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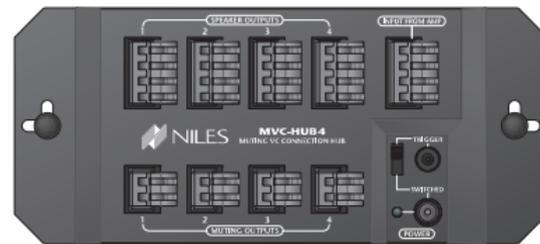
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INSTALLATION & OPERATION GUIDE



MVC HUB4

Muting Volume Control Distribution Hub



NILES®

BLENDING HIGH FIDELITY AND ARCHITECTURE®

MUTING MVC HUB4

VOLUME CONTROL DISTRIBUTION HUB

INTRODUCTION

The MVC HUB4 is a speaker/power distribution hub for use with Niles muting volume controls. It connects the speaker-level output of an amplifier or receiver to the muting volume controls and provides 12V power to the muting volume controls.

When you install a Niles MVC HUB4 Speaker/Power Hub in conjunction with Niles muting volume controls (MVC 100, WMVC 100 and/or WMVC 100E), the automatic muting feature is programmable. This allows certain locations (such as the guest bedroom and porch) to remain muted when system activation turns on other locations (such as the kitchen and family room).

A system with volume controls for multiple speaker pairs connected directly to an amplifier or receiver requires a large number of connecting wires. This creates an unsightly and often inconvenient installation, and increases the potential for connection errors.

The Niles MVC HUB4 eliminates such problems. Simply run a single set of wires from the amplifier or receiver to the speaker connectors and the 12V power plug on the distribution hub, and then connect each of the muting volume controls to the distribution hub.

The only product of its kind on the market, the MVC HUB4 allows you to distribute both the speaker-level output and the switched power output from your amplifier or receiver to the muting volume controls for up to four pairs of stereo speakers.

The MVC HUB4 mounts conveniently in a structured-wiring cabinet or on a wall.

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MUTING VOLUME CONTROL DISTRIBUTION HUB

FEATURES AND BENEFITS

The MVC HUB4 offers a number of improvements over other speaker/power distribution hubs:

- Rustproof, weather-resistant housing of high-impact, injection-molded plastic.
- Removable connector blocks for convenient wire connections.
- LED voltage indicator.
- Built-in protection circuit prevents equipment damage from incorrect wiring.
- Small size and compact footprint, designed specifically to fit into a standard structured-wiring cabinet.
- Snap-in “Christmas tree” plugs (supplied) for quick and easy installation in a structured-wiring cabinet.
- Also suitable for wall-mounting.
- Ideal for home and commercial sound installations.
- UL-rated to comply with all local building codes.
- 10 years parts and labor warranty.

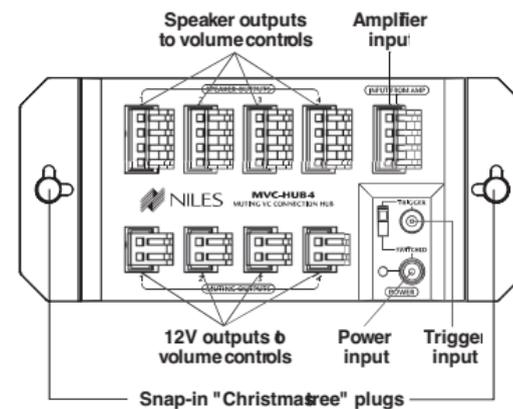


Figure 1

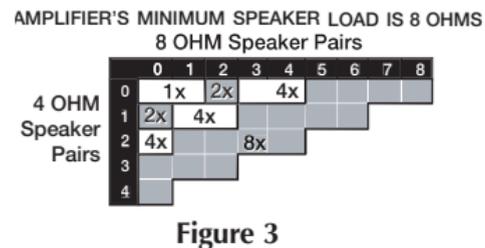
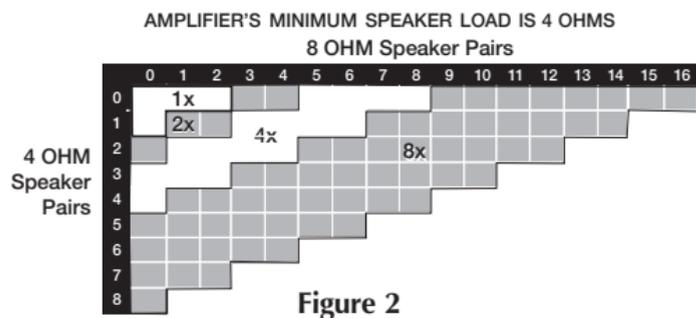
INSTALLATION CONSIDERATIONS

Calculating the Impedance Magnification Setting

To ensure optimal operation of your amplifier or receiver, your speakers must show it a load that it can handle safely and effectively. This requires the use of impedance-magnifying (IM) volume controls.

TECH TIP

Some speakers have selectable impedance. Before you proceed, please confirm that any selectable-impedance speakers in your system are properly set for the system you are installing.



CAUTION! Every speaker pair in the system must be connected to an impedance-magnifying volume control and set to the same magnification.

When you install the MVC HUB4 and connect the volume controls to it, doublecheck the switches on the volume controls to verify that they are set correctly for the impedance load of your speakers.

Use the following instructions and the accompanying charts to select the correct switch setting on the volume controls for the number and type of speakers in your system.

- Count the number of pairs of 4-ohm speakers and the number of pairs of 8-ohm speakers you are connecting. *Count pairs of 6-ohm speakers as 4-ohm pairs.*
- Determine whether the amplifier should see a 4-ohm load or an 8-ohm load. You should find this information in the owner's manual of the amplifier.
- Read the correct switch position from the charts on the next page. See **Figure 2** if your amplifier can drive a 4-ohm load. See **Figure 3** if your amplifier must have an 8-ohm speaker load.
- Set the switches on all of the controls to the same position (1x, 2x, 4x, or 8x).

Type of Speaker Wire

We recommend 16-gauge stranded copper speaker wire for most connections, and 14-gauge wire for runs longer than 80 feet. Don't use speaker wire larger than 14 gauge, because larger wire may not fit into the connectors. Never use solid-core, aluminum, or Romex wire with an IM volume control. For speaker-wire runs within walls, most U.S. states and municipalities require a special type of speaker wire with a specific CL fire

rating, such as CL-2 or CL-3. Consult your Niles dealer, building contractor, or local building-inspection department if you aren't sure what kind of wire is best for your application.

Mounting Location

The MVC HUB4 is designed specifically to fit into a structured-wiring cabinet, with snap-in "Christmas tree" plugs for convenient installation.

Alternatively, you can mount it on a wall, a basement floor joist, or some other unobtrusive location.

INSTALLATION

- Run all necessary wiring to the MVC HUB4. Label the wires for future reference.
- Secure the MVC HUB4 in a suitable location. In a structured-wiring cabinet, use the convenient snap-in "Christmas tree" plugs (supplied) to mount it in the cabinet frame. On a wall or other flat surface, remove the snap-in plugs, insert drywall

12 AWG



14 AWG



TECH TIP

Wire size is expressed by its AWG (American Wire Gauge) number. The lower the AWG number, the larger the wire. Thus, 12 AWG wire is physically larger than 14 AWG.

screws (not supplied) through the resulting holes, and secure the screws to the mounting surface. **DON'T OVERTIGHTEN THE SCREWS, WHICH COULD DAMAGE THE HOUSING.**

- Locate the connector plugs (and remove them if they are plugged in). The four-position connector plugs are for speaker wires; the two-position connector plugs are for 12V wires. See **Figure 1**
- Strip 1/4" of insulation from the end of each wire. Tightly twist the end of each wire until no frayed ends remain.
- Use a small flathead screwdriver or your thumbnail to raise the locking tabs, exposing the holes on the removable connector plug.
- Insert each wire into the appropriate hole on the removable connector plug, and snap the locking tab down.

NOTE: Maintain proper phasing. Connect the positive terminals on the MVC HUB4 to the positive terminals on the amplifier or receiver, and on the volume controls. Connect the negative terminals on the MVC HUB4 to the negative terminals on the amplifier or receiver, and on the volume controls. To help you avoid improv-

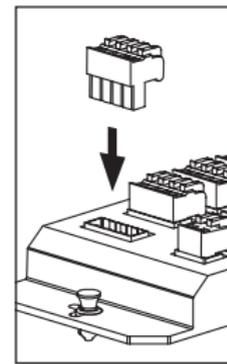


Figure 4

er phasing, the connector plug is keyed. Insert the smooth side of the connector plug into the smooth side of the socket. Don't force the scalloped side of the connector plug into the smooth side of the socket. See **Figure 4**.

7. Plug the connectors into the MVC HUB4 as shown in **Figure 4**. The single four-position connector plug at lower right is the speaker-wire input from the amplifier or receiver. The other four-position connector plugs are the speaker-wire outputs, each leading to a specific volume control. The two-position connector plugs are the 12V power outputs, each leading to a specific volume control.
8. Connect the power-supply wiring. Use a Niles Triggering Power Supply (FG00666) that converts 110V AC to 12V DC at 500mA. Plug the AC end into the switched outlet on the receiver; plug the DC end into the 12V female plug on the MVC HUB4.

TECH TIP

Maintain proper polarity. If the MVC-HUB4 is not in the same location as the amplifier or receiver, you must splice the AC and DC ends of the Triggering Power Supply onto the wire running from the amplifier or receiver to the hub.

PROGRAMMING CAPABILITY

Using Niles muting volume controls (MVC 100, WMVC 100, and/or WMVC 100E) enables you to program individual muting volume controls attached to an MVC HUB4. This allows certain locations (such as the guest bedroom and porch) to remain muted when system activation turns on other locations (such as the kitchen and family room).

To set a pair of speakers attached to a Niles muting volume control for automatic muting or unmuting, press and hold the mute button for 10 seconds. An LED blinks to indicate that programming has occurred.

Niles muting volume controls come from the factory pre-programmed in the automatic mute mode. They will unmute the first time you reprogram them. To restore automatic muting, reprogram them again.

SPECIFICATIONS

Mounting

In a structured-wiring cabinet, using convenient snap-in "Christmas tree" plugs (supplied)

On a wall or other flat surface, secured with drywall screws (not supplied)

Wiring Requirements

14-18 gauge, two individual runs of two-conductor speaker wire, or one run of four-conductor speaker wire.

Niles Triggering Power Supply (FG00665), converts 110V AC to 12V DC at 200mA

Unit Dimensions

6.85" wide x 3" high x 1.3" deep

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MVC HUB4

- MVC HUB4
- Snap-in "Christmas Tree" plugs X2
- Removable 12V control connectors X5
- Removable speaker connector X5