ADERTECH

# MCB-8D

## Ceiling Microphone Array
## Operation Instructions



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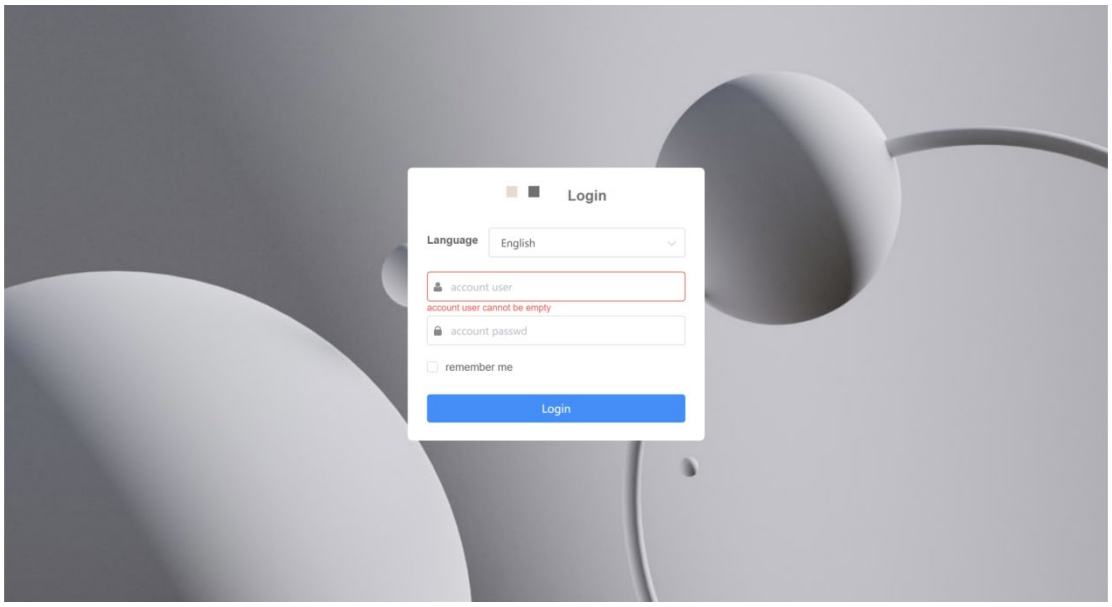
# 1. Log in

Open a browser and enter the IP address in the address bar to access.

The default IP address is： 192.168.1.80




Username: admin  Password: admin123

## Notice

- Before visiting, please ensure that the IP address of your computer is in the same subnet and that the network is functioning properly.

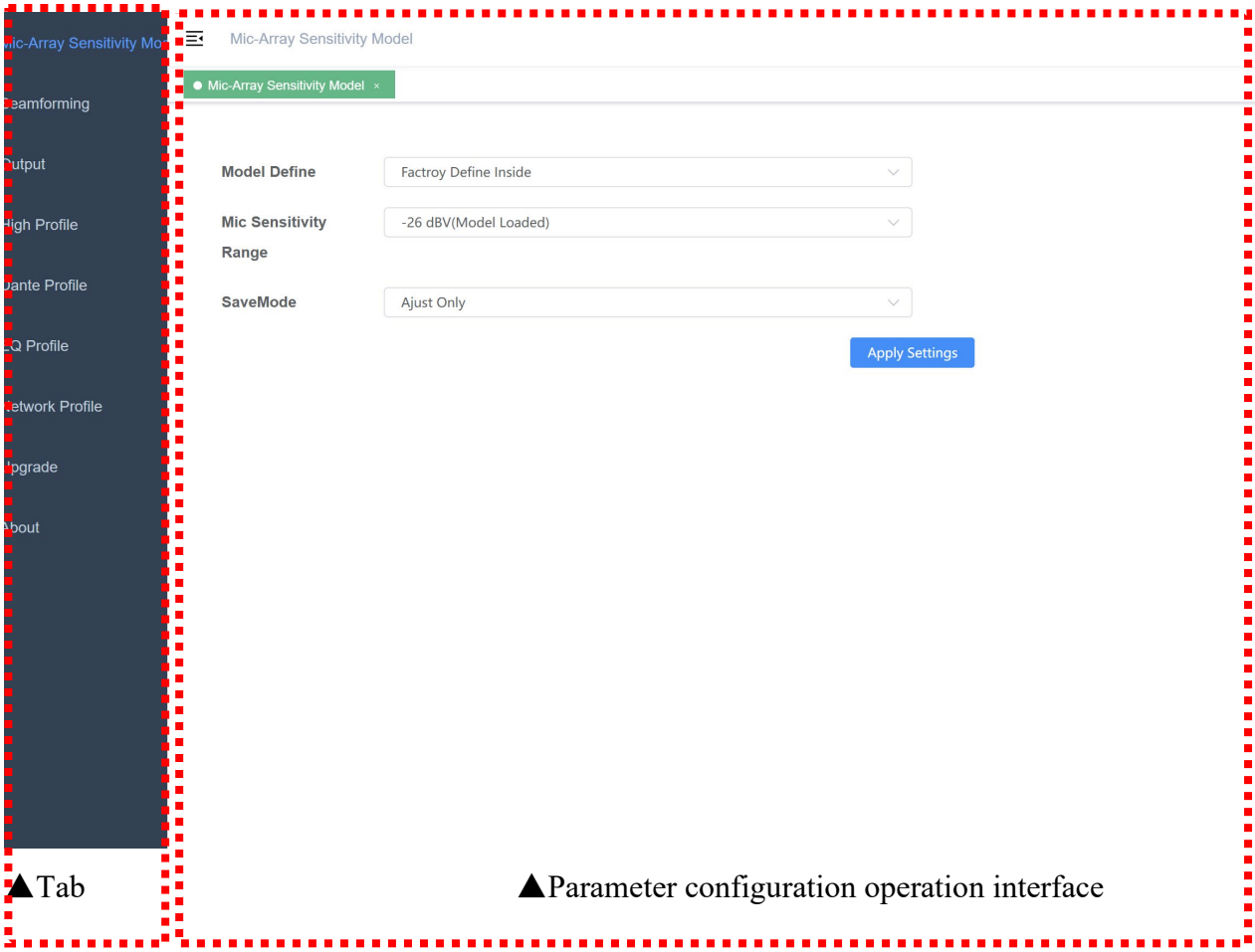
## Taking the setup of Windows10 as an example.

- Network and Internet Settings -> Change Adapter Options -> Right-click on the computer's network card (network adapter) -> Properties -> Select "Internet Protocol Version 4 (TCP/IPv4)" -> Properties -> Advanced -> Click Add in the IP address field -> Enter the IP address such as "192.168.1.123" and subnet mask "255.255.255.0" -> Add -> OK, close all open windows to complete the setup.

- Alternatively, in the "Internet Protocol Version 4 (TCP/IPv4)" properties, select "Use the following IP address" and add an address in the 192.168.1.X subnet, such as "192.168.1.123" with the default subnet mask of 225.225.225.0. Click OK, then close all open windows to complete the setup.

# 2. Web Settings

The left side is the tab area, and right side is the operation interface.

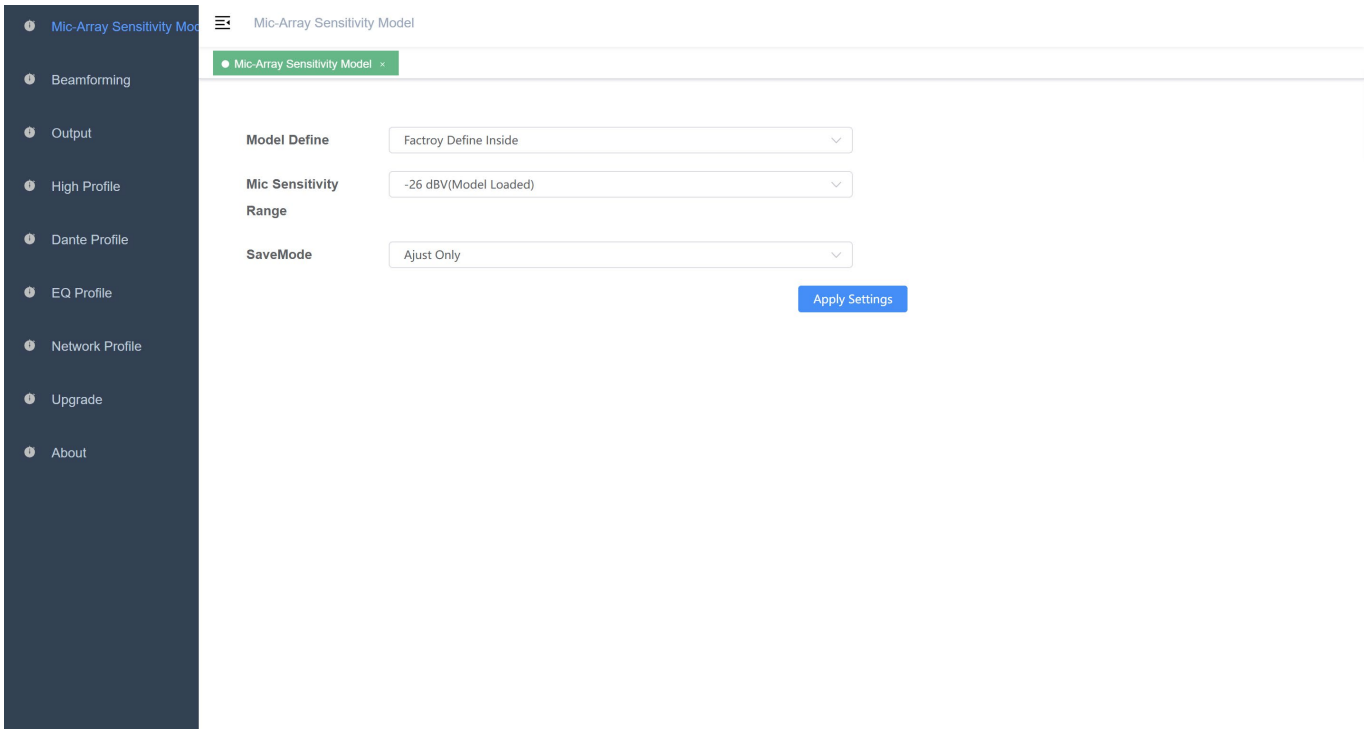



▲Tab

▲Parameter configuration operation interface

# 3. Setup and Detailed Explanation

## （1）Array Sensitivity Model




**Array Sensitivity Model**

**Model Type**

Default Tone: This model adapts to most scenarios, offering a clear and natural listening experience with high audio fidelity and a comfortable auditory sensation.

Transparent Tone: This model is more suitable for classrooms, training rooms, etc. It is not suitable for environments with a lot of reverberation as it may make the audio sound mixed.

Sharp Tone: This model is suitable for environments with a lot of reverberation and long reverberation tails, focusing more on high frequencies in speech, better adapting to spaces with strong reverberation.

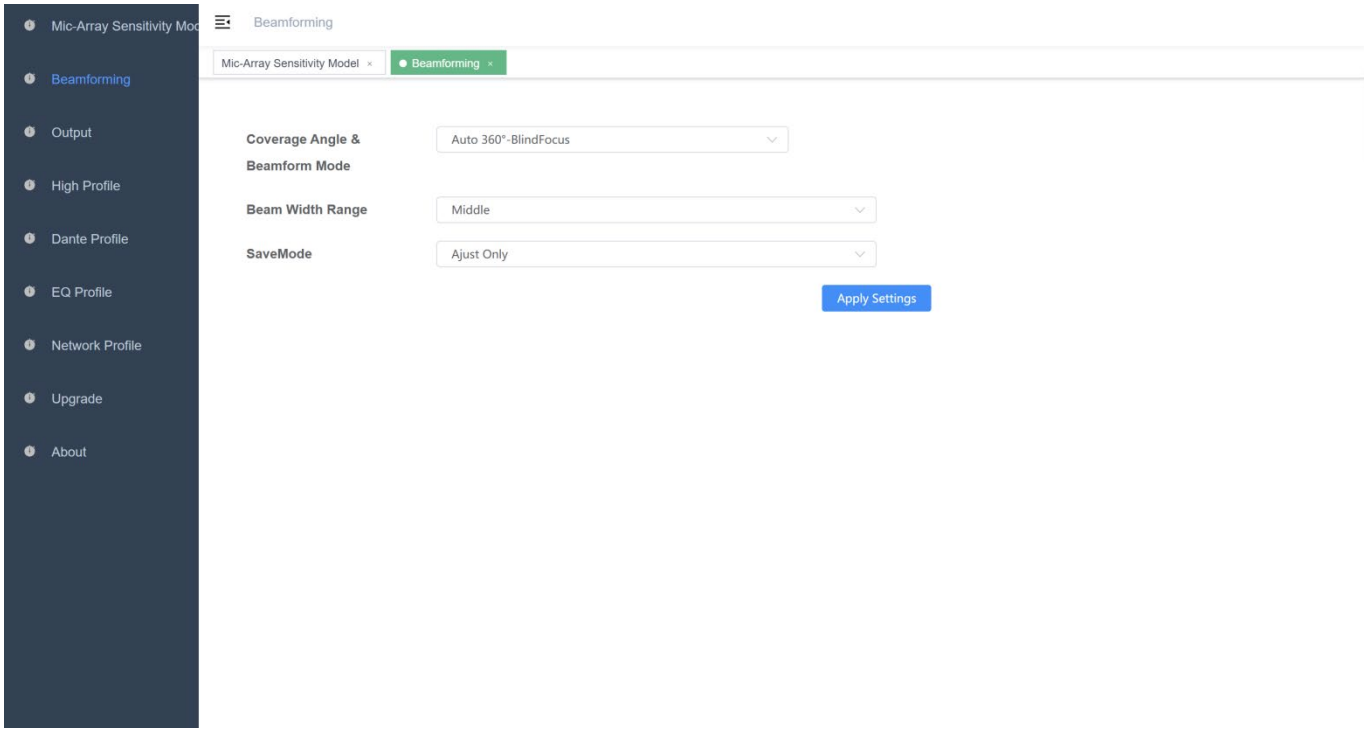
**MIC Optimal Spatial Model Range**

Microphone sensitivity setting, default at -26dBv, the smaller the value, the lower the sensitivity. Choose according to the on-site environment.

**Save Method:** Effective for this session only/Save Configuration/Save Configuration & Apply Immediately

**Apply Settings:** Confirm the current settings and apply them according to the save method.

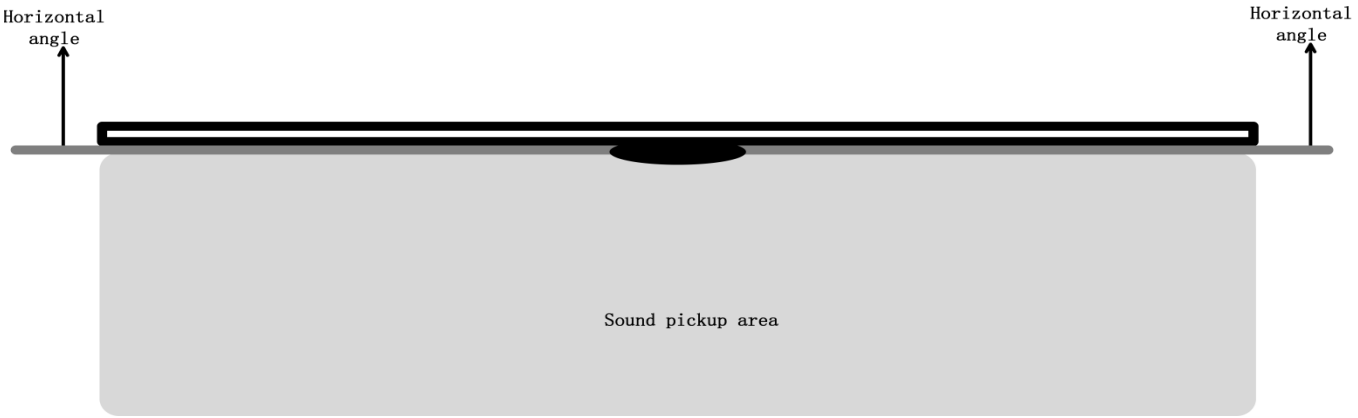
## （2）Beamforming Setup




Beamforming Configuration

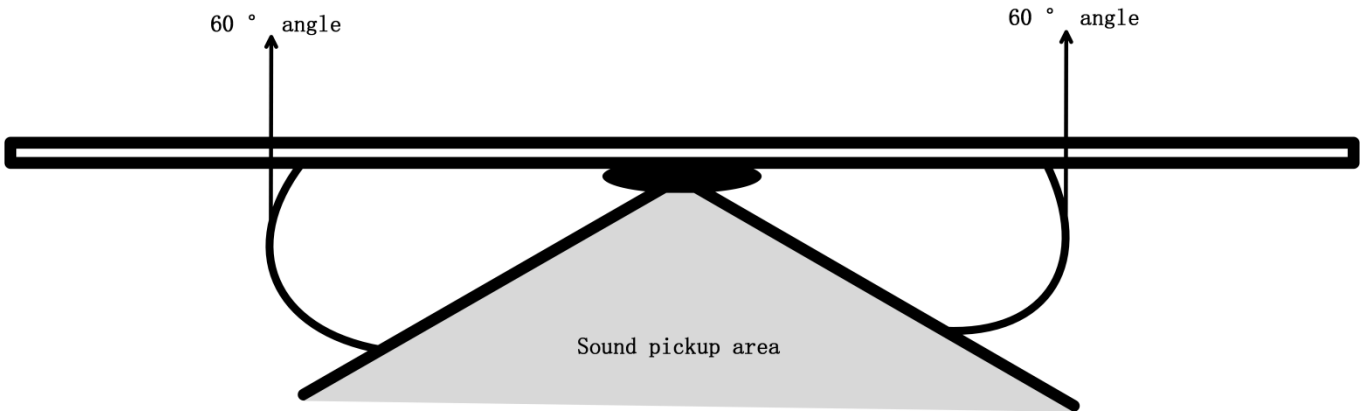
### Pickup Angle & Beam Mode

Omnidirectional Beam Tracking Array - Application: Default option, emphasis on horizontal direction pickup.



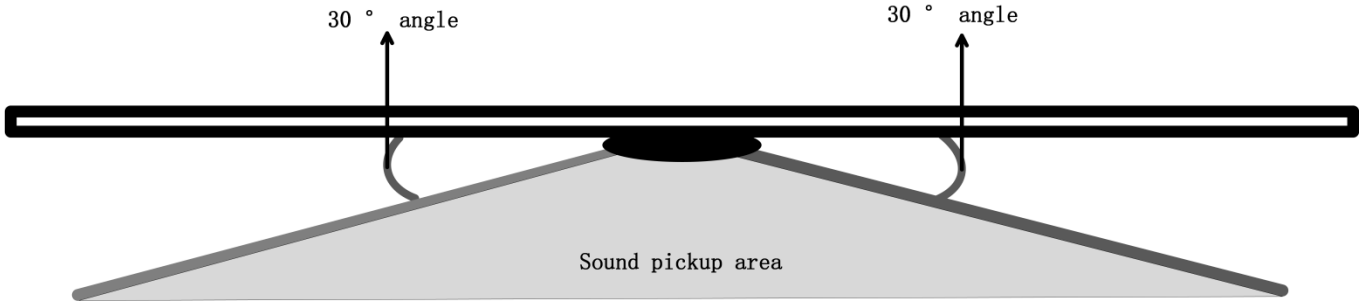

**(Pickup Area: 180° - area indicated by the angle)**

Omnidirectional Beam Tracking Array - 60° Pitch Angle Application: Prioritizes pickup and tracking area, actively blocking noise interference from outside angle.




**(Pickup Area: 60° - area indicated by the angle)**

Omnidirectional Beam Tracking Array - 30° Pitch Angle Application: Prioritizes pickup and tracking area, actively blocking noise interference from outside angle.




**(Pickup Area: 120° - area indicated by the angle)**

Omnidirectional Beam Tracking Array Aggregation - Application: Focuses on low-frequency clarity with less high-frequency feedback.

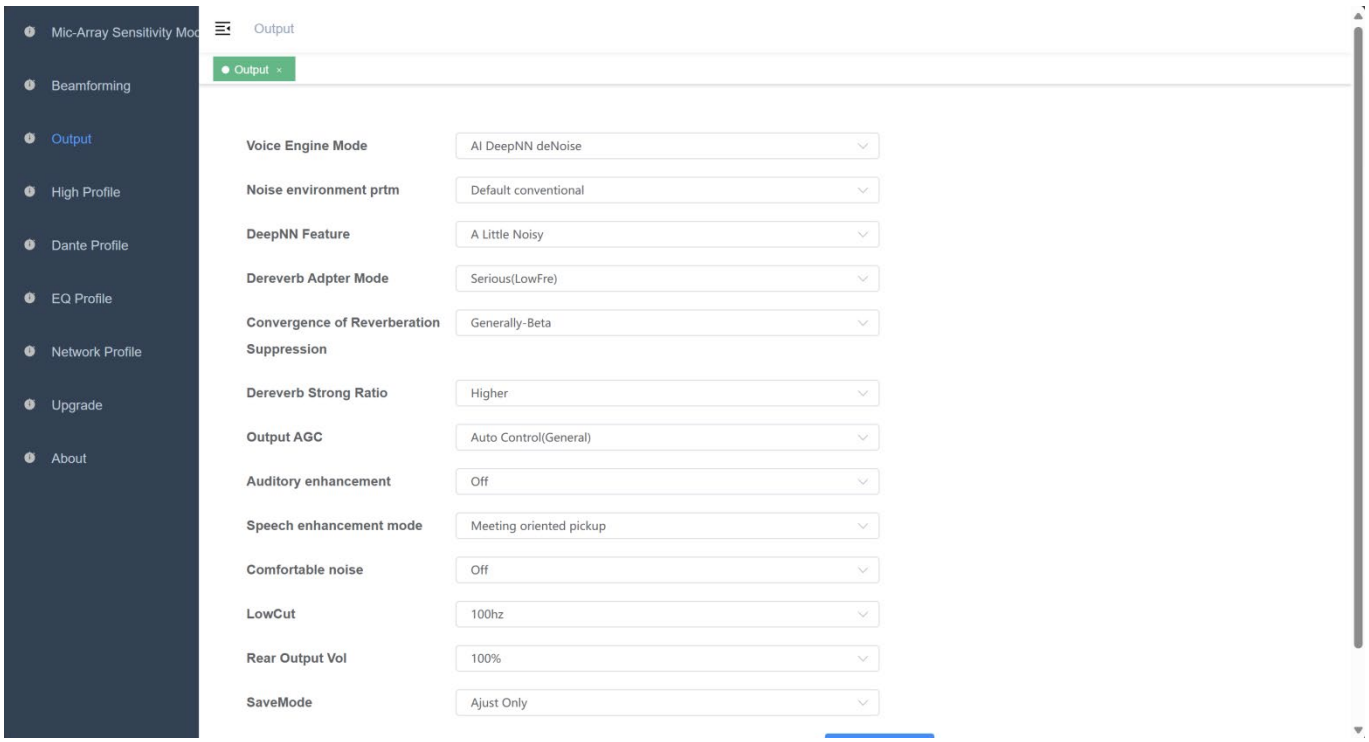
Omnidirectional Beam Tracking Array Aggregation Beta - Application: Focuses on low-frequency clarity with less high-frequency feedback.

**Save Mode:** Only Effective Now / Save Configuration / Save Configuration & Apply Immediately

**Settings:** Confirm current settings according to the save mode.

Notes: The pickup area angle coefficient is a reference theoretical value, not an absolute angle.

# (3). Output Configuration




Output Configuration

**Environmental Noise & Voice Enhancement Mode**
AI Neural Network Model for Noise Reduction (AI Smart Noise Reduction Algorithm)

**Noise Environment Preprocessing**
Select noise reduction level based on overall environmental noise (None/Quiet/Default Normal/Poor/Severe/Extremely Severe)
Process steady-state noise levels in the environment and adjust settings accordingly. (Generally, the Default Normal can cover most scenarios; choose a higher level if the onsite noise is severe.)

**Noise Reduction Feature Context Processing**
Select AI noise reduction level based on environmental noise (None/Level 1/Level 2/Level 3/Level 4/Level 5)
Choose the AI noise reduction level based on the onsite noise environment (default is Level 2 noise reduction; increase level if there is significant noise onsite).

**Reverberation Suppression Switch & Adaptive**
Configure onsite reverberation: (Off/Low/Moderate/High (Low Frequency Focused)/High (Mid Frequency Focused)/High & Small Dynamic Range)
Choose a suitable or high reverberation suppression level based on the onsite environment.

**Reverberation Suppression Convergence**
Fast (fastest converging reverberation suppression, suitable for relatively quiet sites with significant reverberation reflection)

**Balanced (basic configuration, suitable for most scenarios)**
Balanced Alpha (based on the default reverberation suppression algorithm, adjusts the division of reverberation frequency domain, allowing increased sharpness of reverberation & sound)
Balanced Beta (reverberation reflection calculation uses an updated model)

**De-reverberation Intensity**
Configure onsite reverberation environment: (Slight/Low/Medium/High/Maximum), default set to Medium, increase level if reverberation is significant onsite. Reduce level if the acoustic environment is excellent.

**Output Gain Control**
Adjust microphone volume levels to (General/Moderate/Large) based on onsite recording conditions.

**Auditory Enhancement**
Enhances mid to high-frequency harmonics when activated on dynamic listening devices to improve audio quality.

**Voice Enhancement Mode**
For Environmental Monitoring: Used in monitoring scenarios to pick up detailed environmental sounds, making the sound more distinct.
For General Environments: Used in regular scenarios.

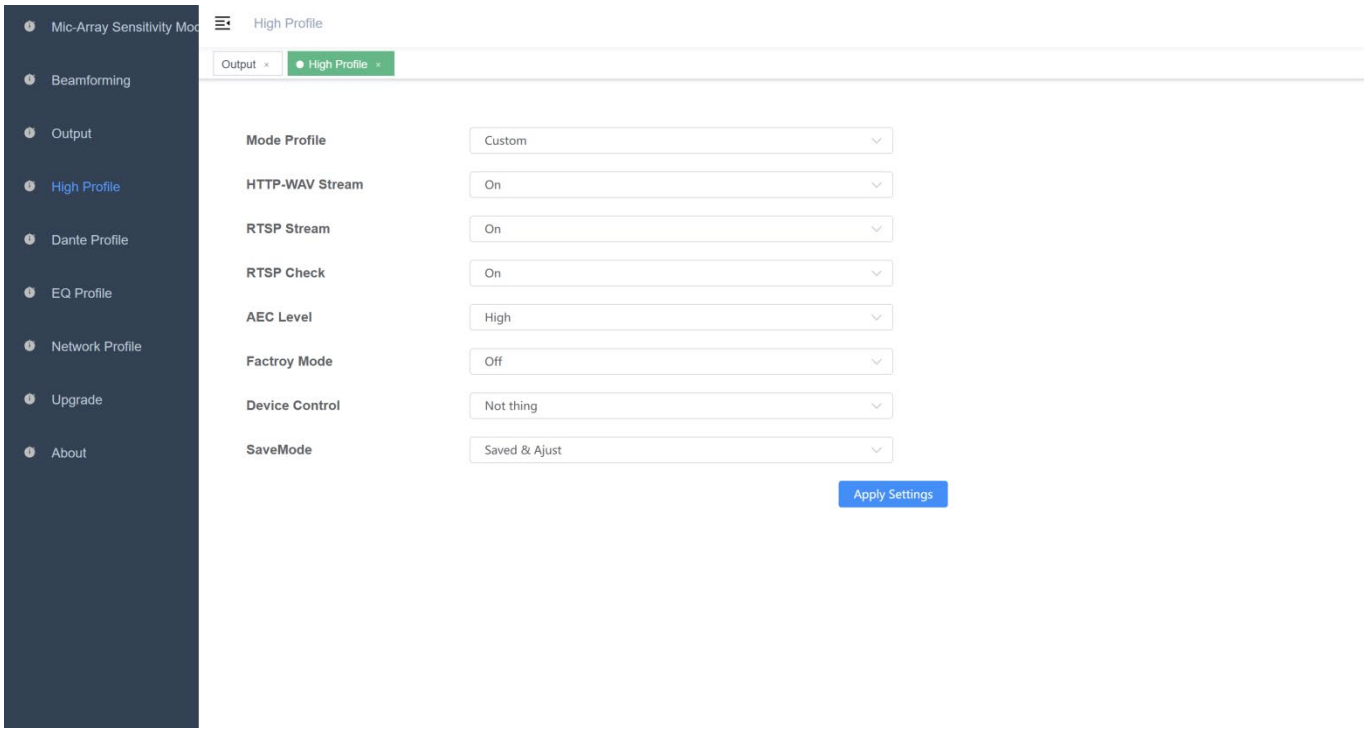
**Comfort Noise**
Adds comfort noise to the audio.

**Low Cut Configuration**
Adjusts the low frequencies cut from the microphone pickup (effective in conference mode).

**Post Output Volume**
Adjust the overall output volume of the microphone (includes USB and analog signals, *Note: provides options to increase by 1dB, 2dB, 3dB on top of the output gain control).

**Save Method:** Effective for this session only/Save Only/Save and Apply
**Settings:** Confirm the current settings and apply them according to the save method

# (4) Advanced Configuration




Advanced Configuration

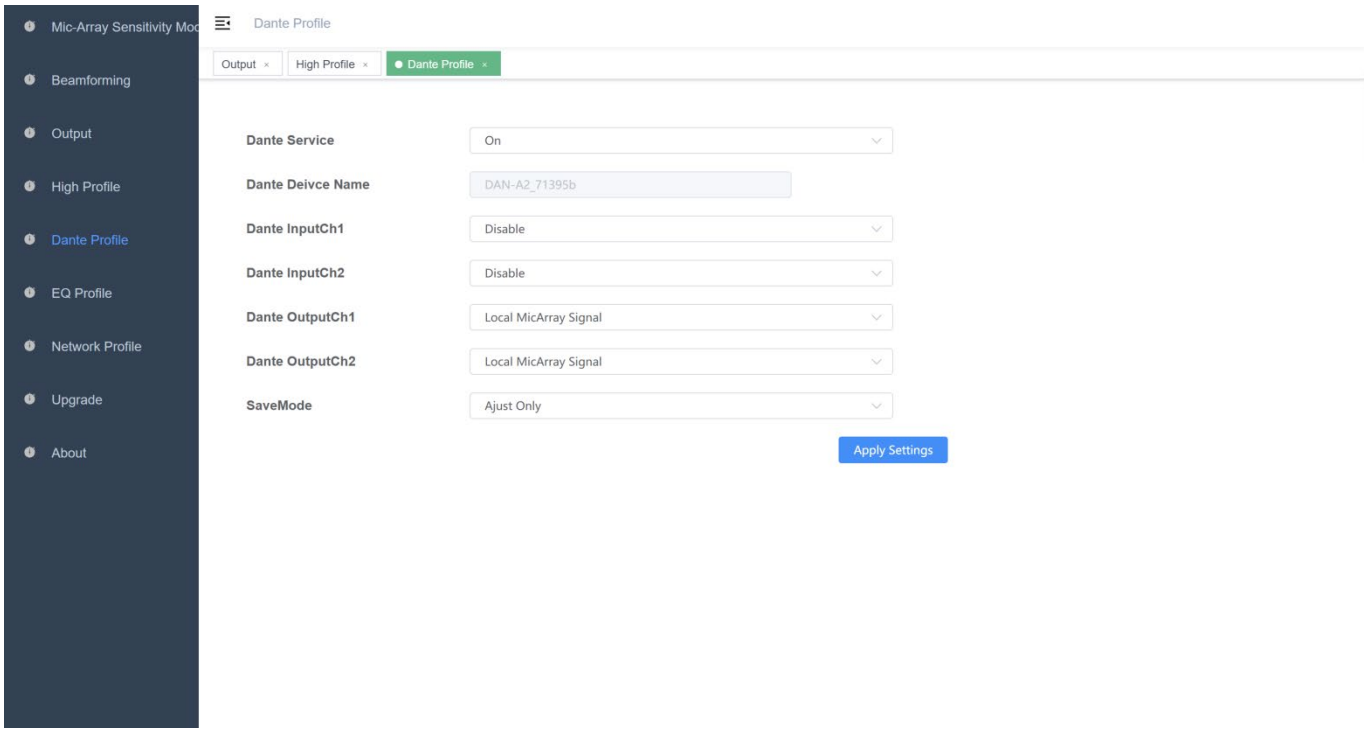
**Application Mode Settings**
Custom configuration not yet available
**HTTP-WAV Stream**
Toggle the audio stream via HTTP protocol ON/OFF, HTTP audio stream output at 32K sampling rate
Microphone audio stream URL (http://IP/mix.wav)
**RTSP Stream**
Enable or disable the device RTSP stream configuration, RTSP audio stream output at 16K sampling rate
Microphone stream URL (rtsp://IP/audio)
**RTSP Authentication**
Enable or disable RTSP stream authentication with username and password
Username: admin, Password: admin123

**Factory Mode**
Off
Test MIC Mode (test microphone sound)
Output 0dB 1Khz (microphone outputs 1Khz audio)
Clear AES67 Configuration (one-click to clear AES67 settings)

**Device Operations**
Control device (disable/restore factory settings & restart/restart)
Control restart and restore to factory settings

**Save Method: Effective for this session only/Save Only/Save and Apply**
**Settings: Confirm the current settings and apply them according to the save method.**

# (5) Dante Configuration




Dante Configuration

**Dante Service**

Dante is an audio connectivity technology that uses Ethernet cables instead of traditional analog cables to achieve high-speed transmission of digital signals and simultaneous transmission of multiple audio channels. In addition, the Dante system can be managed by software, offering scalability and low cost, significantly simplifying the deployment and maintenance of audio and video systems.

**Dante Device Name**

Display the Dante name of this device.

**Dante Input Ch1**

Modify input channel type (AEC: Acoustic Echo Cancellation reference signal, Smart Mixing: Microphone Cascade).

**Dante Input Ch2**

Modify input channel type (AEC: Acoustic Echo Cancellation reference signal, Smart Mixing: Microphone Cascade).

**Dante Output Ch1**

Output current array microphone signal.

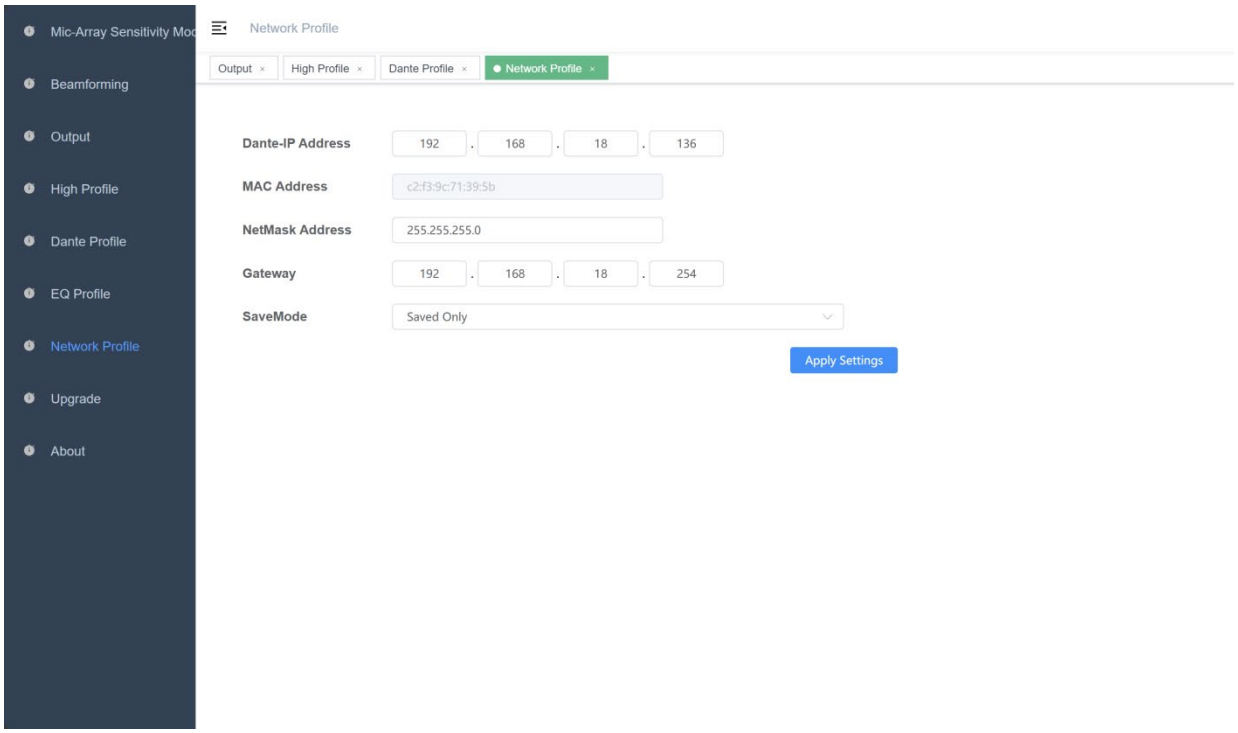
**Dante Output Ch1**

Output current array microphone signal.

**Save Method: Effective for this session only/Save Only/Save and Apply**

**Settings: Confirm the current settings and apply them according to the save method.**

## (6) Network Configuration



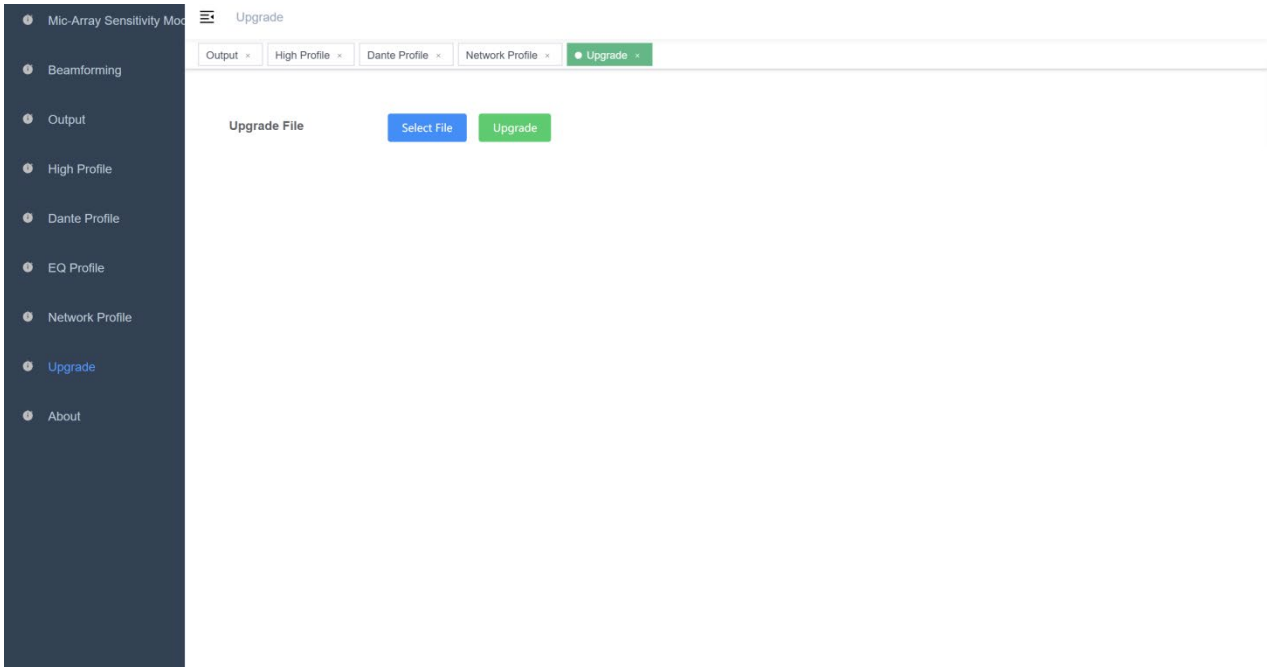

Network Configuration

Configure the product network IP. (Currently, Dante-IP and array mic IP are the same; Dante does not support IP modification.)

**Save Mode:** Only Effective Now / Save Only / Save and Apply

**Settings:** Confirm current settings according to the save mode.

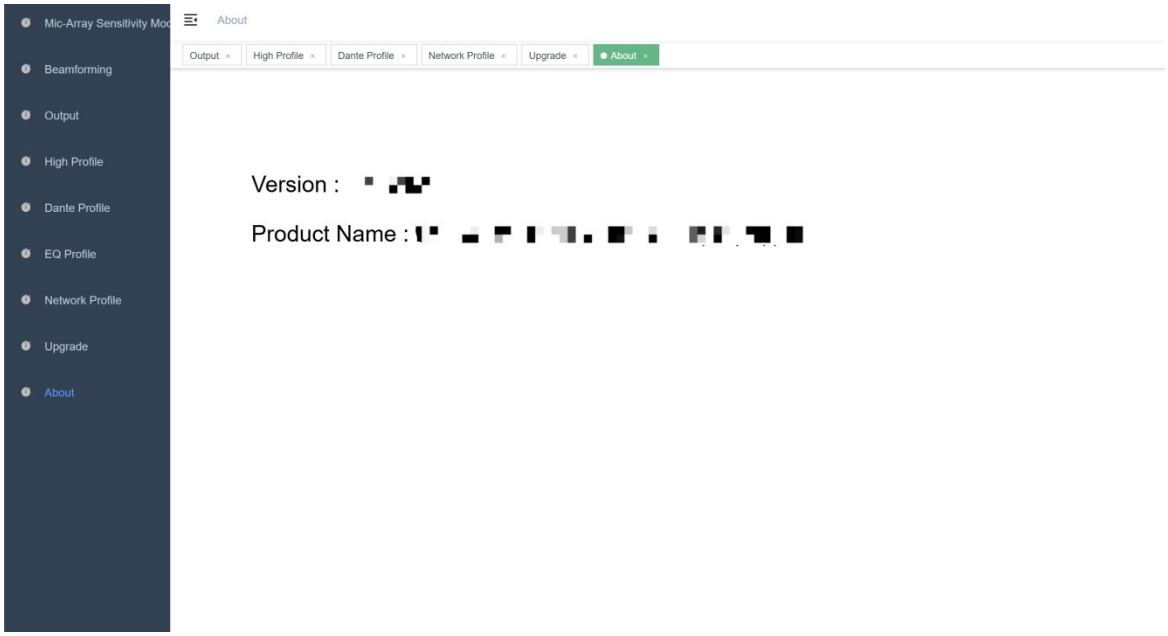
## (7) Upgrade




Upgrade

Select “Upgrade File” and choose to upload, then click “Upgrade Update” to complete the update. The system will automatically restart.

## (8) About




About

Version and product model can be viewed here