
Subject: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Fri, 17 Nov 2023 12:03:52 GMT
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Hello, I'm new here - glad that I found it! - I just acquired a '69-'70 Kustom 100 (2) in amazing condition, and I'm wanting to upgrade the power cord from the 2-prong to a grounded 3-prong...I found this forum and a similar question/answer segment from 2013 I think, so rather than try and reply to that thread, I'm trying to ask through my own...I'm thinking replacing the cord is a good idea and safer than as-is, but it does work fine as-is too...isn't there an adapter of somekind that can fit over the 2-prong plug that would help, even if it did not totally solve the polarity issue? IS polarity an issue?

I've seen advice on how to do this, and I need to say I have not even opened the chassis yet to look inside, but...I'm thinking that the black and white wires will need to be connected to where the black and white wires were connected on the 2-prong cord, and the green will need to go to the chassis. My real question is about this "Death Cap" I've read about...where is it? Why is it referred to this way? Can anyone post pictures of one? Can it just be clipped and removed? If so, will the 3-way 'on-off-on' polarity switch still power the thing on and off?

I've had quotes from repair shops of \$200 or so to replace the power cord, and I just can't bring myself to pay that much...the amp head and cab are in mint condition, and it really sounds great too, so I don't want to screw it up, so any help y'all can offer will be greatly appreciated. Thanks in advance.

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [stevem](#) on Fri, 17 Nov 2023 22:07:35 GMT
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Here's some details to what needs to be done, and while it does take some work and specialty tools 200 bucks seems high to me, and I live in NY!

You need a 3 wire power cable of the length you want to have.

I get a good quality ac extension cable from a hardware store.

You need a new bigger Heyco bushing to fit around the now bigger 3 wire cable.

You also need the Heyco bushing tool to remove the old cable and bushing, and of course you need the tool to install the new cable with its now bigger bushing.

You need a grinder to like I use to open up the chassis hole to take the bigger bushing , or you can use a good size rat tail metal file to open up the hole if there nothing on the inside of the chassis blocking your movement of the file.

You need a crimp on wire ring to go on the green ground cable and a crimp tool or vise to put it on with.

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Sun, 19 Nov 2023 17:06:39 GMT
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Thanks steve for your reply...I have the tool to remove the strain relief collar, and I bought 2 new 15' power cables from Digikey - one slightly thicker than the other, as I plan to re-use the original strain relief (if I can get it in and out without destroying it!).

I'd really like some help with this 'Death Cap'...I'd like to see what it looks like so I'll know what to look for, and some help on how to remove it or disable it so the existing on-off-on power switch will continue to function...

thanks again steve

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [stevem](#) on Sun, 19 Nov 2023 17:30:37 GMT
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The cap is right on the on/ off switch so just clip it out and wire in your new cable.

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [rodak](#) on Wed, 22 Nov 2023 14:49:34 GMT
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Steve: Can you point us to a source for the Heyco strain relief and tool? They heyco.com website lists about a bazillion different strain reliefs, and they don't seem to sell direct to the consumer.

I have one amp and an organ that need this done. I like having the plug with the clip that attaches to the wire after wrapping it. The only place I've found for these is vacuum cleaner cords on Amazon:

https://www.amazon.com/dp/B00EUKM73Y/?coliid=I303IJU5ZREOMZ&colid=8QDSB2VXC1PC&psc=1&ref_=list_c_wl_lv_ov_li_g_dp_it

https://www.amazon.com/dp/B00EUKM4XM/?coliid=I3LQV69OCVLBZO&colid=8QDSB2VXC1PC&psc=1&ref_=list_c_wl_lv_ov_li_g_dp_it

Those suckers are nearly 30 bucks each. Do you know of any better source for them?

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Wed, 22 Nov 2023 15:55:44 GMT
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thanks again steve, I plan to take a look over the weekend

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [stevem](#) on Wed, 22 Nov 2023 17:38:26 GMT
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Mouser electronics stocks the Heyco 1150 bushing that works with 18/3 cable which I assume you will use, and they stock the tool also.

I have never found a 3 conductor cable with the molded in clip on the plug end.
I use common clip on cable Rap's that have elastic.
These are used for audio mic cables and such, but they come in bags of 10 or 20.

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Fri, 24 Nov 2023 11:53:26 GMT
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the reverb tank is suspended from a couple of cross braces on top of the chassis, but after connecting the patch cables the reverb does not work...I did see that it's a 2 spring system and it's missing one spring...it has 031-0005-00 stamped on the tank, but no manufacturer or model name anywhere...if I wanted to replace this tank, what would you recommend?

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [stevem](#) on Fri, 24 Nov 2023 23:56:58 GMT
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Direct drop in replacement reverb tanks can not be had any longer.
We have to go with one's made for a Musicman amp .

To work with Kustom amps the output jack on the tank needs to get grounded to the tank to shield it properly.

These tanks can be bought from Antique electronics and it's part number is p-rmod4fb3d1b.

Note that just like the original tank the output side of the replacement tank needs to be mounted the furthest away from the power transformer.

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Sat, 25 Nov 2023 13:07:55 GMT
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I found the tank, thank you.

Questions; When you say "To work with Kustom amps the output jack on the tank needs to get grounded to the tank to shield it properly."...please elaborate...there's a grounding wire on this old tank soldered to the tank case, and connected to a screw on one of those cross braces...is that

what you mean?

The old 2-spring tank was missing a spring - would that cause it to quit? The RCA input/output jacks on the board do not appear to be labeled, but the patch cables are too short to cross...can I assume the closest jack connects to the closest jack on the tank?

The output jack is already at the opposite end of the chassis from the power transformer...

Is it possible to get a replacement long spring, or better to replace the tank? The tiny clip/hangers for the missing spring appear to be intact...

The old tank was mounted open side up, and the replacement tank says in the description that it's mounted open side down...does that matter?

The fuse is soldered in...what is the rating of the fuse so I can have a couple spares?...3A slo blow?

and finally, the new power cable's got Brown, Blue and Green/Yellow, not Black and White like the old existing cable...is Brown Black, and Blue White when I'm replacing the old 2-wire? I'll use the nut that the Death Cap is screwed down with as my ground after I clip it out...

thanks again for your patience with my dummy questions! I'd like to be able to share some images to you can see the chassis inside, but how can I add images here?

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Sat, 25 Nov 2023 14:00:01 GMT
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Hey steve, please check this tank out...I stumbled across it, the price is killer, and the specs appear to be very close...from rubytubes.com...it's the RRVL3FB1C1B...three springs, medium decay...one thing that's notable is it's described as having the output jack grounded...caught my eye...thoughts? I've ordered the Antique Electronic tank too, just wondering about this one... hope you had a good holiday

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [carlc](#) on Sat, 25 Nov 2023 17:49:54 GMT
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backlineguy,

Here is the cord I've used for replacements. Yeah, about 30 bucks now, but you can make it the length you want and it has the molded plug clip.
<https://www.ezvacuum.com/bissell-2036762-steam-cleaner-power-cord-p-4286.html>

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Sat, 25 Nov 2023 19:28:19 GMT
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Thanks carl! That's great!...but I already bought a cable from Digikey...recommended by a tech...I like your suggestion because it has the clip on it like the original...

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [stevem](#) on Sun, 26 Nov 2023 14:31:08 GMT
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1) black in the old power cable that went to the fuse was hot, in your new cable Brown is hot and green / yellow is ground.

2)
If you go to this sites tech section and look at the schematic for the 803 board you will see that the output jack on the tank is grounded to the tank due to the way the rca jack itself is made. That ground wire you posted about needs to stay.

If the tank is original this jack assembly when screwed in place grounds out to the tank, but the input jack does not do that and this is done so that a hum making ground loop is not formed.

If you use any type of new or used tank this is the way the jack configuration needs to be.
2A) on the 803 board the rca jack closest to the red wires is the jack that feeds the input jack on the tank.

2B) most reverb tanks do not work because one of the small wires at jack has busted off due to the movement of the tanks spring trough. These can be soldered back on provided that the coil the wires feed is not open, as that is the other electronic failure point in most tanks.

2C) if these two points are ok and provided the very fine wire at each have there hooks still intact, then if you can turn up just a spring then you could get that tank back to working again.

2D)
The tank I gave you the part number for is not made to be installed the same, as in hanging upside down. However it should still work.

If the spring trough bottoms out then the 4 support springs can be moved to different holes.

I could not find a new tank that could be mounted the stock way and yet have the right input and output impedence.

The steel tag on the rear of the amp should say .9 amps, so use a 1 1/2 amp fast blow fuse.

Note that pictures can not be up loaded to this site.

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Tue, 28 Nov 2023 15:29:18 GMT
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That's great info steve, thanks. I'm inclined to try the new tank when it arrives, but I may just omit the tank for now, seeing as I have a digital Reverb/Delay I can use instead anyway...getting the power cord upgraded is priority 1 right now...and perhaps replacing the soldered-in fuse with a new fuse holder...I've ordered some 1.5A fast blow fuses too...

Glad I found this forum...super helpful folks here who share my passion for these old amps!

Thanks SO much...

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Sun, 03 Dec 2023 11:20:37 GMT
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ok, yesterday was the day...finally removed the strain relief, fired up the soldering station, and replaced the 2-prong power cord with the grounded 3-prong on my '69 Kustom 100 2...also replaced the fuse block since the original fuse was soldered in...question there...I picked up some 1.5A fast blow fuses, but the existing fuse was a GJV3, so I inserted that into the new clips...and long story short, it works great...BUT the power switch that used to allow polarity change does not power on in both directions (with the center position being OFF)...only one - which is really all I need, but any suggestions on why this is?

Also attempted to wire in a new reverb tank, added new RCA patch cables, but it does not work... with the reverb turned all the way down, if the head itself is jostled a bit, the usual spring reverb tank 'crashing' noise can be heard, but turning up the reverb knob does not produce any reverb...any suggestions on THAT one?

I remember you mentioning something about grounding - and the old/existing tank had a ground wire soldered to the outside and it was grounded to one of the cross braces...this new tank does not have this grounding wire...is that it?

Again, thanks for all the help on this one...I now have a beautiful, functioning - sans reverb - '69 Kustom 100 head with a grounded power cable...and the exterior tuck n roll on this thing is just beautiful too in charcoal ...

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Sun, 03 Dec 2023 12:04:14 GMT
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Hey steve...one more question please; you mentioned in a post that the steel tag on the back says .9 amps, so use a 1.5A fast blow fuse...why do you suggest 1.5A when the schematic lists a 3A fuse...I noticed the rating on the fuse when I replaced the Fuse Block to a clip-in type...

thanks again!

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade

Posted by [steve](#) on Sun, 03 Dec 2023 12:22:06 GMT

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Because while I have never measured the full current draw of a K100 there seems to be inaccurate fuse ratings for these amps.

For example in the schematic for the K100-5 (the PA head) the fuse is shown as 1.5 amps while all other K100 heads are shown with a 3 amp fuse.

A 50 watt amp (which these really are) does not need a 3 amp fuse.

If you look at all the k200B heads they all use a 3 amp fuse, yet have twice the output wattage as a k100.

Try the 1.5 amp fuse and play the amp loud to see if it pops, if it does there should then be no need to go any greater than a 2 amp fast blow type.

With a 3 amp fuse in there if there does develop a power supply / output stage problem then a bunch more parts will blow up before that 3 amp fuse lets go.

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade

Posted by [chicagobill](#) on Mon, 04 Dec 2023 17:16:15 GMT

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The replacement reverb tank should have both input and output jacks grounded. If the input jack is not grounded, there will be no complete circuit and the tank will not be driven with any signal.

All plexi front amps use this same type of tank. In the latter metalfront amps, the drive circuit places the input coil of the tank in the feedback loop of the driver chip, so these tanks need the input jack isolated.

All standard Accutronics tanks (and most other manufacturers) use the same codes on the tanks. The fifth place character describes the input and output grounding schemes. A= Input and output grounded, C= Input isolated and output grounded.

If the tank you bought has a letter C in the 5th spot, then you will need to jumper the ground at the input jack to the chassis ground of the case.

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade

Posted by [backlineguy](#) on Mon, 04 Dec 2023 18:30:41 GMT

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Thanks Chicago...the model of the tank I have is 3FB1C1D...what's " jumper the ground at the input jack to the chassis ground of the case"? The existing tank has a ground wire soldered to the side of the tank near the Input jack, and it's grounded to a cross brace of the chassis...

...and as much as I appreciate your help, most of what you typed was over my head. I'm not an amp tech, I'm replacing the old 2-prong power cord myself to try and save a few bucks, which I have. The reverb tank is not critical, but if it could work, that would help if I ever decided to sell it...I don't need it now, but I'd like to figure out how to get the new tank to work. Thanks again.

And steve, I'll have to get some 2A fuses...

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [chicagobill](#) on Tue, 05 Dec 2023 18:11:50 GMT
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The tank you have is a C tank. So all you have to do is to add a jumper on the input jack shell connection to ground, just like the one that is on the output jack.

Once both jacks are grounded you should have working reverb.

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Thu, 07 Dec 2023 14:05:13 GMT
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Will do, and thanks Chicago!

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Sun, 10 Dec 2023 17:54:47 GMT
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Hey Steve, thanks for your help...I've got the power cable taken care of....one more question, hoping you can point me in the right direction; the screws that hold the back of the cabinet on...I'm missing 9 of them...is this something you have seen or heard of? any direction will be appreciated, and thanks again!

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [steven](#) on Mon, 11 Dec 2023 17:21:29 GMT
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You need Philips head wood screws and finishing washers to match, I think the screws are #10 in whatever length you need.

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [steven](#) on Mon, 11 Dec 2023 17:33:29 GMT

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Any halfway decent hardware store should have this stuff.

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Wed, 13 Dec 2023 00:26:26 GMT

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OK, Thank you again!

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [steven](#) on Wed, 13 Dec 2023 11:48:49 GMT

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The finishing washer you are likely to find today are Aluminum, not chrome plated steel like the originals, so you might as well get enough to replace all of the rusty originals.

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Mon, 18 Dec 2023 11:16:37 GMT

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Thanks Steve...I consider myself very lucky not to have anything rusty on this classic amp. I was able to find the screws and finish washers, and the washers I picked up were very close to the originals, so I think they're fairly close..hard to tell which are original. I've left the tank out at this point, and the power cable is perfect - switch and all work as originally, but without the polarity.

Thanks again guys for all the help and suggestions. I'll be back!

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [carlc](#) on Sat, 27 Jan 2024 15:32:21 GMT

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backlineguy,

For the screws like(similar) the original what you want are oval heads; you can get them here: [fastenermart.com](#). They don't have direct replacements since the originals were chrome plated. They do have them in zinc plated wood screws, or what I bought were the oval head sheet metal screws in stainless steel (no worries about rust like the originals). Work great. They have #8 for the backs, #6 and even the small ones for the name plate and speaker jack. They also have the countersunk finishing washers in zinc plate, nickle plate or stainless steel.

Where are you located? I have a bunch of these.

Subject: Re: '69-'70 Kustom 100 2 power cord upgrade
Posted by [backlineguy](#) on Sun, 28 Jan 2024 13:56:43 GMT
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Thanks Carl...I'll definitely check them out, I appreciate the info. I've just been playing through it a lot, and really, really loving it. In my youth (15 yrs old) I really had no clue about tone, distortion, etc...I bought a 1968 Sunburst Strat from my girlfriend's older brother in '75 for \$200, I'd turn the thing up loud, and that was about it! I kept that original K100 until I was 22, actually used it in the studio once as well, and the contrast between my Kustom and the lead players Fender amp was great... man, I spend a lot of time just admiring it too. It's like brand new cosmetically so it's a treat...I saw a black K100 B-2 I think it was (100w head and the 215 cab) with the tuck n roll - not even close to the same condition as mine...a few cigarette burns on the head, rips with the stuffing/foam showing through in a couple of places - dude was asking \$1800...I paid 1/6 of that, so either that guy is dreaming, or I found the unicorn of K100's...
Either way, I'm incredibly happy and thankful to have mine.
