

MCM CUSTOM AUDIO

70V In-Wall Volume Control Installation Instructions

Model Numbers:
555-125
555-130
555-135



INTRODUCTION

The MCM Model 555-125, 555-130 and 555-135 In-Wall Volume Controls are designed for use with commercial sound 70V distributed audio speaker systems. They are designed for connection between the 70V output of an amplifier and the transformer primary on the speaker system. They adjust the volume of remote speakers by attenuating the audio signal, after the amplifier. To assure maximum power

transfer and efficiency, and minimal heat, these controls use autoformers instead of L-pads or resistor networks. **Note:** These controls are designed for 70V use only. They should not be used with traditional 8ohm or 4ohm speaker systems. Please contact your MCM Sales Representative for information on this type of control.

INSTALLING IN-WALL VOLUME CONTROLS

Mounting

All MCM in-wall volume controls are designed for installation in a standard single-gang electrical box. Take note that these controls require at least 2-1/2" mounting depth. Depending upon local code restrictions, they may suitably be mounted in open-backed boxes, brackets or mud rings. This type of mounting is often considered desirable as it allows for more space behind the control for routing cables. Multiple gang brackets and electrical boxes are available for installing multiple units in one location. These types of mounting devices are readily available from most home building centers, and various models from Carlon, Caddy and Arlington are readily available directly from MCM Electronics.

Caution: Low voltage devices, such as volume controls may not share an electrical box with standard AC wiring devices such as wall switches, AC receptacles or dimmers.

Volume controls are available with plates in the following configurations. The following information applies to all models.

Model 555-125: Decora Style

This plate is compatible with standard decora style multi gang cover plates and accessories, and includes a single gang cover plate. The unit is shipped as white, with ivory plates and knobs included for easy color change. This control occupies standard single gang space.

Model 555-130: Standard Plate Style

This is a single gang steel wall plate with control. The unit is shipped as white, with ivory plates and knobs included for easy color change.

Model 555-135: Stainless Steel Plate Style

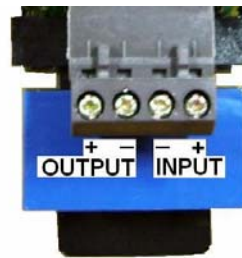
This is an institutional style, natural steel color single gang steel wall plate with control.

Connections

When routing cable through walls to speakers and volume controls, care should be taken to avoid close proximity to AC power lines. This is important for safety reasons, as well as reducing the possibility of noise being introduced on the line. When selecting in-wall speaker wire, be sure to use cable designed for that purpose. Two or four conductor, 16AWG or 14AWG wire is recommended, and most local electrical codes require cable to carry a CL2 or CL3 rating. Be sure to verify compliance with local codes prior to installation.

Caution: Speaker cabling and AC power lines should never pass through the same opening drilled in interior wall studs.

Note input and output connections. Be careful to note correct polarity on both input and output terminals. To ease access to the screw terminals, the strip may be removed from the rear of the control. This is also useful since the strip may be installed at prewire, thus saving time during final trim out phase.



FINAL SETUP AND USE

Testing

Once all controls and speakers are installed, it is recommended that the system be tested prior to connection to the amplifier. This will ensure that the desired speaker load is present at the amplifier output, thus preventing possible amplifier shutdown or damage. The most effective way to accomplish this is to measure the impedance at the amplifier (without the amp connected).

An impedance measuring device is required to accurately accomplish this. Two cost effective examples of this device are the Tenma Audio Impedance Meters, model #72-6950 or #72-6947. These meters measure the impedance of a speaker system, at an audio frequency of 1KHz. This step can serve as a reliable method of preventing unreliable and potentially damaging operation later.

Note: Using a standard DMM, ohmmeter or multimeter is not effective for this purpose, as these devices measure impedance at DC, not at an audio frequency. Since a speakers and volume control devices impedance varies with frequency, a standard ohm meter will not provide accurate readings.

Setup

- Once the amplifier is connected to the system, prior to turning on the power, make sure that the amplifier gain (volume) is set to the **MINIMUM** setting
- Be certain that all of the In-Wall volume controls are set to the **MAXIMUM** setting
- Turn the amplifier on and select a desired music source
- Slowly increase the volume of the amplifier until sound is heard from the speakers
- Walk through all areas in which speakers are installed, and make certain that sound is present at all speakers
- If sound is not present at any speaker, turn off the amplifier power and check speaker connections
- Now adjust the volume of the amplifier to just above the level that will be considered the maximum listening level from the system
- Move through each area, adjusting the in-wall volume controls to a comfortable listening level

Note:

If at any time, the amplifier temporarily disengages, or shuts down, the system should be powered down and checked for proper connections. For additional information regarding distributed audio system installation, please consult documentation included with other components. For additional questions, please contact the MCM Technical Support Department at 1-800-824-8324, or send an email to tech@mcmminone.com.

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