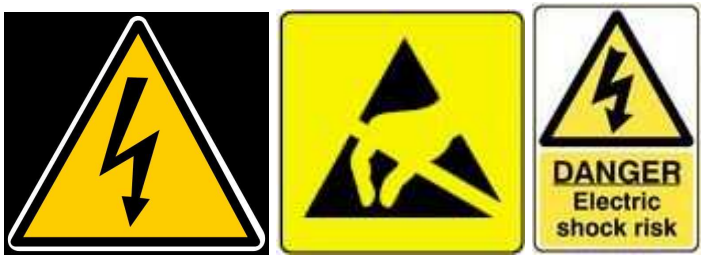
How to bias:

V3M

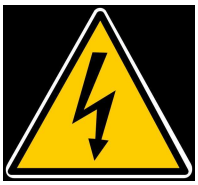




Rev A
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CARVIN

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Only a certified technician should bias Carvin amps, this is very dangerous, you can get hurt, please be very careful when working with any tube amp!

If you have changed the tubes make sure they are a matched set.

-The Bias for the V3M, V3MC should be **80mA** at 50W setting, with 120VAC.

STEP 1

These are the tools you will need:

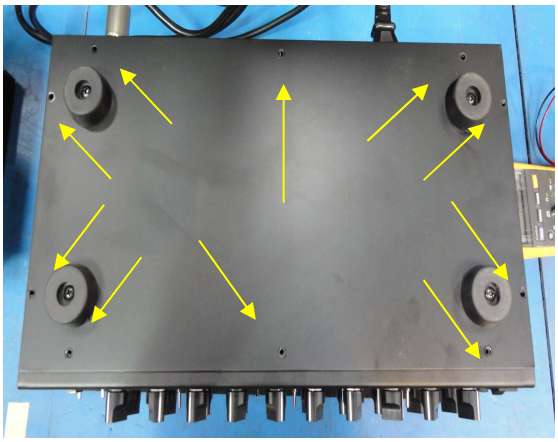
1. A flat head screw driver “small”.
2. A multi-meter, w/ milli amp reading.
3. Banana to clip leads.
4. Drill
5. Amp stand (optional).





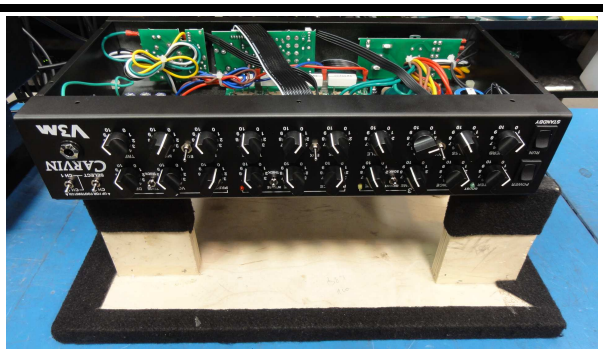


STEP 1A



You have to remove the bottom cover by removing the screws as indicated. It’s a total of 10 screws.

STEP 2



Set it in an amp stand. Be very careful with the tubes they can break.

NOTE: If you don't have an amp stand then support the chassis on some blocks of wood so that the power tubes are not touching anything - they get very hot

STEP 3



Plug in speaker to output 1 or 2, they are both the same, both jacks are in parallel.

NOTE: For speaker setup click on “Troubleshooting” and “Speakers”.

IMPORTANT: Do NOT turn on the amplifier without a speaker plugged in!

STEP 4



Make sure the OHM setting is correct. Improper setting will result in damage to the amp!

NOTE: On the back is where you will find the OHM setting, make sure the speaker matches the OHM setting.

STEP 5



Set the switch in the back to 50W.

NOTE: This step is very important, if you don’t set this to 50W setting you will not get the correct bias setting when you adjust it later in the procedures.

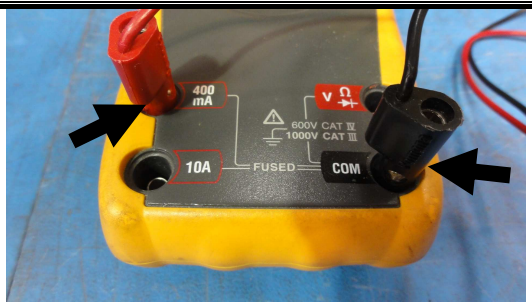
STEP 6



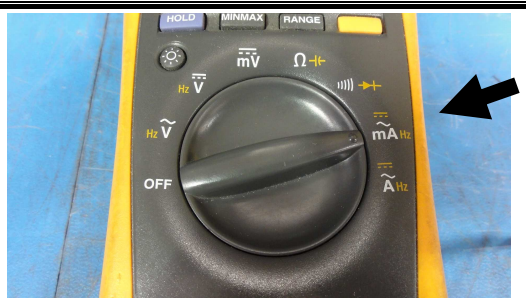
A) Lower the volume down on All channels.
B) Unplug your guitar cord from the input of the amp.

NOTE: If you have signal going through the amp, it will not be the true reading, when you set the bias.

STEP 7



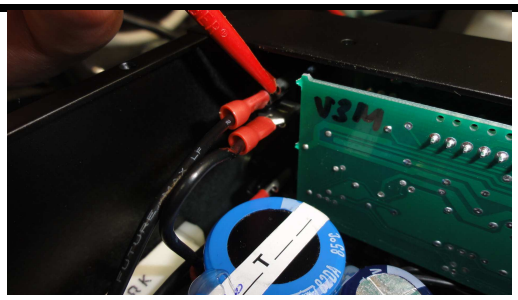
A) Connect the leads to the meter.
Make sure the fuse inside is good.

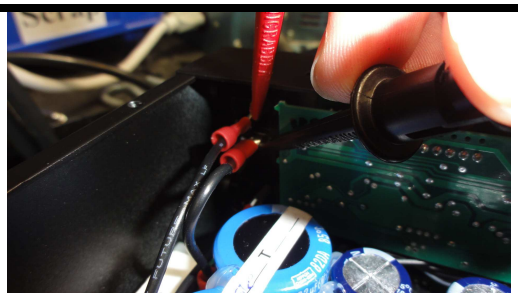


B) Set your meter to the milliamp (mA) position.
Set meter to DC Current, not AC current.

NOTE: If the Fuse inside your meter is open, the meter will never work. It will always read 0mA. In the meter above, mA and COM is selected, you have the option to plug in the lead on (A) but because the setting will be set to 80mA it's best to use mA.

STEP 8

1. 

2. 

Connect clips from meter to Standby Switch. It's easier to clip the leads to the wires that go from the standby switch to the main circuit, see picture above.

IMPORTANT: **Never power the amp ON before connecting the leads, you will get a big spark, you may blow the fuse of the Meter and or damage the amp.**

STEP 9



Plug in AC Cord.

NOTE: Sometimes when the AC Cord is new it does not want to go in all the way. Push firmly to force it in, if that is the case.

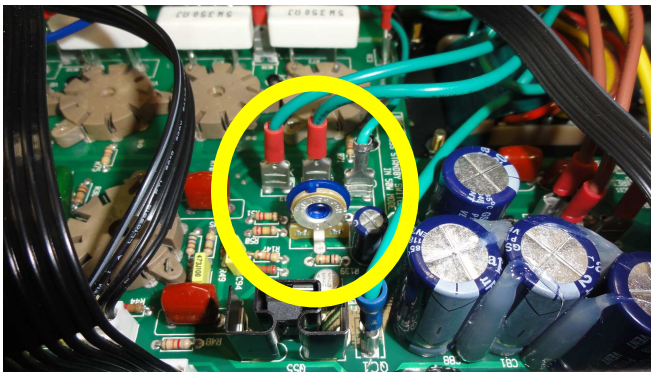
STEP 10



Turn the Power Button ON. Wait 2 minutes for the amp to get hot, after the 2 minutes you should see the meter read current. Your Meter will start low then increase up to 80mA, adjust it accordingly.

NOTE: Do Not turn ON the Standby switch, leave it on STANDBY.

STEP 11

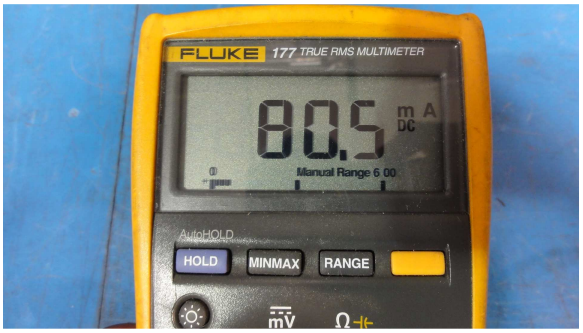


Bias Potentiometer above.

Check your meter at this point, if it goes over 80mA, lower it by turning the bias potentiometer with the screw driver, clock wise, if it's under 80mA bring it up by turning the potentiometer the other way.

It is OK and normal for the bias reading to fluctuate a little bit and may not be exactly 80mA but as close as possible.

IMPORTANT: Set your meter to DC Current, your meter should read (mA)



Good Bias

STEP 12

Power down Steps:
1. Turn OFF the amp
2. Disconnect the meter leads.
3. Unplug your AC cord and wait for the tubes to cool down, so that you can put back the bottom lid.

IMPORTANT: During biasing and normal amp operation if there is a burning smell or loud crackling noise that comes from the speaker, you should turn off the amp as your may have a bad tube. The same is true if your meter reads higher that 150mA or goes into overload. The tubes should never glow RED on the gray plate material, the largest metal part inside the tube. This indicates a major problem and extremely unsafe condition. If this happens turn off the amp immediately!

IMPORTANT: The tubes get very hot! Don't touch them, you will burn your skin if you do. If the amp is ON the tubes will get hot, even if you are not playing the amp, wait 30 minutes before handling the unit to ensure the amp cooled down.

IMPORTANT: This is not the only way to set the bias on this amp, this is the Carvin Approved method which is used on the Production line in the San Diego, California Factory.

NOTE: If the tubes are getting hot and 3 to 5 minutes went by and you don't see any reading on your meter check your meter, you may have the leads connected to the wrong place in your meter or the fuse on the meter is open.

EXPORT(230-240VAC 50Hz): Follow the same instructions.

Comments or questions email us at Carvinservice@carvin.com
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