
Subject: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Mon, 27 Oct 2008 15:37:47 GMT
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Hi all...

My grandfather left me his Kustom K 100C-8. I don't know much about it other than it still plays excelent, it's tuck and role red. It's serial number is 46810

Does anyone have any information on this particular amp, what's in it? Drivers? Amp head? The year it was made????

Anything will be greatly appreciated!!!

Thanks
Rick

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [LesS](#) on Mon, 27 Oct 2008 16:21:39 GMT
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Hi
Welcome to the board.
You had one cool grandfather.

Your amp SN 46810 was made 11/12/69 plus or minus 2 weeks.
It probably has Eminence speakers - see if it has a number like 67-6943 stamped on back of the speakers.
Does it have two speakers? - if it does, the speakers were 8 ohms each wired in series for 16 ohms - unless someone has re-wired it.
If it has four speakers, then the net impedance is 8 ohms.
It might have a speaker-out jack in back below the on-off switch. Kustom stopped putting them on combos about SN 47500.
The output of the amplifier is 60 watts RMS at 8 ohms.
The minimum recommended speaker load is 8 ohms.

Enjoy your amp. If you have any questions please let us know.
-Les S

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Mon, 27 Oct 2008 16:33:44 GMT
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Hi Les,

Yes, he was a great grandfather. He passed away back in the late 80's, before he passed, I had expressed interest in his guitar and amp. Before he passed on, he made sure I got them.

I've aloud a very close friend of mine use the amp for many years now, I recently got back into guitar playing and went and got my amp back from him this weekend.

I'm completly amazed at how well it sounds for it's age. I have nothing to compare it to, but, from what I can tell, it sounds just as good as it would have the day it left the store. I was too young to appreciate his amp back in the day when it played it by himself up on a stage, so I don't recall what it sounded like back then.

Thank you for the input. I won't sell the amp but out of curosity, is there any value to this amp other than personal value? Is this something that would be considered a collectors item, or lots of people would have strong desire for?

ALSO, can the original tubes for this be found? I will take some pics of it tonight when I get home and post them. It's tuck red. Glittery red. Still in rather good shape. A few small tears, but all in all the plastic tuck is still all there.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [rodak](#) on Mon, 27 Oct 2008 17:19:58 GMT
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Yes, it has value, both as a terrific amp, and as a collectors item. I'll let some of the more knowledgable folks here suggest a value, but I'd guess in the \$300-\$500 range.

You won't find any tubes in it, though - the T&R Kustoms were all solid-state only. Virtually all the parts are garden-variety electronics parts, still readily available, so finding repair parts is seldom a problem.

Congrats on discovering Gramps amp - I'm sure he'd be proud!

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Mon, 27 Oct 2008 17:29:02 GMT
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It's solid state? I've assumed all these years it was tube. I would never have guessed that they would have had solid state amps back in those days. At least not for guitar amps anyway.

That actually kinda busts my bubble.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [rodak](#) on Mon, 27 Oct 2008 18:10:26 GMT
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Oh, yeah, it was all the rage. Transistors were new, small, cool-running and frugal with electrical power. Plus they didn't wear out like tubes did. Fender had a complete line of solid state amps and PA gear. I'm sure they thought they'd soon replace the tired old tube amps, but they were a horrendous flop. Probably collectors items now, if you can find one!

Kustoms, on the other hand, were extremely popular, looked cool, and had a good sound - different from the tube amps, but a good sound, nonetheless. Some folks still swear by them.

Ya gotcherself one cool rig there, dude - hang on to it and cherish it!

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Mon, 27 Oct 2008 18:44:47 GMT
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Did Kustom ever make a tube amp?

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [rodak](#) on Mon, 27 Oct 2008 19:00:40 GMT
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Back in those days, I don't think so - at least, not when it was owned by Bud Ross. There may have been some later tube models, long after they'd dropped the tuck'n'roll look.

Kustom did reissue the tuck'n'roll amps in the late 90's (or early 2000's?), and it seemed they had combined the best of both worlds. The amps looked very much like the late 60's amps, but had modern tube-driven innards, with a nice palette of features. I never saw or played one myself, but I heard they were made in China, had reliability problems, they were slow to be delivered, and the Naugahyde was much thinner than the originals. I don't think they sold very well. Eventually, people were dumping them on eBay (new, still in the boxes) for a fraction of the original prices. I recall seeing a few auctions picturing stacks of the boxes, offering a particular amp or cab in your choice of colors.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [stevem](#) on Tue, 28 Oct 2008 10:45:24 GMT
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The first Kustom amps where solid state back in 1965! Quite ahead of the game and with circiuts that sounded good and lasted, unlike the poor sounding and badly made Fender SS amps you mentioned.

Also all the amps componets where no common qualtiy, the driver and output transistors which are the most highly loaded componets in the amp where RCA transistors with gold plated leads! This is one of the main reasons why these amps still function today.

Kustom even took the time to use matched pairs and quads of output transistors to make for a stable amp that sounded great, unlike all of those crap SS amps made untill the Acostic reasearch company came about.

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [rodak](#) on Tue, 28 Oct 2008 13:02:31 GMT

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Yeah,I had forgotten about Acoustic. The Doors used them pretty much exclusively, I think. Sharp looking amps, I always loved their look. The guitar amps seem never to have caught on, but the monster 360 and 370 were the amps to have, if you were a bass player. Pricey, though - I never could afford one.

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [RickBlacker](#) on Fri, 26 Dec 2008 23:39:53 GMT

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I dunno you guys... This amp really is not my style. I think it's great for certian types of music, but, not really cutting it for the type of music I would like to play....

really considering selling it.

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [woody96](#) on Sat, 27 Dec 2008 18:33:48 GMT

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You got any pix of the amp? Does it have two speakers? 10's or 12's? Where are ya located? Thanks!

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [RickBlacker](#) on Sat, 27 Dec 2008 19:13:06 GMT

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This is the only picture I have of it right now.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [woody96](#) on Sat, 27 Dec 2008 19:44:42 GMT
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Thanks; got the pix off the PM.....I will check it out....

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Sun, 28 Dec 2008 03:52:38 GMT
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No problem, however I do want to say that I'm not sold on even selling it.

AND before I could sell it I need to get it fixed. For some reason the right hand side went out on me. the two left side inputs work fine, but the right side inputs stopped working. I looked for a blown fuse, but I didn't see anything that looked blown. I have no clue how much this would cost me to fix.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [woody96](#) on Sun, 28 Dec 2008 04:07:26 GMT
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No problem.....good luck with it!

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Sun, 28 Dec 2008 04:13:37 GMT
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I don't WANT it, but, it's a family thing. My grandfather gave it to me. Called my mother the other day to chat about getting rid of it. Needless to say because it was her fathers, she's not keen on the idea. I also have his old Mosrite guitar as well. Don't really want that either.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [woody96](#) on Sun, 28 Dec 2008 04:20:41 GMT
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Been there; done that myself.....

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [rodak](#) on Sun, 28 Dec 2008 19:14:16 GMT
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You should keep it. It's an excellent example of some of the coolest amps of the late 60s (and one of the smallest and easiest to store). You should eventually have it repaired, take good care of it, and pass it on to your children or grandchildren. (or nieces/nephews)

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [pleat](#) on Mon, 05 Jan 2009 17:50:29 GMT

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I really think before you decide to sell the amp, you really need to put a processor pedal in front of it. Any of the multi effect processors, that are on the market. I use a 1993 Digitech RP1 floor processor that has reverb, compressor, flange, chorus, echo, 7 band eq, and it will make your amp into anything you want with power to spare. I have been playing a small single 12 K50 for the last 10 years with my processor pedal, and the pre amps in the kustoms will take a boat load of gain and will open your eyes as to the sounds you can achieve. I have played small clubs and outdoor events with my set up and I never bother to mic it. You will find that Kustoms just cut through the mix better than any amp I have ever used from Fenders, Marshalls or Peaveys. So give the amp another chance, I think you'll be glad you did.

pleat

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Thu, 10 Sep 2009 23:34:17 GMT

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How hard would it be to put a headphone jack on this?

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [rodak](#) on Thu, 10 Sep 2009 23:48:37 GMT

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Real easy. All you need is a \$2 stereo jack, a 10cent resistor, a little time, and a soldering iron (and maybe a drill). There may be an unused jack or hole on the back that would eliminate the need to drill one(I'm sure just the thought of that would send some Kustom Collectors reeling!). I'm not sure of the value of the resistor, but I'd expect a 100 ohm, 1-watter would get you in the ballpark. One of the other guys could probably add more wisdom and experience to this generic advice.

It looks great with that Line6 POD in front of it - I bet they sound great, together, too. You really should try to find it in your heart to keep it. If you sell it, it's very likely going to be one of those things you regret many years down the road. Those little 2x10 combos look so cool, and in RED! Man, what a great amp!

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [RickBlacker](#) on Fri, 11 Sep 2009 01:29:27 GMT

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I'm actually looking into getting it fixed up. I contacted a local guy here in the Portland Oregon area.

As far as headphone jack, what do I do with those? I'm good enough with a soldering iron. I've taken my guitars apart several times, changed pups on them and what not. I'm sure I could do it.

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [LesS](#) on Fri, 11 Sep 2009 03:09:42 GMT

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Just my opinion - unless your Kustom is really quiet, I would not put a headphone jack in it. Many Kustoms - especially the plexi faceplate Kustoms (those before about July 1971/SN 73xxx) - have a lot of high frequency hiss and would be very noisy when heard through headphones.

-Les S.

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [RickBlacker](#) on Fri, 11 Sep 2009 05:21:42 GMT

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Can that hiss be taken care of with modern parts and a tune up or is this just a side affect of the design?

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [stevem](#) on Fri, 11 Sep 2009 10:12:24 GMT

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Modern replacement transistors and other items like 1 watt metal film type resistors in select parts of the preamps can cut the hiss level by a large factor should you find a need to do so.

The best place in these amps to place a headphone output would be by taking the signal off at the driver board input pad. This spot on the driver board has the two blue wires from the preamps going to it, and many of these amps (like my k100-8) have on the back a plastic capped off hole that could be used to mount the 1/4" jack for the headphones and yet be a totally reversable mod which will hold the value of the amp.

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [RickBlacker](#) on Sat, 12 Sep 2009 18:36:10 GMT

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On the back of the amp, the switch goes either to the left or to the right... Why? What is the difference between going to the left and right to turn it on?

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [Jc](#) on Sun, 13 Sep 2009 02:18:51 GMT

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Back in the days of Black and white TV - Vinyl Albums and two prong power cords. It's a polarity switch. Learned about using that switch the first time ya numbed your face after a nice shock from the microphone!

jc

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [RickBlacker](#) on Sun, 13 Sep 2009 15:28:29 GMT

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So last night I went and got some contact cleaner, took the head out, cleaned up all the pots, pulled off all the contacts sprayed them and ensured there was good contacts on all of them.

I did break one though. It goes to a sensor, i was a bit bummed, but i decided to tape the wires back together. I will replace the part.

I put it all back together. I have't not had a chance to really crank it as the family was home, but I did notice that it definitely doesn't scratch anymore, it's basically seemed to clean it up. I'm much more happy with it.

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [steven](#) on Mon, 14 Sep 2009 09:59:19 GMT

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The only sensor in these amps is the thermal cut off (round item) mounted inbetween the the output transistors with two wires that slip on by spade lugs, is this the sensor you are talking about?

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [RickBlacker](#) on Mon, 14 Sep 2009 15:18:40 GMT

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SOunds like it. It's not on any of the circuit boards, rather mounted to the base of the chasis.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [stevem](#) on Mon, 14 Sep 2009 16:16:05 GMT

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I am talking about the round black item with wires that are white and black stripped coming off it, that are also twisted together.

If you are talking about the little silver tubular item with both leads coming out one end, and the leads are clear sleeved, than that is the bias diode and the amp should be turned on with out first replacing that.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Mon, 28 Sep 2009 19:02:05 GMT

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LesS wrote on Mon, 27 October 2008 12:21Hi

It probably has Eminence speakers - see if it has a number like 67-6943 stamped on back of the speakers.

It has two numbers :

038-0017-00

67-6945

LesS wrote on Mon, 27 October 2008 12:21

Does it have two speakers? - if it does, the speakers were 8 ohms each wired in series for 16 ohms - unless someone has re-wired it.

It has two

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [stevem](#) on Mon, 28 Sep 2009 19:30:50 GMT

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67 Eminence manufacture code, 69+ 1969, 45= the 45th week of that year.
I am surprized that they are Alinco magnets on those drivers!

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [pleat](#) on Mon, 28 Sep 2009 19:40:06 GMT
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I see someone had advised that if it had two speakers, they wrote that they used 8 ohms each and wired in series for 16 ohms. NOT true. The kustom speaker chart I have shows the 2x10 SC amp using 16 ohm speakers and wired in parallel for a 8 ohm total load to the amp.
Don

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Mon, 28 Sep 2009 19:44:43 GMT
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Ok guys... I'm going to ask a very dumb question here. Are these 10's or 12's?

I'm not at home or I'd measure them

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [LesS](#) on Mon, 28 Sep 2009 20:34:51 GMT
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They are 10's.

All the K100 2x10 combo's I have seen used 8 ohm speakers wired in series. Has anyone seen one that used 16's?

The switch might have come when Kustom went from K100 to to K150 combos (approx July 1970 SN 571xx). Also, I think the extra power of the K150 required stronger speakers that normally came in the K100 combos.

-Les S

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Mon, 28 Sep 2009 20:44:51 GMT
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So, the K100C-8 has 10's???? That narrows down my replacement selection.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [LesS](#) on Mon, 28 Sep 2009 20:47:06 GMT
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K100C-8 came in 2x10 and 4x10
(The one that used 12's was the K100C-7)

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Mon, 28 Sep 2009 20:53:56 GMT
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The output jack on the back, what was that designed to push? And when having a cab plugged in, did it cut the power to the two internal speakers? OR could you hook up a second cab and have both running at the same time?

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [LesS](#) on Mon, 28 Sep 2009 21:07:39 GMT
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It was a normal speaker jack.
It connected the external cabinet in parallel.
It did not disconnect the internal speakers.

Kustom quit putting the speaker jack on the combo approx May 1970 SN 54xxx - so the last K100 combos (right before they changed the combos from K100 to K150) had no speaker jack. Some of the K100's with no speaker jack still had the hole drilled, though.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Mon, 28 Sep 2009 21:54:00 GMT
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Thanks Les
Appreciate all the great information!

Rick

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [pleat](#) on Mon, 28 Sep 2009 22:16:41 GMT
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LesS, sent me your email to djt@chartermi.net and I'll send you all the speaker data for the

kustom amps. The dealer service manuals I kept from when I got out of retail, show 16 ohm speakers wired in parallel for the SC series amp with the exception of the 4x10 SC100 that used 8 ohm wired in series and parallel to get 8 ohms to the amp. Very odd that some of the one's you've seen have 8 ohm speakers wired in series. Of course after 40 years, it's really hard to tell what may have happened at the factory to get orders out on time if they were short on the inventory of the 16 ohm speakers, Kustom may have shipped some amps out with 8 ohm speakers and wired them in series so the amp would have less power but a safer operating condition.

Don

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Mon, 28 Sep 2009 22:27:14 GMT
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If it helps, I can send you guys my schematic for the K100C-8, I'd really like to know what I have so that I can order new speakers for this.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [LesS](#) on Mon, 28 Sep 2009 23:48:23 GMT
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RickBlack,
You don't have to buy speakers just like the ones that came in your amp.
There is a good chance that whatever you buy will sound better.

Yours came with Eminence 8 ohm speakers (you can see in your picture that they are wired in series.)

If you play loud, you would proably want to buy 16 ohm speakers and wire them in parallel. (I would go this route, and I would probably get Jensens.)

If not, then two 8 ohm speakers wired in series would be fine.

-Les S.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Mon, 28 Sep 2009 23:59:05 GMT
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Playing loud at this point is not my goal... In fact, I'm after the best sound I can get at low volumes. I want and need something that this amp can drive effortlessly at low output. Don't want to wake my wife while she's sleeping. If I do, I'll take a picture and show you what a guitar wrapped up along side someones head looks like.

I wasn't worried about trying to replace with the same speakers. In fact, I don't want the same speakers. I want something that is fuller, something that has some meat behind it. I know this may sound strange, but here it goes... I like the idea behind the tone i get now. I like the highs and mids, but it just needs a fuller thicker sound.

I've been looking at the Eminence Ragin Cajun
http://www.eminence.com/guitar_speaker_detail.asp?model=RAGINCAJUN&speaker_size=10&SUB_CAT_ID=4

You are suggesting Jensen... Why is that?

AND, I'm still very interested in replacing old caps.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [pleat](#) on Tue, 29 Sep 2009 01:56:42 GMT
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I also would suggest using Jensen speakers. The Eminence speakers you had a link to are only offered in 8 ohms. As you stated you want and need something that this amp can drive effortlessly at low output and the Jensen MOD speakers are ava. in either 8 or 16 ohms. I'd get the 16 ohms, wire them in parallel and you have a 8 ohm load to match the amp's output and since each speaker takes 50% of the rated 50 watts of power you can get speakers rated at 25 watts.
Don

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Tue, 29 Sep 2009 02:52:46 GMT
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LesS wrote on Mon, 27 October 2008 12:21
Does it have two speakers? - if it does, the speakers were 8 ohms each wired in series for 16 ohms - unless someone has re-wired it.
If it has four speakers, then the net impedance is 8 ohms.
The output of the amplifier is 60 watts RMS at 8 ohms.
The minimum recommended speaker load is 8 ohms.

-Les S

LesS wrote on Mon, 28 September 2009 19:48RickBlack,
Yours came with Eminence 8 ohm speakers (you can see in your picture that they are wired in series.)
If you play loud, you would proably want to buy 16 ohm speakers and wire them in parallel. (I would go this route, and I would probably get Jensens.)

If not, then two 8 ohm speakers wired in series would be fine.
-Les S.

pleat wrote on Mon, 28 September 2009 21:56I also would suggest using Jensen speakers. The Eminence speakers you had a link to are only offered in 8 ohms. As you stated you want and need something that this amp can drive effortlessly at low output and the Jensen MOD speakers are ava. in either 8 or 16 ohms. I'd get the 16 ohms, wire them in parallel and you have a 8 ohm load to match the amp's output and since each speaker takes 50% of the rated 50 watts of power you can get speakers rated at 25 watts.
Don

Les you suggest 8 ohms in series,
Don you 16 ohms in paralell.

What are the advantages and disadvantages of each?

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [Jc](#) on Tue, 29 Sep 2009 05:49:48 GMT
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I might have put this on the wrong thread. But this may be another option:

<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=160365879867&fromMakeTrack=true&ssPageName=VIP:watchlink:top:en>

jc

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [stevem](#) on Tue, 29 Sep 2009 10:06:49 GMT
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I have never seen any Kustom combo amp with a extension speaker jack, ahs anyone else? My K100C-8 has a plastic plug from the factory in a hole on the back panel that looks like they where thinking about for a while, but never put it into production.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [pleat](#) on Tue, 29 Sep 2009 10:45:03 GMT
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Addressing a couple of issues. Kustom factory speaker charts only list 16 ohm speakers for the two speaker SC series wired in parallel with the exception of the 4x10 K100SC that used 8 ohm

speakers wired in series/parallel. SC series amps are the self contained, amp and speakers in one cabinet.

If your amp has a speaker output jack on the back panel and it appears to factory wired, two things come to mind. One it was installed at the factory and installed 8 ohm speakers wired in series for 16 ohms to the amp, and with the added speaker jack on the back panel a second speaker cabinet. That might make sense for the 2x10 or 2x12 K100 amps, but the 4x10 K100 is running the 8 ohm total impedance for the head without being able to add more speakers.

I've owned 8 or 9 of the SC series amps in all speaker configurations and have never seen a speaker jack on the back panel. I've owned some where someone has removed the tape or monitor out jack wire, and soldered a wire from the jack to the speaker jack.

It's your amp, and you have many options for speaker brand replacements, but if it were my amp, I'd stay with 16 ohms wired in parallel.

Any chance you can post a photo of the power amp area and show the area where the speaker jack is on the back panel? That may show us if the speaker jack is from the factory or if someone added it before you got the amp.

Don

Subject: Re: Looking for info on a Kustom K 100C-8

Posted by [LesS](#) on Tue, 29 Sep 2009 11:32:29 GMT

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Pleat,

The Kustom wiring chart showing two 16 ohm speakers wired in parallel for the 2-10 SC was dated November 1971 – so it was referring to the K150 2x10 SC.

Kustom changed from the K100 to the K150 combos approx. July 1970 SN 57100.

The 8 ohms speakers and speaker jack applies to the K100 combos – I have verified this without exception by many units I have either owned or seen on ebay. The speaker jack was definitely factory (for example, placement of the jack for all examples I have seen was precise and consistent – not added on.)

See example – the lower jack partially hidden by the AC cord. When the K100 combo had two rear jacks, one was the reverb and the other was the speaker output jack.

<http://www.flickr.com/photos/34116766@N07/3965904496/>

- - - -

Here is everything I know about this for the K100 and K150 models.

K100/K25 Combo era - Sept 1969 to June 1970 (starting with SN 444xx)

Kustom put two 16 ohm speakers in their K100 2x12 combo, as well as the K150 combo that came later.

But for their K100 2x10 combo they used 8 ohm speakers (CTS and Eminence) wired in series. I have seen many of these, and I have never seen a K100 2x10 with 16 ohm Eminence or CTS drivers.

Approx SN 53500 (approx 4/11/70) the stock speaker changed from Eminence drivers to CTS

drivers for the K100C-8 2x10 and 4x10 combos. With the change to CTS speakers, the speaker bolt pattern became slightly larger. I do not have any records of the impedance when used in the K100 combos – these could be 16 ohm drivers – I just can't verify that.

The early K100C-8's seemed to have Eminence speakers, and the later ones CTS. But I owned a K100 C-8 SN 44985 production date September 29, 1969 that had two 8 ohm 10" CTS speakers wired in series.

Approx SN 51500 (approx. March 1970) Kustom stopped putting an external speaker jack on the K100 combo's (2x10, 4x10, etc.). This is probably because they were switching to the 16 ohm CTS speakers (8 ohms load per pair) soon and they did not customers to be able to run their Kustoms at loads below 8 ohms.

So, the question is - why did the K100 2x10 combos come with two 8 ohm speakers wired in series which caused the amp to only put out about 35 watts RMS? Maybe the speakers were easier to obtain than 16 ohm speakers. Also the Eminence speakers were not high power, so maybe the 16 ohm load resulted in fewer blown drivers/warranty claims. (The later K150 2x10 combos came with more powerful 16 ohm speakers wired in parallel. The speakers were marked 16 ohms but could be the ones that Kustom had custom made at 12 ohms. The 12 ohm speaker would be a little better match for the K150 amp - some were rated to run at 6 ohms.)

K150/K50 Combo era - July 1970 to July 1971 (starting with SN 570xx)
With the combo change from K100 to K150 (approx July 1970) the 10 inch CTS driver is now 16 ohms.

I think the extra power of the K150 required stronger speakers that normally came in the K100 combos.

The Kustom wiring chart showing two 16 ohm speakers wired in parallel for the 2-10 SC was dated November 1971 – so it was referring to the K150 2x10 SC.
Kustom changed from the K100 to the K150 combos approx. July 1970 SN 57100.

-Les S.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Tue, 29 Sep 2009 21:25:55 GMT
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I like the idea of running 16ohms in parallel. I'm not sold on the Jensens though. Eminence has a 10" speaker that I like. Not as much as the Ragin Cajun, but it's close.

http://www.eminence.com/guitar_speaker_detail.asp?model=LEGE ND10516&speaker_size=10&SUB_CAT_ID=4

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [LesS](#) on Tue, 29 Sep 2009 22:45:23 GMT
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Hi,
Comparing the Legend 10516 and Ragin Cajun -
Just going by the specs, the Legend 10516 has more highs and seems to compare better with the stock Eminence speakers.
The Ragin Cajun seems to have stronger bass and is a better choice if you want that, keep in mind the Kustom 2x10 cabinet is not too good at bass frequencies so putting in a speaker with strong bass might be a good idea.
Since you wanted speakers with a fuller, thicker sound, between those two choices -I would go with the Ragin Cajun.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [Jc](#) on Tue, 29 Sep 2009 22:51:30 GMT
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Rick,

I know what ya mean about the Jensen Mods Don is talking about. I was having a hard time believing his praise for what I took as a 2nd tier product. When we all met down in Chanute this year, all the boys where hauling the big rigs with fancy speakers on stage and Don walks up with his single 12" jensen Mod and rips!

Great sound and Jensens liked the Kustom Electronic's with his pedals. That and the guy has some talent!

Don't dismiss them ~ Give it some thought.

jc

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Tue, 29 Sep 2009 23:16:53 GMT
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LesS wrote on Tue, 29 September 2009 18:45
Since you wanted speakers with a fuller, thicker sound, between those two choices -I would go with the Ragin Cajun.

Which means running 2 8ohms in series making the amp work harder than running 2 16ohms in parallel which allows the amp to run more efficiently correct?

I'd love to see the response curves of the existing drivers in it now.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Tue, 29 Sep 2009 23:19:07 GMT
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Jc wrote on Tue, 29 September 2009 18:51Rick,

I know what ya mean about the Jensen Mods Don is talking about. I was having a hard time believing his praise for what I took as a 2nd tier product. When we all met down in Chanute this year, all the boys where hauling the big rigs with fancy speakers on stage and Don walks up with his single 12" jensen Mod and rips!

Great sound and Jensens liked the Kustom Electronic's with his pedals. That and the guy has some talent!

Don't dismiss them ~ Give it some thought.

jc

I'd like to hear some sound clips. I've only found one and it was on the Jensen website and it was very difficult to come to any conclusion, the sound bite was not very good quality.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [pleat](#) on Wed, 30 Sep 2009 02:01:24 GMT
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LesS, all the charts I sent, the ones dated 11-71 don't give any impedance of the actual speakers, or what amp or cabinet models the speaker wiring diagram showed. It is pretty easy to see what cabinets or columns by the layout of the drawing. The chart I sent "labeled Speaker Wiring Diagram SC units" has no date of drawing but shows basically three amp heads by it's dash number, the #8 chassis shows two 10" 16 ohm speakers wired in parallel and the other #8 chassis showing four 10" 8 ohm speakers wired in series and parallel. The chart I sent labeled "Speaker Impedance Used Page 1" shows the 2-10SC using 16 ohm speakers wired in parallel for a 8 ohm load. It also shows the 2-12Jensen SC also using 16 ohm speakers wired in parallel for 8 ohms. Same with the 2-12Altec SC.

The # 8 chassis was used for both SC 2x10 and SC 4x10 cabinets. The #6 chassis was the self contained single 15 amp. The # 7 chassis is basically the same as a #8 only a stretched version for the 2 12 cabinet. Both the K100SC and the K150SC used the same # to desinate the width. All the different speaker configurations that were offered in the SC series shows a 8 ohm total load to the amp. So I guess it's here, where we agree to disagree as to what was standard. Having been a Kustom dealer from 66 to 79 I have to go with all the dealer service manuals I have. I'll agree that to keep production running they may have substituted some speaker impedances to keep up with sales, and kustom installing 8 ohm speakers wired in series would do no harm to the amp impedance wise, just would limit the total output of the amp.

pleat

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [pleat](#) on Wed, 30 Sep 2009 02:21:24 GMT
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Rick, the K100 runs at full rated output on a 8 ohm total load. So you have options of getting two 16 ohm speakers wired in parallel or get two 4 ohm speakers and wire them in series. Looking a response curve is interesting. When Peavey first introduced the Black Widow speakers back in the 70's we compared them with the K series JBL. Everything was identical, magnet type, weight, voice coil diameter, edge wound aluminum ribbon, cast frames, aluminum dust caps, same depth of cone from front to spider, yet looking at the response chart, they were really close with the exception at 3k where the JBL had just over 3db rise, and that was all it took to get that JBL snap, the Black widows sounded dull next to the JBL. So you can look at charts, and it will tell you a lot, but hearing is still the best way to compare speakers. Tall order since most places to buy speakers don't have them in cabinets for comparison.
Don

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Wed, 30 Sep 2009 02:28:00 GMT
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Hey pleat..

I'm most likely going with 2 16ohms in parallel. As much as I want the ragin cajun with is a 8 ohm... I just like the idea of running the amp at it's full potential.

How cool would it be to find a place where you could take your amp and have a field day trying different drivers?

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [Jc](#) on Wed, 30 Sep 2009 02:37:47 GMT
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They do have those - It's called the Kustom get togethers. Down in Chanute there was every amp with every kind of speaker you could think of - it was very kool.

That alone would make the trip worth it!

jc

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [pleat](#) on Wed, 30 Sep 2009 02:40:24 GMT
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Rick, those days are long gone. When I was in retail we had identical cabinets loaded with

different brand speakers and we used a A B switcher to jump from one cabinet to the other using the same amp. It was a little easier back then, especially with kustom cabinets. We stocked pretty much all the different brand speakers kustom offered in their cabinets. So it was a level playing field to try brand speakers, same 2x15 cabinets, just different brand speakers. Back in the 60's, loud rockers all played through dual 15" cabinets. Today since guitars have shifted more to the 12 speakers, it would be difficult to have every brand of speakers in the same matching cabinets for trying out. For the last 11 years, my single 12" K50 is my main amp, and I've used it with JBL, EV, Celestion, and a Jensen, I've settled on the the Jensen. It sounds great for my ears, and I run a Roland GR33 synth pedal that gives me a B3 organ, brass, strings, steel drums and I loop that into a Digitech processor for the distortion, echo's, reverbs, flanger, chorus, etc and the amp and jensen just seem to work great, and I don't have the weight of a JBL or EV.

Don

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [LesS](#) on Wed, 30 Sep 2009 02:46:43 GMT
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"LesS, all the charts I sent, the ones dated 11-71 don't give any impedance of the actual speakers, or what amp or cabinet models the speaker wiring diagram showed."

Pleat - it said "2-10SC 16 ohms per speaker 8 ohms per cabinet" and it referred to figure 10; the page for figure 10 was dated 11-71.

So it seems to me this was referring to the K150 combo.

The 8 ohm speakers and speaker jack that I was talking about applies to the K100 combos which production ended about July 1970 SN 57100.

Anyone with a K100 2x10 combo with:

- a) a SN before 53000
 - b) 2 jacks in back
 - c) preferably with Eminence speaker (hole in aluminum dust cap)
- can easily prove this unless it has been modified
(that K100 2x10 combos before SN53000 usually had 8 ohm speakers, were wired in series, and had a speaker out jack).
-

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [pleat](#) on Wed, 30 Sep 2009 03:04:12 GMT
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LesS, I see where the 1971 date on the one chart might be confusing, as I haven't scanned every page of 7 kustom manuals I have. Figure 10 does show two speakers wired in parallel but does not say what diameter or impedance the speakers are. Matching that to SC speaker wiring

diagram I sent with no drawing date matches a parallel schematic.

As far as the K100 SC's I've owned didn't have a speaker jack on the back installed from the factory, but a fellow collector in SC just got a K100SC-8 2x10 in silver that he sent a photo of front and back. The photo on the back shows two jacks on the back, factory power switch, just below it labeled with a green dymo marker says EXT speaker, below it labeled in green dymo tape says Footswitch. It's hard to tell if the footswitch jack has the washer that the factory used to label what jacks were what. I'm gong to email him and have him take some photos of the inside when he replaces the power cord with a new grounded power cable and installs a replacement cord wrap.
Don

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Wed, 30 Sep 2009 03:11:43 GMT
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Sorry for the poor quality... Took it with my cell phone.

The long pot knob is the volume pot i just put in between the preamp and power amp.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [pleat](#) on Wed, 30 Sep 2009 03:31:19 GMT
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Rick, the photo was good. How about taking one showing the inside of the amp in that area? Stange that kustom would label the footswitch jack with the label washer and not the extension speaker jack. How do you post photos to this site? There are many times it would come in handy.
Don

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Wed, 30 Sep 2009 03:34:17 GMT
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Well, i have my images hosted up on my hotmail site, then I just link the image in using the little image icon in the tool bar.

Sure, I can take some more images. Give me 30~45 minutes to get my amp apart, take the pics, then get them posted

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Wed, 30 Sep 2009 04:07:50 GMT

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Here you go... Here are some pictures for you to look at.

<http://cid-f1c667b529532c45.skydrive.live.com/browse.aspx/Guitar%20and%20gear>

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [stevem](#) on Wed, 30 Sep 2009 10:18:08 GMT

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From the pictures you put up I can see two problems with the amp.

1) the bias diode (little can with two clear heat shrunked leads) is out of its clip that is goes into in the center of the output transistor heat sink. This needs to be placed back in the clip with a dab of transistor heat sink grease and the clip need to grip it tight.

Be carefull moving it around as those leads tend to break off, in fact what I would do first would be to straighten out those leads where they enter the board and place a good blob of black, clear or whatever silicone sealer on them to keep them from bending at a 90 degree angle with is what makes them snap.

Also place a dab on the diode itself to keep the leads there from doing that same thing.

2) right in front of that clip is the thermal circuit breaker(round black item with one lead tang broken off)this shuts the amp down in the event that it starts to run too hot, like when that bias diode goes bad or cant sense the heat sink temp.

That looks like a master volume control that some one put in on that channel. this will load down that channel and probibly drop off some high end .

If you want to leave it in I can sen you some good wire to redo it with, as it looks like a mess now, or you can just cut it out and run that blue wire back to where it goes next to the other blue wire on that rear wall mounted driver board.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [pleat](#) on Wed, 30 Sep 2009 13:09:53 GMT

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I see from the photo's the same problems. I think I have a extra thermal circuit breaker I can send you. I've never seen one with the tab broken off, but anything is possible after 40 years.

LesS is right on the fact that the amp does have a factory speaker jack on the back panel. So the mystery continues on why kustom did these on some models and not others. I'm going to email Bud and see if there was a reason for the added speaker jack and series wiring on the K100-8

2x10 SC. Maybe there was some thought of making a matching 2x10 extension cabinet and they would wire the cabinet in series so when adding the extension cabinet it would give a 8 ohm load to the amp.

Don

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Wed, 30 Sep 2009 15:44:58 GMT
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stevem wrote on Wed, 30 September 2009 06:18

1) the bias diode (little can with two clear heat shrinked leads) is out of its clip that is goes into in the center of the output transistor heat sink. This needs to be placed back in the clip with a dab of transistor heat sink grease and the clip need to grip it tight.

Ok, I'll take a look at that tonight.

stevem wrote on Wed, 30 September 2009 06:18

2) right in front of that clip is the thermal circuit breaker(round black item with one lead tang broken off)this shuts the amp down in the event that it starts to run too hot, like when that bias diode goes bad or cant sense the heat sink temp.

Yes I know... I'm the one that broke it. In fact, I made mention of it in another thread I think. It happen when i was trying to clean up all contacts with some contact cleaner a couple of weeks ago. I realized it was a sensor and just taped the two wires back together. I DO agree, it needs to be fixed. In fact, I'm not sure if there is any harm being done. I didn't expect there to be, none the less, I agree, needs to be replaced.

stevem wrote on Wed, 30 September 2009 06:18

That looks like a master volume control that some one put in on that channel. this will load down that channel and probably drop off some high end . If you want to leave it in I can sen you some good wire to redo it with, as it looks like a mess now, or you can just cut it out and run that blue wire back to where it goes next to the other blue wire on that rear wall mounted driver board. I'm the one who put the master volume in. I did it last weekend. Right now, I've only got one side wired up. If looking at the amp, it's the right side channel. The left side channel has yet to be hooked up. I purchased the wrong kind of volume pot. I needed a duel pot so i can run both channels. I realized this after I took out the resistor for the left channel. At first, i was going to have separate volume pots, but decided against it, just don't want to have two separate pots. However, not having much luck finding a duel 50k pot.

Also, I agree that there is some excess wire in there. What I used was some high def coax. Rather beefy. I was going to use some normal shielded guitar speaker wire, but, it was suggested that I use coax.

Are you suggesting that I remove the coax and run the blue wire directly to the pot?

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Wed, 30 Sep 2009 15:47:47 GMT
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pleat wrote on Wed, 30 September 2009 09:09I see from the photo's the same problems. I think I have a extra thermal circuit breaker I can send you. I've never seen one with the tab broken off, but anything is possible after 40 years.

LesS is right on the fact that the amp does have a factory speaker jack on the back panel. So the mystery continues on why kustom did these on some models and not others. I'm going to email Bud and see if there was a reason for the added speaker jack and series wiring on the K100-8 2x10 SC. Maybe there was some thought of making a matching 2x10 extension cabinet and they would wire the cabinet in series so when adding the extension cabinet it would give a 8 ohm load to the amp.

Don

As mentioned to steve, I broke it. Sure, if you have one. I've not gone looking for a new one. I should... I also need to find a duel 50k pot to replace that single volume pot I put in place.

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Sun, 04 Oct 2009 05:09:47 GMT
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stevem wrote on Wed, 30 September 2009 06:18From the pictures you put up I can see two problems with the amp.

1) the bias diode (little can with two clear heat shrinked leads) is out of its clip that is goes into in the center of the output transistor heat sink. This needs to be placed back in the clip with a dab of transistor heat sink grease and the clip need to grip it tight.

Well, go figure. I broke the diode. I've done a little research on this. I found a thread on a forum here

[http://www.electronicpoint.com/need-help-iding-component-pi c-t13955.html](http://www.electronicpoint.com/need-help-iding-component-pi-c-t13955.html)

Turns out that the what looks to be an I is actually the number 1 in front of that manufacturers part number. Also, that diode is no longer made anymore, that thread suggested going to this website and doing a cross reference. <http://www.nteinc.com/>

I did, and this is what I came up with

<http://nte01.nteinc.com/nte/NTERefSemiProd.nsf/69d5aa3584d015ce85256e780056e56f?CreateDocument>

Do any of you see any harm is using this part?

The one thing that is going to be difficult for me is to determine which way the current is flowing so

I know which way to put the diode in. If I'm looking at the top of the board, does the current flow from left to right or right to left?

Thanks all for any help!!!

Rick

Subject: Re: Looking for info on a Kustom K 100C-8
Posted by [RickBlacker](#) on Sun, 04 Oct 2009 20:34:58 GMT
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Did my research, got a new diode and got it fixed.

So far I've replaced all the electrolytic caps in the PC1400 pre-amp and the power amp... Now, I'm going to dive in and replace all the electrolytic caps in the PC1500 pre-amp.
