
Subject: Major Bass Combo Restoration Project

Posted by [trainwreck_joe](#) on Tue, 24 Jan 2012 01:01:49 GMT

[View Forum Message](#) <> [Reply to Message](#)

Where to begin?

Just this past weekend I received the guts of a 1971 1-15 K-100 bass combo amp from an old friend of mine. Components are all there, along with the original front panel, and the open-top, metal "box"--but that's it. The cabinet and its speakers (not to mention the original castors!) are long, long gone.

Does anyone know if there's anybody out there who can build vintage Kustom cabinets from scratch to pretty much original specs? For that matter do any blueprints, specs, information or knowledge bases exist for how these cabinets were constructed?

By the way, the components are a complete mess--but it looks like everything is there. My old friend told me that the amp no longer works (I'm afraid to even plug it in in its current condition), but that it *could* just be a loose capacitor (wishful thinking on his part I'm sure).

I realize that I could probably just buy a vintage Kustom amp out on ebay for much less than the \$\$\$ it will probably take to restore this amp, but I have a lot of personal history with it. It goes all the way back to my high school days, and I'm absolutely floored that--even in the current state it's in--it's come back into my life.

Thanks in advance for any information just to get me started.

--TWJ

ps: Will upload pics of what I have asap.

Subject: Re: Major Bass Combo Restoration Project

Posted by [chicagobill](#) on Tue, 24 Jan 2012 02:18:01 GMT

[View Forum Message](#) <> [Reply to Message](#)

Welcome to the place. We all have stories and feelings about pieces of gear that we had back in the day.

There are a few guys here that build their own cabinets and have sources for tuck and roll, maybe they can help you out. Another idea would be to look for another donor amp that can give it's cabinet and other parts.

I work on the electronics parts of these amps, so I will try and help you get the amp up and running if I can.

A couple of things that you can do are to find the numbers of the pc boards in the amp. That way

we can try and get the schematics for you. Also, if you do post photos we can get a better idea as to what sort of condition it is in.

Again, welcome.

Subject: Re: Major Bass Combo Restoration Project
Posted by [trainwreck_joe](#) on Tue, 24 Jan 2012 17:55:57 GMT
[View Forum Message](#) <> [Reply to Message](#)

Thanks, ChicagoBill.

Well, took my camera downstairs last night to take pics--batteries were dead and no others in the house. So new ones for the camera are on my to-do list for today.

But I did take a good look at all the components with a strong flashlight. Overall it looks pretty good. All the circuit boards look OK--just grimy and dirty--although who knows what components might have gone bad over the 30 years or so this was laying around in my friend's cellar.

So first I'd like to ask if blowing the loose debris out with compressed air would be ok. I can't see why not, but I'm not an expert. Beyond that, is there anything you can recommend as far as a component cleaner? Again, circuit boards are pretty grungy--everything is, but I don't want to end up gunking things up even more.

As far as damage, my friend was prescient enough to see a loose capacitor laying inside the head. He stuck it in a baggie and sent that off to me as well. I *looks* like it broke off at the power switch--that's really the only place where anything looks broken. Offhand, do you know if these amps tended to have a cap that went from the switch to a ground lug? The cap is completely hosed and will need to be replaced, but I don't see any number on it.

I'll upload pics of all this tonight. Also will get the numbers on the pc boards--great idea.

As far as a donor amp, would that be just watching Ebay or Craigslist--or are there other resources where something like that might be available?

Hey, thanks for the reply. I do appreciate it.

--TWJ

Subject: Re: Major Bass Combo Restoration Project
Posted by [chicagobill](#) on Tue, 24 Jan 2012 21:53:09 GMT
[View Forum Message](#) <> [Reply to Message](#)

In my experience, even the worst looking amps can be electronically fit. You really can't tell by just looking.

Yes, there is normally a cap that connects either side of the ac line to the chassis. This is a hum reducing grounding cap or is sometimes referred to as the "death cap". Some people remove this cap and change the ac cord to a three wire one.

As far as cleaning the internals, I use a shop vac with an old 2 inch wide paintbrush. I just carefully brush off the boards, etc. while holding the vacuum hose underneath to collect the gunk. When there is some serious stuff on the boards, I will sometimes use a spray bottle of distilled water and an old toothbrush. I don't recommend this unless you fully understand how to do this without getting other things wet and how to dry off and recondition the boards when you're done.

As for donor amps, eBay, CL and the guys here can be a possible source. Post an ad in the classified section and see if anyone responds.

Subject: Re: Major Bass Combo Restoration Project
Posted by [trainwreck_joe](#) on Thu, 26 Jan 2012 18:15:48 GMT
[View Forum Message](#) <> [Reply to Message](#)

Ok, here's a first pass on information for this amp:

Back Label:

- Model K 100C-6 (that last number is hard to read--could be a 5 if 6 makes no sense)
- Serial# 50101
- Pat. No. 210,129

The only circuit board I was able to remove to check the number was the one on the back (cable/power switch) side of the "box". Here are the numbers on it:

PC 900
KEI-1

Will get the front side pc board numbers asap. Many of the screws on the control knobs that, among other things, hold the boards in place were frozen. Didn't want to force anything, so I sprayed them with a little WD-40 to see if that would free them up a bit. Will check them tonight.

Also still working on getting pics. Long story--decided to borrow a better camera to do it!

That's all for now.

--TWJ

Subject: Re: Major Bass Combo Restoration Project
Posted by [stevem](#) on Fri, 27 Jan 2012 11:17:37 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hello and welcome also!

A product called PB Blaster (white spray can) which can be had from most auto part stores is light years faster than WD-40 as long as its not dried sugar from soda, or sum from spilled beer that is binding the nuts on.

On some plexi front amps like yours I have had to center punch the hold down nuts on oppsite sides and use a very small hobby type number drill to make two holes and then colapse and snap the nut off the pot.

If you need to go this route get at least 4 drill bits and drill real slow as when the bits bite through the back side of the nut they tend to snap unless you power the drill chuck by hand for better control.

Keep us informed on your progress.

Subject: Re: Major Bass Combo Restoration Project
Posted by [trainwreck_joe](#) on Fri, 27 Jan 2012 19:09:28 GMT
[View Forum Message](#) <> [Reply to Message](#)

Thanks, SteveM.

The WD40 actually did its job nicely and I was able to get the set screws out, knobs and luggs out, and remove the front panel PC boards to get the numbers. Looking at the amp from the front, they are, on the Left: KEI-1 1700-B; Right: KEI-1 1700-A.

I also have pictures--but trying to figure out how to display them in a message here. Is the only way to link to a website via the "Insert an image" button?

--TWJ

Subject: Re: Major Bass Combo Restoration Project
Posted by [Kustom_Bart](#) on Fri, 27 Jan 2012 23:29:23 GMT
[View Forum Message](#) <> [Reply to Message](#)

get a photo bucket account and link them to here is the easiest way to do it.

Subject: Re: Major Bass Combo Restoration Project
Posted by [trainwreck_joe](#) on Sat, 28 Jan 2012 00:35:36 GMT
[View Forum Message](#) <> [Reply to Message](#)

Thanks, Kustom_Bart. Yeah, that was pretty easy.

--Ok, so here's the link to my photobucket account:

http://s1148.photobucket.com/albums/o566/trainwreck_joe/

I made it public so it should be accessible--let me know if not.

Let me apologize up front for the blurry shots--especially of what I believe is the death cap (top row). Orange on one side, silver on the other. In the second shot I was trying to show how this cap is split--and missing its one end. Again, there is no cap between the power switch and the ground lugg--just what looks like a broken off leg. When I place this cap in that area with its leg on the ground lugg it seems to "fit".

As you can (or maybe can't) see the innards are pretty dirty--but it doesn't look like there's any major damage.

Thanks for giving it a look--and hope these shots are good enough. Let me know if there's anything in particular you'd like a better shot of.

Subject: Re: Major Bass Combo Restoration Project
Posted by [pleat](#) on Sat, 28 Jan 2012 12:11:46 GMT

[View Forum Message](#) <> [Reply to Message](#)

It looks like the the power switch may be wired incorrectly, which may be the reason the orange cap was removed, it's hard to see from the photo. The white wire from the power cord goes directly to the lower right tab of the switch. If wired correctly the black wire from the power cord goes to the fuse holder and the other end of the fuse goes to the top right tab of the switch. The two center tabs of the switch are black wires that go to the transformer section. The orange cap goes from the chassis ground to the top center lug of the switch. Wiring a new three prong ground AC cable, the black and white wires of the power cord goes to the same lugs as the old two wire AC cord, and the green ground wire of the new cable goes to the ground tab of the chassis, and the orange cap can be removed. Your photo shows that the fuse may have been bypassed, (best I can tell from the photo) Does the amp power up, or is it DOA? If you can post a better photo and explain what the amp is or is not doing, will help a lot in giving some answers.

pleat

Subject: Re: Major Bass Combo Restoration Project
Posted by [cassent5150](#) on Sat, 28 Jan 2012 16:20:35 GMT

[View Forum Message](#) <> [Reply to Message](#)

For all general purposes I would leave the cap off the power switch and make sure theres no wires coming from the switch that go to ground or chassis. Make sure the fuse is good, not more than like 3 amp rating and that it is in the black wire of the power cord. If you have a multi meter to test voltages, set it to DC voltage and with nothing plugged in at the inputs as well as speaker output, clip the meters black wire to the - green wire at the top of the 2 big power filter caps and clip the red meter lead to the red wire on top of the caps and power it up. What does it read? Also test the speaker output jack for DC voltage.

Subject: Re: Major Bass Combo Restoration Project
Posted by [chicagobill](#) on Sun, 29 Jan 2012 02:55:25 GMT
[View Forum Message](#) <> [Reply to Message](#)

The cap is broken, throw it out. It can't be fixed.

Yes, the photos are pretty bad, but they get the message across. I've seen worse as far as the dirt is concerned. It needs to be cleaned up. The connectors to the power transistors and the thermal cutoff switch all need to be serviced and cleaned.

As SteveC stated, you should check the basic amp functions. Please check the power switch wiring before you do anything else. If there are mistakes in the power switch wiring, it can cause you physical harm.

Subject: Re: Major Bass Combo Restoration Project
Posted by [steve](#) on Sun, 29 Jan 2012 17:29:01 GMT
[View Forum Message](#) <> [Reply to Message](#)

If it turns out you have a fuse that is blown, that's a sign of a problem and 9 out of 10 times it's in the output stage.

To be on the safe side and limit any more harm to the amp when you test power it up, I would install a slow blow type 1/2 amp fuse first. If that holds you may be in good shape.

Subject: Re: Major Bass Combo Restoration Project
Posted by [trainwreck_joe](#) on Fri, 10 Feb 2012 18:56:22 GMT
[View Forum Message](#) <> [Reply to Message](#)

Sorry for not responding in a while. I came down with a major case of flu (real h1n1 type junk) and was flat on my back for over a week.

Anyway, thanks to all for all the info. I've decided, however, to take the amp to be repaired professionally--by an older, local guy I know and trust (used to work for Dumble). Looking over the amp he said it shouldn't be hard or too costly to fix at all. Well, we'll see...

When I get it back, though, I'm still going to need to either get or build a cabinet. I'd actually prefer to build one, so if anybody can help me out with dimensions and materials Kustom originally used I'd very much appreciate it.

I'll definitely post a progress report when the amp comes back from the shop.

Again, thanks much.

--TWJ

Subject: Re: Major Bass Combo Restoration Project
Posted by [cassent5150](#) on Mon, 19 Mar 2012 04:49:40 GMT
[View Forum Message](#) <> [Reply to Message](#)

How is the project going. I have the same amp and have to admit its got the best bass tone of any kustom I have with a single 15 Altec 421A speaker. Steve C

Subject: Re: Major Bass Combo Restoration Project
Posted by [stevem](#) on Mon, 19 Mar 2012 10:30:33 GMT
[View Forum Message](#) <> [Reply to Message](#)

I will take some measurements of my K100 cab tonight and post it up in the morning. For bass use these could be had with 2-12" or 1-15" driver so you need to decide which you want. I have both and the 2-12" cab is louder (two drivers) and has better bass range mids to it. Both type cabinets are on the small side for bass use so whatever the dimentions are that I post for you I would add another two inches to the depth measurement!

Subject: Re: Major Bass Combo Restoration Project
Posted by [pleat](#) on Mon, 19 Mar 2012 11:59:34 GMT
[View Forum Message](#) <> [Reply to Message](#)

The amp is the K100-6 part of the self contained series according to the circuit board numbers. The literature section would be a great help in checking the photo of the SC series K100-6 to get a better visual on the cabinet. As far as dimensions, if you figure 2" per T&R the K100-6 is 28" wide, 26" tall, and 13" deep using the depth of the Charger dimensions of the SS series. The divider shelf board that the amp would be secured is 8" down from the top. These are general dimensions to construct a new box. I'd start with the chassis when you get it back and start building around it's dimensions to make sure the amp will slide in and also to have a starting point for the angle of the control panel.
pleat

Subject: Re: Major Bass Combo Restoration Project
Posted by [cassent5150](#) on Mon, 19 Mar 2012 20:17:38 GMT
[View Forum Message](#) <> [Reply to Message](#)

I believe this is the combo amp he has in this photo of my Kustom Collection linked below

<http://www.flickr.com/photos/57807996@N04/5336453389/>

This would be a piece of cake to build or duplicate. This is the best sounding bass amp I have.
Steve C

Subject: Re: Major Bass Combo Restoration Project
Posted by [Kustom_Bart](#) on Mon, 19 Mar 2012 21:31:27 GMT
[View Forum Message](#) <> [Reply to Message](#)

I have a K150 with a 15" JBL in it like that....it really thumps with a bass guitar attached.

Subject: Re: Major Bass Combo Restoration Project
Posted by [trainwreck_joe](#) on Mon, 26 Mar 2012 22:02:05 GMT
[View Forum Message](#) <> [Reply to Message](#)

Thanks for all the followup posts--this is great!

Steve C -- thanks for posting the photo. Yep, that's it!

Unfortunately, I've had to put the project on hold for a bit (tax time, you know--I also sent my Line6 DL4 off to "drasp" for modding). Anyway, I'm hoping to get the circuit box in for repairs next month.

pleat: Thanks for the cab dimensions. That's a good start!

SteveM: Those speaker config decisions are interesting--I've been asking myself those same questions. Let me throw out another curve. Ultimately I'd like to use this amp for playing jazz guitar. The clean (but warm) sound of the old solid state Kustom is what I'm after (Wes dug sold state amps). I'm thinking a 2-12 config would be perfect for this, but what do y'all think--still too bassy? Keep in mind that I used to own a K100 4-10 as well many years ago. I always thought that amp was too bright sounding--and would use the two amps in tandem to round out the sound.

--Joe

ps: Looking at the photo again--where on earth would I come by a pair of those port holes?!

Subject: Re: Major Bass Combo Restoration Project
Posted by [Kustom_Bart](#) on Mon, 26 Mar 2012 22:32:47 GMT
[View Forum Message](#) <> [Reply to Message](#)

Again, why don't you just buy an entire amp??? I have a k-150 with a single 15" with some cig burns on top and a crack in the corner of a plexi face. I works great and is loud as heck. It has a new AC cord needs castors and handles. It has good grill and ports 1 piece back so it is sealed except the ports. I would take 300 for it plus you deal with shipping. It is black. Pleat has seen it.

Bart

can contact me btketner@charter.net You can make a new piece and put in 2 12's or whatever you want. you have lots of options.

Subject: Re: Major Bass Combo Restoration Project
Posted by [stevem](#) on Wed, 28 Mar 2012 10:39:58 GMT
[View Forum Message](#) <> [Reply to Message](#)

Speaker wise for mellow jazz I would go with 2-12s with a Hemp cone (Eminence makes a model like this) as the beaming factor of the high frequencys of any driver gets worse as you go bigger in diameter, and yes my K100 combo with 4-10s can be way brite!

As far as the ports that you need, parts express carries a whole selection of them, but you will have to spray paint the outer rim with chrome type spray if you want the full factory Kustom look, or you could send them out to a plastic rechromer that does car resto work and get the rim plated.

Subject: Re: Major Bass Combo Restoration Project
Posted by [trainwreck_joe](#) on Thu, 29 Mar 2012 21:41:13 GMT
[View Forum Message](#) <> [Reply to Message](#)

Bart: Why don't I just buy an entire amp???

Well, again (1) I have a personal history with this chassis (it was essentially my first friggin' amp) and (2) I like the challenge of rebuilding one pretty much from scratch--yeah, even if I might not be doing the majority of the work.

To me there's just sumpin' cool about taking a completely f***ed up piece of equipment and puttin' 'er right, you know? Just last night I finished up a small project, taking a Boss Metal Zone distortion pedal that I hated--and that finally broke--and not only fixing it but putting Monte Allum's mods in it as well. When I plugged it in I practically flipped--it's now a whole different animal. Needless to say, that was a satisfying experience.

I appreciate the offer on the amp--and no offense--but if wanted to buy a complete, working one I would have picked up the absolutely cherry, white sparkle number that was out on ebay a month or two ago. I think it went for less than 4 Bens too. I was bummed when the sale ended--and I almost bid on it--but I kept tellin' myself that that old chassis I got could potentially be restored into something pretty comparable.

Subject: Re: Major Bass Combo Restoration Project
Posted by [trainwreck_joe](#) on Thu, 29 Mar 2012 21:48:09 GMT
[View Forum Message](#) <> [Reply to Message](#)

Thanks for the tips, Steve--great info. I like the idea of getting the custom built ports chromed!

That 4-10 combo is odd. In my Fender DeVille I've got that config and if anything that amp has always been a little on the dark side.

I love that sound though, but I was always glad I went with that config instead of 2-12s.

--But for the Kustom, yeah, I'm going to go with the 2-12s.

Maybe that's the difference between solid state and a (at least hybrid) tube amp...

Subject: Re: Major Bass Combo Restoration Project
Posted by [Kustom_Bart](#) on Thu, 29 Mar 2012 22:00:43 GMT
[View Forum Message](#) <> [Reply to Message](#)

So buy one complete and screw your head into it with 4 screws and you are all good and you save a bunch of money and you have another chassis for parts.

Subject: Re: Major Bass Combo Restoration Project
Posted by [steve](#) on Fri, 30 Mar 2012 11:20:25 GMT
[View Forum Message](#) <> [Reply to Message](#)

The 10" drivers that Kustom used always had the aluminum voice coil covers, and these will make any amp sound to the brite side of things, not so much the difference between SS and tube!

I have found that painting over these with black liquid electrical tape brings the sound back in line with a non- aluminum dome driver, but if you are carefull you can cut most of the dome away and glue on a replacement paper cover from Weber speakers.

Subject: Re: Major Bass Combo Restoration Project
Posted by [mlzippy](#) on Sat, 26 Jul 2014 15:31:55 GMT
[View Forum Message](#) <> [Reply to Message](#)

I have an old Kustom K100-C6 amplifier that I have completely torn down and am refurbishing. I love the old amps because they are much easier to work on; no microprocessors or chips. Some of the things that I found so far are that some of the tantalum capacitors are shorted in the preamp boards. I also don't like the fact that the old setup does not have a ground. So, I am installing a grounded plug cable. I have gone to the extreme of even documenting the hole pattern of the front panel and the chassis on CAD. What can I say? I was bored one night and needed the drawing practice. I am an electronics technician by trade with over 40 years of experience if you have any questions. Thanks again for your post. I am glad that I am not the only one that appreciates the older stuff.
