



Micca M-CS Dual 5.25" 2-Way In-Wall Speaker

Thank you for purchasing the Micca M-CS In-Wall Speaker! This product has been designed for optimal audio reproduction performance in a variety of home entertainment configurations, with accuracy, clarity, and impact that discerning audiophiles listen for.

Please take the time to become familiar with the M-CS and the proper installation procedures as detailed in this manual.

Installation Tools

A proper installation ensures optimal performance from the M-CS. The following installation tools will be needed:

1. Drywall saw
2. Screwdriver, Phillips head
3. Masking Tape – 1.8 to 2.0 inch
4. Pencil
5. Bubble or laser level
6. Tape measure
7. Stud Finder

Mounting Location

When choosing where to mount for the M-CS speakers, be sure that there are no electrical wires, ducts, plumbing, gas pipes, or any other services running through the location. The M-CS can be mounted in any orientation in order to provide proper coverage at the listener's position. While it is most often mounted in wall, it can also be mounted in ceiling. Keep the following in mind while deciding where to mount the M-CS:

Orientation – The M-CS should be mounted horizontally as a center channel speaker, or vertically as front or surround speakers.

Separation – When used as front or surround speakers, the distance between a pair of M-CS

should be shorter than the distance from the speakers to the listener.

Height – Front speaker position should have the center of the M-CS at ear level of the listener when seated. Center speaker position can be above or below the TV/Display, whichever is closer to seated ear level. Surround locations should be just above seated ear level. If the surround location is very close to the listener, the mounting height can be up to 3 feet above seated ear level to compensate.

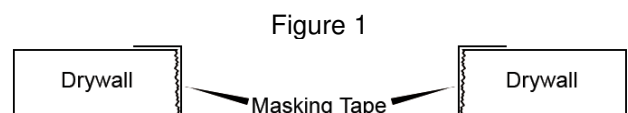
Tweeter Aiming – The tweeter should be aimed towards the listener for all mounting locations.

Mounting Preparation

The M-CS requires a cutout size as listed in the specifications section. An additional $\frac{3}{4}$ " is required in all directions behind the wall for attachment. Modern home construction typically utilize wall studs spaced on 16" centers, providing approximately $14\frac{3}{8}$ " between studs.

Use a stud finder to locate studs in the wall, including horizontal braces that may interfere with the mounting height.

Use the supplied template and a pencil to mark the position where the cutout will be made. Use a bubble or laser level to help ensure that the template is straight. Cut a small square hole in the marked location to double-check that there are no obstructions behind the wall.



Using a drywall saw, make the mounting cutout according to the template outline. Be sure to cut through the drywall at a 90 degree angle. Trim any jagged or loose pieces of drywall. Cover the cut edges of the drywall with strips of masking tape, folding over the edges on both the front and back sides of the drywall (See Figure 1).

This will prevent the gypsum in the drywall from being knocked loose from speaker vibration. Do not allow the edge of the masking tape to protrude more than ¼” beyond the cutout on the outside wall surface. Masking tape within ¼” of the cutout will be hidden by the speaker frame.

If the wall contains insulation, remove the insulation at the cutout and approximately 1 foot above and below it. This ensures adequate air volume for the M-CS to operate. Secure any loose insulation above the cutout.

If the wall is not insulated, it is recommended that the wall cavity is stuffed with approximately 2 feet of fiberglass insulation both above and below the cutout, starting at about 1 foot above and below the cutout. The insulation will provide damping to the speaker and isolate vibrations.

Speaker Wire

In wall speakers should be connected to the amplifier with UL rated CL2/CL3 speaker wire – this is required by building code for most consumers. Avoid installing speaker wire in parallel with household AC wiring to avoid potential hum. It is okay for speaker wire to cross AC wiring at a right angle, however.

It is recommended that a professional or licensed electrician perform the speaker wire installation if you are uncomfortable with the task.

The gauge or thickness of the speaker wire can affect the performance of the M-CS. Always choose a CL2/CL3 rated in-wall speaker wire of the appropriate gauge to prevent excessive speaker wire resistance. Using undersized speaker wire can result in lose of volume, detail, and dynamic range. Please select speaker wire for the M-CS based on the following minimum recommendations:

50' or less - 16 Gauge 2 Conductor CL2/CL3
50' - 80' - 14 Gauge 2 Conductor CL2/CL3
80'-120' - 12 Gauge 2 Conductor CL2/CL3
120'-200' - 10 Gauge 2 Conductor CL2/CL3

Amplifier speaker output terminals are typically color coded with black for negative (-) and red for positive (+). Similarly, the M-CS have speaker wire terminals with a black and red color coding. When connecting speaker wire, ensure that the positive terminal on the amplifier

is connected to the positive terminal on the M-CS. And similarly, the negative terminal on the amplifier should be connected to the negative terminal on the M-CS. Speaker wires typically use at least one of several possible methods to help maintain correct polarity, including color coded insulation or conductor strands, or printing of text and symbols along one side of the wire insulation.

Removing the Grill

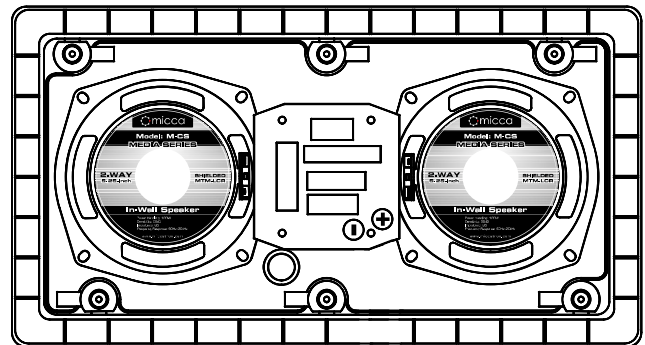
The M-CS has 6 mounting tabs on the back that rotate. While looking at the back of the speaker, rotate the tabs fully counter clockwise so that they stick out away from the speaker frame. Slide each tab towards the front of the speaker and when the tab screw comes in contact with the grill, push gently so that the grill comes away from the speaker.

The grill is held in place by contact pressure. Take care when removing and reinstalling the grill to not distort it due to excessive force.

Mounting the Speaker

While looking at the back of the M-CS, rotate the tabs fully clockwise so that they are inside the speaker frame (See Figure 2). If a tab does not stay rotated, tighten its screw until it stays rotated – do not over tighten.

Figure 2



Place the speaker into the wall cutout. One at a time, loosen each of the six screws until the tabs can turn freely. Next tighten each screw clockwise until the tabs press firmly against the inner wall surface. The speaker need only be properly aligned and held securely to the wall – do not over tighten to break the tabs or damage the wall.

Painting the Frame and Grill

The supplied template can be used as a paint shield when trimmed. Carefully trim along the inner line and place the paint shield inside the speaker frame with the grill removed. The frame can now be painted to match the wall surface. Use an appropriate primer for painting over plastic.

Only the front of the grill should be painted, paint on the sides will make the grill difficult to install onto the speaker frame. Be careful not to clog any of the grill perforations as it may affect speaker performance by restricting airflow.

Tweeter Aiming

Speaker performance is optimal when aimed at the listener. Because it is impractical to install in-wall speakers at an angle, it is sufficient to aim just the tweeter as it reproduces the most directionally sensitive audio frequencies. For this reason, the M-CS is built with a tweeter that can be aimed towards the listening area.

To aim the tweeter, gently press on its circular outer edge. Avoid touching the dome diaphragm or the diffuser. It helps to listen to a familiar piece of music with strong central image such as vocals while aiming the tweeter. When the tweeters are properly aimed, the center image should be coherent and stable from the listening position.

Installing the Grill

The speaker grill is held in place in the mounting groove by friction. Start by pressing the speaker grill into the groove in one spot, and then go around the speaker pressing more of the grill edge into place until the grill is fully seated.

In most installations, the natural friction between the grill and mounting groove is enough to hold the grill securely. If additional friction is needed, use the segments of black gummy material that is supplied with the speaker. Unwrap the gummy material from its protective paper and press it into the mounting groove on the speaker. Position the gummy material evenly around the speaker. Finish by press in the grill as described above.

Speaker Removal

The M-CS can be easily removed should it ever become necessary. Remove the grill using a small hook tool available from hardware and auto parts stores. Loosen the four screws until the tabs release from the ceiling and tuck back into the speaker frame. Pull the M-CS out of the wall and disconnect the speaker wire. The speaker can now be easily replaced or serviced.

M-CS Specifications

Woofers: Dual Magnetic Shielded 5.25" Mica-Filled Polypropylene Cone with Butyl Rubber Surround

Tweeter: 1" Pivoting Silk Dome, Ferrofluid Cooled

Crossover: 12dB/Octave with Compensation Network

Frequency Response: 60Hz-20kHz

Impedance: 8 Ohms

Sensitivity: 90dB 1W/1M

Power Handling: 120 Watts (Each)

Outer Dimension: 15.4" (W) x 8.3" (H)

Cutout Dimension: 13.8" (W) x 6.7" (H)

Mounting Depth: 3.1"