



Upgrade Procedure  
**SoundLok® Upgradable to  
SoundLok® VAE®**

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**These instructions cover the installation of Wenger’s VAE® (Virtual Acoustic Environments) electronics package in upgradable SoundLok® installations where the room panels were manufactured without internal electronic components (Speakers, microphones and VAE control panel).**

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## ***Required Tools***

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The following tools are required for installation:

- Cordless Drill
- Phillips Drive Bit
- Phillips Screwdriver
- Blind Rivet Tool
- 1/8" Drill Bit
- RH and LH Metal Shears

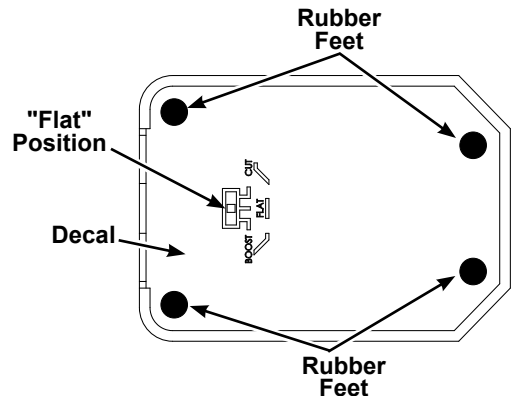
## ***Speaker Installation (4 x 6 Speaker)***

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1. Remove the inside skins that cover the speakers in each of the corner wall panel sections.
2. Locate the two wires inside of each speaker box.
3. Carefully pull the two wires out of the speaker hole.
4. Place speaker gasket over bottom side of the speaker frame.
5. Connect the wires to the speakers. Note that one terminal is larger than the other. The wires must be connected accordingly to maintain correct speaker polarity.
6. Make sure the terminals are firmly attached to each speaker.
7. Place speaker with gasket into speaker box. **Be VERY CAREFUL not to pinch the wires between the speaker and the speaker box.** Also make sure that the wires do not touch the back of the speaker.
8. **Carefully** attach the speaker and gasket to the speaker box with speaker mounting screws. It is **easy** to slip off the screw and puncture the speaker. Place the 4x6 speaker mounting tool from installers' repair kit over speaker to protect it during installation.
9. Re-attach the inside skins to the corner wall panel sections.

## Microphone Installation

1. Remove the perforated inside skin from the wall panel section(s) that house the microphone.
2. Set the switch on the bottom of the microphone housing to the "Flat" position on the decal.
3. Remove both the decal and the rubber feet from the bottom of the microphone housing.

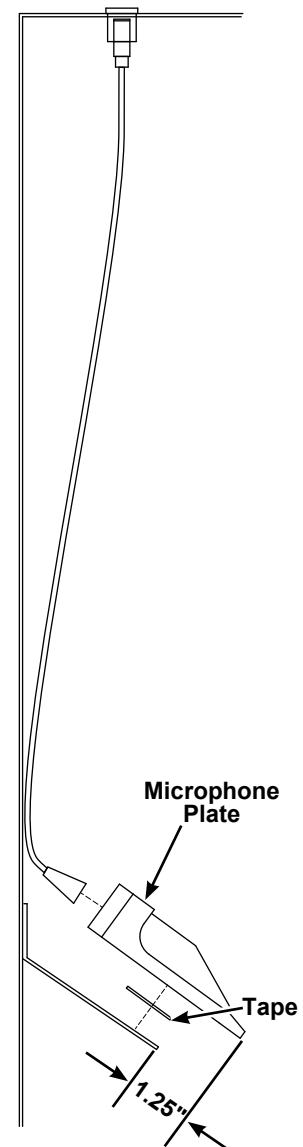


**The decal and rubber feet must be removed to properly attach the microphone housing to the mounting bracket.**

4. Locate the microphone cable connector behind the fiberglass insulation. Plug the microphone into this connector. Make sure the connection is secure by gently trying to separate the connection.
5. Clean the mounting bracket and the back of the microphone plate (in the mounting area) with the alcohol pad. (This **must** be done or the tape will **not** stick properly.)

Attach mounting tape to microphone bracket located as shown.

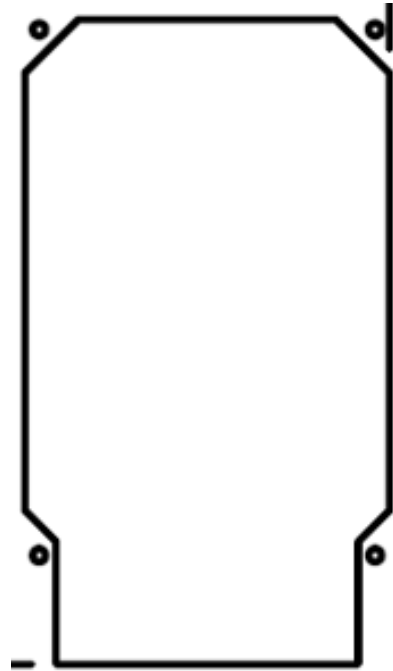
6. Place the excess microphone cable behind the fiberglass so it is not visible through the perforations in the interior skin.
7. Position the fiberglass batting around the microphone so as not to be between the end of the microphone and the diamond perforation pattern in the interior skin. Also, position or trim the insulation to prevent it from contacting the microphone anywhere on its screened area.
8. Position the interior panel on the wall panel. Verify that the panel is not in direct contact with the microphone body by looking through the perforations with a flashlight or carefully probing with a pin.
9. Repeat this process with the other microphone wall panel.



## ***Control Panel Installation***

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1. Remove the blank cover plate from the inside surface of the power panel by drilling out the rivets in the four corners to reveal the control panel access hole.
2. Remove the 4" wide strip of insulation found directly behind the cover plate that runs from the switch electrical box up about 2 feet.
3. The access hole will look like the diagram shown here.
4. Inside the panel, locate the vertical conduit behind the insulation.
5. Fish either end of the VAE control cable through this conduit to the top of the wall panel section.
6. Replace the previously removed strip of insulation back into the panel.
7. Attach the control cable to the control panel making sure the locking tab engages the socket.
8. Insert the control panel into the opening. It may be necessary to split the insulation to fit around the control panel circuit board.
9. Secure the control panel to the face of the power panel using the countersunk blind rivets provided.
10. Remove the nut and washer from the footswitch jack on the face of the control panel.
11. Clean the control panel and install the outer decal (packaged with the control panel) to cover the rivets.
12. Replace the nut and washer on the footswitch jack and lightly tighten.
13. Remove the protective film overlay (if installed) from the LED display.



## ***Black Box Installation***

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Attach a hanger bracket to both sides of the rack using two #10-16 x 0.75" self drilling screws in each side.

Use the bottom set of holes in the mounting brackets for mounting the rack to the ceiling. Use the top set of holes in the mounting brackets to mount the rack to a side wall.



1. Mount the rack to either the ceiling or side panel using the following methods.

### **Mounting Rack with Ceiling Installation**

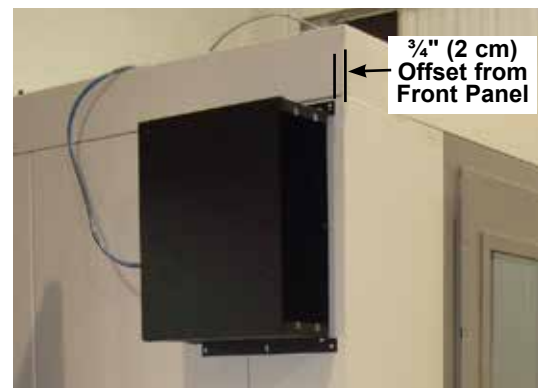
- a. Position the rack on the ceiling panels. The rack must be square with the front panels and positioned  $\frac{3}{4}$ " (2 cm) back from the front panels to allow clearance for the installation of closure panels.
- b. Attach the rack to the ceiling panels using one #10-16 x 0.75" self drilling screw in both of the rear holes and both of the middle holes of the hanger brackets. The front two holes of the hanger brackets are not used.



or

### **Mounting Rack with Side Panel Installation**

- a. Position the rack at the front of the side panel. The rack must be square with the front panel and positioned  $\frac{3}{4}$ " (2 cm) back from the front panel to allow clearance for the installation of closure panels.
- b. Attach the rack to the side panel using a #10-16 x 0.75" self drilling screw in the middle hole of the top hanger bracket. Level the rack and attach screws in the five remaining holes in the hanger brackets.



## ***Black Box Installation (continued)***

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2. Install the flash memory card (connector end first) into the slot in the back of the VAE processor labeled COMPACT FLASH. It will fit into this slot in only one orientation. The contacts will engage during the last 0.125" of insertion. When properly installed, only about 0.125" of the card will protrude beyond the socket.



3. Holding the VAE processor near the black box, connect the two speaker cables found inside the tray to the VAE processor. Connect the 4-pin connector marked "1-2" to the jack in the VAE processor marked "1-2". Similarly, connect the 4-pin connector marked "3-4" to the jack in the VAE processor marked "3-4".



4. Connect the control cable. This is the cable that extends from the top of the power panel. Insert the connector at the end of this cable through the entrance clamp in the black box and plug it into the socket labeled REMOTE KEYPAD on the back of the VAE processor inside the black box. The locking tab on the connector should be positioned upward.



## ***Black Box Installation (continued)***

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5. Connect the microphone cables. Locate the microphone panel located toward the left-hand side as entering the room. Connect a microphone cable between the connector on the top of this panel and the jack labeled "MICROPHONE 1" on the back of the VAE processor inside the black box. Repeat for the other microphone panel using the jack labeled "MICROPHONE 2".

Both microphone cables should be individually inserted through the entrance clamp in the black box before connecting to the VAE Processor.



6. Connect the power cable provided with the VAE processor. It installs between the IEC connector on the back of the VAE processor and the receptacle inside the black box. Bundle and position the excess cable out of the way above the VAE processor. Box cut-away is being shown for clarity.



## ***Black Box Installation (continued)***

7. Install four clip nuts into the four available holes in the front panel of the black box. Install them with the "nut" portion inside the black box. Using these clip nuts, install the processor into the black box with the four screws and washers provided with the VAE processor.

Carefully guide the attached wiring into the black box.

***IMPORTANT: Be sure to use the plastic washers that are provided.***



8. Connect the four speaker cables. These cables connect each corner panel (containing the speakers) to the black box. Locate the room corner panel directly to the left of the door as you enter the room. Connect one end of the first cable to the mating connector at the top of this corner panel where it protrudes through the ceiling rail. Connect the other end to the left-most speaker connector on the black box.

Move to the next corner in a clockwise direction and connect a speaker cable between that corner and the next speaker connector on the black box.

Continue around the top of the room in a clockwise direction connecting the remaining two speaker cables between the corner panels and their respective connectors in the black box.



9. Be sure the VAE system power switch on the power panel is in the OFF position. Plug the main black box power cable into the mating connector on any other available panel. Secure this cable to the adjacent ceiling or wall panel using a cable clip and self-drilling screw positioned within 6" (15 cm) of the power panel end.
10. Push the power switch on the VAE unit to the "ON" position (depressed).

