Subject: My journey so far fixing my new K200A-2 head
Posted by claussoegaard on Thu, 28 Jul 2022 00:50:37 GMT
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I received this amp last week - the seller already warned me of a very loud "noise floor" on the effect channel. The non-effect channel is super quiet and sounds great. But I set out to fix the effect channel. I am just sharing my experience here. I am obviously more than open to any comments or suggestions from anyone, but mostly just posting here for posterity and in case it's helpful for others.

This amp uses two 102 pre amps, a 302A/B effect board (trem/vib/rev), 502 (positive) and 602 (negative) regulator boards and a 702 power amp board. It took me a while to track down all the schematics and the main layout, but Steve helped me out - thanks Steve!

So far I have found two issues.

1. Incorrect wiring between boards

The effect channel is supposed to be wired like this, as far as signal goes

[PC102 pre amp] -> [PC302 effects] -> [PC702 power amp]

However, someone had wired it up backwards. Like so

[PC302 effects] -> [PC102 pre amp] -> [PC702 power amp]

This was the cause of the really loud noise floor. It sounded like white noise or static, not your usual 60 cycle hum. I fixed up the wiring and boom, the noise floor was gone. As long as the effects are turned off/down, both channels now sound equally quiet and great.

2. Issue with negative regulator board (PC602)

The negative regulator board is only used to supply -23V to the effect board (302A/B). I noticed that it was in fact supplying around -40V! It was essentially just taking the -40V (-34V on the schematic) it gets from the main power supply and passing it straight through somehow. No power regulation was happening. One of the three 2N3638 transistors on the board turned out to be bad, there was a short on one of the junctions. I decided to just replace all three transistors with some NOS 2N3638 I found on eBay.

I have no reason to think any of the remaining components have issues. I lifted one leg of all resistors, and they all measured correctly. The 25uF cap also measured just fine on both my multimeter, and with a ESR tester.

Now this is a little odd. It didn't fix the issue, but it changed things. Instead of -40V, it now supplies around -5V.. The effects sound better and less noisy now, but definitely still fairly noisy. As far as I can tell, the 36892 transistor also seems OK, but I have ordered some 2N3055 that I'll try and replace and see what happens. Just for Q1. All the remaining 36892s don't show any signs of having any issues.

That's where I'm at for now. Will probably share more when I get around to continuing this.