



# MuxMeet Omnidirectional Ceiling Microphone

## User Manual

### 500797



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## 1. Safety Precautions

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for future reference.

- Follow basic safety precautions to reduce the risk of fire, electrical shock, and injury.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burns.
- Do not open or remove the housing of the device as you may be exposed to dangerous voltage or other hazards.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture and do not install this product near water. Keep the product away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on the housing, unplug the module immediately.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Using supplies or parts not meeting the product specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- Install the device in a place with adequate ventilation to avoid damage caused by overheat.
- Unplug the power when left unused for a long period of time.
- Information on disposal of devices: do not burn or mix with general household waste, please treat them as normal electrical waste.

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## 2. Introduction

The MuxMeet Omnidirectional Ceiling Microphone (model: 500797) is designed for business meeting, interactive teaching and other scenarios. The digital array microphone can be cascaded to expand the microphone according to the size of the room, ensuring that the pickup range covers the entire space. Equipped with an audio processing unit and AI audio algorithms that eliminate all kinds of noise, echo and howling in the conference room, delivering a high quality voice call experience.

## 3. Features

- Digital array microphone
- Supports Power over Ethernet (PoE)
- Low latency audio transmission
- Multiple interface outputs
- Sound source localization technology
- AI audio algorithms
- Hoisting, wall and ceiling mounting

## 4. Package Contents

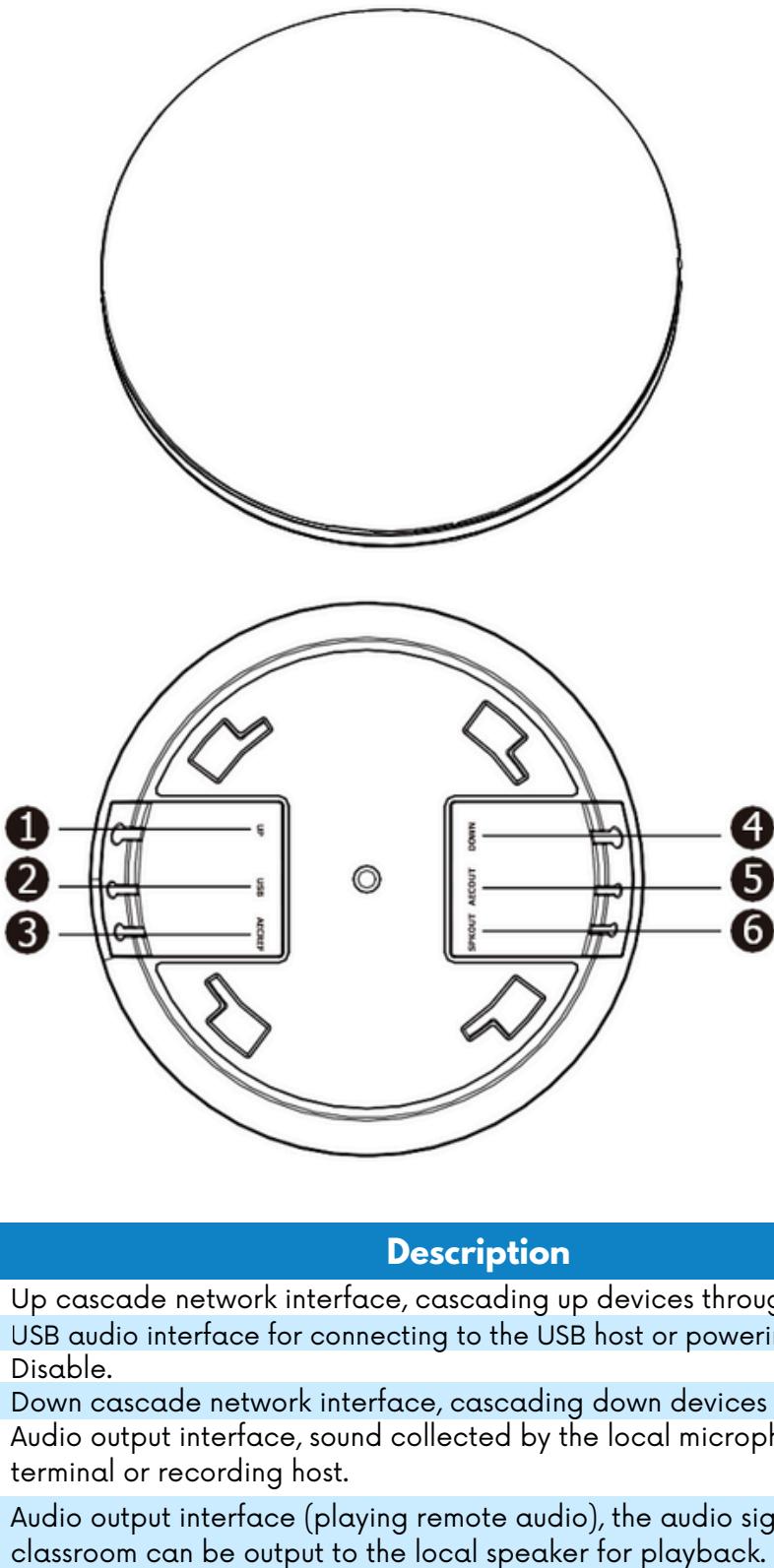
- One (1) MuxMeet Omnidirectional Ceiling Microphone
- One (1) Remote Control
- One (1) Mounting Bracket
- One (1) USB Cable
- One (1) Audio Cable
- One (1) User manual (available via download)

## 5. Specifications

Audio Features	
Environment	Custom audio-video systems in a structured cabling environment.
Application	Head-end installations, conference room, interactive teaching
Compatible Product	Muxlab 500822
Microphone Type	Omnidirectional Microphone
Array Microphone	Built-in 6 mics to form ring array microphone, 360° omnidirectional pickup
Sensitivity	-38 dBFS
Signal to Noise Ratio	65 dB(A)
Frequency Response	50Hz ~ 16KHz
Pickup Range	3m clear pickup, 6m effective pickup
Audio Algorithms	Automatic Echo Cancellation (AEC), Automatic Noise Suppression (ANS) and Automatic Gain Control (AGC)
Hardware Interfaces	
Network Interface	2 x RJ45 uplink and downlink cascade ports
USB Interface	1 x USB-C audio interface, supports UAC 1.0
Audio Interface	2 x 3.5mm Analog audio input and output
M/S Selector	1 x mechanical switch (Disable)
Installation mode	Suspension mounting
General	
Cascade Mode	PoE network interface
Number of cascade	6
Power Supply	Single microphone USB 5V 500mA, cascade microphone PoE IEEE 802.3at
Power Consumption	3.0W Maximum
Temperature	Operating: 0° to 40°C Humidity: Up to 90% non-condensing
Dimensions	Ø170 mm x 40 mm
Weight	0.4 Kg
Compliance	Regulatory: FCC, CE, RoHS
Warranty	2 Years
Order Information	500797 Muxmeet Omnidirectional Ceiling Microphone (UPC: 627699007976)

## 6. Appearance and Interface

The cable connection contains optional configurations and for reference only. Please connect the cables according to actual needs.



No	Interface	Description
1	UP	Up cascade network interface, cascading up devices through PoE network cable.
2	USB	USB audio interface for connecting to the USB host or powering the microphone.
3	AECREF	Disable.
4	DOWN	Down cascade network interface, cascading down devices through PoE network cable.
5	AECOUT	Audio output interface, sound collected by the local microphone can be output to the terminal or recording host.
6	SPKOUT	Audio output interface (playing remote audio), the audio signal sent from the remote classroom can be output to the local speaker for playback.

## 7. About the Product

### 7.1 Features

#### **Digital Array Microphone, Long Distance Voice Pickup**

High SNR ring microphone array design, clear pickup from long distance. Let the speaker move around more freely in the room and get rid of the constraints.

#### **Blind Beamforming, Automatic Alignment to Speaker**

Blind beamforming, precise positioning, adaptive sound field environment can achieve voice enhancement and better anti-interference ability.

#### **Smart Audio Algorithms, Clear Natural Sound**

Built-in powerful audio processing unit, ultra-low signal processing delay; Adaptive fast convergence algorithm, voice intelligent tracking, intelligent noise reduction, echo cancellation, automatic gain, de-reverberation and other advanced technologies, double-talk without suppression, you can easily listen in noisy environments. For ordinary users, there is no need for professional tuning, and it can be used for regular conference applications when it is turned on. For enthusiast users, you can also open the EQ interface and enter the professional tuner mode for personalized high-end tuning.

#### **PoE Cascade, Even Coverage of Conference Room Pickup**

Flexible setting of master and slave devices, support up to 6 microphone PoE cascade, distributed pickup and interaction, evenly covering medium and large conference room spaces.

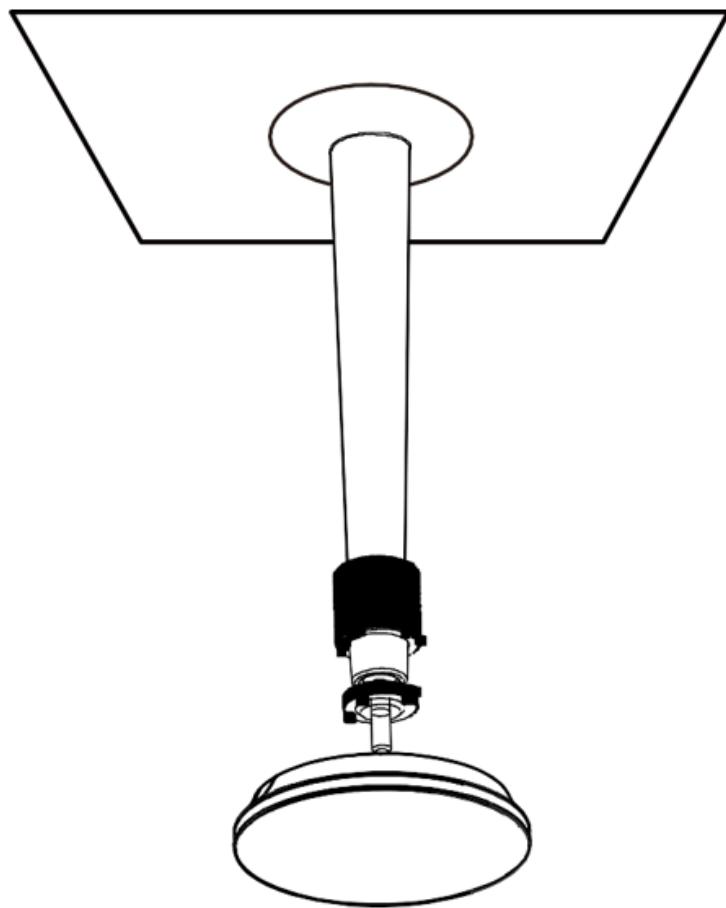
#### **Standard Interface, Plug and Play**

Equipped with standard USB and 3.5mm audio interfaces, the device is plug and play, and can meet the dual-mode application of digital and analog audio.

#### **Hoisting/Wall/Ceiling Mounting, Simple and Flexible Deployment**

Support hoisting, wall, ceiling mounting, flexible and fast deployment, and reduce operation and maintenance costs.

## 8. Product Installation

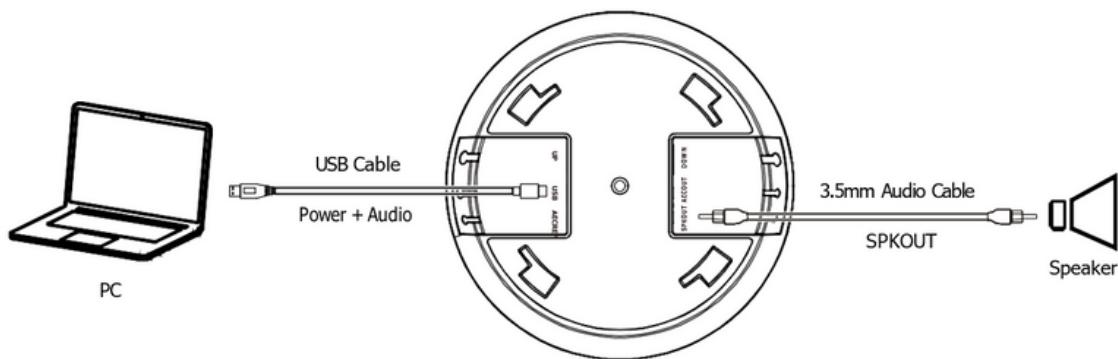


**Note:** The installation diagram is for reference only. The bracket is not standard. Please refer to the actual product for the installation accessories.

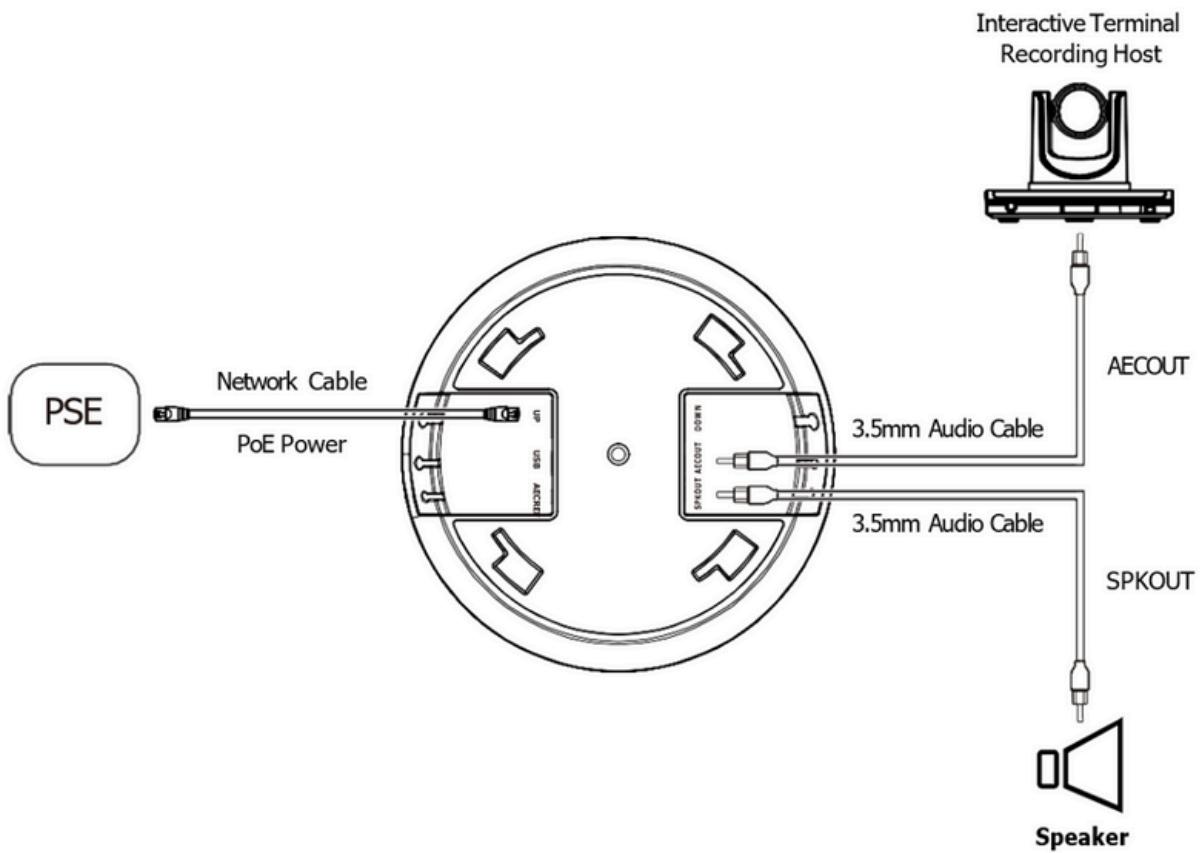
## 9. Network Application

### 9.1 Single Mode

#### USB Connection

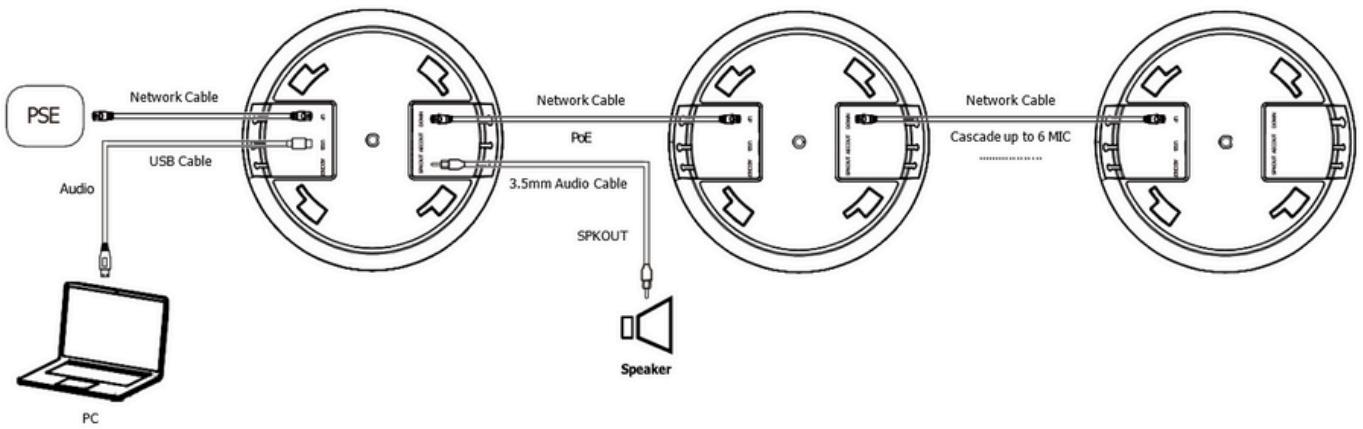


## Analog 3.5mm Connection

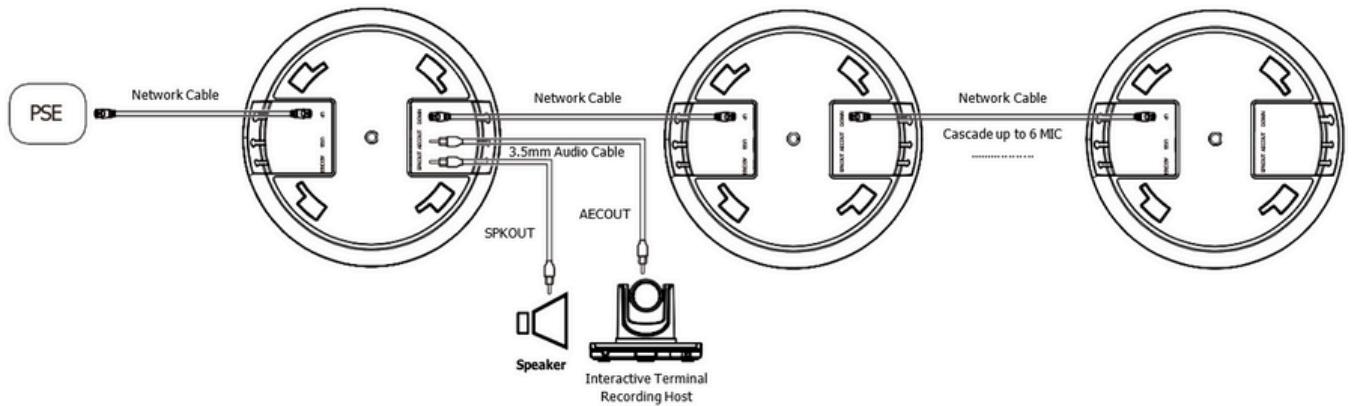


## 9.2 Cascade Mode

### USB Connection

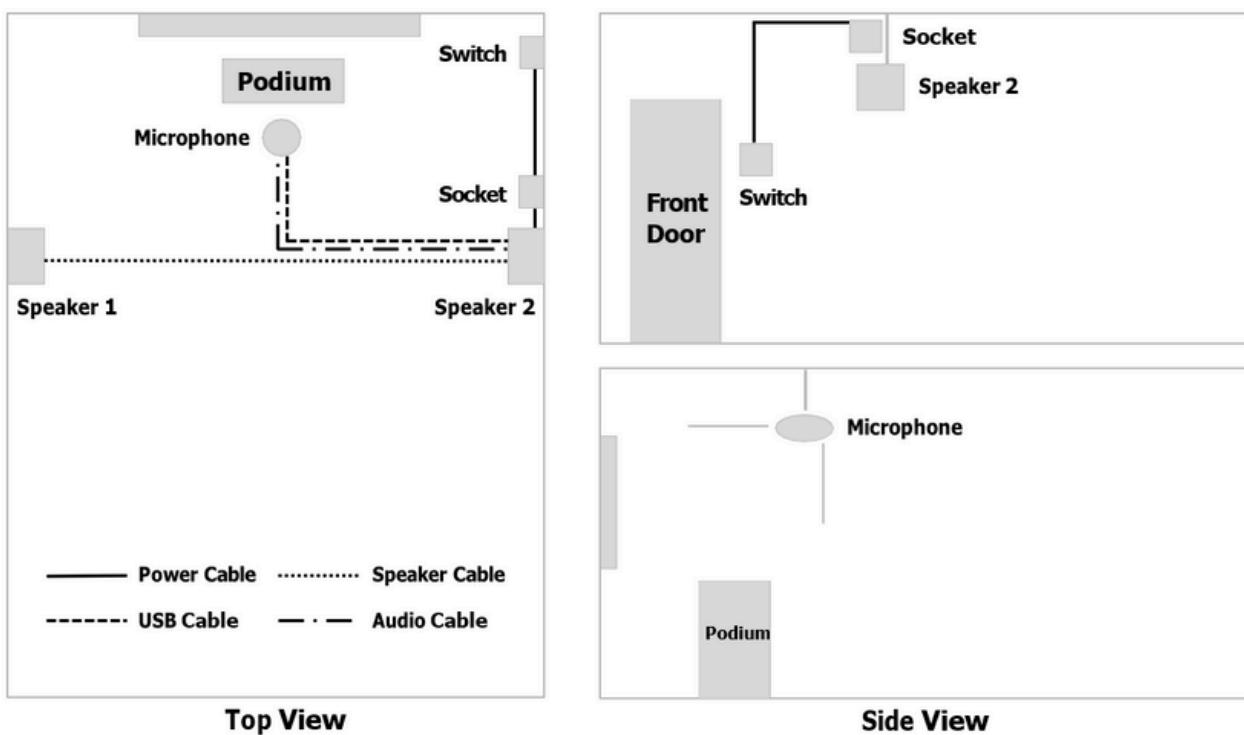


## Analog 3.5mm Connection



## 10 Scenario Installation (Classroom)

For classroom installation, please refer to the figure below. The USB interface is used as the power supply port of the microphone, and can be connected to the socket or adapter with USB interface. The power supply voltage is DC 5V. The SPKOUT audio output interface is output to active speakers or power amplifiers through a 3.5mm interface audio cable. It is recommended to use low-latency active speakers first, and the speaker experience will be better.



## 11. Classroom Installation

### 11.1 Microphone Installation

- 1) **Installation Height:** In theory, the closer the microphone is to the speaker, the better, but considering that it is too low, there may be a risk of students accidentally reaching out and hitting the speaker, causing damage or potential principle, while considering security and flexible processing.
- 2) **Installation Method and Location:** It is hoisted with a boom, and the position near the podium is centered horizontally, and the microphone disk is facing the podium area, focusing on picking up the teacher's lecture sound in the podium area.

### 11.2 Speaker Installation

- 1) **Installation Height:** The recommended height from the ground is 2.0m-2.6m.
- 2) **Installation Method and Location:** It is wall mounted with brackets. It is recommended to install it in the middle and front of the walls on both sides of the classroom.

### 11.3 Socket Installation

An optional socket panel with a USB socket can be installed next to the speaker for easy access to the microphone and speaker. It can also be powered by a USB adapter or directly use a device with a USB interface (TV or large display, etc.).

**Note:** When the microphone and speaker are connected to the same wall plug for power supply, the microphone and speaker need to be turned on or off at the same time.

### 11.4 Switch Installation

You can choose a single switch panel, installed on the side of the door or the blackboard, with a label, easy for teachers to open and close.

## 12. Audio Config Tool



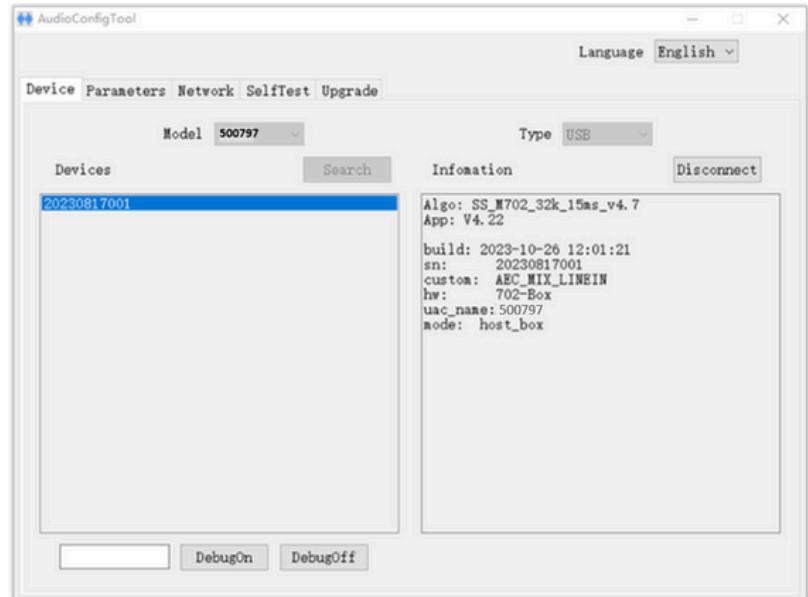
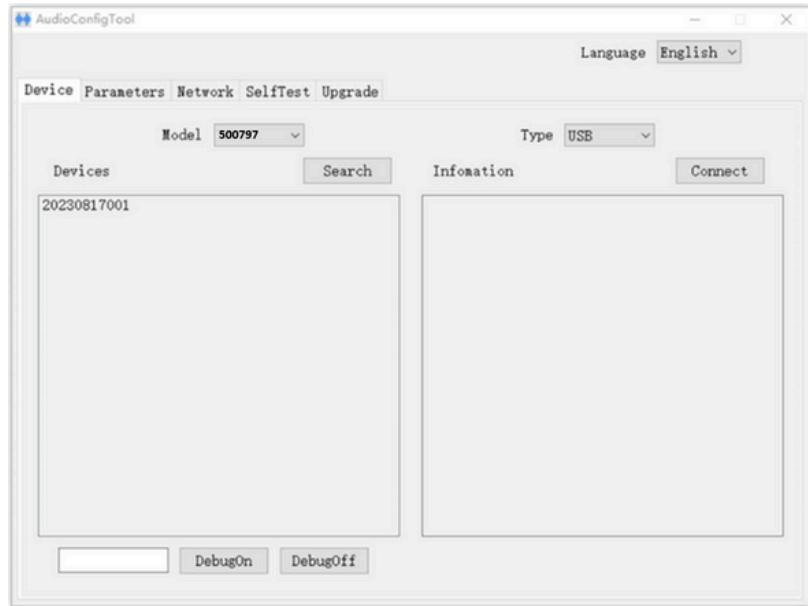
Open and run Audio Config Tool.exe.

### 12.1 Device

**Step 1** Select the Device dialog of Audio Config Tool.

**Step 2** Select Model, click "Search".

**Step 3** Select devices name, click "Connect".

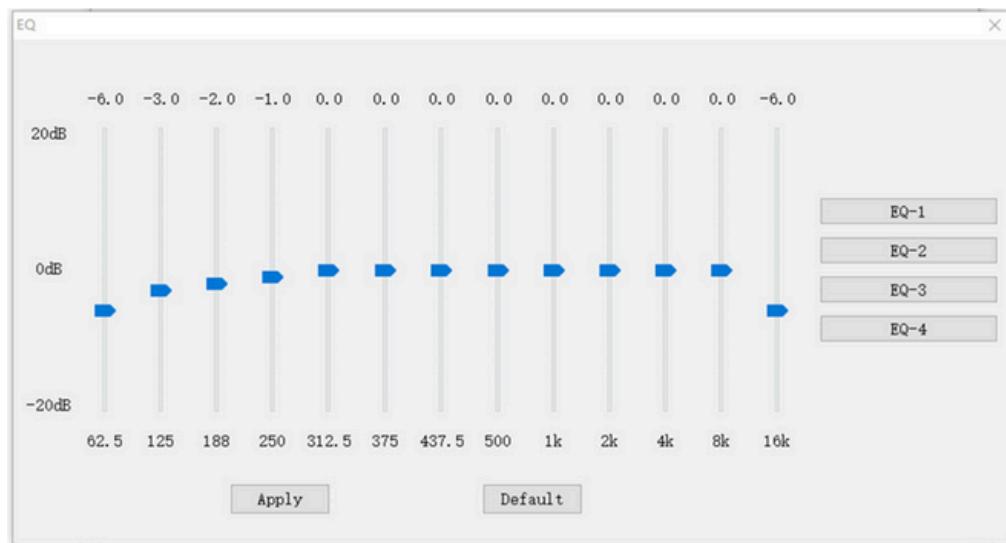
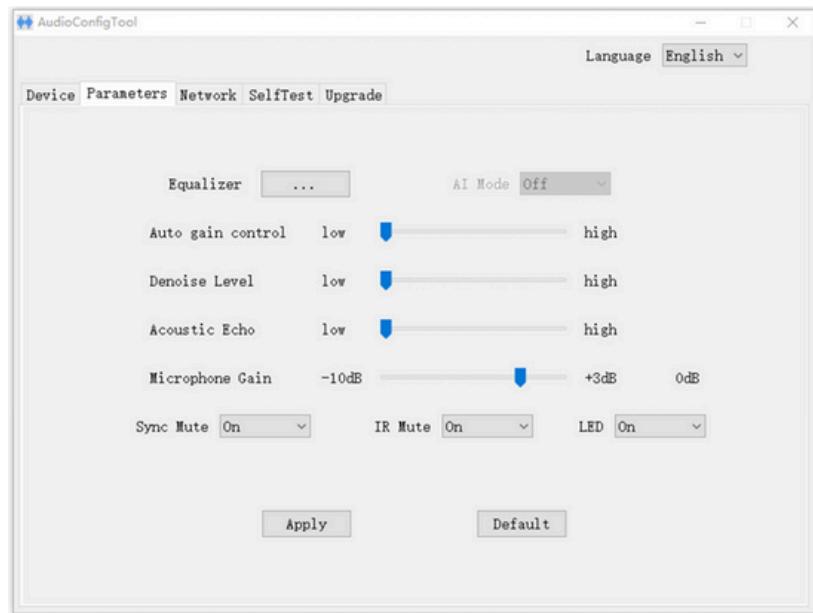


## 12.2 Parameters

**Step 1** Select the Parameters dialog of Audio Config Tool.

**Step 2** Select Equalizer "...", set EQ-1, EQ-2, EQ-3, EQ-4 value.

**Step 3** Set Auto gain control, Denoise Level, Acoustic Echo, Microphone Gain, etc. parameters.



## 12.3 Network

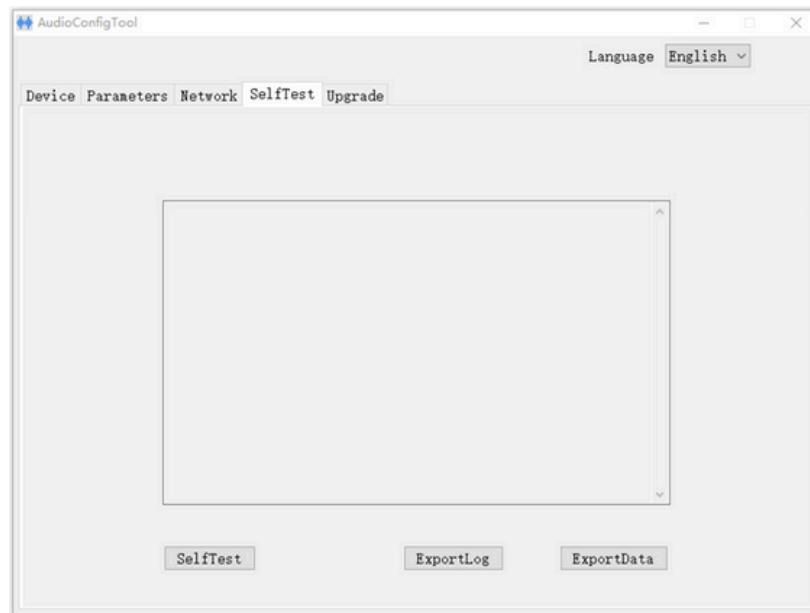
**Step 1** Select the Network dialog of Audio Config Tool.

**Step 2** Set IP address by AutoIP/StaticIP.



## 12.4 SelfTest

**Step 1** Select the SelfTest dialog of Audio Config Tool.  
**Step 2** Click ExportLog to Export Log.  
**Step 3** Click ExportData to Export Data.

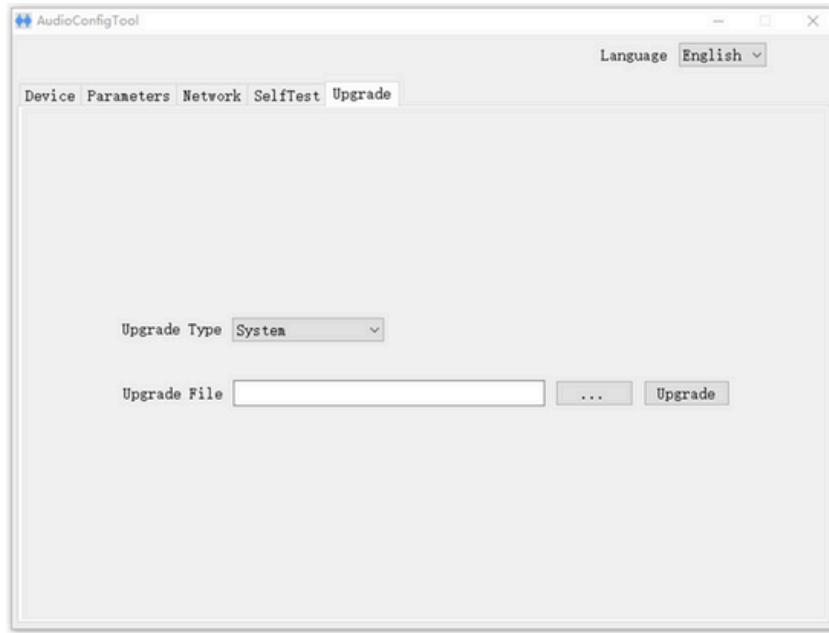


## 12.5 Upgrade

**Step 1** Select the Upgrade dialog of Audio Config Tool.

**Step 2** Set Upgrade Type to System/Application/Configuration.

**Step 3** Select the Upgrade File, click "Upgrade" to Upgrade System.



## 13. Problem and Solution

### 1) Howling appears at startup

For example, it is normal for the microphone to whistle slightly when it is just started. When the device is just started, it needs to learn to adapt to the live sound field environment, and it will stop automatically after the learning is completed.

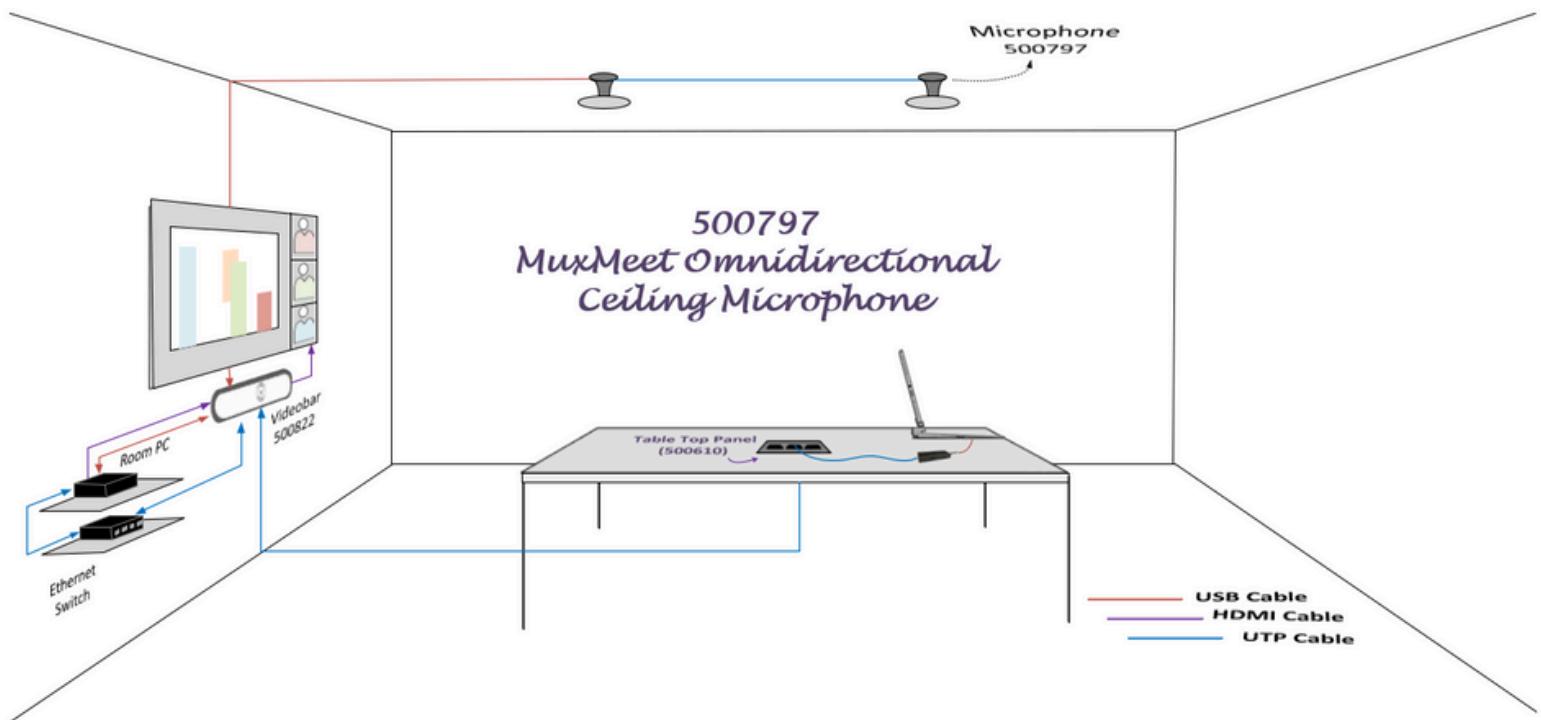
### 2) Persistent howling

For example, when the USB is connected to the computer, confirm whether the listening function is turned on, and check whether the audio input and output wiring is looped back.

### 3) The sound reverberation is not clear

First check whether the room is too small and the reverberation is too large, and then check the settings of the power amplifier or speaker EQ to see if the low frequency part is adjusted too much.

## 14. Connection Diagram



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500797

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