

# Cascadia

Networked Instructional Audio System



## User Manual





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## OVERVIEW



# Important Safety Instructions

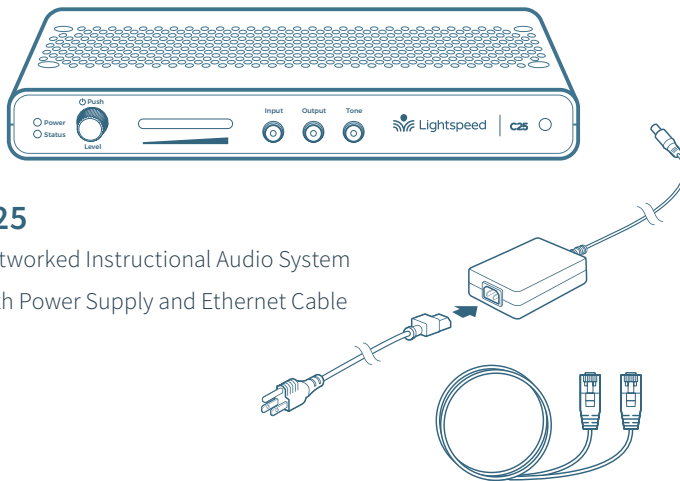
1. Do not use the apparatus near water.
2. Clean only with dry cloth.
3. Do not block any ventilation openings.
4. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
5. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the outlet.
6. **WARNING:** Battery pack shall not be exposed to excessive heat such as sunshine, fire or the like. (1) The battery pack is not serviceable. Do not open, disassemble, or service any battery pack. (2) Do not crush or cut or puncture the internal battery cell. (3) Do not short-circuit the battery, or expose it to water or other liquids. (4) Do not touch the internal battery cell for any reason. (5) Keep the battery away from fire or a hot oven. Do not dispose of the battery into fire or a hot oven. (6) Keep the product with battery away from extremely low air pressure or high temperature surrounding environment. Battery subjected to extremely low air pressure may result in an explosion or the leakage of flammable liquid or gas. (7) Stop using the battery pack if it is damaged, or if you notice any discharge or the buildup of foreign materials on the battery contacts. (8) Do not put the battery in trash that is disposed of in landfills. When disposing of the battery pack, comply with local ordinances or regulations.
7. **CAUTION:** Risk of explosion if battery is replaced by any battery other than Lightspeed Part # L3.7V



# System Components

Cascadia, a networked instructional audio platform, integrates directly with leading life-safety, paging and intercom, and phone systems to provide teachers with all the benefits of instructional audio in the classroom, plus the ability to quickly initiate a silent, emergency alert or call the front office for everyday communication, from anywhere across the campus.

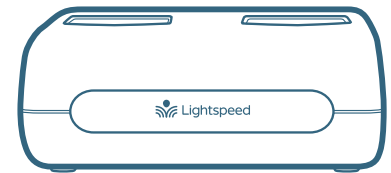
The standard configuration of the C25 system includes:



**C25**  
Networked Instructional Audio System  
with Power Supply and Ethernet Cable



**Clearmike**  
Teacher Microphone



**Microphone Cradle Charger**  
and Power Supply



**TIP:** The C25 and wireless microphones are paired together at the factory. Please keep all components together as a system. Moving them from one system or room to another will result in the need to re-pair them to function.



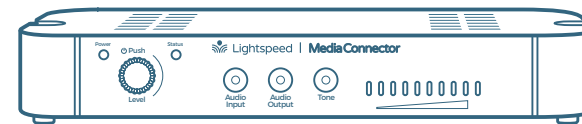
# Optional Components

OPTIONAL EQUIPMENT WHICH MAY BE PART OF YOUR C25 SYSTEM



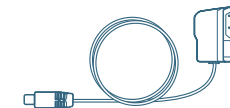
## SHAREMIKE

Student Microphone *(Optional)*



## MEDIA CONNECTOR

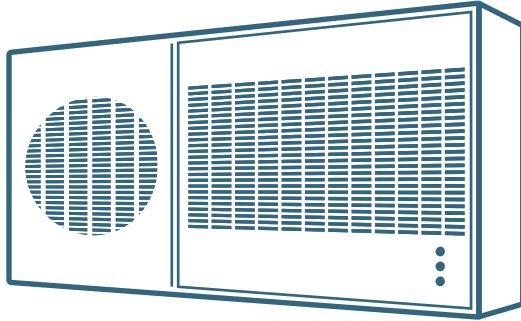
and Power Adapter



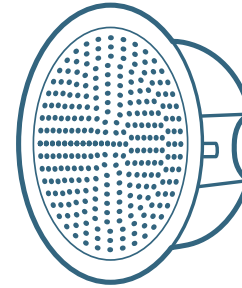


# Optional Speakers

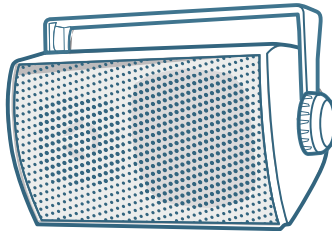
SYSTEMS CAN BE CONFIGURED WITH A VARIETY OF CEILING OR WALL-MOUNTED SPEAKERS, INCLUDING THESE LIGHTSPEED MODELS.



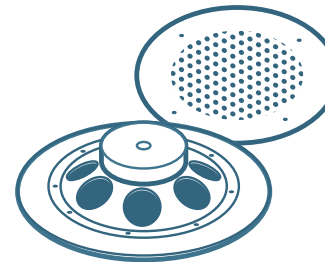
**TCQ** (x 1)  
Hybrid Ceiling Speaker



**DRQ** (x 4)  
Ceiling Speaker



**WMQ** (x 4)  
Wall Speaker  
Available in U.S. and Canada only



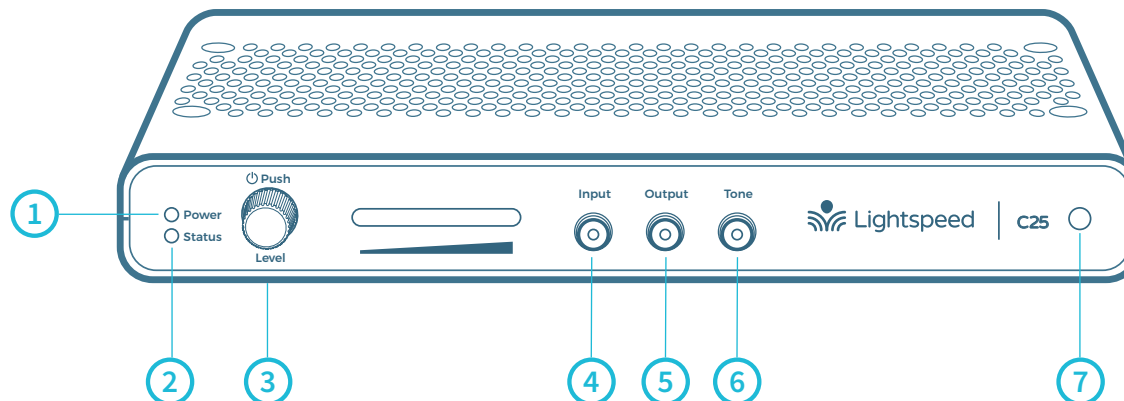
**4JCS** (4 per room)  
Plenum Ceiling Speaker  
Available in U.S. only



# C25 Controls and Indicators

## FRONT PANEL

1. **POWER LIGHT**  
**White light:** Power on
2. **STATUS LIGHT:** Microphone link and pair indicators.  
**Blue light:** Microphone(s) is/are connected to the system  
**Off:** Microphone(s) is/are not connected to the system
3. **POWER BUTTON / VOLUME ADJUSTMENT:** Press and hold this button for one second to turn the system power on or off. This also functions as an adjustment knob for the volume and tone depending on the mode selected (see 4,5,6 below).
4. **AUDIO INPUT VOLUME SELECTOR:** Selects Audio Input as the mode for the adjustment knob (3) for the audio sources connected to the audio inputs on the back of the C25.
5. **AUDIO OUTPUT VOLUME SELECTOR:** Selects Audio Output as the mode for the adjustment knob (3) for the audio device connected to the audio output jack on the back of the C25.
6. **TONE SELECTOR:** Selects Tone as the mode for the adjustment knob (3) for the microphone. This adjusts the bass or treble that is heard through the speaker output.
7. **IR RECEIVER:** For pairing to microphone.

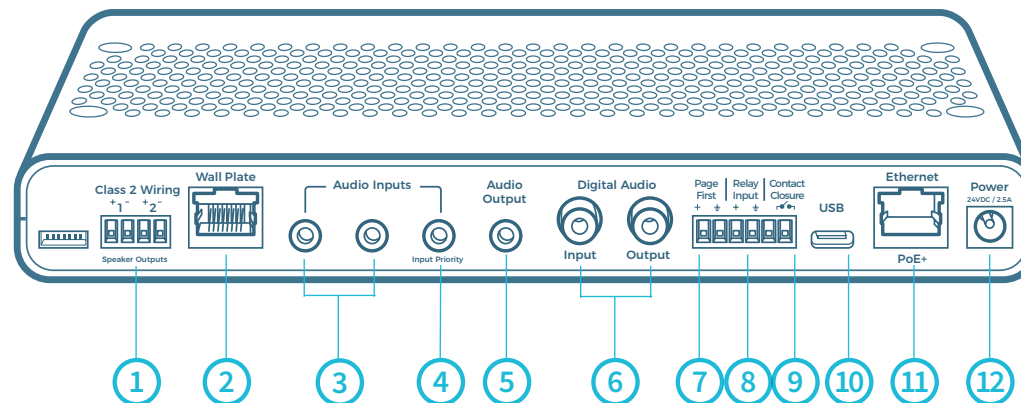




# C25 Controls and Connections

## BACK PANEL

1. **SPEAKER OUTPUTS:** This Euroblock connector is used to connect the C25 to the loudspeaker(s). Up to two 8-ohm speakers can be connected to each output.  
**NOTE:** *Wiring to these terminals should follow the Class 2 wiring methods as outlined in the National Electric Code.*
2. **RJ45 for Wallplate:** Reserved for future use.
3. **AUDIO INPUTS:** 3.5mm stereo connectors for connecting classroom audio sources to be played through audio system.
4. **INPUT PRIORITY:** Additional 3.5 mm stereo connector that automatically mutes other audio inputs when a signal is detected.
5. **AUDIO OUTPUT:** 3.5mm stereo connector for connecting to an assisted listening device (ALD) or to a computer for recording.
6. **S/PDIF RCA:** Digital Audio Input and Output to connect one C25 to another.
7. **PAGEFIRST INPUT:** Connect the input from the optional PageFirst sensor here when interfacing with a building's paging system to mute the C25 during a page.
8. **RELAY INPUT:** Senses external relay closure to mute C25 audio when a signal from a fire alarm, paging system or other device is detected.
9. **CONTACT CLOSURE:** Internal relay contact closure to provide signal to notify external system based on user input.
10. **USB-C:** For testing purposes only.
11. **PoE+ ETHERNET CONNECTOR:** Network connection and power.
12. **DC POWER:** Optional if PoE+ power is not available. Plug the power supply (24V/2.5A) into this jack.

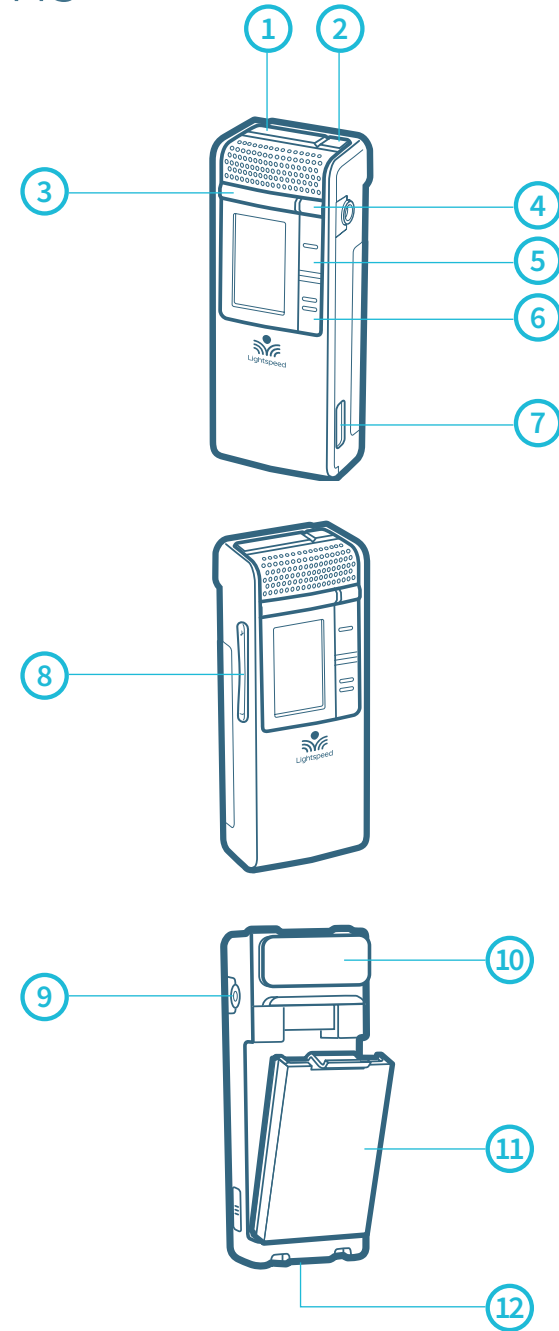






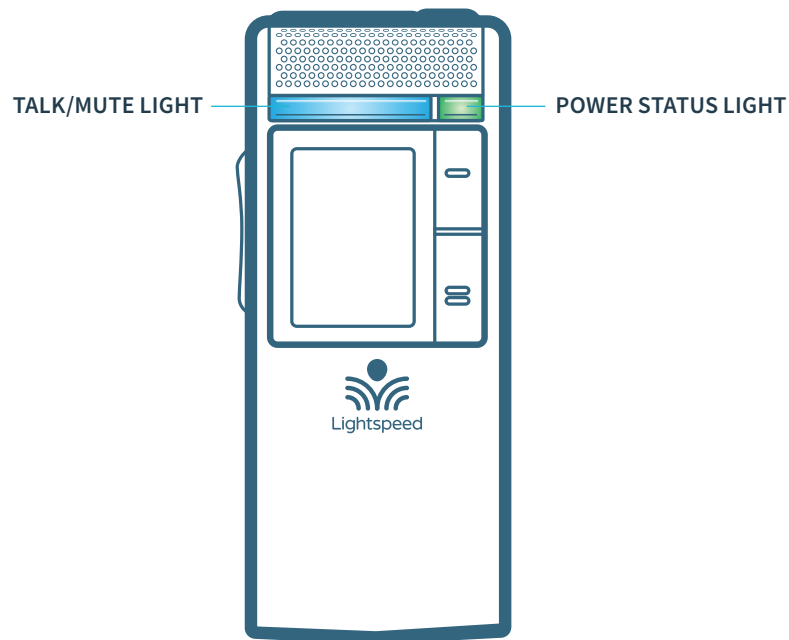
# Clearmike Controls and Connections

1. **POWER/MUTE BUTTON:** Press and hold 1 second to power on. Press and hold for 2 seconds to power off. Tap to mute or talk. Press and hold for 5 seconds to initiate pairing.
2. **IR TRANSMITTER:** For pairing to base unit.
3. **TALK/MUTE LIGHT:** See page 10 for light color descriptions.
4. **POWER STATUS LIGHT:** See page 10 for light color descriptions.
5. **PROGRAMMABLE BUTTON 1:** Press and hold 2 seconds to activate event 1.
6. **PROGRAMMABLE BUTTON 2:** Press and hold 2 seconds to activate event 2.
7. **EMERGENCY ALERT BUTTON:** Press and hold 2 seconds to activate alert.
8. **MICROPHONE VOLUME UP/DOWN**
9. **EARBUD/MIC CONNECTION:** Connect the earbud for SIP calls. Also for use with an LMA (lapel) microphone.
10. **LANYARD INTERFACE:** Insert the lanyard into this hook to wear the Clearmike.
11. **BATTERY:** Rechargeable battery pack can be replaced by the user.
12. **USB INPUT:** Connect audio source to send to C25. USB input can also be used for charging.





# Microphone Lights



LEFT LIGHT / RIGHT LIGHT



**OFF / OFF:** Mic off or no live link with base



**SOLID WHITE / OFF:** Mute, live link with base



**SOLID BLUE / OFF:** Talk



**ANY COLOR / BLINKING RED:** Low Battery



**BLUE/WHITE ALTERNATING / OFF:** Pairing



**OFF / BLINKING ORANGE:** Firmware update in progress



Placing a Call:



**ANY COLOR / BLINKING GREEN:** Calling



**SOLID BLUE / SOLID GREEN:** Call in progress

In Charger:



**OFF / SOLID RED:** Charging



**OFF / SOLID GREEN:** Charged

Plugged into USB:



**SOLID BLUE / SOLID RED:** Charging



**SOLID BLUE / SOLID GREEN:** Charged



# Clearmike Display

## BATTERY INDICATOR

(Full, half, empty)

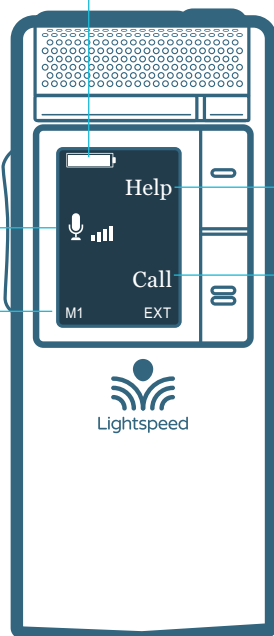
## MUTE INDICATOR/ VOLUME

## MIC NUMBER (M1 OR M2)

## PROGRAMMABLE BUTTON 1 LABEL

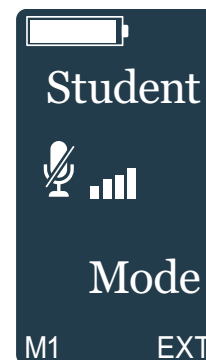
## PROGRAMMABLE BUTTON 2 LABEL

## DEFAULT SCREEN



## PROGRAMMABLE BUTTON LABELS

- **BLANK:** No function
- **CALL:** Initiate call
- **HELP:** Request help
- **CHECKIN:** Check-in during emergencies

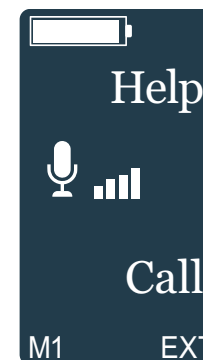


## STUDENT MODE

If two Clearmikes are paired with a C25, one of the microphones can be set to Student Mode.

Student Mode disables the programmable buttons and the alert button on the microphone. This allows the microphone to be passed around the class and used by students and prevents accidental button presses.

The volume buttons and mute button will still work. Student mode can only be turned on or off using the Cascadia Web Console.



## EXTERNAL MIC DETECTION

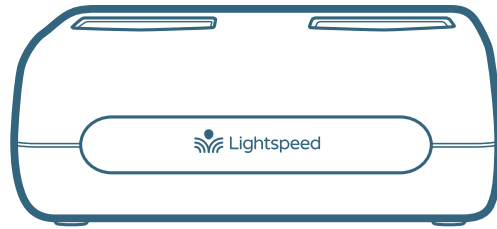
The 3.5mm audio jack on the microphone can be used with an earbud or an external microphone.

To use an external microphone, External Mic Detection must be turned on. External Mic Detection can only be turned on or off using the Cascadia Web Console.

When turned on, plugging in an external mic will disable the internal microphone on the Clearmike

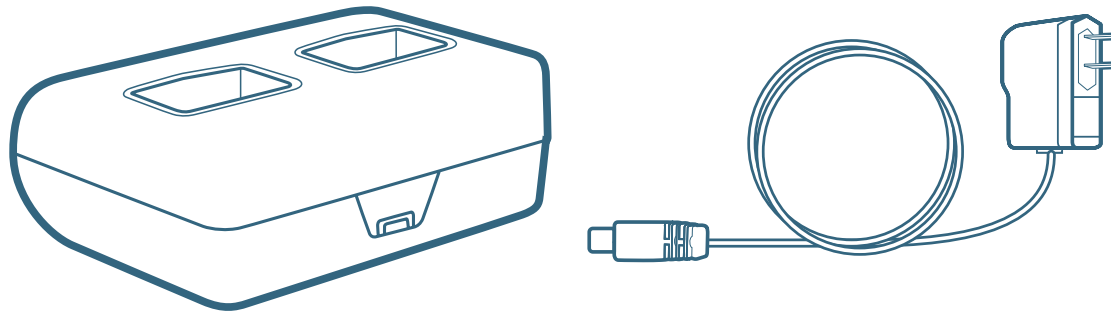


# Microphone Cradle Charger



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**DC POWER PORT:** Connect the 5V/1.0A DC power cord



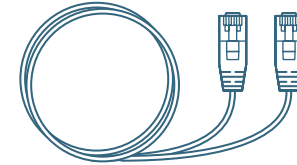


## SET-UP & OPERATION

### Power over Ethernet (PoE+)

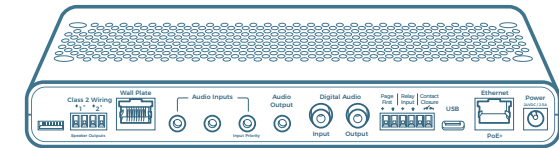
- Locate network switch that can support PoE+ power.
- Insert PoE+ Ethernet Cable into the “Ethernet” port on C25 and the other end to the network switch.
- The C25 automatically powers on and the white Power light on the front panel will turn on.

PoE+ Ethernet Cable

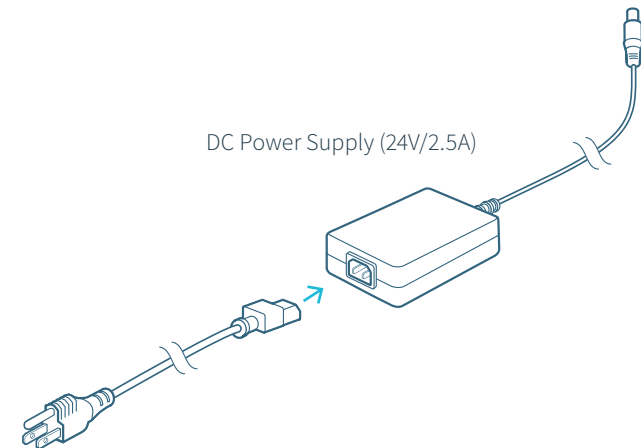


### Connecting the Power Supply

- Locate the power supply and AC power cord.
- Connect the AC power cord into the DC power supply.
- Insert the DC connector into the “Power” port on C25 and plug the other end to an electrical outlet.
- The C25 automatically powers on and the white Power light on the front panel will turn on.
- A network connection is required for network communication when using the DC power supply.



DC Power Supply (24V/2.5A)



If the C25 is connected to a network switch with PoE+ ports and the DC power supply is also used, the C25 will be powered by the DC power supply.

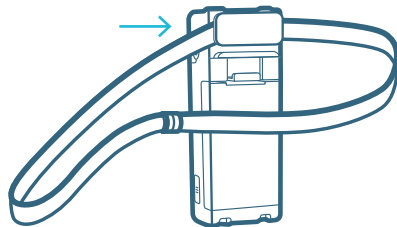


# Charging the Clearmike

## BEFORE USE, THE CLEARMIKE SHOULD BE CHARGED

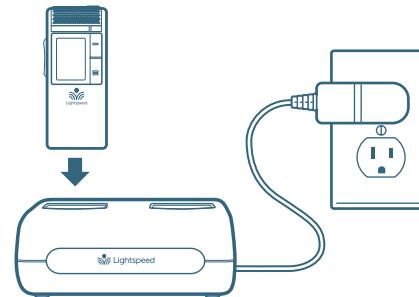
It will take 5-6 hours for the Clearmike to obtain a full charge. A fully charged Clearmike will last for up to 8 hours of use. If microphones are used daily, they should be charged each night.

Replacement lithium polymer battery packs may only be purchased through Lightspeed (part # L3.7V).



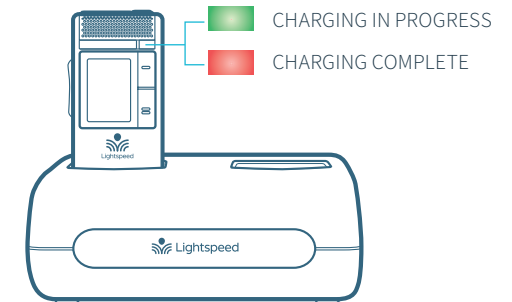
## ATTACH LANYARD

Hang the Clearmike on the lanyard opposite the magnetic clasp.



## CONNECT CRADLE CHARGER

Plug power cord into the cradle charger and then plug the AC end into an electrical outlet.



## CHARGE CLEARMIKE

Place the microphones into the cradle charger. The power status light will glow red when it is charging. When charging is complete, the power status light will glow green.

It takes about 5-6 hours to fully charge the microphone battery.



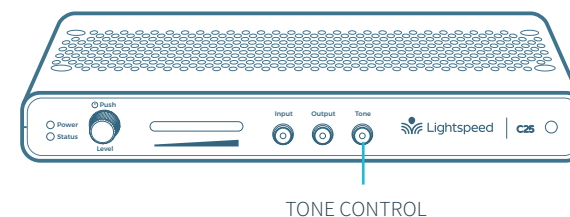
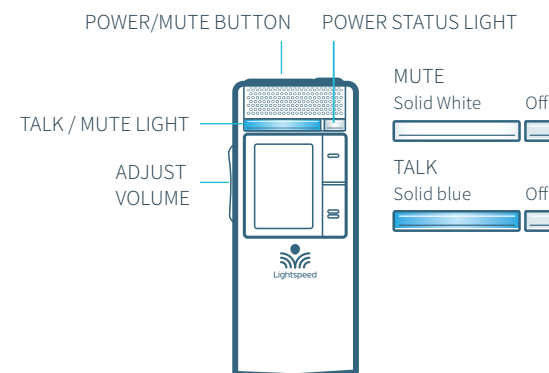
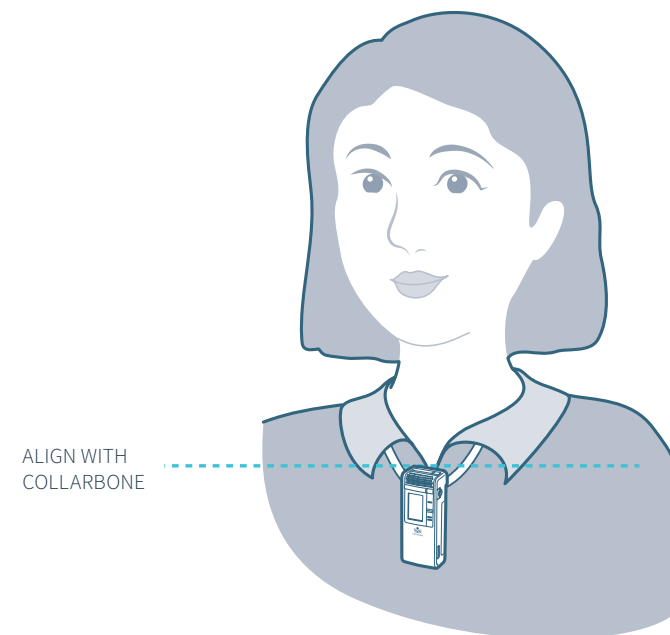
# Setting Up the Clearmike

Once the Clearmike is charged, follow these steps for use.

1. Remove the Clearmike from the charger and put it on by connecting the magnetic clasps behind your neck. Adjust the lanyard so that the top of the Clearmike aligns with the collarbone.
2. The Clearmike will automatically power on and mute when it is removed from the charger.
3. The microphone volume on the Clearmike is set at the factory to the midpoint. It is adjusted by the up/ down buttons on the side of the mic. The volume can only be adjusted while the microphone is in talk mode.
4. While speaking in a normal voice, fine tune the microphone volume. Proper volume level should be as follows:
  - Your voice should be clearly heard by another person on the other side of the room.
  - You should barely be able to hear your own voice.
  - There should not be any audio “feedback” or squealing unless you are too close to a speaker (2-3 feet). If there is, turn the volume down slightly.

**REMEMBER:** This equipment supplements the user’s voice so they are able to speak in a conversational tone. Having the volume set too high will result in feedback and listener fatigue.

- Once initial volume level is set, walk around the room and listen for overall audio quality.
- If further fine tuning is required, you may need to adjust the Tone Control on the front of the C25.





# Daily Use of the Clearmike

## 1. AT THE START OF THE DAY, REMOVE CLEARMIKE FROM THE CHARGER

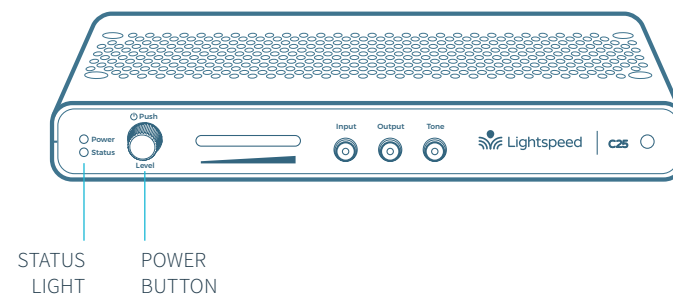
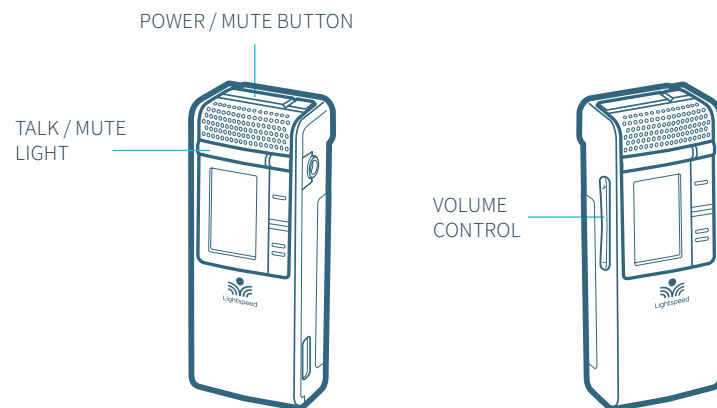
- The microphone will default to the Mute state, the Talk/Mute light will turn to white.
- Place the microphone around your neck.
- Press the power/mute button. The Talk/Mute light will turn blue, indicating the microphone is active and ready to use.
- Adjust volume with the UP/DOWN buttons if necessary. The volume can only be changed when the microphone is in the Talk state.
- If Clearmike needs to be powered down for some time, press and hold the power button for 2 seconds and release. To power Clearmike again, press and hold the power button until the Talk/Mute light turns white.

## 2. PRIVATE CONVERSATIONS

- Mute the Clearmike during private conversations by momentarily pressing the power button. When muted, the blue light turns white.
- When conversation is over, momentarily press the power button again to unmute the Clearmike.

## 3. END OF DAY

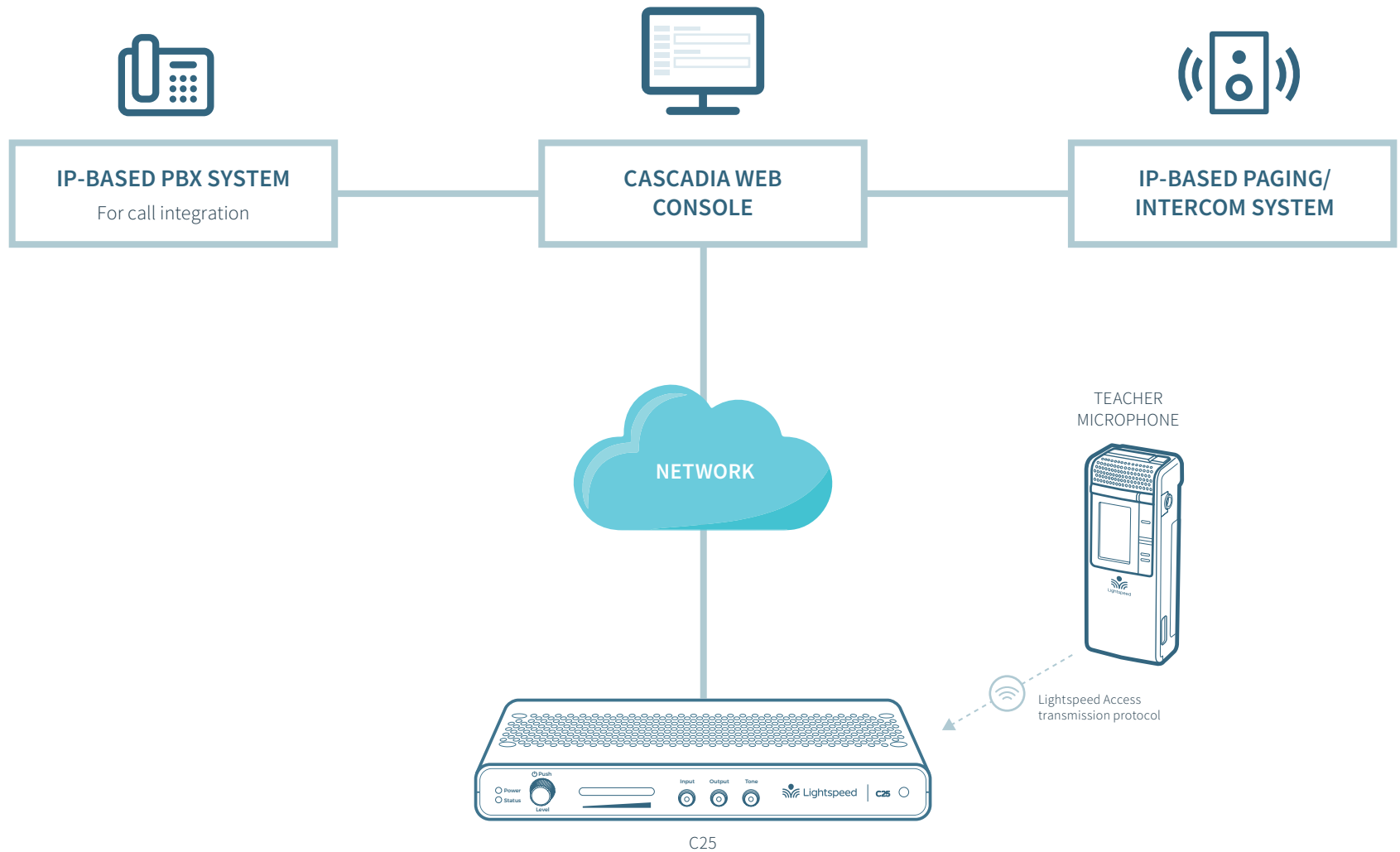
- Place the Clearmike into the cradle charger and make sure the power supply is plugged in to an electrical outlet.
- The C25 will not power down if it has a live link to a microphone. After 60 minutes of audio inactivity, the C25 will automatically power down.
- When Clearmike is removed from charging cradle the next day, it will automatically power on the C25.







# Network Integration





# Using an Alert Notification

The C25 can integrate with some IP based alert notification systems, enabling the Clearmike to send an alert through the school's network.

This will cause the alert notification system to perform a prescribed action, such as notifying the appropriate parties of a classroom alert. The alert will also be tracked in the Cascadia Web Console.

See page 46-47 for information on programming the microphone buttons.



EMERGENCY ALERT BUTTON

## WITH EMERGENCY ALERT INTEGRATION

1. Push and hold the Emergency Alert button for 2 seconds.
2. Display says "Alert Sent" and microphone lights flash red and blue for 10 seconds.
3. Alert notification system performs prescribed actions.



BUTTON WITH "HELP" LABEL

## WITH HELP REQUEST INTEGRATION

1. Push and hold the button on the front of the microphone with a "Help" label for 2 seconds.
2. Display says "Alert Sent" and microphone lights flash red and blue for 10 seconds.
3. Alert notification system performs prescribed actions.



# Placing a Call

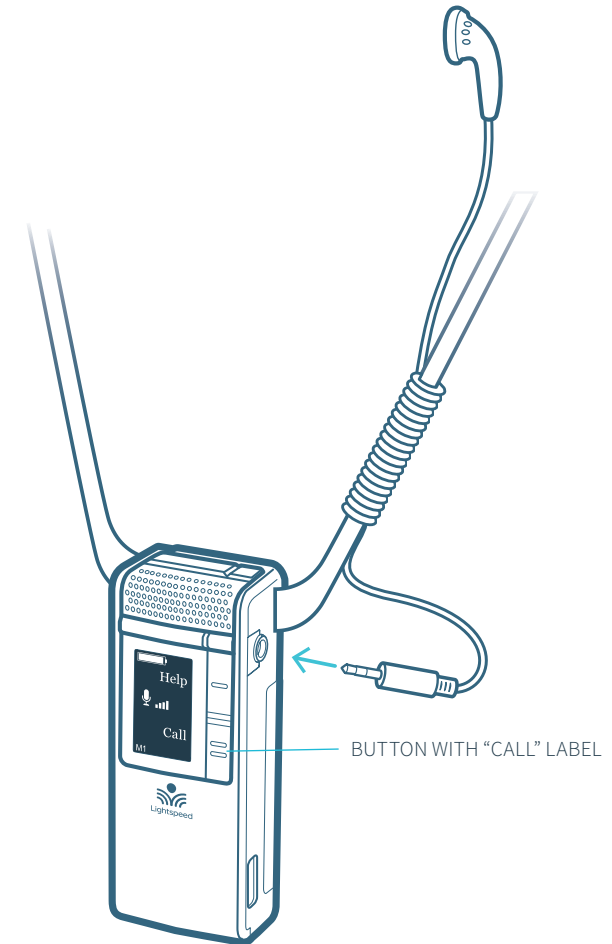
The C25 can integrate with some IP based PBX systems to enable calls to be placed from the Clearmike. All C25 systems on the network will call the same phone number, determined by the school.

The Clearmike will act as the microphone for the call, but an external earbud must be used to hear the call. Every Clearmike comes with a lanyard with an integrated earbud if the call feature is used.

See page 48 for information on programming the microphone to enable calls.

## HOW TO PLACE A CALL

1. Plug earbud into the 3.5mm jack on the microphone.
2. Insert earbud into ear.
3. Push and hold the button on the front of the microphone labeled "Call" for 2 seconds.
4. Display will change to "Calling".
5. When call connects, display will change to "Call Active".
6. Press "Cancel" to hang up the call.





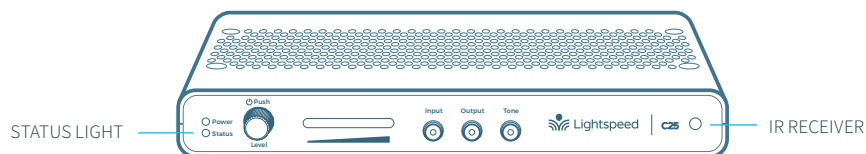
# Pairing your Clearmike



Your system is shipped with microphones and base units pre-paired for quick and easy use.

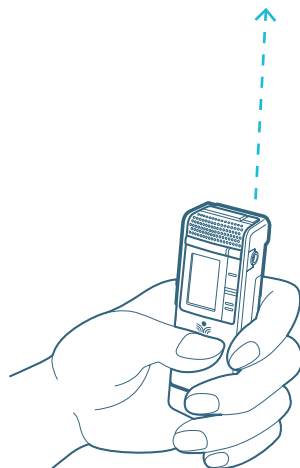
If for any reason you need to pair new components, follow this pairing process:

**PLEASE NOTE:** All microphones must be out of the charger while pairing.



①

With the Clearmike powered off, point the IR transmitter lens toward the C25.

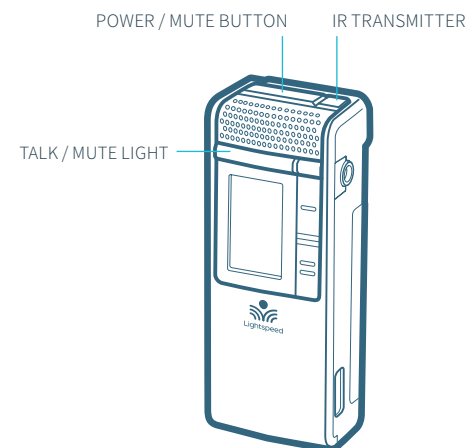


②

Press and hold the Power/Mute button for 5 seconds until the Talk/Mute light starts flashing blue and white. The Status light on the C25 will also start flashing blue and white.

③

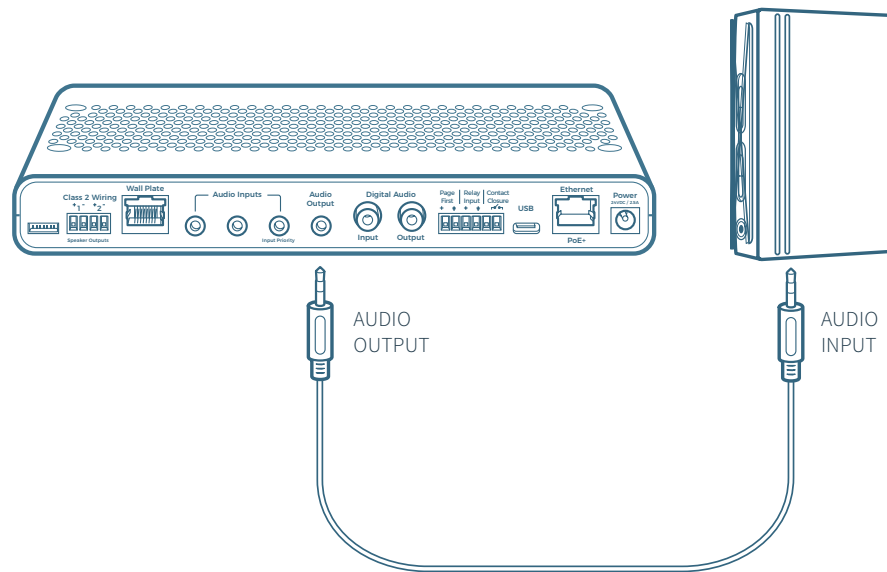
When complete, the Status light on the C25 will turn blue, the Talk/Mute light on the microphone will be white, and the display on the microphone will say "Pair Success".





# Output Audio to Assistive Listening Device (ALD)

1. Press the Audio Output Selector first, then turn the volume control on the front panel all the way down (fully counterclockwise).
2. Determine the type of audio input jack on the ALD as manufacturers' products differ in connector size and shape. Many require a 3.5 mm to 3.5 mm patch cable (part# MSC3535, not included).
3. Connect a patch cable from the ALD microphone jack or AUX input to AUDIO OUT jack on the back of the C25.
4. With the C25 and ALD turned on, speak into the Flexmike and slowly adjust the corresponding volume control on the C25 until the appropriate audio level is obtained in the ALD.
5. It may be necessary to adjust the volume on the ALD to achieve appropriate volume level.





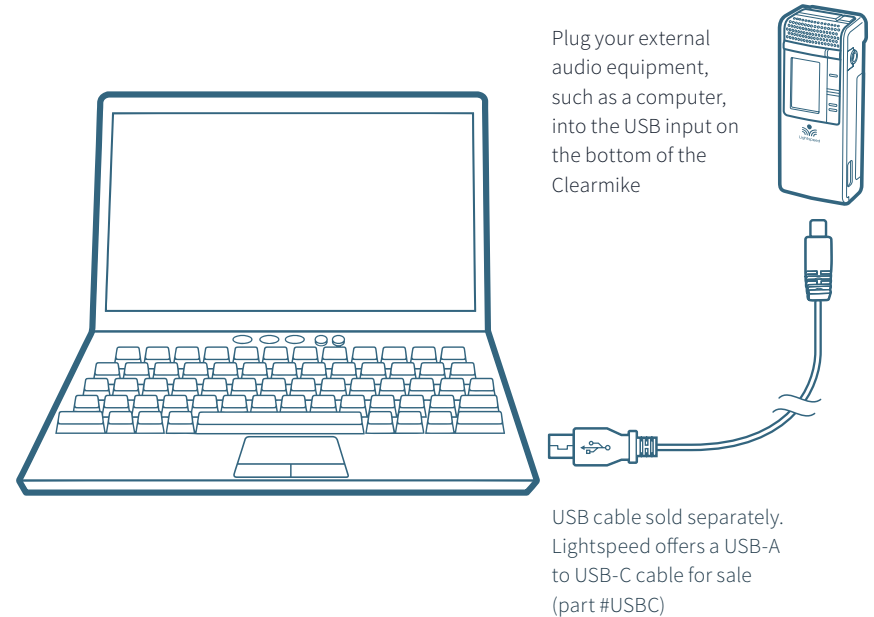
# Using Your Microphone as a Wireless Audio Link

You can connect your 2nd microphone to your computer's USB port to enable a wireless 2-way audio link.

**SEND AUDIO FROM THE COMPUTER** to the C25 to ensure all audio from the computer (videos, video conferencing, audio books, music, etc) can be played through the Lightspeed C25 system and speakers.

**SEND AUDIO TO THE COMPUTER** from the C25 to ensure the teacher's Clearmike and any student microphones are clearly picked up by a video conferencing solution.

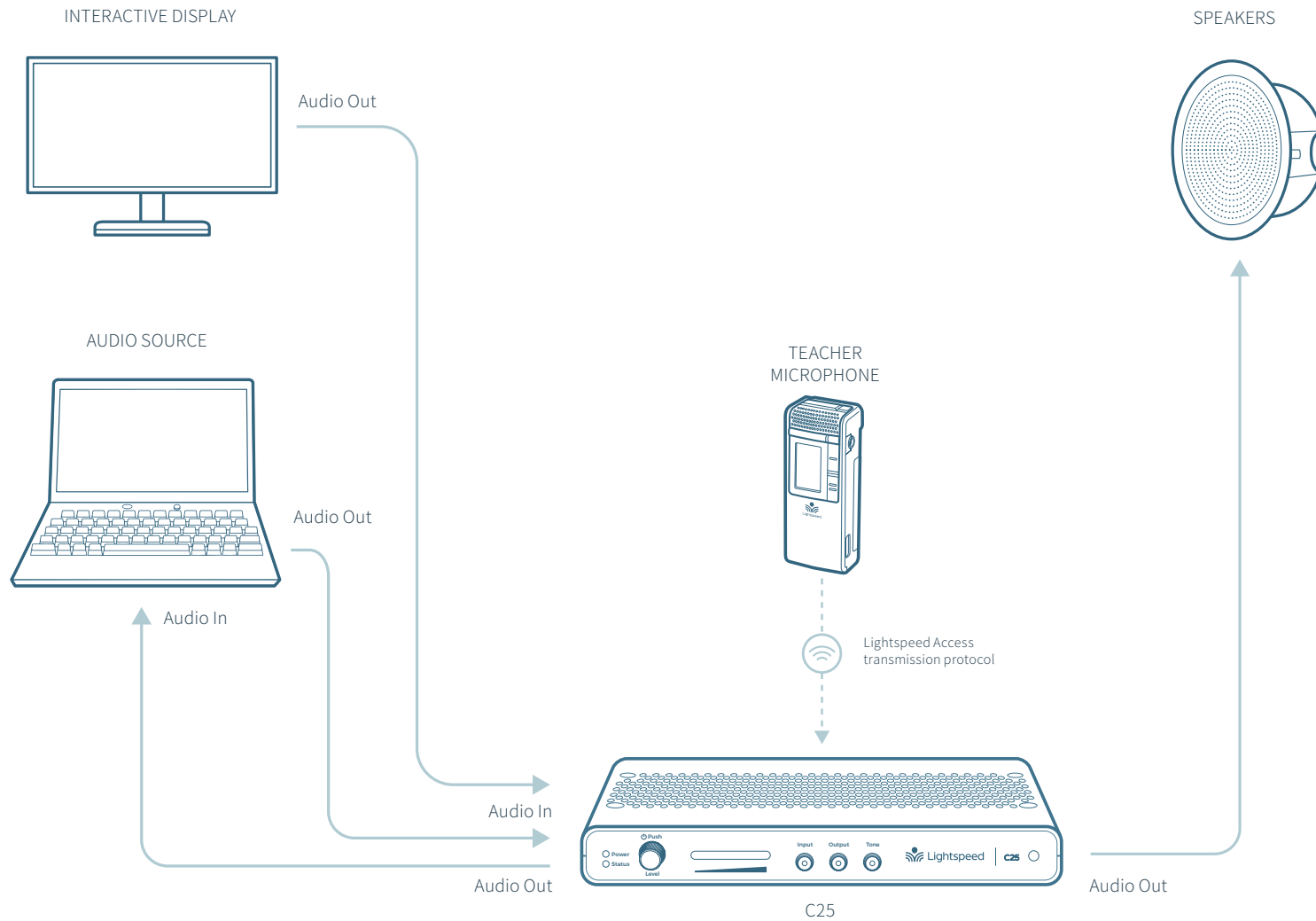
1. With a USB-C cable connect your microphone to your computer's USB port.  
This will also power/charge your microphone.
2. Open sound settings on your computer:
  - Select Lightspeed Audio as the Output source to send all computer audio to the C25 system
  - Select Lightspeed Audio as the Input source to use the Lightspeed microphones as the computer microphone audio for video conferencing and recording applications.
3. You may also need to select Lightspeed Audio as the speaker and microphone audio in your video conferencing application the first time you use it.



**TIP:** If your system includes two Clearmikes, you can use one mic for instruction and the second mic to transmit audio through the system.



# Audio Integration





# Analog Control Features

The 975 connects and responds to several important third-party life safety solutions.



## 1. INPUT PRIORITY

MUTES CLASSROOM AUDIO SYSTEM

When an audio source is connected to the Input Priority jack, an audio signal from that source will automatically mute all other audio inputs to allow it to be heard without interference. The C25 is shipped with a removable plug inserted into the Input Priority jack to ensure that the connection to an audio source is intentional.



## 2. PAGEFIRST

MUTES CLASSROOM AUDIO SYSTEM

When the PageFirst sensor clip is connected to an external paging source, all audio signal are muted to ensure paging is heard clearly.

*See page 34 for installation details*



## 3. RELAY INPUT

MUTES CLASSROOM AUDIO SYSTEM

When the C25 is connected to a fire alarm, audio signals going through the unit are muted when the fire alarm is activated to minimize distractions from the sound of the alarm.

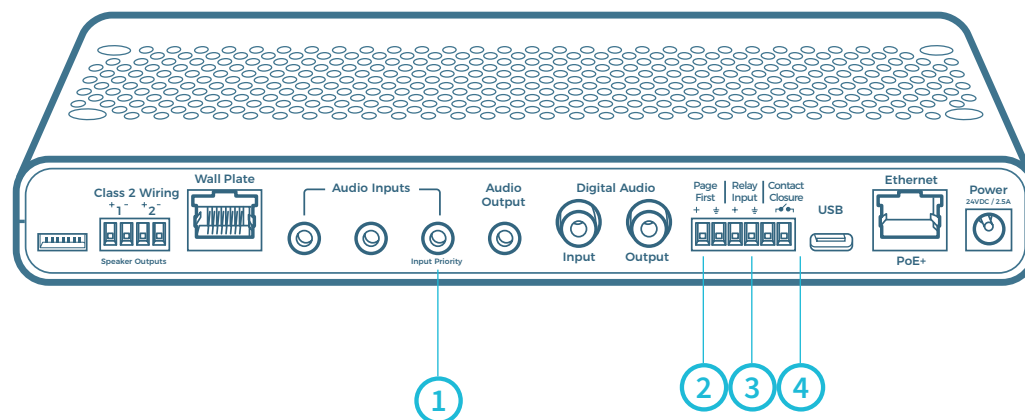


## 4. ALERT NOTIFICATION

INITIATES ALERT WITH CLEARMIKE

If your building is equipped with an alert notification system, the C25 and Clearmike can be programmed to initiate a contact closure function. Press and hold the emergency alert button on the side of the Clearmike for two seconds to activate the contact closure. External systems sense this contact closure to perform a prescribed action, notifying the appropriate parties of a classroom alert.

*See page 46 for details*







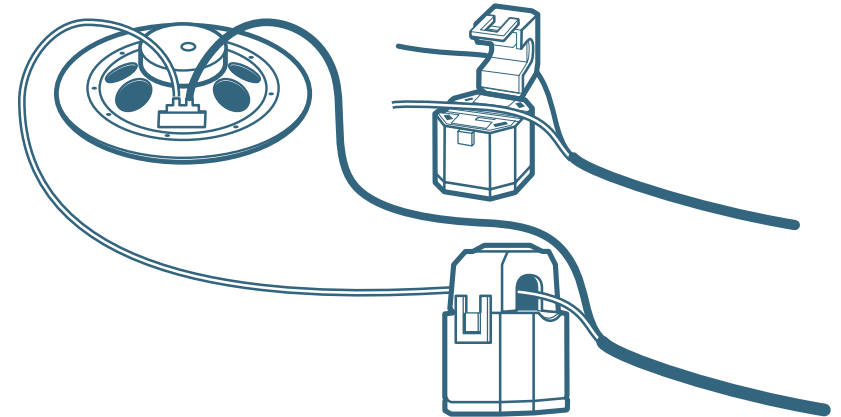
# Installing PageFirst Sensor *(optional)*

This C25 can interface with an independent classroom paging system.

When a page is broadcast, all audio from the system is muted, ensuring important school-wide messages are not missed. Please note that PageFirst is not compatible with telephone or IP-based paging systems.

How it works:

1. PageFirst sensor clip is hung around a lead wire attached to the classroom paging speaker.
2. The clip is hard-wired to the C25.
3. As a page is broadcast, the sensor clip detects the audio signal through induction and immediately mutes the amplifier.
4. When the page is over, the audio from the amplifier returns to normal volume level.
5. Adjust sensitivity in Cascadia Web Console.

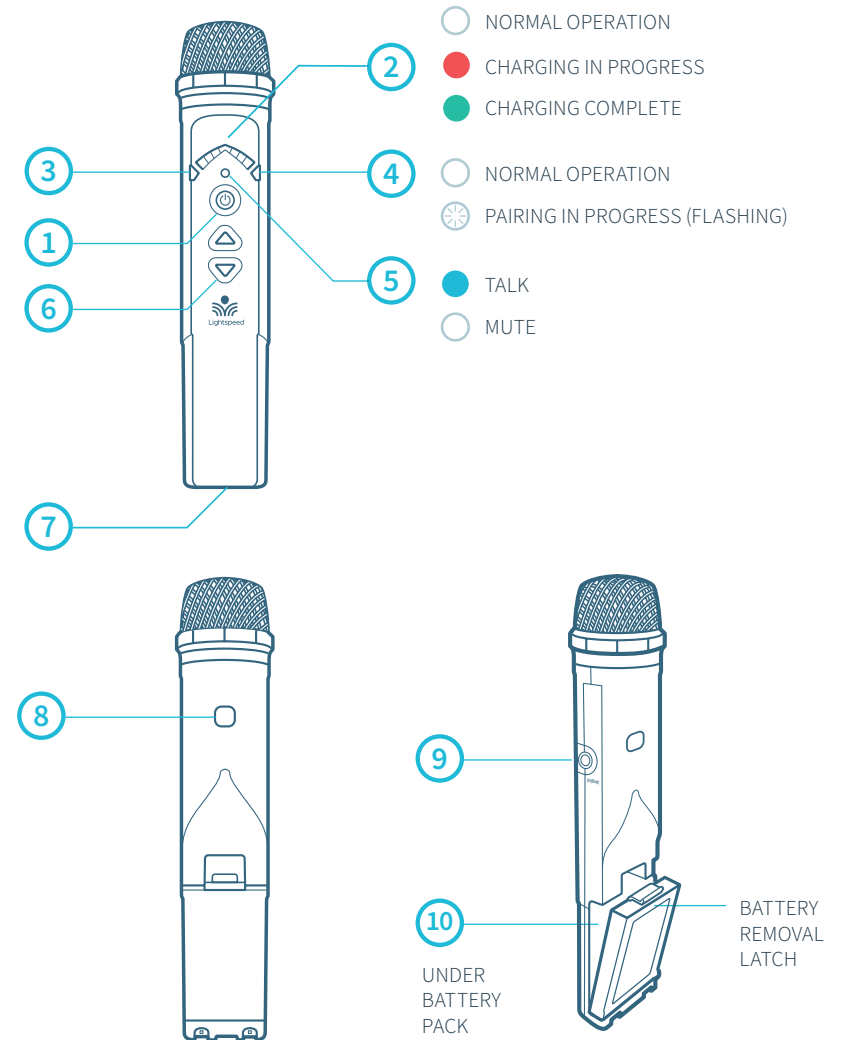




## OPTIONAL ACCESSORIES

# ShareMike Controls and Connections

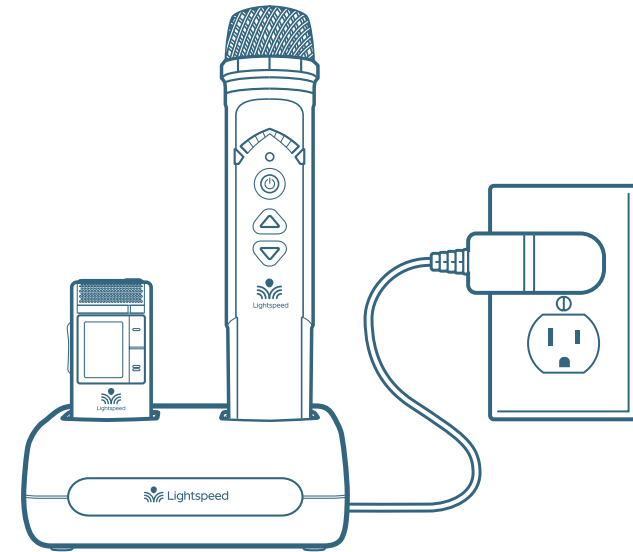
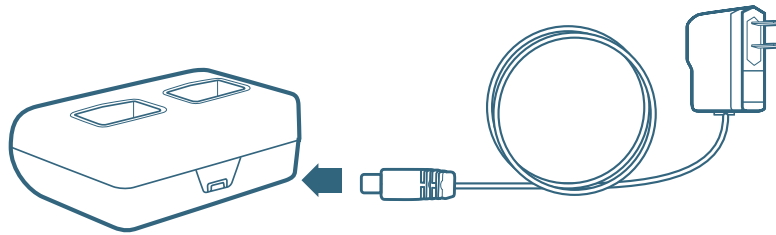
1. **POWER BUTTON**
2. **POWER STATUS LIGHT**  
**Red light:** During operation, turns red to indicate low battery  
**White light:** Normal operation  
  
When charging in Cradle Charger:  
**Red light:** Charging  
**Green light:** Charging complete
3. **MIC 1 STATUS:** Lighted to indicate microphone is registered as Mic 1  
**White: solid** = Normal operation  
**White: flashing** = Pairing in process
4. **MIC 2 STATUS:** Lighted to indicate microphone is registered as Mic 2  
**White: solid** = Normal operation  
**White: flashing** = Pairing in process
5. **MUTE/TALK STATUS LIGHT**  
**Blue: solid** = Talk  
**White: solid** = Mute
6. **MICROPHONE VOLUME UP/DOWN**
7. **USB INPUT:** Connect audio source to send to C25. USB input can also be used for charging.
8. **IR TRANSMITTER:** For pairing to base unit
9. **AUDIO INPUT:** Plug a laptop or other audio device into this jack to wirelessly transmit the audio signal to be played through the system.
10. **VOLUME LOCK:** Disables volume controls.





# ShareMike: Charging

1. Make sure the charger is plugged into a wall outlet.
2. The power status light on the microphone will glow red to indicate charging.
3. Leave the ShareMike in the charger overnight to obtain a full charge. It takes about 5-6 hours to fully charge the battery. The light will turn green when charging is complete.

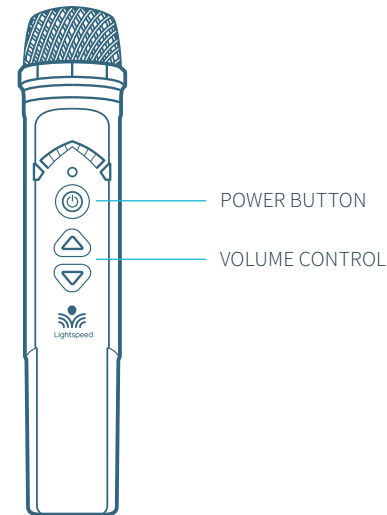
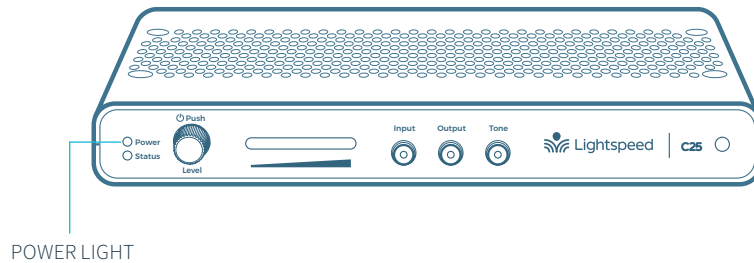


**PLEASE NOTE:** The C25 and microphone(s) are paired together at the factory and all components should be kept together as a system. Moving them from one system, or room, to another will result in the need to re-pair.



# ShareMike: Initial Set-Up

1. Ensure the C25 is on. The white power light will glow.
2. Turn on the ShareMike by pressing and holding the power button until the LED lights.
3. Tap the power button to unmute the microphone. The Mute/Talk light will turn from white to blue.
4. Grip the barrel in the center section.
5. While speaking in a normal voice, increase the volume with the ShareMike until your voice is barely audible.



**PLEASE NOTE:** This equipment is designed to supplement and distribute the user's voice so they are able to speak in a conversational tone. Having the volume set too high will result in feedback and listener fatigue.



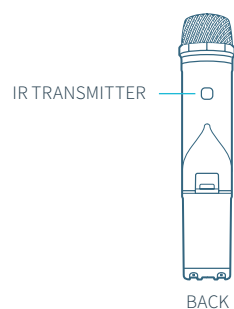
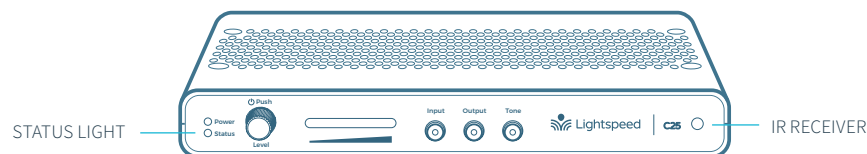
# Pairing your ShareMike



Your system is shipped with microphones and base units pre-paired for quick and easy use.

If for any reason you need to pair new components, follow this pairing process:

**PLEASE NOTE:** All microphones should be out of the charger while pairing.



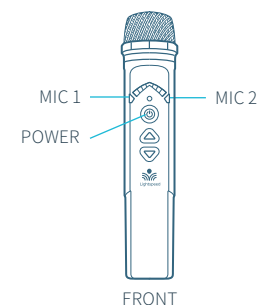
①

From a powered off state, point the IR transmitter lens, located on the back of the microphone, toward the C25.



②

Press and hold the power button for 5 seconds until the mic 1 and mic 2 lights start flashing, then release the button and let the pairing process finish.



③

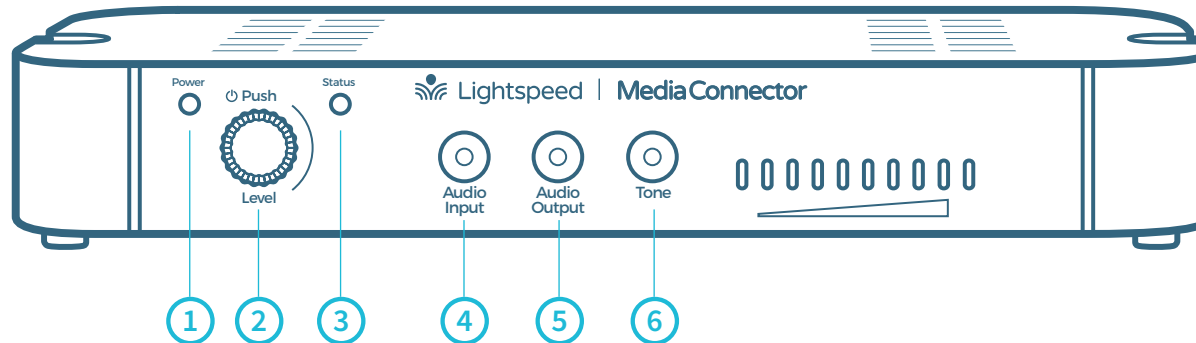
The Status light on the base unit will light up indicating the pairing process is complete. The mic 1 or mic 2 light on the microphone will stay illuminated.



# Media Connector Controls and Indicators

## FRONT PANEL

1. **POWER LIGHT**  
**White light:** Power on
2. **POWER BUTTON / VOLUME ADJUSTMENT:** Press and hold this button to turn the system power on or off. This also functions as an adjustment knob for the volume and tone of the paired C25 depending on the mode selected (see 4, 5, 6 below).
3. **STATUS LIGHT:** Media Connector link and pair indicators.  
**Solid white:** Media Connector is paired to the system  
**Off:** Media Connector is not paired to the system
4. **AUDIO INPUT VOLUME SELECTOR:** Selects Audio Input as the mode for the adjustment knob (2) for the audio sources connected to the audio inputs on the back of the Media Connector.
5. **AUDIO OUTPUT VOLUME SELECTOR:** Selects Audio Output as the mode for the adjustment knob (2) for the audio devices connected to the audio outputs on the back of the Media Connector.
6. **tone SELECTOR:** Selects Tone as the mode for the adjustment knob (2) for the microphone. This adjusts the bass or treble that is heard through the classroom speaker.

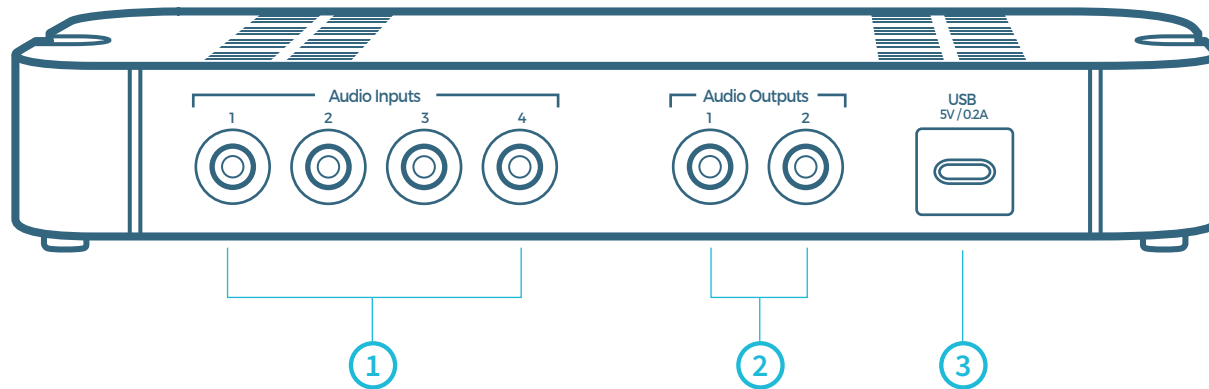




# Media Connector Controls and Indicators

## BACK PANEL

1. **AUDIO INPUTS:** 3.5mm stereo connectors for connecting classroom audio sources to be played through audio system.
2. **AUDIO OUTPUTS:** 3.5mm stereo connectors for connecting to an assisted listening device (ALD) or to a computer for recording.
3. **USB INPUT:** Plug the USB-C end of the power cable into this USB port on the Media Connector.
  - The USB port supplies power to Media Connector when connected to the Media Connector power supply, or from a laptop.
  - It also acts as an input for a digital audio when connected to an audio source. Note that when the USB is used for audio input, the other four audio input jacks are not operational.





# Media Connector Set Up and Operation

## DETERMINE LOCATION

Media Connector is designed to be connected to the primary media source in the classroom, usually the computer or display panel.

## WALL MOUNT OR DESKTOP

The Media Connector can be placed on a table surface or wall-mounted.

- Choose a location that is convenient to the classroom audio sources and power supply.
- It should be located 3-6 feet off of the floor to allow for good transmission.
- Do not enclose in a metal cabinet or in a location where the signal will be obstructed.

**NOTE:** The Media Connector does not require a direct line of sight to the C25. However it functions best when no obstructions are between the two devices.

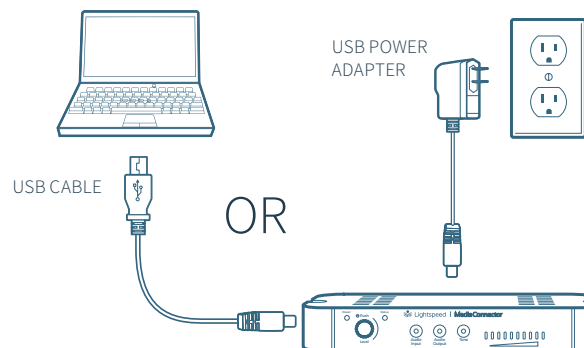


## CONNECT TO POWER

Connect the USB power cord to a computer. Plug the USB cable into the USB input on the back of the Media Connector.

OR

Use the USB power adapter to plug into a wall outlet.







# Connecting Media Connector to Audio

Audio can be connected using either a digital 2-way USB audio or analog audio:

## USB AUDIO

If locating and connecting to computer USB, Media Connector will default to digital USB audio (3.5mm analog audio ports will be disabled). USB audio enables a 2-way audio link to:

**Send audio from the computer to the C25** to ensure all audio can be played through the Topcat speaker.

**Send audio to the computer from the C25** to ensure the teacher's Clearmike and any student microphones are clearly picked up by a video conferencing solution.

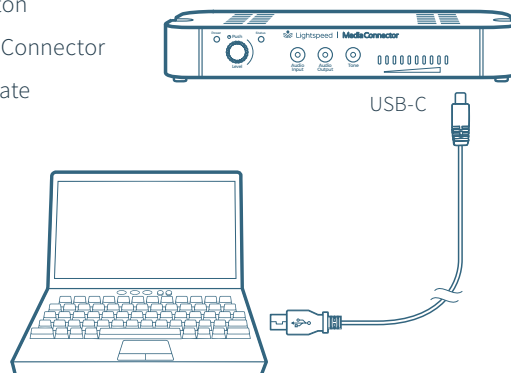
## DISABLE/ENABLE USB AUDIO

### TO DISABLE USB AUDIO AND USE COMPUTER USB FOR POWER ONLY

- Unplug USB cable from Media Connector
- Press and hold Audio Output button
- Plug USB cable back to Media Connector
- Status light turns white to indicate USB disabled
- Release Audio Output button and system will reboot with disabled USB-C audio
- Analog Audio Inputs are now active

### TO ENABLE USB AUDIO ON YOUR MEDIA CONNECTOR

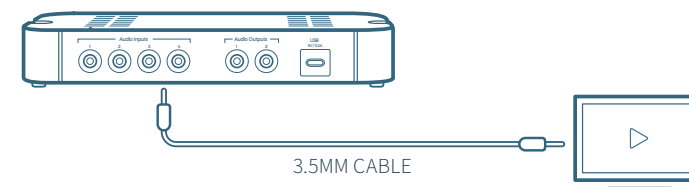
- Unplug USB cable from Media Connector
- Press and hold Audio Out button
- Plug USB cable back to Media Connector
- Status light turns blue to indicate USB-C is enabled
- Release Audio Out button and system will reboot with enabled USB-C audio
- Analog Audio Inputs are now inactive



## ANALOG AUDIO

Plug your external audio equipment (e.g., video display) into one of the Audio input jacks.

Adjust the volume as needed by pressing the Audio Input selector and adjusting the level knob as needed.



## COMPUTER SETTINGS

Once connected, open computer sound setting to select "Lightspeed Audio" as the microphone and speaker.



## SETTING THE VOLUME LEVELS

For recording, or to interface with an Assistive Listening Device, connect a 3.5mm cable to the Audio Output of the Media Connector to the microphone input on the device. Press the button for the desired level adjustment.

- Turn the knob to adjust volumes up or down for Audio Input/Output
- To adjust the Tone (bass/treble) of the speaker, press Tone and use the adjustment knob to turn the bass up and down

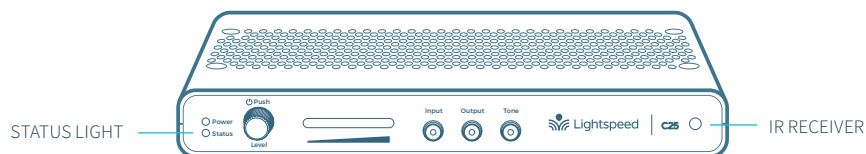


# Pairing C25 to Media Connector



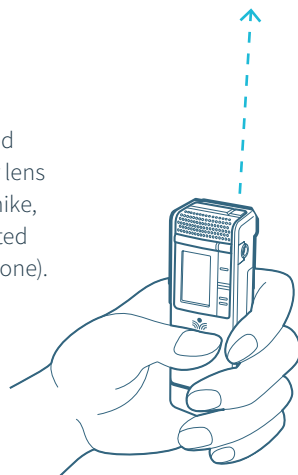
Your system is shipped with microphones and base units pre-paired for quick and easy use. If for any reason you need to pair new components, follow this pairing process:

**PLEASE NOTE:** Microphones should be out of the charger while pairing.



1

With the microphone turned on, point the IR transmitter lens toward the C25 (for ShareMike, the transmitter lens is located on the back of the microphone).



2

Press and hold the ClearMike power button for 5 seconds until the status light on the C25 starts flashing, then release the button. At this point, the status light on C25 will blink for 30 seconds.

If after 30 seconds the status light blinks rapidly, you will need to start the pairing process again.

POWER IR TRANSMITTER



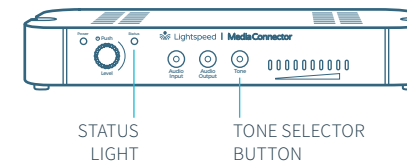
CLEARMIKE

3

On the Media Connector, press and hold the Tone Selector button for 5 seconds to put it into pairing mode.

When the status lights are solid on both the C25 and Media Connector, pairing is successful.

MEDIA CONNECTOR





## SOFTWARE OPERATION

# Cascadia Web Console

### HEADLINE

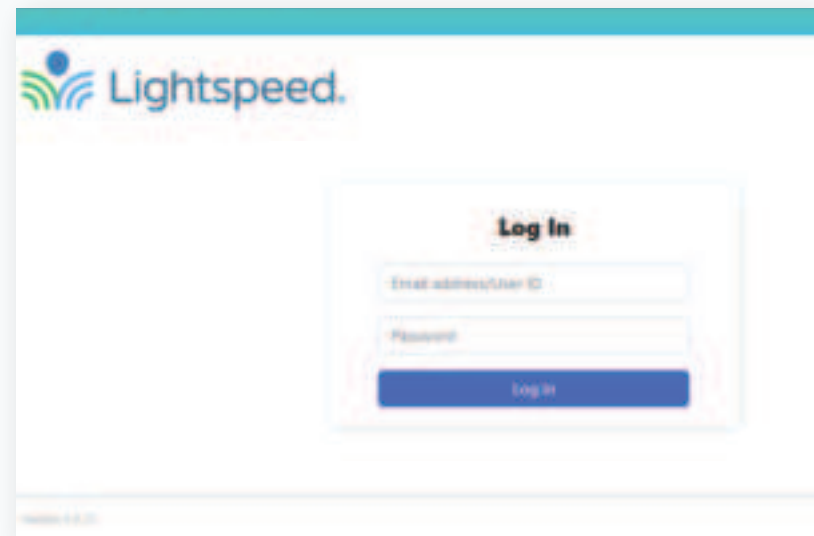
The Cascadia Web Console is a web interface for the network software that monitors all the C25 bases on a network.

#### **Installing the Cascadia Web Console server software**

For installation instructions see “Cascadia Software Installation Guide” document.

#### **Logging In**

Using a computer on the same network as the Cascadia Web Console server, open a web browser with the address <http://cascadia-console:3000/>. This address will open the log in page for the Cascadia Web Console. Log in using your organization's network credentials.





# Dashboard

The dashboard is the default page for the web console. When a C25 base is connected to the network, it will show up in the dashboard table.

(See following page for definitions)

The screenshot shows the Lightspeed dashboard interface. At the top, there's a header with the Lightspeed logo and a user login bar showing 'User: Admin, Role: Administrator' and a 'Sign Out' button. On the left is a navigation sidebar with buttons for Dashboard, Maps, Logs, Firmware, Programming, SIP Calling, and LDAP. The main area contains a table of base information. Eight numbered callouts point to specific parts: 1. Location of Base User Defined (points to the Location column header), 2. Product Model Number (points to the Product column header), 3. Base Name User Defined (points to the Base Name column header), 4. Serial Number of Base (points to the Serial Number column header), 5. Base Status (points to the Base Status column header), 6. Call Status (points to the Call Status column header), 7. Date & Time (points to the Date & Time column header), and 8. Remove Base (points to the Remove column header). The table lists several bases with details like Location, Product, Base Name, Serial Number, Base Status, Call Status, Date & Time, and a Remove button.

Location	Product	Base Name	Serial Number	Base Status	Call Status	Date & Time	Remove
C100	Cisco C25	Math 1	02C32020400044	Ready	Idle	11/8/2023 4:17:01 PM PST	
C100	Cisco C25	Math 2	02C32020400079	Ready	Idle	11/8/2023 4:17:01 PM PST	
C100	Cisco C25	Physics 1	02R6N2120100074	Low Power Mode	Idle	11/8/2023 4:17:40 PM PST	
C101	Cisco C25	ELA 1	02R6N2120100080	Low Power Mode	Idle	11/8/2023 4:17:02 PM PST	
0040	Cisco C25	Wireless	02C32020200045	Disconnected	Idle	11/11/2023 7:04:32 AM PST	
	Cisco C25		02C32020200037	Disconnected	Idle	11/8/2023 3:34:49 PM PST	
	Cisco C25		02C32020200001	Disconnected	Idle	11/8/2023 12:04:44 PM PST	

NAVIGATION

SCHOOL NAME USER DEFINED



# Dashboard Definitions

1. **Location:** Alphanumeric user defined location of the base. New bases on the network will have no location data.
2. **Product:** Product model number
3. **Base Name:** Alphanumeric user defined name of the base. New bases on the network will have no name data.  
If left blank this field will default to the location data.
4. **Serial Number:** Serial number of base
5. **Base Status:** Current status of the base
  - **Disconnected:** Base has missed 3 network health checks and can no longer be found on the network.
  - **Emergency/Emergency Nearby:** If an emergency alert is triggered from a base on the network with a paired mic, the status of that base will change to Emergency. If the alert comes from a non-paired mic, the status will change to Emergency Nearby.
  - **Help Requested/Help Requested Nearby:** If a non-emergency alert is triggered from a base on the network with a paired mic, the status of that base will change to Help Requested. If the alert comes from a non-paired mic, the status will change to Help Requested Nearby.
  - **Low Power Mode:** After 1 hour of inactivity or audio input, the base will enter a low power mode. Check manual for mention of low power/standby
  - **Idle:** Base is in full power mode and has passed a network health check.
6. **Call Status:** Current call status of the base
  - **Idle:** No call currently being made
  - **Ringing:** Call in progress
  - **Busy:** Destination phone not available
  - **Connected:** Call connected and in progress
  - **Failed:** Call not able to be initiated for unknown reason
  - **Disconnected:** Base status is Disconnected.
7. **Date & Time:** Timestamp of the last known good network health check for a base.  
Health checks are performed every 5 seconds and the timestamp will flash green.
8. **Remove:** Remove a base from the dashboard. Only available for disconnected bases.



# Base Details: Status

**NOTE:** Double clicking on a base in the dashboard brings up a details page for that base.

**Name:** Field to enter name for the base.

**Location:** Field to enter location of the base. Required field for alerts.

**Dashboard:** Base status shown on dashboard

**Network:** State of network connectivity

**Emergency:** State of emergency alert

**Help Request:** State of Help Request

**SIP Call:** State of call

**Low Power Mode:** State of power mode

**SafetyMute:** Indicator for system mute due to PageFirst, Relay Input, or Input Priority

**Power Source:** Power supply for the base

**Serial Number:** Serial number of the base

**MAC Address:** MAC address of the base

**IP Address:** IP address assigned to the base

**DECT ID:** DECT ID assigned to the base

**C25 App Version:** Processor firmware version for base.

**C25 FW Version:** DECT/DSP firmware for base.

**C25 OS Version:** Operating System version for the base.

**C25 HW Version:** Hardware version for the base

**Runtime:** Total time base has been on the network

**Last Restart:** Timestamp of last time base was powered down and restarted

**Last Update:** Timestamp of the last known good network health check for a base

Status	
Name:	Math 1
Location:	C106
Item	Status
Dashboard:	Low Power Mode
Network:	Active
Emergency:	Inactive
Help Request:	Inactive
SIP Call:	Idle
Low Power Mode:	Active
SafetyMute:	Inactive
Power Source:	RoE+ 802.3at
Serial Number:	03C2325294800048
MAC Address:	0EC41AEEA152
IP Address:	10.1.100.131
DECT ID:	09C1A00960
C25 App Version:	7.0.03
C25 FW Version:	7.0.11
C25 OS Version:	7.0.05
C25 HW version:	R04
Runtime:	192 hours
Last Restart:	11/21/2023 3:55:21 PM PST
Last Update:	11/29/2023 4:00:23 PM PST



# Base Details: Paired Devices

## PAIRED DEVICES

Lists all the devices that are currently paired with the base. These devices include the Clearmike, Sharemike, and Media Connector (MCN).

**Serial Number:** Serial number of device

**Type:** Device type

**Connected:** Status of wireless connection between the device and the base.

**FW Version:** Firmware version for device

**Student Mode:** Toggle on/off for Student Mode. Only available with Clearmike.

**Ext Mic Detect:** Toggle on/off external mic detection. Only available with Clearmike.

**Unpair:** Delete pairing between the device and the base.

Serial Number	Type	Connected	FW Version	Student Mode	Ext Mic Detect	Unpair
00CMPT22034200134	Clearmike	connected	T3.11	<input type="checkbox"/>	<input type="checkbox"/>	
00SHNPGTRC0000013	Sharemike	connected	6.1.08			
00MCNAR222501113	Media Connector	connected	6.1.08			

Item	Value
MIC Index	1
Serial Number	00CMPT22034200134
DECT ID	00C140000
Type	Clearmike
Firmware	T3.10
HW Version	3
Pairing Status	paired
Connected	connected
Last Paired	4/23/2022 1:40:12 PM EDT
Battery	100
Charging Status	Not Charging
Mic Volume	0
Mute	Unmute

## CLEARMIKE DETAILS

Double clicking on a device in the list brings up details on that device.

**MIC index:** Two mics can be paired to a single base. Mic 1 or Mic 2.

**Serial Number:** Serial number of device

**Type:** Device type

**FW Version:** Firmware version for device

**HW Version:** Hardware version for device (Clearmike only)

**Pairing Status:** Confirmation that device is paired with base

**Connected:** Status of wireless connection between the device and the base.

**Last Paired:** Timestamp of when device was paired with base

**Battery:** Battery level of microphone. 100, 50, and 10 are the levels shown.

**Mic Volume:** Volume setting of mic. 10 to 100.

**Mute:** Mute status of mic.




# Base Details: Audio Settings

The audio settings for the base can be adjusted from either the front panel on the base or the Audio portion of the Base Details page. Click the edit icon to adjust the audio settings.

Audio			
Input Volume	Output Volume	Tone	Edit
70	40	55	

### Edit Base Audio

Input Volume  70

Output Volume  40

Tone  55

When using the PageFirst sensor, adjusting the sensitivity of the system can be done in the Base Details page. Click the edit icon to adjust the sensitivity level. Setting the sensitivity to 0 will disable this feature.

PageFirst Sensitivity	
PageFirst Sensitivity	Edit
14	

### Edit PagingFirst Sensitivity

Sensitivity Level  14





# Base Details: Status History

The base details page includes a Status History that shows displays the last eight events associated with the base.

All events for all bases are saved in a global log file that can be exported using the Logs menu button.

Date & Time ↕	Event
9/15/2023 4:00:47 PM PDT	update page first sensitivity request
9/15/2023 3:57:05 PM PDT	audio settings change
9/15/2023 3:57:08 PM PDT	audio settings change
9/15/2023 3:52:49 PM PDT	MIC Connected change
9/15/2023 3:52:54 PM PDT	MIC Connected change
9/15/2023 3:50:49 PM PDT	audio settings change

Double clicking an event will bring up the Log Entry Details. The log data is saved in a JSON format.

```
{
  "deviceId": "XXXXXXXXXXXX",
  "origin": "XXXXXXXXXX",
  "event": "audio settings change",
  "status": {
    "deviceId": 0,
    "cpuUsage": 100,
    "low": 0,
    "high": 100
  },
  "timestamp": "2023-09-15T16:50:49Z",
  "date": "9/15/2023 3:50:49 PM PDT"
}
```



# Maps

The Cascadia Web Console has a map feature that can be set up to give a visual representation of the Base Status from the Dashboard. If alerts have been set up in the Cascadia Web Console, the status of the alerts will also be shown on the map. For details on how to set up the map, see the “Cascadia Software Installation Guide”.





# Logs

Logs for all the bases on the network are saved as a system log. As a default, the settings for events to be logged are set to the maximum. This system log can be downloaded by clicking the “Download System Logs” button.

**LOG LEVEL:** Chose the level of detail included in log events.

**LOG HTTP TRAFFIC:** Log network traffic associated with events.

**LOG DXC TRAFFIC:** Log wireless traffic associated with events.

**LOG SIP TRAFFIC:** Log SIP call information associated with events.

The screenshot shows a web interface with two main sections. The top section, titled "Basestation Log Configuration", contains four rows of settings. Each row has a label on the left and a blue button on the right. The buttons are labeled "Verbose", "True", "True", and "True" respectively. Below these buttons is an "Ok" button. The bottom section, titled "System Logs", contains a single blue button labeled "Download System Logs".

Configuration Item	Value
Log Level	Verbose
Log HTTP Traffic	True
Log DCX Traffic	True
Log SIP Traffic	True

System Logs

Download System Logs



# Firmware: Download

Firmware updates can be downloaded directly to the Cascadia Web Console using an internet connection or can be manually loaded. Firmware files for the C25, Clearmike, Sharemike, and Media Connector are included in a firmware bundle.

### Cascadia Available Updates

[Login to Cascadia Downloads](#)

Login to download all available updates from [downloads.lightspeed-nls.com](#)

### Manually Import Bundle

[Choose File](#) No file chosen [Upload](#)

Choose a file before Pressing the Upload button

### Select Firmware Bundle

Bundle Name	C25 APP	C25 FW	ENT	MCN	SMH	remove
<input type="checkbox"/> Cascadia_Firmware_Bundle_25-10-00	0.6.1	7.0.11	7.0.10	6.1.00	6.1.00	
<input type="checkbox"/> Cascadia_Firmware_Bundle_25-10-01	0.6.1	7.0.11	7.0.11	6.1.00	6.1.00	
<input type="checkbox"/> Cascadia_Firmware_Bundle_25-11-02	0.6.2	7.0.11	7.0.11	6.1.00	6.1.00	



# Firmware: Update

Applying a firmware bundle update to a base will also update all paired devices. Bases can be updated individually or in bulk using the check box. The devices that will be updated are highlighted in yellow.

### Select Firmware Bundle

Bundle Name	CIS APP	CIS FW	CNT	MON	SMN	remove
<input type="checkbox"/> Cascade_Firmware_Bundle_25-10-31	0.0.1	7.0.11	7.0.11	6.1.00	6.1.00	
<input type="checkbox"/> Cascade_Firmware_Bundle_25-11-02	0.0.2	7.0.11	7.0.11	6.1.00	6.1.00	
<input checked="" type="checkbox"/> release0.0.3	0.0.3	7.0.11	7.0.11	6.1.00	6.1.00	

### Select one or more bases to update

<input type="checkbox"/> Location	Product	Base Name	Serial Number	CIS APP	CIS FW	Paired Devices
<input type="checkbox"/> C107	Cascade C25	Project 1	00F0N25221000014	0.0.2	7.0.11	CNT 1: 7.0.11 CNT 2: 7.0.11
<input type="checkbox"/> C101	Cascade C25	SLA 1	00F0N25221000000	0.0.2	7.0.11	CNT 1: 7.0.11 CNT 2: 7.0.11
<input type="checkbox"/> C109	Cascade C25	Menu 1	00C0S25234000044	0.0.0	7.0.11	CNT 1: 7.0.11
<input type="checkbox"/> C108	Cascade C25	Menu 2	00C0S252340000076	0.0.0	7.0.11	CNT 1: 7.0.11 SMN 2: 6.1.00 MON 1: 6.1.00

### Apply Bundle

Pressing the Apply Updates button will push the update package to the selected bases.

Bundle to be applied: release0.0.3  
Number of bases to update: 3



# Programming: Stand Alone

The programming web page has options to pick an integration partner and to program the buttons on the paired Clearmike.

## SELECT AN INTEGRATION PARTNER

The **Standalone** selection can be used for generic integrations if a building is equipped with an alert notification system.

The **Alert Button** can be programmed to control the contact closure on the rear panel of the C25, which external systems can use to perform a prescribed action, such as notifying the appropriate parties of a classroom alert.

Alternatively, the **Alert Button** can be programmed to activate a contact closure followed by a SIP call to control both functions with a single button press.

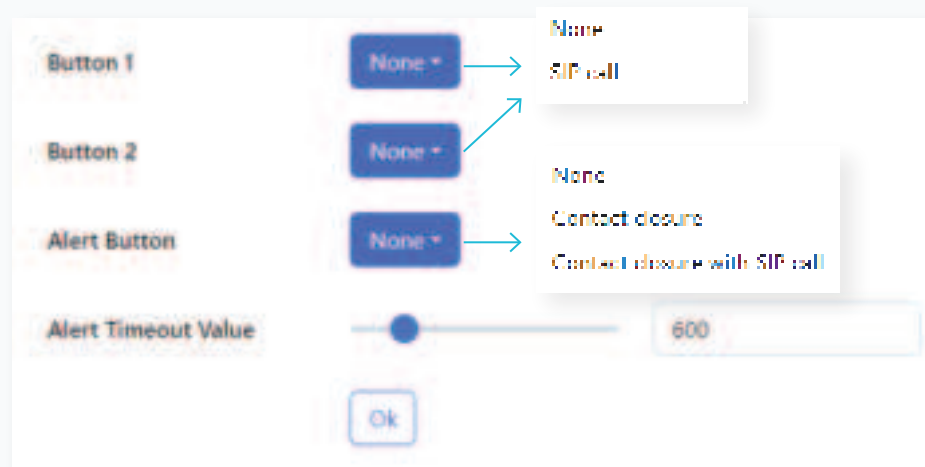
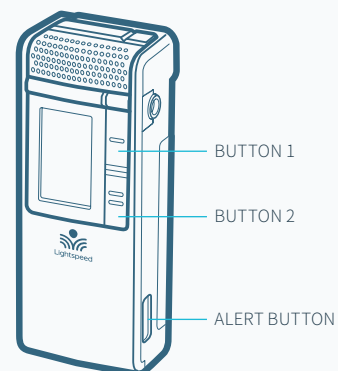
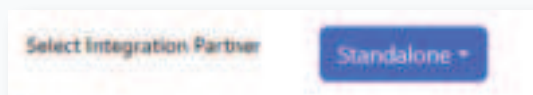
## ALERT TIMEOUT VALUE

The Alert Timeout Value controls how long alerts are displayed in the Dashboard. This is a Cascadia Web Console specific setting and does not control other third-party systems. Value can be set between 0 and 3600 seconds.

## PROGRAM BUTTONS ON THE CLEARMKIE

**Button 1** or **Button 2** can be programmed to initiate a SIP call, if that feature is set up using the SIP Calling web page.

**Disable buttons:** All buttons can be disabled by selecting the None option.

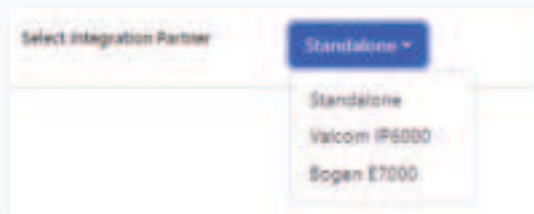




# Programming: Integration Partners

## OPTIONS OTHER THAN STANDALONE

For options other than Standalone, the integration is handled through the network. For details on how to set up the network integration with various partners, see the “Cascadia Software Installation Guide”.



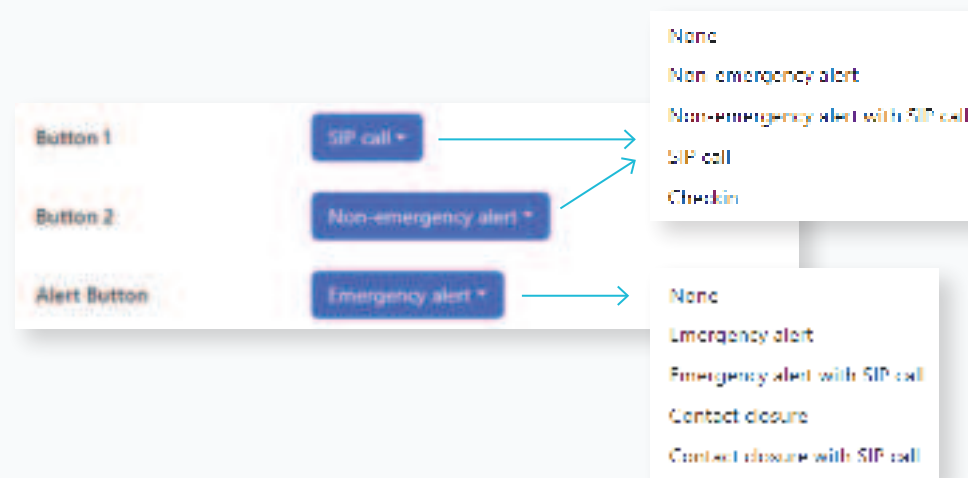
## PROGRAM BUTTONS ON THE CLEARMKIE

The **button programming options** control what is displayed on the microphone screen and the commands sent over the network. The prescribed actions that are activated with the microphone command signals are setup, customized, and controlled by the integration partner system.

**Button 1** and **Button 2** have the same programming options. The options include a Help Request, SIP call, and Check-in commands. One option combines the Help Request and SIP call into a single button.

The **Alert Button** can be programmed to activate an Emergency Alert or the combined action of an Emergency Alert with a SIP call.

**Disable buttons:** All buttons can be disabled by selecting the None option.





# SIP Calling

Use the SIP Calling web page to integrate with a school's phone system to enable SIP calls. Follow the phone system instructions on how to register a third-party SIP device.

Double click on a base to edit the individual base SIP settings.

**Global SIP settings.**

Destination URI:  SIP ADDRESS TO CALL

Server:  IP ADDRESS OF PHONE SERVER

Register:

Protocol:  PROTOCOL TYPE: TCP OR UDP

**Individual Base SIP settings (active bases only).**

Base	Serial Number	Location	Base URI	Display Name	Password
Phone 1	02R8N25231800074	C107	sip:1007@10.1.100.80	1007	75aef9a4f9a4f9a4f9a4f9a4f9a4f9a4
Desk 1	02R8N25231800080	C108	sip:1008@10.1.100.80	1008	34cd0ef4e4f4e4f4e4f4e4f4e4f4e4f4
Phone 2	02C8N25231800084	C109	sip:1009@10.1.100.80	1009	607b70a88f80a88f80a88f80a88f80a8
Phone 3	02C8N25231800078	C108	sip:1008@10.1.100.80	1008	44cd0ef4e4f4e4f4e4f4e4f4e4f4e4f4

**Edit Base SIP Settings**

Base URI:  SIP ADDRESS OF BASE

Display Name:  DISPLAY NAME WHEN PLACING A CALL

Password:  PASSWORD REQUIRED BY PHONE SYSTEM





# LDAP

Use the LDAP web page to integrate with a school's LDAP system.

**SERVER:** IP address or system name of LDAP server.

**SERVER PORT:** Port number to communicate with LDAP server.

**ADMIN DN:** Distinguished name of LDAP account with read access.

**ADMIN PASSWORD:** Password for above LDAP account.

**SEARCH BASE DN:** Distinguished name of LDAP organizational unit where webapp user accounts reside.

**ATTRIBUTE:** Name of LDAP user attribute that provides webapp access.

The image shows a screenshot of an 'LDAP Setup' web form. The form is titled 'LDAP Setup' in a red box. It contains six input fields, each with a label and a dropdown menu. The 'Server' field has a dropdown with 'IP/DNS' selected and the text 'dc.yourcompany.com'. The 'Server Port' field has a dropdown with 'Port' selected and the text '389'. The 'Admin DN' field has a dropdown with 'DN' selected and the text 'CN=Idapsvc,OU=Users,DC=yourcompany,DC=cr'. The 'Admin Password' field has a dropdown with 'Password' selected and a masked password '\*\*\*\*\*'. The 'Search Base DN' field has a dropdown with 'DN' selected and the text 'OU=Users,DC=yourcompany,DC=com'. The 'Attribute' field has a dropdown with 'Role' selected and the text 'cascadiaRole'. At the bottom of the form is an 'Ok' button.

Field	Label	Value
Server	IP/DNS	dc.yourcompany.com
Server Port	Port	389
Admin DN	DN	CN=Idapsvc,OU=Users,DC=yourcompany,DC=cr
Admin Password	Password	*****
Search Base DN	DN	OU=Users,DC=yourcompany,DC=com
Attribute	Role	cascadiaRole

Ok

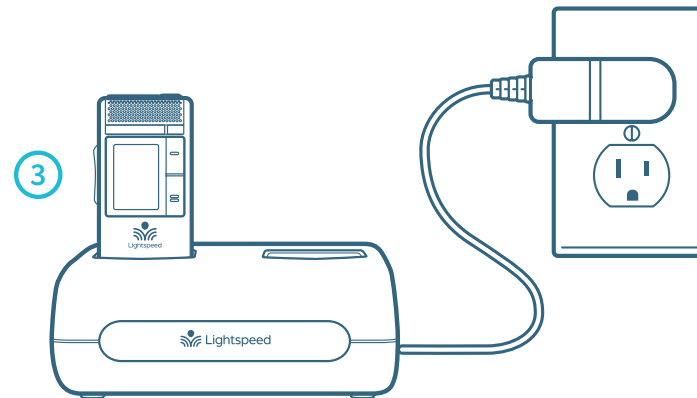
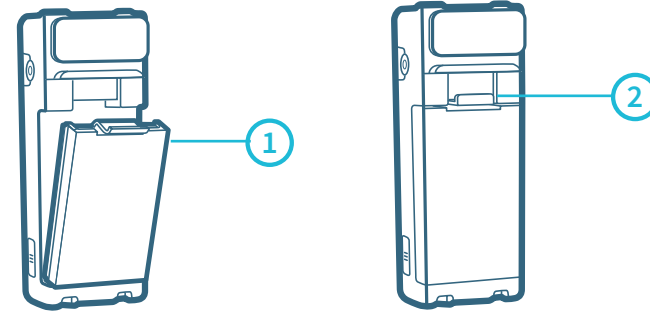


## MAINTENANCE & TROUBLESHOOTING

# Clearmike Battery Replacement

### BATTERY PART #L3.7V

1. Push down on the latch and carefully pull the battery pack away from the Clearmike.
2. Insert new battery pack as shown and make sure the latch is secure.
3. Place the Clearmike in a cradle charger to charge the battery pack.

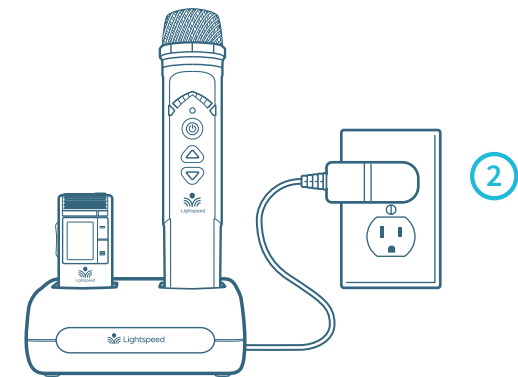
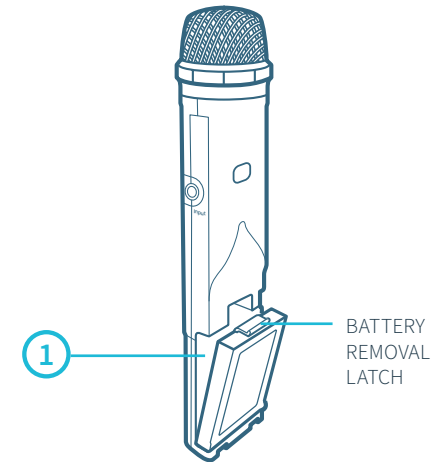




# ShareMike Battery Replacement

## BATTERY PART #L3.7V

1. Push down on the latch and carefully pull the battery pack away from the ShareMike.
2. Insert new battery pack as shown and make sure the latch is secure.
3. Place the ShareMike in a cradle charger to charge the battery pack.





# Troubleshooting

**PROBLEM: Low battery indication:** Most problems are directly related to low battery power. Please run through the “Battery Check” items first. For remaining troubleshooting, use known good, fully-charged batteries.

**SOLUTION:** Battery Check

- Confirm batteries are charged each night. A solid red light on the battery status light indicates a low battery.
- Confirm proper batteries are used: Clearmike and Sharemike require the Lightspeed #L3.7V rechargeable battery pack.
- Make sure the microphones obtain a full charge. A full charge takes 5-6 hours.
- When charging the transmitter, the red charging light is solid. The green light will be solid when a full charge is reached.

**PROBLEM: Microphone doesn’t indicate a “Ready” signal (solid white light)**

**SOLUTION:** Follow these steps to ensure the system is ready to use.

- Power cycle the microphone using either the Power/Mute button or by placing in a charger and then removing it. Wait for up to 30 seconds for the white light to turn solid, indicating READY for operation.

**PROBLEM: Low volume or feedback**

**SOLUTION:** Follow these steps to eliminate low volume or feedback:

- If the volume is too high, feedback will occur. Adjust accordingly.
- Adjust the volume level on the Clearmike or move the microphone further from the audio system speakers.

**PROBLEM: No sound from speaker and wireless components**

**SOLUTION:** Follow these steps to produce sound from C25:

- Confirm that the white POWER light located on the front panel of the C25 is on.
- Confirm the microphone is powered on and linked to the C25. The Talk/Mute light will be white indicating the microphone is linked.
- Tap the Power/Mute button to confirm that microphone is not muted. The Talk/Mute light on the front of the microphone will be solid blue indicating microphone is not muted.
- Check speaker connections on the C25. Make sure the cables are properly connected (see page 8 of this manual or the Installation Guide for more information).
- Slowly turn up the volume level while talking into the microphone.

**If you still have questions after reviewing these instructions, call Lightspeed Technical Services at 800.732.8999, 5am–5pm, PST.**

Customers outside the U.S. should contact their local reseller.



# Tips for Optimum Audio Performance

- **Speak in a natural voice.** A normal conversational speech level will provide an adequate signal. It is not necessary to increase the intensity of your voice—the audio system provides adequate amplification (approximately 5–10 dB) above ambient room noises.
- Avoid **wearing jewelry** that may rub or bump against the microphone.
- **Mute the microphone** during private conversations with a student, parent, or other classroom visitor. You can tell the mic is muted when the light turns white.
- **Recharge microphones each night.** When recharged nightly, operating time (actual usage) for the microphones will last through a typical school day.



## WARRANTY, SAFETY & SPECIFICATIONS

### Five-Year Limited Warranty

Lightspeed Classroom Audio Systems are guaranteed against malfunction due to defects in materials and workmanship for a period of five (5) years, beginning at the date of the purchase invoice. If such malfunction occurs, the product will be repaired or replaced (at Lightspeed's option) without charge during the warranty period.

Lightspeed's Warranty Exchange Program applies to all classroom audio systems within the five (5) year warranty period. If a classroom audio product or component has an issue that requires service, a refurbished replacement will immediately be sent to the customer to minimize downtime. Customers will receive the exchange product(s) or component(s) within 2-3 days. A prepaid return label will be included with exchanged products so original malfunctioned equipment can be returned to Lightspeed. Any exchanged equipment will remain covered under the original five-year warranty.

1. Warranty for C25 is five (5) years.
2. Warranty on Lightspeed NiMH and Lithium Polymer rechargeable batteries is one (1) year.
3. Warranty on microphones and components that support discontinued systems (FMA, SMA and FMCA) is one (1) year.
4. A prepaid shipping label will be provided by Lightspeed for warranty repairs within the United States. Customers outside the U.S. should refer to the Lightspeed website ([www.lightspeed-tek.com](http://www.lightspeed-tek.com)) for warranty repair instructions.
5. Warranty does not extend to finish, appearance items, or malfunctions due to abuse or operation other than specified conditions, nor does it extend to incidental or consequential damages. Repair by other than Lightspeed or its authorized service agencies will void this warranty. Information on authorized service agencies is available from Lightspeed Technologies, Inc.

**Our Service Department (800.732.8999, 5am–5pm, PST) will handle your repair or replacement needs.**

Customers outside the U.S. should contact their local reseller.




# Safety Warnings and Certifications (*Pending Approval*)




**CAUTION**  
**RISK OF ELECTRICAL SHOCK**  
**DO NOT OPEN**



**THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.**



**The lightning flash** with arrowhead symbol inside an equilateral triangle is intended to alert the user to the presence of non insulated “hazardous voltage” within the product’s enclosure, which may be of sufficient magnitude to induce a risk of electric shock to persons.



**The exclamation mark** inside an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying this product.



**USE A LIGHTSPEED SUPPLIED BATTERY ONLY**



CAUTION: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.



Battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

## CERTIFICATIONS



This product is listed to UL standards and requirements for electrical safety by Underwriters Laboratories Inc.



This product conforms with the essential requirements of the following European Union Directives: 2004/108/EC Electromagnetic Compatibility (EMC) and 2006/95/EC Low Voltage Directive (LVD).



LightSpeed Technologies launched a formal product recycle program in Europe that complies with the European Union Directive 2002/96/EC on Waste Electrical and Electronic Equipment (“WEEE Directive”). Please visit [www.lightspeed-tek.com](http://www.lightspeed-tek.com) for more information.



This product is manufactured using lead-free processes and is free of other materials harmful to the environment. It conforms to the most stringent new European guidelines for consumer products (RoHS).




# Précautions De Sécurité et Certifications




**ATTENTION**  
**RISQUE D'ÉLECTROCUTION**  
**NE PAS OUVRIR**



**CONFORMÉMENT AUX NORMES D'INSTALLATION APPLICABLES, CE PRODUIT DOIT ÊTRE INSTALLÉ PAR UNE PERSONNE FAMILIARISÉE AVEC LA CONCEPTION ET LE FONCTIONNEMENT DU PRODUIT ET CONSCIENTE DES RISQUE ENCOURUS.**



**L'éclair flèche** dans un triangle équilatéral avertit l'utilisateur de la présence d'une "tension dangereuse" non isolée à l'intérieur de l'appareil, qui peut être d'une ampleur suffisante pour constituer un risque d'électrocution.



**Le point d'exclamation** contenu dans un triangle équilatéral avertit l'utilisateur de la présence d'importantes instructions d'exploitation et de maintenance dans la documentation qui accompagne ce produit.



UTILISEZ UNIQUEMENT LA BATTERIE  
LIGHTSPEED FOURNIE



ATTENTION: Risque d'explosion si la batterie est  
remplacée par un type incorrect. Mettre au rebut les  
batteries usagées selon les instructions.

## CERTIFICATIONS



Ce produit est certifié conforme aux normes et aux exigences UL en matière de sécurité électrique par Underwriters Laboratories Inc.



Ce produit est conforme aux principales exigences des directives de l'Union Européenne suivantes : 2004/108/EC Electromagnetic Compatibility (EMC) and 2006/95/EC Low Voltage Directive (LVD).



Lightspeed Technologies a lancé un programme de recyclage de produits en Europe conformément à la directive de l'Union Européenne 2002/96/CE relative aux déchets d'équipements électriques et électroniques (directive « DEEE »). Veuillez visiter notre page Web [www.Lightspeed-tek.com](http://www.Lightspeed-tek.com) pour plus de renseignements.



Ce produit est fabriqué en utilisant des processus sans plomb ni aucune autre matière nuisible à l'environnement. Il est conforme aux nouvelles règles européennes les plus strictes en matière de biens de consommation (RoHS).





# Canada, Industry Canada (IC) Notices

## ENGLISH

This device complies with Industry Canada license exempt RSS standard(s). This Class B digital apparatus complies with Canadian ICES-003 and CAN ICES-3(B)/NMB-3(B). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. The IC for this device is IC ID 1732B-LS975. This includes accessories such as the Flexmike (IC 1732B-LSFMN), Sharemike (IC 1732B-LSSMN) and Media Connector (IC 1732B-LSMCN).

## French

Canada, avis d'Industrie Canada (IC)

Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003 et RSS-247. Son fonctionnement est soumis aux deux conditions suivantes: (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement. L'identifiant IC de cet appareil est IC ID 1732B-LS975. Ceci inclut les accessoires comme le Flexmike (IC 1732B-LSFMN), Sharemike (IC 1732B-LSSMN) et un Media Connector (IC 1732B-LSMCN).

Cet équipement est conforme aux limites d'exposition aux radiations IC inaux doivent suivre les instructions d'utilisation spécifiques pour satisfaire la conformité à l'exposition IC, veuillez suivre les instructions de fonctionnement décrites dans ce manuel.



# RF Radiation Exposure Statement

## ENGLISH

Your mobile device is a radio transmitter and receiver. It is designed not to exceed the limits for exposure to radio waves (radio frequency electromagnetic fields) recommended by international guidelines. The guidelines were developed by Health Canada and include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

## FRENCH

Votre appareil mobile est un émetteur-récepteur radio. Il est conçu pour ne pas dépasser les limites d'exposition aux ondes radio (champs électromagnétiques de fréquence radio) recommandées par les directives internationales. Les lignes directrices ont été élaborées par Santé Canada et comprennent une marge de sécurité importante destinée à assurer la sécurité de toutes les personnes, indépendamment de l'âge et de la santé.

## NOTICE FOR USB

**NOTE:** Lightspeed is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



# EU Declaration of Conformity

According to EU Directives EMC 2014/30/EU, LVD 2014/35/EU, RED 2014/53/EU, RoHS 2011/65/EU

**Manufacturer:** Lightspeed Technologies, Inc.

**Address:** 11509 SW Herman Rd.  
Tualatin, Oregon 97062

*We herewith declare that the following systems comply with the appropriate basic safety and health requirements of the Directive based on its design and type, as brought into circulation by us. In case of alteration of the system, not agreed upon by us, this declaration will lose its validity.*

**Products:** Redcat, Topcat, 975, Access Link, Flexmike, Sharemike, Pod, Activate Station, Media Connector, Mobile PA

**Model Numbers:** RCN, TCN, 975, ALN, FMN, SMN, POD, ACT, MCN, MPA

As applicable, products conform to the standards listed below:

EN 62368-1:2014

IEC 62133:2012

EN 50385:2017

EN 50566:2017

EN 50663:2017

EN 62479:2010

ETSI EN 301 406 V2.2.2 (2016-09)

ETSI EN 301 489-1 V2.2.3 (2019-11)

ETSI EN 301 489-6 V2.2.1 (2019-04)

EN IEC 63000:2018

The Technical Construction File is available to proper authorities and the product is CE marked.

Lightspeed Representative

Date: December 6, 2022

Michael Frost, Compliance Engineer



# System Components

## STANDARD COMPONENTS

<b>C25</b>	Wireless audio base station
<b>24V-2.5A-NA</b>	24V/2.5A power supply for C25
<b>FSCC</b>	Transceiver cradle charger, power supply
<b>5V1C</b>	5V power supply for FSCC
<b>CMT</b>	Clearmike classroom transceiver with battery pack and lanyard
<b>L3.7V</b>	Lithium Polymer rechargeable battery pack for Clearmike, one per Flexmike
<b>FL</b>	Microphone lavalier cord
<b>SPEAKERS</b>	As ordered

## STANDARD COMPONENTS (OUTSIDE U.S. AND CANADA)

<b>C25G</b>	Wireless audio base station
<b>24V-2.5A</b>	24V/2.5A power supply for C25, specify country
<b>FSCC -INT</b>	Transceiver cradle charger, power supply
<b>5V1C -INT</b>	International 5V power supply for FSCC
<b>CMTG</b>	Clearmike classroom transceiver with battery pack and lanyard
<b>L3.7V</b>	Lithium Polymer rechargeable battery pack for Clearmike, one per Clearmike
<b>FL</b>	Microphone lavalier cord
<b>SPEAKERS</b>	As ordered

## OPTIONAL ACCESSORIES

<b>SMN</b>	Sharemike handheld transceiver with battery pack
<b>L3.7V</b>	Lithium Polymer rechargeable battery pack for Sharemike
<b>USB C</b>	Charging cable for Sharemike
<b>EMA</b>	Earset microphone with TRRS connector for Clearmike
<b>LMA</b>	Lapel microphone with TRRS connector for Clearmike
<b>MCN</b>	Media Connector with Access Technology, power adapter and power cord.



# System Specifications

## C25

<b>Description</b>	Wireless audio hub
<b>Wireless Communication</b>	Access Technology (1.9 GHz)
<b>Frequency Response</b>	20 Hz - 20 kHz Power Amp, 150 Hz - 6.5 kHz Wireless
<b>Power Supply Options</b>	24VDC/2.5A or PoE+ 802.3at
<b>Power Output</b>	40 WRMS total (20 WRMS/channel) with 24VDC supply
<b>Tone Control</b>	Bass/Treble control
<b>Ethernet</b>	10/100Mbps
<b>Audio Inputs</b>	Three (3) 3.5mm inputs, one S/PDIF coaxial digital input
<b>Audio Output</b>	One (1) 3.5mm output, one S/PDIF coaxial digital output
<b>Max Input/Output Level</b>	1.4VRMS / 1.4VRMS
<b>Total Harmonic Distortion</b>	<1%
<b>Analog Control Signals</b>	Inputs: PageFirst (25/70V page mute), Relay Input Output: Contact closure (initiated from microphone)
<b>Dimensions (W x H x D)</b>	9.0" x 6.1" x 1.2" (229mm x 155mm x 30mm)
<b>Weight</b>	17.5 oz (496g)
<b>Operating Temperature</b>	10°C to 40°C (50°F to 104°F)

## CLEARMIKE

<b>Description</b>	Pendant-style transceiver
<b>Earbud Lanyard</b>	Magnetic clasp with integrated earbud
<b>Wireless Communication</b>	Access Technology (1.9 GHz)
<b>Integrated Microphone</b>	Uni-directional electret
<b>Analog Audio I/O</b>	3.5mm TRRS
<b>Digital Audio I/O</b>	USB-C
<b>Control Buttons</b>	Power/mute, volume up/down, alert, two programmable
<b>Volume Control</b>	+/- 12dB
<b>Total Harmonic Distortion</b>	<1%
<b>Display</b>	E-paper display
<b>Battery Power</b>	3.7V LiPo battery pack

<b>Battery Life</b>	8 hours (fully charged)
<b>Charging</b>	Cradle charger or USB-C
<b>Dimensions (L x W x H)</b>	3.0" x 1.2" x 0.9" (76mm x 30mm x 23mm)
<b>Weight</b>	1.3 oz (39g)

## SHAREMIKE

<b>Description</b>	Handheld transceiver
<b>Wireless Communication</b>	Access Technology (1.9 GHz)
<b>Total Harmonic Distortion</b>	<1%
<b>Integrated Microphone</b>	Uni-directional electret
<b>Audio input</b>	3.5mm TRRS
<b>Battery Power</b>	3.7V LiPo battery pack
<b>Battery Life</b>	8 hours (fully charged)
<b>Charging</b>	2 contacts for cradle charging
<b>Power</b>	On/off button
<b>Registration</b>	Push button for registration with Access Link
<b>Dimensions (L x W x H)</b>	6.0" x 1.1" x 1.1" (153 x 28 x 28mm)
<b>Weight</b>	2.6 oz (73g)

## MEDIA CONNECTOR

<b>Description</b>	Wireless audio transceiver
<b>USB power</b>	5V USB-C connector
<b>Wireless communication</b>	Access Technology (1.9 GHz)
<b>Tone control</b>	1 bass/treble control
<b>Audio input</b>	Four (4) 3.5mm inputs
<b>Audio output</b>	Two (2) 3.5mm outputs
<b>Audio Link indicator</b>	1 LED on front panel
<b>Device registration</b>	Push button for Access Link
<b>Dimensions (W x H x D)</b>	7.6" x 5" x 1.13" (193 x 127 x 29mm)
<b>Weight</b>	9.6 oz. (272g)



## Dedicated to Access for All

We strive to make a remarkable difference for teachers and students by creating Access to powerful in-the-moment insights to the learning process. Our audio and video solutions improve student engagement, enable teachers to activate small groups, and encourage collaboration.

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