
Subject: Linking Kustoms (Talk About Overkill!)

Posted by [Truetone49](#) on Mon, 04 Apr 2016 17:09:37 GMT

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While new to this forum, I have been a Kustom lover since 1969, when I acquired a 1968 Cascade K100 PA, the columns of which I use in my home studio today (see photo). At the request of a friend and fellow Kustom fan, over the past 18 months I have located, acquired, and reconditioned a "1968 Kustom K200/3-12J-3" and a "1973 Kustom K150/2-12G-2" that he intends to use to amplify his recorded music. Now, he wants to link the two amps, as if one isn't loud enough to blast his oldies all over the neighborhood!

Here are my questions:

1. The rear of the K150's head has an output jack labeled "TO TAPE - RECORD" (the K200 has no such jack). Could he link the amps by running a speaker cable from the K150's tape jack to one of the inputs on the head of the K200?
2. Would he use a LOW or HIGH impedance input on the K200 to amplify the signal coming from the K150?
3. In the alternative, would it be safer for him to use only the K200 head and connect a Y-splitter from the output jack to send the K200 signal to both speaker cabinets?

I realize these may be primitive questions, but I have way too much time invested in the cleaning and polishing of tuck & roll Naugahyde to see him destroy both the amps just to impress (or irritate) his neighbors!

Thanks! Truetone 49

Subject: Re: Linking Kustoms (Talk About Overkill!)

Posted by [chicagobill](#) on Mon, 04 Apr 2016 21:49:19 GMT

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Does he plan to use the rig in stereo or mono?

The output from the K150 tape output will be a little too strong for the input of the K200. It should be reduced with a couple of resistors or a volume pot.

The two inputs of the K200 are not high and low impedance, they are high and low frequencies. The high input has a series cap installed to reduce the low frequencies, so it is sort of like a bright input.

Which model K200 is it?

Subject: Re: Linking Kustoms (Talk About Overkill!)

Posted by [Truetone49](#) on Mon, 04 Apr 2016 23:25:53 GMT

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Thanks for your reply.

He will be using the amp(s) in mono. The bigger amp is a 1968 K200A-3, Series Model 3-12J-3.

Since my friend lives too far away for me to assist, would it be simpler (especially for me) if he just used the K200 head and split the output to both speaker cabinets?

Thanks! Truetone 49

Subject: Re: Linking Kustoms (Talk About Overkill!)
Posted by [chicagobill](#) on Tue, 05 Apr 2016 00:59:33 GMT

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Three 12's and two 12's connected to one head? How are the cabinets wired? Are the speakers original? The impedance load might be too low to safely run the head with both cabinets.

Subject: Re: Linking Kustoms (Talk About Overkill!)
Posted by [Truetone49](#) on Tue, 05 Apr 2016 01:43:26 GMT

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I had done enough reading to suspected the load might be too low to run two cabinets, which is why I asked. Your information has been very helpful and has caused me to conclude it would be best for me to tell him to stick with one amp at a time! I realize one could create a buffer between the two amps using the proper components and make it work, but this guy is doing well just to turn them on!

Thanks very much for your help!

Truetone49

Subject: Re: Linking Kustoms (Talk About Overkill!)
Posted by [steven](#) on Tue, 05 Apr 2016 10:34:57 GMT

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What I am posting on how to wire the two amps assumes that the K150 is a head, not a combo amp!

Input the audio signal that he wants to play back into the top input on the top channel on the K150" then take a long guitar cord and plug it into the lower input of that top channel and run that cable into a input on the K200.

You did not mention what type of gear that he is playing his music back from, but he needs to be carefull as the input stage in either amp can be blown out by pumping in too hot a signal!

Remember guitar amp input stages are designed to handle as little as .080 volts up to .300 volts

and the line level output of a record or tape playback unit will be atleast twice that .300 volts!!!

Subject: Re: Linking Kustoms (Talk About Overkill!)
Posted by [Truetone49](#) on Tue, 05 Apr 2016 18:55:42 GMT
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I truly appreciate the education you are providing. In my 50+ years using live sound amplification, I never had an occasion to "link" two amps. Of course, during the early part of that time period, I was lucky to afford even ONE amp!

My friend's music source is an iPod Classic. The CNET website suggests the headphone jack output of an iPod is 30mW per channel, and an online converter says that equates to .03VA. So, if the stereo output of an iPod is 60mW, equating to .06 volts, is that an acceptable signal for direct input to the K150?

And, yes, the K150 is a stack, rather than a combo. The head has CHANNELS 1 & 2, with two inputs each, running vertically. So, if I am understanding correctly, my friend could plug his iPod into the TOP CHANNEL 1, then plug one end of a 12 gauge 1/4" to 1/4" speaker cable into the BOTTOM CHANNEL 1....and the other end of that speaker cable into any of the inputs on the front of the K200.

That is, unless I can talk him out of doing it at all!

Thanks! Truetone49

Subject: Re: Linking Kustoms (Talk About Overkill!)
Posted by [chicagobill](#) on Tue, 05 Apr 2016 19:31:57 GMT
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No, plug the iPod into the top jack of channel 1 and then take a guitar cord (shielded) and plug it into lower jack of the same channel 1 and then plug the other end of the second cord into the front of the K200A.

When the two cords are plugged into the jacks of a single channel of the 150 head, the input signal will be connected to the second cord through an isolation resistor inside the head.

We used to do the same thing with Fender and Marshall amps back in the day when things were really loud on stage.

You should try and make certain that the two amps have grounded 3-wire ac cords that are plugged into the same power circuit. Or if they have the original two wire cords with ground switches, be sure that they are switched so that the two chassis' are at the same ground potential.

Subject: Re: Linking Kustoms (Talk About Overkill!)
Posted by [Truetone49](#) on Tue, 05 Apr 2016 21:32:27 GMT
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I think I understand the connections now, and your cautions about the grounding and importance of a shared circuit. If I decide to share this knowledge with my friend, I will come up with a way to describe this in very simple terms! Or, I may choose to share it with him only when I can be nearby to supervise!

Again, thanks very much for responding and for your very helpful guidance.

Take care, Truetone49

Subject: Re: Linking Kustoms (Talk About Overkill!)
Posted by [pleat](#) on Tue, 05 Apr 2016 22:03:24 GMT
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One thing that you will need to do is, all audio signals use shielded audio cable. Speaker cables are used from the speaker outputs to the speaker cabinets.

Using a speaker cable as an audio cable will create a lot of hum.

pleat

Subject: Re: Linking Kustoms (Talk About Overkill!)
Posted by [steven](#) on Wed, 06 Apr 2016 10:51:41 GMT
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If you mono down / Y down the stereo output of anything , not only a iPad you will have even less voltage output , the problem in doing such is sound quality !

When this type of hook up is done a channels who's mix / output level is stronger than the other will tend to override the lower output channel ,so tell your Buddy that the intended stereo mix of what he is playing back through the Kustoms will not quite sound the same as if it where blended in true mono!

If you can still find one of those Radio shack pre molded Y adapters with two Female inputs and one Male output you can snap it open, break the hot connection and wire in series a 220k 1/4 watt resistor and this will to a large extent give a good sounding mono mix of the left and right outputs of the iPad or whatever!

In regards to your Buddy's blasting his tunes around the neighborhood he needs to keep within the cut off time of 10 pm that most community's have in place, lol!
