



MUSICAVC-70ZS 8 OHM STEREO VOLUME CONTROL

FEATURES

- Provides precision level control with slider attenuation.
- 70 watt rating achieves clear, stereo music reproduction in 8 ohm applications
- Impedance-Matching Capability of 2X, 4X and 8X provides flexibility in system design
- Low profile styling is a favorite of architects and designers
- 1X Setting allows use as a standard 8 ohm non-impedance matching volume control
- Decora-Style plate supplied in white, ivory, and almond

APPLICATION

Superior styling of the MUSICAVC-70ZS volume control combined with its fine tune level capability makes it ideal for residential/custom installation and professional applications of all kinds including: private homes, medical and legal offices, dental groups, studios, and high-profile businesses that demand clear music reproduction and precise level control.

GENERAL DESCRIPTION

The MUSICAVC-70ZS volume control provides clear, distortion-free stereo music reproduction when one or multiple loudspeaker pairs are powered by a single amplifier. MUSICAVC-70ZS is an 8 ohm device with a decora-style wall plate supplied in three colors to match virtually any decor. Frequency response is 20Hz - 20kHz (-3dB, -0).

The slim control slider projects a mere 7/16" for unobtrusive yet functional operation. Assemblies measure 2 9/16" deep and mount into a standard 18 cu. in E.O. Box (by others). Each volume control is supplied with matching plastic parts in white, ivory, and almond. These parts are the plate and slider/trim piece. The volume control can be changed to the color of your choice by changing out both plastic parts.

HOW TO CHANGE COLORS

- 1) Remove the slider/trim piece by compressing the four tabs on the back side of the metal plate.
- 2) Find the peg on the back of the desired color slider/trim piece. Locate this peg over the hole in the metal plate. Position the two knob slots over the two slider pegs and the four tabs over the four holes in the metal plate.
- 3) Press the slider/trim piece to the metal plate until the four tabs lock in place.

SPECIFICATIONS

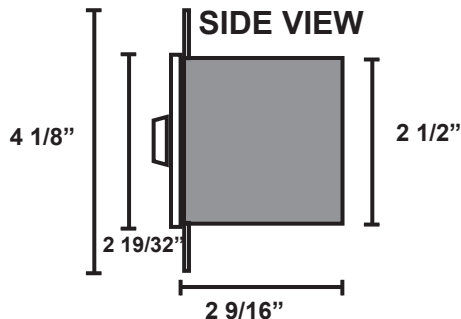
Power Handling	70 Watts
Impedance	8 Ohms
Frequency Response	20Hz- 20kHz (-3dB, -0)
Insertion Loss	.5dB
Type	Stereo
Maximum Attenuation	74dB



TOP VIEW



SIDE VIEW



IMPEDANCE SWITCH SETTINGS

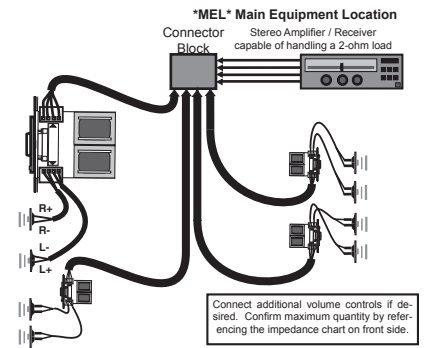
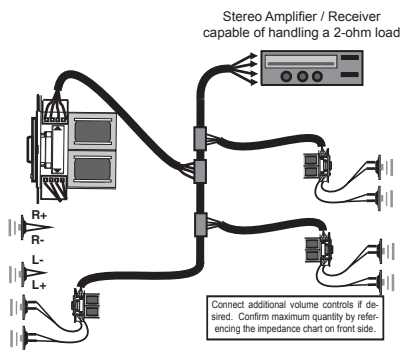
REQUIRED AMPLIFIER OUTPUT IMPEDANCE	MAX. QTY. 8 OHM LOUDSPEAKER PAIRS SWITCH SETTING				MAX. QTY. 4 OHM LOUDSPEAKER PAIRS SWITCH SETTING			
	@1X	@2X	@4X	@8X	@1X	@2X	@4X	@8X
8 OHM	1	2	4	8	0	1	2	4
4 OHM	2	4	8	16	1	2	4	8
2 OHM	4	8	16	32	2	4	8	16
1 OHM	8	16	32	64	4	8	16	32

INSTALLATION INSTRUCTIONS FOR MUSICAVC-70ZS

These diagrams show examples of a system that used 8 ohm loudspeakers and an amplifier capable of handling a 2 ohm load.

Set each MUSICAVC-70ZS volume control impedance switch according to the chart on the front of this sheet.

The wiring depicts how volume controls can be daisy chained or wired in home run fashion from each volume control to the amplifier.



Mounting Location:

Volume controls should be placed in accessible wall locations that are close to entry ways, exits, light switches, or telephones. They may also be ganged with other low voltage* controls such as keypads or infrared repeaters.

*Note:

MUSICAVC-70ZS should not be mounted into the same electrical box used for a 110 volt device even if the box says it is partitioned for this purpose. Speaker wires may pick up electrical noise which will be transmitted as a buzzing or popping sound to the loudspeakers.

Mounting Requirements:

MUSICAVC-70ZS units require a 18 cu. in. E.O. Box with a minimum inside depth of 2.620" and a minimum inside height of 2.550". Recommended boxes for new construction include: Carlon PVC switch box #B118A, and RACO PVC outlet box. For retrofit applications, Carlon PVC switch box B120R may be used.

Calculating the proper Impedance settings for the system:

MUSICAVC-70ZS is an impedance-matching stereo volume control that allows multiple loudspeaker pairs and volume controls to be connected, in parallel, without the additional cost of a separate impedance-matching device. For flexibility in system design, MUSICAVC-70ZS has three impedance matching capabilities: 2X, 4X, and 8X as well as a 1X non-impedance matching setting that allows the unit to be used as a volume control.

To determine which setting should be used (1X, 2X, 4X, and 8X) you will need to know the number of loudspeaker pairs, the loudspeaker impedance, and the load capability (output impedance) of the amplifier. Most amplifiers will handle a load down to four or two ohms with some going as low as 1 ohm.

Using the chart on page one; cross reference the number of loudspeaker pairs to the amplifier impedance.

Example:

If you have 8 pairs of 8 ohm loudspeakers and an amplifier capable of handling a 4 ohm load you must set the volume control at the 4X setting for the amplifier to drive all 8 pairs of speakers at full volume. Note that the 2X setting allows only

4 pairs of 8 ohm loudspeakers to operate on a 4 ohm load. If however, you could select an amplifier with a 2 ohm output impedance, the same 8 loudspeakers could operate on a 2 ohm load (at the 2X setting) or 16 loudspeaker pairs (at the 4X setting). Whenever possible, the lowest switch setting for a given amplifier should be selected.

Changing Impedance Setting:

Once the proper impedance setting is determined, locate the impedance switch on the back side of the circuit board. Next, locate the 1X, 2X, 4X and 8X settings on the circuit board. If the settings are correct, continue to the next step. If the settings need to change, simply slide the switch to the correct setting.

Limitations:

MUSICAVC-70ZS limits the degree of impedance matching to eight times so that music quality and overall performance is not sacrificed. We do not recommend that any quality, multi-room music system be connected to a device which provides 16X impedance matching as it may limit the amplifier's power and system performance.

Pre wiring and Installation:

A) Mount the outlet box or plaster ring in the wall (see mounting requirements). Each room's wiring can be individually run back to the amplifier (home run) or connected from one room to the other (daisy chain). The daisy chain wiring method connects one set of speakers with volume control in parallel to the next, using connection block or crimp connectors in between. This method has the advantage of requiring less wiring for the system rough-in, but allows for little or no system upgrading for future applications.

With either method, be sure to mark the cable connected to the amplifier as (INPUT) and write down the color codes you have designated for the left channel, right channel, positive, and negative leads.

B) If using the "Home Run" wiring method, each room's speaker/volume control wiring should be individually run back to the Main Equipment Location "MEL" in a "Home Run" fashion. Run a total of four conductors of speaker cable from the amplifier location to

each room's volume control box.

Note:

Many building and fire codes require cable to be CL-2, CL-3, or FT4 rated. Check with your local building inspector before pre wiring.

C) Next, run a two-conductor speaker cable from the outlet box to the corresponding left and right speakers. Mark each cable (LEFT) and (RIGHT) and determine the polarity of each channel (positive and negative).

D) Cut the cable accordingly, allowing enough cable to hang outside the outlet box, to properly connect the volume control. Tuck the cable back into the outlet box to prevent damage during drywall installation.

E) Tuck the excess cable from inside the outlet box back out into the wall or fold wires carefully while inserting the volume control into the outlet box. Position the volume control so that the front bracket lines up with the mounting holes on the box. In some cases the MUSICAVC-70ZS may be a tight fit requiring it to be inserted on the right side of the outlet box and then slid left into the center position.

Note:

In retrofit applications, metal extension plates and non-recommended outlet boxes may require field modification to accept the units' higher and deeper profile.

Pre-Wiring and Installation

F) Secure unit with supplied silver colored screws. We recommend tightening the screws then backing them out 1/4 turn to allow movement side to side and front to back. This will allow the face plate to fit flush when the cover plate is installed.

G) Select the cover plate and screws that match the knob/trim piece color. Mount the cover plate and fasten with screws.

