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Subject: Kustom 150 Tremolo Issue

Posted by [pennalizer](#) on Wed, 27 Feb 2013 16:17:39 GMT

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Hi everyone. I have a Kustom 150 2x10 combo amp. I am having an issue with the tremolo. When you click the tremolo effect on with the intensity control there is a loud pulsing/helicopter sound. The depth of this pulsing sound is not affected by the intensity control but is affected by the speed control. The pulsing sound is also there in the vibrato mode. All components are on one single board for preamps and effects #PC1500.

Has anyone ever encountered this? Thanks for any help in advance.

Schematic links:

[http:// music-electronics-forum.com/attachments/4808d1237505157-pc15-00-1.jpg](http://music-electronics-forum.com/attachments/4808d1237505157-pc15-00-1.jpg)

[http:// music-electronics-forum.com/attachments/4809d1237505182-pc15-00-2.jpg](http://music-electronics-forum.com/attachments/4809d1237505182-pc15-00-2.jpg)

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Subject: Re: Kustom 150 Tremolo Issue

Posted by [chicagobill](#) on Thu, 28 Feb 2013 22:59:14 GMT

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Took a while to get the schematic in some readable form, but here are a few ideas.

Start by checking the voltages in the trem circuit and see how they compare to the schematic figures. I'm going to guess a bad cap, but without any voltage measurements, who knows. It shows the trem off to get the readings, so try it that way.

You know that the oscillator circuit is running from the thumping that it is causing, but I don't know if it is being carried in on a power supply line or in the audio signal path. You could try reading the 8 volt supply lines to see if there is any spiking or pulsing there.

You could also try temporarily grounding the wiper of the intensity pot to see if you can turn on the trem oscillator without sending the modulation signal to the modulator circuit. That way if it is caused by the audio section, you can limit the search there.

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Subject: Re: Kustom 150 Tremolo Issue

Posted by [pennalizer](#) on Fri, 01 Mar 2013 01:05:11 GMT

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Thanks chicagobill. Is the schematic I posted the right one to work from? I believe it is but wanted to double check.

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Subject: Re: Kustom 150 Tremolo Issue

Posted by [chicagobill](#) on Fri, 01 Mar 2013 05:37:03 GMT

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As far as I know yes, but you have the board in front of you. How well does it match up?

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Subject: Re: Kustom 150 Tremolo Issue

Posted by [pennalizer](#) on Sun, 03 Mar 2013 20:53:27 GMT

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Well....coming from PC5032 there is a green and red wire supplying PC1500 the +8v and -8v. I am reading -22.8v and +26.3v. So I'd say there is something wrong with the 8v supply. All voltages on PC1500 are high. What could be causing this on PC5032? Thanks.

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Subject: Re: Kustom 150 Tremolo Issue

Posted by [chicagobill](#) on Mon, 04 Mar 2013 02:32:23 GMT

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There is a problem with the voltage regulator. My guess would be the positive one. The negative side just follows or tracks the positive side, so with both sides being too high, the positive side is putting out too much voltage and the negative side just follows along.

Check all of the transistors in the positive voltage regulator and see what you find out.

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Subject: Re: Kustom 150 Tremolo Issue

Posted by [pennalizer](#) on Mon, 04 Mar 2013 13:11:20 GMT

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When we were diagnosing the power amp because of the blown fuses I removed and checked every transistor on PC5032. I replaced the ones that didn't check out. I guess I will have to check them again. I'll post back with the results. Could it be a cap or resistor and not a transistor? Thanks!

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Subject: Re: Kustom 150 Tremolo Issue

Posted by [steven](#) on Mon, 04 Mar 2013 14:38:02 GMT

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When you are checking the transistors in the regulator stage make sure you have them installed right as some replacements are leaded differently in regards to E,B,C.  
also leave the power leads (red and green) disconnected from both preamp boards as many of the caps are not rated for those high + and - voltages coming out of the regulator, the same with the caps in the regulator circuit.  
All the caps that can be harmed by the high voltage are electrolytic types.

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Subject: Re: Kustom 150 Tremolo Issue  
Posted by [pennalizer](#) on Mon, 04 Mar 2013 14:46:31 GMT  
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The NTE parts I ordered have the same leads as original. I will double check my installation to be safe. I will also disconnect the red & green leads to the preamp boards. Thanks for the tips. I think once I fix this issue the tremolo thumping will disappear. Then I can rock!!

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Subject: Re: Kustom 150 Tremolo Issue  
Posted by [pennalizer](#) on Mon, 04 Mar 2013 23:37:14 GMT  
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Best I can tell I think I had a bad solder joint on Q13. The 8v supply is fine now. The amp makes a loud pop when I first turn it on. Is that normal?

Also 2x10 combo cabinet is a 8 ohm load, correct? (2x16 ohm speakers in parallel).

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Subject: Re: Kustom 150 Tremolo Issue  
Posted by [Kustom\\_Bart](#) on Tue, 05 Mar 2013 01:07:24 GMT  
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The pop is normal for a lot of Kustoms. The 8 ohm load is correct as well.

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Subject: Re: Kustom 150 Tremolo Issue  
Posted by [stevem](#) on Tue, 05 Mar 2013 14:04:13 GMT  
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So the tremolo issue is fixed now also?

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Subject: Re: Kustom 150 Tremolo Issue  
Posted by [pennalizer](#) on Tue, 05 Mar 2013 14:22:55 GMT  
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Yes. Tremolo is fixed. Chassis is 100% and sounds pretty darn good. Very deep, rich reverb. Both speakers are blown and I have a pair of Eminence 10516's coming. Should be great when it is complete. Thank you all for the help!!!

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Subject: Re: Kustom 150 Tremolo Issue  
Posted by [Kustom\\_Bart](#) on Tue, 05 Mar 2013 16:13:35 GMT  
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I love the Eminence speakers. I have a K150 with 2 x 12's in it and bought it non working and it all worked fine except the speakers were blown. I had a pair of 1980 Eminence speakers that were broken in really well and they sound so sweet. I think they came out of an old organ.

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