
Subject: Reverb issue again!!

Posted by [cassent5150](#) on Sun, 14 Mar 2010 18:59:37 GMT

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I'm working on a K200B-5 and trying to fix the reverb problem. So far the pan and wires checked out good. I'm getting residual reverb spring sound from the tank by tapping on the pan but no signal from the preamps getting threw. There is somewhat of a drop in volume when the reverb control is turned up. This drop in volume is present with the pan wires connected and disconnected as well. I checked the values on the transistors and they all seem to be close to the schematic values except for Q-801 has a value (I would believe on the collector) at -.13 when it should be -.9 ! I checked all the caps for shorts and replaced the transistor with a new 2N5088 and the values I get on this transistor is still -7.2// -6.3//-.13. Anyone got any Ideas where to go from here? Thanks STEVE C

Subject: Re: Reverb issue again!!

Posted by [chicagobill](#) on Mon, 15 Mar 2010 16:22:42 GMT

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Is the pan original or a replacement?

Use your ohmmeter and read the resistance of the tank's input transducer coil. Do you get a reading there? Is the tank's input RCA jack grounded to the metal case?

Subject: Re: Reverb issue again!!

Posted by [cassent5150](#) on Tue, 16 Mar 2010 03:36:30 GMT

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Yes, the tank does have a wire grounding it to the chassis. There was a short pan replacement in it, that was the first thing I thought to check so I hooked it up to a K100B-5 reverb board and it sounded OK. I have some original Kustom reverb tanks with that black adhesive board covering on the bottom (I'm going to say it came from a Kasino 100 PA) on hand and replaced it. I did hook it up to the K100B-5 to make sure it was OK and it sounded great. With my meter set on 200 Ohm setting I'm getting 183 ohms on the input and 180 ohms on the output. the short pan is showing 57 ohms on the input and I couldn't get a reading on the 200 ohm setting on my meter. I went to the next setting 2K and it showed (.211).

Subject: Re: Reverb issue again!!

Posted by [pleat](#) on Tue, 16 Mar 2010 10:42:15 GMT

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I'm not a tech, but sold Kustoms back in the 60's and 70's and the reverb pans were 180 ohms input and 180 ohms output according to Bob Brinkman the head tech at Kustom during those years.
pleat

Subject: Re: Reverb issue again!!
Posted by [chicagobill](#) on Tue, 16 Mar 2010 15:45:01 GMT
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Pleat, you may not be a tech, but you do know more than any of us mere mortals!

The short tank will work, but the input impedance is lower than normal for a Kustom amp.

My grounding question was not about the tank being grounded, but about the input RCA jack. Kustom tanks for use in A and B series amps must have a grounded input jack to work correctly. A lot of aftermarket tanks use the Fender style isolated input jack, making them inoperable in a Kustom amp, unless you solder ground the input jack.

If you are using a tank from another Kustom amp, then there should be no problem.

If you are getting return signal from the tank (rattling spring sound), then the problem is somewhere in the drive circuit. Check the cables, and investigate why the voltage is too low on the transistor. I will have to dig out the schematics to offer any additional ideas.

Subject: Re: Reverb issue again!!
Posted by [stevem](#) on Tue, 16 Mar 2010 17:04:00 GMT
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If you took out c801 and c802 for testing did you re-install them the right way in regards to polarity?

Also what does r825 and r827 ohm check at, and how does the +8 volt power rail test at?

Subject: Re: Reverb issue again!!
Posted by [chicagobill](#) on Tue, 16 Mar 2010 21:50:15 GMT
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If you unhook the reverb cable from the output end of C802 what happens to the voltage at the collector of Q801.

Subject: Re: Reverb issue again!!
Posted by [cassent5150](#) on Fri, 19 Mar 2010 00:33:51 GMT
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Hey guys I'm so sorry to keep ya'll waiting. I have been swamped with my buisness (Independent Trucking) and I haven't had any time to get back into it and reply to ya'll. I don't have the test equipment to test for weak transistors and leaky caps yet but (like i mentioned earlier about the O-scope, transistor tester and cap tester) I'm looking at buying all three pieces of equipment for \$250 if I can get him to show me that they work. Hey Chicagobill, on those tank issues, out of the four long tanks I have 2 of them that are kustom and they both seem to have input and output

right at 180 ohms and are grounded at the rivets that fasten the RCA jacks, the other 2 are hammond and both RCA jacks grounded as well as the short tank. I checked the voltage at Q802 and there is no change when the tank is connected and disconnected at the output of C802 (I'm not the best at relating the schematic to the board cause the layout is so different so correct me if I'm wrong but your talking about the RCA connection that is not grounded and the transistor collector that is hooked up to the - side of the 10 uf cap and the 1K resistor). It remains at (-3.5). Stevem, I used this maybe three or four weekends ago and the reverb was working then. I didn't remove anything from the board to test yet, but I did get some voltages. Those resistor ohms (with my meter on 2M setting registered (R825=.064 and R827=.029). They are 15.8 across the red to green wires on the reverb board and individually -7.6 and +7.8. At the main rails I have 84.6 across and -42.2 and +42.6. I gotta go I'll check some more again later. Thanks Steve C

Subject: Re: Reverb issue again!!
Posted by [chicagobill](#) on Fri, 19 Mar 2010 22:59:01 GMT
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I'm confused here. The earlier post said that there was -.13 volts at the collector of Q802, and now there is -3.5?

Subject: Re: Reverb issue again!!
Posted by [cassent5150](#) on Sun, 21 Mar 2010 21:19:10 GMT
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That was Q-801 values I mentioned in my first comment and the values did change when I replaced the Q801 from 2N5088 back to a used SE4002. The reading then was -3.5 on the collector of Q801 not Q802 like I said in that last comment. Here are the transistor values I just took (Keep in mind I replaced Q800 and Q801 with new transistors 2N2222).

supply voltage +7.82 and -7.69

Q800 C=+4.60 B=+0.64 E=0.00

Q801 C=+0.38 B=-6.59 E=-7.29

Q802 C=+7.17 B=-0.00 E=-0.54

Q803 C=-0.75 B=+7.17 E=+7.82

Q804 C=+4.10 B=+0.64 E=0.00

Q805 C=+4.29 B=+0.65 E=0.00

Q806 and 807 only have a base reading of -0.67

Seems the values on Q801 indicate a problem so I pulled the caps C800,C801 and C802 checked them out of the board for shorts and found them to be OK so I reinstalled them (Correctly according to the schematic as well as compared to a working PC-803). The transistors Q800 and 801 checked out OK also but I went ahead and replaced them anyway with the 2N2222 Transistors. This, by the way did give me a different reading on the collector of Q801 again from the -3.5 to the +0.38 "dag nab it were going the wrong darn way". This is about all I can take for now, I am so clueless about this crap it irritates me. My guess is its probably something way over my head or the ability of the tools I have to work with I should say!!! Can anyone walk me through this??? Steve C

Subject: Re: Reverb issue again!!

Posted by [cassent5150](#) on Tue, 23 Mar 2010 12:37:34 GMT

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OK I give up on the reverb board until I can get the tools to check the components. Its like I seen in other postings, the components in the board are not shorted but may still be bad. I can change out transistors all day long but I have no way to tell if the new transistors I'm replacing them with are good. Its like shooting in the dark. So I jerked the reverb board out of a k100-5 I wasn't using and we're back up and running with the K200-5 and it sounds great.

I'm going to put the bad reverb board in the K100 and still try and figure out what the heck is going on with it. The values at Q801 are off at the collector, does anyone know what components might effect that value or things I may do to pinpoint the problem??????
