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Subject: K200 Bright Channel is ALIVE...  
Posted by [gregp](#) on Fri, 26 Aug 2016 00:19:20 GMT  
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Well..... I replaced the PET 8002 after the input with a 2N3904..... while it DID bring the BRIGHT channel back to life, its clearly either not right or there are further issues.

The dead Bright channel now works, However,

It works best in the LOW input, the Bright input is weak and thin

Also

when you engage the BRIGHT Boost, the volume drops significantly.  
Finally, there is also a lot of HISS, particularly the higher the TREBLE is turned up?

Any thoughts?

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Subject: Re: K200 Bright Channel is ALIVE...  
Posted by [stevem](#) on Fri, 26 Aug 2016 10:44:15 GMT  
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Has any other transistors look like they have been replaced?

There are 5 or 6 electrolytic type caps on that 203 board that I would replace with new non polarized types before you dive in with a meter and do voltage checks!  
Also if you have anymore 2n3904 transistor , and since they are do cheap you might just shot gun Q205 and Q206 to see if that helps since that is the Boost circuit.

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Subject: Re: K200 Bright Channel is ALIVE...  
Posted by [gregp](#) on Sat, 27 Aug 2016 01:30:19 GMT  
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This one is all orange drops. no electrolytics...

Q205 and 6.. would they be the 2 at the bottom of the board?

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Subject: Re: K200 Bright Channel is ALIVE...  
Posted by [stevem](#) on Sat, 27 Aug 2016 09:50:01 GMT  
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The 5 or 6 caps I am talking about can not be a orange drop type as they are not made in uf values large enough to replace these caps!

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Subject: Re: K200 Bright Channel is ALIVE...  
Posted by [gregp](#) on Sat, 27 Aug 2016 13:15:57 GMT  
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yeah, sorry.... while they LOOK like orange drops (on the order of almost a ceramic disc (blob) shape) they are indeed likely 10uf electro's!  
They are orange!! But marked 10-15 with a "+" indicator...

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Subject: Re: K200 Bright Channel is ALIVE...  
Posted by [gregp](#) on Sat, 27 Aug 2016 14:04:59 GMT  
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Replaced the bottom 2 PET8002 on the bright board for ostensibly what is the Bright Boost??  
When I turn the Bright switch on, it literally shuts the volume off?  
and still a lot of hiss....

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Subject: Re: K200 Bright Channel is ALIVE...  
Posted by [2beertom](#) on Sun, 21 Aug 2022 02:30:09 GMT  
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Hi,  
I have PC303 in my K200....sale issue as above...enage the bright switch and the level drops to near zero, replaced the 2 boost circuit transistors, no change, replace the 2 10uf caps in the boost circuit and still no change....any thoughts/ help/ advice?  
thanks!

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Subject: Re: K200 Bright Channel is ALIVE...  
Posted by [steven](#) on Sun, 21 Aug 2022 11:55:03 GMT  
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After q304 there are 3 electrolytic caps, not 2 that can effect that boost circuit.  
Replace them all and confirm that all 3 are installed the right way.

What number transistor did you use to replace the factory ones,?

If you could provide some voltage readings on those two transistors in that circuit that would be helpful also.

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Subject: Re: K200 Bright Channel is ALIVE...  
Posted by [2beertom](#) on Mon, 22 Aug 2022 02:27:50 GMT

Hi,

Thanks for replying!

I had ECG123AP's on hand, put them in and the voltages are pretty close to the schematic. I checked the DC voltages on Q300-Q307, everything is fairly close to what's on the schematic.

I changed many 10uf caps and one 33uf cap and still no joy with bright on. My bench setup allows for a 1khz low level sine wave to be injected at the input jack, while an 8 ohm power resistor with distortion meter, audio voltmeter and scope monitor the output. With the other channel of the scope on the center contact of the bright switch, with switch in off, I see a low level sine wave on both other contacts, one from the q305q306 circuit and the one Q304. What's interesting is that when I put the bright switch to ON, both sine waves on those switch contacts drop in level by 25db!

For fun, I disconnected the center contact wire from the bright switch, the one that goes to Q307 and again scope the switch contacts....again interesting, the levels are 25db lower....what the heck! the circuit "need" to have that connection to work? I don't see any feedback loop...

Anyway, I pretty much stumped on this one, any insight would be really appreciated.

tom f

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Subject: Re: K200 Bright Channel is ALIVE...

Posted by [chicagobill](#) on Mon, 22 Aug 2022 23:08:29 GMT

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I noticed that the schematics are not available right now, so I'm going to give you a generic answer.

Clean the bright switch. In all of the preamps with the bright boost circuit, the switch is similar to that of an FX floor pedal. The circuit is bypassed in one position, and in circuit in the other position. If the switch gets oxidized, the signal can be cut off or reduced.

Spray a little deoxit into the small holes on the back of the switch and work the switch back and forth a few times and see if the signal comes back. If one application doesn't fix it, try a second and even a third application before you give up on it.

You can also try and bypass the switch with a jumper lead to see if the signal comes back.

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Subject: Re: K200 Bright Channel is ALIVE...  
Posted by [steven](#) on Tue, 23 Aug 2022 10:47:20 GMT  
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There were four revisions of the 303 board, when I get home this afternoon I will see which one I have to share.

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Subject: Re: K200 Bright Channel is ALIVE...  
Posted by [2beertom](#) on Tue, 23 Aug 2022 14:56:21 GMT  
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ok, I will look at the version number on this 303 board.  
I will try the de oxit cleaning on the bright switch in the meantime.

thanks for all the advice!

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Subject: Re: K200 Bright Channel is ALIVE...  
Posted by [2beertom](#) on Wed, 24 Aug 2022 19:15:41 GMT  
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the PC303 board I have is marked KEI-1  
It seems to match the schematic I have pretty well.

Still stumped on this....everything else works good on this board: tremolo, reverb, bass, treble, low and high inputs....this bright switch thing is nuts.  
The de oxit cleaning had no affect.

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Subject: Re: K200 Bright Channel is ALIVE...  
Posted by [steven](#) on Wed, 24 Aug 2022 23:19:16 GMT  
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I would jump the output side of c340 to the output side of c319.  
Does the audio still sound thin ?

Please note the proper installation of c314.

My schematic copy of 303 has no revision on it.  
Over the weekend I will dig out my 200B that has a 303 channel and see what I can figure out/turn up.

PS. Something just dawned on me here!  
I went and looked at the PC 203 schematic which has what should be the same brite boost circuit

built into it, and it's very different!

I wonder if one of the latter revisions that I don't have a schematic for corrects for what's not right on the earlier 303 boards, or maybe we are finding out that after all of these decades none of the 303 boards ever worked right, wouldn't that be something!!

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