

Wall

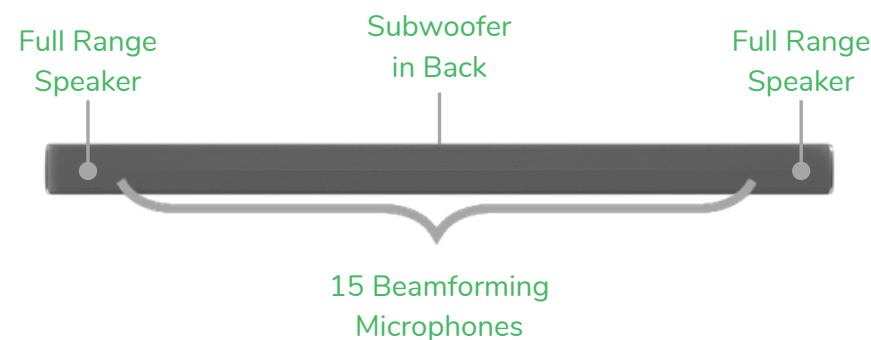
User Manual



model: wall1

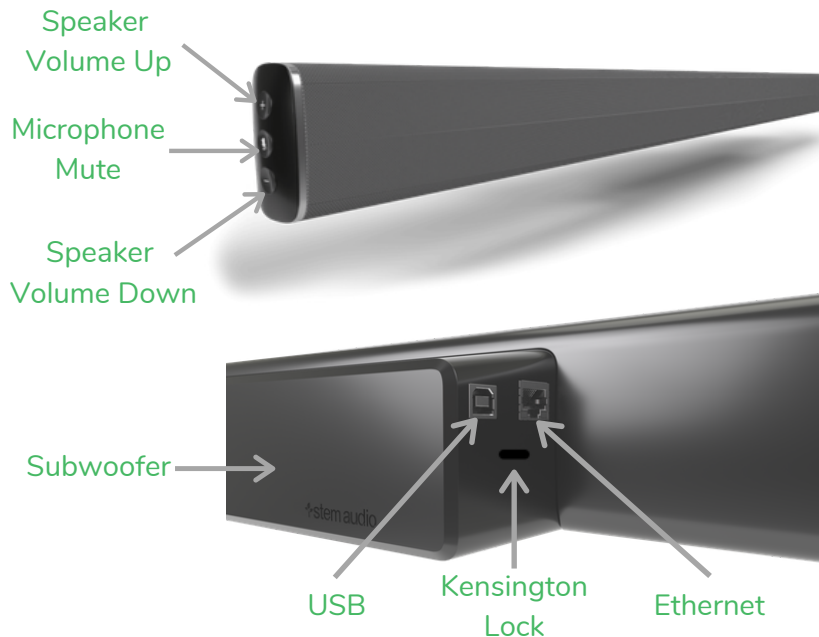
Overview

Optimized to sit on any flat surface or to be mounted on any wall, the Stem Wall is a high-quality conferencing bar array that turns any environment into a professional conference room. Equipped with 15 microphones that perform real beamforming plus full-range speakers and subwoofers, Wall ensures everybody has a voice.



Setting Up

All Stem endpoints can be used as solo standalone devices or in unison with other devices within the Stem ecosystem. If you plan on using this device as an individual unit, then follow the standalone setup instructions. If you plan on using multiple Stem devices in your room, then skip ahead to the multiple device setup instructions.



Standalone Setup (option 1)

1. Place or mount the device in a desired location in the room.
2. Using an Ethernet cable, connect the device to a network that supports PoE+. *This connection provides the device with power, data, and other IoT and SIP capabilities.*

Note: If your network doesn't support PoE+, you should purchase a separate PoE+ injector or PoE+ enabled switch.

3. If you need video conferencing capabilities, use the USB type B cable provided and connect the device to your PC.

4. Lastly, we recommend you complete setting up your room via the Stem ecosystem platform. For more information on setting up your room, you can visit stemaudio.com/manuals or stemaudio.com/videos

Note: The ecosystem platform is available on the Stem Control or in iOS, Windows, and Android apps. You can also access the platform through your web browser by typing in the product's IP address.

5. That's it! Your Wall is all set up to work as a standalone device.

Multi-Device Setup (option 2)

1. Place or mount the device in a desired location in the room.
2. Using an Ethernet cable, connect the device to a network that supports PoE+. *This connection provides the device with power, data, and other IoT and SIP capabilities.*

Note: If your network doesn't support PoE+, you should purchase a separate PoE+ injector or PoE+ enabled switch.

3. When setting up multiple Stem devices in a room, make sure you have a Hub. All communications between the device and the far-end will be done through the Hub, so *no USB connection is needed.*

4. You must complete setting up your room via the Stem ecosystem platform. For more information on setting up your room, you can visit stemaudio.com/manuals or stemaudio.com/videos

Note: The ecosystem platform is available on the Stem Control or in iOS, Windows, and Android apps. You can also access the platform through your web browser by typing in the product's IP address.

5. That's it! Your Wall is all set up to work within the Stem ecosystem.

Mounting

1. Using a level, mark two points on your mounting surface at exactly 16 inches apart (40.6 cm).

2. Place screws in the two marked points via studs or anchors.

Note: Make sure your screws can support up to 14 lbs. (6.35 kg).

3. To mount the device onto the screws, align the guide marks on the back of the device with the screws.



4. Once the screws are aligned with the guide marks on the device, lightly push in and down to lock in place.

5. That's it! Your Wall is now mounted!

Using Wall

The Directional Array



During a call, Wall uses proprietary beamforming technology to locate a legitimate voice source and to steer an array towards it. This allows Wall to focus on the speaker in the room and cancel out all other noise. The beamforming process is dynamic as it adjusts the direction of the array when the source of sound changes or moves. In a call, when a voice is detected in the room, one or multiple blue lights located on the device will indicate which direction Wall's audio beam is focusing on. This is the direction that will be heard best by the far-end of the call (the person you are talking to).

Volume Control

Speaker

Change the speaker volume by using **+** to increase, or **-** to decrease the volume.

Mute

To mute Wall's microphones during a call, press  located on the side of the device. When muted, the lights on the device will slowly pulse red. To unmute, just press  again.

Light Guide

Light Activity	Device Function
Slow red pulsing	Device is muted
Rapid red pulsing (approx. two seconds)	Device is being pinged
Solid red line	Device error
Single blue light moving from left to right	Device is booting up
Blue lights turning off from right to left	Device is restarting
Partial blue dots shifting	Device is adapting & testing the environment
Directional blue light	Direction of voice pickup in progress

Product Specs

Connectors

- USB: USB Type B
- Ethernet: RJ45 connector (requires PoE+)

Specs

- Frequency response: 50Hz – 16KHz
- Broadcast level (peak): 90dB SPL @ 1KHz from 1m (5 watts RMS)
- Noise cancellation: > 15dB (without pumping noise)
- 100% full duplex – no attenuation (in either direction) during full duplex
- High-end performance conforms to ITU-T G.167
- Acoustic echo cancellation: > 40dB with conversion speed of 40dB/sec
- Residual echo is suppressed to the environment noise level, preventing artificial ducking of signal
- 15 high-quality beamforming microphones
- Two subwoofers: 10 watts (RMS) each & two full range speakers: 4 watts (RMS) each
- Direction-finding algorithm (determines the presence and direction of a speaker)
- Beamforming algorithm (forms and directs audio beams towards a defined direction)
- Automatic voice-level adjustment (AGC)
- Weight: 7.5 lbs. (3.4 kg)
- Dimensions: Length: 48 in. (121.9 cm) Depth: 3.5 in. (8.9 cm) Height: 3.25 in. (8.3 cm)
- Power Consumption: PoE+ 802.3 at Type 2
- Operating Systems: Windows 98 and up / Linux / MacOS.

Complies with:

- AS/NZS CISPR 32:2015
- EN 55032:2012/AC:2013
- VCCI 32-1
- FCC 15.109:2019
- FCC 15.109(g):2019
- ICES-003:2016 updated April 2017

Warranty

The following warranty statement is effective for all Stem Audio products as of May 1st, 2019. Stem Audio warrants that this product is free of defects in both materials and workmanship. Should any part of this product be defective, the Manufacturer agrees, at its option, to repair or replace with a like-new replacement any defective part(s) free of charge (except transportation charges) for a period of two years for all products. This warranty period begins on the date the end-user is invoiced for the product, provided the end-user provides proof of purchase that the product is still within the warranty period and returns the product within the warranty period to Stem Audio or an authorized Stem Audio dealer according to the Product Return and Repair Policy listed below. All inbound shipping costs are the responsibility of the end-user, Stem Audio will be responsible for all outbound shipping costs.

Product Return and Repair Policy

1. Return to seller if purchased through an authorized dealer Proof of purchase date from reseller within the warranty period must be provided by the end-user Seller may, at its discretion, provide an immediate exchange or repair or may return the unit to the manufacturer for repair
2. Return to Manufacturer
 - a. An RMA (return merchandise authorization) number must be obtained by the end user from Stem Audio
 - b. The end-user must return the product to Stem Audio with proof of purchase (showing purchase date) for a warranty claim, and display the RMA number on the outside of the shipping package.

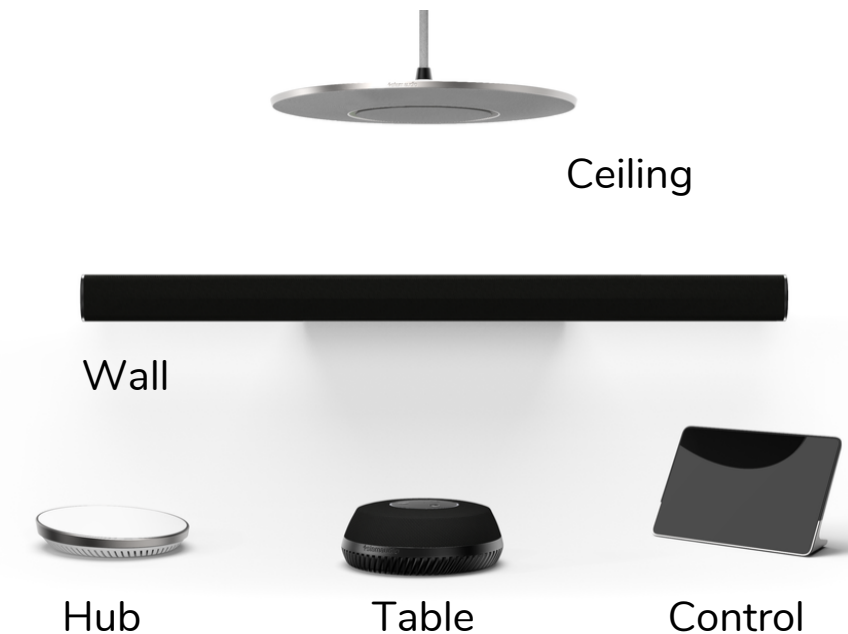
THIS WARRANTY IS VOID IF:

The product has been damaged by negligence, accident, act of God, or mishandling, or has not been operated in accordance with the procedures described in the operating and technical instructions; or; The product has been altered or repaired by other than the manufacturer or an authorized service representative of the Manufacturer; or; Adaptations or accessories other than those manufactured or provided by the Manufacturer have been made or attached to the product which, in the determination of the Manufacturer, shall have affected the performance, safety or reliability of the product; or; The product's original serial number has been modified or removed.
NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, APPLIES TO THE PRODUCT. MANUFACTURER'S MAXIMUM LIABILITY HEREUNDER SHALL BE THE AMOUNT PAID BY THE END USER FOR THE PRODUCT.

The manufacturer shall not be liable for punitive, consequential, or incidental damages, expenses, or loss of revenue or property, inconvenience, or interruption in operation experienced by the end-user due to a malfunction in the purchased product. No warranty service performed on any product shall extend the applicable warranty period. This warranty extends only to the original end-user and is not assignable or transferable. This warranty is governed by the laws of the State of California. For more information or technical support please refer to our website www.stemaudio.com, email us at customerservice@stemaudio.com, or call (949) 877-7836.



The Ecosystem



Need Some Help?

Website: stemaudio.com

Email: customerservice@stemaudio.com

Telephone: (949) 877-STEM (7836)

Product Quickstart Guides:

stemaudio.com/manuals

Product Setup Videos:

stemaudio.com/videos

