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Subject: tuff fix

Posted by [stevem](#) on Sun, 12 Oct 2014 12:49:51 GMT

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I took in a 5033 output board from a new board member that had somewhat low output and early clipping, it could only muster some 24 watts of clean power when I installed it in my K150 head before the negative half of the output wave would cut off hard!

long story short, after checking his two 36892 outputs, after replacing diodes, resistors and transistors on the fly due to how hard this small board is to work on, the criminal turned out to be the 27 uf @35 volt cap across the 4700 ohm resistor after the second 2n4249 transistor!

Now take note this cap had been pulled and I had checked it on both my cap check meter and my ESR meter and it passed, yet it was on the way to going fully shorted.

The main thing that gave me a clue was by chance touching it and feeling it being warm.

A check with my thermal gun showed it at 118 degrees and its mate above it in the circuit was at 89!

This was pulling the needed -30 volts in that section of the circuit down to -17.5 and the clipping was started there on the output of that 2N4249 transistor!

I had broke my own Cardinal rule of replacing every Tantalum cap in the first place that could have a effect on what I was trouble shooting!

Now with all the more on the money resistors and matched diodes and such the amp outputs 84 watts of rms power into a 8 ohm resistive load and sounds very nice!

Just as a side note while playing around inside my K150 head while doing this repair I found that if ran the stock RCA reverb return cable a certain way I could cut the amount of hum that the reverb made by half!

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Subject: Re: tuff fix

Posted by [Jerrybass1955](#) on Tue, 14 Oct 2014 15:46:18 GMT

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Cool!

Being somewhat new here, I don't know if this has been discussed before, but the cables going to / from the reverb can be quite significant. I built a clone of a Fender Deluxe Reverb a few years ago and swapping out the stock cables with some higher quality cables made a HUGE difference in the noise level of the reverb circuit. I may have to think about doing that on the Kustom 100 I am working on. How did you orient the cables? I bet it was related to the proximity to the power transformer.

Jerry

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Subject: Re: tuff fix

Posted by [stevem](#) on Tue, 14 Oct 2014 23:28:24 GMT

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Yes it was and I was going to try a set of better cables that I most times have on hand but instead I just moved the cable around with the verb cranked until I got the lowest hum, which was to my surprise by taking the cord on a 90 twairds the power transformer and then making another 90 parallel down the middle of the amp and then over to the pan!

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Subject: Re: tuff fix

Posted by [tboomer](#) on Wed, 15 Oct 2014 15:18:51 GMT

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I wonder who's that was? Nice job Steve!! Electronics are waaay over my head! That amp is gonna be pretty hot over the factory specs and should sound great! I am a bit under the weather again and will take care of things ASAP. Thanks!! Ted

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