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Subject: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Tue, 11 Aug 2015 00:54:13 GMT  
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Help.....just received a kustom XII bi-amp. The amp on the inside to the furthest left has the wires cut that are coming from the two filter caps into that amp. I have no clue as to why its been disconnected and am afraid to reconnect them for fear of something else blowing. Pleat has seen the pictures and says its the power and ground wires that have been cut. What do I need to do to test this amp out?

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Subject: Re: Kustom XII bi-amp  
Posted by [stevem](#) on Tue, 11 Aug 2015 10:44:50 GMT  
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Reconnect the wires and install a fuse to replace the likely blown one with a fuse of 1/2 the needed amperage, then turn the amp on, if that fuse blows it's time to check the diode cup on the floor of the amp and start pulling the output transistors and checking them.

If the diode cup checks good I think you can unpower the high amp or the low amp one at a time by its Molex connector, if so then install another low amp fuse and power it up again and if the fuse holds you have pinned down the bad amp section.

It would be my guess that the thing has a bad amp section low amp section will be bad!

Oh wait, let's go back to square one here, the first thing to do is to unhook the power transformer from the diode cup, install that small fuse and then power up the amp to confirm that the PT is not shorted out, and then confirm that the diode cup is good.  
Be sure to not let those wires you pulled off touch anything!

It's been a while since I have been in one of these, but if I recall right they have a thermal circuit breaker for each amp section, so both of those need to be checked for being open if the amp does not power up with a good fuse.

Is the crossover / control board in that biamp PC 5258?

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Tue, 11 Aug 2015 17:19:29 GMT  
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Let's not get ahead of ourselves here, let's have a bit more information. Does the part of the amp that is still hooked up work as it is? If it does, then the power supply is probably okay.

This thing has a large power amp for low freqs and a smaller power amp for highs and an electronic crossover to separate the signals. If the one power amp is still working, which one is it the lows or the highs?

The amp that was disconnected could be shorted, or it could have not been needed by some former owner and unhooked, or who knows why it was taken out of the circuit. In order to reconnect it, you will need to run a few tests to be sure that it in fact is not shorted.

The simplest test would be to use an ohm meter to check the two power supply line for shorts to ground.

Tell us more about the amp.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Tue, 11 Aug 2015 17:52:21 GMT  
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Okay here is what I have found....so far.

The amp that was unhooked is the far left amp. It is the one connected to the left low output. The red and green wires coming from the two filter caps were cut at the board. I also found that the three pronged Molex plugs at the bottom of the boards had been switched. The plug that had gone to the left amp had been put on the middle amp and no plug was connected at the bottom of the left amp. I reconnected the plugs to what I believe is the right amps. The middle plug will not reach the far left amp so I assumed it must go to the middle amp. I did notice that some work has been done on this unit. There are several new rectangular resistor...I guess.....white...have replaced some of the original ones. Also on the left amp there is something that I think is a diode....three pronged fork with a black square in the middle with a hole in the center. Sorry for not knowing the actual tech jargon since its been 40 years since I took my electronic course.

I will take my meter and test for ground on the two wires cut at the board....I am assume the green wire is a ground and that should test closed. The red should not.....

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Tue, 11 Aug 2015 18:08:34 GMT  
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Okay....did a continuity test to ground on both the red and green wire coming out of the board. Open circuit on both.

Next?

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Tue, 11 Aug 2015 18:19:37 GMT  
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Retested the red wire....show a reading for just a split second and then goes to OL. Tried the

ohms setting, goes to 4.7 and fluctuations some but holds. The green wire does the same thing but when you ohm it the reading steadily drops till it shows OL.

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Tue, 11 Aug 2015 18:45:14 GMT  
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You never answered the basic question, does the amp work as it is?

The red wire is the positive voltage, the green wire is the negative voltage and the black is the ground.

What value or scale was the meter set for when you got the 4.7 reading? If it's 4.7 ohms, that would be a short circuit, if it was 4.7 megohms (million ohms), not so much.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Tue, 11 Aug 2015 19:02:09 GMT  
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Bill....I never plugged it in since I had seen wires cut and know now that the plugs have been moved.

The reading was in meg. Rechecking again...the longer I leave the probes on the wires, the values increase as well. Guessing that the battery in meter is supplying the increase.

Since I don't have a schematic to go by, I am also assuming that the Molex plugs are the output.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Tue, 11 Aug 2015 19:06:34 GMT  
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I can't believe someone would cut the wires just because they didn't need the one amp. Especially since they moved the Molex plug from the one amp to the other.

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Tue, 11 Aug 2015 19:17:09 GMT  
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I don't know how much test equipment you have, but if you have light bulb limiter, I'd suggest using it on this amp when you first plug it in.

People do dumb things. Who know why, all I can suggest is that you get it back to normal if you

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can. Have you looked for a schematic? That would help in putting everything back to normal.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Tue, 11 Aug 2015 19:24:11 GMT  
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I have just the basic multi meter.....

I went on line and can't find anything on this amp.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Tue, 11 Aug 2015 19:40:39 GMT  
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I did find a schematic but will cost \$20 to buy.

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Tue, 11 Aug 2015 20:15:02 GMT  
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Well, can you see the pc board numbers? If you at least find the numbers on the power amp boards, that will be a big help. Exactly how many power amps are in this thing? Two 130 watt low freq amps, and two 60 watt high freq amps?

The limiter that I suggested, is nothing more than a standard incandescent light bulb that is connected to the ac line, wired in series with the test amp. If the test amp draws too much current, the light bulb turns on and shuts off the current going to the amp. This will prevent the amp's fuse and internal circuitry from blowing.

I'm sure that if you want to build one, you can find instructions out there. My first one was an old extension cord and a light socket.

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Subject: Re: Kustom XII bi-amp  
Posted by [pleat](#) on Tue, 11 Aug 2015 20:43:10 GMT  
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The amp has three identical power amps housed with the electronic cross over. I think the boards may be PC5065 but I'm not sure. The XII BiAmp slave amp is the big brother to the VIII bi amp that uses one 130 watt amp for the lows and the smaller 75 watt amp for the horns.

I saw pictures and he is describing a transistor with the 3 legs and the hole for mounting to a heat sink.

pleat

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Tue, 11 Aug 2015 21:31:05 GMT  
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Just googled light bulb limiter.....easy enough to make. I'll build one tonight.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Tue, 11 Aug 2015 21:59:21 GMT  
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I finally found a number on the board.....kind of hard to make out the numbers since I had to use a mirror to get to them.....00 5065 009 I think. Pleat, your right as usual.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Wed, 12 Aug 2015 05:47:36 GMT  
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Went to make my limiter tonight and didn't have a 250 watt bulb to use. I did accidently plug the amp in and even with the power switch in the off position the lights inside the switch came on. Is this normal for this amp? If so how would you know if the amp is on or off?

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Subject: Re: Kustom XII bi-amp  
Posted by [stevem](#) on Wed, 12 Aug 2015 10:10:15 GMT  
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Sorry, I misread part of your first post.

The red and green wires where cut either to trouble shoot the amp, and or to un- power that amp section and be able to use the remaining 2 good amp sections.

In These Amps they stopped using the metal case TO5 type driver transistors that we are use to seing in the silver rectangular heat sink boxes, and switched to the plastic pack TO- 220 types, which if your amp is like mine ( the smaller bi- amp) these transistors are red cased and green.

Mine are RCA brand with one being a 65860, and the other being a 7701.

Neither of them have I been able to cross, but they are just standard audio driver types and not a issue to get a replacement for .

Let's go To back to square one like Bill posted, is the fuse good?

If any of the red wires on the output transistor sockets have a low resistance to ground( under 200 ohms ) then they are shorted.

The best way to get that reading and not have the meter try to charge those big main filter cans is to unhook the red and green wires from the cans first.

Like I posted yesterday, if you do power it up thru the limiter like you are making I would still derate the fuse you install by 50 to 75 %.

Let us know how it goes!

Oh, where did you find the schematic?

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Wed, 12 Aug 2015 16:23:42 GMT  
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Music Parts.com has this and tons of Kustom schematics.

Does your power switch light up when you plug it in.....this one does.

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Wed, 12 Aug 2015 16:39:59 GMT  
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I don't know for sure, but it sounds like the power switch has been wired wrong.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Wed, 12 Aug 2015 18:48:50 GMT  
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Guess I had better break down and order that schematic for this thing. Looks like some SOB did a hatchet job on this amp.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Wed, 12 Aug 2015 18:50:00 GMT  
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Steve....any way you could post a picture of the insides of your amp for me to go by?

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Wed, 12 Aug 2015 20:08:54 GMT  
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A couple of things, have you taken photos of the inside of this amp?

For the limiter, you don't need a 250 watt lamp, a 100 or a 60 will be fine.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Wed, 12 Aug 2015 22:42:17 GMT  
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Well.....now I have a 300 watt bulb. The site I googled said to use the largest wattage you could find so that is what I did.

I have sent Pleat pictures of the inside. I don't know how to post on here yet. Send me a PM and I send them to you.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Thu, 13 Aug 2015 00:27:39 GMT  
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Well this thing is certainly a joke. Yes the switch was totally wired wrong.....so its on all the time.

Good news is that the limiter did not light up when I plugged it in. However, I connected two of my smaller PA cabinets into it and plugged my lap top into the input, tuned in a radio station, and the volume stinks. With it cranked all the way up I'll bet I'm getting less than 20 watts of power out of the two speakers. I even reconnected the mox plugs at the bottom of the middle board like it was when I opened it and no difference in sound what so ever. Any ideas?

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Thu, 13 Aug 2015 01:10:46 GMT  
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I reconnected the two wires that were cut on the left amp.....this amp is the left low output.....but guess what.....the horn level controls the volume and its still just as low as the other low output.

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Subject: Re: Kustom XII bi-amp  
Posted by [pleat](#) on Thu, 13 Aug 2015 02:15:31 GMT  
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A few things, have you traced from the speaker jack wires back to each amp? So you know what

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the center and the other amp is suppose to drive speaker or horns? Are the two remaining amps working?

You said the first amp or left side amp is a low frequency amp the one with the wires cut. The center amp I will assume drives the other low frequency speakers, and the remaining amp is driving the high frequency for the horns.

Since you are hooking up your computer to the input, the signal is going through the electronic crossover first, and the signal is then split or divided into the low power amps and the high frequency amp.

When you hooked up your speakers, did you hook one speaker to the low amp and one speaker to the horn amp? If you hooked both speakers to the horn amp, you won't get much volume as the crossover is only letting the higher frequencies pass on to the power amp. There are two volume controls, Main or master, which has to maxed to get the most volume and then the horn volume control. The horn volume tracks with the master volume control. Turning it down automatically turns down the signal going to the horn amp.

As to the switch always be on, Just tossing this out, the power switch is a rocker type with the center position being the off position. It functions as power and polarity in one switch.

pleat

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Subject: Re: Kustom XII bi-amp  
Posted by [lowa Boy](#) on Thu, 13 Aug 2015 03:19:43 GMT  
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The left amp goes to the left low, middle is horn and right is low right. I tried the two cabinet into the left low first.....very low and I mean low volume of sound about the same as the horn; tried just the right low amp with both speakers.....guessing about 20 watts output; tried just the horn.....it squeaked out some sound but not much even when turned up all the way.

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Thu, 13 Aug 2015 05:40:06 GMT  
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It sounds like you are making progress. Do you still have the amp plugged into the limiter? If the bulb didn't light up brightly, then the amp is not drawing too much current and can be powered up directly without the limiter.

Using the limiter will reduce the power supply voltages and will lower the output power. Next step will be to test the power supply voltages with your volt meter. Take the readings at the two power supply caps. There should be plus and minus 40-45 volts at the terminals.



Subject: Re: Kustom XII bi-amp  
Posted by [stevem](#) on Thu, 13 Aug 2015 10:19:29 GMT  
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From what I see from the photos the left hand and the middle power amp board have both been worked on, I even see added top side jumper wires on one of them!  
That middle board has had two of the 4 Emitter resistors replace, so that amp section had at least two shorted output transistors.  
I think the best course of action is to pull each board one at a time and go thru it, all that you may need to replace semiconductor wise can still be had and if any circuit traces have been messed up due to the work done your gonna need to pull the boards anyway.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Fri, 14 Aug 2015 00:16:50 GMT  
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Just gets better all the time.....and this clown I bought it from said it worked just fine.  
Bill...sending you pictures also. Will take reading at filters.

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Subject: Re: Kustom XII bi-amp  
Posted by [stevem](#) on Fri, 14 Aug 2015 10:30:52 GMT  
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Look on the brite side, even if you had to replace every darn transistor on one of the 130 watt power sections I don't think it would top 40 bucks!

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Fri, 14 Aug 2015 17:54:19 GMT  
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I've seen the photos now and agree that this has been hacked by someone that shouldn't have been in there.

The transistor that was added to the top of the one board has a different pin arrangement from the original one, so the jumper wire may have been added to connect up one of the pins.

I notice that the driver transistors are the old style TO-39H and not the later versions that used a TO-220 that Steve described.

I can't completely see how the switch is wired, but it looks like a replacement to me. All of the factory switches normally have the two cross connections for the polarity wiring made as part of the switch with flat brass strips. These are added on wires.

If you get a better photo showing how the wires are connected to the back of the switch, I can tell

you how to rewire it so that it works correctly.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Fri, 14 Aug 2015 23:33:04 GMT  
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This double throw switch doesn't make any sense. This amp has a ground plug on it.....must have been added? The ground cap is still connected to the switch. Looks like a 2 year old soldered this thing. Problem seems to be with the way the lights inside the switch were wired. I'm going take all the wires off and start over.....since the soldering is so sloppy. One of the spades on each switch should go to ground to complete the circuit for the light inside the switch.....correct?

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Sat, 15 Aug 2015 05:26:57 GMT  
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In the early days of three prong ac cords, they still used a ground switch and cap, so the original switch would have been a three position center off one.

The light inside the switch is a neon bulb with a dropping resistor. It connects to the two sides of the power line hot and neutral. Nothing should be grounded except for the one end of the ground cap.

What you need to figure out is what terminals the neon light is connected to. My guess would be the two center ones. Is the ground cap connected to one of the center two terminals?

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Subject: Re: Kustom XII bi-amp  
Posted by [stevem](#) on Sat, 15 Aug 2015 10:44:53 GMT  
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The problem with those TO-220 transistors as replacements is that the fatter leads will not pass thru the factory lead holes without being drilled out That makes for the need to wire it up with all jumper wires unless you tack solder one or more of the leads right to the top side of the other components it goes to.

This looks like a mess and a tack solder joint is iffy at best!

When I need to go this route I drill out the holes with a .060" bit and hope that the trace is wide enough that I do not have to use a jumper no less on the bottom side.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Sat, 15 Aug 2015 15:14:53 GMT

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No,.. it is attached to one of the bottom spades on the switch; then from each bottom spade they ran a jumper crisscross to the top spades, there is nothing attached to the middle spades on either of the switches.

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Sun, 16 Aug 2015 05:46:34 GMT  
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Okay, then the two wires from the transformer should connect to the outer connectors. The two wires from the ac line should connect to the two middle connectors.

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Subject: Re: Kustom XII bi-amp  
Posted by [pleat](#) on Sun, 16 Aug 2015 12:56:50 GMT  
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You mentioned earlier in your post that one the Molex plugs, had been moved to a different power amp board. The wires to the Molex plugs are feeding the either the Low or High pass signals from the electronic crossover in the amp.

Since there are so many things that have been tampered with, in the amp, you can't be sure that the middle power amp is the horn amp. Someone may have shifted the molex connector to the middle power amp then and moved the actual speaker jacks from the middle power amp to the horn output labeled on the back panel.

I would think it's time to get a schematic. Trying to solve multiple problems (power amp, cut wires, power switch) all at the same time may be counter productive and confusing for people on this site. Until you get the power amps back up and running and making sure that the speaker jack labels go to the correct power amp, everything else is secondary. pleat

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Sun, 16 Aug 2015 15:39:51 GMT  
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I hadn't thought about the output jacks being changed but that's a good possibility. The way the Molex plugs are wired, the middle plug can't be moved to the far left amp so am pretty sure those are correct.....now.

Rechecked the output wiring.....don't see how they could have moved them since the length of the blue wires pretty much makes it impossible to reach the far left amp other than the way it currently is wired. There's also corrosion on the outputs jacks as well and no signs that any tampering has been done. Looks like that is okay for now also.

Tech question.....I have a multi meter.....read ohms, uF, uA and AC/DC voltage as well as continuity. Is this meter adequate enough to work on this equipment? If I need something else, I have no problem spending the money on getting it.....I guess

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Sun, 16 Aug 2015 16:25:27 GMT  
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Well it appears that someone did switch the output jacks on this thing.....the low right is actually controlling the high end. With jumpers on the cut wires back to the left board, I am getting the same amount of sound out of the two boards. With volume turned all the way up, still getting maybe at best 30 to 40 watts.....not blasting like the K-200 that I can only turn up to about 1 1/2. The horn signal is coming thru on that amp as well but would also expect it to be a lot louder.

How do I check out the filter caps.....do the wires have to come off.....do you take voltage reading while the amp is on?

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Sun, 16 Aug 2015 17:40:52 GMT  
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A couple of questions. What are you using to drive this amp? It is a power amp so it is probably looking for at least 1 volt of signal to get full power output.

Are you still hooked up to the light bulb limiter?

As for your meter, that should do fine, the ohms reads resistance, the uF (micro Farad) is capacitance, the mA (micro Amp) is current and the voltages are for volts.

To test capacitors, the amp must be off and the power supplies drained. Pulling the plug and leaving the amp sit for a while will probably be enough to drain the caps, but you should test for voltage at the two main filter caps to be sure.

Set your meter to read dc volts. Hold the black lead to the black wires that connect two filter caps together. Now take the red meter lead and touch it to the screw terminal where the red wires are connected. Make note of the DC voltage reading. If the amp has been off for a while there should be less than a few volts there. Then touch the red lead to the screw terminal on top of the second cap where the green wires connect. The voltage reading there will be negative, so your meter will have some sort of minus sign in front of the reading.

When you are sure that there is no voltage left on the filter caps, set you meter to read capacitance, the uF position. Now hold the black lead on the black wire terminal and the red lead to the red terminal and see what reading you get. Some meters will read into the 1000's of uF and some won't, so see if you get a good stable reading. Then test the second cap by putting the black meter lead to the green terminal and the red lead to the black terminal. You can also test any of

the small caps on the boards in the same way.

As for testing the operating voltage, you will need to have the amp turned on to test this. If you don't feel safe in doing this, then don't. If you want to try it, you will need to do exactly what I described in testing the caps for residual voltage, but with the amp turned on. If you have clip leads, you can use them to connect the meter to the caps before you turn on the amp and then just turn the amp on to read the meter and then turn it off again.

Just remember that working on any amp that is plugged in and turned on is dangerous and can cause you physical harm.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Sun, 16 Aug 2015 17:58:37 GMT  
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I work with 120/240 volts everyday so doesn't bother me working "live".

I'm using the external speaker jack on my lap top for the signal. Right now it's plugged into my K-200 and has no problem rattling the windows.....can't even come close to that right now with this amp.

Limiter is unhooked.

I'll check the filter caps like you said.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Sun, 16 Aug 2015 18:10:55 GMT  
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Tested the filter caps just like you said.....left one says OL then goes to disc. The right cap just read OL until I remove the probes then get a momentary reading of 23.2.....meter is set on uF.

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Mon, 17 Aug 2015 02:41:58 GMT  
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It sounds to me like the caps still have a charge on them. OL (overload?) and then disc (discharge?). If the amp has been off for a while, try leaving the meter leads connected longer and see if you get a stable reading after the meter goes through the discharge cycle.

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Subject: Re: Kustom XII bi-amp  
Posted by [stevem](#) on Mon, 17 Aug 2015 10:31:30 GMT  
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Yes, that's all you should need ( that one meter ) along with some of our help maybe and the schematic, which brings me to the point that other than the volume / crossover board on the face of the you should be able to pretty much use the output stage schematic for a metal face K 250 and 150 amp to go over the 3 output sections since they are just powered in parallel off of a bigger version of the power supply in the K250 heads.

I have not seen a full chassis picture of it yet, but if it has a choke in the power supply like in the metal face K150 amps than the power supply is a bigger version of that one.

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Subject: Re: Kustom XII bi-amp  
Posted by [C4ster](#) on Mon, 17 Aug 2015 13:13:12 GMT  
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Hi all, I have been following this post and I concur that a schematic is mandatory in this case, or any troubleshooting of amplifiers. But something just jumped out at me that I want to address. If you are comparing a K200 of any version, it has preamps that will take a low level signal, maybe 30mV or so and amplify it to the full output rating of an amp. Kustom amps have lots of preamp gain. If you then used that same signal without making any adjustments to it, and applying it to the Kustom XII, you WILL NOT get the same sound output as the K200. You are comparing apples to oranges. ChicagoBill is 100% correct about the levels necessary. Any power amp is designed to be driven from a mixer and subsequently, graphic equalizers, effects and other rack type equipment. These are line level sources, not instrument level sources that the K200 would be driven by. Sorry for the rant.  
Conrad

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Subject: Re: Kustom XII bi-amp  
Posted by [stevem](#) on Mon, 17 Aug 2015 14:22:53 GMT  
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x2, the k200 only needs 100mv to drive it well into full output and clipping, these bi amps need ten times that or better!  
If you feed the test signal into your k200 and then pull the feed for the bi amps input from the rca out of the k200 then that will get you in the ball park, and remember you do not need to have a speaker hooked up to the k200 to do this .

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Mon, 17 Aug 2015 16:43:01 GMT  
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Well the amp set unplugged all night.....readings from black to red on the filter showed -.017 same

with the other cap as well.

Still can't figure out why the left amp wires were cut if the output volume from it is the same as the right amp?

Should I switch the output jacks so they are at least in the correct place? Assuming they have been moved for some reason?

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Mon, 17 Aug 2015 16:44:46 GMT  
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I will hook up the K-200 and connect it like you said and see if there is any difference in the volume.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Mon, 17 Aug 2015 17:12:50 GMT  
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Well now we are cooking! My K-200 RCA jack must have a short.....all I heard was loud buzz. Hooked up the K-250, turned volume to second dot, started turning up the volume on the XII and could only get to about 6 before my ears started hurting. Horn is working perfect as well.

Looks like all I need to do is switch the horn jacks back or rather into their right spot and repair the cut wires, and rewire the switch back the right way.

So guessing even with the hatchet job that was done on this thing.....the parts must be working okay.

---

Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Mon, 17 Aug 2015 17:38:57 GMT  
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Someone give Conrad a big cigar.....he hit it on the head. Pleat was right also about using this and the K-300 head.....right now I have it hooked up to my 2 rebuilt 595 cabinets and my Altec horn.....this thing is loud. Get my other two 595's rebuilt and add the other horn and this thing will rock. And right now, I am only using two of the XII amps and not all three. I can't even imagine what this will sound like with the additional K-200 and K-400 amps and four 3-15's cabinets. Damn this is awesome!

Subject: Re: Kustom XII bi-amp  
Posted by [pleat](#) on Mon, 17 Aug 2015 19:19:11 GMT  
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Since so much has been rewired in your amp, I'd make sure that both low frequency amps speaker output jacks are correctly labeled on the back panel. Since it has two mono low frequency amps, it doesn't matter if low speakers jacks are in the left or the right low out. It's the horn amp that I'd be concerned with. You don't want to think your hooking up the horns and find out that your driving the horns with a low frequency power amp.

To check, I'd plug in a normal speaker cabinet to the horn amp speaker output jack, ( no chance of damaging a speaker with high frequencies ) Turn up the main volume control and then I'd turn up the horn amp volume control. If you don't hear a difference in gain with the horn amp control, then that indicates the horn amp speaker output jack is not in the proper location for the labels on the back of the amp.

pleat

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Subject: Re: Kustom XII bi-amp  
Posted by [lowa Boy](#) on Mon, 17 Aug 2015 19:34:53 GMT  
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I had already tried what you mentioned.....there is a define difference between the horn and woofer inputs. For some unknown reason someone had put the horn output into the left low description.....same with plugging the amp moxex plug into the wrong amp.

I have been running this thing for over 2 hours now without any problems and incredible sound. Pleat, the horn is working so much better now than it did with the crossover that I hooked up to it before. BIG thanks for steering me in the right direction on buying this amp.

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Subject: Re: Kustom XII bi-amp  
Posted by [lowa Boy](#) on Mon, 17 Aug 2015 19:41:36 GMT  
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Have just removed the old crossover from this horn cabinet as well as the L-pad and since there are two holes in the input plate, added a fuse and wired a parallel speaker jack in the event I decide to add another 16 ohm horn with this one to get an 8 ohm load.....pretty cool.....I could have 4 of these horns running.

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Subject: Re: Kustom XII bi-amp  
Posted by [lowa Boy](#) on Tue, 18 Aug 2015 02:02:28 GMT  
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The amp is still running good after almost 6 hours. Only problem I'm having is trying to remove the output jacks and moving them to where they belong. They are so corroded all they do is turn in the hole. I'm now starting to wonder if these were ever switched around after all. Still after looking at the wiring, I don't see how any of the molex plugs could have been moved to a different amp in this thing. I may just have to mark the outputs with tape.

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Subject: Re: Kustom XII bi-amp  
Posted by [pleat](#) on Tue, 18 Aug 2015 02:25:33 GMT  
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Can you just unsolder the speaker wires and re-solder them to the right speaker jacks?  
pleat

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Tue, 18 Aug 2015 04:23:43 GMT  
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It would be easier to just cut the two wires.....black blue to the output jacks and just reconnect them to the right output. Its too tight where the jacks are to do a good solder job.

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Subject: Re: Kustom XII bi-amp  
Posted by [stevem](#) on Tue, 18 Aug 2015 10:48:07 GMT  
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Man!, Bill and myself do not even get some minor pat's on the back for helping out YET again! Lol!  
Enjoy the SPL my friend!

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Subject: Re: Kustom XII bi-amp  
Posted by [C4ster](#) on Tue, 18 Aug 2015 12:16:03 GMT  
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Steve,  
Sometimes its just better to wait the storm out. These long threads sometimes just get further from the answer than closer.  
Conrad

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Tue, 18 Aug 2015 15:46:16 GMT  
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Hey Steve you KNOW I appreciate all the help you and Bill have provided.....the thing you don't know is that in the past two weeks Pleat has been helping me thru emails with this thing. He has spend an enormous amount of time with me on this as well as how to set up my PA system. Don't worry you'll get your share of fame when we start rebuilding the amps. All you guys are great in my book. Without all the priceless advice, this stuff would have been in the scrape heap long ago. You are the guys that keep it going. It's a team effort....what one guy doesn't think of, someone else does.....that's what makes this website so great. You guys are not just names on a website, I consider you all my FRIENDS.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Tue, 18 Aug 2015 15:54:34 GMT  
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Add another 12 pack to what I already owe you.....that should help lol.

On another note.....are there an plans for another Kustom get to gather any time soon? I really would like to meet you guys.

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Wed, 19 Aug 2015 06:39:13 GMT  
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Hey if you're supplying the beer, why don't we all meet up at your house.

Glad to hear you got the amp working.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Wed, 19 Aug 2015 16:00:59 GMT  
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Hey come to Marshalltown Iowa any time.....door is always open and you can drink beer till you bust.....out here in the country we have lots of tree's.....pick your favorite. lol

It would be great if we could all get together some weekend if Kustom doesn't have any plans for another festival any time soon. Meet somewhere centrally so we could all get together and swap lies.

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Subject: Re: Kustom XII bi-amp  
Posted by [chicagobill](#) on Wed, 19 Aug 2015 16:46:37 GMT  
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Gee, a guy living in Marshalltown and he plays Kustom amps. Go figure.

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Wed, 19 Aug 2015 17:53:23 GMT  
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Guess what Bill....we now have indoor plumbing, cable tv and the internet. Keeping shoes on sometimes is a problem but damn we is getting educated too.

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Subject: Re: Kustom XII bi-amp  
Posted by [pleat](#) on Thu, 20 Aug 2015 01:17:06 GMT  
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We always have at least two problems. When and where to have a convention. There are about 20 core collectors I hang with daily. Everyone wants it in their backyard. We driven to Chanute in 09-10 and 2012. We did a regional gathering in Indy in 2011 and last summer we did one in VA. One collector in VA has over 380 pieces of kustom amps, speakers, organs, guitars. That one was a blast.

Consensus has been no more than a 6 or 7 hour drive. Kind of hard since we have collectors from CA to VA. The bulk of collectors could drive to Nashville, but where in Nashville would be a challenge. a couple of us tried three different times the beginning of 2015 to get something going and the emails go quiet. This is the 50 anniversary of Kustom.

pleat

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Subject: Re: Kustom XII bi-amp  
Posted by [Iowa Boy](#) on Thu, 20 Aug 2015 03:02:29 GMT  
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Oh man that is just so wrong. Is there even a Kustom museum anywhere?

Family reunions are hard as hell to organize so I can imagine how difficult something like this would be. Maybe Vegas.....everyone would make an effort to go there and there are always cheap airline packages and hotel deals to be found not to mention a great weekend get away.

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