Subject: K200B DC voltage on speaker repair
Posted by terminal on Sun, 03 Feb 2019 16:01:34 GMT
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Here's the problem and the fix.

My K200B-3 suffered a failure that resulted in voltage around -25VDC directly on the speaker output. I always worry that I'll have a Kustom connected to some nice speakers and it'll be putting big DC on the speaker and fry the voice coil. In this case the amp stopped working.

In checking voltages I found the voltages on many transistors were way off. I decided to start with the signal path as it entered PC703 and follow it toward the output, checking components. Q701 and Q702 were the first to be way off. The emitter VDC was near -25VDC. I pulled both transistors to test them and found they tested okay (with forward and reverse diode test E->B and C->B plus E<->C short test..). CR700, CR701 and CR702 all checked out ok.

My attention turned to C708 and C709 because they are directly in the middle of the -VDC and +VDC supplies. In this failed state where there was -25VDC where there should be 0VDC, I thought "no matter what, these caps are old and C708 is at nearly double its rated voltage!" so I replaced both with 10uf/50V electrolytics and that thankfully that fixed the problem.

the amp is fixed! (but if I made a mistake with replacement caps choice, please let me know :))