Subject: PCB for the CCS
Posted by Damir on Tue, 15 Feb 2005 13:04:15 GMT
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Here`s the PCB "proposal", I hope that it`ll works without (capacitive/oscillations) problems. I didn`t try it, so far :-).See that "stopper" resistors R2 & R4 must be mounted with it`s "body" close to the G-pin, "upward". Fix the heatsink somehow (little screws left and right through the board, or...?).Without "proper", photo process it can be made with nail-polish, then Fe-III-chlorid. Be carefull, good luck!
DN2540 CCS cascode schematic

Subject: Brilliant!
Posted by PakProtector on Tue, 15 Feb 2005 13:36:41 GMT
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Looks excellent. Looks like it will be an easy 'Stuff' too.regards,Douglas

Subject: Re: PCB for the CCS
Posted by Manualblock on Tue, 15 Feb 2005 16:15:02 GMT
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Niice! What about these guys who do one-off prototype boards? Anyone familiar with that?

Subject: Re: PCB for the CCS
Posted by Damir on Tue, 15 Feb 2005 18:12:51 GMT
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Who needs them?:-) Large part of this hobby is pleasure when you build something all by yourself - allright, "home made" PCB probably won`t looks too proffesional, but so what? You can buy PCBs in electronic store, adjust dimensions of the little board and traces to your components (little planning in 1:1 on the paper), clean the Cu, then with alcohol-marker draw the traces, and paint them with your favorite nail-polish (avoid glittering one, just ordinary :-)). Buy Fe-III-Chlorid christals (el. store, too), put them in the PVC glass of water, put the board in and wait. "Mix up" a little, it can last a few hours - but then the unprotected Cu "go away", clean the lacquer with polish remover (acetone). Use ~0,9mm bore, few holes and that`s it. Use rubber gloves. Check the traces before and after soldering on little particles and dirt between the traces. Good luck!

Subject: Thanks , Doug ! :-)
Posted by Damir on Tue, 15 Feb 2005 18:17:01 GMT
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And "5687 anode out" can be easy on the lower part of the PCB if it`s better (in some concrete case), etc.

Subject: the 12B4 option...
Posted by PakProtector on Tue, 15 Feb 2005 19:10:31 GMT
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If you don't need as much gain as the 5687 delivers(u=~16), the 12B4 is my next option. It takes a second 9-pin socket, and ought to have 6 or 7, instead of 2 LED's to bias. That's about *IT*.The heaters will take ~25% more curent, at 0.6 amp instead of 0.45 amp of the 5687. Both will run at 12.6 V.I offer this as an alternative to the gymnastics a lot of ForePlay owners go through getting a reasonable amount of volume knob sensitivity. We're not stuck with 12AU7's so there is no need to act like it at the design table.Putting in a second socket later oughtn't to be too difficult. Take out the valves before drilling more holes. Reserve a bit of real estate with a Sharpie....regards,Douglas

Subject: Re: the 12B4 option...
Posted by Damir on Tue, 15 Feb 2005 19:30:48 GMT
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Yes, I agree - "modern" sources like CD or DVD are often "hot" and A~16 can be too much... However, I`m sure that those good people here will definitely come to hate you after this...:-) The only chance you can redeem yourself is to make Hg-rectifier (866?) PS (say of "Guinevere" PT-2x400V), we need exactly B+=304V, haha (9V drop through OPT with Rw=150 Ohms, Uak=250V, Ugk=45V). Current draw - 60mA for the output tube, 8-15 mA for the driver....

Subject: Oh...yes!
Posted by PakProtector on Tue, 15 Feb 2005 20:10:04 GMT
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I have only one defense: everybody(with a power TX), is still working on layout. The option was more of a suggestion to consider chassis design with furhter experiemntation (of unknown details).Don't shoot me please! Actually, I'd live to have everybody out for a long weekend where we

actually put Guinevere together and test for smoke leaks and listen. Lowe's has SS hardware, and there is always Radio Shack in 3 different locations in case we need something that wasn't brought.regards,Douglas

Subject: Re: Oh...yes!
Posted by Manualblock on Tue, 15 Feb 2005 20:28:24 GMT
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What time are we expected? Budwieser work for you?

Subject: Re: Oh...yes!
Posted by PakProtector on Tue, 15 Feb 2005 20:35:40 GMT
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Well, anytime after 1100 this Saturday would be fine. No beer for me. Diet Dr.Pepper would be fine.regards,Douglas

Subject: Re: Oh...yes!
Posted by Manualblock on Tue, 15 Feb 2005 21:33:13 GMT
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I'll join you with the Diet Dr. Although truth be told I would long for a cold Bud for 8 years now. It's probably for the best, alchohol and electronics makes a bad match. A careless person could spill some on their shiny new amp and mar the finish.

Subject: Re: Oh...yes!
Posted by Damir on Tue, 15 Feb 2005 22:17:19 GMT
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I have some acquaintance who spilled almost full bottle of wine in his (working) 100W "Marshall"... Even when he changed all tube sockets/tubes, something was never ever quite "right" with this amp... Despite the popular myth, alcohol doesn`t help much in music...:-)

Subject: PCB for the CCS
Posted by PakProtector on Tue, 15 Feb 2005 22:45:42 GMT
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radio Shack still has DIY PCB etching kits. I saw them while I was getting some of their discontinued 97 Tin/3 Copper solder. They do make a bit of a chemical mess...but they probably have instructions for dealing with *THAT* too!regards,Douglas

Subject: Re: PCB for the CCS
Posted by Forty2wo on Tue, 15 Feb 2005 23:24:03 GMT
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A Few extra holes at the bottom and you could mount the LED's as well...John

Subject: Re: Oh...yes!
Posted by Manualblock on Wed, 16 Feb 2005 00:01:03 GMT
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Testimony to the quality of build of Marshall amps. Even saturated they still work. It should sound nice on Blues songs.