Subject: Building something new is not easy thing...
Posted by PakProtector on Sat, 05 Mar 2005 02:02:22 GMT
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pat yourselves on the back. Just got back from smoke testing a slightly more complex version of Guinevere at my friend's place. Some smoke came out, and parts were replaced. this with me close by, and a new Ph.D due on his wall...I have to remember that I smoked a few MOSFET's in my career. You guys are doing quite well IMO.regards,Douglas

Subject: but this is the result...and mods for Guinevere
Posted by PakProtector on Sat, 05 Mar 2005 11:39:33 GMT
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anonomously quotated:First impressions, clarity and chrispness in the highs and tight lowend likens to the step from dynamic transducers to planar. Center image is a little weak, but the total image is superior and the sound stage is much more in your face as well as significantly deeper. Finally, my speakers don't sound like they are sitting on the floor. The presence just sucks you into the music. To much steriophile BS, I like it!Seems to be a near-universal reaction. His version runs 12B4's, and is shunt-regulated with VR gas diodes. Two 0C3, a 0C3 and a 0B3.The Guinevere mod for this circuit is fairly easy. Two sockets for VR tubes(and these can be the mini "2" series instead of the "3" series Octals), and another CCS to feed it. Probably have to run the HV from the 325 taps...Another mod is to battery bias the CCS's. This improves the regulation by about an order of magnitude and improves the noise figure, related to the plate resistance of the valve and the size of R-3. The ratio of Rp/R-3 when made smaller improves the performance. With 4 Li-ion batteries and 12B4's, one can approach unity...regards,Douglas

Subject: Re: but this is the result...and mods for Guinevere
Posted by Manualblock on Sat, 05 Mar 2005 13:04:10 GMT
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Thanks for the encouragement. The most difficult part of the project is placing parts. Determining where each part should go is demanding if you want a clean appearence.And as new constructors everything has to be examined twice and three times.

Subject: Guinevere - Next step?
Posted by colinhester on Sat, 05 Mar 2005 16:21:05 GMT
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It seems you have done an incredible amount of work tweeking Guinevere. What is the next progression from V2? What can be done w/o adding another tube or CCS board, or is this really the only way to go? In version 2, what is the best way to lower the noise? Also, can you compare and contrast V2, the one we built, versus higher numbered versions in terms of sonic performance.....Colin

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Subject: Re: Guinevere - Next step?
Posted by PakProtector on Sat, 05 Mar 2005 17:30:00 GMT
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I would suggest battery bias of the CCS plate loads. 2x 3.3V Li-Ion button cells, perhaps 3 of them. You'll need to add cathode-cathode connected 18V 500 mW zener diode pairs to protect the gate-source voltage limit of +/- 20V. A good .033-.1 uF capacitor to R-C decouple the batteries from the gate is also recomended.at 2x bateries, R-3 is ~910 R. With 3x it goes to ~1k2 Ohms.Enjoy for a bit...don't tweak too quickly. How are you guys fixed for gain? rgards,Douglas

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Subject: Re: Guinevere - Next step?
Posted by colinhester on Sat, 05 Mar 2005 18:30:13 GMT
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Can you supply a schematic for the mods? I've been thinking of where to go next and need some direction. I do not plan on doing the mods just yet, but sometime down the road it will need to be done. The gain is a bit on the touchy side. Very little throw in the volume know gives a big increase in volume. I'll look at the foreplay mods and see what is suggested. Seems to be the same "problem" that the foreplay has. It's not really a problem, but still needs to be modified.I know there are a lot of ideas being suggested about amps, but if we could start norrowing the choices down, that would be great. I emailed you about using something off the beaten path, and you suggested the 1619. I like the idea because the tube is cheap and not widely used in an amp. The only problem I see is that 1619s are metal-cased. Kind of a childish request, but I want to bask in the tube's glow, and this tube ain't goin' do it for me. The 813 seems like a good choice, but the voltages scare me with my current skill set. I think that leaves the 6V6, 6L6, 2A3 and KT88. Did I leave out any? I do wnat to go PP, but beyond that I have no preference, other than I will build whatever manualblock builds. As soon as time permits, I'm going to start constructing the base for the amps, and I would like to have an idea of what's going in them.Please, I'm not being pushy, but I'm really pumped about this endeavour. It's been a while since I've used the technical/engineering skills that I spent years in school perfecting.

Subject: Re: Guinevere - Next step?
Posted by PakProtector on Sat, 05 Mar 2005 18:59:11 GMT
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Here is a link to soem CCS schematics. Rev 4C at the top of the page is what I am suggesting.There is another similar valve to 1619. the 1624. Same specs, but 807 glass and anode cap. The sheet says refer to type 1619 for plate curves...I can certainly relate to the metal can sentiment. Glowing stuff does add to the appeal.I am working on various amp designs. I am trying to root out any hidden troubles, and find a best selection of parts.Let's not forget the 300B. that's a pretty fine valve, and not much more demanding than a 2A3. Slightly bigger PS(KT88 sized). An 8-10k chunck of output Iron will work well for both I think.there is something to be said for PP, class A, DH triodes.As to Guinevere gain, I do most strongly suggest punching another 9-pin socket in and trying the 12B4. Everything else is going to be transferable, save adding 2 more LED's in the cathodes. I do hate wasting gain...regards,Douglas
CCS schematics

Subject: Re: Guinevere - Next step?
Posted by Manualblock on Sat, 05 Mar 2005 19:59:44 GMT
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Gee; years in tech/engineering school; and a PHD. I must say I am in mighty rare company for a simple train dispatcher. I am honored to be sharing this project with you all.

Subject: Re: Guinevere - Next step?
Posted by colinhester on Sat, 05 Mar 2005 23:25:09 GMT
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If we go 300B PP, will the Ginevere Tx be big enough? I'm sitting on 3 of these Tx's and would like to use them for the amp. I like the idea of 1624 - clear glass and anode caps. This has some serious sex appeal going for it.Before I start puncing a hole in a perfectly good top plate, what will dual 12B4s bring to the dance?.....Colin

Subject: Re: Guinevere - Next step?
Posted by Manualblock on Sat, 05 Mar 2005 23:26:08 GMT
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I'll try to work with C on this if possible also.

Subject: Re: Guinevere - Next step?
Posted by PakProtector on Sat, 05 Mar 2005 23:34:45 GMT
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OK 1624 it is then. And I'm going to take this to the top with a new thread.regards,Douglas

Subject: 12B4's
Posted by PakProtector on Sat, 05 Mar 2005 23:37:41 GMT
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hey-Hey!!!,The 12B4 valve offers more than 6 dB gain reduction. 6.5 mu v. 16 from the 5687. Filament requirement is similar, and slightly increased amperage from the pair of 12B4's.If you have a hair-trigger volume control with the 5687, the 12B4 is a good solution.regards,Douglas

Subject: oeps....
Posted by PakProtector on Mon, 07 Mar 2005 01:40:30 GMT
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I meant to use the example of a thoroughly educated gentleman having trouble to illustrate the capability you all have demonstrated. Perhaps I was not properly clear. It seemed clear to me, but then I already knew the 'rest of the story'.regards,Douglas