

# MimioClarity Classroom Audio Distribution System



MimioClarity is a standalone or networked classroom audio distribution system that shares teacher, student, and lesson media throughout the classroom. It integrates with the Connected Classroom and existing audio solutions.

## Features

MimioClarity comes in a bundle of:

- Amplifier/receiver (AMP/REC)
- Teacher microphone
- Student microphone
- 2-USB-C Charging Cables
- Option of speakers
  - Cut-in Ceiling Speakers
  - Wall Mount Speakers
  - Lay-In Speakers

## Options

The following bundles and kits are available:

- Classroom Bundle:
  - 4 Wall Mount Speakers (MC-AMP-KIT-W4)
  - 4 Cut-In Ceiling Speaker (MC-AMP-KIT-CI4)
  - 4 1x2 Lay-In Speakers (MC-AMP-KIT-D4)
- Small Classroom Bundle:
  - 2 Wall Mount Speakers (MC-AMP-KIT-W2)
  - 2 Cut-In Ceiling Speakers (MC-AMP-KIT-CI2)
  - 2 1x2 Lay-In Speakers (MC-AMP-KIT-D2)

- Classroom Kit: (MC-AMP-KIT V1.0)
  - Amplifier/Receiver
  - Teacher Microphone
  - Student Microphone
  - 2-USB-C Charging Cables
  
- Speaker Kits:
  - Classroom Cut-in Speaker Kit (2 Speakers) (MC-S-CI)
  - Classroom 1 x 2 Lay-In Speaker Kit (2 Speakers) (MC-S-D1x2)
  - Classroom Wall Mount Speaker Kit (2 Speakers) (MC-S-W)
  
- Additional Components:
  - Teacher Microphone (MC-MIC-T V1.0)
  - Student Microphone (MC-MIC-S V1.0)
  - 2 USB-C Charging Cables



## Specifications

### MimioClarity Amplifier

Standalone or networked amplification of lesson media, combined amplifier and receiver (AMP/REC) which can pair/connect up to four microphones in any combination of teacher and/or student microphones. Teachers that utilize more than one room can pair and connect with a simple press of a button. When paged by school PA system, the amplifier mutes.

Integrates with a school PA or SIP system, by muting the classroom audio to allow communication from outside the classroom. When configured as a SIP endpoint, the class uses the microphones to talk and the system's speakers to hear.

Once installed, there's no need to touch it again. IT can manage the system through their network and teachers have access through a web app.

Please Note: Clarity AMP is intended to be fastened in place about 2 meters High.



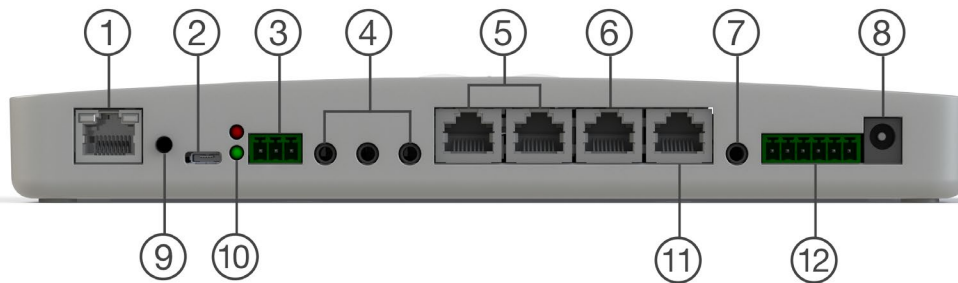
Base Station and Amplifier	
Amplifier Type	92% Efficient Class D
Integrated Mic Receiver	Connect any combination of four MimioClarity teacher or student microphones.
Compatible Mics	MimioClarity microphones
Networked	100 Mbps POE. Integrated with the school systems, centrally managed via the IT portal, control via a teacher app, and PoE provides secondary power source.
ALD Output	Connect to legacy ALD systems with control volume
Speaker Configurations	2,4, 6, or 8 (4 speakers typical)

Continuous Power	60 watts (30 watts [rms] per channel x 2 channels @ 8 ohms) Secondary amp powered by POE (10 watts per channel)
Minimum Load Impedance	2 ohms
Signal to Noise	94 dB @ 20 Hz to 20 kHz at maximum output
Output Signal Amplitudes	2 VPP maximum
Output Level	+2 dBm nominal
Total Harmonic Distortion	<1% @ 1kHz into 8Ω
Tone Control	Yes
Baud Rate	2,400–115,200
Frequency	DECT 1.9Ghz (Does not interfere with Bluetooth or Wi-Fi)
Wireless Range	Up to 100 ft
Reception Area	1,256 ft <sup>2</sup>

## Controls and Integration

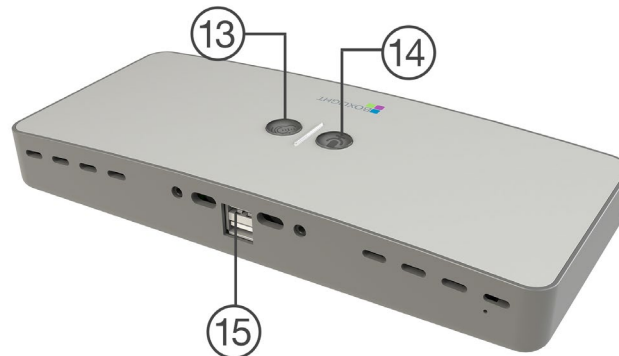
User Control	Volume control (inputs and output levels) plus mute Preset equalizer and multiband settings Network settings and Bluetooth pairing Streaming audio control Firmware updatable
User Level Control	Multiple user level (User & IT)
Presentation Control	When connected from the AMP via USB-C to the computer, use the Teacher Microphone to advance the presentation either Page Up or Down.

## Inputs, Output, Connections, and Buttons



①	Ethernet	10/100 Mbps POE
②	USB C Interface	1 x USB C (Bottom side: Interface with local computer)
③	Control I/O	1 x 3 Pin Phoenix Connector, RS 232
④	Audio Line In	3 - Line In 3.5
⑤	Audio Line In With Control	2 x RJ 45-line level audio input, RS 232, Power 5/24 DC output option
⑥	Audio Line In With Control	1 x RJ 45-line level audio output, RS 232, Power 5/24 DC output option
⑦	Audio Line Out	1 x 3.5 mm line level output
⑧	Power Input	External 24 VDC
⑨	Reset Button	Reset to factory settings
⑩	Status Lights	Green = working; red = fault
⑪	GPIO Microphone Input	1 x RJ 45 GPIO 1, GPIO 2, GPIO 3
⑫	Speaker Output and PA Connector	Phoenix connector speaker A, B. Connect to building paging system mutes all amplifier inputs in the event of a building page.

## Inputs, Output, Connections, and Buttons Continued



⑬	Power/Paring Button	Turning on/off and pairing the microphones
⑭	ALD Button	Uses near field handshake (future Product development available 2021)
⑮	Bluetooth & Wifi Dongle Slot	USB for BT and Wifi Accessories

## Dimensions and Weight

Overall Dimensions (W x H x D)	9.25" x 3.75" x 1.25" (235mm x 95mm x 32mm)
Net Weight	11.9 oz. (337g.)
Enclosure	PC/ABS plastic UL compliant

## Environmental

Storage Temperature	Storage: -40 to 158°F / 10–90% non-condensing
Storage Humidity	Storage: -40 to 158°F / 10–90% non-condensing
Power Requirement	External 24 VDC (120/240 VAC converter)
Protection Circuits	Thermal and short circuit protected
Power Consumption (Operating)	72 W Maximum
Certification	FCC, CE, UL Material safety data available on request

## Accessories

Amplifier power supply

Bluetooth USB dongle

## Wall Speakers

The Clarity light-weight wall speakers are designed for easy installation and crystal-clear tone. A perfect solution for small spaces and loud enough to project sound throughout the classroom or boardroom.



## Wall Speaker Specifications

Frequency Response	80 hz – 20 khz +/-2dB
Power Handling	40W
Sensitivity	86dB 1Watt/ 1m
Impedance	8 Ohms Nominal
Type	2-Way System
Weight	1.05 kg
Dimensions	112x120x188 mm

## MimioClarity Teacher Microphone

Easy to use and lightweight, the microphone has 10 hours of battery life and is held on a break-away lanyard (to be worn around the neck). Teacher microphone can be used as a clicker to easily navigate slides that are being shared at the front of the class and a simple two button volume control for the teacher's microphone to ensure that every word is heard by every student. Best of all, Boxlight's technology does not rely upon a line of sight, like IR receivers. MimioClarity RF will not interfere with Wi-Fi or Bluetooth frequencies.



Teacher Microphone	
Frequency	DECT 1.9GHz (Does not interfere with Bluetooth or Wi-Fi)
Wireless Range	Up to 100 feet.
Microphone Type	Omnidirectional
Frequency Response	100 hz – 8khz
Auxiliary Mic Input	1 x 3.5 mm mic level input
Auxiliary Line Input	1 x 3.5 mm line level input
Battery	Lithium-ion (Battery is NOT user replaceable.)
Talk Time	10 hours
Charge Time	2 hours
Charging Method	USB C (can be used while charging)

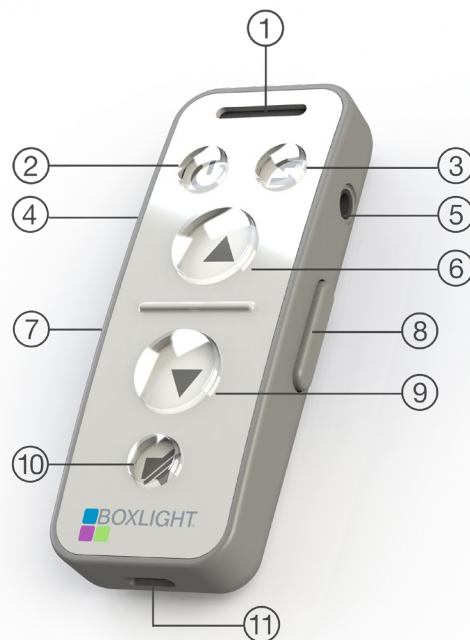


## Controls and Integration

### Controls

- On/Off button
- Teacher mic mute button is red when muted and blue while charging.
- Teacher mic volume up and down buttons are easily distinguished between up and down arrows
- Pairing button: Single button to connect mic with amp in the room with near field bonding technology
- Programmable left/right button to PC connected to amp via USB-A (Default: Page up/page down)

## Inputs, Output, and Buttons



①	Omnidirectional Mic	Picks up sound with equal gain from all sides or directions
②	On/Off Button	Power the microphone on and off; Buttons are backlit when on
③	Pairing/Connecting	Uses near field handshake to simply pair the microphones with a single button for connecting
④	Mic Input	Side Button: 1 x 3.5 mm mic input
⑤	Audio Line In	Side Button: 1 x 3.5 mm stereo line input
⑥	Volume Up	Turns the volume of the microphone up to next of six presets

⑦	Page Up/Alert	Side Button: Page up to connected PC (like a presenter clicker)
⑧	Page Down/Alert	Side Button: Page down to connected PC (like a presenter clicker)
⑨	Volume Down	Turns the volume of the microphone down
⑩	Mute Button	Mutes the teacher microphone
⑪	USB-C	Charges the microphone in approximately 2 hours. The microphone can be used while charging.

## Dimensions and Weight

Overall Dimensions (W x H x D)	3.5" x 1.754" x .75" (99mm x 46mm x 19mm)
Net Weight	2.2 oz. (62g)

## Environmental

Storage Temperature	Storage: -40 to 158°F (-40 to +70°C)/10–90% non-condensing
Storage Humidity	Storage: -40 to 158°F (-40 to +70°C)/10–90% non-condensing
Battery	Lithium-ion (rechargeable). Battery is NOT user replaceable.
Certification	FCC, CE, UL Material safety data available on request

## Accessories

Replacement batteries
6ft USB C cable
Replacement Lanyards

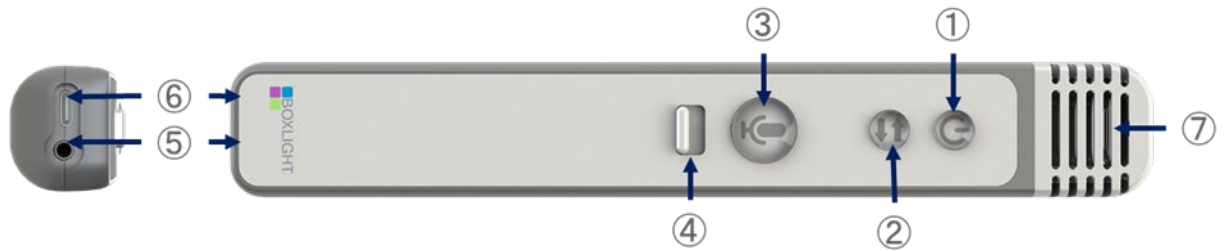
## MimioClarity Student Microphone

Every student's voice should be heard. It's critical for student engagement that they too have a microphone to participate in lessons. It is designed to withstand the rigors of a classroom and simple to use. Student microphone can also be used to distribute media through the 3.5 Audio In as well as capture group conversations when toggled on.



Student Microphone	
Frequency	DECT 1.9 GHz (Does not interfere with Bluetooth or Wi-Fi)
Wireless Range	Up to 200 feet
Microphone Type	Omnidirectional
Frequency Response	100 hz – 8 khz
Auxiliary Line Input	1 x 3.5 mm line level input
Battery	Lithium-ion (rechargeable). Battery is NOT user replaceable.
Talk Time	10 hours
Charge Time	2 hours
Charging Method	USB C (can be used while charging)
Controls and Integration	
Controls	<ul style="list-style-type: none"> <li>• On/off button</li> <li>• Toggle-to-talk switch</li> <li>• Push-to-talk button</li> <li>• Pairing button: Single button to connect mic with amp in the room using Boxlight's near field bonding technology</li> </ul>

## Inputs, Output, and Buttons



①	On/Off Button	Power the microphone on and off. Buttons are backlit when on
②	Pairing/Connecting	Uses near field handshake to simply pair the microphones with a single button
③	Push-to-Talk Button	Push down to turn on microphone to capture voice like a CB radio; Button is blue while charging
④	Toggle-to-Talk Switch	Switch to activate the microphone being continuously on
⑤	Audio Line In	1 x 3.5 mm stereo line input
⑥	USB-C	Charges the microphone in approximately 2 hours; The microphone can be used while charging.
⑦	Omnidirectional Mic	Picks up sound with equal gain from all sides or directions

## Dimensions and Weight

Overall Dimensions (W x H x D)	1.25" x 8.5" x 1.25" (31.75mm x 216mm x 32mm)
Net Weight	3.9 oz. (110g)

## Environmental

Storage Temperature	Storage: -40 to 158°F / 10–90% non-condensing
Storage Humidity	Storage: -40 to 158°F / 10–90% non-condensing
Battery	Lithium-ion (rechargeable). Battery is NOT user replaceable.
Certification	FCC, CE, UL Material safety data available on request

## Accessories

Replacement batteries

## Resetting Amplifier & Clearing All Paired Mics

If you are using multiple microphones with an amplifier, you may want to clear the amplifier of all microphones to be sure you haven't paired too many microphones with the amplifier. It is highly recommended that you only pair 6 microphones. There can be 4 active microphones on 1 amplifier at a time. If more than 6 microphones are paired, you will see the first microphone paired is the first microphone that drops.

There are several options when resetting or clearing the AMP of all paired microphones.

**Please Note:** When you unplug and re-plug the amplifier, this is a power cycle.

- When you press and hold the Power button on the amplifier for approx. 4 seconds, it will turn red and clear all of the microphones that are paired to the amplifier.
- When you push the Reset button (next to the ETH port) this is considered a soft reset. This resets the processor but doesn't change the audio path or the mic status.
- When you press and hold the Factory Reset button it will reset everything "back" to the default settings, thus erasing any changes you may have made. It will keep the current firmware but will reset all the settings in the Clarity Amplifier Interface UI. See **Technical User Guide** for details.

Once you have reset the amplifier, all microphones will have to be paired again with the amplifier.

## What's in the box

### Hardware

- Classroom Bundle: Amplifier/Receiver, teacher microphone, and student microphone

### Documentation

- Warranty card
- Access to the online Quick Start Guide

*Specifications are subject to change without notice.*