Lightspeed

Topcat Cascadia

Networked Instructional Audio System

User Manual

Table of Contents

⚠️ 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. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

7. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

8. When the mains plug or appliance coupler is used as the disconnect device, it shall remain readily operable after installation.
⚠️ Lorsque la fiche secteur ou le coupleur de l'appareil est utilisé comme dispositif de déconnexion, il doit rester facilement utilisable après l'installation.

9. When installing via direct wiring to AC mains, an appropriate disconnect device shall be incorporated in the electrical installation of the building in accordance with local building codes.
⚠️ Lors de l'installation via un câblage direct sur le secteur CA, un dispositif de déconnexion approprié doit être intégré à l'installation électrique du bâtiment conformément aux codes du bâtiment locaux.

10. Please keep the unit in a good ventilation environment.

11. WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. AVERTISSEMENT: Pour réduire le risque d'incendie ou de choc électrique, ne pas exposer cet appareil à la pluie ou à l'humidité.

12. 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.

13. CAUTION: Risk of explosion if battery is replaced by any battery other than Lightspeed Part # L3.7V

⚠️ Important Safety Instructions (cont.)

To avoid potential equipment damage and/or serious injury, READ AND FOLLOW all safety precautions when installing Topcat Cascadia. WARNINGS are included throughout the procedural steps in this guide, and are repeated below for emphasis.

- **USE A LICENSED ELECTRICIAN FOR POWER CONNECTIONS.** Topcat Cascadia system uses standard 100 – 240VAC power. Obtain the services of a licensed electrician when supplying and connecting power to the ceiling enclosure. BE SURE electrical installation complies with local building codes. Improperly installing and/or connecting power to the system may result in EQUIPMENT DAMAGE, serious INJURY and/or DEATH.

- **DO NOT INSTALL ALONE.** The ceiling enclosure weighs approximately 20 lbs (9 kg), and requires at least two people to install. DO NOT install alone.

- **USE SUITABLE LADDERS.** Use proper ladders or support platforms when installing Topcat Cascadia enclosure. DO NOT stand on chairs, tables, or other unsuitable surfaces.

- **SUPPORT THE CEILING ENCLOSURE PROPERLY. DO NOT** allow the full weight of the ceiling enclosure to rest on the tile grid of the ceiling. The ceiling enclosure is designed to be suspended at TWO POINTS by suspension wires (secured to rafters or other suitable building structure) and to rest LIGHTLY on the tile grid.

- **ATTENTION INSTALLER:** Attach supplied safety cable in accordance with state and local building code requirements. **NOTE:** *Wiring to these terminals should follow the Class 2 wiring methods as outlined in the National Electric Code. Le câblage vers ces bornes doit suivre les méthodes de câblage de classe 2 décrites dans le Code national de l'électricité.*

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Suitable for use in environmental air spaces (plenums) in accordance with Section 300.22 (C) of the National Electrical Code, and Sections 12-128, 12-010(3) and 12-100 of the Canadian Electrical Code.

Peut être utilisé dans des gaines transportant de lair traité, conformément à la section 300-22(C) du National Electrical Code et aux articles 2-128, 12-010(3) et 12-100 du Code Canadien de lélectricité, Première partie, C22.1.

System Components and Unpacking

The standard configuration of the Topcat Cascadia system includes:
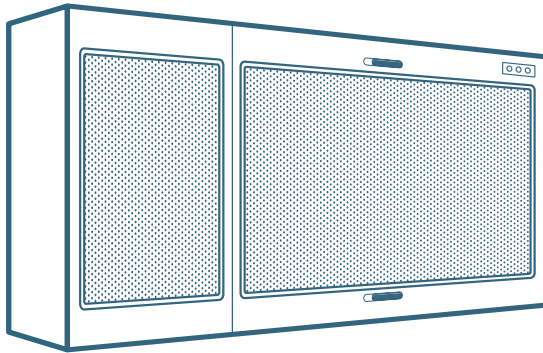
Topcat Cascadia
Networked Instructional Audio System

Clearmike
Teacher Microphone
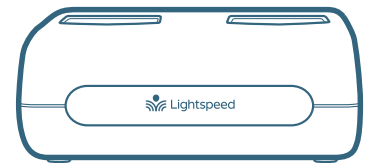
Microphone Cradle Charger
and Power Supply

NOTE ON PAIRING: Topcat Cascadia and any wireless components (microphones, Media Connector) are pre-paired at the Lightspeed factory as required for proper operation. If paired components are separated and swapped during the installation process, they must be re-paired.

Optional Components

Optional equipment which may be part of your Topcat Cascadia system
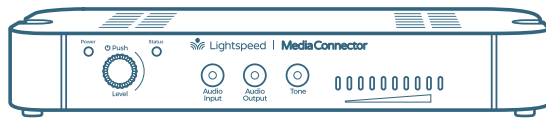
Media Connector
and Power Adapter
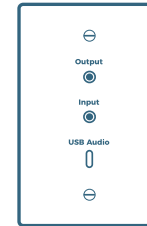
Wallplate

Sharemike
Student Microphone

Topcat Cascadia Controls (Inside Speaker Door)

Mounted inside the Topcat Cascadia is a Cascadia C25.

To access the controls and connections of the C25 system, push the two sliders to the unlocked position and open the speaker door.

Cables can be connected to the C25 using pass through ports in the metal housing.

Door panel latches must be locked in place when unit is in operation.

Monté à l'intérieur du Topcat Cascadia se trouve un Cascadia C25.

Pour accéder aux commandes et aux connexions du système C25, poussez les deux curseurs en position déverrouillée et ouvrez la porte du haut-parleur.

Les câbles peuvent être connectés au C25 à l'aide de ports traversants dans le boîtier métallique.

Les loquets du panneau de porte doivent être verrouillés en place lorsque l'appareil est en fonctionnement.

STATUS LIGHT   POWER LIGHT   IR SENSOR

DOOR PANEL LATCHES
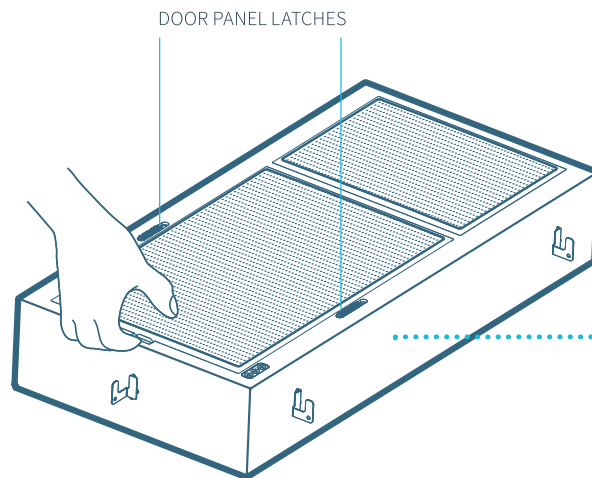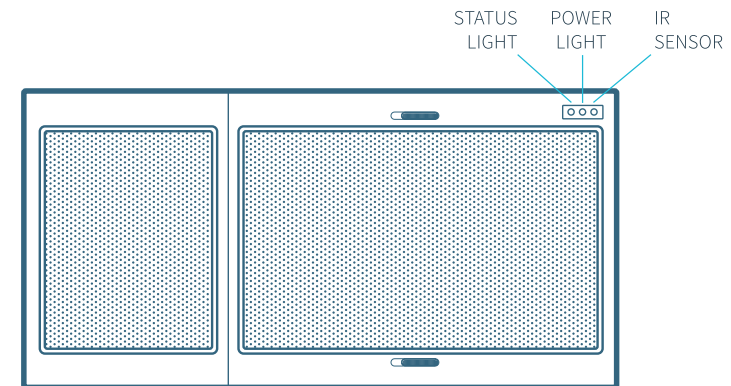
LIFT PANEL TO OPEN SPEAKER DOOR
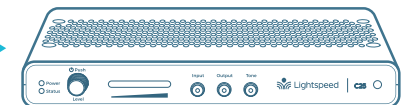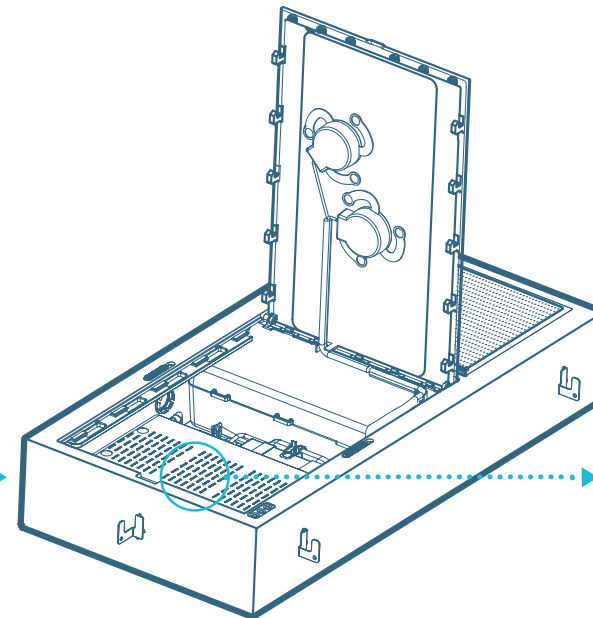
C25 MOUNTED INSIDE OF TOPCAT CASCADIA

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.
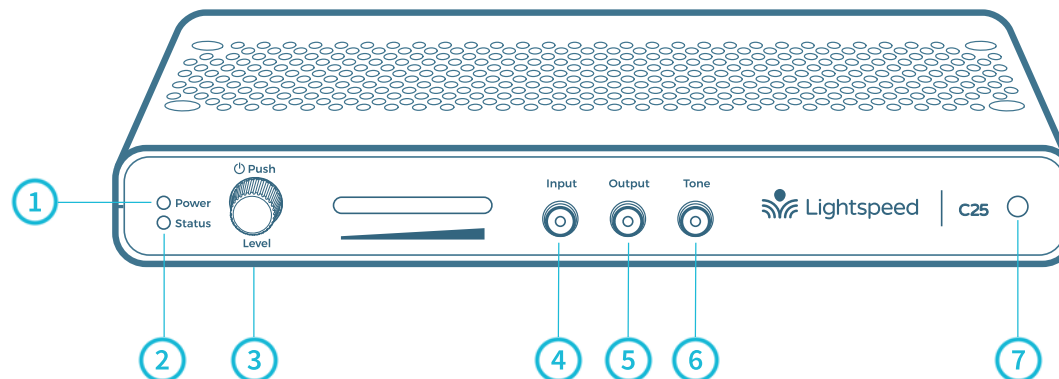
C25 Controls and Connections

BACK PANEL

1. **REMOTE LED:** Connection for external LED and IR sensor when C25 is installed in a Topcat Cascadia

2. **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.

3. **RJ45 for Wallplate:** Cat5e cable (24AWG) to optional Wall Plate. **RJ45 pour plaque murale:** câble Cat5e (24AWG) vers plaque murale en option.
   Note: Wall Plate (WPT) is designed/suitable for use only with UL Listed AV/ICT equipment only.

4. **AUDIO INPUTS:** 3.5mm stereo connectors for connecting classroom audio sources to be played through audio system.

5. **INPUT PRIORITY:** Additional 3.5 mm stereo connector that automatically mutes other audio inputs when a signal is detected.

6. **AUDIO OUTPUT:** 3.5mm stereo connector for connecting to an assisted listening device (ALD) or to a computer for recording.

7. **S/PDIF RCA:** Digital Audio Input and Output to connect one C25 to another.

8. **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.

9. **RELAY INPUT:** Senses external relay closure to mute C25 audio when a signal from a fire alarm, paging system or other device is detected.

10. **CONTACT CLOSURE:** Internal relay contact closure to provide signal to notify external system based on user input.

11. **USB-C:** For testing purposes only.

12. **PoE+ ETHERNET CONNECTOR:** Network connection and power.

13. **DC POWER:** Optional if PoE+ power is not available. Plug the power supply (24V/2.5A) into this jack.
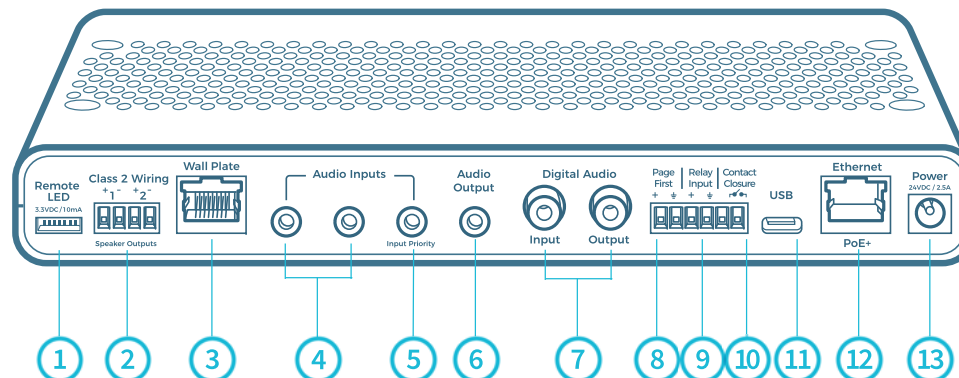
Clearmike Controls and Connections

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

TALK/MUTE LIGHT ◀ —————— —————— ▶ POWER STATUS LIGHT

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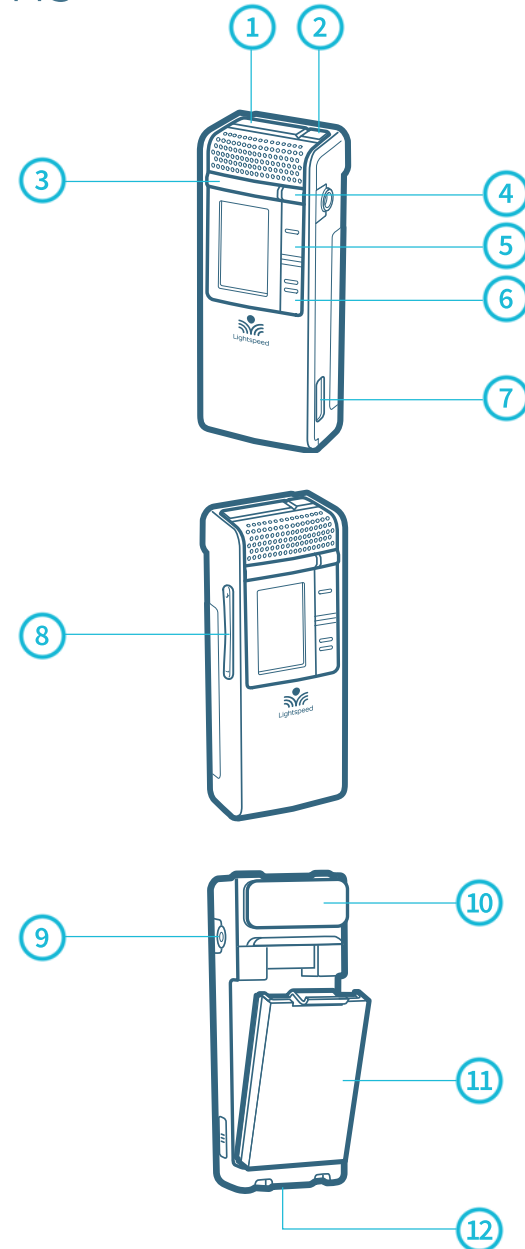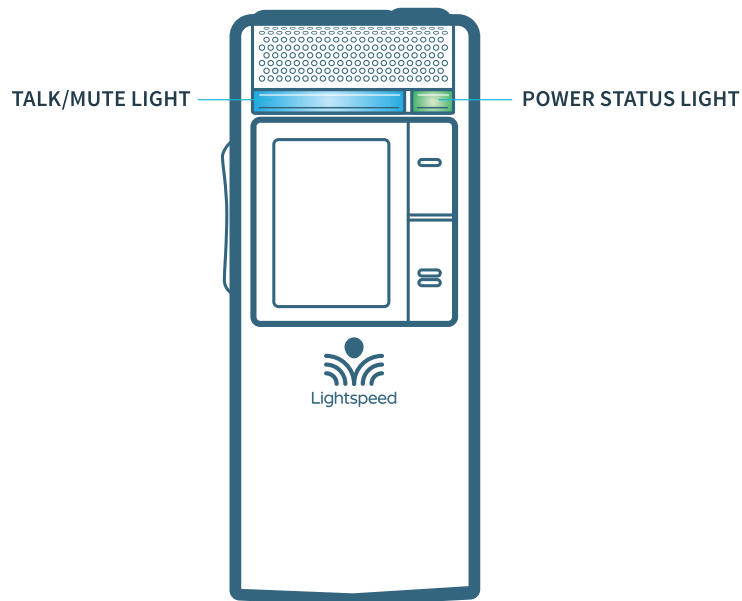
OFF / OFF: Mic off or no live link with base

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)

DEFAULT SCREEN

PROGRAMMABLE BUTTON 1 LABEL

PROGRAMMABLE BUTTON 2 LABEL

Help

Call

M1   EXT

Lightspeed

PROGRAMMABLE BUTTON LABELS

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

Student

Mode

M1   EXT
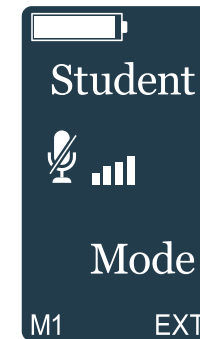
STUDENT MODE

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.

Help

Call

M1   EXT
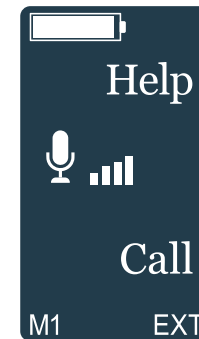
EXTERNAL MIC DETECTION

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 much 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
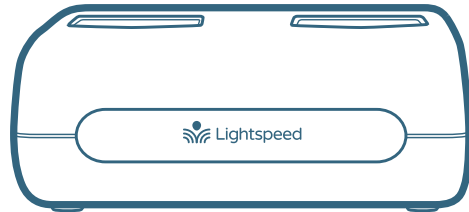
DC POWER PORT: Connect the 5V/1.0A DC power cord
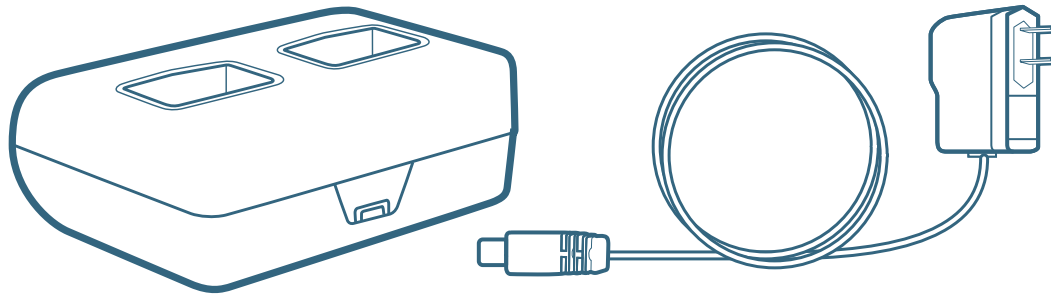
SET-UP & OPERATION

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).

charging in progress

charging complete
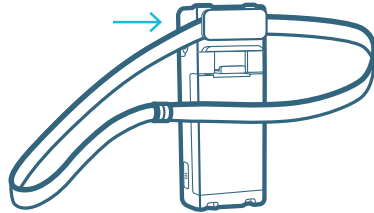
ATTACH LANYARD

Hang the Clearmike on the lanyard opposite the magnetic clasp.
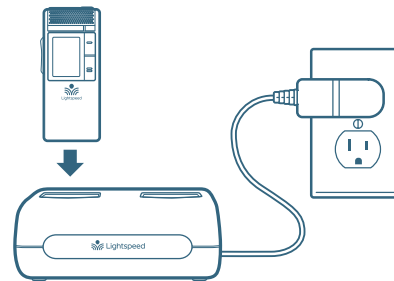
CONNECT CRADLE CHARGER

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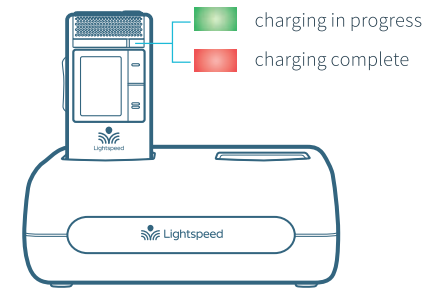
CHARGE CLEARMIKE

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. If a Media Connector is paired with the system, it can also be used to adjust the Tone Control.

ALIGN WITH
COLLARBONE

POWER/MUTE BUTTON   POWER STATUS LIGHT

TALK / MUTE LIGHT

ADJUST
VOLUME

MUTE
Solid White   Off

TALK
Solid blue   Off

Lightspeed
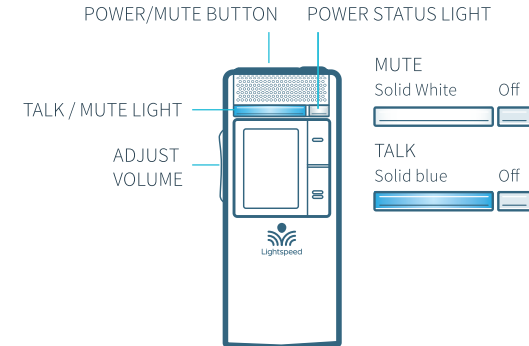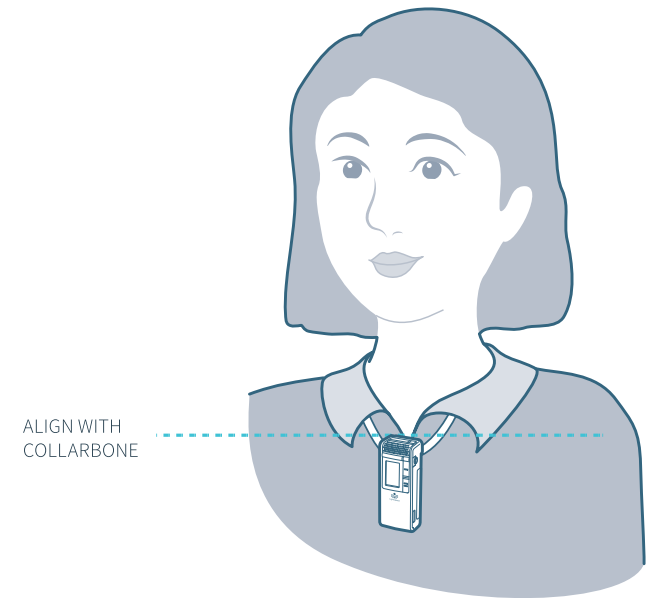
Daily Use of the Clearmike

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.

   - Topcat Cascadia 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.

POWER / MUTE BUTTON

TALK / MUTE LIGHT

VOLUME CONTROL

STATUS LIGHT

POWER LIGHT

Network Integration

IP-Based PBX System
For call integration

Cascadia Web Console

IP-Based Paging/ Intercom System

LAN

TEACHER MICROPHONE

Lightspeed Access transmission protocol
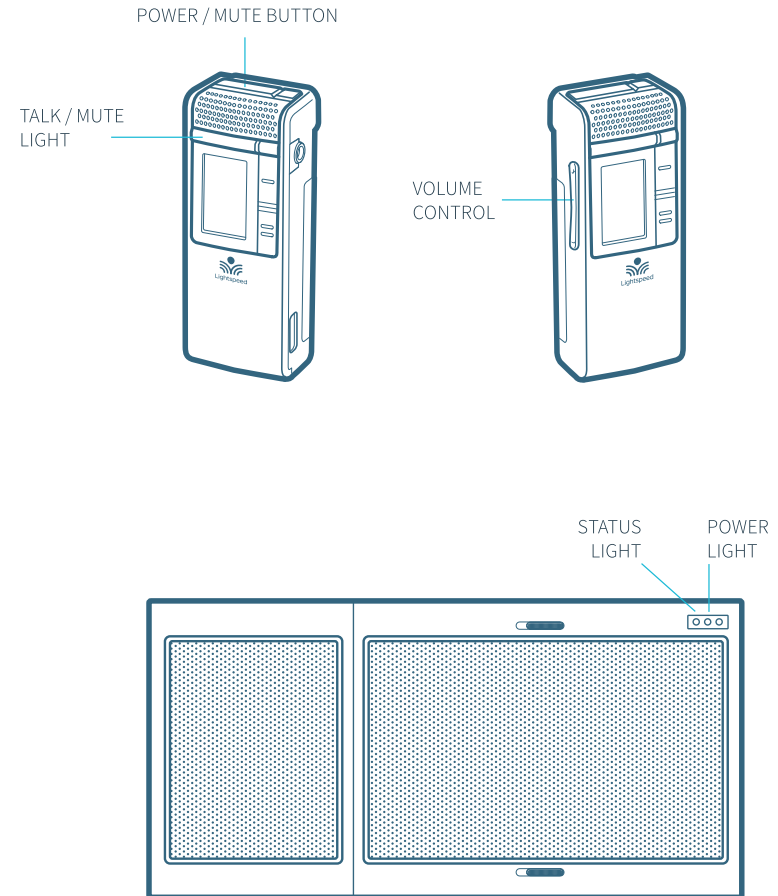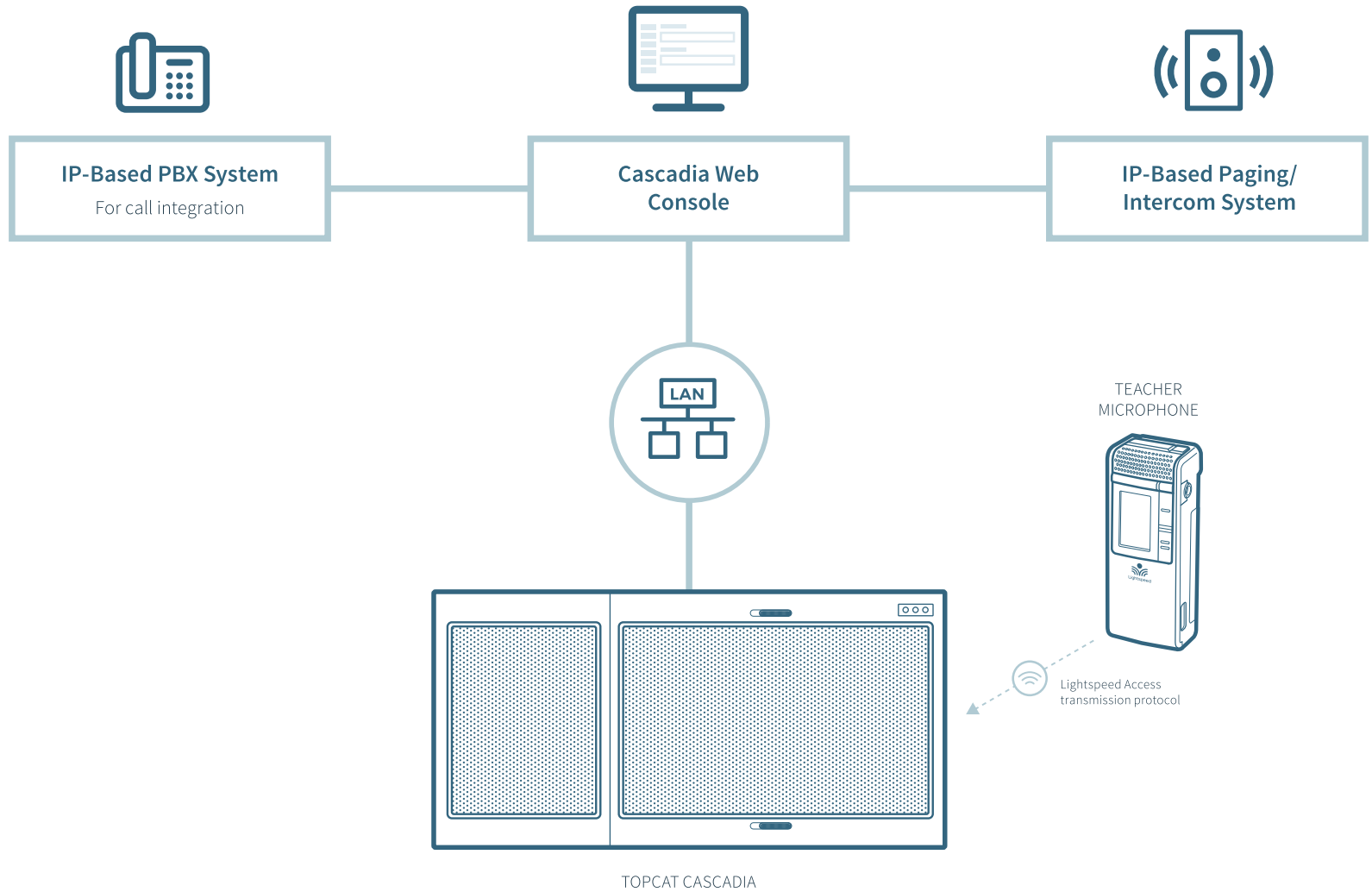
TOPCAT CASCADIA

Using an Alert Notification

The Topcat Cascadia 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 50-51 for information on programming the microphone buttons.

EMERGENCY ALERT BUTTON

BUTTON WITH "HELP" LABEL

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.

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 Topcat Cascadia can integrate with some IP based PBX systems to enable calls to be placed from the Clearmike. All Topcat Cascadia 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.

BUTTON WITH "CALL" LABEL

Help

Call

M1

Lightspeed
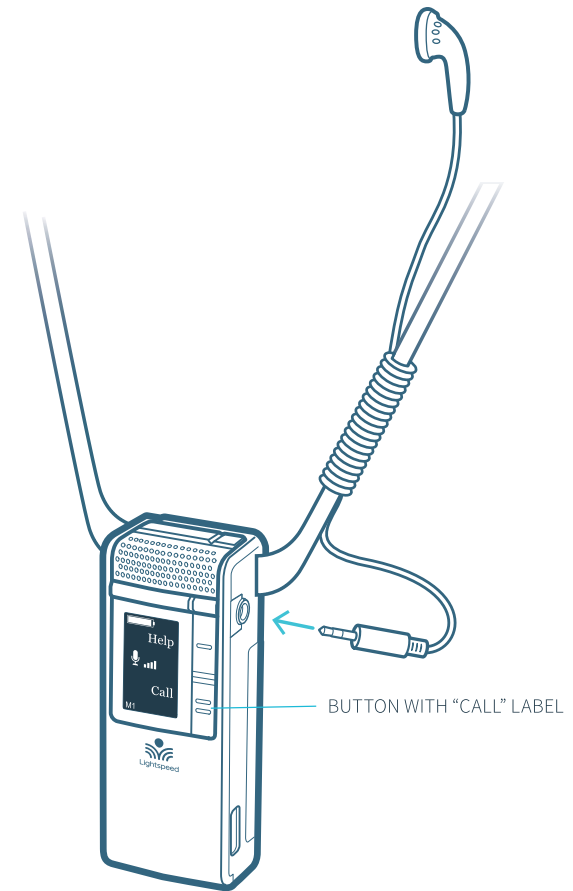
Pairing your Clearmike

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.
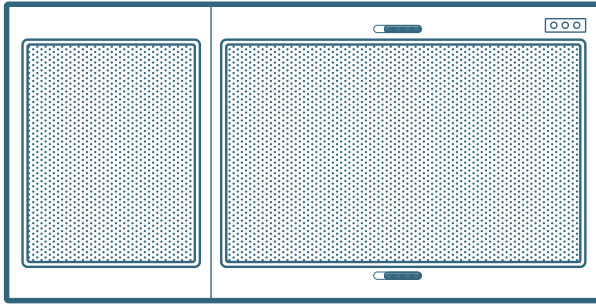
1

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

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 Topcat Cascadia will also start flashing blue and white.

3

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

POWER / Mute Button   IR TRANSMITTER

TALK / MUTE LIGHT

Lightspeed
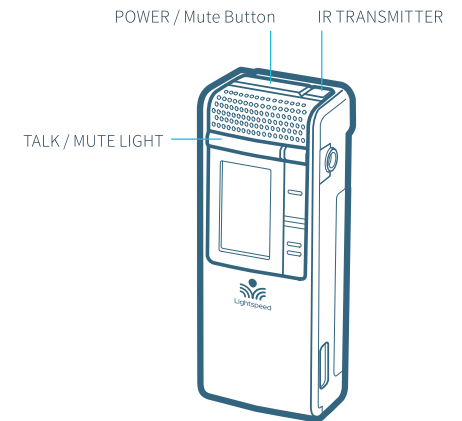
Using Your Microphone as a Wireless Audio Link

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 Topcat Cascadia to ensure all audio from the computer (videos, video conferencing, audio books, music, etc) can be played through the Lightspeed Topcat Cascadia system and speakers.

SEND AUDIO TO THE COMPUTER from the Topcat Cascadia 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.
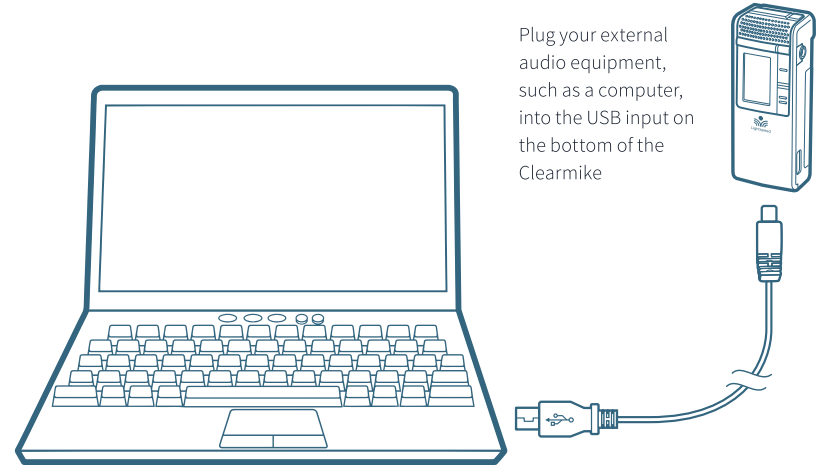
Plug your external audio equipment, such as a computer, into the USB input on the bottom of the Clearmike

USB cable sold separately. Lightspeed offers a USB-A to USB-C cable for sale (part #USBC)

💡 **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

INTERACTIVE DISPLAY

Audio Out

AUDIO SOURCE

TEACHER
MICROPHONE

Audio Out

Audio In

Lightspeed Access
transmission protocol

Audio Out

Audio In

TOPCAT CASCADIA
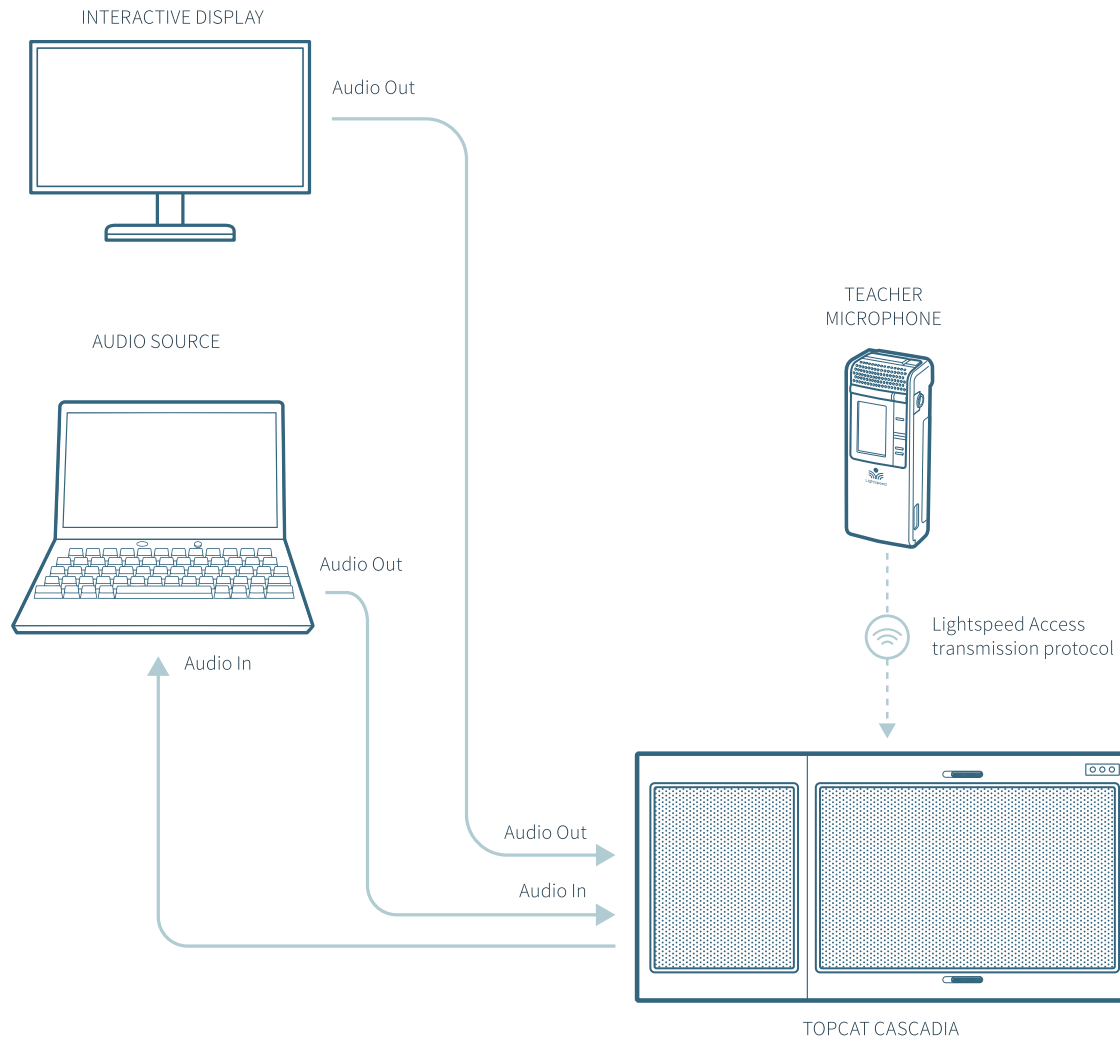
Analog Control Features

The C25 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 activates 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
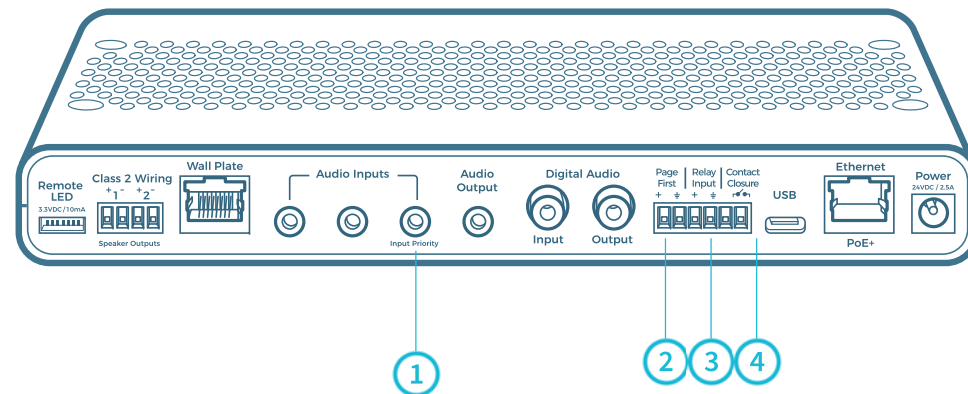
Installing PageFirst Sensor *(optional)*

The Topcat Cascadia 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 Topcat Cascadia.

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.
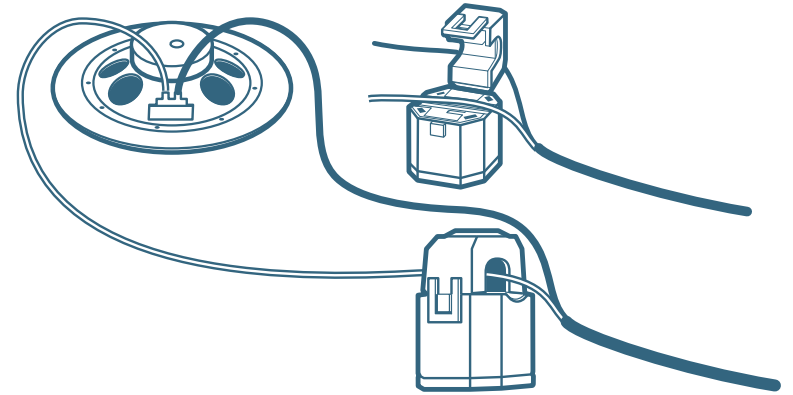
Sharemike Controls and Connections

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 = Linking in process

4. **MIC 2 STATUS:** Lighted to indicate microphone is registered as Mic 2
   White: solid = Normal operation
   White: flashing = Linking 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 Topcat Cascadia. 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.

NORMAL OPERATION

CHARGING IN PROGRESS

CHARGING COMPLETE

NORMAL OPERATION

LINKING IN PROGRESS (FLASHING)

TALK

MUTE

BATTERY REMOVAL LATCH

UNDER BATTERY PACK
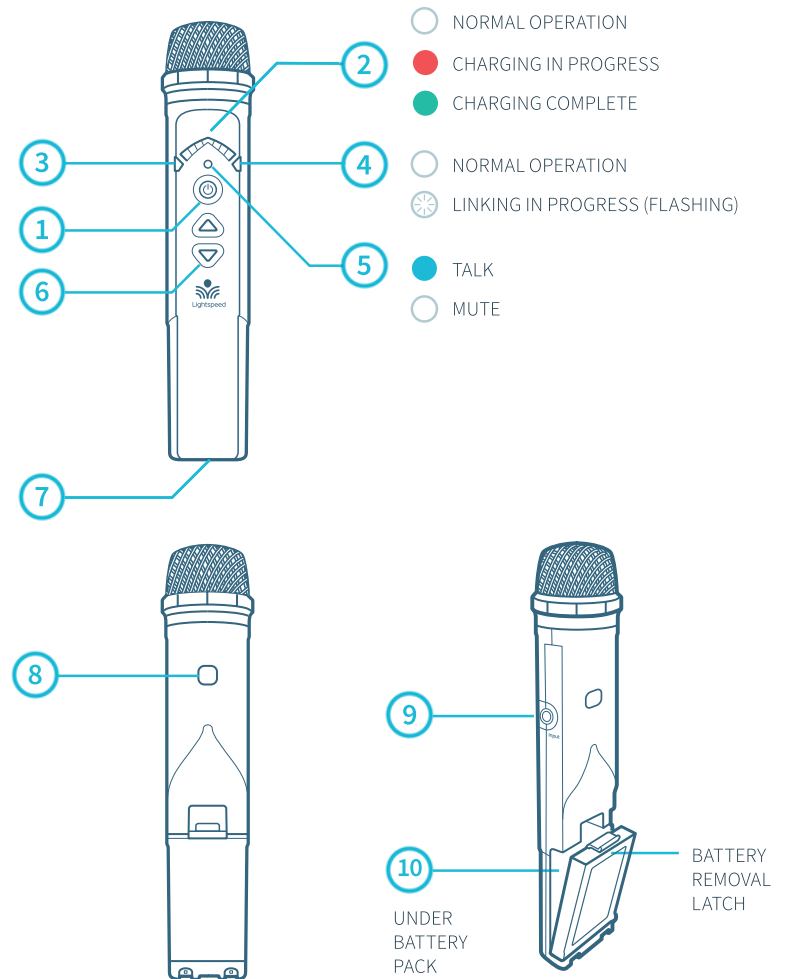
Sharemike: Charging

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 5-6 hours to fully charge the battery. The light will turn green when charging is complete.
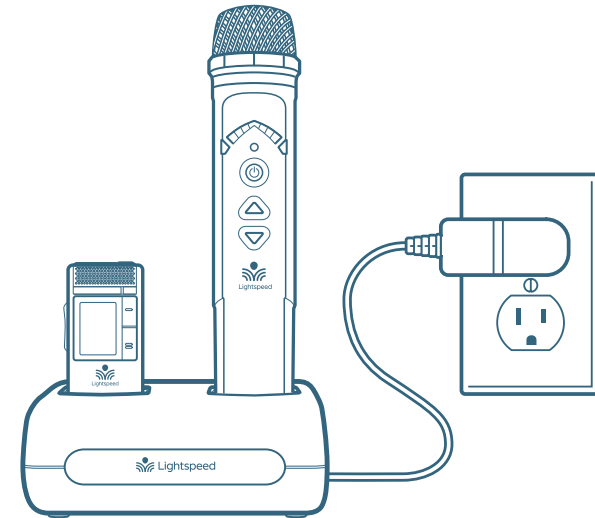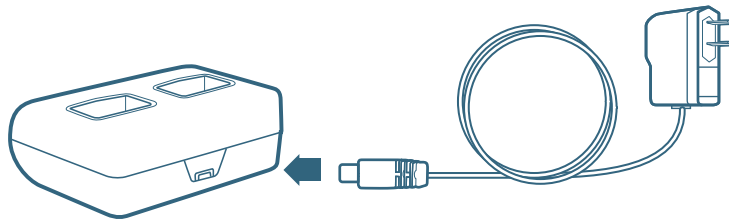
PLEASE NOTE: Topcat Cascadia and microphone(s) are paired together at the factory and all components should be kept together as a system. Moving them from one system, or room, to another will result in the need to re-pair.

Sharemike: Initial Set-Up

POWER LIGHT ON

ENSURE TOPCAT CASCADIA IS POWERED ON

The white light on the speaker panel of Topcat Cascadia will glow.
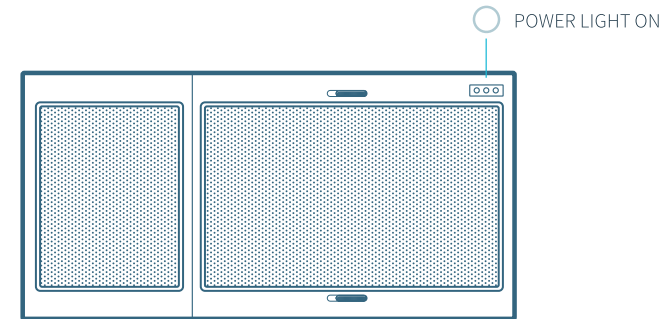
TURN ON THE SHAREMIKE

- Press and hold the power button until the LED lights.

- While speaking in a normal voice, increase the volume using the Activate Volume button or the Media Connector Microphone Volume knob until your voice is barely audible.

POWER BUTTON

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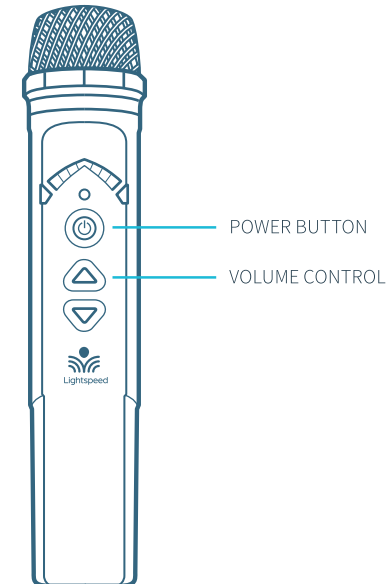
PLEASE NOTE: This equipment is designed to supplement and distribute the user's voice so they are able to speak in a conversational tone. Having the volume set too high will result in feedback and listener fatigue.

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.

STATUS LIGHT   IR SENSOR

IR transmitter
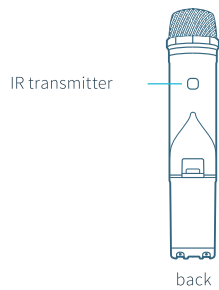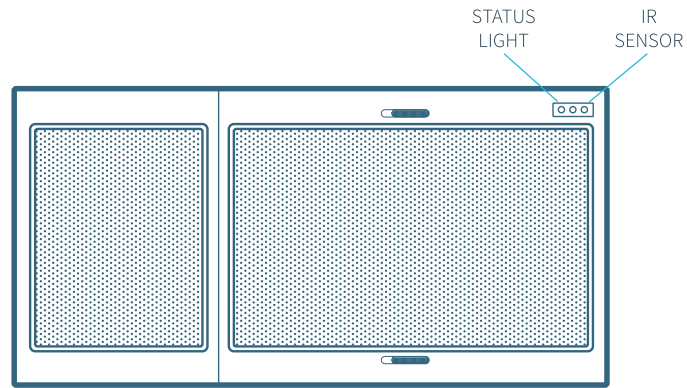
back

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.

MIC 1   MIC 2
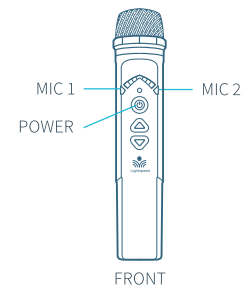
POWER

FRONT

Media Connector Controls and Indicators

FRONT PANEL

1. **POWER LIGHT**
    White light: Power on

2. **POWER BUTTON / VOLUME ADJUSTMENT:** Press this button 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).

3. **STATUS LIGHT:** Microphone link and pair indicators.
    Solid blue: Microphone(s) is paired to the system
    Off: Microphones are not paired to the system

4. **AUDIO INPUT VOLUME SELECTOR:** Selects Volume 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 Volume as the mode for the adjustment knob (2) for the audio device connected to the audio output jack 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.
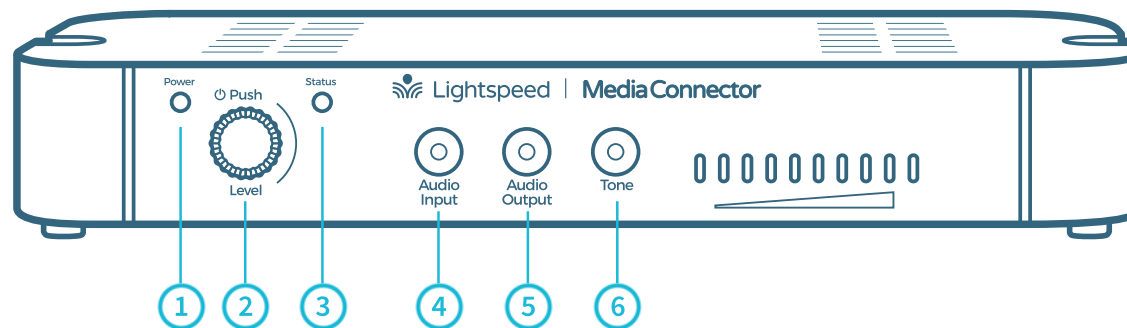
Media Connector Controls and Indicators (Optional)

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.
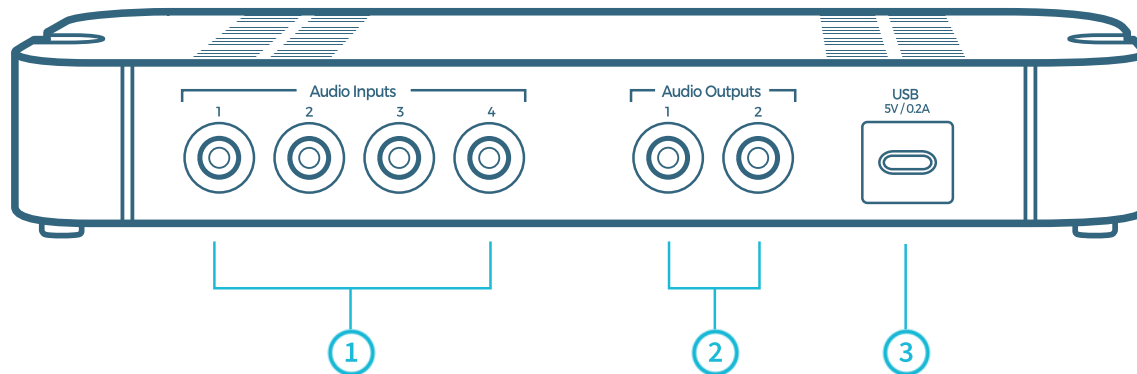
Media Connector Set Up and Operation

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 Topcat Cascadia. 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.

USB Cable   OR   USB Power Adapter
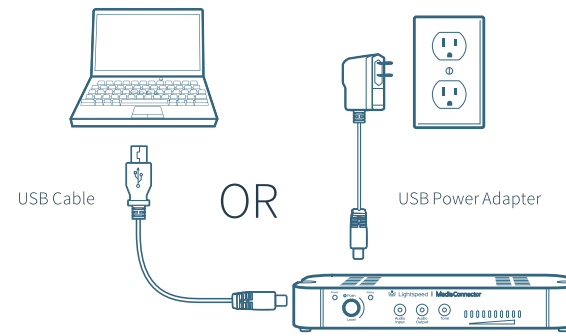
Connecting Media Connector to Audio

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 Cascadia speaker.

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

USB-C
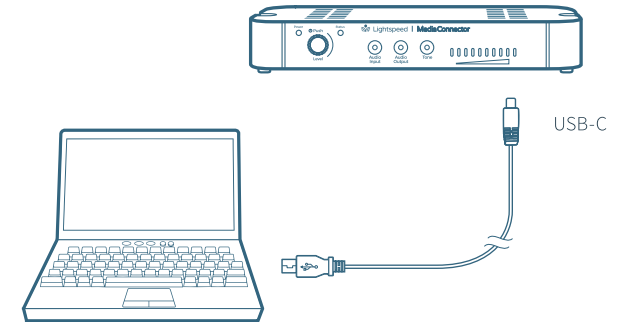
ANALOG AUDIO

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.
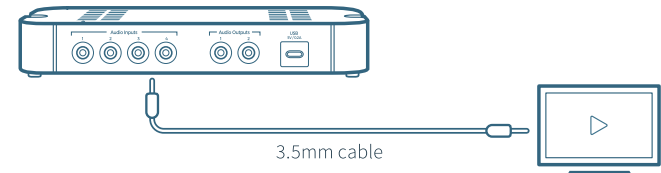
COMPUTER SETTINGS

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

3.5mm cable

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

LEVEL   AUDIO INPUT SELECTOR

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 Media Connector.

4. With the Media Conector and ALD turned on, speak into the Clearmike and slowly adjust the corresponding volume control on the Media Connector 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.

Audio Inputs
1 2 3 4

Audio Outputs
1 2

USB
5V / 0.2A

AUDIO OUTPUT

AUDIO INPUT
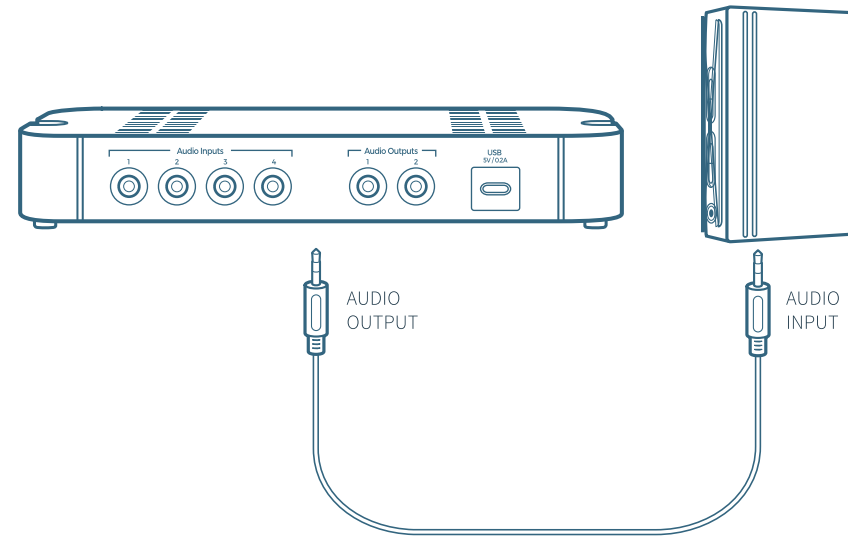
Pairing Topcat Cascadia to Media Connector (Optional)

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:

1

From a powered off state, point the IR transmitter lens toward the Topcat Cascadia (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 Topcat Cascadia starts flashing, then release the button. At this point, the status light on Topcat Cascadia will blink for 30 seconds.

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

3

With the Media Connector powered off, press and hold the power button to put it into pairing mode.

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

STATUS LIGHT   IR SENSOR

TOPCAT CASCADIA

MEDIA CONNECTOR

Power | Push | Status | Lightspeed | Media Connector

Level | Audio Input | Audio Output | Tone

STATUS LIGHT
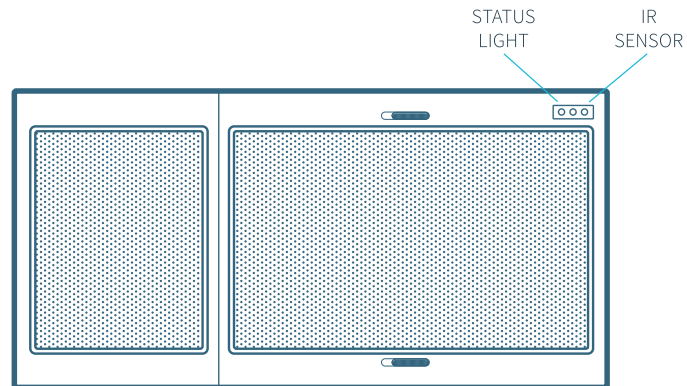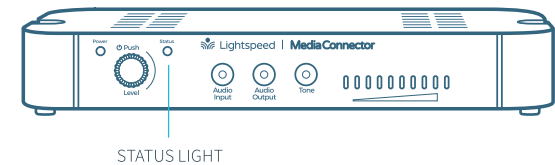
CLEARMIKE

POWER / MUTE   IR TRANSMITTER

TALK / MUTE LIGHT   STATUS LIGHT
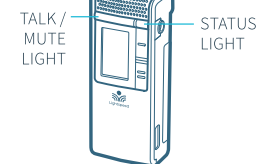
Media Connector: Audio Integration

INTERACTIVE DISPLAY

Video In

TOPCAT CASCADIA

LAPTOP

HDMI Out
Audio Out

TEACHER
CLEARMIKE

Audio In

MEDIA CONNECTOR

Lightspeed Access transmission protocol

Wall Plate

Output

Input

USB Audio
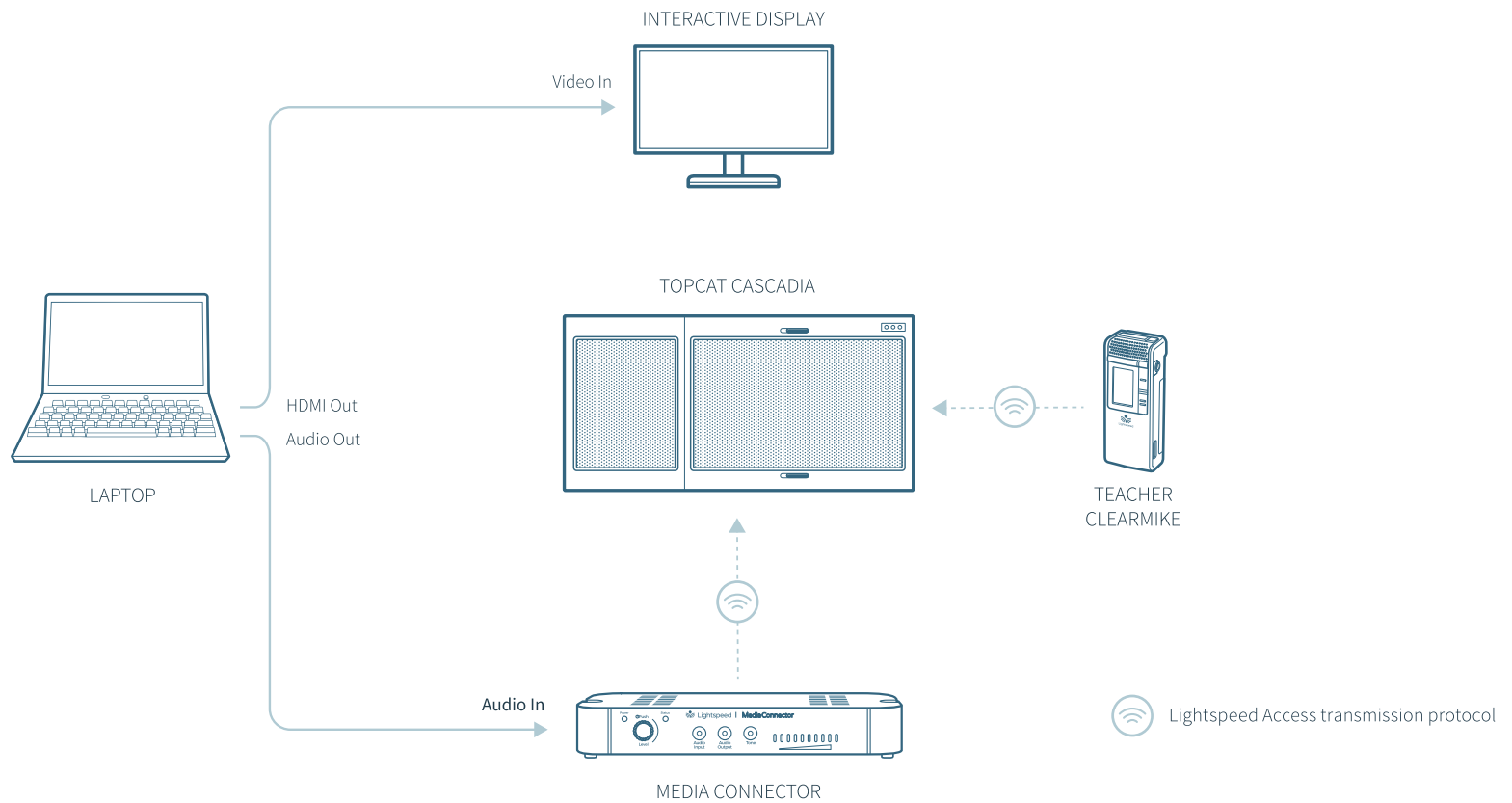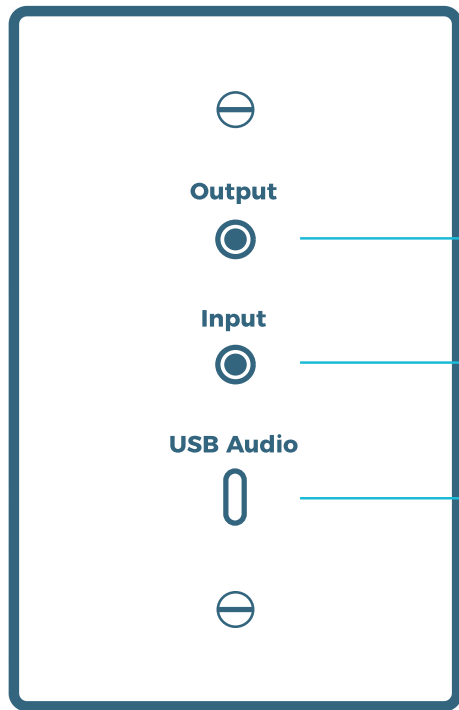
AUDIO INPUT

- 3.5mm stereo connector for connecting classroom audio sources to be played through audio system.

AUDIO OUTPUT

- Audio Output: 3.5mm stereo connector for connecting to an assisted listening device (ALD) or to a computer for recording.

USB-C

- For playing USB audio.

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.

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)

①	②	③	④	⑤	⑥	⑦	⑧
Location of Base User Defined	Product Model Number	Base Name User Defined	Seria Number of Base	Base Status	Call Status	Date & Time	remove base

Location	Product	Base Name	Serial Number	Base Status ↓ ≡	Call Status	Date & Time	Remove
C109	Cascadia C25	Math 1	02C25ZS234300244	Ready	Idle	11/9/2023, 4:17:51 PM PST	
C108	Cascadia C25	Math 2	02C25ZS234300079	Ready	Idle	11/9/2023, 4:17:51 PM PST	
C107	Cascadia C25	Physics 1	02RBNZS231800074	Low Power Mode	Idle	11/9/2023, 4:17:48 PM PST	
C101	Cascadia C25	ELA 1	02RBNZS231800060	Low Power Mode	Idle	11/9/2023, 4:17:52 PM PST	
DV49	Cascadia C25	Mike DV49	02C25ZS233900049	Disconnected	Idle	11/1/2023, 7:04:25 AM PDT	🗑
	Cascadia C25		02C25ZS233900037	Disconnected	Idle	11/9/2023, 3:24:49 PM PST	🗑
	Cascadia C25		02C25ZS233900051	Disconnected	Idle	11/8/2023, 12:33:45 PM PST	🗑

User: Admin, Role: Administrator

Sign Out

Dashboard
Maps
Logs
Firmware
Programming
SIP Calling
LDAP

Lightspeed School

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 alter 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 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:	Physics 1
Location:	C107

Item	Status
Dashboard:	Ready
Network:	Active
Emergency:	Inactive
Help Request:	Inactive
SIP Call:	Idle
Low Power Mode:	Inactive
SafetyMute:	Inactive
Power Source:	PoE+ 802.3at
Serial Number:	02RBNZS231800074
MAC Address:	3E:CB:37:1C:E7:E1
IP Address:	10.1.100.62
DECT ID:	03C1A00150
C25 App Version:	0.6.2
C25 FW Version:	7.0.11
C25 HW Version:	unknown
Runtime:	151 hours
Last Restart:	11/4/2023, 4:32:56 AM PDT
Last Update:	11/10/2023, 10:21:51 AM 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.

Paired Devices

Serial Number	Type	Connected	FW Version	Student Mode	Ext Mic Detect	Unpair
03CMTZS234200134	Clearmike	connected	7.0.11	☐	☐	🗑
03SMNZR203900013	Sharemike	connected	6.1.08			🗑
03MCNAR222601115	Media Connector	connected	6.1.06			🗑

Clearmike Details

Item	Status
MIC index:	1
Serial Number:	03CMTZS234200158
DECT ID:	03C1A0005E
Type:	Clearmike
FW Version:	7.0.10
HW Version:	3
Pairing Status:	paired
Connected:	connected
Last Paired:	4/28/2022, 1:48:12 PM PDT
Battery:	100
Charging Status:	not charging
Mic Volume:	0
Mute:	muted

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.

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.

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.

Status History

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, 3:57:03 PM PDT	audio settings change
9/15/2023, 3:32:49 PM PDT	MIC Connected change
9/15/2023, 3:32:34 PM PDT	MIC Connected change
9/15/2023, 3:30:43 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.

Log Entry Details ✕

```
{
    "serialNumber": "02RBNZS231800074",
    "origin": "basestation",
    "event": "audio settings change",
    "status": {
        "InputVolume": 5,
        "OutputVolume": 100,
        "Tone": 50,
        "Mute": false
    },
    "timeStamp": 1694818625194,
    "dateTime": "9/15/2023, 3:57:05 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.

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-tek.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	CMT	MCN	SMN	remove
☐ Cascadia_Release_Bundle_23-10-30	0.6.1	7.0.11	7.0.10	6.1.06	6.1.08	🗑
☐ Cascadia_Release_Bundle_23-10-31	0.6.1	7.0.11	7.0.11	6.1.06	6.1.08	🗑
☐ Cascadia_Release_Bundle_23-11-02	0.6.2	7.0.11	7.0.11	6.1.06	6.1.08	🗑

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	C25 APP	C25 FW	CMT	MCN	SMN	remove
☐	Cascadia_Release_Bundle_23-10-31	0.6.1	7.0.11	7.0.11	6.1.06	6.1.08	🗑
☐	Cascadia_Release_Bundle_23-11-02	0.6.2	7.0.11	7.0.11	6.1.06	6.1.08	🗑
☑	release0.6.3	0.6.3	7.0.11	7.0.11	6.1.06	6.1.08	🗑

Select one or more bases to update

	Location	Product	Base Name	Serial Number	C25 APP	C25 FW	Paired Devices
☐	C107	Cascadia C25	Physics 1	02RBNZS231800074	0.6.2	7.0.11	CMT 1 : 7.0.11
							CMT 2 : 7.0.11
☐	C101	Cascadia C25	ELA 1	02RBNZS231800060	0.6.2	7.0.11	CMT 1 : 7.0.11
							CMT 2 : 7.0.11
☐	C109	Cascadia C25	Math 1	02C25ZS234300244	0.6.3	7.0.11	CMT 1 : 7.0.11
☐	C108	Cascadia C25	Math 2	02C25ZS234300079	0.6.3	7.0.11	CMT 1 : 7.0.11
							SMN 2 : 6.1.08
							MCN : 6.1.06

Apply Bundle

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

bundle to be applied: release0.6.3
number of bases to apply to: 0

Apply Updates

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.
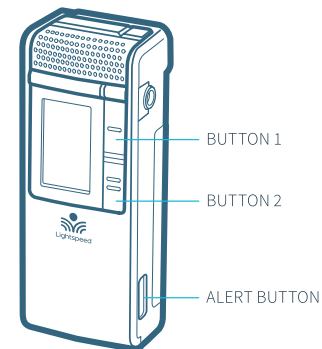
Programming: Integration Partners

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".
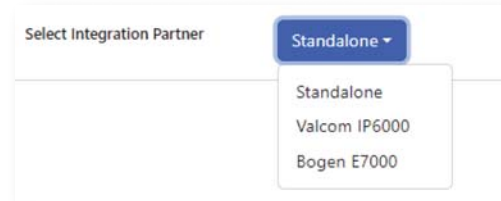
Program buttons on the Clearmkie

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.
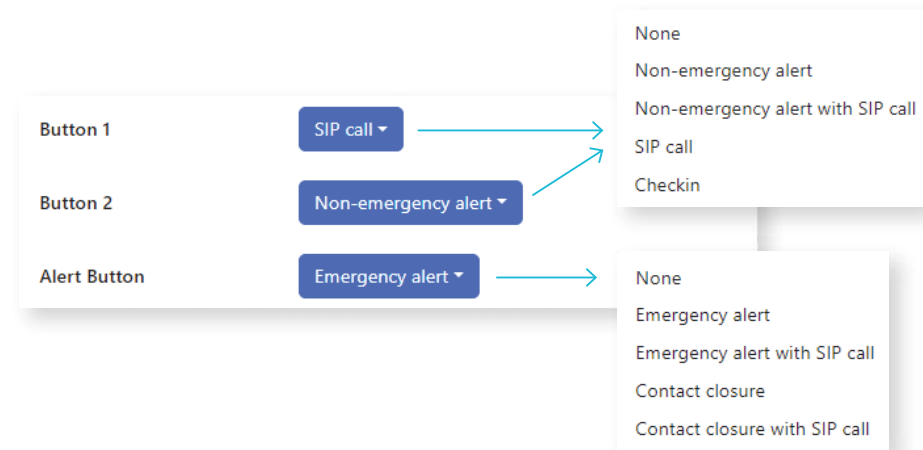
SIP Calling

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	URI sip:1002@10.1.100.90	——— SIP address to call
Server	Server 10.1.100.90:5060	——————— IP address of phone server
Register	True ▾	
Protocol	udp ▾	——————— Protocol type: TCP or UTP
	Ok	

Individual Base SIP settings (active bases only).

Base	Serial Number	Location	Base URI	Display Name	Password
Physics 1	02RBNZS231800074	C107	sip:1007@10.1.100.90	1007	794kfjfguejf9gk4of0ck4i50gkfk...
ELA 1	02RBNZS231800060	C101	sip:1001@10.1.100.90	1001	54kdldofihls4l6k43aaal3ahdcbn...
Math 1	02C25ZS234300244	C109	sip:1009@10.1.100.90	1009	dcd0f470496990e3ea5ad8aac4...
Math 2	02C25ZS234300079	C108	sip:1008@10.1.100.90	1008	44cb3d032932504b001217f792...

Edit Base SIP Settings

Base URI	URI sip:1007@10.1.100.90 ✔	——— SIP address of base
Display Name	Display Name 1007 ✔	——— Display name when placing a call
Password	Password 794kfjfguejf9gk4of0ck4i50gkfk ✔	——— Password required by phone system
	Cancel Ok	

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.

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.
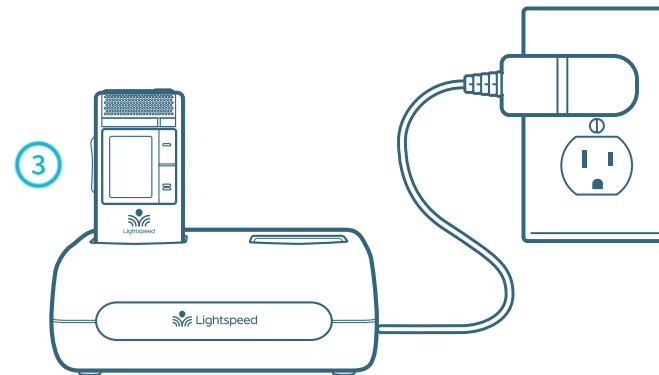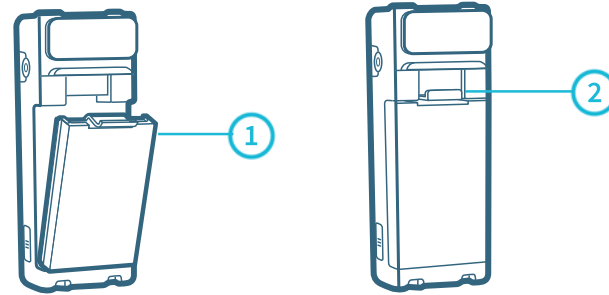
Sharemike Battery Replacement

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.

BATTERY REMOVAL LATCH
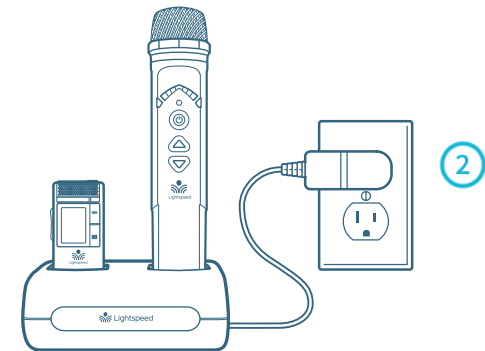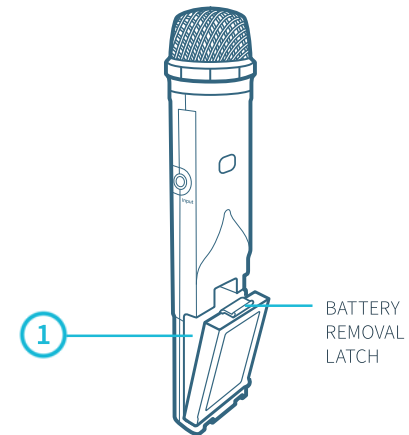
Troubleshooting

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.

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 on transceivers is five (5) years.

2. Warranty on Lightspeed NiMH and Lithium Polymer rechargeable batteries is one (1) year.

3. 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) for warranty repair instructions.

4. 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

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 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).

57

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 a l'interieur de l'appareil, qui peut être d'une ampleur suffisante pour constituir 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 rebus 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 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 The IC for this device is IC ID 1732B-LSTCC. This includes accessories such as the Clearmike (IC 1732B-LSCM1), 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-LSTCC. Ceci inclus les accessoires comme le Clearmike (IC 1732B-LSCM1), 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.

FCC Notice to User

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference; and

2. This device must accept any interference received, including interference that may cause undesired operation.

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 (that is, the antenna for radio or television that is receiving" the interference).

- Reorient or relocate and increase the separation between the telecommunications equipment and receiving antenna.

- Connect the telecommunications equipment into an outlet on a circuit different from that to which the receiving antenna is connected.

- Consult the dealer or an experienced radio/TV technician for help.

IMPORTANT NOTE: To view the FCC ID, please refer to the nameplate label located behind the speaker access door.

English

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. No change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

French

NOTE IMPORTANTE: Pour se conformer au règles d'exposition des ondes RF par la FCC, la (ou les) antenne(s) utilisée(s) par ce transmetteur doivent être installées de façon à être séparée d'une distance d'au moins 20 cm de toute personne et ne doit pas être utilisée près ou en conjonction avec aucune autre antenne ou transmetteur. Aucune modification à l'antenne ou à l'appareil n'est permise. Toute modification à l'antenne ou à l'appareil peut résulter que l'appareil excèdera l'exposition aux ondes RF règlementaires et ainsi annuler le droit à l'usager d'utiliser l'appareil.

FCC RF Radiation Exposure Statement

This device (Access Link) complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with a minimum distance of 20cm between the radiator (Access Link) and any part of your body.

For body worn operation, the portable part (Flexmike) has been tested and meets FCC RF exposure guidelines.

This device must not be co-located or operating in conjunction with any other antenna or transmitter. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Notice to Canada User

English

This device complies with Industry Canada license exempt RSS standard(s).

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.

French

Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

1. L'exploitation est autorisee aux deux conditions suivantes :

2. L'appareil ne doit pas produire de brouillage, et l'utilisateur de l'appareil doit accepter tout brouillage radioelectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

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

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 Cascadia, 975, Access Link, Flexmike, Sharemike, Pod, Activate Station, Media Connector, TCQ2, DRQ, Mobile Connector

Model Numbers: LSRCNG, LSTCNG, LS975G, LSALNG, LSFMNG, LSSMNG, LSPOD 1881, LSACT 1881, LSMCNG, TCQ2, DRQ, MC

As applicable, products conform to the following EU/AS/NZ test standards listed below:

Safety Standards: EN 62368-1

EMC/RF Standards: EN 301406 V2.2.2 (2016-19)

EN 301489-1/-6

EN 301489-1/-17

EN 50371 (2002)

EN 50385 (2017)

EN 300 328

EN 55022

EN 55024

AS/NZ CISPER 22

AS/NZ 4268

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

Lightspeed Representative   Date: April 22, 2021

Michael Frost, Compliance Engineer

System Components

STANDARD COMPONENTS 🇺🇸 🇨🇦

TCC	Topcat Cascadia all-in-one ceiling-mount wireless audio base station
24V2.5-NA	24V/2.5A power supply for C25
FSCC	Transceiver cradle charger, power supply
5V1C	5V power supply for FSCC
CMT	Clearmike Classroom transceiver with battery pack and lanyard
L3.7V	Lithium Polymer rechargeable battery pack for Clearmike, one per Clearmike
FL	Microphone lavaliere cord

STANDARD COMPONENTS (outside U.S. and Canada)

TCCG	Topcat Cascadia all-in-one ceiling-mount wireless audio base station
24V2.5	24V/2.5A power supply for C25, specific country
FSCC-INT	Transceiver cradle charger, power supply
5V1C-INT	International 5V power supply for FSCC
CMTG	Clearmike Classroom transceiver with battery pack and lanyard
L3.7V	Lithium Polymer rechargeable battery pack for Clearmike, one per Clearmike
FL	Microphone lavaliere cord

OPTIONAL ACCESSORIES 🇺🇸 🇨🇦

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

System Specifications

TOPCAT CASCADIA

Product Description	All-in-one Instructional Audio System
Wireless Communication	Access Technology (1.9 GHz)
Frequency Response	20 Hz - 20 kHz Audio Out, 150 Hz - 6.5 kHz Wireless
Power Supply Options	AC Mains: 100-240V ~ 50/60Hz 1.5A or PoE+ 802.3at
Power Output	20W RMS
Tone Control	Bass/Treble Control
Ethernet	10/100Mbps
Audio Inputs	Three (3) 3.5mm inputs
Audio Outputs	One (1) 3.5mm output
Max Input/Output Level	1.4VRMS / 1.4VRMS
Total Harmonic Distortion	<1%
Analog Control Signals	Inputs: PageFirst (25/70V page mute), Relay Input
	Output: Contact closure (initiated from microphone)
Dimensions	(W x H x D) 23.75" x 11.73" x 4.19" (603mm x 298mm x 106mm)
Weight	13.5 lbs (6.1 kg)
Mounting	In-ceiling installation or wall-mount with bracket

SHAREMIKE

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

CLEARMIKE

Description	Pendant-style transceiver
Earbud Lanyard	Magnetic clasp with integrated earbud
Wireless Communication	Access Technology (1.9 GHz)
Integrated Microphone	Uni-directional electret
Analog Audio I/O	3.5mm TRRS
Digital Audio I/O	USB-C
Control Buttons	Power/mute, volume up/down, alert
Volume Control	+/- 12dB
Total Harmonic Distortion	<1%
Display	E-paper display
Battery Power	3.7V LiPo battery pack
Battery Life	8 hours (fully charged)
Charging	Cradle charger or USB-C
Dimensions (L x W x H)	3.0" x 1.2" x 0.9" (76mm x 30mm x 23mm)
Weight	1.3 oz (37g)

MEDIA CONNECTOR

Description	Wireless audio transceiver
USB power	5V USB-C connector
Wireless communication	Access Technology (1.9 GHz)
Tone control	1 bass/treble control
Audio input	3.5mm stereo (x4) with master volume
Audio output	3.5mm stereo (X2) mixed with volume control
Audio Link indicator	1 LED on front panel
Device registration	Push button for Access Link
Dimensions (W x H x D)	7.6" x 5" x 1.13" (193 x 127 x 29mm)
Weight	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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