



VMT100

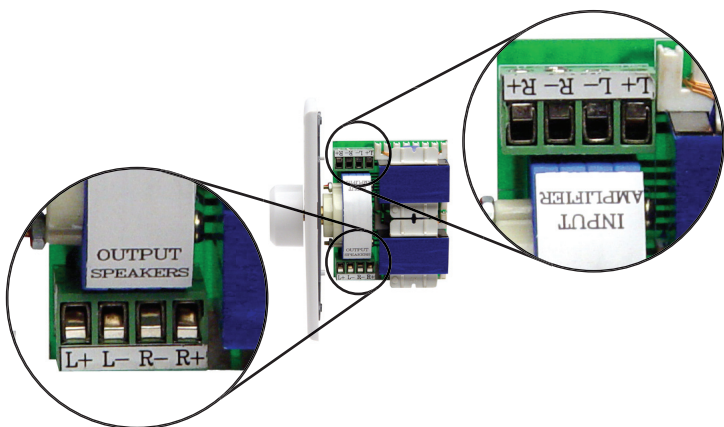
12 Position Impedance Matching Volume Control



Installing the VMT100

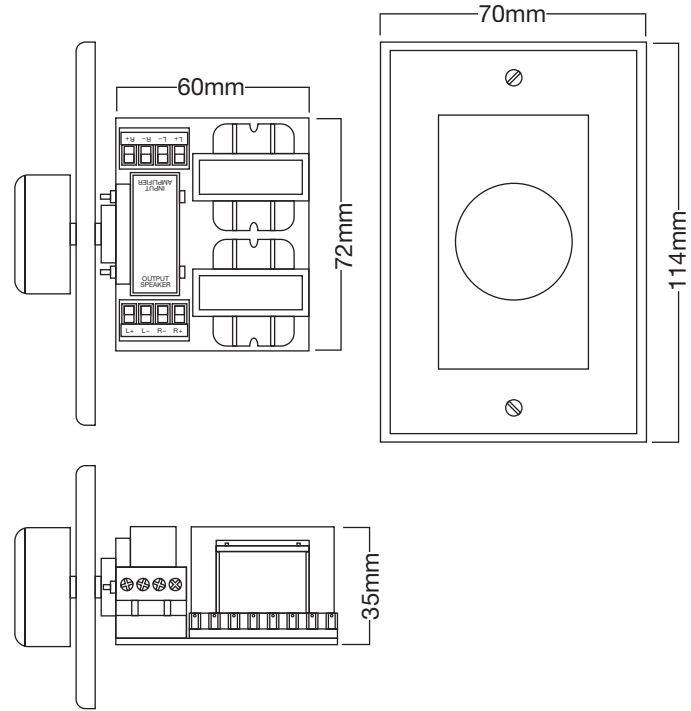
First you should carefully choose the location for mounting the VMT100. Consider where the volume control will be most convenient to you. Think about how you use the room where the VMT100 is to be located, and place the volume control specifically to enhance the pleasure of using the room. For example, in a dining room you might want to place the VMT100 near the door that leads in from the kitchen. This places the VMT100 in a well used traffic route and adds to the ease of access by those most likely to use the room and have music playing at background levels.

Next consider where your light switches are located. You never want to put the VMT100 into the same box as a light switch or dimmer. This almost assures you of picking up hum and noise from your electrical system or the electronics in the dimmer. Also, use caution to keep your speaker wires from running parallel to any electrical circuits in your walls. The speaker wire will act as an antenna and pick up hum and transient noise from the electrical system of your home. If you are using a metal J-Box you should take special caution to insure that none of the speaker wiring can short to the metal J-Box. Finally, when connecting the speaker wires to the VMT100 make sure that you properly observe the "Amplifier Input" and "Speaker Output" making sure you connect the proper wires to these terminals. Only strip off 1/4 inch of the speaker wire insulation to prevent the possibility of stray strands causing a short circuit. The maximum wire gauge that will properly fit into the terminal of the VMT100 is 14AWG.



The VMT100 Features high quality audio transformers, removable and solderless connection terminals and a computer grade double-sided glass epoxy printed circuit board. Impedance matching jumpers multiply the impedance the amplifier "sees" by two, four or eight times, allowing parallel connection of multiple VMT100s without damaging the amplifier. Twelve level positions provide a maximum of 54dB of attenuation. All VMT100 controls include a color matched knob, color matched plastic insert, color matched screws and metal mounting bracket.

Dimensions



Setting the Jumper on the VMT100 Volume Control

Set all jumpers to the same setting for all VMT100s connected to an amplifier regardless of the number of speakers connected to each VMT100. (Note: we recommend connecting only a single pair of speakers (4~8 ohm) to each VMT100. However there are exceptions that we will suggest later in this document.)

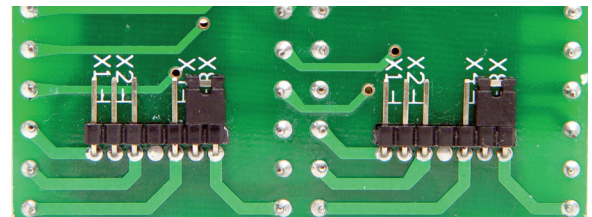


Figure 1

Figure 1 illustrates the location of jumpers which allow the user to select "X1" (one time the impedance), X2 (two times the impedance), X4 (four times the impedance) or X8 (eight times the impedance).

All VMT100s connected to the same amplifier should be set to the same setting.

Example: Four VMT100s each connected to a pair of 8 ohm speakers used with an amplifier rated to handle a minimum 8 ohm impedance should have all jumpers set to X4. See the chart below in Figure 2 for confirmation.

The VMT100 is shipped in a clear plastic bag within its packaging to prevent the loss of the jumpers in shipment. Check to be sure that each of your VMT100 Volume Controls has two jumpers on the back of the circuit board. If not you can call the Phoenix Gold Tech Support line to have replacements sent out to you. If a jumper is missing from one of the channels, that channel will be inoperative.

Jumper Settings for 8 ohm Amplifiers - Figure 2

		Number of 8 ohm Speakers								
		0	1	2	3	4	5	6	7	8
Number of 4 ohm Speakers	0		x1	x2	x4	x4	x8	x8	x8	x8
	1	x2	x4	x4	x8	x8	x8	x8		
	2	x4	x8	x8	x8	x8				
	3	x4	x8	x8						
	4	x8								

Jumper Settings for 4 ohm Amplifiers - Figure 3

		Number of 8 ohm Speakers																
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Number of 4 ohm Speakers	0		x1	x1	x2	x2	x4	x4	x4	x4	x8	x8	x8	x8	x8	x8	x8	x8
	1	x1	x2	x2	x4	x4	x4	x4	x8	x8	x8	x8	x8	x8	x8	x8		
	2	x2	x4	x4	x4	x4	x8	x8	x8	x8	x8	x8	x8	x8				
	3	x4	x4	x4	x8	x8	x8	x8	x8	x8	x8	x8	x8					
	4	x4	x8	x8	x8	x8	x8	x8	x8	x8								
	5	x8	x8	x8	x8	x8	x8	x8										
	6	x8	x8	x8	x8	x8												
	7	x8	x8	x8														
	8	x8																

Installation Examples

Example #1

Your amplifier is capable of 4 ohm minimum impedance. You will be using six pairs of 8-ohm speakers each connected to a separate VMT100 Volume Control. First, look up (0) in the four ohm speakers along the left hand margin of the chart in Figure 2. Next find (6) in the 8-ohm row along the top margin of the grid in Figure 2. Now cross reference the two and find that your jumper setting is 4X.

Example #2

Your amplifier is capable of handling a 16-8 ohm load, and you have 2 pair of eight ohm speakers in your dining room connected to one VMT100 Volume Control and 4 other pair of speakers distributed throughout you home, each pair connected to a separate VMT100 Volume Control.

First realize that the two pair of eight ohm speakers will need to be considered as one 4-ohm pair and the other four pair of speakers each represent and 8-ohm pair. Look up (1) in the four ohm speakers along the left hand margin of the chart in Figure 1. Now look up (4) in the eight ohm speakers along the top margin of the chart in Figure 1. Cross reference these to find that all jumpers should be set to 8X.

Example #3

Your amplifier is capable of 4 ohm minimum impedance. You will be using 10 pairs of 8-ohm speakers and 3 pair of 4-ohm speakers, each connected to a separate VMT100 Volume Control. First, look up (3) in the four ohm speakers along the left hand margin of the chart in Figure 2. Next find (10) in the 8-ohm row along the top margin of the grid in Figure 2. Now cross reference the two and find that your jumper setting is 8X.

Setting the Jumper on the VMT100 Volume Control (cont.)

Multiple VMT100s must be wired together in parallel. The combined impedance of all VMT100s must be greater than or equal to the lowest allowed impedance of your amplifier (consult amplifier specifications).

Use the appropriate grid in Figure 2 or 3 to locate the proper jumper settings for your installation. First select the grid for your amplifier (4 ohm minimum impedance or 8 ohm minimum impedance). Next find the number of 4 ohm speaker pairs you are using on the left hand side of the grid. Now find the number of 8 ohm speaker pairs you will be using along the top boarder of the grid. Cross reference the correct jumper setting and set all VMT100s to this setting.

If you need further assistance call Phoenix Gold Technical Support at 1-800-950-1449.

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Phoenix Gold International, Inc.
9300 North Decatur St.
Portland, OR 97220

www.phoenixgold.com