

**Read and understand these instructions  
before proceeding!**



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Visit the Active Acoustics web page at [wengercorp.com](http://wengercorp.com) for more information.

**Note:** If you need additional information, contact Wenger Corporation using the information below.

# Important User Information

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## General

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In no event will Wenger Corporation be liable for technical or editorial omissions made herein, nor for direct, indirect, special, incidental, or consequential damages resulting from the use or defect of these instructions. The manufacturer reserves the right to change this product at any time.

The information in this document is not intended to cover all possible conditions and situations that might occur. The end user must exercise caution and common sense when assembling or installing Wenger Corporation products. If any questions or problems arise, call the Wenger Corporation at (800) 4WENGER (493-6437) or +1-507-455-4100 worldwide.

## Manufacturer

The Transcend® Studio is manufactured by:

Wenger Corporation  
555 Park Drive  
Owatonna, MN 55060  
(800) 4WENGER (493-6437) • +1 (507) 455-4100  
wengercorp.com

## Intended Use

- This product is intended for indoor use in normal ambient temperature and humidity conditions – it must not be exposed to prolonged outside weather conditions.
- This product is intended to be assembled, installed and used only as described in these instructions

## Warranty

Warranty information is available at [wengercorp.com](http://wengercorp.com).

# Safety Precautions

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Throughout this document you may find cautions and warnings which are defined as follows:

- **WARNING:** Failure to follow the instruction could result in serious injury or damage to property.
- **CAUTION:** Failure to follow the instruction could result in minor injury or damage to property.

Read and understand all of these safety instructions before any assembly, installation or use.

### CAUTION

*Make sure anyone assembling, installing or using this product has read and understands these instructions.*

### CAUTION

*Failure to comply with Warnings and Cautions in this document or on the equipment can result in damage to property or serious injury.*

# Welcome

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Thank you for choosing the Transcend® Studio System. This manual guides you through the complete installation process — from unpacking your system to completing the first calibration.

Please read each section carefully and follow the steps in order for best results. If you have questions at any point, Wenger Corporation support is available at (800) 4WENGER (493-6437) in the USA or +1-507-455-4100 worldwide.

## What to Expect

The installation process consists of four phases:

1. **Plan** — Determine the final location for each component within the room.
2. **Install** — Mount the speakers, microphones, subwoofer, and processor.
3. **Wire** — Connect all components to the TS-1A processor.
4. **Calibrate** — Power on the system and complete the automated calibration.

A typical installation takes several hours, depending on room size and cable-routing requirements.

## Package Contents

The Transcend Studio ships as a complete kit across several boxes. On delivery, verify that all listed components have arrived. Note that some packages may contain multiple items.

- 1 x Transcend TS-1A processor
- 1 x Transcend TS-C control panel
- 1 x Control panel stand
- 2 x Microphones
- 1 x 250' (76.2 m) Spool of speaker cable
- 1 x RCA to bare wire cable
- 2 x XLR to bare wire cables
- 1 x USB-C cable
- 1 x Ethernet cable
- 1 x Subwoofer
- 4-8 x Full range speakers (depends on configuration)

## Optional Accessories (As Configured)

- PVC wire molding kit
- Processor wall mount bracket
- Fiberglass acoustic ceiling tiles
- Wall absorber panels

### NOTICE

***If components are missing or damaged, contact Wenger Corporation immediately at (800) 4WENGER (493-6437) or +1-507-455-4100.***

***Retain the original packaging, as the shipping carrier may need to inspect it.***

## **Welcome (continued)**

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### **Required Tools**

Gather the following tools before beginning installation:

- Wire cutter and stripper
- Bubble level
- Standard screwdriver with #1 and #2 Phillips bits
- 3/32" flat-head screwdriver (for Phoenix terminal block connections)
- Power drill with bits appropriate for the wall or ceiling material
- Gloves (recommended when handling acoustic ceiling tiles or wall panels, which contain fiberglass)

### **NOTICE**

***Fastener anchors for installing components into the ceiling or walls are not included. Use appropriate anchors for the specific substrate material being mounted to.***

### **Additional Documentation**

Several components — including the speakers and mounting brackets — ship with their own documentation. Use this manual as the primary installation guide and refer to the supplementary documents where directed. The latest version of this manual, additional troubleshooting information, and documentation are available on the Transcend Active Acoustics page at [wengercorp.com](http://wengercorp.com).



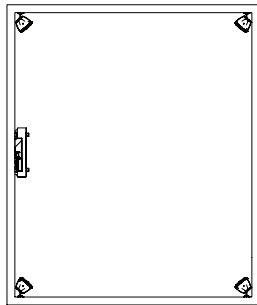
## Planning Your Installation

The Transcend TS-1 series uses a sophisticated active acoustic algorithm that simulates the experience of being at the center of a much larger space. By reproducing directional early reflections, the system creates a sense of size, space, and directionality. To achieve this effect, every component must be laid out correctly.

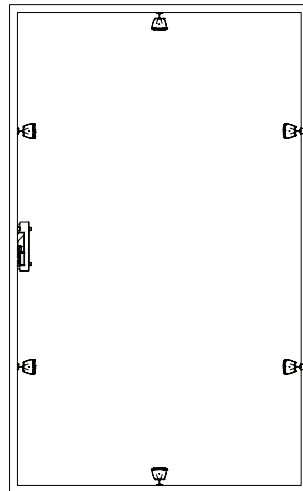
### System Configuration and Layout

Before installation begins, plan the location of every component to optimize performance. Transcend Studio systems come in three standard sizes, based on the square footage of the installation area.

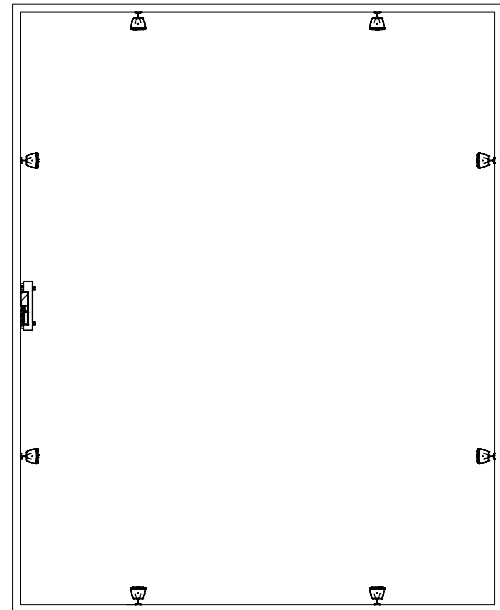
To identify your configuration, count the number of speakers included in the shipment.



**4-Speaker System**  
50 to 145 ft<sup>2</sup>  
(4.65 to 13.47 m<sup>2</sup>)



**6-Speaker System**  
146 to 300 sq ft<sup>2</sup>  
(13.56 to 27.87 m<sup>2</sup>)



**8-Speaker System**  
300 to 500 sq ft<sup>2</sup>  
(27.87 to 46.51 m<sup>2</sup>)



*For the remainder of this section, if you've received a custom set of layout drawings for your specific room, install the individual components in the locations as detailed in those documents and skip that portion of this section.*

# Planning Your Installation (continued)

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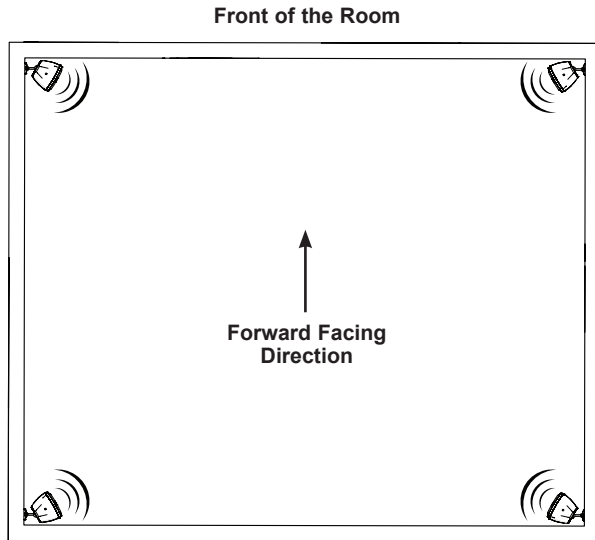
## Speaker Placement

Before positioning components, designate one wall or direction as the front of the room. This decision determines two things: where stereo playback originates and the spatial orientation of the acoustic presets.

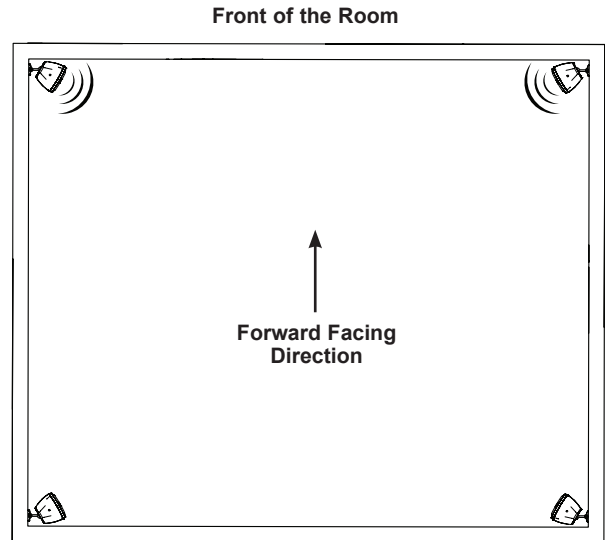
Transcend can play external audio through all speakers simultaneously or through a dedicated stereo pair. The front-of-room designation fixes the L/R orientation for that stereo pair.

In most installations, the front is the wall that people face during normal use — for example, the wall with a TV, projector, or instructor position.

The acoustic presets also use this forward direction. In the Concert Hall preset for instance, playing towards the front of the room is the same as playing towards the audience.



**Playback Through All Speakers**



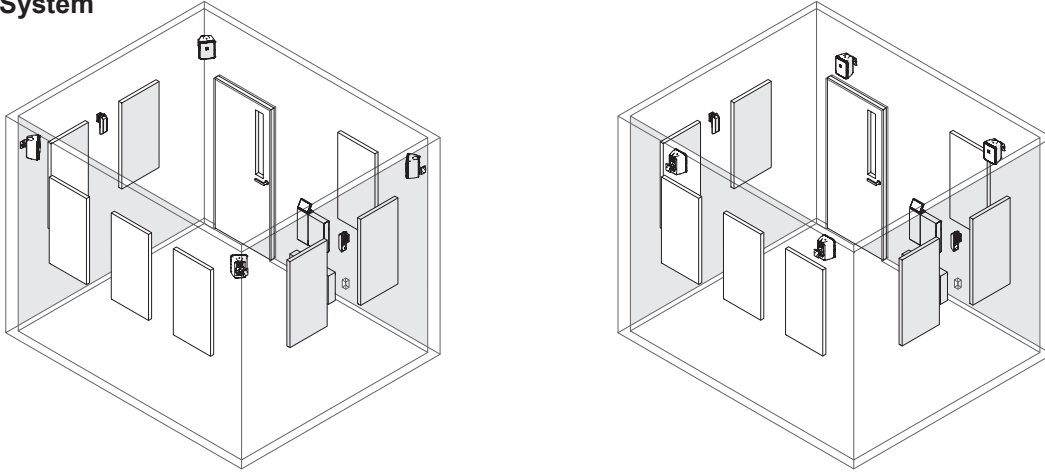
**Playback Through Dedicated Stereo Pair**

# Planning Your Installation (continued)

## Speaker Placement (continued)

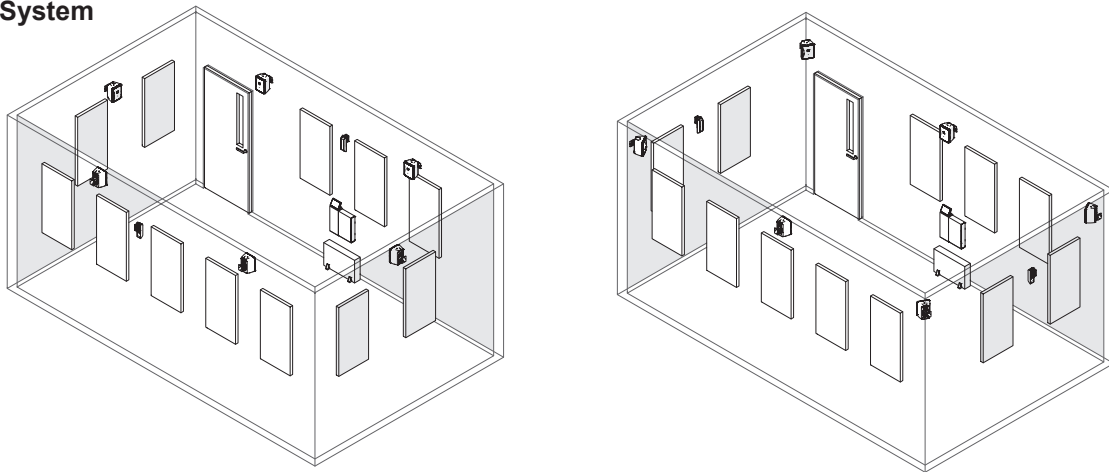
Plan speaker placement based on the recommended layouts for 4, 6, and 8-speaker configurations as shown.

### 4-Speaker System

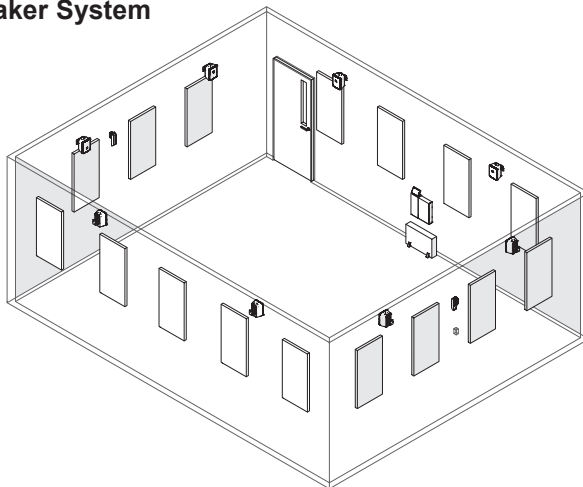


### 6-Speaker System

*Preferred speaker placement*



### 8-Speaker System



## Planning Your Installation (continued)

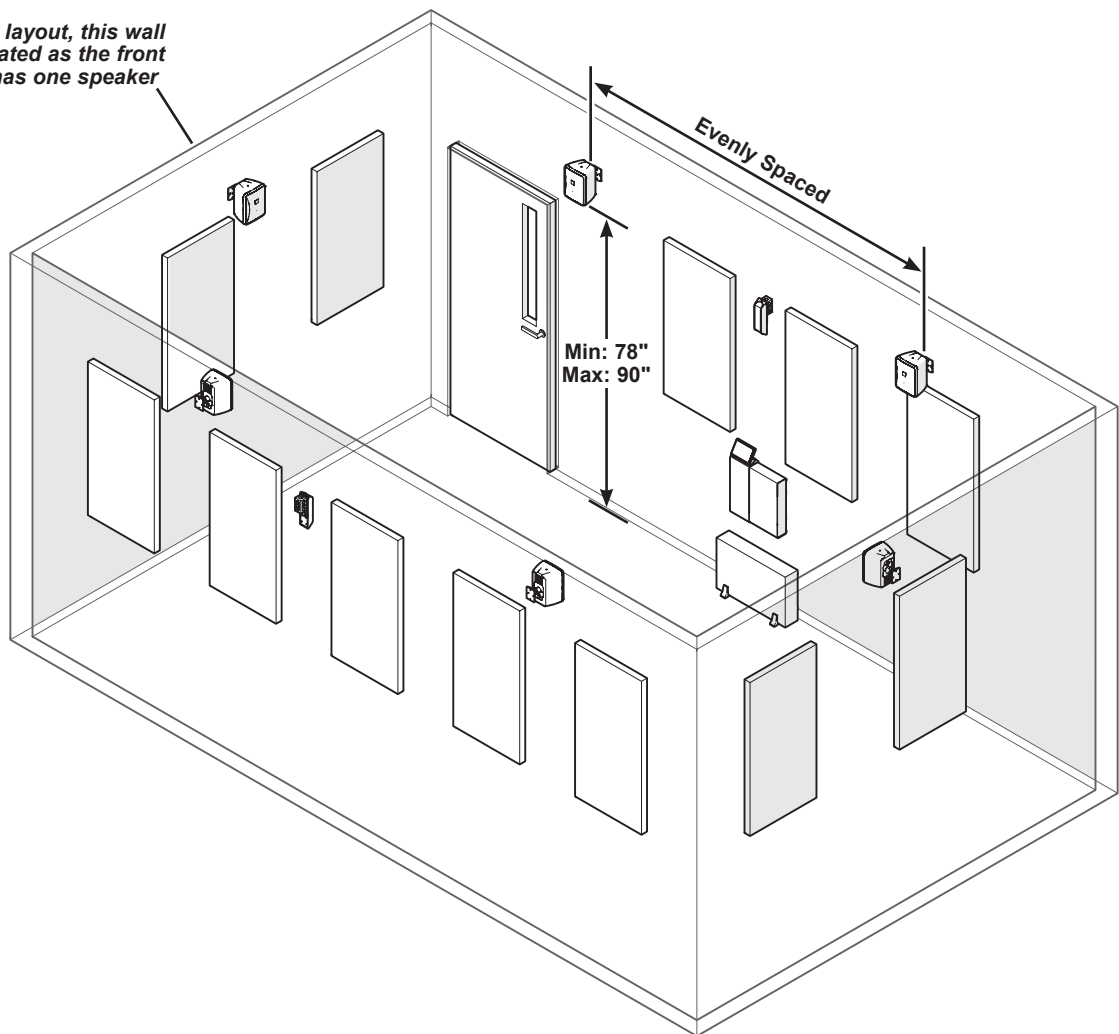
### Speaker Placement (continued)

Every space is different, and rooms may have unusual geometry or obstructions. When planning the layout, apply these principles:

- Evenly space speakers as much as possible throughout the room to create a balanced acoustic environment.
- Speakers may be placed in corners or mid-wall, in either a horizontal or a vertical orientation.
- Mount all speakers at the same height across the room. For JBL Control 25 speakers, use a minimum height of 78" (1981 mm) and a maximum height of 90" (2286 mm), measured to the bottom of the speaker cabinet. In rooms with taller ceilings, mount speakers toward the higher end of this range.

Keep the stereo pair in mind when choosing speaker positions. In most rooms, the stereo pair may work on any wall. In long, narrow rooms, however, it may not be practical to designate a short wall as the front if two speakers will not fit on that wall while still covering the room evenly.

*With this speaker layout, this wall cannot be designated as the front because it only has one speaker*



### NOTICE

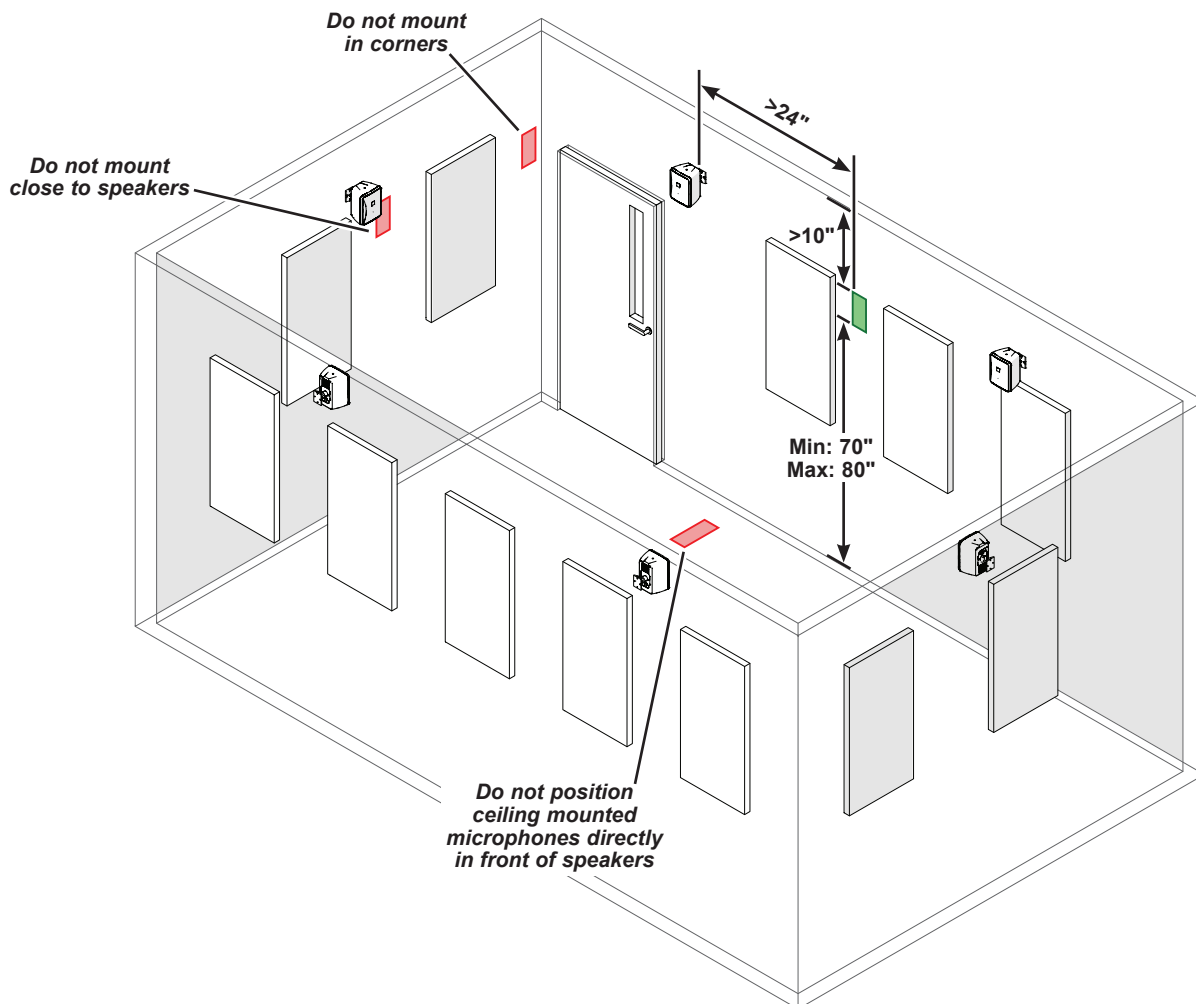
***In a new construction project or renovation, conduit may be pre-installed to route cables to the speakers and microphones. Verify, that the wall boxes are for the use of this system and then layout the locations of the speakers according to the positions of those wall boxes.***

## Planning Your Installation (continued)

### Microphone Placement

Microphone placement has the greatest impact on Transcend Studio performance. When positioning microphones, apply these principles:

- Microphones may be mounted to the wall or through-bolted to a ceiling tile. Ceiling tile mounting is preferred for the most even coverage.
- Position microphones toward the center of the room so they pick up the space evenly.
- Mount wall-mounted microphones between 70" (1778 mm) and 84" (2134 mm) from the floor to the bottom of the device. In rooms with taller ceilings, mount microphones toward the higher end of that range.
- Do not mount surface-mount microphones to ceilings taller than 11' (3353 mm). If microphones must be mounted to the ceiling in a space with a ceiling height greater than 11', contact Wenger Corporation for alternative options.
- Locate microphones evenly between speakers, not directly next to or under one. This helps reduce vibration transmitted from the speakers.
- Keep microphones away from ventilation / HVAC ducts. A microphone near a duct or vent will pick up the sound of moving air and reproduce it through the speakers.
- For ceiling-mounted microphones, avoid positions near vibrating mechanical equipment above the ceiling tiles. Do not attach the microphone directly to a metal grid; mount it in the center of a ceiling tile to help dampen vibrations.



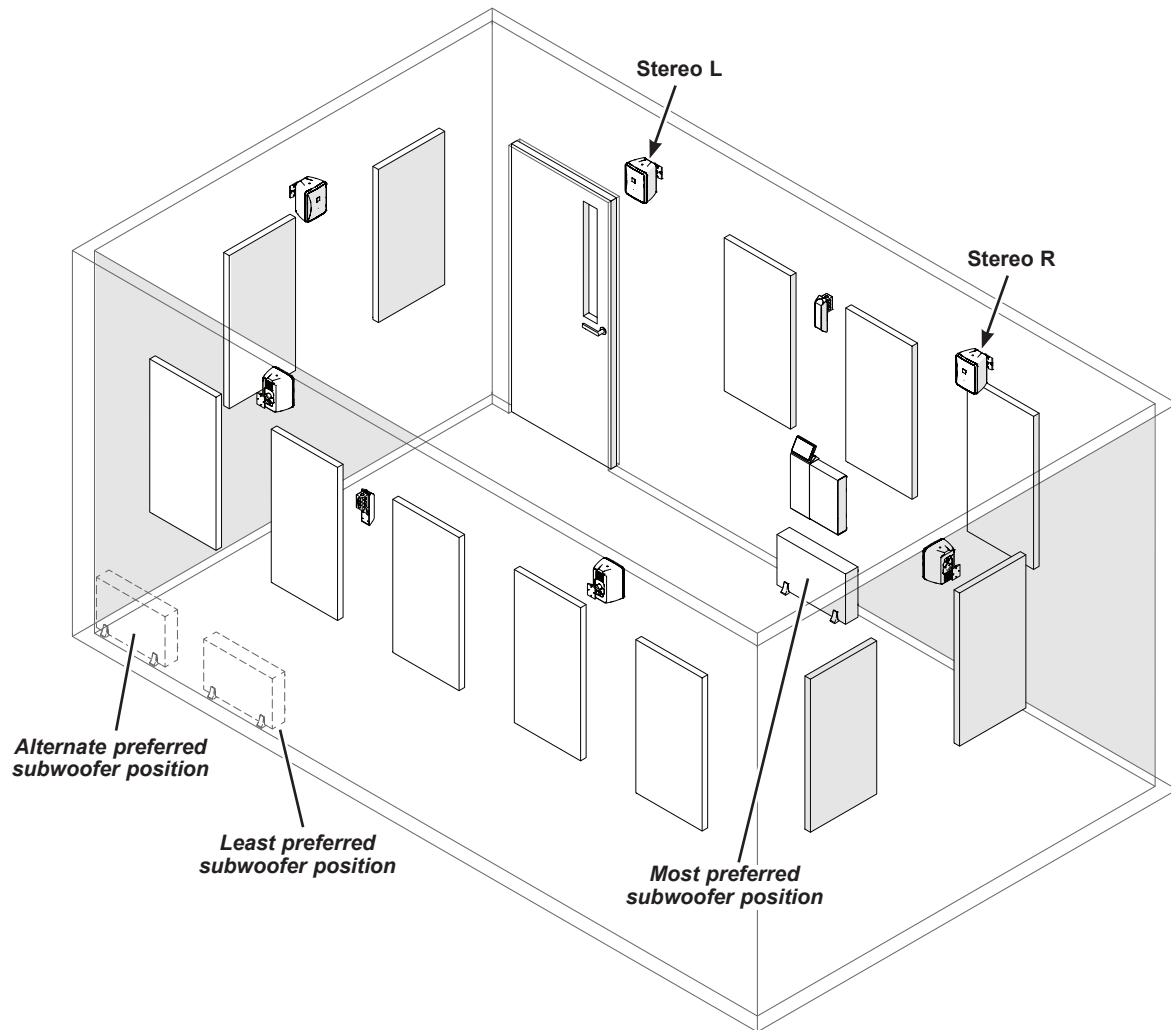
## ***Planning Your Installation (continued)***

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### ***Subwoofer Placement***

Even bass coverage depends on subwoofer placement and can be tricky. Best practice is to position the subwoofer either in the middle of a wall or a corner. Off-center or off-corner positions may create dead spots in the room.

A common installation places the subwoofer directly below the processor when the processor is wall-mounted with the optional universal wall mount.



## ***Planning Your Installation (continued)***

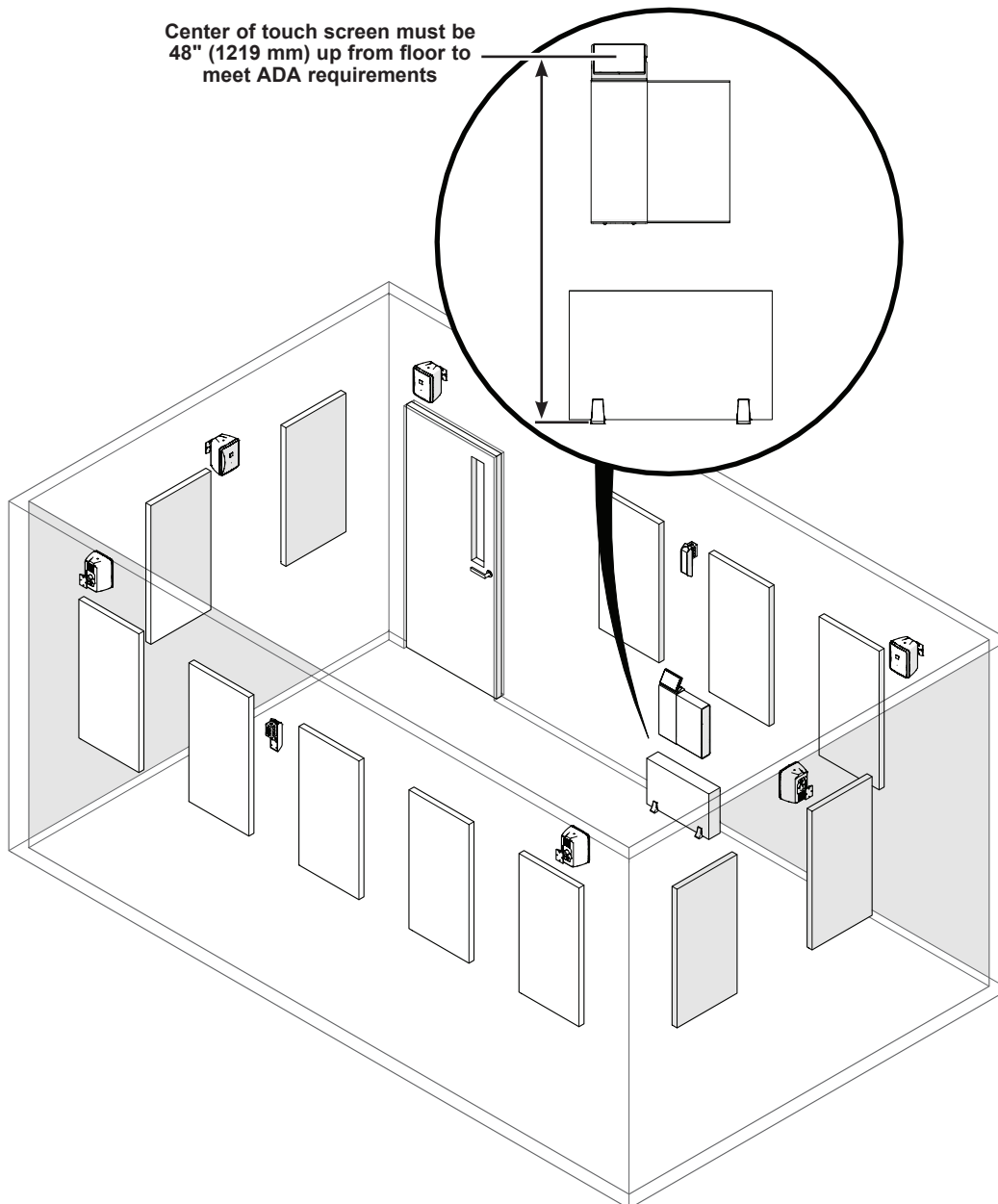
### ***Universal Wall Mount Placement (Optional)***

The optional universal wall mount kit attaches the processor and control panel to the wall. The wall mount should be located near or directly above an electrical outlet.

- The bracket may be mounted with the processor facing either left or right.
- The control panel stand may be installed onto the top of the mount or omitted.
- The bracket is designed to mount over a 2-gang electrical box, which may be used for power, cable pass-through, or both.

### **NOTICE**

***If the control panel is to be mounted onto the wall mount bracket, the center of the touch screen must be 48" (1219 mm) from the floor to meet ADA requirements.***



## ***Planning Your Installation (continued)***

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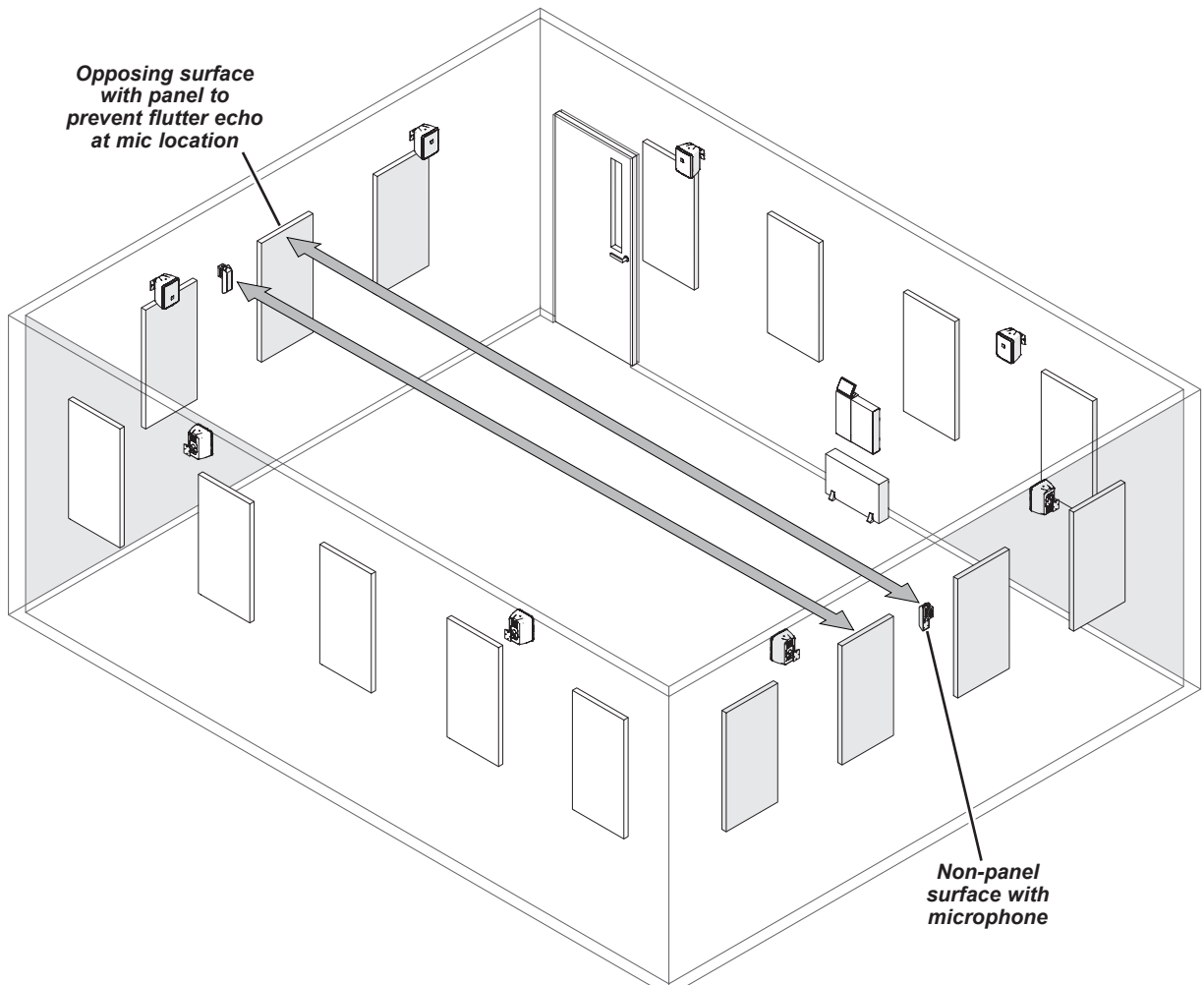
### ***Acoustic Panel Placement (Optional)***

Acoustic panels should be evenly spaced around the room on all four walls.

Parallel walls may produce a phenomenon called flutter echo — rapid sound reflections between closely spaced, parallel surfaces that create a harsh ringing or audible "chatter". This is a common issue in practice and studio spaces.

To help mitigate flutter echo, stagger the acoustic panels so that untreated areas on one wall are offset from untreated areas on the opposing wall, rather than directly across from them. This staggered placement disrupts repetitive reflections and improves sound clarity.

Placing acoustic panels opposite microphone locations, windows, TVs, or whiteboards further reduces reflections and improves overall system performance.



## ***Component Installation Before Wiring***

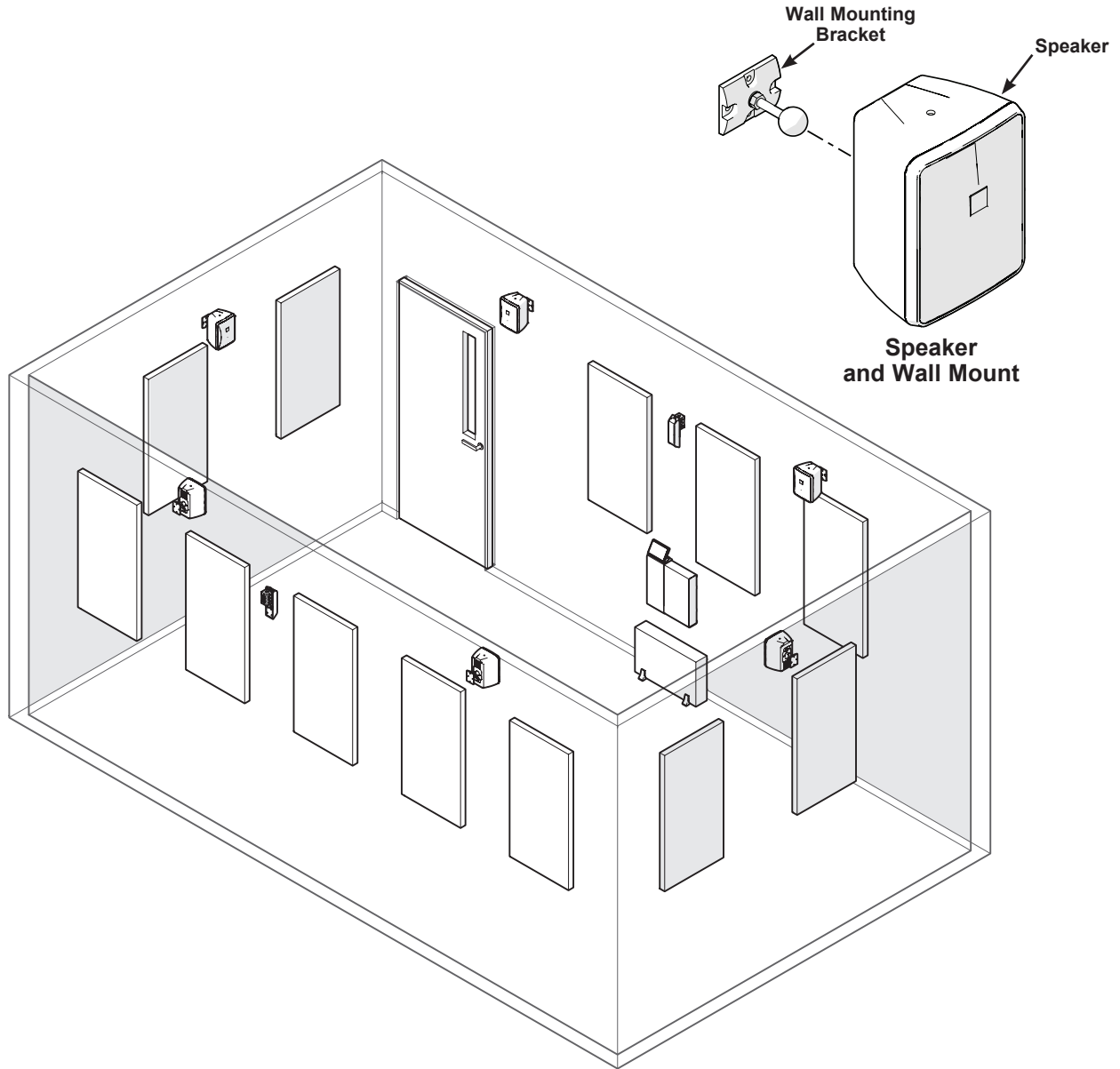
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Once all component positions are finalized, you can begin mounting hardware.

### ***Speaker Wall Bracket Installation***

Follow the installation instructions provided with the speakers to mount them to the wall.

Install the mounting brackets first but wait to attach the speakers themselves until the cables have been routed.



## Component Installation Before Wiring (continued)

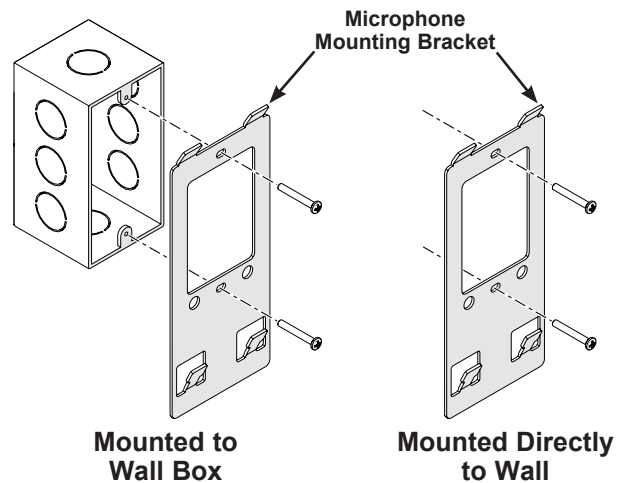
### Microphone Wall Bracket Installation

1. Attach the microphone mounting bracket to a wall box or directly to a wall.

#### NOTICE

**Fasteners are not included, please use fasteners appropriate for the wall type.**

If mounting the microphone to the ceiling, install the mounting bracket at the same time that you wire and install the microphone on pages 26-27.



### Subwoofer Installation

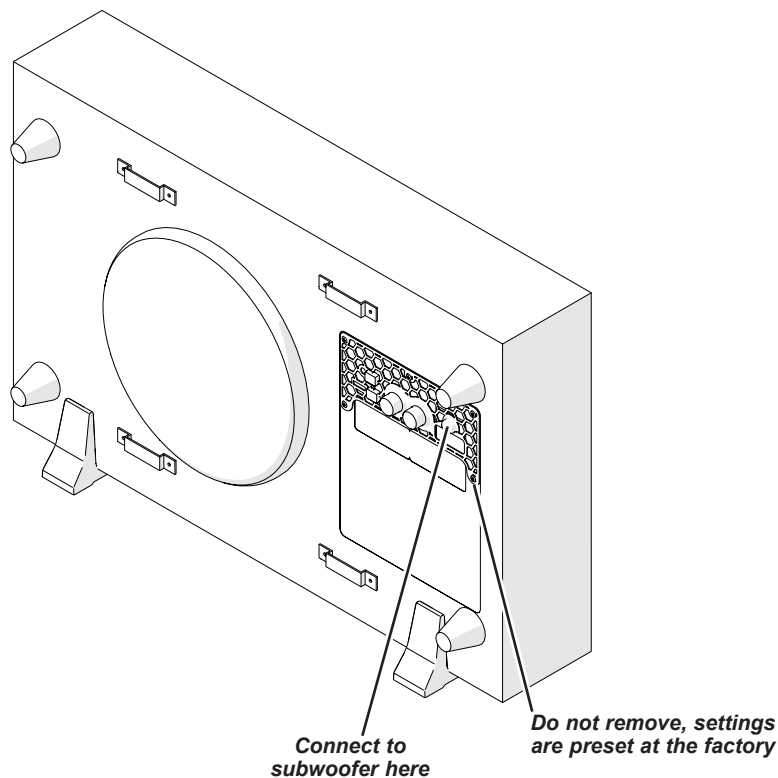
Follow the mounting instructions provided with the subwoofer.

When possible, use the floor-standing brackets and place the subwoofer on the floor against the wall rather than mounting it to the wall. Floor placement minimizes vibration transmitted into the wall, which may be picked up by the microphones.

If attaching the subwoofer to the wall, avoid placing it on the same wall as the microphone if possible.

The subwoofer ships with a pre-installed cover over its configuration knobs and switches.

**These settings are configured at the factory specifically for Transcend Studio — do not remove the cover. Only the audio input and power connections are needed.**



## Component Installation Before Wiring (continued)



Mounting the processor to the wall is optional.

This is the procedure for mounting the processor to the wall!

If the processor will not be wall mounted, skip ahead to "Optional Wire Molding Installation" on the following page.

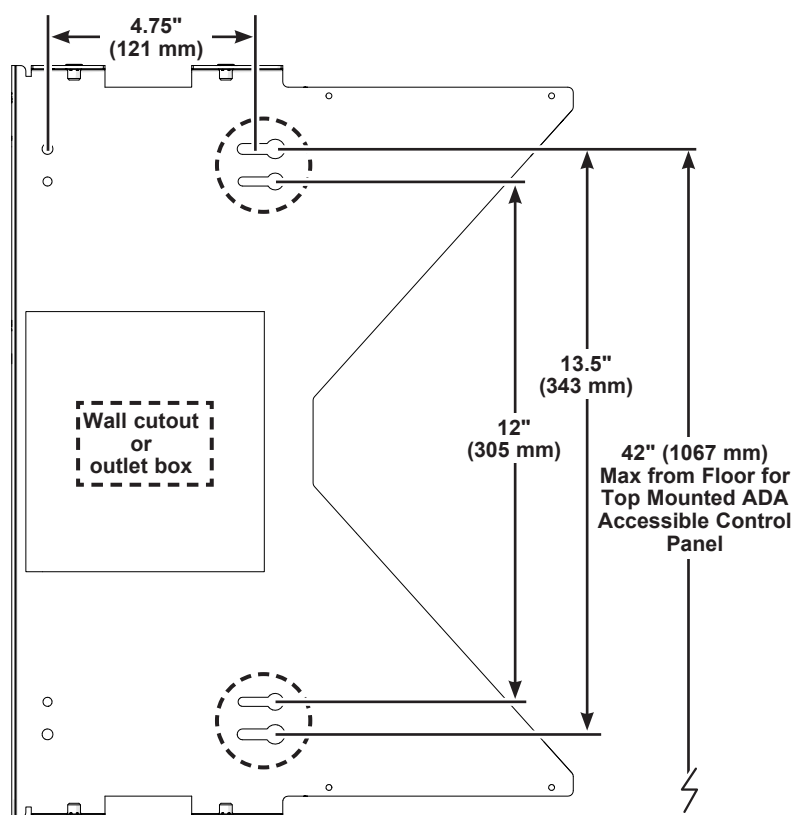
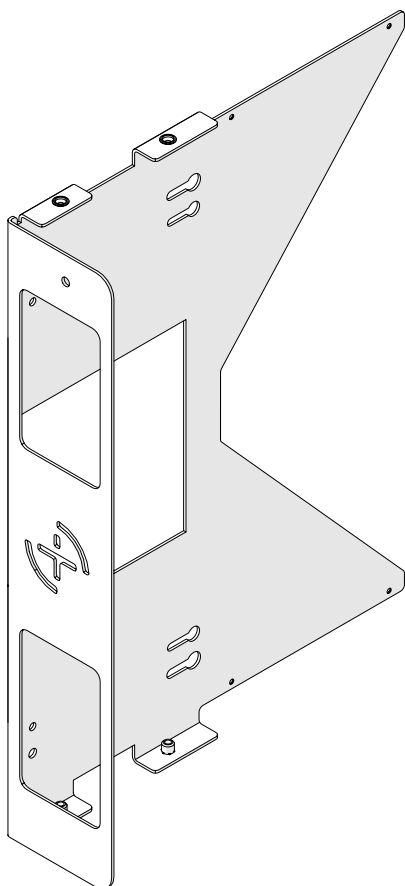
### Optional Processor Wall Mount Installation

Use the processor wall bracket to maximize floorspace in small rooms and to neatly manage system cables. Alternately, the processor could be rack mounted or placed flat onto a secure shelf/desk surface.

Position the wall bracket against the wall at the desired location, ideally around an existing wall cutout or outlet box. Mark the center of the mounting slot. Install one anchor at the top location and one at the bottom as shown.

### NOTICE

Fasteners are not included, please use fasteners appropriate for the wall type.



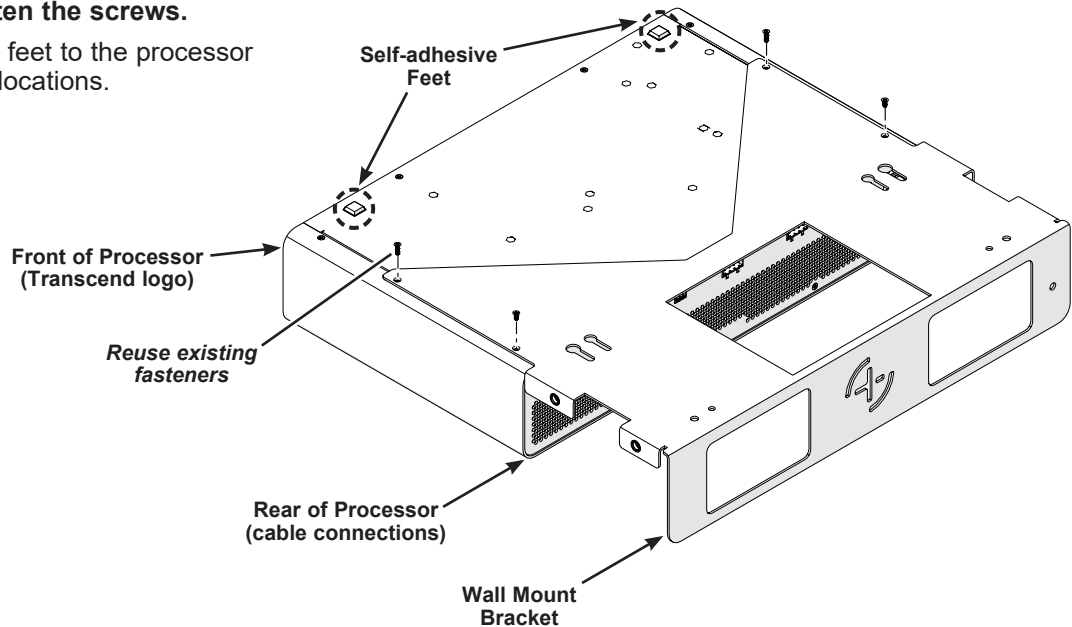
### NOTICE

If using an in-wall box for both power and low voltage pass through, follow proper code guidelines for separating AC mains and low voltage. Typically code requires low voltage to run through separate conduit and the 2-gang box needs a divider plate to separate the 2-gangs. This bracket is not rated as an electrical enclosure, only for use as a cable cover.

## Component Installation Before Wiring? (continued)

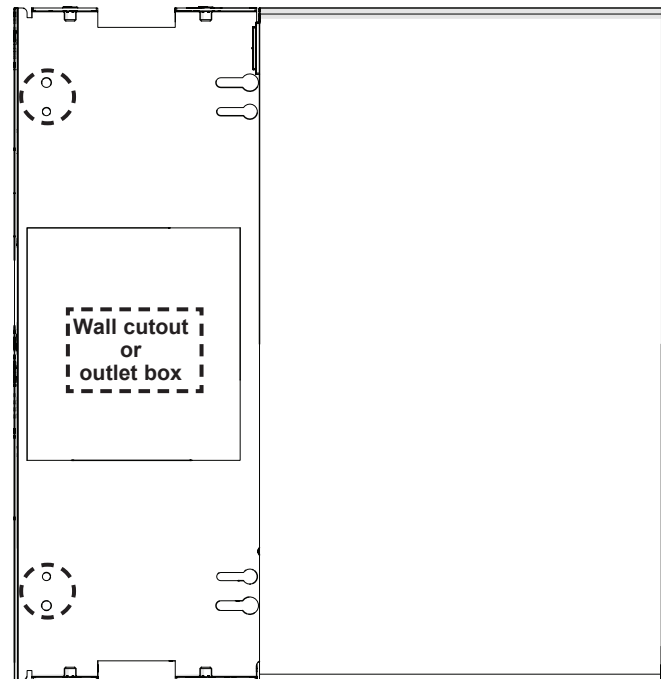
### Optional Processor Wall Mount Installation (continued)

1. Lay the processor upside down on a soft material and attach the wall mount bracket to the processor by removing and then re-using the four rear-most mounting screws on the bottom of the processor. **Do not over tighten the screws.**
2. Add self-adhesive feet to the processor at the two circled locations.



3. Slide the processor and wall mount bracket onto the two anchors. Use a level to position and mark the two screw holes that will lock the position on the wall.
4. Install fasteners into the anchors to lock the bracket in place.

Do not install the cover plate or the control panel bracket at this time.



### Optional Wire Molding Installation

If your configuration includes PVC wire molding, lay out and install the adhesive-backed sections to conceal cable runs.

Heavily textured walls or wall coatings containing nylon or Teflon may cause the adhesive to lose grip over time. If this occurs, secure each molding piece to the wall with mechanical fasteners (not provided).

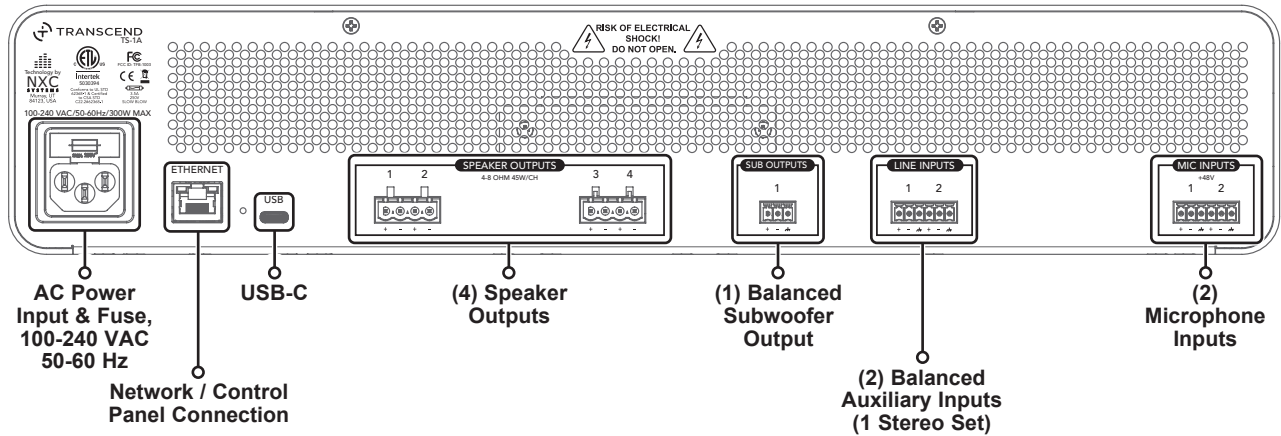
# Wiring and Connections

## Connection Overview

All cables connect to the back of the TS-1A processor. A complete installation includes:

- 2 x Shielded microphone cables
- 4 to 8 x Speaker cables (based on system size)
- 1 x Subwoofer cable
- 1 x Ethernet cable for the control panel
- 1 x USB C cable for the control panel
- 1 x IEC power cable

**Do not plug in the power cable until all connections are made.**



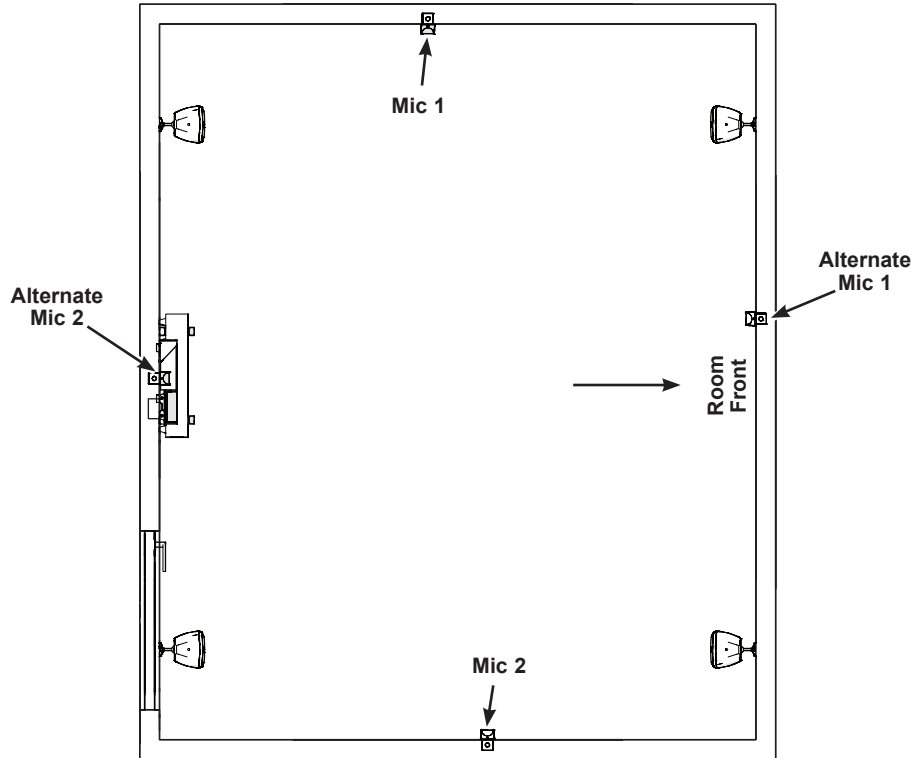
TS-1A: Amplified Model I/O Overview

# Wiring and Connections (continued)

## Wiring the Microphones

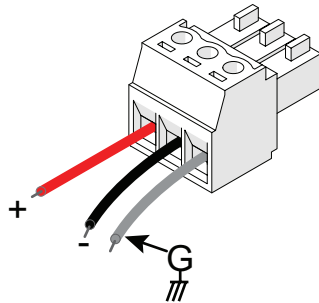
Connect the microphone cables as follows:

- When facing the front of the room, connect Mic 1 to the microphone on the left or front side.
- Connect Mic 2 to the microphone on the right or back side.



Strip and terminate the microphone cables to the removable Phoenix connector according to the polarity markings on the back of the processor. The same polarity convention applies to the subwoofer cable:

- Red/white → +
- Black → -
- Shield → Ground



# Wiring and Connections (continued)

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## Wiring the Speakers

Use the wiring diagrams that follow as a guide. Match the diagram to your system size and room layout.

The TS-1A processor has four speaker outputs. For 6- and 8-speaker systems, multiple speakers must be connected in parallel. This can be done in two ways:

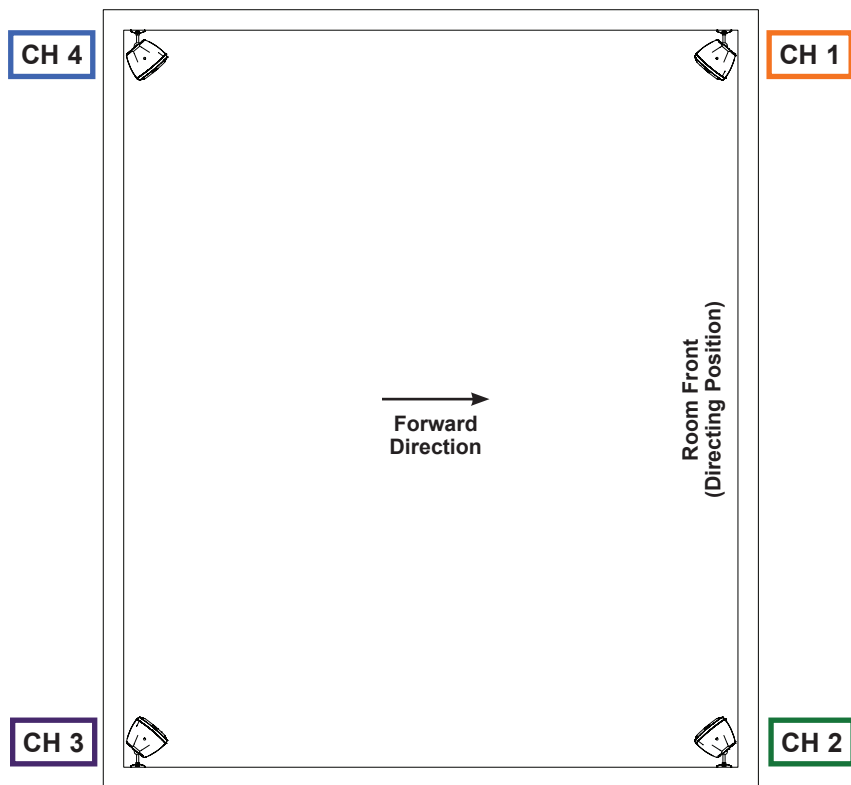
- Run a wire between the two speakers, then bring one cable back to the processor.
- Bring each speaker's cable back to the processor individually and combine them at the terminal block.

Wire polarity:

- Red/white → +
- Black → -

In the following illustrations, note the position of each speaker and which channel the speaker should be connected to on the rear of the Transcend processor.

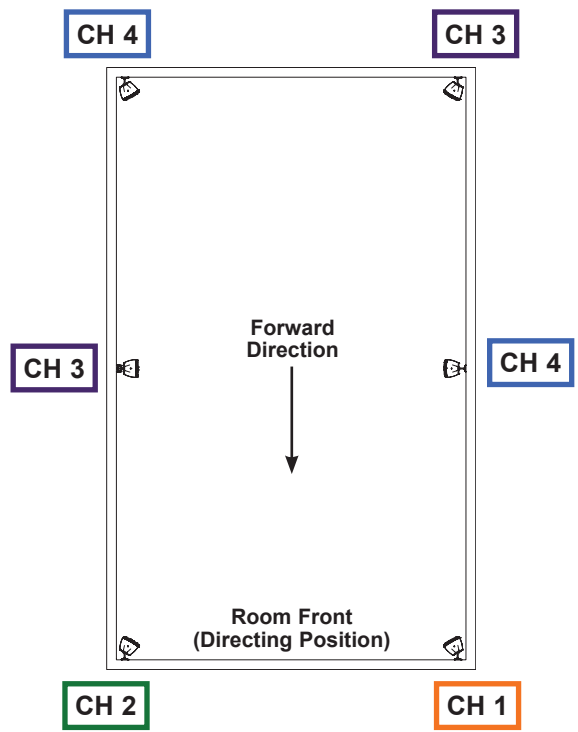
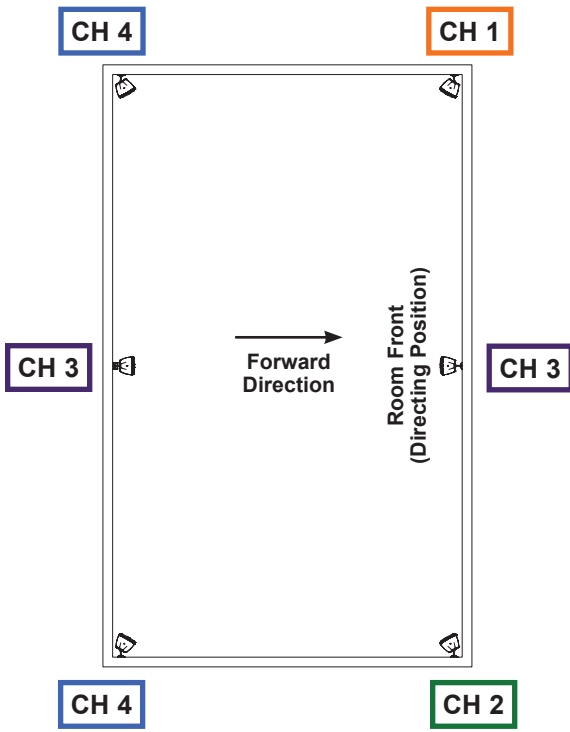
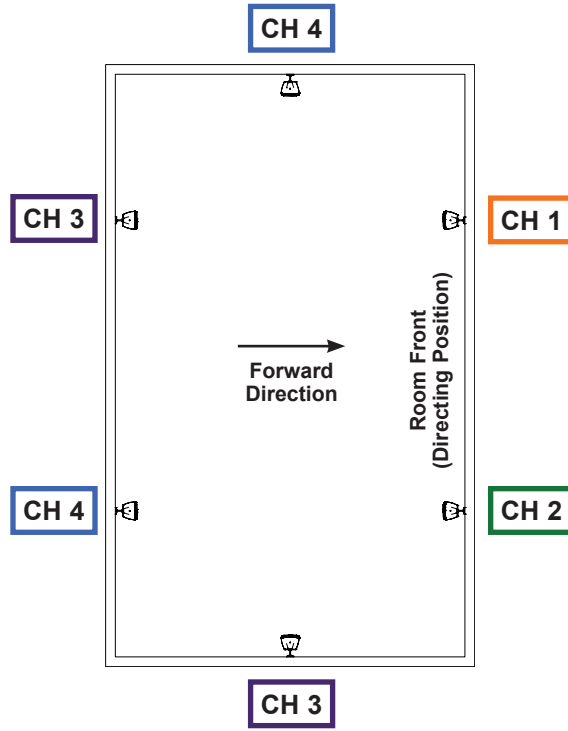
### 4-Speaker Systems



6 and 8-speaker systems are shown on the following pages.

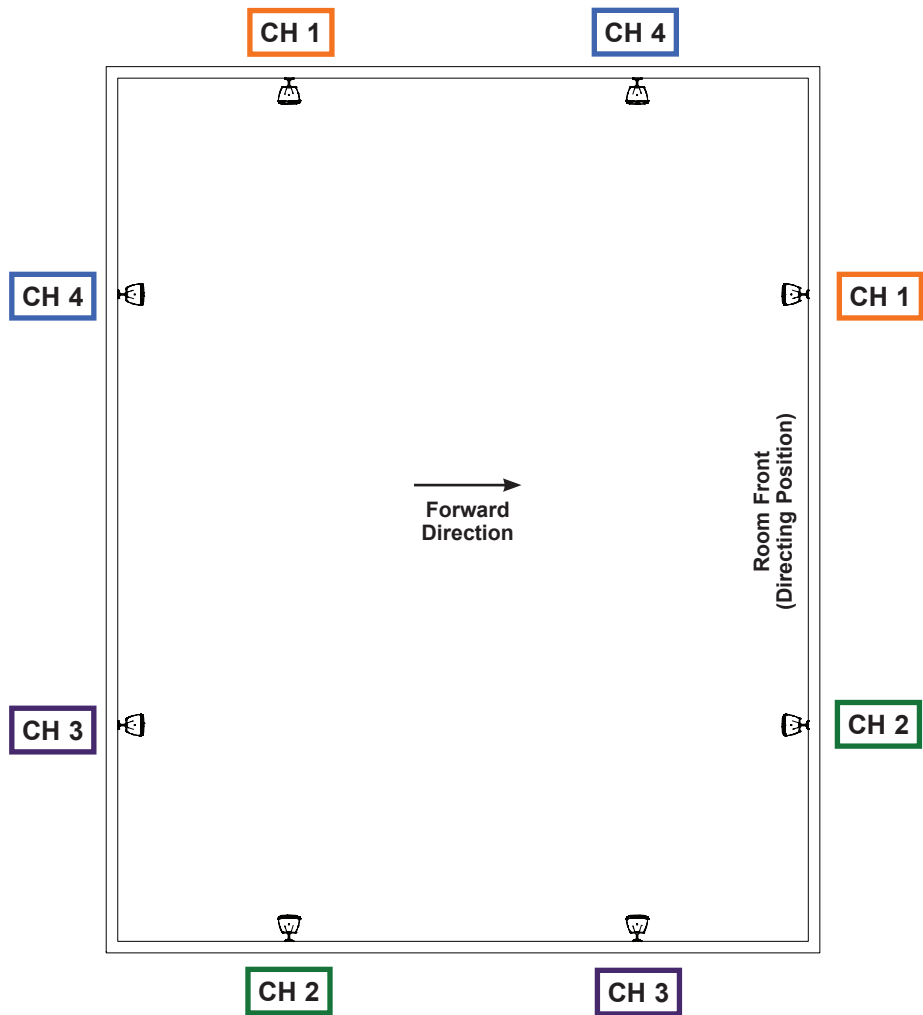
# Wiring and Connections (continued)

## Wiring the Speakers (continued) 6-Speaker Systems



# Wiring and Connections (continued)

## Wiring the Speakers (continued) 8-Speaker Systems



### Speaker Installation

Now that speaker cables have been routed and the speaker brackets have been installed, follow the instructions provided with the speakers to mount and wire the speakers.

When aiming the speakers, cover the room as evenly as possible. Avoid angling speakers significantly downward as this creates hot spots near the edges of the room.

For JBL Control 25 speakers, the best results may be obtained by aiming mid-wall speakers straight out from the wall and angling corner-mounted speakers at 45° into the room. This will help produce an even sound field.

### Optional Acoustic Panels Installation

If adding acoustic treatments is planned for the space, install and mount the acoustic panels following the instructions included with panels.

## Component Installation After Wiring



*Mounting the processor to the wall is optional.*

*This is the procedure to finish mounting the processor to the wall!*

*If the processor will not be mounted, proceed to "Control Panel Desk Stand Installation" on page 24.*

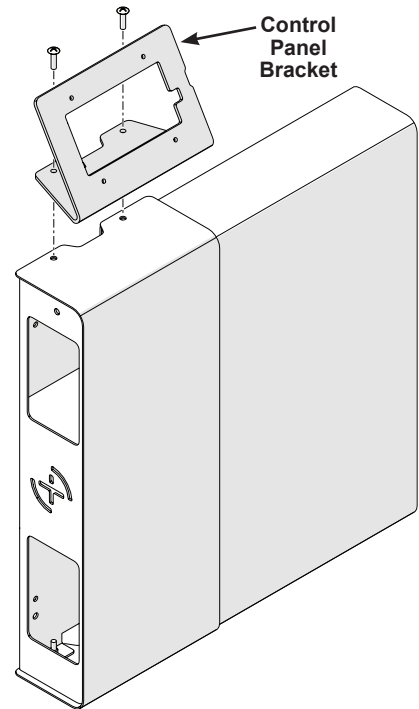
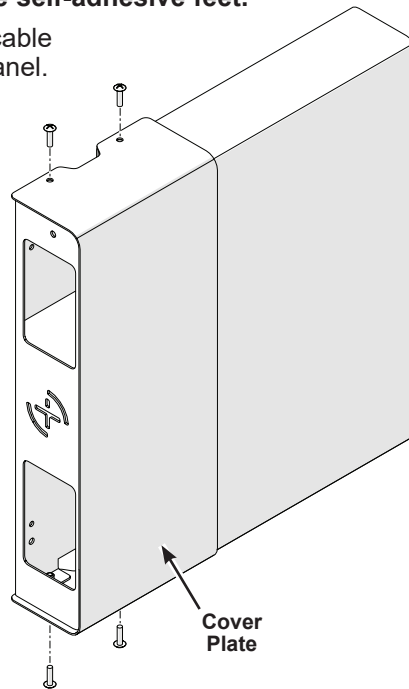
### Finish Optional Processor Wall Mount Installation

1. Attach the cover plate to the processor wall bracket using the four screws included in the processor box.

It can be attached with or without the control panel bracket.

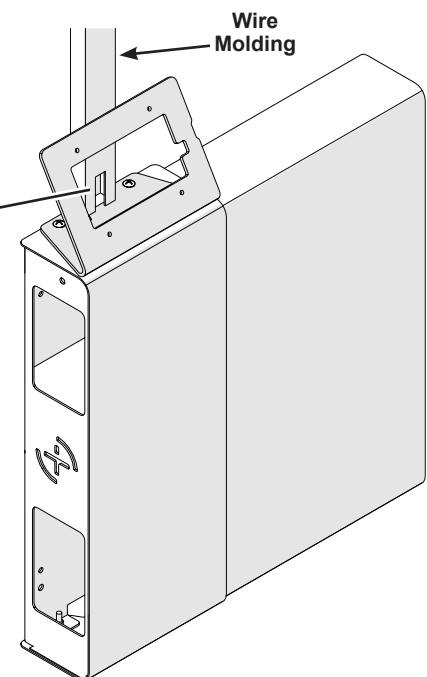
**When using the control panel bracket in this configuration, remove or do not install the self-adhesive feet.**

Leave USB-C and Ethernet cable hanging out for the control panel.



2. Cut a slot in the wire molding above the processor as shown. Pass The USB-C cable and Ethernet cable from the processor through this slot to be attached to the control panel later when it is mounted.

*Cut a slot in the wire molding to pass the USB-C and Ethernet cables through*

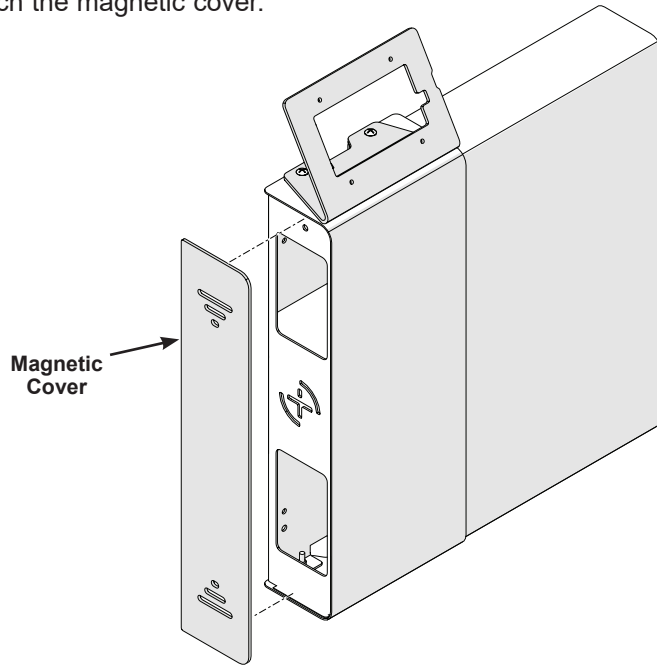


## ***Component Installation After Wiring (continued)***

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### ***Finish Optional Processor Wall Mount Installation (continued)***

3. Attach the magnetic cover.



## Component Installation After Wiring

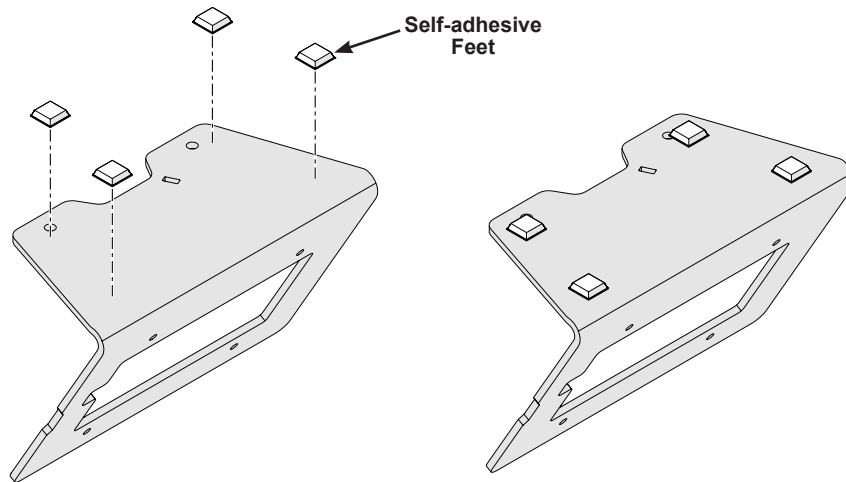


*This procedure will not be used if the optional processor wall mount has been installed.  
If the optional processor wall mount has been installed, skip ahead to "Control Panel Mounting"  
on the following page.*

### Control Panel Desk Stand Installation

If the optional processor wall mount is not part of this installation, the control panel bracket should be used as a desk stand as shown.

1. Install the four included self-adhesive feet onto the bottom of the control panel bracket.

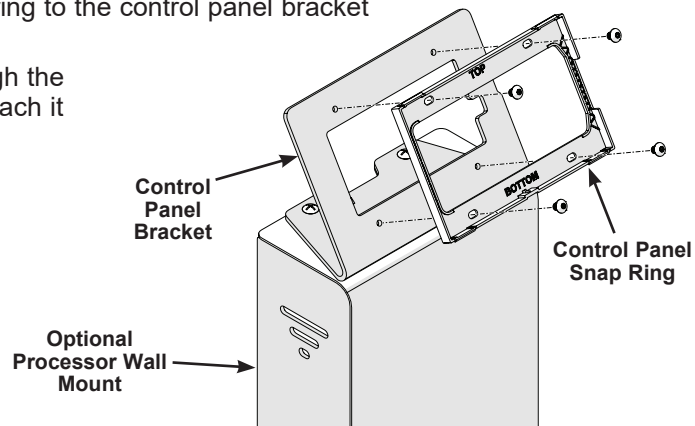


2. Continue on to "Control Panel Mounting" on the following page.

## Component Installation After Wiring (continued)

### Control Panel Mounting

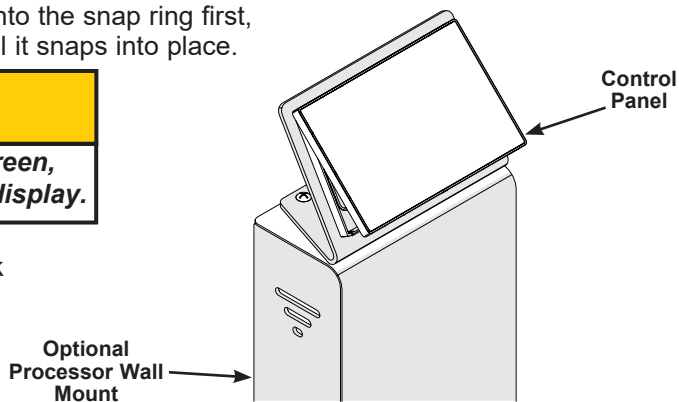
1. Attach the control panel snap ring to the control panel bracket using the included fasteners.
2. Pass the Ethernet cable through the bracket and snap ring, then attach it to the control panel.



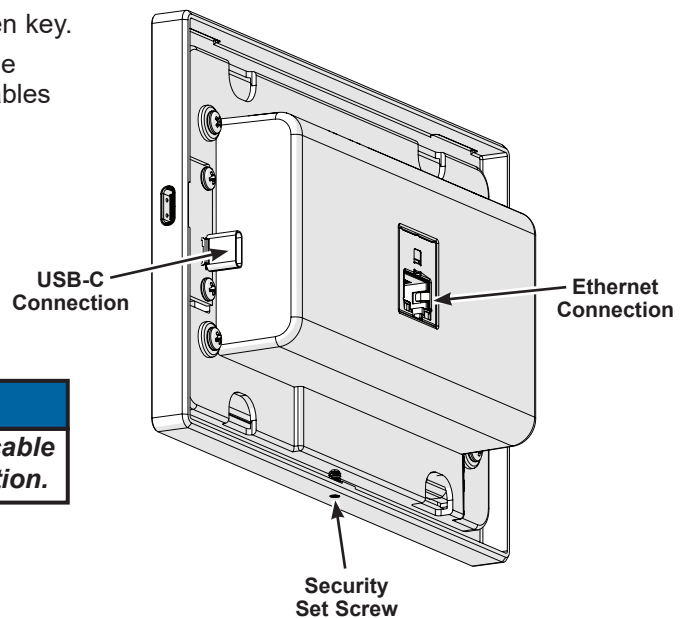
3. Hook the top of the control panel onto the snap ring first, then press down on the bottom until it snaps into place.

**CAUTION**  
To help avoid damage to the screen, only press on the edges of the display.

4. Attach the USB-C cable to the back of the control panel.



3. Install the security set screw using the included allen key.
4. If using the control panel as a desk stand, attach the other end of both the USB-C cable and Ethernet cables to the back of the processor.



**NOTICE**  
The control panel requires that both the Ethernet cable and the USB-C cable be attached for proper operation.

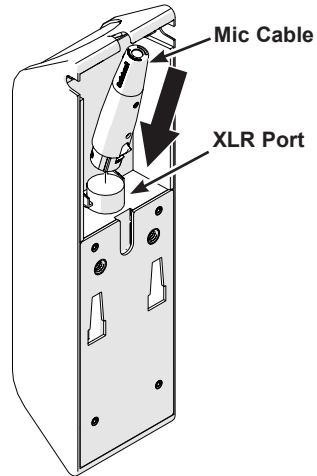
## Component Installation After Wiring (continued)



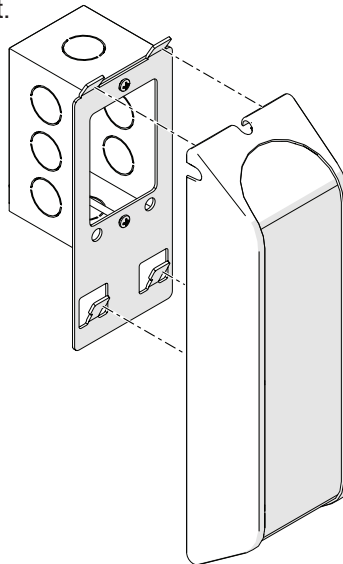
Microphones can be installed in both the wall and ceiling.  
This is the procedure for installing in the wall!  
For installing in the ceiling, proceed to the following page.

### Microphone Wall Installation

1. Connect the mic cable with the XLR connector to the XLR port on the back of the microphone.



2. Install the microphone onto the bracket.



## Component Installation After Wiring (continued)



Microphones can be installed in both the wall and ceiling.  
This is the procedure for installing in the ceiling!  
For installing in the wall, go to the previous page.

If your installation includes ceiling tiles, follow the instructions included with the ceiling tiles and install them before proceeding.

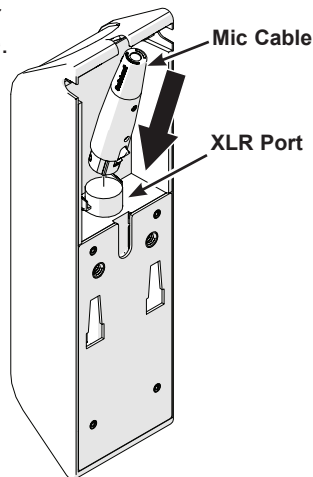
### Microphone Ceiling Tile Installation

When installing a microphone in a ceiling tile, orient it so that the cable pass-through holes point away from the center of the room. The microphone is directional.

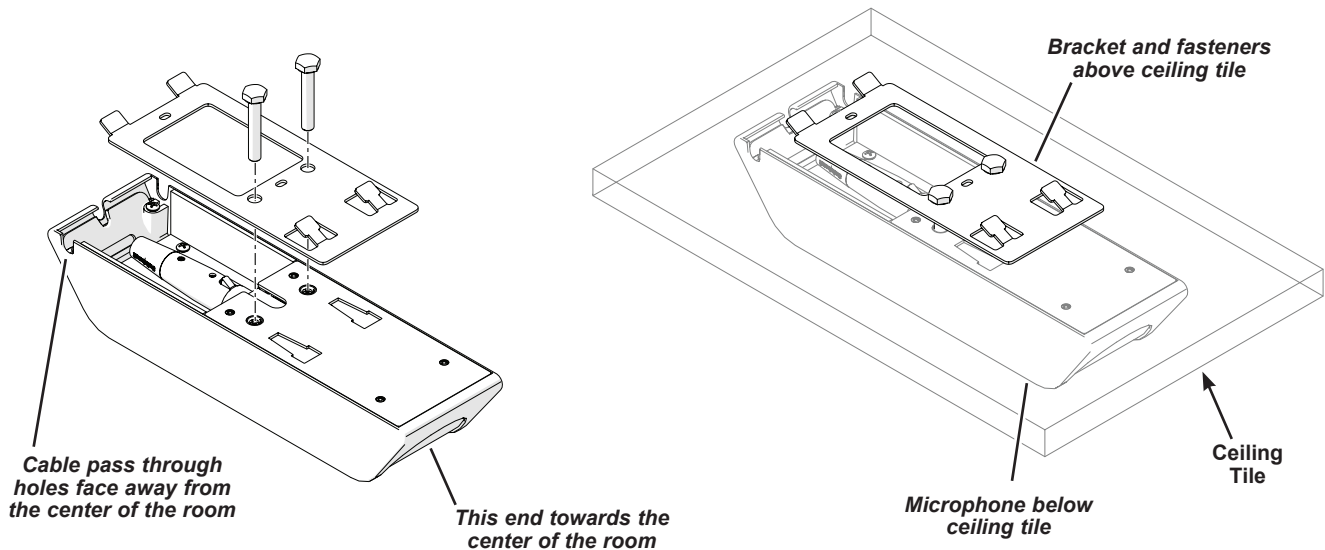
### NOTICE

Use the included thread locker when ceiling mounting the device to prevent loosening due to vibrations.

1. Connect the mic cable with the XLR connector to the XLR port on the back of the microphone.



2. Install the microphone onto the bracket.



## ***First Time Setup and Calibration***

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Before connecting power, confirm that all connections are complete and all components are installed in their final positions. If any component is repositioned after calibration, auto-calibration must be run again. All acoustic wall and ceiling treatments should be installed prior to calibration.

The first time the system powers on, the control panel may perform a firmware update.

Once the update is complete, follow the on-screen instructions to set up and calibrate the system.

### ***NOTICE***

***Select Studio for the system type (not SoundLok).***

***If SoundLok is accidentally selected, contact Wenger Corporation for further instructions to perform a reset.***

During calibration, do not block the microphones or speakers or place any objects in front of them. Obstructions can affect system tone and measurement accuracy.

After calibration, refer to the Quick Start Guide included in the processor box for instructions on daily use.

### ***NOTICE***

***The subwoofer for Transcend Studio has an automated sleep feature to conserve energy when not in use. Disconnect the subwoofer from power for 10 seconds then reconnect it before running auto-calibration. Otherwise, the subwoofer will miss the first measurement in the auto-calibration process.***

## ***Additional Resources***

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For troubleshooting documentation, EQ adjustment guidance, auxiliary input configuration, and other advanced topics, refer to the complete resource manual at [wengercorp.com](http://wengercorp.com).

If you encounter any issues during or after installation, contact Wenger Corporation support at (800) 4WENGER (493-6437) in the U.S. or +1-507-455-4100 worldwide.