VAC-in-the-BOX

Instruction sheet

Thank you for purchasing the Audio Alchemy VAC-in-the-BOX (VITB), *external* Phono Preamplifier. You obviously care about the quality of the music you listen to on your home audio system. In order to be sure that you obtain the best possible performance from your new purchase, please read the following instructions before operating your VAC-in-the-BOX.

IMPORTANT - READ FIRST!!

- Do not plug **anything** in until we instruct you to do so.

- Your Turntable may utilize either a moving magnet (MM) or moving coil (MC) phono cartridge in order to use VAC-in-the-BOX.

- VITB is a full phono preamplifier, not just a head-amplifier or pre-preamplifier. Therefore, it puts out a *line-level* signal. It must plug into an auxiliary input on your preamplifier, *not* a phono input.

- In order to use VAC-in-the-BOX you will need two pairs of high quality RCA cables; one from your turntable, *the* other to your preamplifier. Contact your Audio Alchemy dealer for assistance in selecting appropriate cables.

INSTRUCTIONS

1. Unpack your VAC-in-the-BOX and power supply and place them each in convenient locations; VITB near your turntable, power supply on the floor or shelf near an AC power plug within about six feet of the VAC-in-the-BOX. *Do not plug the power supply into the AC mains yet.*

To perform the gain and loading settings on VITB, the board must be removed from the chassis. Do this by removing the knurled ground nut on the right side, and the one Phillips screw on the left side. Remove the back panel. To remove the PCB, flex the board up in the middle and slide it out. Reverse this procedure to install the PCB back in the case. See the attached illustration for details on this and each of the next two sections.

NOTE: ***Always remove power from VITB before changing any of these settings.***

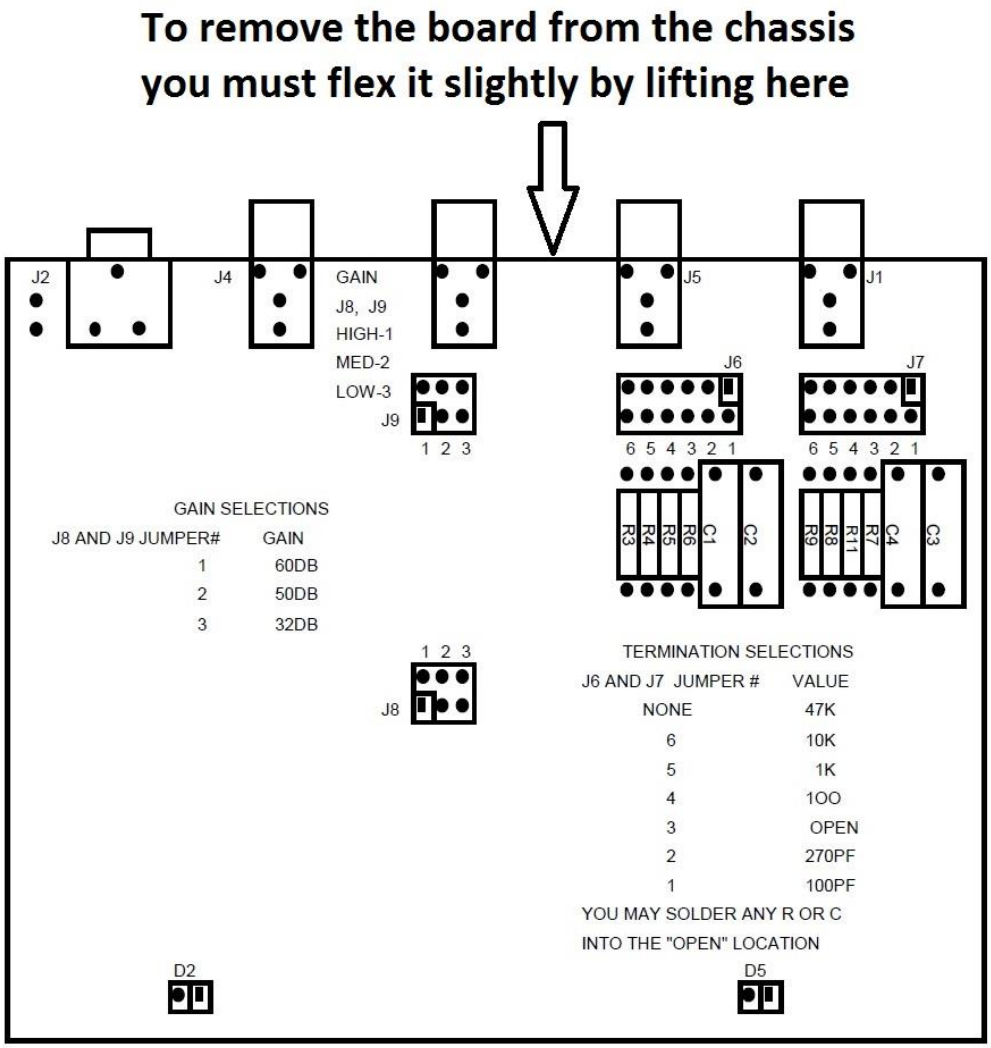
2. Phono cartridges require the correct resistive (and if moving magnet, capacitive) loading for optimum performance. The instruction manual for your cartridge will tell you what the correct loading should be.

All MM and some high-output MC cartridges use 47K Ohm loading which is VITB's default condition; therefore remove all jumpers from positions 3 through 6 of both J6 and J7. The correct capacitance for MM loading can be determined empirically or by calculation. By subtracting your input cable capacitance from the specified optimum load capacitance you will know *the* ideal capacitor value to add. We provide 100 pico Farads (pF) in position 1, and 270 pF in position 2. Use one or both (totaling 370 pF) to get within 10 % of the ideal value. Should you need a value other than these, a capacitor of your choice (polystyrene type preferred) can be soldered into position 3 and the attendant jumper installed to select it. Too low a capacitive value will sound slightly "bright" while too high will sound "dull".

Most MC cartridges require resistive loading below 47K Ohms for optimum performance. J6 and J7 of VITB includes 100 Ohms on position 4, 1K Ohm on position 5 and 10K Ohms on position 6. Select the closest value to your needs, or solder an exact value into position 3 and install the attendant jumper to set it.

Controversy exists within the audio community regarding resistive termination of MC cartridges. Some feel that 47K Ohms should be used far all cartridges, others think that 10 Ohms or 100 Ohms (or whatever) is best. We recommend that you experiment to determine what is best for your system. Whatever you do, be sure you set both channels (J6 and J7) to the same value.

3. All MM and high-output MC (approximately 2.5 to 5.0 mV) cartridges require low (32 dB) gain. Therefore set *both* jumpers J8 and J9 to position 3. For medium output MC (1.0 to 25 mV) cartridges use medium gain; set *both* jumpers J8 and J9 to position 2. Low output MC (below 1.0 mV) cartridges require the highest gain so set *both* jumpers J8 and J9 to position 1. Some experimentation may be required to determine the optimum setting.



When you have completed the gain and loading settings for VITB the board can be reinstalled in the chassis.

4. Attach a set of cables from the "LEFT and "RIGHT" audio output jacks of the VAC-in-the-BOX to your preamplifier (or receiver, depending on your system).

5. Attach the ground wire from your turntable to the ground lug on VITB. Note that on some systems other ground connections may provide a lower hum level. Try connecting a ground wire from VITB's ground lug to the preamplifier or to a known high-quality ground (water pipe or AC wall plate mounting screw). Experiment for best results.

6. Plug the DC power cord from the power supply into the "DC POWER" socket of the VITB. You may see a harmless small spark when you make this connection due to the power stored in the power supply from when we tested it at our factory. This is normal and nothing to worry about; don't let it surprise yon! Plug the AC mains power-cord for VAC-in-the-BOX into the AC receptacle. The "POWER" indicator should illuminate.

7. Select the appropriate input on your control unit and start your turntable. You should now be enjoying beautiful music!

If you have any problems or questions concerning the connection of your VAC-in-the-BOX, please contact your dealer or Audio Alchemy, Inc. for further assistance.

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