
Subject: PC-703 Regulator problem

Posted by [cassent5150](#) on Tue, 15 Mar 2011 01:40:21 GMT

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I'm about to my wits end with this regulator section. Caps are new except for the ceramic disc ones and in the correct direction. All transistors are new and installed correct pulled out of the board retested and reinstalled correct yet I cannot get but 1.5 to 2.3 - volts with the pre amp hooked up. I unconnect the pre amp from this driver board which is totally rebuild and quiet as a mouse at idle and regulator is producing a whopping 11 V+ and 10.7-. I might add that I did test the output of the driver board and it is very strong as well. I wanted to isolate the problematic area so I took the PC-105 pre amp board out of another K200B-1 that works perfectly and installed it and get the same results. Minus voltage drops to 1.5 V- or so soon as you hook up the green wire from the pre amp for some reason. Can anyone advise me on this cause I'm out of ideas at this point. I dont have the 47 pf ceramic caps at the moment to replace the ones that are in there, but at 100 volt rating do you think they would even fail? HELP!!!!

Subject: Re: PC-703 Regulator problem

Posted by [chicagobill](#) on Tue, 15 Mar 2011 17:34:00 GMT

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What happens to the positive 8 volt supply when the negative side drops? The negative supply tracks the positive side, so I'd guess that if the negative side collapses under load either there is too much current draw or not enough positive reference voltage.

How do your voltage readings on Q715, 716 and 717 compare to the schematic?

Subject: Re: PC-703 Regulator problem

Posted by [cassent5150](#) on Wed, 16 Mar 2011 02:18:43 GMT

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With the pre amp connected (Keep in mind there is nothing wrong with the pre amp, I removed it from a perfectly working 200 amp just like this). The readings are as follows

715: E=0 B=+4.24 C=-2.45

SchemE=0 B=-.64 C=-8.74

716: E=-1.97 B=-2.44 C=-40.7

E=-8.12 B=-8.74 C=-38.6

717: E=-1.32 B=-1.96 C=-2.44

E=-8.0 B=-8.12 C=-8.74

Q710/711 and 712 all are 2 to 3 volts Higher than schematic on all pins

Q713 has +11V at the base and the schematic is +.51 and almost 3 volts higher than schematic on the E and C pins

All transistors are new and the tantalum caps are replaced with orange drop and sprague electrolytic type. I did not replace the ceramic disc type yet!!

I unhooked the pre amp and positive voltages remained the same but all the - voltages were over 2 volts higher than the schematic values on all pins
Q713 still has + 11 V at the base instead of +.51 V

Subject: Re: PC-703 Regulator problem

Posted by [cassent5150](#) on Wed, 16 Mar 2011 14:02:24 GMT

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Well, I guess I needed to just step away from it for a while and regroup my thinking. I read your post last night and replied with the test results of the transistors. I got home from work this morning and with somewhat renewed mind and pulled the board to give it ANOTHER GO AROUND!! This time I attacked it from your perspective of the positive side of things and I'll be darned if I didn't find it right off. The mounting screw for Q718 has a copper ground trace extremely close to star washer and was possibly making a slight contact so I corrected that problem and proceeded to removing all the components including one end of all the resistors. Retested all the components and all was well. I then ran an ohms check on all the resistors and, WHAM, found an open resistor. Positive regulator side 2.7 ohm resistor R745. It was missing from the board when I got this head so it was a brand new one I just put in on this rebuild job. It wasn't burned, just nothing going through at all, it was an open circuit. I started on this thing this morning at 7 AM and its all back together up and running like a kitten at 8:30. Man, this thing is so quiet, you have to get your ear right up to the speaker to hear that faint shhhh trade mark kustom hiss. This is the second K200B I've done thats come out like this (Whisper Quiet). The first one I sold to one of my jamming buddies and he uses it for recording. Its the one I wrote about earlier where he brought it to me to tweek the 1st channel PC-203 for distortion with those 2N3565's, ya dont need no marshall stomp box on that channel anymore thats for sure. Anyways Thanks for the help AGAIN!!
Steve C

Subject: Re: PC-703 Regulator problem

Posted by [chicagobill](#) on Wed, 16 Mar 2011 15:58:48 GMT

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Glad to hear you got it up and running again. Who'd a thunk a brand new resistor, DOA.