15 mA/channel with 20 Hy and 100 uF gives less than a volt of ripple with a 1kV CT plate supply. Combine that with a tube active load and I suspect that a regulated supply is not required. The vlave shunt regulator has cool out the bazooo from a string of 3 0D3's. This will want a HV/unregulated supply of ~600V and that IMO, is pushing it, let alone for entry level.The 1kV CT can be done quite easily with damper diodes like the 12AX4 or 6AU4 depending on your available filament supply. A delay is needed for an LC like this and dampers are just the ticket. Doesn't glow like an 816 though...regards,Douglas....damn Thrintun!

Subject: Sweet!
Posted by Wayne Parham on Tue, 21 Dec 2004 11:09:18 GMT
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I like!

Subject: I have a schematic in hand...
Posted by PakProtector on Tue, 21 Dec 2004 11:41:54 GMT
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Hey-hey!!!,There are some isues, like a bunch of cathodes riding at voltages significantly distant fromeach other voltage-wise... Looks like two filament supplies.It is for this app: 12B4A amplifier valve, 15 mA current, biased with my favourite red LED's. 6BK7/6DJ8 half at the bottom of the cascode, sharing its filament supply with the 12B4. Half a 5687 on the top ov the cascode, with its own filament supply. The 5687 cathode is ~250V and that's the reason.Four valves, not including the rectifiers, and requiring a B+ of ~450.I feel sad, it is about Christmas, and if I take time out to build this now, I'll get shot. Probably after getting my doo-dads squished in a big vise.As far as parts go, the Hammond 193C 20 Hy choke ought to do for the power inductor. a 500-0-500 is 'up to you', I have at least two of them. L-C-R-C DC filament supplies are not too much trouble. If this works as well as I think it will, I'll have to lay out the Green for a nice pair of 10's...regards,Douglas....damn Thrintun!

Subject: Re: I have a schematic in hand...
Posted by Wayne Parham on Tue, 21 Dec 2004 12:18:03 GMT
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Yep, yep. Better to enjoy the holidays and reserve the rest of the project work until afterwards.
