

INSTALLATION / MAINTENANCE INSTRUCTIONS

The SPP2 is a full-duplex speaker post, primarily for use in quick-service operations. It comes with separate speaker and microphone units. Some units also come with a light to illuminate the ORDER HERE sign.

These instructions are for standard installation of the SPP2 at drive-thru sites. The SPP2 is easy to assemble and mount according to the following instructions. For unusual mounting situations, special mounting kits can be ordered. SPP2 installations should take approximately one hour maximum.

CAUTION: All electrical connections must be made by a licensed electrical contractor.

When installation of the SPP2 Speaker Post and the drive-thru audio system have been completed, a functional check of the SPP2 should be done according to the audio system installation instructions. If any problem occurs that can not be corrected according to the troubleshooting guide in the audio system installation instructions, call HME Customer Support at 1-800-848-4468.

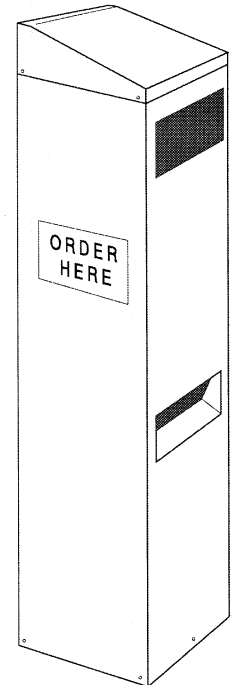


Figure 1.
SPP2 Speaker Post

1.0 INSTALLATION REQUIREMENTS

1.1 Tools Required

Phillips (crosspoint) #2 screwdriver
Standard (slotted) screwdriver
Hexagonal ball driver, 1/8 inch (3.18 mm)
Nut drivers; 5/16, 3/8 and 7/16 inch (7.94, 9.52 and 19.05 mm)
Socket wrenches; 3/8, 3/4 and 7/16 inch (9.52, 11.11 and 19.05 mm)
Wire nuts **or** soldering iron with solder and electrical tape
A high-speed drill with a 1/2 inch (12.7 mm) masonry bit may be required.

1.2 Preparation Required

A concrete slab must already be in place. At new installation sites it should have been installed by a contractor, specifically for the SPP2 Speaker Post. At some older installation sites, the SPP2 may be installed where another speaker post previously existed.

At new installation sites, there should be four threaded metal studs embedded in the concrete, in a 6-inch (152.4 mm) square pattern. At least two conduits should have been installed in the center of the slab, between the four studs. An additional conduit with electrical wires may also have been installed for light connections.

At older installation sites, configuration of the concrete slab may vary. For some SPP2 installations, an adapter plate may be required. For other installations, it may be necessary to saw off existing studs and replace them with new ones in the appropriate configuration. These procedures are discussed in section 2.8 and 2.9.

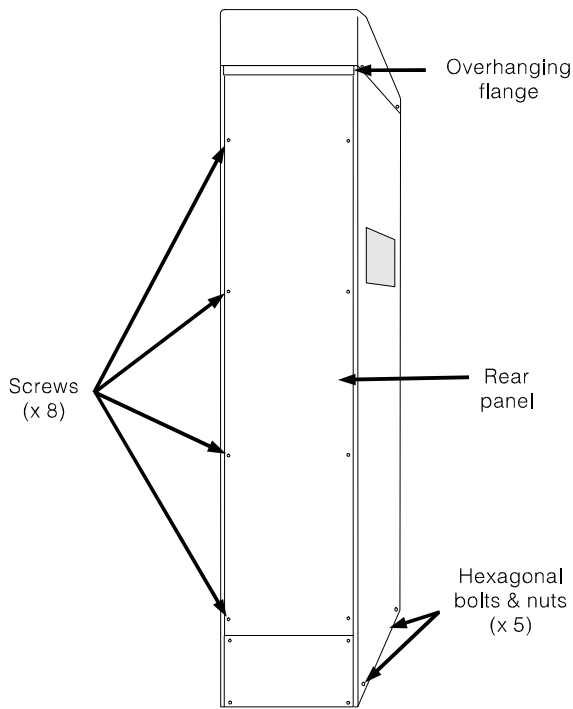


Figure 2. SPP2 rear view

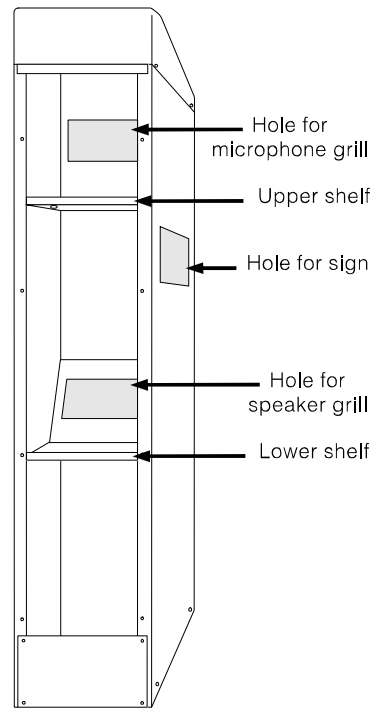


Figure 3. SPP2 rear view with rear panel removed

2.0 INSTALLATION PROCEDURE

For ease of assembly, locate a clean area where the speaker post can be laid down to be worked on without scratching its finish. Its shipping carton can be flattened on the ground and used as a work surface.

2.1 Open the Speaker Post

Remove the eight Phillips (crosspoint) screws from the rear panel of the speaker post as shown in Figure 2. Pull the rear panel away from the speaker post and slide it downward, out of the overhanging flange to remove it. Set the screws and the rear panel aside. With the rear panel removed, the inside of the speaker post should appear like Figure 3.

2.2 Install the Speaker and Microphone Grills

Follow the instructions in paragraphs 2.2.1 and 2.2.2 to install the speaker and microphone grills as shown in Figure 4, and in paragraph 2.7 to install the ORDER HERE sign as shown in Figure 9.

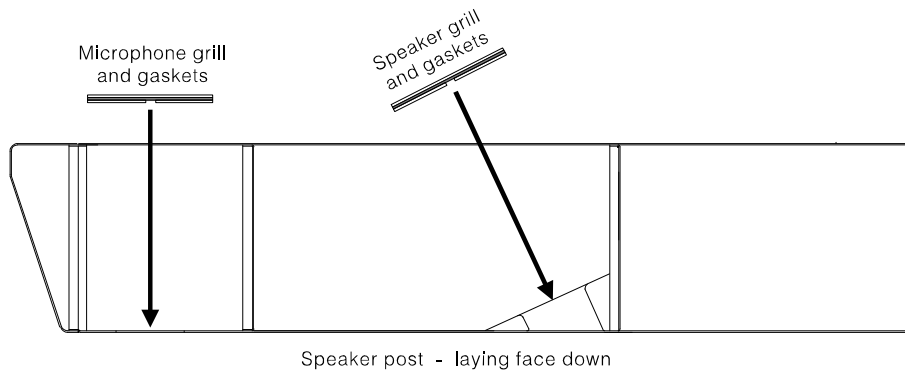


Figure 4.

Install the two grills in the speaker post

The **speaker grill** is the flat, metal grill sandwiched between two gaskets, and marked "SPKR." The **microphone grill** has a rectangular area that is raised on one surface. It is sandwiched between two gaskets, and marked "MIC." Install the two grills in the speaker post as follows:

2.2.1 Install the Microphone Grill

- ! Peel the paper off the two "¶" shaped gaskets on one side of the microphone grill to expose their self-adhesive surfaces.
- ! Position the microphone grill over the opening near the inside, top of the speaker post as shown in Figure 5A, so the adhesive side of the gasket is toward the outside, front of the speaker post. The gasket with the round hole should be facing you as you look into the back of the speaker post, with the opening in the circle pointing down. Align the two rubber grommets in the sides of the grill with the two threaded studs on each side of the grill opening, and press firmly on the rubber grommets until they are all the way down over the studs. **Be careful not to push the grommets out of their mounting holes.** Rub the surface of the gasket so the adhesive on the front gasket will stick evenly to the metal on the speaker post.
- ! Place two of the enclosed flat washers over the studs, and fasten them in place with two of the enclosed hexagonal nuts. Do not over tighten the nuts, or you may damage the grommets.

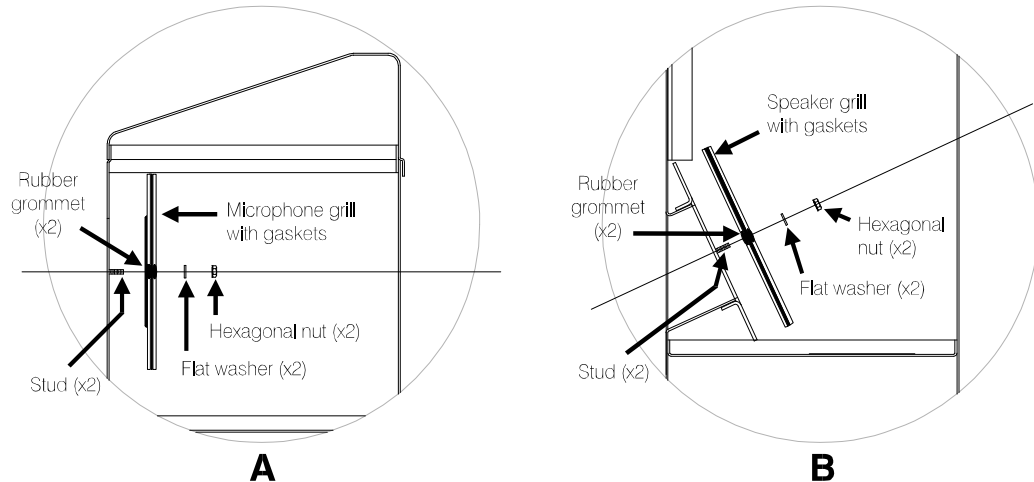


Figure 5. Installation of microphone grill (A) and speaker grill (B) in SPP2 speaker post

2.2.2 Install the Speaker Grill

- ! Peel the paper off the two "¶" shaped gaskets on one side of the speaker grill to expose their self-adhesive surfaces.
- ! Position the speaker grill over the opening near the inside, top of the speaker post as shown in Figure 5B, so the adhesive side of the gasket is toward the outside, front of the speaker post. The gasket with the round hole should be facing you as you look into the back of the speaker post, with the opening in the circle pointing down. Align the two rubber grommets in the sides of the grill with the two threaded studs on each side of the grill opening, and press firmly on the rubber grommets until they are all the way down over the studs. **Be careful not to push the grommets out of their mounting holes.** Rub the surface of the gasket so the adhesive on the front gasket will stick evenly to the metal on the speaker post.
- ! Place the remaining two flat washers over the studs, and fasten them in place with the remaining two hexagonal nuts. Do not over tighten the nuts, or you may damage the grommets.

2.3 Install the Microphone Unit

Install the SP2000A microphone unit above the upper shelf of the SPP2 Speaker Post in the position shown in Figure 6 as follows:

- ! Locate and remove the package of bolts, washers and nuts enclosed in the box with the microphone unit.
- ! Position the foam grommet flat against the microphone-grill gasket and rub it around the edges to fasten it to the adhesive on the gasket.
- ! Remove the nut that holds the base on the microphone unit.
- ! Position the four holes in the base over the holes in the shelf, and fasten it in place with the four sets of nuts, washers and bolts as shown in Figure 6. Only make the nuts finger-tight, so the position of the base can be adjusted later.
- ! Reattach the microphone unit to the base with the nut you removed earlier. Press the front of the microphone unit firmly against the grill gasket and foam grommet, and tighten the nut to keep the unit at that angle.
- ! Tighten the four nuts and bolts that hold the microphone unit to the shelf.

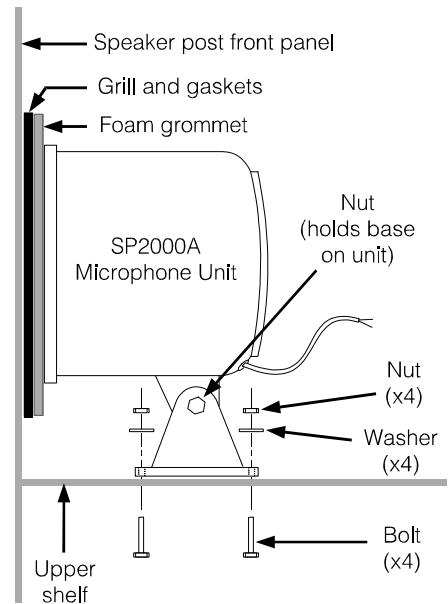


Figure 6. Microphone unit installation in the SPP2

2.4 Install the Speaker Unit

Install the SP2000A speaker unit above the lower shelf of the SPP2 Speaker Post in the position shown in Figure 7 as follows:

- ! Locate and remove the package of bolts, washers and nuts enclosed in the box with the speaker unit.
- ! Position the foam grommet flat against the speaker-grill gasket and rub it around the edges to fasten it to the adhesive on the gasket.
- ! Remove the nut that holds the base on the speaker unit.
- ! Position the four holes in the base over the holes in the shelf, and fasten it in place with the four sets of nuts, washers and bolts as shown in Figure 7. Only make the nuts finger-tight, so the position of the base can be adjusted later.
- ! Reattach the speaker unit to the base with the nut you removed earlier. Press the front of the speaker unit firmly against the grill gasket and foam grommet, and tighten the nut to keep the unit at that angle.
- ! Tighten the four nuts and bolts that hold the speaker unit to the shelf.

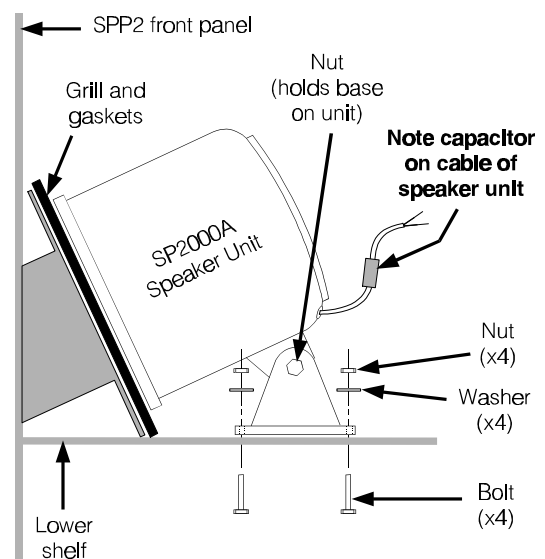
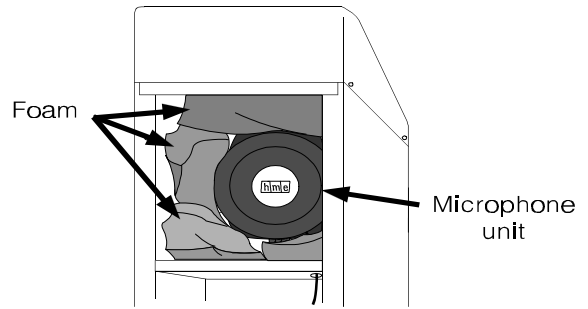


Figure 7. Speaker unit installation in the SPP2

2.5 Pack Foam Around the Microphone Unit

Use the enclosed foam pieces as acoustic treatment around the microphone unit as shown in Figure 8. Pack the foam around the top, sides and back of the microphone unit, filling the upper compartment before closing the speaker post.



2.6 Install the Light Fixture Kit (optional)

The optional light fixture is used to illuminate the speaker post sign. If a light fixture kit was included with the SPP2 Speaker Post, install it according to the installation instructions included with the kit.

Figure 8.
Foam packed around top and sides of microphone unit in upper compartment of speaker post

2.7 Install the Sign

Install the ORDER HERE sign inside the speaker post, over the hole below the upper shelf as follows:

- ! Position the sign on the inside of the speaker post, over the rectangular sign hole, so it will be read correctly from outside the speaker post when the post is standing upright, as shown in Figures 1 and 9. Be certain the four threaded studs near the corners of the hole go through the four holes in the sign.
- ! Place one of the enclosed flat washers over each of the four studs, and fasten each washer in place with one of the enclosed hexagonal nuts.

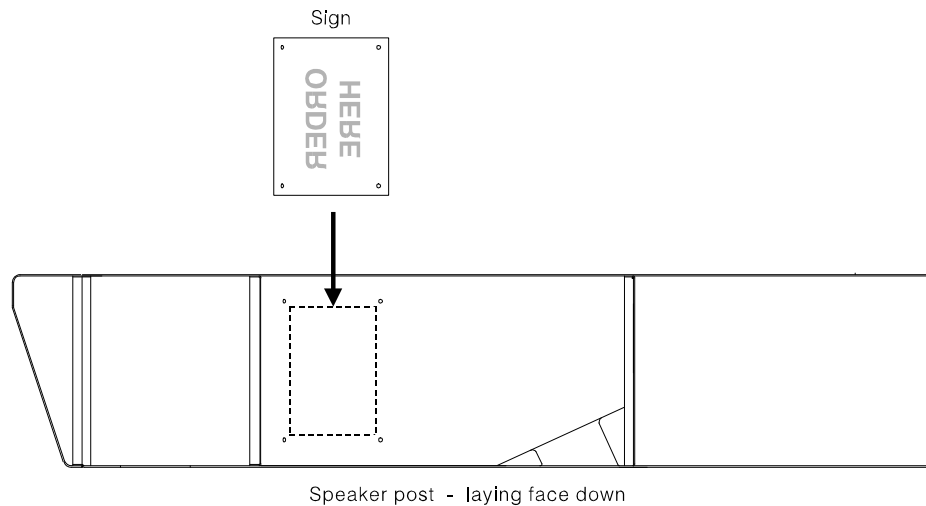


Figure 9.
Install the sign in the speaker post

2.8 Install the Mounting Plate

2.8.1 Standard Installation on Concrete Slab with Four Mounting Studs in 6 Inch Square Pattern

If the concrete slab has four threaded metal studs in a 6 inch (152.4 mm) square pattern, the standard mounting plate included with the speaker post will be installed as described below. Refer to Figure 10.

- ! Put one of the enclosed levelling nuts and a washer on each of the four threaded, metal studs on the concrete slab.
- ! Position the mounting plate on the concrete slab as shown in Figure 10, with its front end toward the drive-thru lane and the four studs going through the four largest holes in the plate. Use a level to adjust the positions of the levelling nuts until the plate is level.
- ! Put a second washer on each of the studs, over the mounting plate.
- ! Screw one of the four enclosed ½ inch (12.7 mm) hexagonal nuts onto each of the studs, and tighten them in place with a socket wrench.
- ! Spray or coat the studs and nuts with an anti-rust compound such as WD-40.

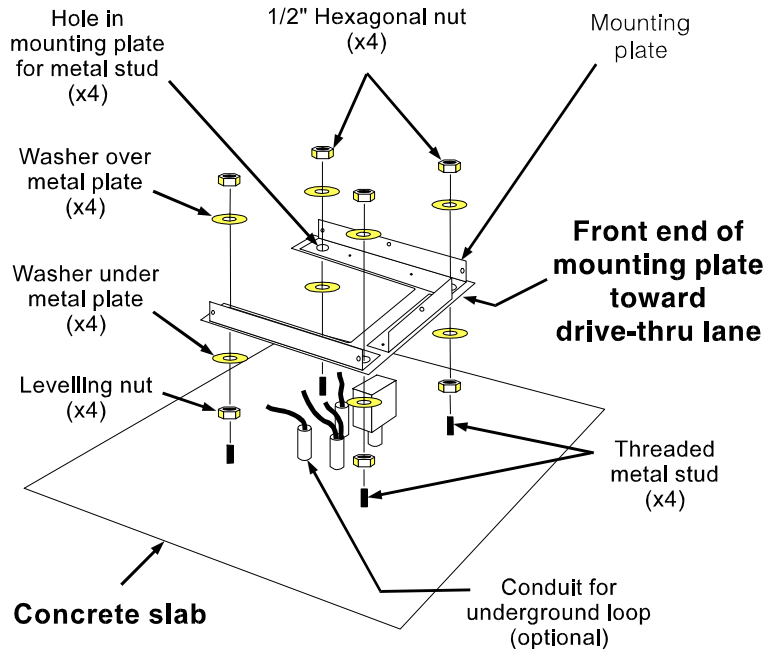


Figure 10. Placement of mounting plate on concrete slab

2.8.2 Non-standard Installation on Concrete Slab with No Mounting Studs, or Studs in Irregular Pattern That Will Not Fit Mounting Plate or Adapter

If there are no studs in the concrete slab, HME mounting kit with self-expanding anchor studs (K18582) is required.

If there are studs in the concrete slab, but they are not arranged in a pattern that will fit either the standard mounting plate or the adapter plate, cut the studs off flush with the concrete surface and use HME mounting kit with self-expanding anchor studs (K18582).

- ! Drill four holes in the slab with a ½ inch (12.7 mm) masonry drill bit in a high-speed drill, in a 6 inch (152.4 mm) square pattern.
- ! Install the four self-expanding anchor studs in the holes in the concrete slab.
- ! Install the standard mounting plate that comes with speaker post according to paragraph 2.8.1.

2.8.3 Non-standard Installation on Concrete Slab with Four Mounting Studs in Square Pattern Between 10x10 and 16x16 Inches (264x264 and 381x381 Mm)

If the concrete slab has four threaded metal studs in a square pattern, between 10 x 10 and 15 x 15 inches (between 254 x 254 and 381 x 381 mm), HME mounting kit with adapter plate (K18605) is required.

- ! Assemble the mounting plate and adapter plate with the enclosed nuts, washers and bolts as shown in Figure 11.
- ! Install the four enclosed levelling nuts on the four studs on the concrete slab, as shown in Figure 11. Install the adapter plate on top of the levelling nuts. Use a level to adjust the positions of the levelling nuts until the adapter plate is level. Install the remaining four nuts and washers on the four studs to secure the adapter plate to the concrete slab.

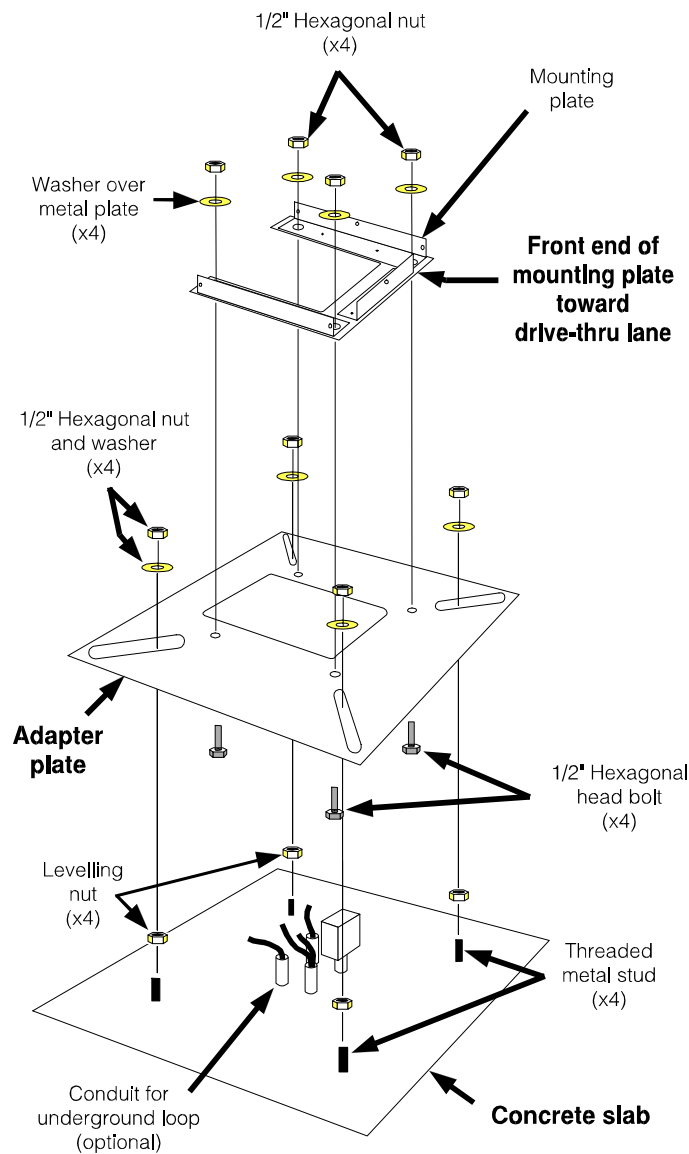


Figure 11.
**Assembly of mounting plate on adapter plate
and their placement on the concrete slab**

2.9 Install the Speaker Post on the Mounting Plate

Position the speaker post over the mounting plate as shown in Figure 12. Angle the inside-front of the post against the front of the mounting plate, then straighten the post over the plate. Reinstall the five hexagonal bolts and nuts that were removed from the holes at the bottom-front and sides of the speaker post, and tighten them in place with a socket wrench.

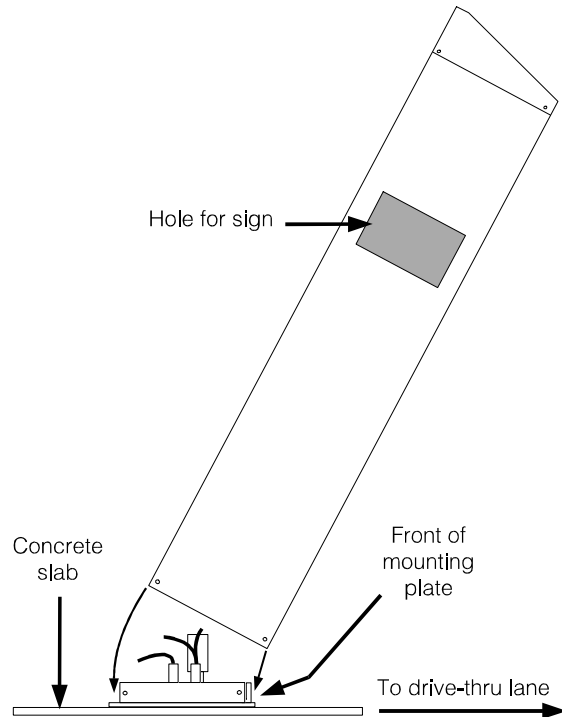


Figure 12. Positioning of speaker post on mounting plate

2.10 Connect the Cables/wires in the Speaker Post

Splice the cable wires from the microphone and speaker inside the speaker post to the microphone and speaker wires from the two audio cables coming through the conduit into the speaker post, according to color codes. Be certain to connect the microphone and speaker to separate audio cables to prevent feedback. All splices must be soldered and covered with electrical tape.

If any AC electrical wiring is required in the speaker post, be certain it is done by a licensed contractor. Electrical wire color codes are as follows: green = ground, black = hot, white = common.

2.11 Close the Speaker Post

Refer to Figure 2. Replace the rear panel of the speaker post by sliding it upward, under the overhanging flange near the top-rear of the speaker post. Fasten the panel in place and install the eight enclosed security screws through the holes in the panel into the speaker post.

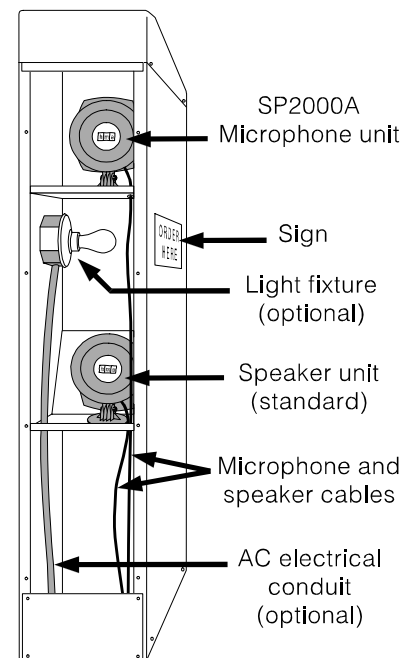


Figure 13. SPP2 Speaker Post with all standard and optional components installed

3.0 CLEANING AND MAINTENANCE

To clean the SPP2 speaker post, use a damp cloth or sponge with cleaning solution on it.

IMPORTANT: Do not spray water or cleaning solution directly on the speaker or microphone grill.
Do not use a hose to clean the speaker post.

Refer to the drive-thru audio system operating/installation instructions for speaker and microphone maintenance and/or troubleshooting instructions.

4.0 SPECIFICATIONS

Cabinet —	Dimensions:	43"H x 8"W x 9"D
Speaker unit —	Power input:	6 watts, 8 ohms
	Frequency response:	300 -11,000 Hz
	Dimensions:	7e"H x 5½"W x 4½"D