
Subject: K200-B1: Bright channel noisy, Normal = perfect
Posted by [Packerleap](#) on Tue, 04 Oct 2005 17:04:14 GMT
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My amp has that swishy, swirling noise, mixed with random popping, crackling. The noises get quiet, then louder, then quiet again, etc. The other channel (Normal) sounds perfectly quiet; no issues at all.

I consulted an old priest and a young priest, and they directed me here! (Exorcist reference; sorry..) Anyway, does anyone have any suggestions of what components to look at? If the caps were bad, both channels would suffer, right?

Thanks,
John

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect
Posted by [steven](#) on Wed, 05 Oct 2005 12:32:25 GMT
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That channel most likly has a noisy transistor, or a coupling cap going bad, although the latter is rare. modern replacement transistor produce a much lower idle hiss/white noise factor than the originals. if you are able to due the work yourself, you can change out all the preamp transistors on both channels for a cost of less than 10 dollars before shipping and have a much better sounding and less noisy amp.

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect
Posted by [Packerleap](#) on Wed, 05 Oct 2005 18:59:16 GMT
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Well, I can solder a little.. I also have a schematic for the amp, but I'm intimidated a little, to be honest. That little square preamp board mounted behind the pots is our area of concern, right?

John

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect
Posted by [chicagobill](#) on Wed, 05 Oct 2005 21:12:49 GMT
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John:

Yes the pre-amp circuit for the bright channel is the board that is mounted via the four front panel controls. And, you are also correct in assuming that the problem lies in the bright channel circuit, as there is no problem with the normal channel.

A little more checking and you might be able to better pinpoint the problem area in the circuit. Is the noise better or worse if the bright switch is on or off? Does the noise get better or worse when

the volume or tone controls are set at different levels? All of these factors can help to isolate the source of your problem.

As far as doing the work yourself or not, you need to decide if this is something that you can handle. It is not that difficult, but if it is beyond your abilities, you can do damage to the amp and/or yourself.

If you decide to try it, you will need a small wattage soldering iron, some kind of solder removal tool (vac or braid), electronic rosin core solder, and a source for electronic parts. You will also need a small assortment of hand tools (pliers, screwdrivers, etc.). Never work on the amp while it is plugged into the wall socket. And never do anything that you are not sure of.

Bill

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect

Posted by [Packerleap](#) on Thu, 06 Oct 2005 17:14:26 GMT

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Hey, Bill!

Thanks for the reply!

On the Bright channel, The bright switch seems to be very flakey. Sometimes the sound will cut out completely when moving the switch. I've been told that these amps often have grounding problems. I fixed the Harmonic Clipper on my B-4 by adding a better ground to that circuit. Spray cleaner is ineffective on this one. I just added two brand new 8 ohm 200 watt RMS 15's to the cab, (4 ohm total load) and I seem to hear excessive distortion ("farting", so to speak), even in the Normal channel, at about 45% volume (11 o'clock-ish) so I wonder if both channels of the amp need lookin' at.

John

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect

Posted by [chicagobill](#) on Thu, 06 Oct 2005 21:32:22 GMT

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John:

The bright channel "Bright" switch on a 200B is actually wired like a bypass switch on a stomp box. If the switch is dirty or corroded, you can lose signal. I find that if you spray a good quality contact cleaner into the small holes on the back of the switch and rotate it a few times, it will usually come back to life.

As to your distortion problem, it will change dramatically with the input signal source. What are you playing through the amp? It may also be power supply / filter cap related. If the filter caps are drying up, they may not be able to supply enough voltage to keep up with the demands of the power amp.

Bill

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect
Posted by [C4ster](#) on Fri, 07 Oct 2005 01:53:53 GMT

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To elaborate on what Bill says, you just may be reaching the limit of the amp. Solid state amps don't distort as musically as a tube amp. Kustom was the best of the solid state bunch. No, superior to ANY other SS amp. I replace my filter caps with larger versions. I replaced my 2500mF caps in my K100 with 10,000mF caps. Get them with the same voltage rating or larger. But remember, the caps get larger as the ratings go up. I had to lay mine down as they were much taller but smaller in diameter and they would hit the reverb tank unless I laid them down. If they get too big, you may experience the frying of the power fuse when you power it up for the first time. A time delay fuse will solve that problem. But no larger than the original rating.

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect
Posted by [Packerleap](#) on Fri, 07 Oct 2005 18:04:28 GMT

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I'm playing a Fender P bass through it. I played it again last night, and I'm not quite as worried about it as I was.. still, I think I want to go through it, and see what's making the Bright channel sound like sci-fi theme music!

John

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect
Posted by [Packerleap](#) on Fri, 07 Oct 2005 18:10:27 GMT

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Ok! I have 2 K200's I'd like to change the filter caps on. I know to be careful with those suckers, too! Does anyone know the values of the stock caps, and have a recommendation for replacements? I'll start with the K200 B-1, because there's a lot of space to work in inside the chassis. If that goes as planned, I'll attack the B-4.
I certainly appreciate all the help, folks!

John

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect
Posted by [rodak](#) on Fri, 07 Oct 2005 19:09:53 GMT

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I've got some 12,000mf, 63V caps I've used in my Kustom organ and my K150 combo amp. They're fairly small, about 1-1/4" dia and about 2-1/2" high. They don't have screw-in terminals like the originals, but I soldered a couple of circular crimp-on connectors to the solder tabs, and used a screw/nut/lockwasher to attach the wires, works great.

Let me know if you're interested. I'll let 'em go for \$3 each plus shipping.

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect
Posted by [Packerleap](#) on Fri, 07 Oct 2005 22:03:03 GMT
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Are those the typical values used for these amps? Because I know ZIP about filter caps, I'm not really sure what the accepted tolerances are for this. I assume exact replacements are not important? Are those values you quoted close to what is in there now, or does that even matter?

John

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect
Posted by [Packerleap](#) on Sat, 08 Oct 2005 00:12:42 GMT
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On the cap subject, does anyone have any advice about handling the old filter caps? Methods of discharging them, for instance? Also, do the new caps need to be "charged", or anything like that?

Thanks again,
John

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect
Posted by [chicagobill](#) on Sat, 08 Oct 2005 18:42:42 GMT
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John:

The original filter caps in the 200B series amps are rated at 4500 mfd @ 50 volts. I know that some of the guys on the board have replaced them with caps that are twice or three times the original value. Maybe they can chime in here about their preferences in values and sources. In any case, the minimum voltage rating for the caps should be 50 volts.

As you already know, there is a physical size limitation on the replacement caps, if you are going to mount them in the original fashion. On your B-4 head the reverb tank position will determine the maximum height that the caps can be. I measured one of the originals, and it measured 3 1/4" tall.

As far as safe handling is concerned, you can discharge a cap by placing a small value (ohmage) resistor across the terminals of each filter cap until the remaining voltage charge has drained off.

Maybe a 100 ohm / 1watt would work well here. New replacement caps, with low voltage ratings should be fresh, and shouldn't need to be "re-formed". (Re-forming is a process where you re-form the electrolyte in a cap by heat or by the slow application of increasing voltage, up to its rated value.)

Be certain that when replacing the caps, that you correctly identify the positive and negative terminals, and that you replace them observing the correct polarity. A reverse charged cap can explode! (Don't ask me how I know this!)

Bill

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect

Posted by [Packerleap](#) on Sat, 08 Oct 2005 20:01:13 GMT

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Thanks, Bill! I just bought some new 10,000 mfd 75 vdc caps from our local parts warehouse. I hope they work, because they're the same size as the originals. Made by Mallory, too! They have a bin of 'em, for \$1.95 each. I'm going to try them out later today, and I'll drop a line here to let you know how it went. Of course, if you see a mushroom cloud over San Diego. it's probably me!

Thanks for all the help!

John

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect

Posted by [Packerleap](#) on Sun, 09 Oct 2005 21:45:16 GMT

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I'm back! I just changed the caps in both my B-1 and B-4. The difference in the B-1 is amazing; less change in the B-4, but still very noticeable. The noisy channel on the B-1 is quieter now, and the overall "beefiness" is great. Very robust sounding. I lied about the caps being the same size; they are slightly smaller in diameter than the originals, but it was an easy fix. Now, I've got my K100-8 combo apart, and ready for new caps on Monday! He uses 2500 mfd 50 vdc..

Thanks a ton for all the help and advice; I really appreciate it.

John

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect

Posted by [stevem](#) on Mon, 10 Oct 2005 12:13:58 GMT

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Also hooking up a powersupply cap wrong will blow out that power rails outputs and driver, and in the case of the 150 and 250 heads take out a IC chip or two.And yes, do ask me how I came to

know this!Never work on a amp droopy eyed after midnight!!

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect

Posted by [chicagobill](#) on Mon, 10 Oct 2005 19:35:18 GMT

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John:

Great to hear that the K-200s are back in tip top shape. I'm sure that the K-100 will sound great as well. While I do not like replacing parts for the sake of replacing them, I do think that replacing the filter caps on any amp can often do wonders.

Steve:

Been there done that too!

Bill

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect

Posted by [Packerleap](#) on Mon, 10 Oct 2005 21:03:51 GMT

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Well, I figured that the caps had to be at least 35 years old, and everyone I spoke to said "change out those caps"! It was a unanimous vote. I'll do the K-100 tonight, then sit around and figure out what other Kustom trouble I can get into!

John

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect

Posted by [stevem](#) on Tue, 11 Oct 2005 12:26:37 GMT

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While you are in your 100 extend the leads on the 5 watt resistor that feeds the pilot light so it stops burning the PC board like they all do from the factory, or JB epoxie a scrap of aluminum that is big enough to have rap around flaps on each side of the resistor, to its PC side surface.

Subject: Re: K200-B1: Bright channel noisy, Normal = perfect

Posted by [Packerleap](#) on Tue, 11 Oct 2005 17:41:06 GMT

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Oh, man! I just put it all back together last night... maybe this weekend between football games! Hey - another question: On the 100 when I engage the Trem/Vibe circuit, I'm getting noticable distortion from the amp. Circuit off, nice and clean. Any ideas??

Thanks,
John
