



Prestel SCL-84D-WH

Vari-directional Array Speaker



USER MANUAL

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Manufacturer Qualifications

Our company holds the following certifications:

- ISO 9001:2015 Quality Management System Certification
- ISO/IEC 20000-1:2018 Information Technology Service Management System Certification
- ISO/IEC 27001:2022 Information Security Management System Certification
- ISO 14001:2015 Environmental Management System Certification
- ISO 45001:2018 Occupational Health and Safety Management System Certification

The company's development, production, and distribution processes are carried out in accordance with these management systems to help ensure consistent product quality and standardized operations.

Legal Statement

Disclaimer

Please read this user manual carefully before using the product and follow all instructions and precautions provided herein. Our company shall not be liable for any damage or loss resulting from improper use of the product or failure to follow this manual.

To the fullest extent permitted by applicable law, our company shall not be liable for any special, incidental, indirect, or consequential damages arising out of or in connection with the use of this document or the products described herein, including but not limited to loss of profits, loss of data, loss of goodwill, or loss of anticipated savings.

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If the product is connected to the Internet, it may be exposed to risks including, but not limited to, unauthorized access, cyberattacks, or malware infection. Our company shall not be liable for abnormal operation, information leakage, or other losses arising therefrom, but will provide technical support related to the product in a timely manner.

Users shall comply with all applicable laws and regulations when using this product. Our company shall not be liable for any consequences arising from the use of this product for any unlawful purpose or in any manner that infringes the rights of any third party.

If any part of this manual conflicts with applicable law, the applicable law shall prevail.

Privacy Notice

When installing or using this product, personal data such as facial information, fingerprints, images, audio, or other identifiable information may be collected, depending on the product features and application scenario. Users shall comply with all applicable privacy and data protection laws and regulations in their country or region and take appropriate measures to protect the rights and interests of relevant individuals.

For example, where required by applicable law, users should provide clear and visible notice of the presence of surveillance or monitoring areas and make available appropriate contact information.

Copyright Notice

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When this document is made available through the Internet or other public media, our company permits downloading and printing for personal, non-commercial use only.

About This Manual

This manual is provided for reference only and applies to related products. The actual product may vary in appearance, features, or specifications. Please refer to the actual product for final details.

The information contained in this manual is subject to change without prior notice.

This manual is intended for guidance only and does not constitute any express or implied warranty.

Users are solely responsible for the application and use of the product. Our company shall not be liable for any indirect, incidental, or consequential loss arising from improper use of the product or misinterpretation of this manual.

Important Safety Precautions

Please read this user manual carefully before using the product and follow all safety instructions and precautions provided herein.

During Installation

Keep Away from Moisture:

Do not expose the device to rain, water, or humid environments. Failure to do so may result in fire or electric shock.

Use the Correct Power Supply:

Use only the specified power adapter or power supply for the device. Using an incorrect power supply may result in fire or electric shock.

Protect the Power Cord:

Do not scratch, cut, twist, or excessively bend the power cord. Keep the power cord away from heat sources, and do not place heavy objects on it. Failure to do so may result in fire or electric shock.

During Use

If Any Abnormal Condition Occurs:

If any of the following conditions occurs during use, immediately disconnect the power supply. Failure to do so may result in fire or electric shock.

- Smoke or an unusual odor comes from the device.
- Water or a foreign object enters the device.
- The product enclosure is damaged.
- The power cord is damaged, such as exposed or broken conductors.
- The device malfunctions, such as loss of network connection or no sound output.

Do Not Open the Enclosure:

High-voltage components are present inside the product. Opening the enclosure without authorization may result in fire or electric shock.

Do Not Touch the Device During Thunderstorms:

To avoid electric shock, do not touch the device or the power plug during thunderstorms.

Do Not Place Liquid Containers on the Device:

Do not place liquid containers on the device. If a container is accidentally knocked over and liquid enters the device, it may result in fire or electric shock.

Precautions When the Device Is Not in Use:

If the device will not be used for 10 days or longer, disconnect the power supply and unplug the power plug from the power outlet. Failure to do so may result in fire or electric shock.

1. Product Introduction

The Vari-directional Array Speaker is an intelligent active column speaker system built on DFX (Direct Field synthesis) technology, designed for ultra-clear sound reinforcement applications in complex spaces. Unlike traditional beamforming technology, DFX technology enables one-click generation of a customized sound field through custom installation geometric parameters (height, target range) in the visualization software, achieving precise sound coverage, thoroughly simplifying the deployment process and reducing the reliance on acoustic expertise.

This system adopts a line array structure with eight 4-inch high-performance full-range units, supporting sound field zone coverage. DFX technology can achieve sound field distribution with consistent loudness and balanced timbre across listening areas with a large near-to-far span, while significantly suppressing sound energy leakage in non-target areas, reducing reflections, reverberation interference and mutual interference, and clearly improving sound reinforcement clarity.

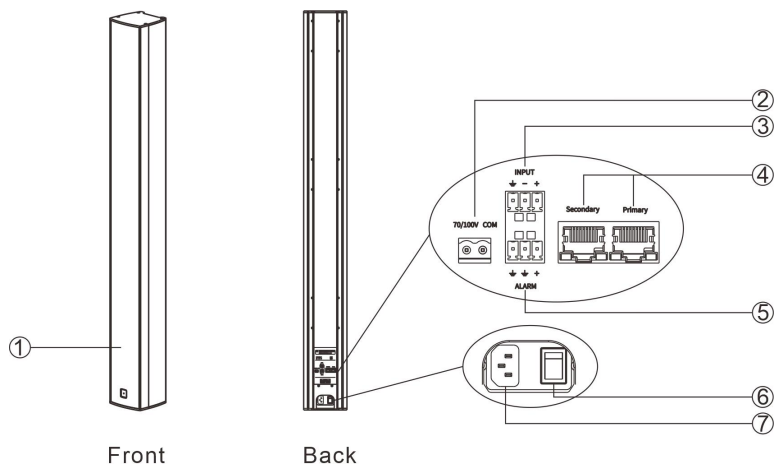
1.1. Product Features

- 8×4-inch high-quality full-range speakers.
- Adopts DFX sound field synthesis technology, with consistent timbre and balanced loudness perception.
- Supports configuration tool / web page access, allowing custom drawing of spatial sound fields.
- DSP processing, 48kHz sampling rate, 32-bit AD/DA conversion.
- Supports line input and 70/100V constant voltage input.
- Supports DIGITAL digital audio input and AES67 network input, with network redundancy backup.
- Frequency response range 120~16kHz, horizontal coverage 135°, vertical coverage customizable.
- Compact and minimalist structural design, simple installation, quick debugging.
- Supports adaptive loudness adjustment to the environment.

1.2. Product Specifications

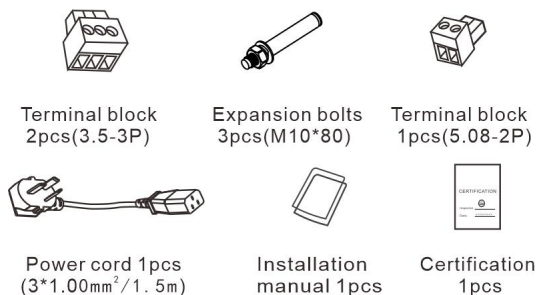
Product Specifications	
Speaker Type	4" speaker
Speaker Quantity	8 units
Power Consumption	RMS Power: 360W
Frequency Response	120Hz~16KHz
Max SPL	125dB SPL (@1m/240W, sine wave, speaker central axis direction)
Power Supply	100V~240V AC 50/60Hz
Network Interface	2*RJ45, supports network redundancy, supports network access
Speaker Line Input	1 channel, supports 100V/70V input
Analog Audio Input	1 channel, Phoenix port (3-pin, HCE type, 6-pin), 0dB
Short-circuit Input	1 channel, Phoenix port (3-pin, HCE type, 6-pin)
Operating Temperature	-10°C~50°C
Operating Humidity	≤90%RH (no condensation)
Product Dimensions	130×130×1196 (L×W×H)

1.3. Product Interfaces

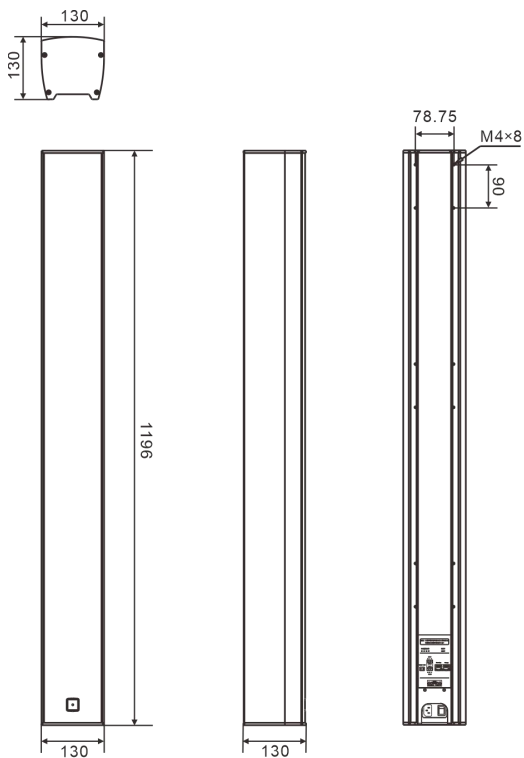


- ① **Indicator Light:** Power indicator light.
- ② **70/100V COM:** 70/100V constant voltage input interface.
- ③ **INPUT:** Line signal input ($\leq 0\text{dB}$).
- ④ **Primary/Secondary:** Dual RJ45 network ports, support device access, dual-port redundancy backup.
- ⑤ **ALARM:** External alarm signal input (dry contact).
- ⑥ **ON/OFF:** Power switch, ON for power on, OFF for power off.
- ⑦ **AC100-240V:** Power input, supports AC100-240V 50/60Hz power supply.

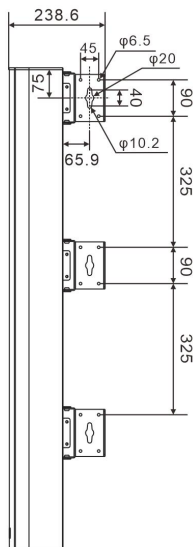
1.4. Product Packing List



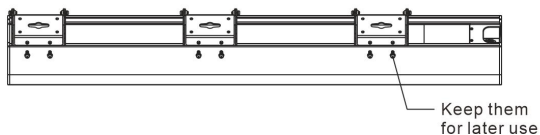
1.5. Product Dimensions(Unit: mm)



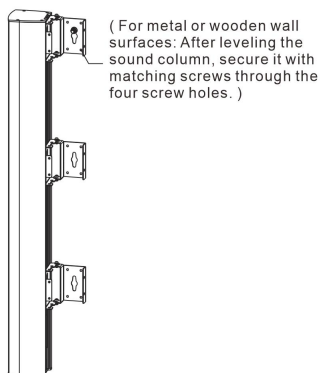
1. Required Tools: Electric drill, spirit level, Phillips screwdriver bit, adjustable wrench, and drill bits ranging from 6 mm to 14 mm.
2. Wall Surface Selection: The mounting wall must be flat and free of bumps or depressions, with a load-bearing capacity of no less than 100 kg and no obvious obstructions around.
3. Mounting Height Requirement : The bottom end of the sound column shall be at least 2 meters above the horizontal ground.
4. Mounting Dimensions:



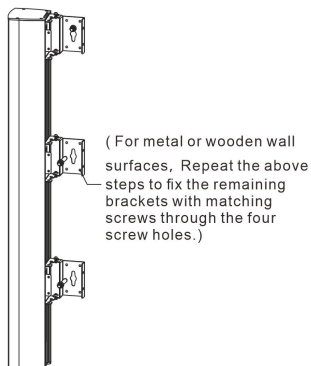
- a. After selecting the proper location and height, install the first expansion bolt. Hang the top bracket of the sound column onto this expansion bolt. Skip the expansion bolt installation step if mounting on metal or wooden panels.
- b. Remove the safety screws from the sound column brackets



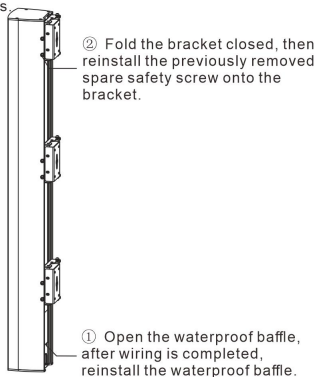
c. Open the bracket, hang the top bracket onto the expansion bolt. After hanging, use a spirit level to level the sound column, then fully tighten the bolt.



d. Install expansion bolts for the remaining brackets and tighten them fully for fixation.



e. Connect the power cord, network cable and audio cable, then install the bracket safety screws.



2. Basic Network Settings

After the terminal is successfully connected according to the "Installation Manual", turn on the power, and change the network parameters of the terminal according to the on-site application environment. There are two methods:

2.1. IP Device Configuration Tool

(1)Run "IP DevConfig Tool", after the tool is started, the interface will display the IP terminal that has been scanned, or you can click the "Quick scan" button to scan the terminal again.

(2)Configure the terminal's IP network information.

Method 1: Check the designated terminal and click "Terminal Configuration"- "Parameter Configuration" to configure IP network information for the terminal.

Method 2: If the scanning tool does not scan the terminal, you can click "Advanced" to perform mandatory IP configuration. This method will force all terminals in the network to be configured to the same IP address and other information, so when using this method, please ensure that only one target terminal is connected in connected to the network.

For specific operation steps, please refer to the User Manual of "IP Device Configuration Tool".



NOTE:

1. If you use Windows 7 system to operate, please use the administrator mode to run the IP DevConfig Tool, and turn off the firewall and related software;
2. If the terminal is not scanned, the mandatory configuration method can be used. At this time, the IP DevConfig Tool can only configure the network parameters of one terminal at a time. When using this method to configure terminal network parameters, please make sure that one computer corresponds to only one target terminal.

3. Product Configuration

3.1. Web Page Parameter Configuration

3.1.1. Login To Web Page

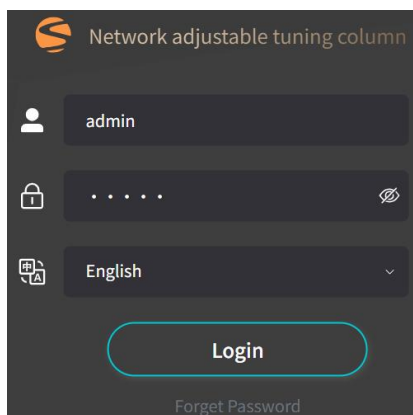
(1) Enter the IP address of the Vari-directional Array Speaker in the browser address bar (default IP address: **192.168.1.101**), then press **Enter**.

(2) For the first login, you need to set the login password. The default username is admin.

(3) Enter the default username and the set password.

 **NOTE:**

If you forget the login password, please click the "Forgot Password" button, then contact our after-sales customer service and send them the key displayed on the page to retrieve your password.



The image shows a login interface for a device titled "Network adjustable tuning column". It features a dark background with orange accents. There are three input fields: a username field with the text "admin", a password field with masked characters "....." and a toggle icon for visibility, and a language selection dropdown menu currently set to "English". Below these fields is a large "Login" button with a blue border. At the bottom, there is a "Forgot Password" link.

(3) Click **Login** to access the device web interface.

3.1.2. Basic Parameters

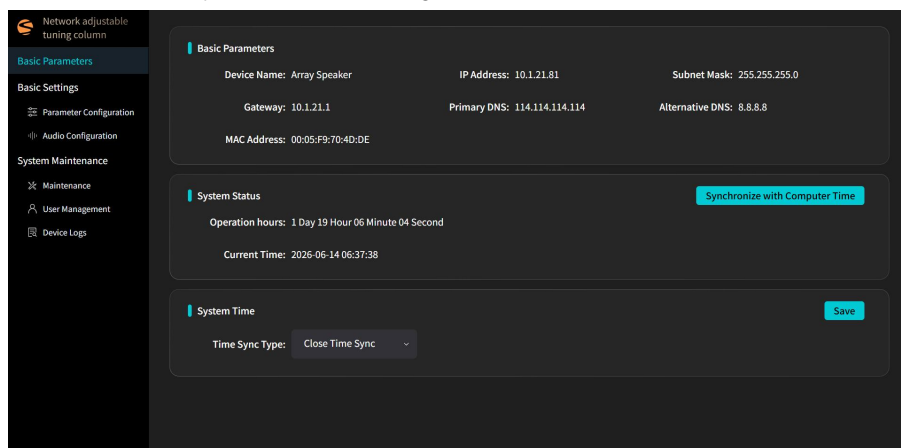
In "Basic Parameters", you can view the device IP, subnet mask, gateway and other network parameters, as well as view the system running time and current time.

Click "**Sync with Computer Time**", and the system time will be synchronized with the PC.

System Time Calibration:

Supports NTP time calibration method, which is **Close Time Sync** by default.

NTP Sync: Select NTP Sync (please ensure that the NTP server is installed and enabled), and set the NTP calibration time interval and the NTP server IP address and port. After saving and taking effect, the device will automatically calibrate the time according to the "NTP Interval".



3.1.3. Basic Settings

3.1.3.1. Parameter Configuration

(1) Device Config

Please set the device's IP address, subnet mask, default gateway and other related parameters according to the actual network environment. The parameters will take effect after saving and rebooting the device.



NOTE:

The default factory device IP is 192.168.1.101 and must not be duplicated with other terminals.

Device Name: Set the name of the device, used for docking with the server platform.

(2) Access Control

Network Protocol: Set the network protocol, optionally DIGITAL or AES67.

(3) Service Parameters

Set the IP address and port of the server platform that the device logs into, as well as the login server ID, login password and other information.

Local Port: Set the local port according to the actual situation. The default is **5060** and no modification is needed under normal circumstances.

Transmission Mode: Set the transport protocol, optionally UDP or TCP.



NOTE:

This is displayed only when the access protocol is set to "DIGITAL".

The screenshot displays the 'Parameter Configuration' interface for a network device. The left sidebar contains a navigation menu with the following items: 'Basic Parameters', 'Basic Settings', 'Parameter Configuration' (highlighted), 'Audio Configuration', 'System Maintenance', 'Maintenance', 'User Management', and 'Device Logs'. The main content area is divided into three sections, each with a 'Save' button in the top right corner.

- Device Config:** Contains input fields for Device Name (Array Speaker), IP Address (10.1.21.81), Subnet Mask (255.255.255.0), Gateway (10.1.21.1), Primary DNS (114.114.114.114), and Alternative DNS (8.8.8.8).
- Access Protocol:** Features a dropdown menu for Network Protocol set to 'DIGITAL'.
- Service Parameters:** Includes input fields for Device ID (81), Local Port (5060), Server IP (10.1.21.253), Server Port (5060), Login Password (masked with dots), and Transmission Mode (set to 'UDP').

3.1.3.2. Audio Configuration

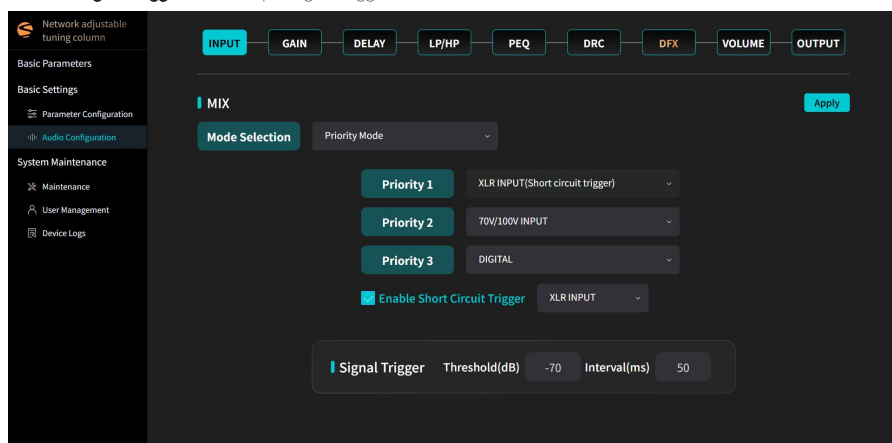
(1) INPUT

Mode Selection: Optional **mixing mode** or **priority mode**.

Mixing Mode: You can select digital audio input, XLR input, and 70V/100V constant voltage input for mixed output. Use the ON/OFF switch to control the corresponding input channel.

Priority Mode: You can set the priority of XLR input, 70V/100V constant voltage input, or digital audio input. The default priority is XLR input (short-circuit trigger) > 70V/100V constant voltage input > digital audio input.

Signal Trigger: Set the input signal trigger threshold and interval (ms).



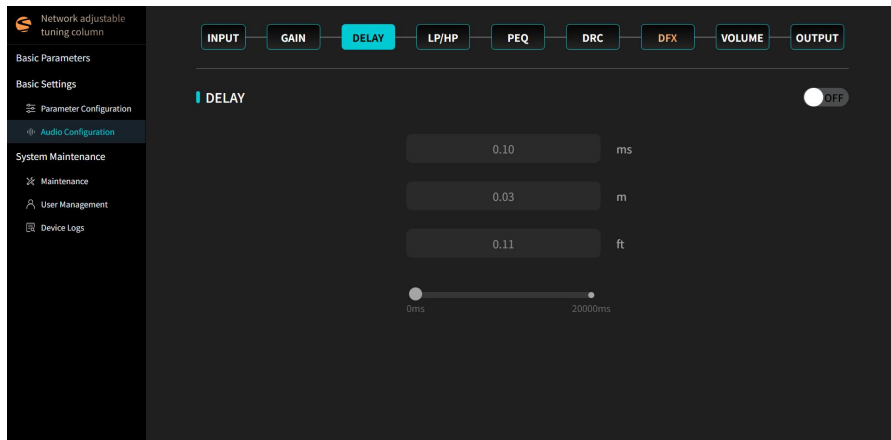
(2)GAIN

Set the input gain for digital audio input, XLR input, and 70V/100V constant voltage input.



(3)DELAY

Set whether to enable the audio delay algorithm, and set the delay time.



(4)LP/HP

The Low Pass filter (LP) and High Pass filter (HP) perform frequency filtering on the audio signal to optimize sound quality, reduce noise, or enhance specific sound effects.



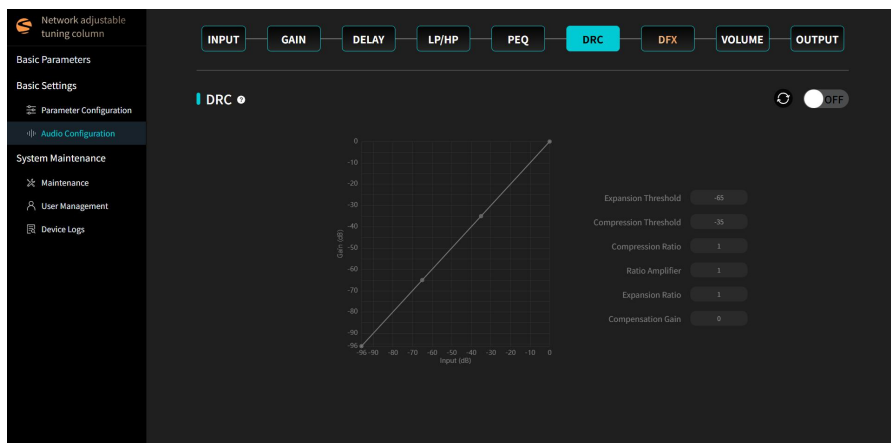
(5)PEQ

Parametric Equalizer (PEQ) precisely boosts or attenuates the sound in a specific frequency range of the audio signal; suitable for noise reduction, voice enhancement, reverberation improvement and other issues.



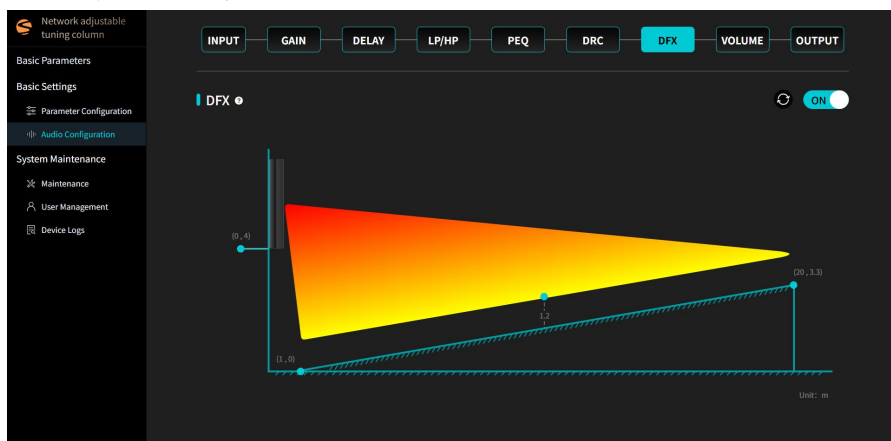
(6)DRC

Dynamic Range Compressor (DRC) can compress, expand and gain-compensate the dynamic range of the audio signal, optimizing the audio output level. It makes the sound more stable and clear, avoiding sudden volume changes or distortion.



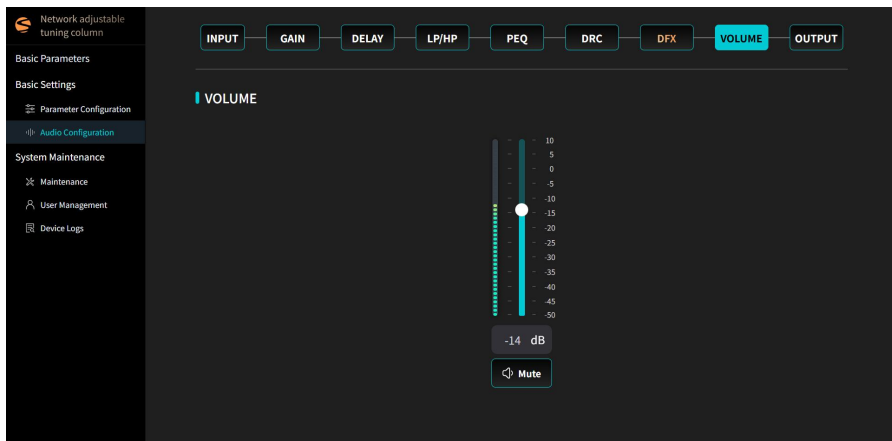
(7)DFX

Direct Field Enhancement (DFX) enhances the audience's perception of sound direction, distance and spatial sense by simulating the "direct sound" (Direct Sound) characteristics of the sound source when it propagates in space. It can help users more authentically restore the spatial positioning of audio and improve voice clarity.



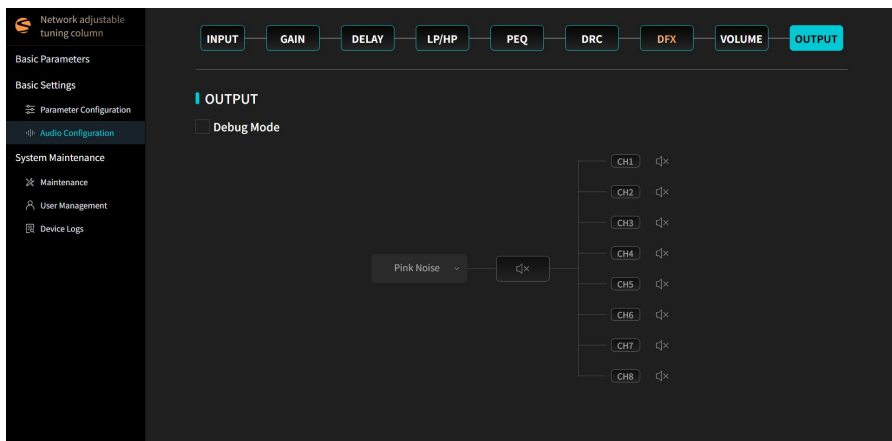
(4)VOLUME

Adjust the total output volume of the column speaker.



(5)OUTPUT

Check "Debug Mode" to select "Pink Noise" for audio calibration, or select "White Noise" and "Sine Wave" to detect audio performance.



3.1.4. System Maintenance

3.1.4.1. Maintenance

In the system maintenance interface, you can perform firmware upgrade, restore factory settings, reboot device and other operations.

(1)Version Information

Displays the current system version information of the device.

(2)Firmware Upgrade

Click the **"Upgrade Firmware"** button, select the file provided by the manufacturer, and the firmware can be upgraded.



NOTE:

Please do not power off during the upgrade process, otherwise it may cause upgrade failure and device malfunction. The upgrade process takes about 60s, and the device will automatically reboot after the upgrade is completed.

(3)Reboot Device

Click the **"Reboot Device"** button, then click **"Confirm"** to reboot the device.

(4)Restore to Default

Click the **"Restore to Default"** button, then click **"Confirm"** to simply restore the device parameters. Except for network parameters such as IP address, other parameters will be restored to the company's unified default values.

(5)Factory Restore

Click the **"Factory Recovery"** button, then click **"Confirm"** to restore all device parameters to the factory settings.

(6)Language

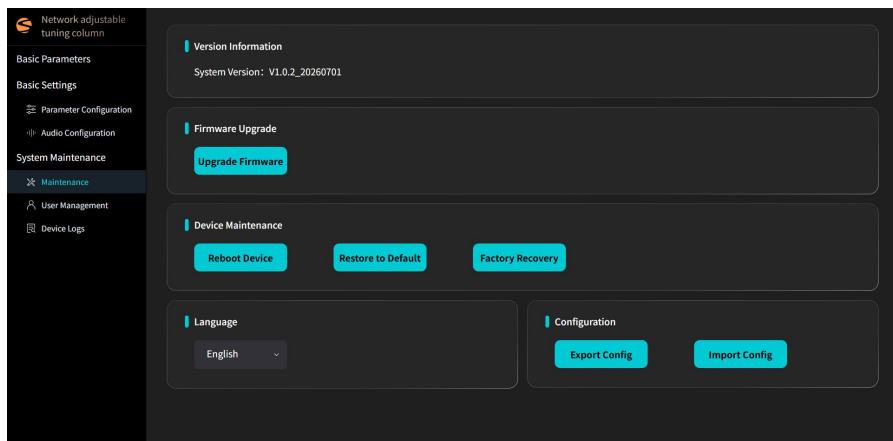
You can switch the display language of the WEB interface, supporting Chinese and English.

(7)Export Configuration

Click the **"Export Config"** button, select the audio configuration module to be exported, and the configuration of that module can be exported. Multiple selection is supported.

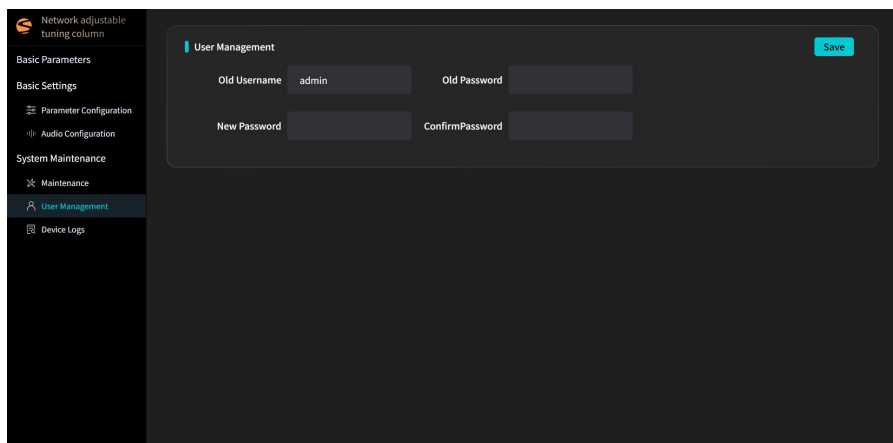
(8)Import Configuration

Click the **"Import Config"** button, select the configuration file to be imported, and the configuration can be imported.



3.1.4.2. User Management

You can modify the password for logging into the web page.



3.1.4.3. Device Logs

The system can record web operations and generate logs. Users can browse and export system logs on the web page.

Network adjustable
tuning column

Basic Parameters

Basic Settings

Parameter Configuration

Audio Configuration

System Maintenance

Maintenance

User Management

Device Logs

Device Logs

Export

ID	Username	Type	Operation Terminal	Date	Event	Details
1	admin	Network	192.168.70.235	2026-06-14 06:37:52	Device Name	⊕
2	admin	System	192.168.70.235	2026-06-14 06:36:12	Login Successful	-
3	system	System	192.168.70.235	2026-06-14 06:36:03	Login Failed	-
4	admin	System	192.168.70.235	2026-06-14 02:29:38	Login Successful	-
5	admin	System	192.168.70.235	2026-06-14 00:41:30	Login Successful	-
6	admin	System	192.168.70.235	2026-06-14 00:40:41	Login Successful	-
7	admin	System	192.168.70.235	2026-06-13 11:09:42	Login Successful	-
8	admin	System	192.168.70.235	2026-06-13 11:01:06	Login Successful	-
9	admin	System	192.168.70.235	2026-06-13 08:40:12	Login Successful	-
10	admin	System	192.168.70.235	2026-06-13 08:39:12	Login Successful	-
11	admin	System	192.168.70.235	2026-06-13 08:21:18	Login Successful	-
12	system	System	192.168.70.235	2026-06-13 07:58:26	Language Settings	⊕
13	admin	System	192.168.70.113	2026-06-13 07:56:51	Login Successful	-
14	admin	Audio	192.168.70.113	2026-06-13 06:03:58	Set Input Volume	⊕
15	admin	Audio	192.168.70.113	2026-06-13 06:02:28	Set Input Volume	⊕

Total: 229 < 1 2 3 4 5 > Go to 1

4. Basic Function

4.1. Broadcast Reception

The Vari-directional Array Speaker supports receiving broadcasts initiated by other devices and servers.

5. Troubleshooting

5.1. Common Issues and Solutions

Issue	Solutions
No sound from the Vari-directional Array Speaker.	● Check if the device has normal power supply and verify the network cable Connection. ● Check whether the interfaces are loose or have poor contact. ● Check if the volume setting is muted.
Web page display Anomaly?	Refresh page, clear cache or change browser.

5.2. Summary

The table above provides common faults and corresponding troubleshooting solutions to help users identify and resolve product issues. If the problem persists, please contact our technical support for further assistance.