
Subject: Rare m-350 B Head serial #2043
Posted by [Guitarfinder](#) on Thu, 07 Apr 2022 20:20:55 GMT
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Hi all, I am an amp tech but having trouble with this rare M-350 B head.
I have looked through all the technical stuff on this site with no luck.
This head has two channels, left side is Intensity, Speed, bass, volume and treble, with 2 inputs
right side is volume , bass, treble with 2 inputs.
It does not have reverb or boost.
I can find no # on the board, it does have 2- Mallory 25v 4000mfd can caps.
Any help or info would be greatly appreciated.
I am new to old solid state amps but have all the gear to test...
HELP!!!!

Subject: Re: Rare m-350 B Head serial #2043
Posted by [steven](#) on Thu, 07 Apr 2022 22:53:15 GMT
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Hi to ya!
Does this amp have a small transformer mounted on the upper left rear wall of the amp as you
view the chassis from the front?

Note that I will have to approve 4 more of your post before this site will allow you to just pop a
reply straight up.

Subject: Re: Rare m-350 B Head serial #2043
Posted by [Guitarfinder](#) on Thu, 07 Apr 2022 22:57:50 GMT
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Thanks for responding
There is a small transformer mounted on the base in the left corner.
Some of the wires go to the board, some go to the speaker Jack
I can send pics

Subject: Re: Rare m-350 B Head serial #2043
Posted by [steven](#) on Thu, 07 Apr 2022 23:08:32 GMT
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Pictures are not accepted by this site.
Send a bunch to my email if you would.
smag25ra5@yahoo.com.

Subject: Re: Rare m-350 B Head serial #2043
Posted by [steven](#) on Fri, 08 Apr 2022 10:38:48 GMT
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Thanks for the pictures.

Does the channel without the effects atleast work?

Also please send me one more picture.

Send a shot (1 shot) of the whole inside of the chassis looking down from above.

Subject: Re: Rare m-350 B Head serial #2043
Posted by [steven](#) on Fri, 08 Apr 2022 15:53:14 GMT
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This is a very early made amp, maybe even a late 1964 amp.

I have worked on one of these in 2019 and I could not turn up a schematic for it, but fortunately it was all stock.

These amps are only about 18 watts in output power and they use output Transistors that are Germainum types and where used in car radios of the day, and they are not cheap when you do find them NOS these days!

Right off the bat I see two problems with the amp.

1) it looks like big Transistor in the non effects channel next to the blue wire is a silicon type and in this amp all the small signal preamp Transistors are Germainium.

2) on the effects channel there are not enough Transistors I see on the board for it to do what it needs to do, infact I think I see where atleast one is missing.

It looks like a ton of replacement caps have been stuffed into the amp and with the electrolytic types it's important that they where installed the right way.

Once again let me ask you this , does either channel work right now?

Subject: Re: Rare m-350 B Head serial #2043
Posted by [Guitarfinder](#) on Mon, 11 Apr 2022 17:36:17 GMT
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Thanks very much for the input and help, when it came in the map had very, very low output on the right (simple) channel.

But now just a low hum...

Subject: Re: Rare m-350 B Head serial #2043
Posted by [steven](#) on Mon, 11 Apr 2022 20:20:12 GMT
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When you power it up are you reading a DC voltage on the speaker output jack, or no?

Subject: Re: Rare m-350 B Head serial #2043
Posted by [Guitarfinder](#) on Tue, 12 Apr 2022 15:27:06 GMT
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Hi, thanks again for all the help.
Reads -27, If I switch the leads it reads +27 volts
B

Subject: Re: Rare m-350 B Head serial #2043
Posted by [steven](#) on Tue, 12 Apr 2022 21:46:46 GMT
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That amp only has a positive power supply rail just like a tube amp that's cathode biased, so I don't understand how your reading a negative.
If the amp has a shorted output transistor you should have a positive voltage on the output jack.

What amperage fuse is in this amp ?

You should test both output transistors and the driver transistor next to that small transformer.

I would also test out all 4 diodes on that heat sink plate

Note that this type of early output solid state output stage has no circuit to protect the output transistors from failing if there is a short across the speaker output.

Subject: Re: Rare m-350 B Head serial #2043
Posted by [Guitarfinder](#) on Tue, 12 Apr 2022 22:57:18 GMT
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3 amp for power and 4 amp for speaker.
I will test those, thank you
Could something be installed backwards?

Subject: Re: Rare m-350 B Head serial #2043
Posted by [steven](#) on Tue, 12 Apr 2022 23:14:41 GMT
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What do you have for voltage on the blue wire that feeds the primary of that small driver / phase splitter transformer?

It should be positive.

While your working on this amp I would derate that 3 amp fuse to 1.5 and that 4 amp speaker fuse to a 1 amp, both should be fast blow types.

Subject: Re: Rare m-350 B Head serial #2043
Posted by [rodak](#) on Wed, 13 Apr 2022 13:47:11 GMT
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I've been watching this discussion, and I'm very curious - what does this M-350B look like? I haven't seen that one anywhere. Can you point me to a photo of one? I didn't see it in the Literature section.

Subject: Re: Rare m-350 B Head serial #2043
Posted by [stevem](#) on Wed, 13 Apr 2022 14:24:22 GMT
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From the pictures he sent me it looks just like a early Frank model with stove hat knobs.

Subject: Re: Rare m-350 B Head serial #2043
Posted by [rodak](#) on Wed, 13 Apr 2022 15:38:11 GMT
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Wow, I'd love to see that.
Guitarfinder: could you send those pics to me too?

vintagekustom2@combo-organ.com

Robert

Subject: Re: Rare m-350 B Head serial #2043
Posted by [Guitarfinder](#) on Thu, 14 Apr 2022 20:37:02 GMT
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Sent!

Subject: Re: Rare m-350 B Head serial #2043
Posted by [Guitarfinder](#) on Thu, 14 Apr 2022 21:09:48 GMT
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Hey, If I understand you correctly the blue wire from the small transformer to the board reads .0015 Vdc

Subject: Re: Rare m-350 B Head serial #2043
Posted by [steven](#) on Fri, 15 Apr 2022 10:26:43 GMT
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Ok, what do you read on that red wire that goes to what looks like a 2.2K resistor?

That's the Collector terminal of the driver Transistor and it should have full power supply voltage on it which comes into that driver transformer thru that what looks like a blue wire also going to the primary side of that driver transformer..

Subject: Re: Rare m-350 B Head serial #2043
Posted by [steven](#) on Fri, 15 Apr 2022 11:52:08 GMT
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In terms of a schematic for this amp I have found none yet, but what I have found is that a schematic for a Vox T60 model from the 60s is very close at least in terms of the General power supply and output stage, even the preamp is the typical 3 Transistor set up used back then, but for the T60 being a one channel amp, and the T60 uses Germainium Transistors also.

The main difference is that the Kustom uses a cap coupled output stage the uses one of those big filter cans that the amp has.

The T60 schematic can be found at the tube store schematic listing .

Subject: Re: Rare m-350 B Head serial #2043
Posted by [Guitarfinder](#) on Fri, 15 Apr 2022 20:27:07 GMT
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Howdy, I cleaned up some soldier joints and went over the board.
The red wire reads -25.72 Vdv
I don't understand the negative voltage.
I now get negative 25.72 at new points that were lower before.
I have discovered that I am getting voltage to new areas of the board that were dead before, although it is negative also...
Thanks to all helping!!

Subject: Re: Rare m-350 B Head serial #2043
Posted by [steven](#) on Sat, 16 Apr 2022 12:23:45 GMT
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Well unlike the mid year 1965 model that I have worked on it would seem that the model you have is built like a early table top solid state radio of the type that does not use a output transformer, or that Vox T60 model that I posted about in that they run on a negative power supply.

Proof of that would be the positive end of one of those filter cans going to ground.

If you indeed have a large negative voltage showing up on the hot of the speaker jack then you have a bad output transistor.

Have you swapped in lower amperage fuses yet?
