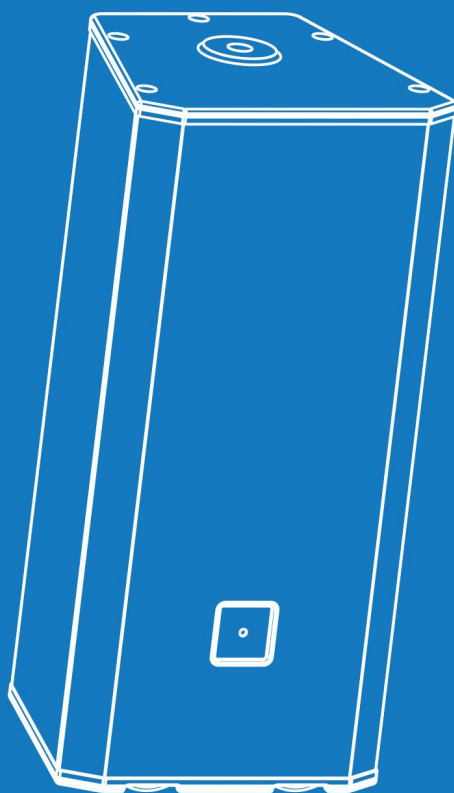


***SPON***

# IP OUTDOOR COLUMN LOUDSPEAKER

User Manual



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# 1. Important Safety Precaution

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Please read this User Manual carefully before using this product and follow all the safety precautions mentioned herein.

## **During Installation:**

### (1) Avoid humidity:

Please do not expose the device to rainy environment or other humid environment, otherwise it may lead to fire or electric shock.

### (2) Use correct power supply:

Please use the specified power adapter for the device, using high voltage power supply may lead to fire or electric shock.

### (3) Protect the electric wire:

Do not scratch, cut or twist the power cord, keep the power cord away from any heating device, do not place heavy objects on top of the power cord, otherwise it may lead to fire or electric shock.

## **During Use:**

### (1) If anything goes wrong:

During use of this device, if any of these anomalies mentioned below happens, please cut off the electricity immediately, otherwise it may lead to fire or electric shock.

- smoke or strange smell coming out of the device.
- water or other foreign object gets into the device.
- damage on the product shell.
- damage of the power cord (cable core exposed or broken).
- malfunction of the device (no network connection or no sound).

### (2) Do not open the product shell:

There are high voltage parts inside of the product shell, opening the product shell without permission may lead to fire or electric shock.

### (3) Do not touch the device when it thunders:

To avoid electric shock, please do not touch the device or power plugs when it thunders.

### (4) Do not place liquid containers on top of the device:

If accidentally knock over the liquid container and let any liquid get into the device, it may lead to fire or electric shock.

### (5) Cautions when the device is not in use:

If the device is not in use for 10 days or longer, please cut off the electricity and unplug the power plug from the power socket, otherwise it may lead to fire or electric shock.

## 2. Product Overview

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Here is what you can find in this section:

- **2.1 Basic Introduction**
- **2.2 Product Features**
- **2.3 Hardware Interface Description**

## 2.1 Basic Introduction

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IP outdoor column loudspeaker embedded with the IP audio digital network audio technology of independent intellectual property rights, it is equipped with power input interface, network interface, it supports receiving broadcast from other terminals or initiated by server.

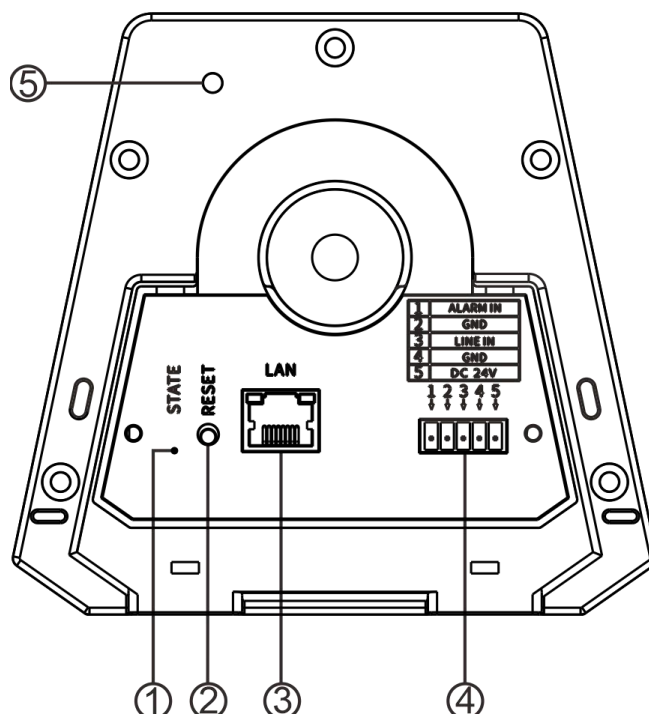
## 2.2 Product Features

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- Integrated wall-mounted design, exquisite workmanship, integration of network audio decoding, power amplifier and speaker.
- It can cooperate with the server to realize timing ringing, real-time sampling and broadcasting, and other functions.
- Users can configure the network parameters, audio parameters of the IP outdoor column loudspeaker through web browser to achieve personalized configuration.
- It can be accessed where there is an Ethernet port. Cross-network segment and cross-routing are supported.

## 2.3 Hardware Interface Description

### Interface Description



①STATE:status light. The meanings are as follows:

Solid green	Login status
Flashing green	On task
Flashing red	Off-line status

②RESET:

When the device is in off-line status, short press the reset key, the device will broadcast it's IP information.

When the device is in powering on process, long press the reset key, it will go into recovery mode, you can process a web upgrade for the device.

After the device is powered on, long press the reset key, the device will back to the factory default settings.

③RJ45 network interface.

Network light: when the network interface is connected to the network cable, it will be solid green. When there are data transfer, it will be flashing orange.

④Integrated interface:

1: ALARM IN:alarm input interface.

2: GND:the common ground of line input and alarm input.

3: LINE IN:line input interface.

4: GND: the ground end of power.

5: POWER:Power interface,support DC 24V/2.7A power input.

⑤Microphone:Pick up local audio.

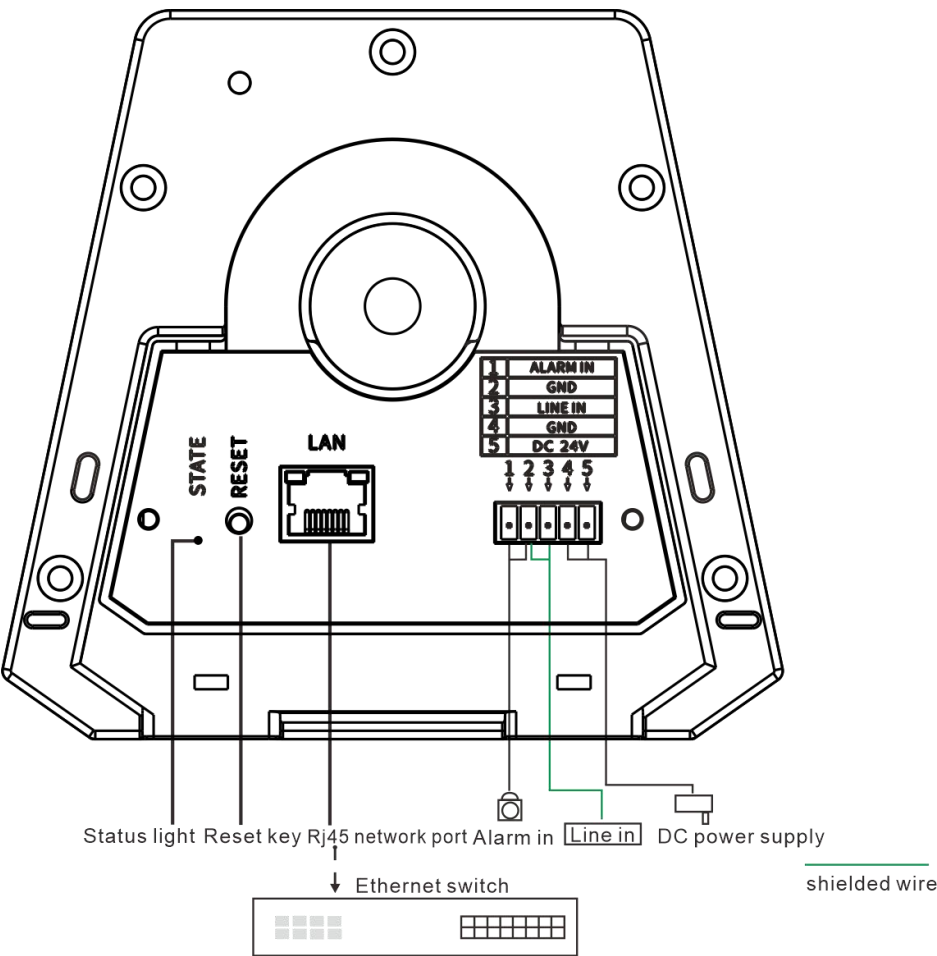
# 3.Unpacking and Installation

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Here is what you can find in this section:

- **3.1 Wiring**

### 3.1 Wiring





# 4. Quick Operation Guide

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Here is what you can find in this section:

- **4.1 Network Settings**
- **4.2 User-defined Terminal Parameters**
- **4.3 Basic Function**
- **4.4 Troubleshooting**

## 4.1 Network Settings

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### Basic Network Settings

After connecting the terminal according to the quick installation manual, please switch on the power, and change the network parameters of the terminal according to the live environment.

#### Through WEB page

- 1) Enter the IP address of the device ( the default is 192.168.1.101) in the address bar of your web browser and press Enter.
- 2) Enter the user name and password (Both are admin by default) in the login window and click on “Login”.
- 3) Access to the web page of the device, and configure network parameters, server parameters, and audio parameters.

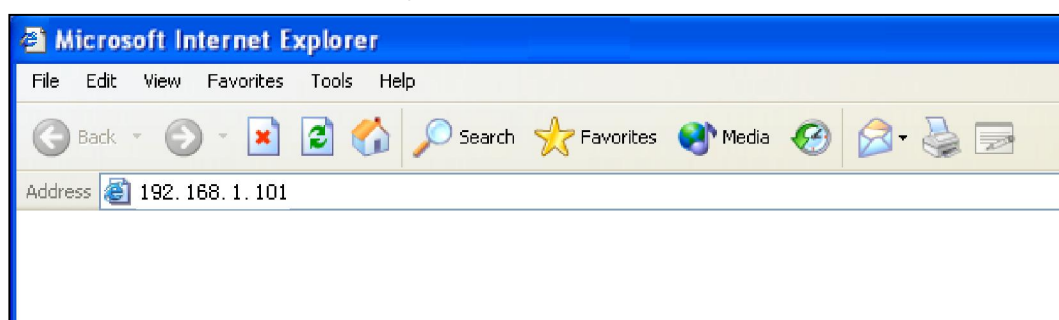
For specific operations, please refer to the network parameters setting in User-defined Terminal Parameters.

## 4.2 User-defined Terminal Parameters

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### 4.2.1 Login web interface

- (1)Please enter the IP address of the IP outdoor column loudspeaker in the address bar of the browser ( the default IP address is 192.168.1.101),and then press enter.



- (2)Enter the username, password on the login page.  
Note: Default username and password are both admin.

# IP Network Public Address

Login

(3) Press login to enter the IP outdoor column loudspeaker web page.

**(Note: If the relevant parameter modification in the web page does not take effect after saving, please clear the cache and set them again.)**

## 4.2.2 Running Status

When login to the web page, click “Running Status”, it will show the information of: Terminal ID, server IP, server port, device register status, device MAC address, device IP address, default gateway and other information.

IP Network Public Address

Back to home page

admin Help

Running Status

Basic Settings

Advanced Settings

Home Page > Running Status

Running Status

Terminal ID

2

Server IP

192.168.1.13

Server Port

5060

Register Status

Unregistered

IP Address

192.168.1.101

Subnet Mask

255.255.255.0

Gateway

192.168.1.1

MAC Address

36:b6:76:f9:c8:b1

## 4.2.3 Network Params

Please set the terminal's network parameters according to the live environment. Click [save] after setting, the parameters will take effect after reboot.

The screenshot displays the 'Network Params' configuration page. On the left is a dark sidebar with navigation options: Running Status, Basic Settings, Network Params (selected), Server Params, Audio Params, Bluetooth Params, Alarm Params, Auto Upgrade, Task Priority, and Advanced Settings. The main content area has a breadcrumb trail: Home Page > Basic Settings > Network Params. At the top right of the main area are links for 'Back to home page', 'admin', and 'Help', along with a green 'Save' button. The 'Network Params' section contains five input fields arranged in two rows. The first row includes IP Address (192.168.1.101), Subnet Mask (255.255.255.0), and Gateway (192.168.1.1). The second row includes Primary DNS (192.168.1.1) and Secondary DNS (192.168.1.1).

The relevant Settings of network parameters are as follows:

IP Address	The IP address of the device, the factory default IP is 192.168.1.101, which cannot be repeated with other terminals.
Subnet Mask	The subnet mask of the LAN network.
Gateway	The gateway of the network.
Primary DNS	The IP address of the preferred DNS server (domain name resolver) for the network.
Secondary DNS	The IP address of the alternate DNS server (domain name resolver) for the network.

## 4.2.4 Server Params

IP outdoor column loudspeaker supports SIP protocol and NAS protocol, you can choose the transport protocol according the actual server you log in to.

Note: Default protocol is SIP protocol.

### SIP Protocol

The default is SIP protocol. If the device is going to log into a NAS (intercom) protocol server, you need to select the NAS protocol here, please refer to the NAS protocol setting introduction for specific parameter settings.

The screenshot displays the 'Server Params' configuration page. On the left is a dark sidebar with navigation options: Running Status, Basic Settings, Network Params, Server Params (highlighted), Audio Params, Bluetooth Params, Alarm Params, Auto Upgrade, Task Priority, and Advanced Settings. The main content area has a breadcrumb trail: Home Page > Basic Settings > Server Params. Below this is a 'Server Params' section with a 'Transport Protocol' dropdown set to 'SIP'. Below that are input fields for 'ID' (value: 2), 'Password' (masked with \*\*\*\*), 'Server IP' (value: 192.168.1.13), 'Server Port' (value: 5060), and 'Local Port' (value: 5060). A green 'Save' button is located in the top right corner of the configuration area.

The relevant Settings are as follows:

Transport Protocol	Setting the protocol for normal communication between device and sever. (Default is SIP protocol )
ID	Unique number to identify the terminal and cannot be duplicated with terminals or other hosts.
Password	Password for terminal to login to SIP server, default is 1234.
Server IP and port	IP address of the SIP server that the terminal logs into. Please enter the correct IP address of the SIP server. The port number cannot be changed except in special cases. (Default is 5060)
Local port	Configure the local port according to the actual situation, the default is 5060.

# NAS Protocol

IP Network Public Address

Back to home page

admin

Help

Home Page > Basic Settings > Server Params

Save

Server Params

Transport Protocol

NAS

ID

1

Server IP

192.168.1.13

Server Port

2048

Secondary Server IP

192.168.1.14

Secondary Server Port

2048

Local Port

5060

The relevant Settings are as follows:

Transport Protocol	Setting the protocol for normal communication between device and sever. (Default is SIP protocol )
ID	Unique number to identify the terminal and cannot be duplicated with terminals or other hosts.
Server IP and port	IP address of the NAS server that the terminal logs in to. Please enter the correct IP address or domain name of the NAS server. The port number cannot be changed except in special cases (the default is 2048)
Secondary Server IP and port.	The IP address and port of the alternate NAS server.
Local port	Configure the local port according to the actual situation, the default is 5060.

## 4.2.5 Audio Params

Set the broadcast parameters of terminal, click [save] after setting, the parameters will take effect after reboot.

The screenshot shows the 'Audio Params' configuration page in the IP Network Public Address system. The page has a sidebar with navigation options: Running Status, Basic Settings, Network Params, Server Params, Audio Params (selected), Bluetooth Params, Alarm Params, Auto Upgrade, Task Priority, and Advanced Settings. The main content area displays the following settings:

- Broadcast Output Volume: 9
- Talk Input Volume: 9
- Talk Output Volume: 9
- Talk Ring Volume: 9
- Monitor Input Volume: 9
- Microphone Input Gain: 21dB
- EQ: Disable
- EQ Mode: Speech
- Ring Time Limit(sec): 0
- Network Adaptability: Low Latency

A 'Save' button is located in the top right corner of the configuration area.

The relevant Settings are as follows:

Broadcast Output Volume	Set the broadcast output volume (0 to 15) when the host is offline. When the host is online, the broadcast output volume is controlled by the server.
Talk Input Volume	Set the talk input volume (0 to 15) when the host is offline. When the host is online, the talk input volume is controlled by the server.
Talk Output Volume	Set the talk output volume (0 to 15) when the host is offline. When the host is online, the talk output volume is controlled by the server.
Talk Ring Volume	Set the volume of the intercom ringtone(call out, incoming call) .
Monitor Input Volume	Set the input volume of the terminal while being monitored (0 to 15)
Microphone Input Gain	Set the microphone input gain(0 to 27dB).
EQ EQ mode	When EQ is enabled,you can adjust the sound effects of the current network task, Supports BASS, POP, Classic, Rock, and Speech modes. <b>Note: EQ value must be adjusted by personnel with relevant professional knowledge, non-professionals please do not adjust at will, otherwise it will lead to a poor sound quality.</b>
Ring Time Limit(sec)	Set the time for automatically answering call. The default value is 0 seconds.
Network Adaptability	Audio quality can be adjusted according to the network environment, low latency, low bandwidth, custom are optional.

## 4.2.6 Bluetooth Params

Set the Bluetooth parameters of terminal, click [save] after setting, the parameters will take effect after reboot.

The screenshot shows a web interface for configuring Bluetooth parameters. On the left is a dark sidebar with a menu including 'Running Status', 'Basic Settings', 'Network Params', 'Server Params', 'Audio Params', 'Bluetooth Params' (highlighted), 'Alarm Params', 'Auto Upgrade', 'Task Priority', and 'Advanced Settings'. The main content area has a breadcrumb trail 'Home Page > Basic Settings > Bluetooth Params' and a 'Save' button in the top right. The 'Bluetooth Params' section contains three input fields: 'Audio Bluetooth Name' with the value 'BT-AUDIO\_f9c6bdf', 'Manage Bluetooth Name' with the value 'BT-MANAGER\_f9c6bdf', and 'Audio Bluetooth Mode' with a dropdown menu currently set to 'Outdoor'.

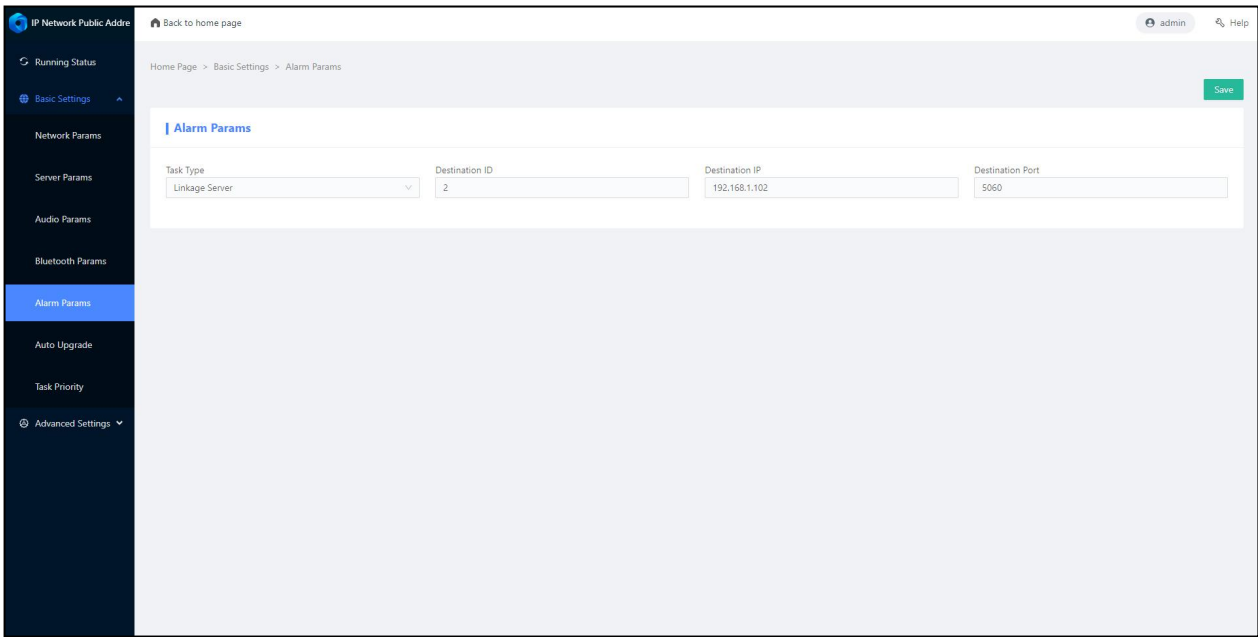
The relevant Settings are as follows:

Audio Bluetooth Name	Set the Audio Bluetooth name of the terminal.
Manage Bluetooth Name	Set the Manage Bluetooth name of the terminal.
Audio Bluetooth Mode	<p>Indoor mode and Outdoor mode are optional.</p> <p>In Indoor mode, you can directly connect your mobile phone to the Audio Bluetooth for Bluetooth play.</p> <p>In Outdoor mode, you need to download the APP, open the APP and connect to the Manage Bluetooth first, and then enable the Audio Bluetooth, finally, you can connect your mobile phone to the Audio Bluetooth for Bluetooth play.</p> <p><b>Note: In outdoor mode, one party of Management Bluetooth and Audio Bluetooth should be connected at least, otherwise the Audio Bluetooth will be automatically turned off after one minute.</b></p>



### 4.2.7 Alarm Params

Set the Alarm parameters of terminal, click [save] after setting, the parameters will take effect after reboot.



The relevant Settings are as follows:

Task Type	Initiate Intercom and Linkage Server are optional. When select initiate intercom, Closing the terminal alarm input port will trigger the terminal to initiate intercom. Please fill in the correct target ID, IP address, and port in the destination ID, destination IP, destination port column. When select linkage server, closing the terminal alarm input port will trigger server broadcast task.
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## 4.2.8 Auto Upgrade

When the terminal restarts, it can connect to the version server automatically to upgrade firmware. Click "Save" after setting. The parameters will take effect after reboot.

The screenshot shows a web interface for 'IP Network Public Address'. On the left is a dark sidebar with a menu: 'Running Status', 'Basic Settings' (expanded), 'Network Params', 'Server Params', 'Audio Params', 'Bluetooth Params', 'Alarm Params', 'Auto Upgrade' (highlighted), 'Task Priority', and 'Advanced Settings'. The main content area has a breadcrumb 'Home Page > Basic Settings > Auto Upgrade' and a 'Save' button in the top right. The 'Auto Upgrade' section contains three fields: 'Auto Upgrade' (a dropdown menu set to 'Enable'), 'Version Server IP' (a text box containing '192.168.1.13'), and 'Version Server Port' (a text box containing '80').

The relevant Settings are as follows:

Auto Upgrade	Set whether to enable the automatically upgrade function.
Version server IP, port	The IP address and port of the version server. When the terminal restarts, it can connect to the version server to automatically upgrade firmware.

## 4.2.9 Broadcast Task Priority

Set broadcast task priority.

Click "Save" after setting. The parameters will take effect after reboot.

The screenshot displays the 'Task Priority' configuration page within a web interface. The left sidebar contains navigation links: Running Status, Basic Settings (selected), Network Params, Server Params, Audio Params, Bluetooth Params, Alarm Params, Auto Upgrade, Task Priority (highlighted), and Advanced Settings. The main content area shows the 'Task Priority' settings. At the top, there is a 'Back to home page' link and a 'Save' button. Below the title 'Task Priority', there is a 'Task Mode' dropdown menu set to 'Sound Mixin'. Underneath, there are three priority settings: 'Priority-1' set to 'Network Broadcast', 'Priority-2' set to 'Line Input', and 'Priority-3' set to 'Bluetooth Input'. To the right of these, there is a 'Line Input Threshold' input field set to '90'. At the bottom, there is a 'Bluetooth Input Threshold' input field set to '103'.

The relevant Settings are as follows:

Task Mode	Sound Mixin and Priority are optional, the default is Sound Mixin. When Priority is selected, you can set broadcast task priority. The default priority is " Network Broadcast>Line Input>Bluetooth Input"
Line Input Threshold, Bluetooth Input Threshold	When the "Priority" is selected for Task mode, Set the Line Input Threshold and Bluetooth Input Threshold through " Input threshold calibration" button.

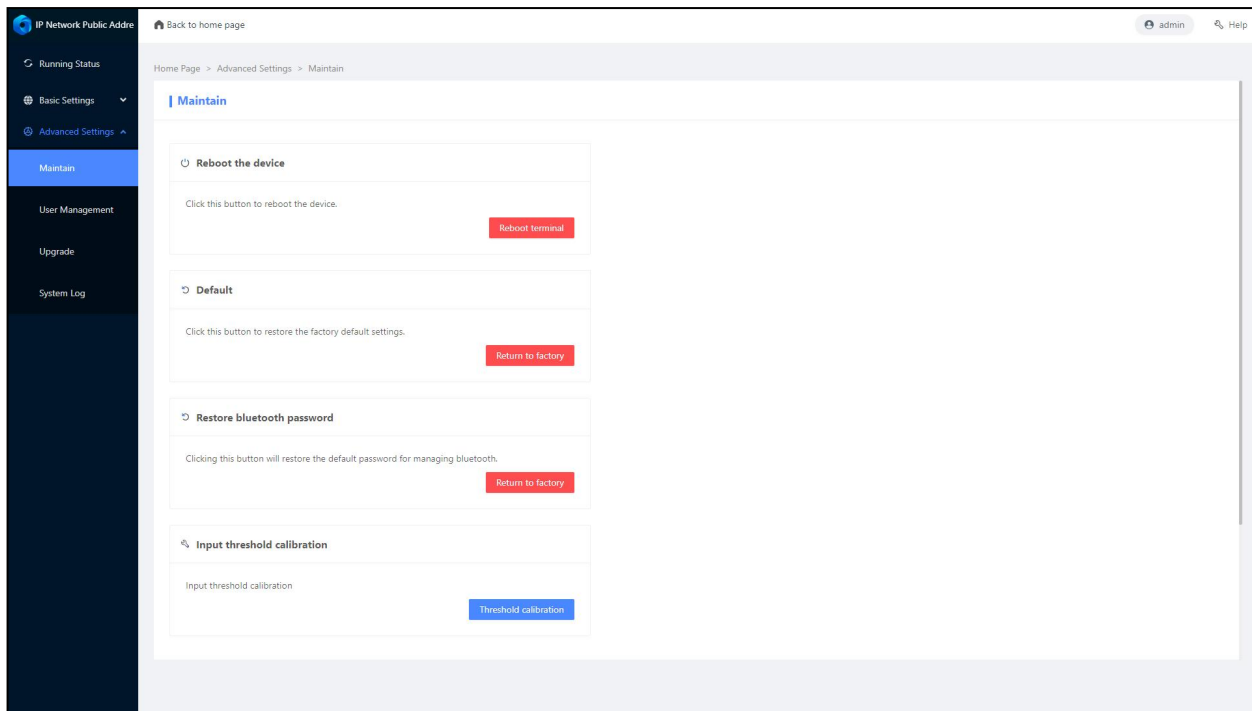
## 4.2.10 System Settings

**Reboot terminal:** Click on the “Reboot terminal” button to reboot the device.

**Return to factory:** Click on this button and all parameters of the device will be restored to factory Settings (please use it with caution)

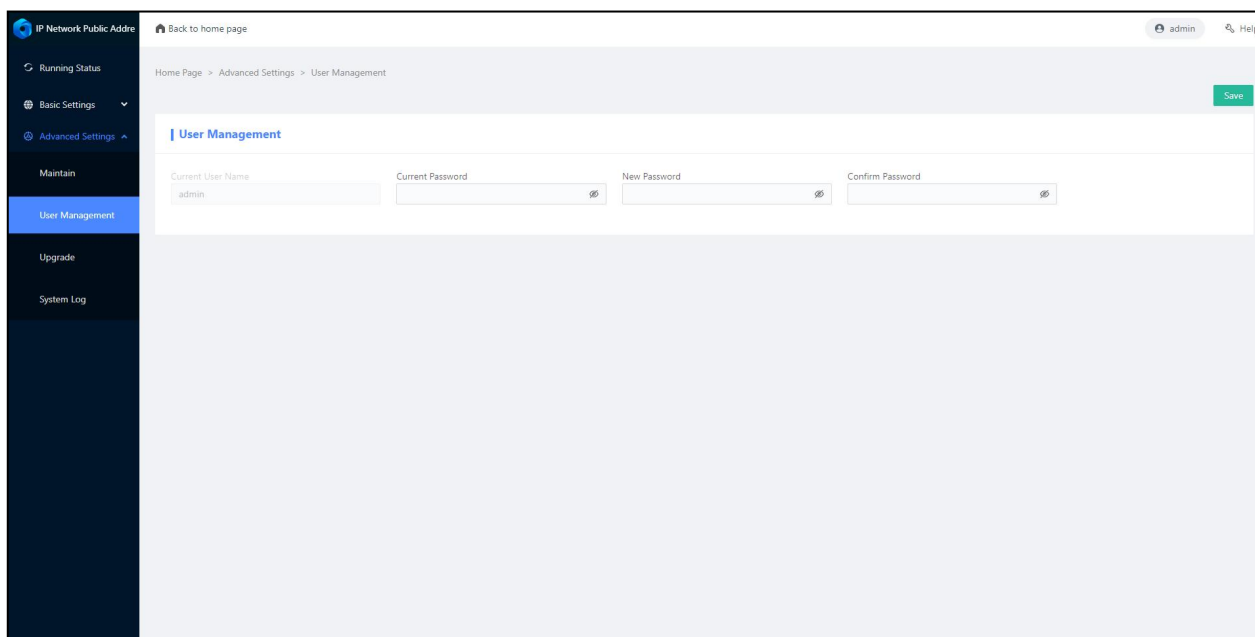
**Restore bluetooth password:** Click on the button will restore the Manage Bluetooth password to the default password, the default password is 628592.

**Input threshold calibration:** Click on “Threshold calibration” button will calibrate the line input threshold and Bluetooth input threshold according to the current condition of the device.



## 4.2.11 User Management


You can change the password for logging into the WEB in this page. After save the password change, rebooting the web page to take effect.



The screenshot displays the 'User Management' page within a web interface. On the left is a dark sidebar with navigation links: 'Running Status', 'Basic Settings', 'Advanced Settings', 'Maintain', 'User Management' (highlighted), 'Upgrade', and 'System Log'. The main content area has a breadcrumb trail: 'Home Page > Advanced Settings > User Management'. At the top right of the main area is a 'Save' button. Below the breadcrumb, the title 'User Management' is followed by a form with four input fields: 'Current User Name' (containing 'admin'), 'Current Password', 'New Password', and 'Confirm Password'. Each password field has a small icon to its right. The bottom half of the page is a large, empty light gray area.

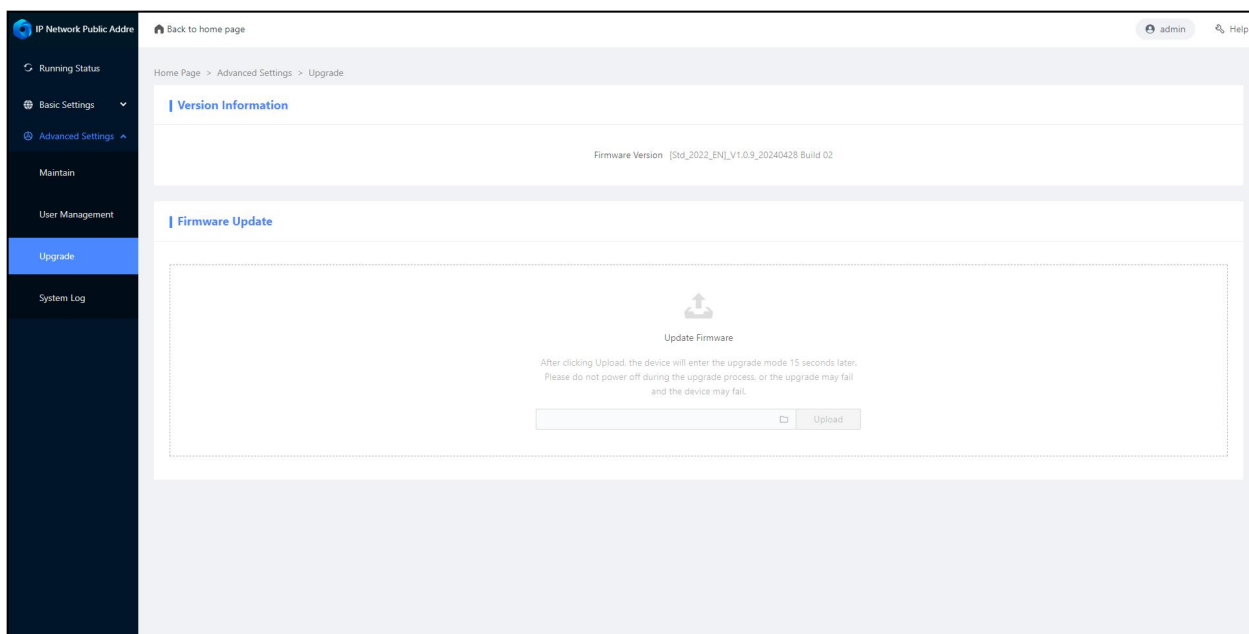
## 4.2.12 Upgrade

**Version Information:** Display the current firmware version of the device.

**Firmware Update:** On the upgrade page, you can upgrade the firmware version of the device as follows: Click on " " button, select the firmware upgrade file provided by the manufacturer, click on "Upload" button to start the upgrade.

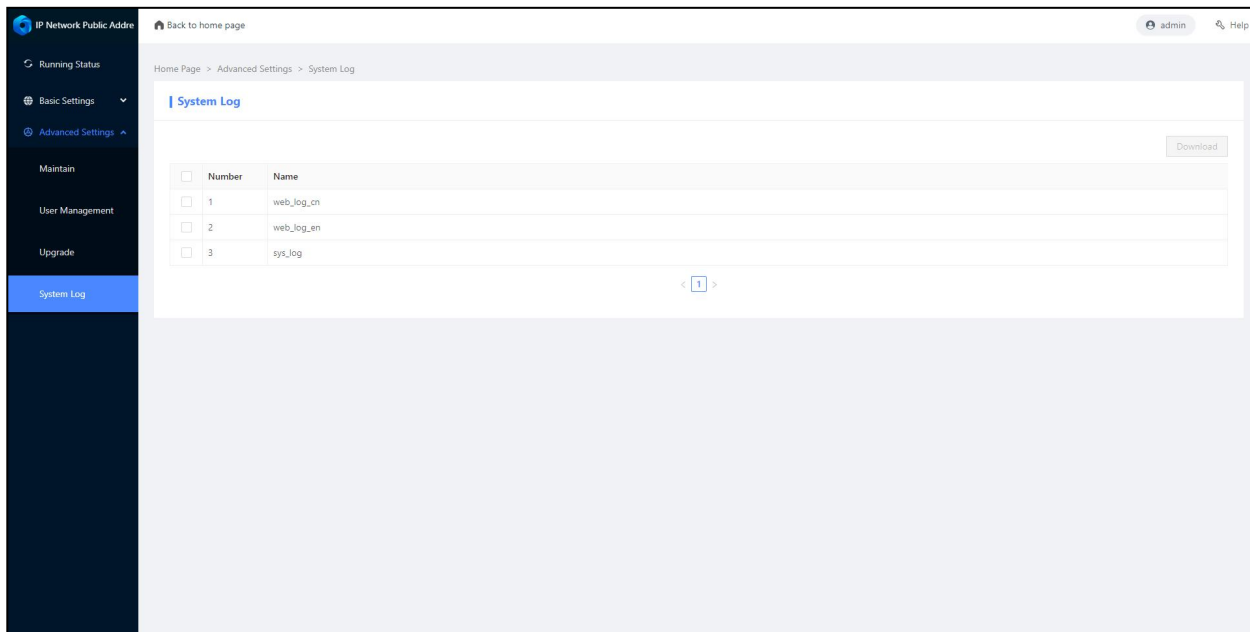
**Note: 1.** Please do not power off during the upgrade process, otherwise it may lead to upgrade failure and device malfunction. The upgrade process is about 120s, the device and WEB page will reboot automatically after the upgrade is completed. (Do not upgrade the firmware unless you have special needs)

**2.** The upgrade package used in the Recovery mode is different from that used on the WEB interface. The upgrade package used for the WEB interface upgrade is the same as that used for the automatic upgrade through the version server.




### 4.2.13 System Logs

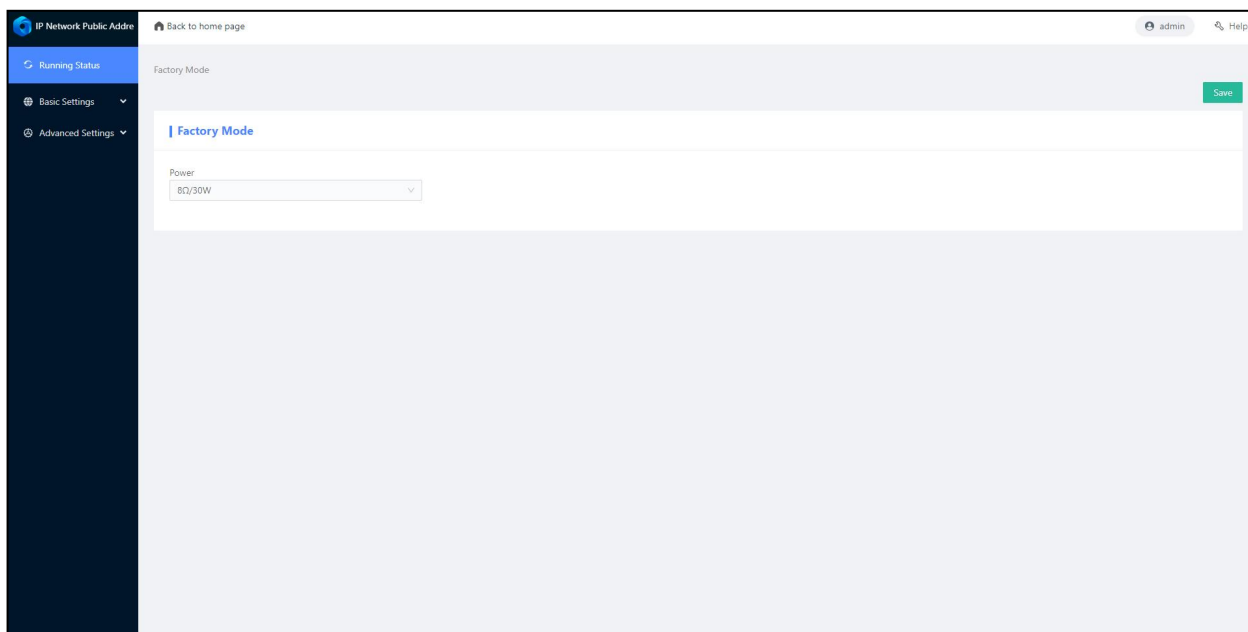
IP outdoor column loudspeaker can automatically record the running process and generate logs, and support users to download system logs.



### 4.2.14 Factory Mode

Click on the  icon 10 times on the upper left corner of any interface of web page to enter to the factory mode.

In factory mode, the output amplitude can be adjusted, it supports 8Ω/10W, 8Ω/20W, 8Ω/30W three kinds of power, the default is 8Ω/30W.



## 4.3 Basic functions

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### 4.3.1 Initiate broadcast

Closing the terminal alarm input port will trigger the server broadcast task.

**Note:** You need to go to **Basic Settings--Alarm Params** of web interface, select the “server task” as task type first.

### 4.3.2 Receive broadcast

Support receiving broadcasts initiated by servers or other terminals.

### 4.3.3 Initiate Intercom

Closing the terminal alarm input port will trigger the terminal to initiate intercom.

**Note:** You need to go to **Basic Settings--Alarm Params** of web interface, select the “initiate intercom” as task type, and fill in destination ID, destination IP, destination port first.

### 4.3.4 Receive Intercom

Support receiving intercom initiated by other terminals.

### 4.3.5 Receive monitoring

Support receiving monitoring initiated by other terminals.



## 4.4 Troubleshooting

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### Device can't login the server?

1. Check whether the server software and the main control computer are started normally. Before starting the server software, it is necessary to close all firewalls (including the system's own firewall and the firewall contained in other anti-virus software);
2. Check whether the network connection is normal;
3. Check the IP settings of the device. Check whether the terminal's ID, server IP, terminal IP, gateway IP and other parameters are set correctly.

### No sound when receiving a broadcast?

1. Check whether the device is online;
2. Check whether the terminal volume on the server and web page broadcast output volume are 0, if so, increase the volume.

### The Web page is displaying abnormally?

Clear caches or change browser.

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