

## INSTALLATION INSTRUCTIONS

These instructions are for mounting the DM5 Microphone in a speaker post or menu board. The installation will take approximately 20 minutes.

### Tools Required

- Standard (slotted) screwdriver
- Phillips (crosspoint) screwdriver
- Soldering iron and solder
- Crimp caps or shrink tubing with heat gun
- Serrated knife



Figure 1. DM5 Microphone

## 1. INSTALLATION PROCEDURE

**CAUTION:** Remove power from the audio system before beginning the installation.

Typical DM5 Microphone installation involves placement of the microphone in its molded foam enclosure and mounting it inside the upper compartment of the speaker post, connecting it to the microphone/speaker cable wires from the drive-thru audio system, and filling the empty space behind the unit with acoustic foam (not provided). If the DM5 is mounted in a small area, its molded foam enclosure may need to be compressed in order to close the compartment.

Follow these instructions to install the DM5 in a typical speaker post. Installation in the microphone compartment of a menu board is similar to installation in a speaker post.

- Open the speaker post and remove any existing equipment, foam or debris. If there is an existing microphone, disconnect it from the audio system's microphone cable and remove it.
- Remove the small portion of the provided foam microphone enclosure, resulting in the two pieces of foam shown in Figure 2.
- Insert the DM5 Microphone cable through the hole in the foam enclosure, and place the microphone into the hole as shown in Figure 2.
- Insert the removed piece of foam back into the hole in the foam enclosure as shown in Figure 2, to fit snugly against the back of the microphone.
- Using a serrated knife, trim the foam enclosure so it is  $\frac{1}{4}$  to  $\frac{1}{2}$  inch larger than the upper speaker post compartment, vertically and horizontally, for a compressed fit. Retain the foam pieces to add to acoustic foam to fill the speaker post compartment, if needed.

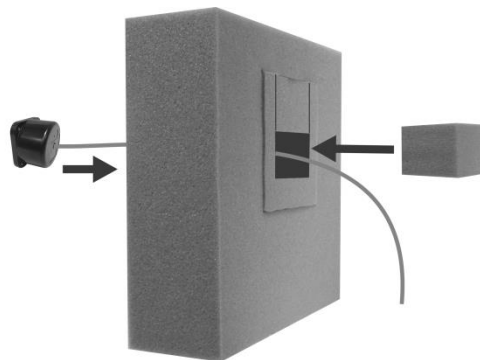
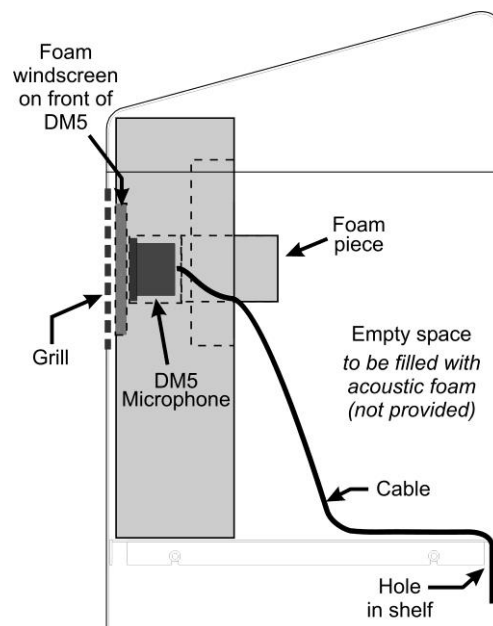


Figure 2. Placement of DM5 Microphone and foam in the foam enclosure

- Place the foam windscreen in front of the microphone, positioning it so it will cover the inside of the speaker grill as shown in Figure 3.
- Place the microphone, in its foam enclosure, into the upper compartment of the speaker post, so the front of the foam windscreen is **flush against the metal**, centered on the grill, as shown in Figure 3.
- Splice the audio system's microphone cable wires (new or existing) to the wires of the cable extending from the back of the DM5, according to the audio system wiring diagram. Solder the connection, and then cover the splice with shrink tubing or crimp caps.
- Fill the empty space behind the DM5 Microphone and its foam enclosure with acoustic foam (not provided), and close the speaker post.
- If the DM5 is replacing another microphone, the microphone cable may need to be rewired in the audio system base station. Wiring connections for the DM5 with HME audio systems are as follows.



**Figure 3. DM5 Microphone unit in typical speaker post installation**

HME System	Connections with Switcher Board	Connections with no Switcher Board
<b>System 6200 EOS HD</b>	For single lane or lane 1 of dual lanes to left Switcher Board J1 – 1, 2 and 3 (shield) For lane 2 of dual lanes to right Switcher Board J1 – 1, 2 and 3 (shield)	For single lane or lane 1 of dual lanes to Base Station Audio Board J6 – 1, 2 and 3 (shield) For lane 2 of dual lanes to Base Station Audio Board J14 – 1, 2 and 3 (shield)

## 2. IN CASE OF PROBLEMS

If there is no inbound audio when a vehicle is present, one of the following probable causes and solutions may apply. If the problem is not solved, call HME at 1-800-848-4468.

Probable Cause	Solution
Power off at base station	Verify the power is ON at the base station.
DM5 not wired correctly	Verify the DM5 is wired correctly.
Underground cable is damaged	Perform a continuity test on the microphone cable from inside the store to the DM5. Pull a new cable if needed. All 3 wires (red, black and drain) must be connected.

## 3. SPECIFICATIONS

**Microphone type:** Electronic  
**Impedance:** 200Ω

**Operating temperature:** -22°F to +140°F ( -30°C to +60°C)  
**Dimensions:** 3.5" x 1.75" (88.9mm x 44.45mm)

### Waste Electrical and Electronic Equipment (WEEE)

The European Union (EU) WEEE Directive (2002/96/EC) places an obligation on producers (manufacturers, distributors and/or retailers) to take-back electronic products at the end of their useful life. The WEEE Directive covers most HME products being sold into the EU as of August 13, 2005. Manufacturers, distributors and retailers are obliged to finance the costs of recovery from municipal collection points, reuse, and recycling of specified percentages per the WEEE requirements.

### Instructions for Disposal of WEEE by Users in the European Union

The symbol shown below is on the product or on its packaging which indicates that this product was put on the market after August 13, 2005 and must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of the user's waste equipment by handing it over to a designated collection point for the recycling of WEEE. The separate collection and recycling of waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local authority, your household waste disposal service or the seller from whom you purchased the product.



# HME

®

## SP10 Outside Speaker

### INSTALLATION INSTRUCTIONS

The SP10 is a speaker for use in Quick Service Restaurant (QSR) menu boards, speaker posts and enclosures. The instructions below are for a typical installation of the SP10.

- Strip approximately 1 inch (25.4 mm) of insulation from the end of the speaker cable, and  $\frac{1}{4}$  inch (6.35 mm) of insulation from each of the two cable wires, but do not tin the wires. Connect the speaker cable wires to the connector plug as shown in Figure 1.
- Insert the connector plug into the connector on the speaker as shown in Figure 1.

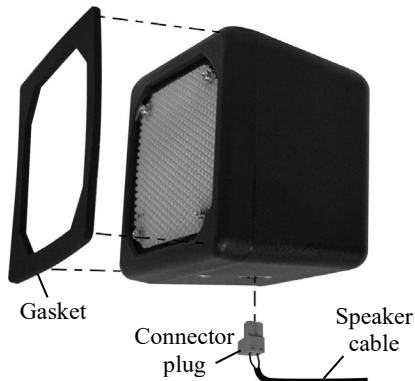


Figure 1. SP10 with gasket and cable connector plug

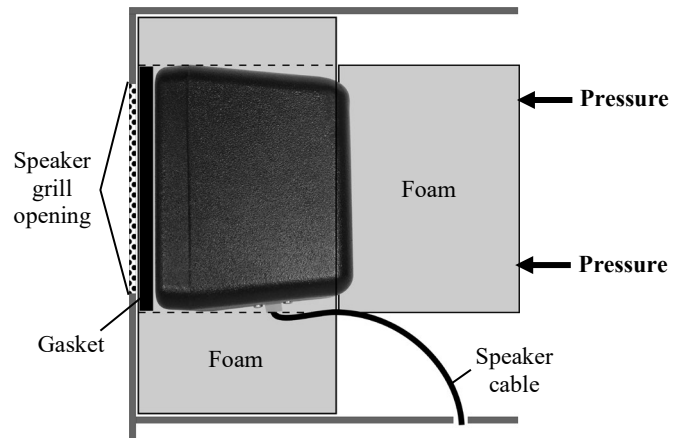


Figure 2. SP10 in speaker post, menu board or enclosure

#### If not using the optional mounting brackets:

- Peel the paper off the self-adhesive gasket, and press the adhesive side of the gasket against the front of the speaker in the position shown in Figure 1.
- Position the speaker inside the speaker post or menu board, with the gasket centered against the inside of the speaker grill as shown in Figure 2. The cable connector can be on the bottom or on either side. Align the opening in the gasket with the grill opening.
- Remove both inserts from the molded foam enclosure and place the foam enclosure around the speaker. Trim foam with serrated knife if necessary. Place removed foam inserts behind speaker to provide pressure to speaker, to ensure a good gasket seal against the speaker grill opening.

#### If using the optional mounting brackets:

If using the optional mounting brackets shown in Figure 3 to secure the SP10 inside the speaker post or menu board, follow instructions on the back of this sheet.

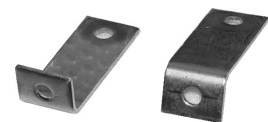


Figure 3. Brackets



**Figure 4. Attach brackets to speaker**

- Attach the brackets to the screw inserts on the sides of the speaker unit with the two Phillips (crosspoint) screws provided as shown in Figure 4.
- Hold the front of the speaker centered against the speaker grill of the menu board or speaker post. Mark the menu board or speaker post through the open holes in each of the two mounting brackets on the speaker, and set the speaker aside. Drill holes at the two marked spots, approximately the same size as the holes in the speaker mounting brackets.
- Peel the paper off the self-adhesive gasket, and press the adhesive side of the gasket against the front of the speaker in the position shown in Figure 1.
- Hold the speaker inside the speaker post or menu board, with the gasket against the speaker grill and the holes in the mounting brackets over the two drilled holes.
- From outside the speaker post or menu board, place the two washers on the enclosed security screws, and insert the screws through the two drilled holes. Inside the speaker post or menu board, place the locking nuts on the security screws. Tighten the nuts on the screws only enough to provide a good seal between the gasket and the enclosure.
- Place foam around the sides and back of the speaker as shown in Figure 2.

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