Column Array Speaker

SP-5000

INSTALLATION GUIDE

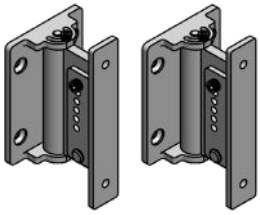
The TeachLogic SP-5000 is a wall-mounted column array loudspeaker designed to deliver clear, evenly distributed sound reinforcement across classrooms, auditoriums, houses of worship, boardrooms, and similar commercial spaces. Its slim column enclosure and adjustable wall bracket aims sound directly at the listening area while keeping the footprint on the wall to a minimum.

The SP-5000 is sold and shipped as a matched pair, so that both channels of a stereo or distributed audio system can be installed with identical hardware.

Package Contents

(2) Column array speakers
(1) pair

(2) Phoenix-style 4-pole terminal blocks



(2) Wall brackets

ITEM	QTY	DESCRIPTION
Column array speaker & Mounting screws (for wall bracket assembly)	2	One matched pair packaged together. Ships with (2) pre-assembled M6 screws for attaching each wall mount bracket
Wall mount bracket	2	Includes the wall and speaker attachment components including angle adjustment hardware.
Phoenix-style terminal block, 4-pole	2	Detachable screw-terminal connector for speaker wire; one per speaker.

NOTE: Wall anchors for attaching the wall bracket to the building structure are NOT included. The correct hardware depends on the wall or ceiling construction at the installation site (wood or metal stud, drywall alone, masonry, etc.). The installer must select venue-appropriate anchoring hardware rated to support the combined weight of the speaker and bracket assembly.

Important Safety Instructions

Please read and follow these instructions. Follow all warnings. A qualified installer familiar with local building and electrical codes should install this equipment.

- Read these instructions in full before beginning installation and keep them for future reference.
- This product should be installed and serviced only by a qualified installer or technician.
- Two installers are recommended when lifting, positioning, or holding the speaker in place during mounting.
- Verify that the wall or mounting surface, as well as the anchoring hardware selected, can safely support the combined weight of the speaker and bracket assembly with an adequate safety margin.
- Anchor to a structural stud whenever possible. When anchoring to drywall or masonry alone, use anchors rated for the application.
- Disconnect the amplifier or receiver from AC power before making, changing, or inspecting any speaker wire connections.
- Do not exceed the power handling or impedance rating of the SP-5000. Driving the speaker beyond its rated limits can cause permanent damage and voids the warranty.
- Do not install the speaker near heat sources, in locations exposed to moisture or dripping water, or in environments outside its rated operating range.
- Use only attachment hardware and accessories specified or approved by Williams AV.
- Do not modify the speaker enclosure, bracket, or wiring in any way not described in this manual.

Tools & Materials Needed (not included)

- Phillips and flathead screwdrivers
- Drill/driver with bits sized for the chosen wall anchors
- Stud finder (recommended for wood- or metal-stud walls)
- Level
- Tape measurer
- Pencil
- Wire strippers
- Wire cutters
- Wall anchors or toggle bolts rated for the mounting surface and the combined weight of the speaker assembly
- Speaker wire suitable for the run length and (where required by local code) rated for the space it passes through (e.g., plenum-rated cable in air-handling spaces)
- Ladder or lift appropriate for the mounting height
- Safety glasses (for drilling)

Planning the Installation

- Choose a mounting location with a clear, unobstructed path for sound to reach the primary listening area.
- Locate a stud so that at least two of the mounting screws create a secure anchor point.
- For paired or stereo installations, mount both speakers at the same height and the same pivot angles so the sound field is balanced across the room.
- Identify the wall construction (wood or metal stud, drywall alone, masonry, tile, etc.) in order to select the appropriate anchoring hardware.
- Plan and route speaker wire from the amplifier location to each mounting point before installing the wall bracket, leaving enough slack at the bracket location to comfortably connect the wire to the Phoenix-style terminal block.
- Confirm the amplifier or receiver is powered off before running, connecting, or disconnecting any speaker wiring.
- Mark and confirm the mounting location with a level before drilling, and re-check that it clears any studs, conduit, or plumbing that must be avoided.

Speaker Wire Connection

The SP-5000 uses a detachable 4-pole Phoenix-style terminal block, which can be removed from the speaker for easier wiring on a bench or ladder, then reinserted once wired.

Note: The screws on the Phoenix-style terminal block are shipped ready to accept wire. The screws do not need to be pre-loosened.

⚠WARNING! Always disconnect the amplifier from AC power before connecting or disconnecting speaker wiring at the terminal block.

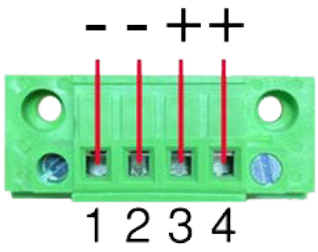


Figure 1

The positive (+) terminal connects to position 3 or 4. The negative (–) terminal connects to position 1 or 2.

To wire the connection:

1. Strip approximately 3/8 inch (10 mm) of insulation from each conductor — enough for the bare wire to fully seat in the terminal without leaving exposed copper outside the block.
2. Insert the stripped conductor fully into the appropriate terminal opening.
3. Tighten the terminal screw firmly.
   - Avoid overtightening, which can strip the terminal or crush the wire strands.
   - Avoid undertightening, which can cause an intermittent or noisy connection.
4. Keep the polarity consistent across both speakers in a pair to prevent phase cancellation between the two speakers.
   - For example, land the same conductor (by color or marking) on the positive terminal.
5. After wiring, gently tug each conductor to confirm it is fully seated and secure before reinserting the terminal block into the speaker.

Installation Instructions

Read all of the steps before starting the installation process.

To mount and position the speakers:

1. Complete the speaker wire connection before mounting or plan to land the wire after the speaker is hung, as described in “Speaker Wire Connection” on page 3.
2. Mount the wall bracket.

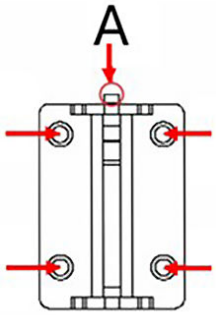


Figure 2

a. Hold the wall bracket at the marked, leveled location and mark the wall through the mounting holes indicated by the arrows in Figure 2.

b. Using the appropriate installer-selected attachment hardware, drive wall anchors into the marked locations, then fix the wall bracket to the wall. Pay attention to the direction of the hook groove so that the speaker bracket will hang correctly.

c. Confirm the bracket is level and securely fastened by gently pulling on the mounted bracket to check for movement.

d. Loosen the screw at position A to allow the bracket to pivot left and righthis sets the horizontal aim of the speaker once it is hung. Leave the screw at A loosely fitted for now.

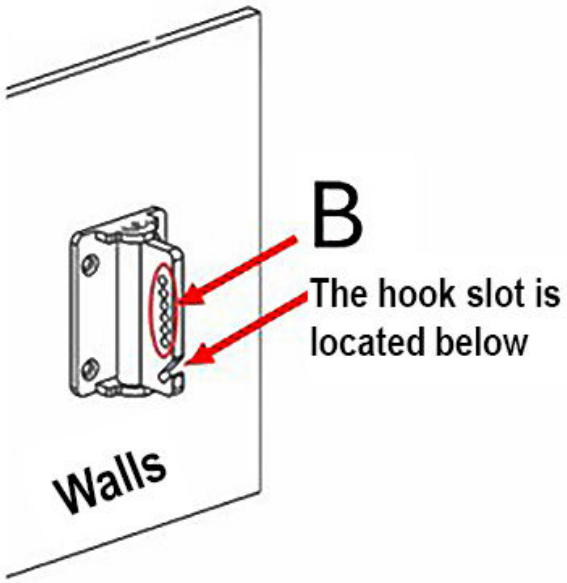


Figure 3

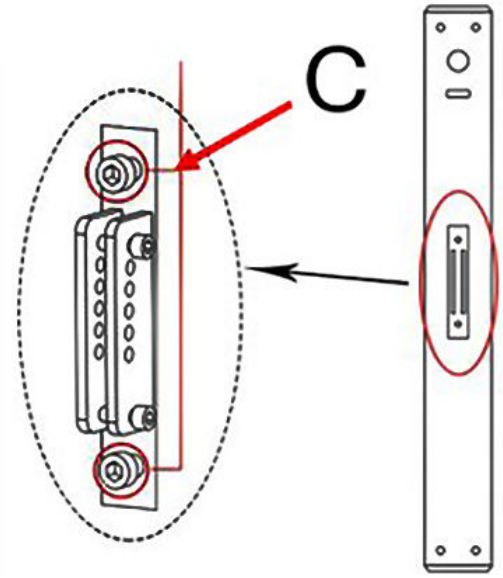


Figure 4

3. Set the angle-adjustment reference.
   a. The holes at position B (Figure 3) can be adjusted up and down to set the vertical tilt of the speaker.
   b. Note that the hook slot used to hang the speaker bracket is located just below hole

4. Attach the speaker bracket to the speaker.
   a. Assemble the smaller speaker bracket components (position C in Figure 4) onto the two mounting holes on the back of the column array speaker. The M6 screws are pre-assembled into the speaker inserts.
   b. The bracket's angle-adjustment hole should lines up with the wall bracket's hook slot.
   c. Tighten the mounting screws firmly. Avoid overtightening, which can strip the threaded inserts in the speaker enclosure.

5. Hang and secure the speaker.
   a. With a second installer supporting the speaker, hang and insert the screws on the bottom of the smaller speaker bracket into the slotted hook of the wall bracket.
   b. Align the angle-adjustment holes on the wall bracket and the speaker bracket to the angle determined during planning.
   c. Tighten the screws inserted in this step (Figure 5).
   d. Tighten the screw at position A (Figure 2) fully once the left-right angle is confirmed.

6. Before releasing support of the speaker, confirm the speaker is securely mounted by gently testing for any wobbling at both the wall bracket and the speaker bracket.

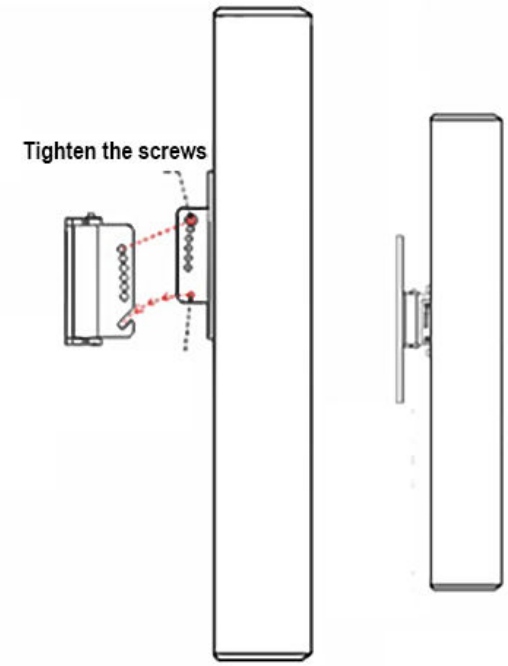


Figure 5

Adjusting the Speaker Angle

The SP-5000 wall bracket allows the speaker's aim to be fine-tuned after mounting:

- **Left-right (pan) angle**: loosen the screw at position A (Figure 2), pivot the bracket to the desired angle, then retighten firmly.
- **Up-down (tilt) angle**: select the hole position at B (Figure 3) that best aligns the speaker toward the listening area, then tighten the corresponding screws.
- Re-check both angles for the paired speaker to keep the stereo image balanced.
- Periodically re-check tightness in high-traffic or high-vibration spaces.

Testing the Installation

- With the amplifier volume at a low level, power on the system and confirm that each speaker reproduces sound on the correct channel.
- Listen for buzzing, rattling, or distortion, which can indicate a loose bracket screw, a wall anchor that isn't fully seated, or a wire that is not fully secured in the terminal block.
- Walk around the primary listening area to confirm even sound coverage and a balanced stereo image between the paired speakers.
- Recheck all mounting hardware for tightness after the initial test, and again after the system has been in use for a few days.

Care and Maintenance

- Do not use liquid cleaners, solvents, or abrasive cleaning pads on the grille or enclosure.
- Dust the speaker grille periodically with a soft brush or a vacuum brush attachment.
- Periodically inspect wall anchors and bracket hardware for tightness, particularly in gymnasiums, auditoriums, or other high-vibration environments.
- Avoid painting over the speaker grille. This can restrict acoustic transparency and change the speaker's sound.
- Keep the speaker's terminal connections free of dust and moisture.
- If the unit is removed for maintenance, disconnect power at the amplifier first.

Troubleshooting

SYMPTOM	POSSIBLE CAUSE	SUGGESTED SOLUTION
No sound from one speaker	Terminal block not fully seated, or wire not secured in the terminal	Reseat the terminal block; verify each conductor is fully inserted and the terminal screw is tight
No sound from one speaker	Amplifier channel not active or muted	Confirm the corresponding amplifier channel is powered and unmuted
Buzzing or rattling	Loose bracket screw, wall anchor, or angle-adjustment hardware	Power off, then check and retighten all mounting hardware
Distorted sound	Amplifier driven beyond the speaker's rated power or impedance	Verify the amplifier's output matches the SP-5000's power and impedance rating
Uneven volume between paired speakers	Mismatched amplifier gain settings or a partially shorted/ reversed wire	Confirm matching gain settings on both channels; re-check polarity and wire connections at both speakers
Speaker angle drifts over time	Angle-adjustment screws not fully tightened	Retighten the screws

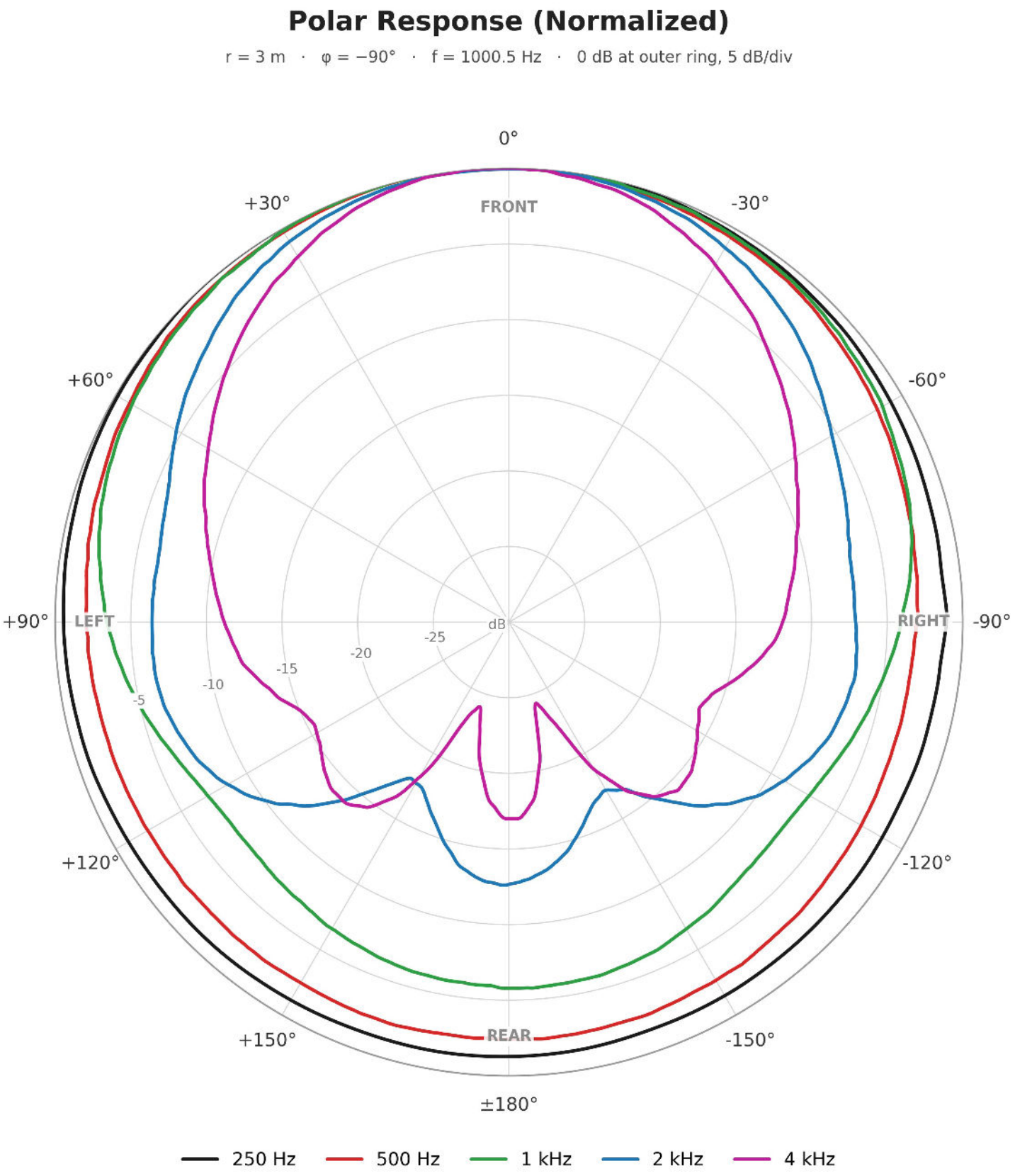
If the problem persists, contact Williams AV Technical Support before returning or servicing the unit. See "Contact & Support" on page 8 for details.

Specifications

SP-5000

SPECIFICATION	VALUE
Intended use	Indoor environment, mounted to wall or adjacent to flat panel display
Configuration	2-unit matched pair, wall-mount column array
Connector type	4-pole detachable Phoenix-style terminal block
Frequency response	110 Hz to 20 kHz
Power handling (RMS / peak)	50W RMS / 200W Peak
Nominal impedance	8Ω
Sensitivity (1W/1m)	87dB
Dispersion angle	20° vertical, 120° horizontal
Dimensions (H x W x D)	26.4” (670 mm) x 3.2” (80 mm) x 3.9” (100 mm)
Weight (per speaker)	2.2kg (4.85 lbs)
Enclosure material	ABS mixed aluminum alloy reinforced box
Finish	Black powder-coated
Grille material	Metal mesh
Operating temperature range	32°F to 104°F (0°C to 40°C)
Driver unit	4 x 2.5” neodymium drivers
Mounting holes	2 x M6

Polar Plot


Polar Response (Normalized)
r = 3 m · φ = −90° · f = 1000.5 Hz · 0 dB at outer ring, 5 dB/div
0°
+30°
-30°
FRONT
+60°
-60°
+90°
LEFT
RIGHT
-90°
dB
-25
-20
-15
-10
-5
+120°
-120°
REAR
+150°
-150°
±180°
250 Hz
500 Hz
1 kHz
2 kHz
4 kHz

Recycling Instructions

Please Recycle.

Help Williams AV protect the environment!

		Do not dispose of batteries or equipment in the trash. Please take the time to dispose of your equipment properly at an electronics recycling center.

Compliance & Certifications

CE RoHS

Limited Warranty

TeachLogic-branded products, including loudspeakers such as the SP-5000, are covered by a five (5) year limited warranty against defects in materials and workmanship from the date of purchase, under normal installation, use, and service conditions. The warranty does not extend to damage caused by accident, misuse, unauthorized modification, improper installation, power surges, or use with non-TeachLogic components. Repairs made by parties other than TeachLogic or Williams AV or its authorized service agencies may void the warranty.

For complete warranty terms and to arrange a return authorization (RA#) for service, visit teachlogic.com/warranty or contact Williams AV Technical Support.

Contact & Support

For additional support, specifications, or replacement parts, visit the Williams AV website or reach out using the contact information below.

https://williamsav.com/support/

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