
Subject: 6Ah4 Amp

Posted by [Manualblock](#) on Wed, 28 Jun 2006 21:58:13 GMT

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Well; I don't know who cares about this old tube but I am now in the process of gathering parts for a SE amp built from this tube. Before i ramble on with this I'll state that I was following Damir's project on the group build section where he has built a 300B SE amp. His project looks to be probably about as good a design as is possible to make. Someday I would love to explore that opportunity but right now the over 1K\$ in parts alone is just not happening. So in perusing the web I came across a very simple and nicely done amp using the 6AH4 as a power tube and the 5755 as a driver with a 6X4 rec tube. The voltages are manageable and the parts count is low and a couple people have expressed delight in the sound of this amp. The 5755's were 4\$ each. The 6Ah4's were 8.50\$ each and the 6X4 was 9\$. It uses a 7kp output trans and a 500v ct power trans along with a 10H filter choke. I have the choke from Hammond and the power trans is a 372x. I just need some advice on what output trans to use; preferably something that can be re-used for a better amp someday if needed. I bought a Hammond chassis and am using the Ratshack 100K pot. The rest of the parts are pretty cheap; I think I can do this for under 400\$. Just thought I'd post on this since there hasn't been much activity on the SE forum lately. I am building this to run with my little Ion BS 1's SD speaks with a tweeter that comes in at about 8k.

Subject: Re: 6Ah4 Amp

Posted by [Fortytwo](#) on Fri, 30 Jun 2006 01:25:24 GMT

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Hi M, I am not familiar with the 6AH4, so I looked it up in my trusty 'GE essential characteristics' (a great quick reference book by the way). The kicker here is the high plate resistance (Rp), requiring the < 7K transformer. Most of the good affordable multiple tap transformers, like the Lundahl or James run about 3K to 6.5k. The higher K transformers tend to be for the high power triodes like the 845, so get expensive. If the designers feel that 6.5K will do. The James transformers at about \$150- \$200 a pair are a fine choice and will be right at home in any number of future amps. I have a pair in my DRD amps. If 6.5K is to low, or over budget, take a long look at the Hammond 125 series. At \$20-\$35 each, they are not the last word in thunders bass, or shimmering highs but are pretty pretty damn good for the money. Have a look at Angela. <http://www.angela.com/catalog.html> Keep in mind that I would not expect more than a 1-1.5W with this tube. So thunder is probably not in the program. I don't want to dissuade you from your project but have you considered the 2A3, at about \$30...John

Subject: Re: 6Ah4 Amp

Posted by [Manualblock](#) on Fri, 30 Jun 2006 12:20:08 GMT

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Thanks John thats excellent help. I knew about the high Rp and the 7k trans. I figured that would lead to eventually a big triode amp. That has always been my goal except I felt I needed more experience to work with the high plate voltages. The speakers for this amp are very efficient so 2watts is adequate. I have to e-mail the amps designer and ask what he thinks of the 6.5k trans. They use I believe Hashimoto trans? How you doing with the Broskie pre-amp?

Subject: Re: 6Ah4 Amp
Posted by [Forty2wo](#) on Sun, 02 Jul 2006 16:21:13 GMT
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Hi M, If a big triode amp is the goal. Consider whether or not a 3-6.5K mid sized transformer would be usable. I know an 845/211 wants about 10K and about 20-30 Watts as well. I have not looked too far into the world of big triode amps, the high voltage scares me too. I have not done enough research to say what tube might work with what transformer. On the other hand, Ray P of the DC Bottleheads, built a 829 amp that uses a Radio shack 70V line transformer Parafeed. This trans is about the size of an ST-70 chock and it sounds great. go figure. Go to the Bottlehead forum, search Under Ray P and Meet pics. It's worth a look. So for the 6ah4 the little Hammond's might be the way to go. Another possibility, if you have a set of P-P transformers handy from say a EL84 or 6V6 amp, these run about 6-8K. Yea I know a P-P trans is not designed to run single ended and you will saturate the core, at least somewhat. But at very low power it works. As for the Aikido, I have not done anything new with it. It works POS power supply and all and I have lately been spending my time on my 300B amp, when it is cool enough to run it (92 here in Valley Forge today). there is more over at G.B...John

Subject: Re: 6Ah4 Amp
Posted by [Manualblock](#) on Sun, 02 Jul 2006 23:37:19 GMT
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92 in the shade? I have no problem paying for a good set of trannies if I have to. Let me ask; is the 300B your tube of choice? I only ask out of curiosity; seeing as how they are so darned expensive. There are so many amps out there; how to tell what tube is your choice??

Subject: Re: 6Ah4 Amp
Posted by [Forty2wo](#) on Mon, 03 Jul 2006 21:40:09 GMT
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Well, you might say the 300b is my tube of choice, because, I have a pair. When we talk of

common DHT for SET amps we, (I) mean 45, 2A3, & 300b. I love the 45. My 45 DRD is probably the most "refined" amp I have but with my 96db speakers, they are more than sometimes, not enough. Even at very moderate volumes. OK, flashback time. A few years back, when I thought to try the SET thing, I, as I suggested above tried it by inflicting it on my long suffering ST-70. I wired one EL34 across both sides of the output trans and let her rip. I liked it enough to pursue the idea. I had less efficient speakers back then and was used to 20-50W of P-P tubes and 250W of SS. So the 300b seemed like the only choice. The 300b has the most output power, they say 8W into a 3.5k load. I use a 5.6k load for about 4~5W and it's still plenty. But the 300b is a hard tube to drive. So (in my opinion) it's sound, is more dependent on the input stage. I have tried . FI, OK but soft. SSRP, just couldn't get it to work for me. WE-91(6sj7) not bad at all, may well be many people's cup of tea. If I had the money I'd try 310's. DRD, I was still on the 45 honeymoon, so not a fair trial, must get back to that. And now the choke loaded D3a. This is working for me so far. What I am looking for may not be the "best". What I Want is a sense of life or emotion. Not something pure but clinical like a gain clone. (though I will not part with mine) Some reviewer once said something like "the 300b sounds great but you always know you're getting a show" I was playing some James Cotton a while ago and I was at the show. On to the 2A3. 2.5 Watts. If this is enough power for your speakers. It's pretty much a 'no brainer' They are not too expensive and easier to drive. There are so many kinds out there both, new and old you can tune the sound a little if you have high efficiency speakers, that's what I'd do. If you have a 3-5K transformer you can try something else later...John

Subject: Re: 6Ah4 Amp

Posted by [Manualblock](#) on Tue, 04 Jul 2006 23:02:45 GMT

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Here's why I ask. I lived with an EAR 859 amp for a couple few years. That's an SE using a 509 pentode wired in triode. Very good Yoshino Transformers driven by 6922 tubes. The sound was very good but dry; very dry. That's why I sold it. Yet lots of folks love that amp and that combination. 300b's sound exactly to me like you say; very 3d presentation; we call it pschycadelic. 2A3's are too soft. That's why I am trying the 6Ah4. I figure something has to have that lively/detailed/good bass; vintage sound. Where instruments don't seem to be larger than life. That's what the 211's seem to do. except I'm too chicken to try them. So is that where you are going with your driver stage?

Subject: Re: 6Ah4 Amp

Posted by [Fortytwo](#) on Wed, 05 Jul 2006 02:21:40 GMT

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Pschycadelic; now there's a cool word. I am not familiar with that amp or the 509. I tend to disagree with the 2a3 as soft. The D3a is working well for me, I am still trying this and that. I am

about due for an update over at GB, so I won't go into detail. To be honest this setup may be guilty of being a little bit larger than life. I will take them to the Bottlehead meet and see what everyone thinks. I will have to revisit the DRD. What is now the DRD45 uses the James outputs and a really trick universal power transformer. But that is a project for a bit later on. One thing I want to point out is this amp (the non DRD) has used the same power supply, 300b's, and output transformers (Lundahl 1623) and by changing only the driver/input stage has turned it into 4 or 5 completely different amps. If I had started with the SSRP I may have given up on the 300b. Yet this works well for others. I am curious as to who the 6ah4 will sound. Do you have a link to the schematic? Happy Independence day...John

Subject: Re: 6Ah4 Amp

Posted by [Manualblock](#) on Wed, 05 Jul 2006 13:38:38 GMT

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Hey John; here's the schematic.

<http://www2u.biglobe.ne.jp/~tossie/6AH4-.html>

Subject: Re: 6Ah4 Amp

Posted by [Fortytwo](#) on Wed, 05 Jul 2006 22:25:23 GMT

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Found it, Biglobe can be a pain. Be sure try it with and without the feedback loop. If it doesn't work out, consider the 6bm8 STC amp, from the same site and others. It would use the same power supply and chassis. I built one and it is a great sounding little amp. My friend Dave prefers it to my other amps. hasn't heard the new 300b yet...John

Subject: Re: 6Ah4 Amp

Posted by [PakProtector](#) on Mon, 17 Jul 2006 09:24:50 GMT

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Hey-Hey!!!, I'd suggest the 2A3. While it won't teach you about super-silly HV, you'll learn much from the DH cathode. Go for a bit more load than 2k5, you'll still make your 2W. Then again, I am currently plying with TX tubes, and I am just leaving the voltage spec of vintage AB1 commercial amps. Super high B+ is not a requirement. If you get a custom SE output, say from Jack of Electra-Print, a 5k/80 mA 15W version would be useful for a lot of tubes. Up to an 845 at 7-800V. Very versatile, good for 300B, and even a high load 2A3. cheers, Douglas

Subject: Re: 6Ah4 Amp
Posted by [Manualblock](#) on Mon, 17 Jul 2006 19:24:00 GMT
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I have a couple 6Bm8 circuits from Svetlana. I have no way of knowing how anything other than what I have heard will sound; thats why I picked a cheap tube; the 6h4a. I look at it like this; the transformers are interchangeable; most of the passive parts are useable and the chassis are useable; so whats the risk in trying?See I have heard lots of amps and they all sound different and they all sound good in the right situation. So I am intyerested when someone describes a good sound with a particular type of system.I figure the one watt would work with the 96 db monitors and have a 7K primary on the OPT that I could use with another SE design. What do you think?

Subject: Re: 6Ah4 Amp
Posted by [Fortytwo](#) on Wed, 19 Jul 2006 00:18:57 GMT
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It sounds like you are trying to talk yourself into it. Go for it! Like you say you can always transmogrify it into something else.BTW. DIY Hi fi still sells the output transformers from there 'Lady Day' amps. these can be wired from 2.5K to 7.5K and are a steal at \$190 a pair shipped. Look under ,accessories / magnetics...John

Subject: Re: 6Ah4 Amp
Posted by [Manualblock](#) on Wed, 19 Jul 2006 12:21:16 GMT
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Now you are talkin'! I had pretty much made up my mind to go with the Sansui from EIFL for about 250\$ pr with shipping; they can use either 5K or 7K. Let me look at the DIY units.As far as talking myself into this; it's finding the time to do the grunt work that matters, the parts will all be re-used. Drilling and cutting chassis and mounting tubes and transformers is work. I would love to find someone who has streamlined that process. Thats a guy I would buy even two sixpacks for sharing that knowledge.

Subject: Re: 6Ah4 Amp
Posted by [Manualblock](#) on Wed, 19 Jul 2006 20:08:35 GMT
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Thanks Doug; let me say this and hope it doesn't sound rediculous. The 2A3 is such a common

circuit; there are so many models and designs that it would be much easier to just succumb and build one of the standard well designed circuits available on the net. But my question then would be which one is best? Why are there so many variables instead of a few good designs using that tube? It has been used to the most extent that you would think by now there would be two or three designs proven to be the best out there. Yet we see many new trials and changes to existing circuits. So I have to ask why people feel they need to re-do this type of amp on such a constant basis? Is there really a fundamental change for the better in each example? So I have to believe that people aren't happy with that tube as it rests in the existing designs. Why? I would want to try a PP 2A3 amp if I did use that tube if only to not follow the usual suspects and try instead something a little different. So is this a silly post on my part? Anyone looking to do PP 2A3?

Subject: Re: 6Ah4 Amp

Posted by [PakProtector](#) on Wed, 19 Jul 2006 22:27:42 GMT

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Hey-Hey!!!, There is nothing stupid about the points you've made...or the questions you ask. If there were one single best, most of us would probably build it. Building something that is a bit different, and innovative is a lot of what makes this fun. Just because the general population hasn't recognized something as good, does not mean it's not. Perhaps even excellent, yes?. The Galahad schematic is still on my build list. I figured a way to combine my next two amps into one convertible just so I could do some more varied building. I don't think I would change anything about it. One of the attractions of the pentode front end is its nearly constant output Z with signal level. The plate Z can change a lot, and the whole thing will still be dominated by the plate load resistor. That's probably a good thing....) I do suspect that part of the multitude of 2A3 amps is due to the value of personal experimentation. I know you can relate with the "I'll build it myself and see" mentality. Probably also because it works well too. cheers, Douglas

Subject: Re: 6Ah4 Amp

Posted by [j.luis cruz](#) on Fri, 13 Oct 2006 13:45:19 GMT

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Hy .. do you could share the link to this amp. thanks

Subject: Re: 6Ah4 Amp

Posted by [Gerard](#) on Sat, 25 Nov 2006 22:08:17 GMT

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Hey....I have a Dehavilland Ultraverve preamp. It uses 2 6ah4's following one 6sn7 (Long live the

glorious 6sn7!). It also uses a big rectifier (5aw4). It is a great example of a 6ah4 design and I recommend anyone building an amp with this octal tube get their hands one. They are around 2 grand. I'm writing because I am having a hard time finding good 6ah4's. I have 2 great Sylvania's in the preamp now, but would like to start collecting them. Any advise? I have quite a few 6sn7's, and would like to begin a collection of really good 6ah4's. Thanks everyone...Gerard
