

*Important Mounting Instructions*

 <b>CAUTION</b>
<p><i>When wall mounted, the black box containing the VAE processor must be securely attached to the wall in accordance with the installation instructions.</i></p> <p><b>FAILURE TO FOLLOW INSTALLATION INSTRUCTIONS MAY RESULT IN INJURY.</b></p>

These instructions cover the installation of Wenger's VAE® (Virtual Acoustic Environments) electronics package in new "Practice" installations where the room contains all necessary internal components such as speakers, microphones and VAE control panel.

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## ***Required Tools***

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The following tools are required for installation:

- Phillips Screwdriver
- Cordless Drill
- Phillips Drive Bit
- $\frac{7}{16}$ " Wrench
- $\frac{3}{8}$ " Hex Drive Bit

## ***Black Box Preparation***

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"Black box" is the term used throughout this manual to describe the assembled black electronics rack containing the VAE processor and related cables and components.

1. 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.



2. Install four clip nuts into the four available holes in the front panel of the black box. (The electrical outlet is near the back side). 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.



3. Connect the two speaker cables found inside the black box to the VEA 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".



## ***Black Box Preparation (continued)***

4. 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.



5. Push the power switch on the VAE unit to the "ON" position (depressed).



## ***Black Box Preparation (continued)***

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### **Please note before continuing:**

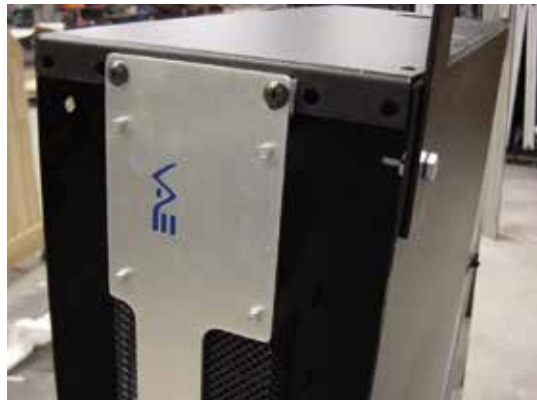
Most installations will allow the P/N 216H417 black box to be located in its preferred position, sitting on the top of the VAE equipped Wenger sound isolating practice room. In applications where that space is not available or desirable, the black box can be hung from the wall on the side of the room.

Determine the best hanging location for the P/N 216H417 black box. It can be hung on any side of the VAE equipped Wenger sound isolating practice room but only from the ceiling rail flange and only in an area that is inaccessible to non-service personnel behind closure panels requiring tools for removal.

The P/N 216H417 black box can be hung in the orientation that best fits the installation however the preferred orientation positions the black box with its open ends toward the side, providing the best dust protection.



6. Attach two (2), P/N 216H559 black box hanger brackets to the P/N 216H417 black box using 1/4-20, Grade 5, hex-head cap screws and 1/4-20 hex nuts provided with the black box. Select the two adjacent holes on the base of the black box that will be in the upper corners when installed. Secure the P/N 216H559 hanger brackets to the black box by passing the screw through the hole in the straight end of the hanger bracket and then through the selected holes in the base of the black box. (Remove or reposition the box's adjacent rubber feet if necessary for hanger strap clearance.) Secure both hanger brackets with the nuts provided. Position the hanger arms vertically and tighten the fasteners with a 7/16" wrench.



## ***Black Box Preparation (continued)***

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### **⚠ CAUTION**

#### ***IMPORTANT MOUNTING INSTRUCTIONS***

***When hung on the side of the VAE equipped Wenger sound isolating practice room, the P/N 216H417 black box must be attached to the ceiling rail vertical flange around the perimeter of the room in accordance with the installation instructions may result in injury.***

***This installation should only be performed by trained, skilled personnel. The black box should only be hung from a side of the room that is inaccessible to non-service personnel behind closure panels requiring tools for removal.***

7. The VAE equipped Wenger sound isolating practice room has a vertical steel flange around the perimeter of the room flush with the exterior wall panels. This feature is referred to as the "ceiling rail" flange. Lift the black box with hanger brackets installed into the desired black box final location. Hook the two hanger brackets over the ceiling rail flange of the VAE equipped Wenger sound isolating practice room to suspend the black box in the desired location.



## ***Black Box Preparation (continued)***

8. Secure the two (2) P/N 216H559 black box hanger brackets to the top rail as shown using the (Wenger P/N X001192) ¼" diameter by 1" long, hex washer-head self-drilling screws supplied in the kit with the hanger brackets. These screws have a metal-cutting drill point that is designed to be drilled directly into the ceiling rail of the Wenger VAE sound isolating room using a standard drill driver with a 3/8" hex driver bit without the need to pre-drill pilot holes in the ceiling rail.



With the hanger brackets located as desired, drive the screws through the top hole in the hanger bracket into the room's top rail flange as shown using a drill/driver. Once the drill point passes through the ceiling rail, the screw's integral threads will draw it into the ceiling rail. (The hole on the far side of the hanger bracket hook allows for screw clearance, only. The screw's threads will not engage in this hole.) Adjust the drill screw so that the screw head is against the hanger bracket and the hanger brackets hook is approximately centered on the ceiling rail flange as shown and is in contact with topmost edge of the ceiling rail flange. Always secure both hanger brackets with the two screws provided.



### **⚠ CAUTION**

***Use only the Wenger P/N X001192, ¼" diameter x 1" long, hex washer-head self-drilling screws provided to secure the hanger bracket to the ceiling rail of the Wenger VAE equipped sound isolating practice room. Always secure both hanger brackets to the ceiling rail as instructed.***

***This installation has been evaluated using only this specific hardware installed in the ceiling rail flange. Other fasteners or mounting arrangements have not been tested and are not permissible.***

## ***Black Box Installation***

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1. Position the black box on the room's roof or sidewall near it's planned final position.

2. 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 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.



3. 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.



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

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4. 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".



5. Make 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 the room's Power Panel.  
Secure this cable to the back of the power panel using a cable clip and self-drilling screw positioned within 6-inches of the plug on the Power Panel end.
6. Position and secure all other cables to the ceiling panels as necessary using cable clips and self drilling screws as appropriate.