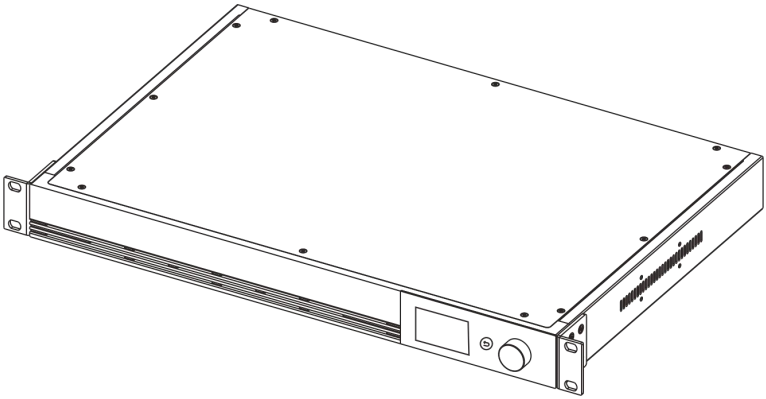
SPON

# Network Integrated Amplifier

# USER MANUAL



www.sponcomm.com

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# Manufacturer's Reference

**SPON Communications Co., Ltd is the holder of the following certificates:**

- ISO 9001:2015 OUALITY MANAGEMENT SYSTEM CERTIFICATE.
- ISO/IEC 20000-1:2018 INFORMATION TECHNOLOGY-SERVICE MANAGEMENT CERTIFICATE OF CONFORMITY.
- ISO/IEC 27001:2022 INFORMATION SECURITY MANAGEMENT SYSTEM CERTIFICATE OF CONFORMITY.
- ISO 14001:2015 ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE.
- ISO 45001:2018 OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATE.
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The information in this guide is subject to modification without prior notice.
This manual is only used as a guide, and the statements made do not constitute any form of warranty.
The user shall bear full responsibility for the application of the product, SPON does not

assume any responsibility for any indirect or incidental losses caused by the incorrect use of this guide.

# Important Safety Precaution

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

## During Installation

**Avoid humidity:**

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

**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.

**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

**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).

**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.

**Do not touch the device when it thunders:**

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

**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.

**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.

# 1. System Application Examples

## 1.1. About This Manual

**This manual covers the following models:**

| Product Type | Model Number | Power Output |
|---|---|---|
| Network Integrated Amplifier | GEN-5301P13 | 130W |
| Network Integrated Amplifier | GEN-5301P26 | 260W |
| Network Integrated Amplifier | GEN-5301P36 | 360W |
| Network Integrated Amplifier | GEN-5301P50 | 500W |

## 1.2. System Requirements

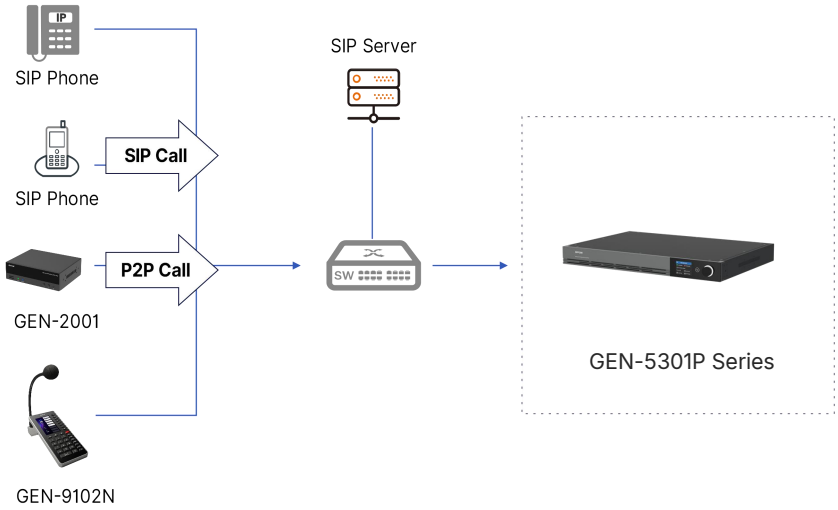
**Recommended PC operational environments are as follows:**

| | |
|---|---|
| Display | Resolution: 1920x1080 |
| OS(64bit) | Windows10~Windows 11 |
| Browser | Microsoft Edge \ Google Chrome |

# 2. Introduction to System Scenario Functions

| | **Initiator** | **Recipient** | **Connected Attachments** |
|---|---|---|---|
| **SIP to Local Broadcast** | GEN-9102<br>GEN-2001<br>SIP Phone | GEN-5301P Series | N/A |
| **VMS to Local Broadcast** | VMS Client | | |
| **Note**: The specific functions and interfaces of the equipment will be adjusted according to the product form of the equipment, please refer to the actual product specifications parameters prevail. | | | |

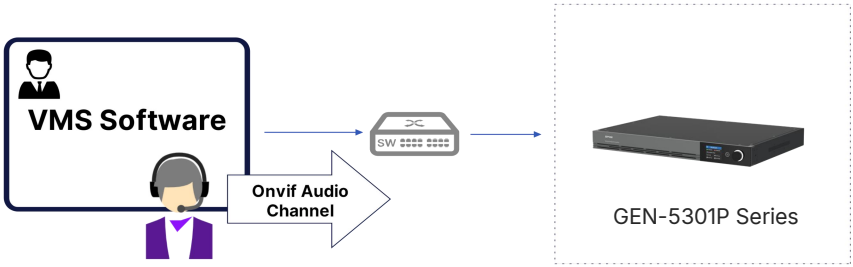
## 2.1. SIP to Local Broadcast




| **By registering the device with SIP Server or using P2P calling, you can make the receiving end play broadcasts. For the broadcast settings via SIP Phone or using P2P calling, refer to the following setup procedure** | | |
|---|---|---|
| **Setup 1** | Login to devices WEB<br>-Default username and password are both admin | Login |
| **Setup 2** | Ensure that the IP address of the device and the SIP server and SIP Phone can communicate with each other, and fill in the correct SIP account information.<br>-SIP server address, port, SIP account, password and other information provided by the SIP server provider<br>-P2P-type broadcasts, requiring the originator to support P2P calls (GEN-9102 or GEN-2001 recommended) | SIP |
| **Setup 3** | Setting the broadcast priority<br>-Adjust pattern prioritization as needed | Priority |
| **Setup 4** | Reboot<br>-After setting the parameters, you need to reboot the device to | Maintain |

| | | |
|---|---|---|
| | take effect | |
| **Setup 5** | Adjusting the broadcast volume<br>-Volume can be fine-tuned through the broadcast program and the total output volume can be adjusted through audio parameters<br>-Volume adjustment according to the site environment and actual use requirements | Audio |

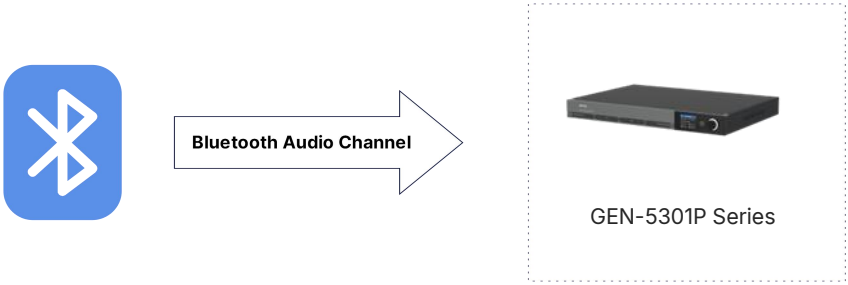
## 2.2. VMS to Local Broadcast




| **By registering the device with or connecting it to NVR or VMS, VMS broadcasting can be performed using the microphones connected to these clients. For VMS Broadcast Settings, please refer to the following setup procedure.** | | |
|---|---|---|
| **Setup 1** | Login to devices WEB<br>-Default username and password are both admin | Login |
| **Setup 2** | Enable ONVIF protocol functionality and add devices via NVR or VMS<br>-Default ONVIF protocol port: 9090; default user name: admin; default password: 123456<br>-For details on how to set up MICs and speakers for NVR and VMS, see the NVR and VMS User's Manuals | ONVIF |
| **Setup 3** | Setting the broadcast priority<br>-Adjust pattern prioritization as needed | Priority |
| **Setup 4** | Reboot<br>-After setting the parameters, you need to reboot the device to | Maintain |

| | | |
|---|---|---|
| | take effect | |
| **Setup 5** | Adjusting the broadcast volume<br>-Volume can be fine-tuned through the broadcast program and the total output volume can be adjusted through audio parameters<br>-Volume adjustment according to the site environment and actual use requirements | Audio |

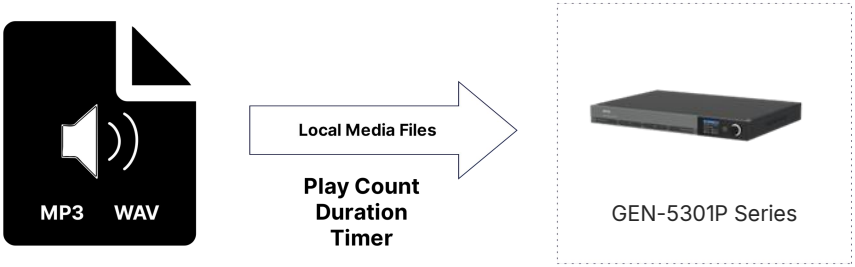
## 2.3. Bluetooth to Local Broadcast




| | | |
|---|---|---|
| **Setup 1** | Login to devices WEB<br>-Default username and password are both admin | Login |
| **Setup 2** | Log in to the device's Web interface.<br>Navigate to the "Bluetooth" settings page.<br>Enable the Bluetooth function and enter a new Bluetooth name (optional).<br>Save the settings and restart the device to apply the changes. | Bluetooth |
| **Setup 3** | Setting the broadcast priority<br>-Adjust pattern prioritization as needed | Priority |
| **Setup 4** | Reboot<br>-After setting the parameters, you need to reboot the device to take effect | Maintain |
| **Setup 5** | Adjusting the broadcast volume<br>-Volume can be fine-tuned through the broadcast program and | Audio |

| | | |
|---|---|---|
| | the total output volume can be adjusted through audio parameters<br>-Volume adjustment according to the site environment and actual use requirements | |

## 2.4. Media Files to Local Broadcast




| | | |
|---|---|---|
| **Setup 1** | Login to devices WEB<br>-Default username and password are both admin | Login |
| **Setup 2** | Upload media files to the device<br>-Built-in 80MB media storage space, support MP3, WAV file format (8K~48KHz) | Media |
| **Setup 3** | Create a broadcast pattern<br>-Setting the name of the broadcasting program, media files, number of times to be played, playback interval, playback time, etc. | Pattern |
| **Setup 4** | Setting the broadcast priority<br>-Adjust pattern prioritization as needed | Priority |
| **Setup 5** | Reboot<br>-After setting the parameters, you need to reboot the device to take effect | Maintain |
| **Setup 6** | Adjusting the broadcast volume<br>-Volume can be fine-tuned through the broadcast program and the total output volume can be adjusted through audio parameters | Audio |

| | | |
|---|---|---|
| | -Volume adjustment according to the site environment and actual use requirements | |

# 3. Product Introduction

Network Integrated Amplifier supports AC power supply. This network-integrated amplifier features a built-in Class-D digital amplifier and supports 100V/70V output. It can receive SIP calls from phones or VMS (Video Management System) platforms, handle up to 20 multicast streams, and store up to 20 audio files. In addition, it includes priority management, a timer, Bluetooth connectivity, and custom actions that can be triggered via HTTP API.

## 3.1. Product Features

- 1U standard rack-mount design, compatible with rack, desktop, and wall-mount installation methods.
- Built-in Class D digital power amplifier, supporting 70V/100V constant voltage output and integrated with multiple protections (overload, overheating, etc.)
- Equipped with a 2.0-inch high-definition display + jog dial, supporting network parameter visualization and input/output volume adjustment.
- Built-in Bluetooth module, compatible with mobile phones, tablets, and other devices for local Bluetooth playback.
- Multiple audio inputs: 1 MIC (Microphone) input, 2 LINE inputs.
- Rich IO interfaces: 2 alarm inputs, 1 alarm output.
- Supports DC24V forced-cut output, directly connectable to volume controllers.
- Built-in 80MB audio storage, supporting file upload via WEB interface

## 3.2. Product Specification

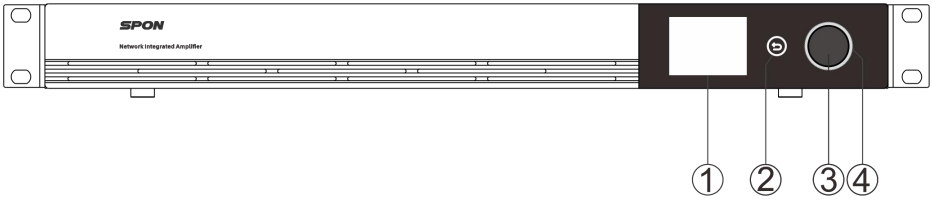
| Product Specification | | | | |
|---|---|---|---|---|
| Model Number | GEN-5301P13 | GEN-5301P26 | GEN-5301P36 | GEN-5301P50 |
| Input Voltage | 100V~240VAC,50/60Hz | | | |
| Standby Power Consumption | ＜10W | | | |
| Maximum Power Consumption | ＜160W | ＜310W | ＜420W | ＜580W |
| Amplifier Topology | Class-D | | | |
| Frequency Response | 130Hz~18KHz(±3dB) | | | |
| THD+N | ＜0.1%@1KHz | | | |
| SNR | ⩾85dB | | | |
| Audio Input Connectors | Line In 1#: Balanced,500mV<br>Line In 2#: Balanced,500mV<br>Mic In:1 x 6.5mm TRS, Balanced,50mV<br>Bluetooth:1 x IPX1 External 2.4G Antenna<br>Network:1 x RJ45 Connector | | | |
| Audio Output Connectors | 1 x 4-Pin Phoenix Connector (Power Output)<br>2 x RCA Jacks (AUX Output) | | | |
| Audio Output Power | 70V/100V@130W | 70V/100V@260W | 70V/100V@360W | 70V/100V@500W |

| | |
|---|---|
| Audio Transmission | Multicast, x 20(Editable) |
| Audio Codec | Opus, PCMU (G.711u), PCMA (G.711a), G.722 |
| Audio Stream | WAV(8/16/22/44.1/48 kHz sampling rate, 8/16 bits, mono/stereo),<br>MP3(32/44.1/48 kHz sampling rate, 64-320kbps, CBR/VBR, mono/stereo). |
| Audio Storage | Max 20 audio files ,80MB |
| Audio File Format | WAV, MP3 |
| Network I/F | 100BASE-TX, RJ45 Connector |
| Network Protocol | TCP/IP, UDP, HTTP, RTP, RTSP, ARP, ICMP, NTP, SIP, ONVIF |
| Config Method | Web Interface or DevConfig Tool |
| USB | USB 2.0 |
| Control Input | x 2, 1 x 3-Pin Phoenix Connector |
| Control Output | x 1, 1 x 3-Pin Phoenix Connector |
| EMC Out | x 1, DC24V/2A |
| Accessory (Reserved) | x 1 |
| Mounting Method | Desktop, Wall Mount, Rack Mount |
| Installation Environment | Indoor Locations |

| | |
|---|---|
| Housing Material | Sheet Metal |
| Color | Gray + Black |
| Dimensions | 483 x 317 x 44mm |
| Weight | 4.2kg |
| Operating Temperature | 0°C~+50°C |
| Warranty | 2 Years |

## 3.3. Product Interfaces

### 3.3.1. Front Panel



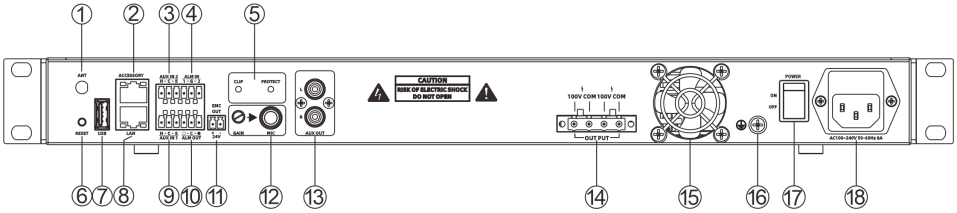

**①Display Screen:** Displays information including network parameters.

**②Back Button:** Views parameters on the display screen and returns to the previous menu.

**③Shuttle Knob:** Used for menu selection on the display screen; press to enter the selected menu.

**④Indicator Light:** Illuminates steadily by default; flashes when receiving a task.

### 3.3.2. Rear Panel




**①Antenna Interface:** External Bluetooth Antenna.

**②Accessory Interface:** Reserved.

**③/⑨Audio Input Interface:** For external audio source connection and local sound reinforcement.（H:Hot end，C:Cold end，E:Earth end）.

**④Alarm Input Terminal:** Used for receiving external dry contact signal triggers. Configurable Interlinked Tasks, including: Pattern, Broadcast disable.

**⑤Power Amplifier Status Indicators:**

**CLIP:** Red light keeps on when the input signal is oversize or output is overload.

**PROTECT:** The light keeps on under protection or malfunction status of the amplifier module.

**⑥Reset Button:** Press and hold the reset button for 10 seconds, then release. The device will automatically restart.

**⑦USB Interface:** Supports USB drives in FAT32 format.

⑧**RJ45 Connector:** Insert the network cable to connect to the Ethernet switch, so that the device can log in to the server normally.

⑩**Alarm Output Terminal:** When a relevant task is received, it can trigger a short-circuit output signal.

(●-NC: Normally Closed；C-COM: common；O-NO: Normally opened).

⑪**Strong Cut DC24V Output Interface:** Maintains consistency with the alarm output status; when a relevant task is received, it can output a DC24V strong cut signal.

⑫**MIC Input Interface:** Used for dynamic microphone connection and local sound reinforcement; The GAIN knob is used to adjust the MIC volume.

⑬**Audio Output Interface:** Line output interface.

⑭**Power Output Port:** Default constant voltage 100V output, support to set as 70V output on webpage.

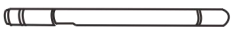
⑮**Cooling Fan:** When installing, ensure that the fan outlet is not blocked, and try to keep a distance of more than 10cm.

⑯**Ground Terminal:** To ensure the safety and reliability of the equipment, ground terminal must be connected to the earth.

⑰**Power Switch:** Control the on & off of the power.

⑱**Power Input Interface.**

## 3.4. Product Packing List



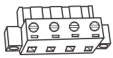
2.4G glue stick antenna 1pcs

Power cord 1pcs ($3*1.0mm^2$/1.5m) (Optional)

Countersunk Cross Screw 8pcs(M3*6)

Foot pad 4pcs(FF-7)

Wiring Terminal 2pcs（3. 81-6P）



Wiring Terminal 1pcs（7.62-4P）

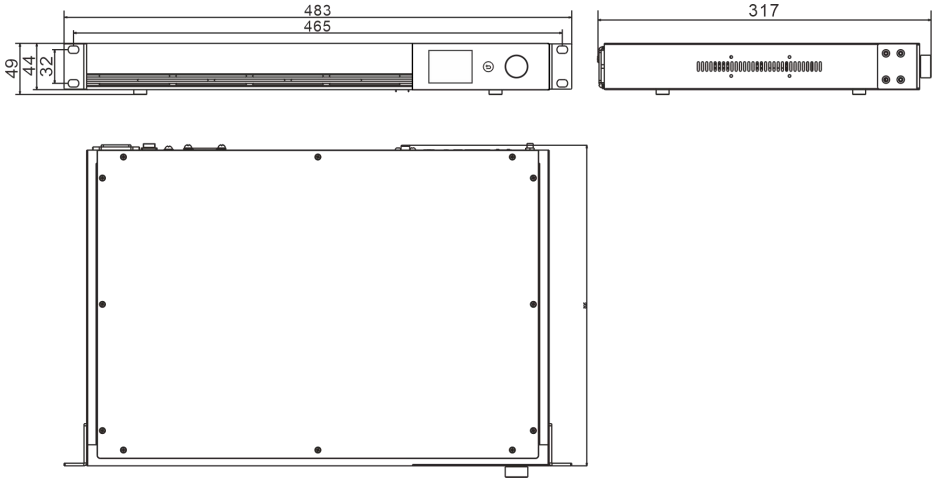
Hangers 2pcs

Wiring Terminal 1pcs（3. 81-2P）

Installation Instruction 1pcs

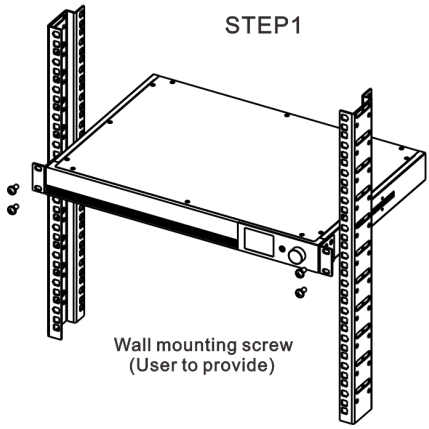
Certification 1pcs

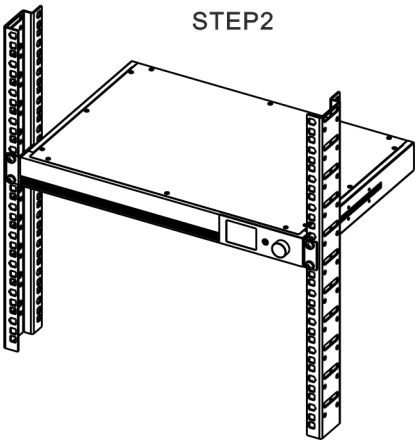
## 3.5. Product Dimensions（Unit: mm）



## 3.6. Installation Diagram

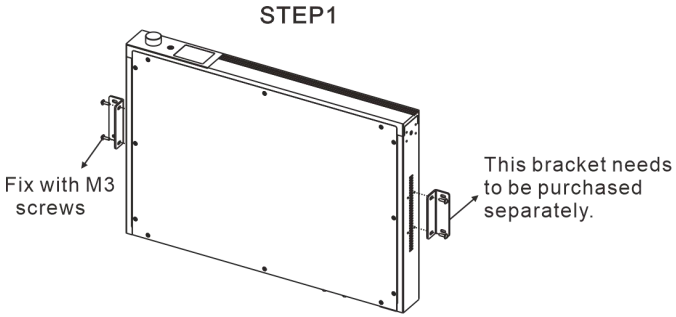
**[Mounting the rack]**



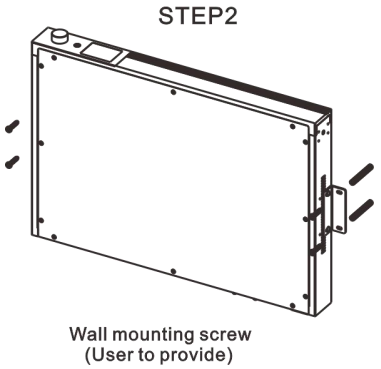
**[Mounting on the wall]**

Prepare a commercially available L-shaped bracket, etc, and fix it with the accessory screws using the four screw holes of this unit.




**Note**

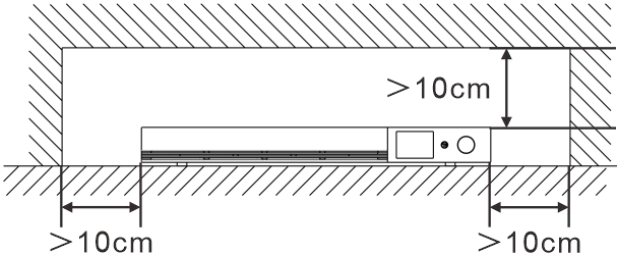
Use metal fittings of sufficient strength and install in a place with sufficient strength.




**[Desktop Installation]**

**Note**

To prevent the internal equipment temperature from rising, please keep a 10cm distance between all sides of the device and other objects; otherwise, air circulation may be blocked.



# 4. Product Configuration

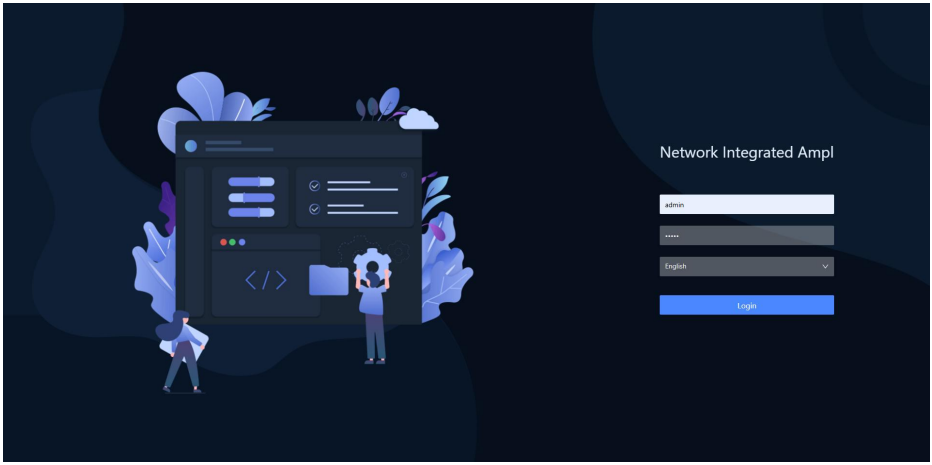
## 4.1. Web Page Parameter Configuration

### 4.1.1. Login To Web Page

(1) Please enter the IP address of the Network Integrated Amplifier in the address bar of the browser (the default IP address is 192.168.1.101), and then press enter.

(2) Enter the username, and password on the login page.

(3) Press login to enter the Devices web page.




Notes:

-Before accessing the device, make sure that the PC network and the device network can communicate with each other.

-Default Network Parameters:

IP address: 192.168.1.101; Subnet mask: 255.255.255.0; Gateway: 192.168.1.1

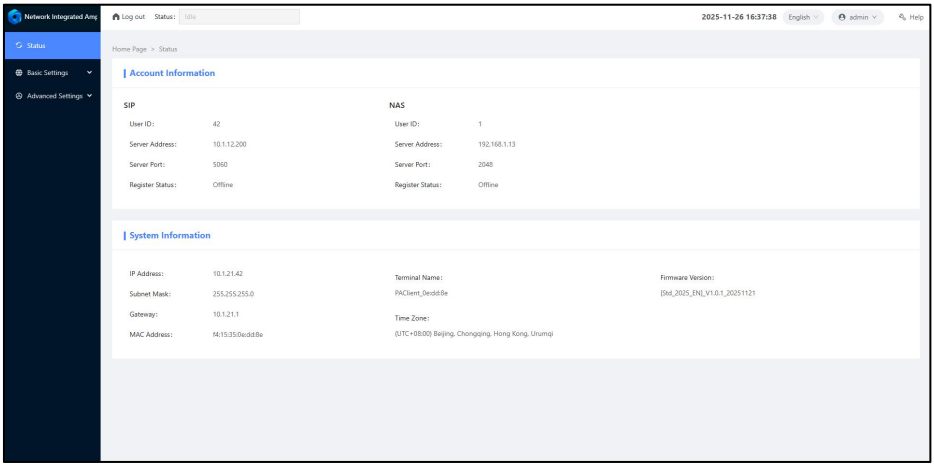
-Default username and password are both admin

-If the relevant parameter modification in the web page does not take effect after saving, please clear the cache and set them again.

-Avoid multiple PCs or multiple browsers accessing WEB at the same time, the new login will force the old access to quit. And the default logout timeout is 60s when the access has no operation.

### 4.1.2. Running Status

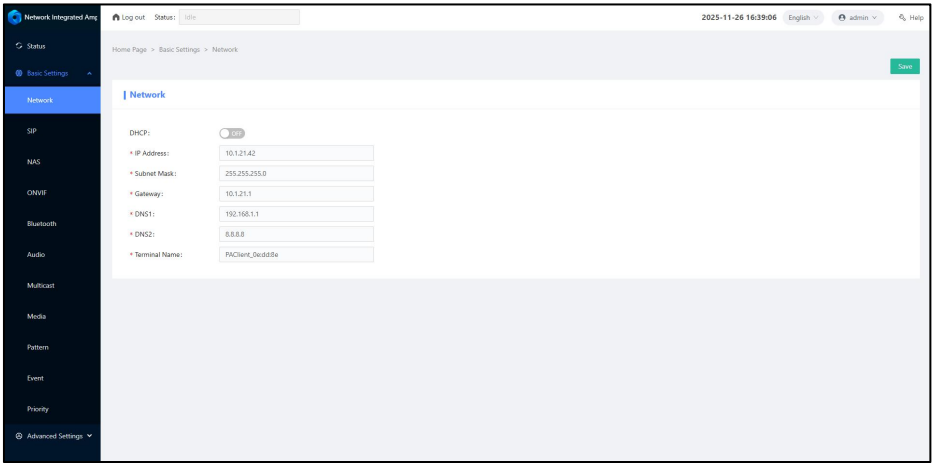
When the login to the WEB page is successful it will display the information of: Terminal ID, device IP address, default gateway, device MAC address and other information.



### 4.1.3. Basic Settings

#### 4.1.3.1. Network

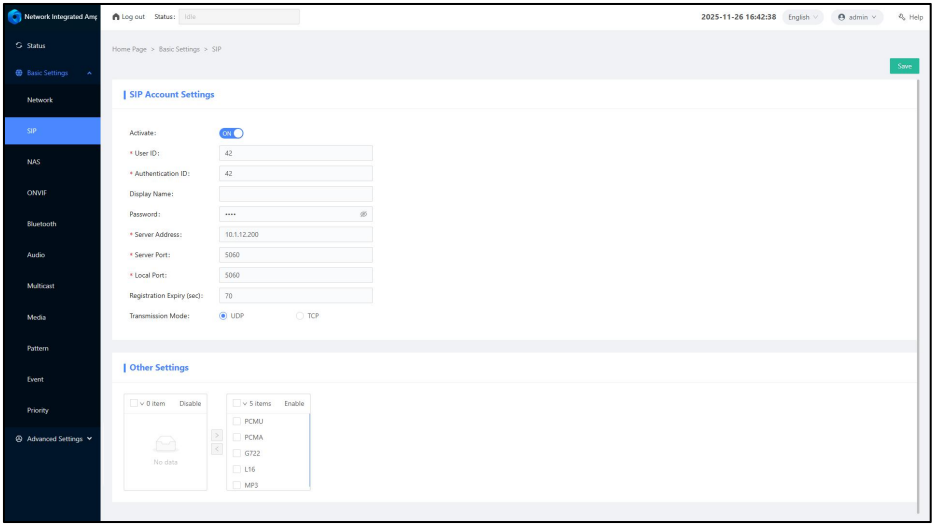
Please set the terminal network parameters according to the live environment. click on [save] button after setting, the parameters will take effect after reboot.




| Network | |
|---|---|
| DHCP | When DHCP is enabled, obtain IP, DNS, and other parameters from the DHCP server. |
| IP Address | When set to a static IP can set the IP address of the device. Only private addresses can be entered.<br>Initial setting: 192.168.1.101 |
| Subnet Mask | When set to a static IP can set the Subnet Mask of the device.<br>Initial setting: 255.255.255.0 |
| Gateway | When set to a static IP can set the Gateway of the device.<br>Initial setting: 192.168.1.1 |
| DNS1/2 | When set to a static IP can set the primary DNS server address and the secondary DNS server address.<br>Modify these according to your actual situation when using the device. |
| Terminal Name | The host name carried in the request information after enabling DHCP. Valid only in a DHCP usage environment. The name will be displayed in the client list of the DHCP server |

### 4.1.3.2. SIP

Set configuration parameters related to SIP.

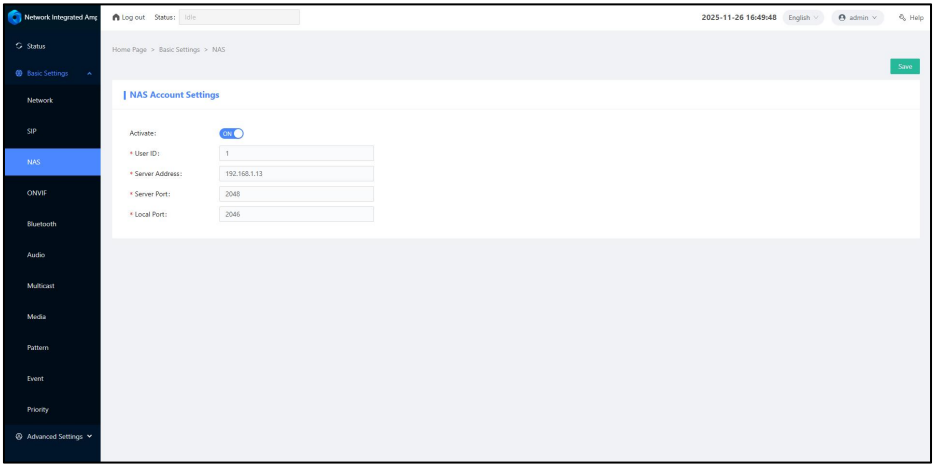



| SIP | |
|---|---|
| Activate | Enable account activation to send a registration request to the specified SIP server address. Enabled by default. |
| User ID | Configure the ID for registering with the SIP server.<br>The default ID is 2. |
| Authentication ID | Configure the authentication ID on the SIP server; by default, it is the same as the User ID. The default ID is 2. |
| Display Name | The local name displayed on the other terminal during SIP intercom. |
| Password | Password for terminal to login to SIP server, default is 1234. |
| Server Address | IP address of the SIP server that the terminal logs into. Please enter the correct IP address of the SIP server.<br>When the SIP server address is in domain name format, you need to modify the DNS server that can resolve this domain name. |
| Server Port | Configure the SIP Server port according to the actual situation, the default is 5060. |
| Local Port | Configure the port used for the device to register with the SIP server; default is 5060. |
| Registration Expiry(sec) | Configure the registration interval for the SIP server ID; the unit is seconds. The default value is 70. |
| Transmission Mode | Configure the transport protocol for registering with the SIP server; adjust according to your actual situation. The default is UDP. |

| | |
|---|---|
| Audio Coding | Supports PCMU, PCMA, G722, L16, and MP3 encoding methods, with priority ordered from top to bottom. To adjust the audio coding priority, move the desired coding method to the left selection box and then select it to move to the right to complete the configuration.<br>Note: When establishing communication using L16 or MP3 encoding, the receiving end only receives (suitable for SIP broadcasting). For two-way SIP intercom, please select PCMU, PCMA, or G722 audio codecs. |

#### 4.1.3.3. NAS

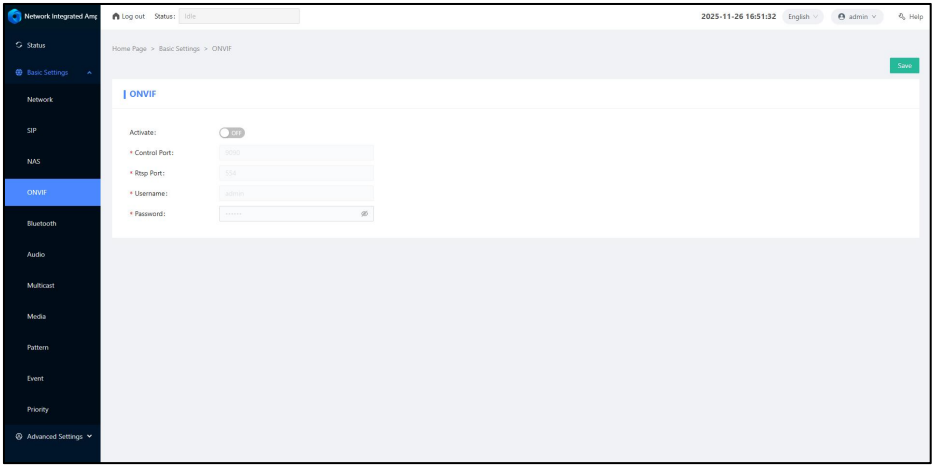
The NAS protocol is applicable to our company private protocol and can be adapted for use on both the XC-9000 server software and the built-in server software.




| NAS | |
|---|---|
| Activate | Enable account activation to send a registration request to the specified NAS server address. Enabled by default. |
| User ID | Configure the ID for registering with the NAS server; Default ID is 1. |
| Server Address | IP address of the NAS server that the terminal logs into. Please enter the correct IP address of the NAS server.<br>When the NAS server address is in domain name format, you need to modify the DNS server that can resolve this domain name. |
| Server Port | Configure the NAS Server port according to the actual situation, the default is 2048. |
| Local Port | Set the port used by the local device to log in to the NAS server. The default value is 2046. |

#### 4.1.3.4. ONVIF

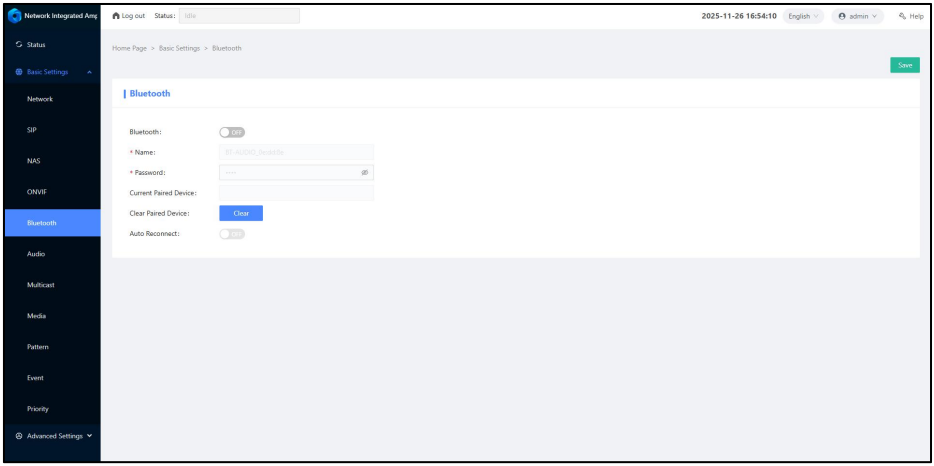
Set ONVIF related parameters for credentials used to connect to VMS, NVR.




| ONVIF | |
|---|---|
| Activate | When enabled, the terminal will support the ONVIF protocol and can perform bidirectional transmission of audio streams with the VMS platform. default is disabled. |
| Control Port | The port used for ONVIF protocol communication; the default is 9090. |
| Rtsp Port | The port used for media data negotiation; the default is 554. |
| Username | The username used for ONVIF authentication. Default: admin |
| Password | The password used for ONVIF authentication. Default: 123456 |

### 4.1.3.5. Bluetooth

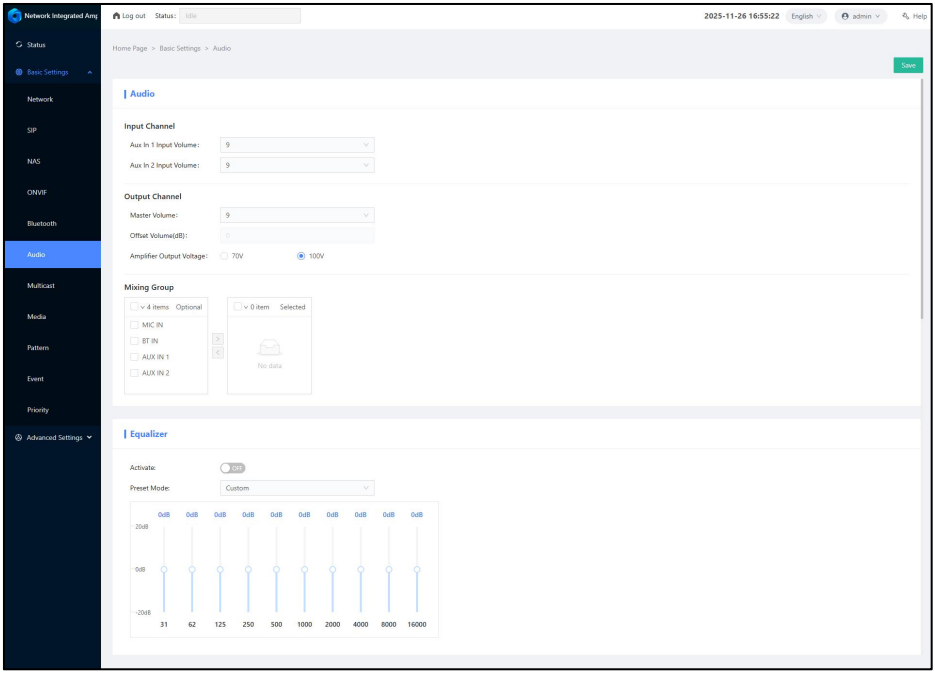
Configure the parameters related to Bluetooth connections.




| Bluetooth | |
|---|---|
| Bluetooth | Enable Bluetooth connection; default is disabled. |
| Name | Editable Bluetooth name for discoverable devices; by default, it includes the last six digits of the device's MAC address. |
| Password | The pairing code used for connecting Bluetooth devices; the default is 1234. |
| Current Paired Device | Display the name of the currently paired device. |
| Clear Paired Device | Click the button to clear paired remote devices. |
| Auto Reconnect | Enabled: When a paired device is detected, the audio Bluetooth will be automatically reconnected;<br>Disabled: When the audio Bluetooth is disconnected for more than 2 minutes, paired devices will be automatically cleared. |

### 4.1.3.6. Audio

Configure the parameters related to input and output volume and channels.

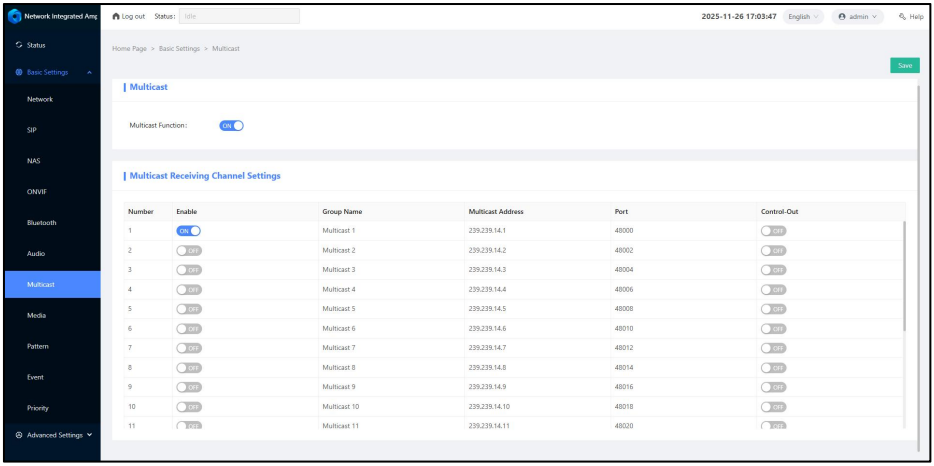



| Audio | |
|---|---|
| Aux In 1 Input Volume | Set the input volume of local audio input 1. |
| Aux In 2 Input Volume | Set the input volume of local audio input 2. |
| Master Volume | Set the audio output volume for local tasks (does not take effect when Bluetooth, microphone, and aux audio source is active). |
| Offset Volume(dB) | Display the setting value of the master volume offset volume correction. Offset volume correction is set remotely by external devices or LCD screens and cannot be adjusted through a browser. |
| Amplifier Output Voltage | Set amplifier output voltage (70V/100V). |
| Mixing Group | Supports 4-channel input audio mixing (MIC IN/BT IN/AUX IN 1/AUX IN 2), and the priority page will be updated synchronously after configuration adjustments |
| Equalizer | Equalizer: Optimizes sound quality by boosting or attenuating signals in specific frequency bands.<br>When enabled, supports six preset modes — Bass, Pop, Classic, Rock, Speech, and Custom — for switching. Changes are saved |

| | |
|---|---|
| | and take effect in real time. The Custom mode allows adjustment of ten frequency bands, each ranging from -20 dB to +20 dB. Other modes only display preset values and do not support custom adjustment. Default is disabled. |

### 4.1.3.7. Multicast

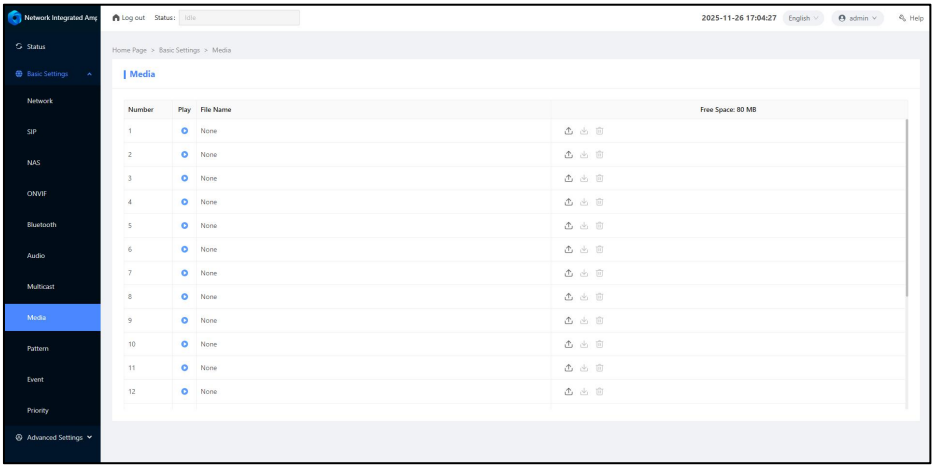
Set the terminal Receive multicast parameters, click on [save] button after setting, the parameters will be applied immediately.




| Multicast | |
|---|---|
| Multicast Function | Enable or disable multicast reception function. |
| Enable | Enable or disable single channel multicast reception. |
| Group Name | Set the name of the multicast reception address for quick identification of the target type or area. Users can modify this according to their needs. Default multicast 1~20. |
| Multicast Address | Multicast reception address, which follows the Class D IP Address Range. Default parameters: 239.239.14.1 ~ 239.239.14.20. |
| Port | Multicast reception port, default parameters: 48000 ~ 48038. |
| Control-Out | Enable or disable linkage alarm output. |

#### 4.1.3.8. Media

Upload media files to be played when the corresponding task is triggered. Maximum supported storage space is 80MB.




| Media | |
|---|---|
| Play | Play uploaded media files via the WEB page (recommended to use Chrome browser for operation) |
| File Name | The name of the currently uploaded media file, cannot be modified on the web page. |
| | -Upload: Upload audio media files (supports mp3, wav)<br>-Download: Download audio media files from the terminal device via the current WEB<br>-Delete: Delete audio media files from the terminal device via the current WEB |
| Free Space | Display the remaining media storage space on the device. This will be recalculated and shown each time a file is uploaded. Maximum supported storage space is 80MB |

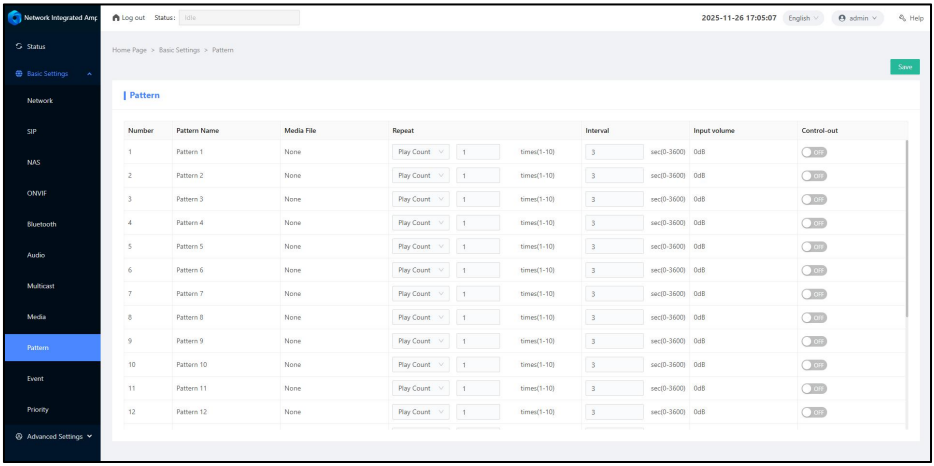
Notes:

-Supported file formats: WAV (8/16/22/44.1/48 kHz sampling rate, 8/16 bits, mono/stereo) , MP3(32/44.1/48 kHz sampling rate, 64-320 KBPS, CBR/VBR, mono/stereo).

-Maximum file size: no more than 50mb for a single file and no more than 80MB for total storage.

#### 4.1.3.9. Pattern

Set the configuration for the broadcast file playback mode. When external signals, buttons, timers, or other operations trigger an event, the corresponding broadcast operation will be executed.




| Pattern | |
|---|---|
| Pattern Name | Used for modifying the name of the broadcast mode, facilitating the management of different broadcasting methods. |
| Media File | Matches the media file that needs to be played. Detailed configuration needs to be done in the Media section. |
| Repeat | Play Count: The number of times to play is the loop count of the Media File;<br>Duration: The duration is the total playback length of the media file.<br>Timer: Set up a scheduled task to run periodically within the time range of specific days and hours each week |
| Interval | The time interval before playing the next media file after the current media file of files has finished playing.<br>The maximum Interval for file playback is 3600 seconds. |
| Input Volume | Adjust the output gain for the playback of media files |
| Control-out | When the corresponding broadcast mode is triggered, simultaneously switch the short-circuit output state |

Notes:

This unit supports Remote Control by external devices.

**①Command format**

http://admin(username):admin(password)@<IP_address>/api/v1/<Command_type>/<Command>?<Parameter1=value1>&<Parameter2=value2>

**②Command list**

| Command Type | Command | Parameter1 | value1 | Parameter2 | value2 |
|---|---|---|---|---|---|
| control | pattern/play | pattern_number | 1-20 | destination | speaker |
| control | pattern/stop | pattern_number | 1-20 | | |
| control | reboot | | | | |

**③Command Example**

Basic info. Username=admin, password=admin, IP address=192.168.1.101

- Example1: Play pattern5;

http://admin:admin@192.168.1.101/api/v1/control/pattern/play?pattern_number=5&destination=speaker

- Example2: Stop pattern9;

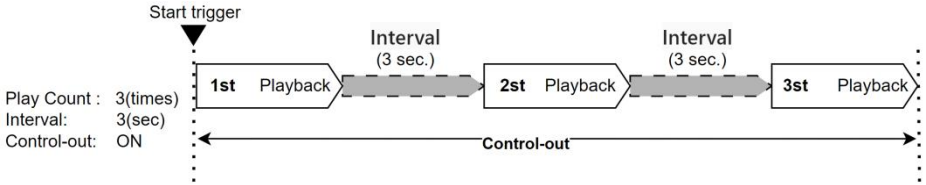
http://admin:admin@192.168.1.101/api/v1/control/pattern/stop?pattern_number=9

- Example4: reboot the unit;

http://admin:admin@192.168.1.101/api/v1/control/reboot

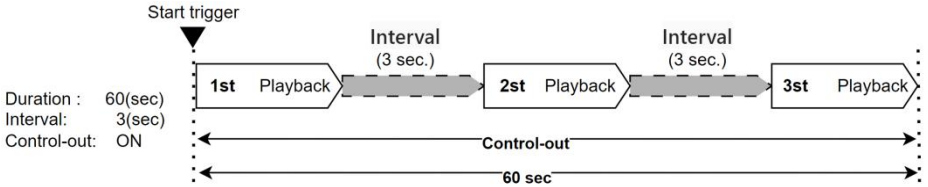
**[If Play Count is selected]**

Designate the number of times the sound source playback will be repeated. The following operation is performed when Edge is selected as the Signal Mode and the start trigger is a control input, or if the receiving device is externally controlled by remote API.



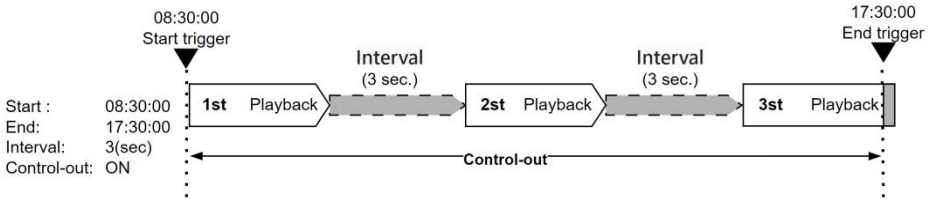

**[If broadcast duration is selected]**

Designate the duration of repeated play. The following operation is performed when Edge is selected as the Signal Mode and the start trigger is a control input, or if the receiving device is externally controlled by remote API.




**[If Timer is selected]**

Designate the repetition start time and end time for the sound source.




Note:

Pattern numbers set to Timer will not be enabled, even if set as event actions on the Event Settings screen. Nor can they be externally controlled by Remote API. Instead, to control the pattern by event action or Remote API, set it to Play Count or Duration. Patterns set as Timer are only enabled as determined by the timer settings.

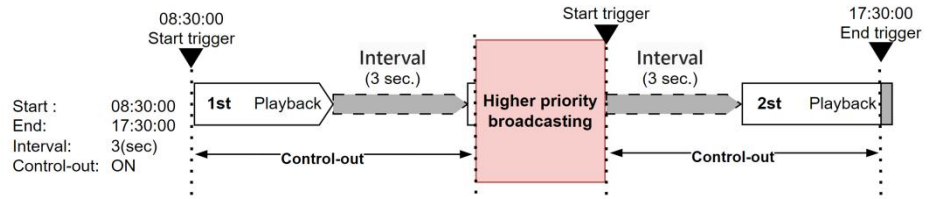
• The start time and end time cannot be set to the same value.

**Tips:**

The broadcast execution time cannot be executed across days, for example, if you need to set up a broadcast task that starts at 17:00 PM and ends at 6:00 AM the next day, you need to configure two time points: first, configure 17:00:00~23:59:59; then, configure 0:0:0~6:0:0

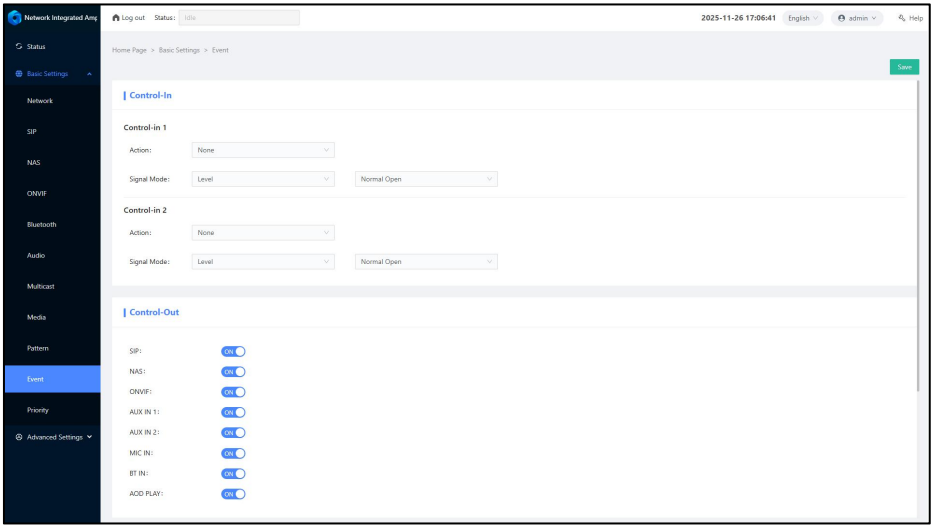
• To play the sound source only once, without performing repeat play, set an end time based on the length of the sound source play.

• If another higher priority broadcast is enabled between the start time and end time, the broadcast will behave as follows:



#### 4.1.3.10. Event

Set the tasks to be triggered when the terminal alarm input interface is activated. These tasks can include initiating a SIP call, triggering a pattern, broadcast Disable, and other operations to meet different usage scenarios.

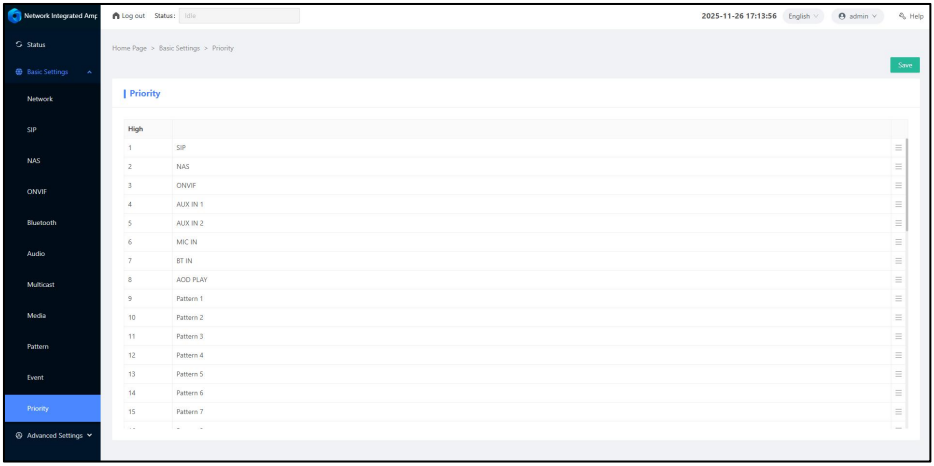



| Event | |
|---|---|
| Control in | Configure to trigger the operation of the corresponding target task when a change in a particular short-circuit input signal occurs. |
| Action | The actions support triggering the following types:<br>Pattern, and Broadcast Disabled.<br>Select Pattern to be triggered for playback tasks on the local machine only.<br>Broadcast Disabled is a mute operation that only becomes effective when the signal trigger mode is set to level type. Upon being triggered, it will shut down all audio output channels on the device without affecting other task statuses. |
| Signal Mode | Trigger signals include level signals and edge signals.<br>Level signals are of the type that requires continuous triggering, such as using a self-latching switch to trigger.<br>Edge signals are for instantaneous trigger detection, like using a push-button switch to trigger.<br>Normally open/Normally closed detection is for judging changes in alarm states. When setting a Normally open alarm, it is necessary to ensure that the corresponding short-circuit input's initial state of the device is closed, and an alarm will be triggered when it opens. Conversely, the same principle applies. |

| | |
|---|---|
| SIP/NAS/ONVIF/AUX IN 1/AUX IN 2/MIC IN/BT IN/AOD PLAY to Control-Out | When the device receives a SIP, NAS, ONVIF, AUX IN 1, AUX IN 2, MIC IN, BT IN, AOD PLAY task, it adjusts the alarm output interface state based on the task type. |

#### 4.1.3.11. Priority

Set the task priority, ranked from high to low. Users can drag the icon on the right side of the table to freely sort the tasks.




| Priority Settings | |
|---|---|
| Priority | Priority ranking starts at 1 as the highest, decreasing sequentially. |

**Recommendations for use:**

-High priority tasks: such as emergency broadcasts or alarm signals, should always be executed first.

-Low priority tasks: such as background music or timed broadcasts, can be executed when there are no higher priority tasks.

-High-priority tasks will override low-priority tasks. Once the high-priority task is completed, the low-priority task will resume execution.

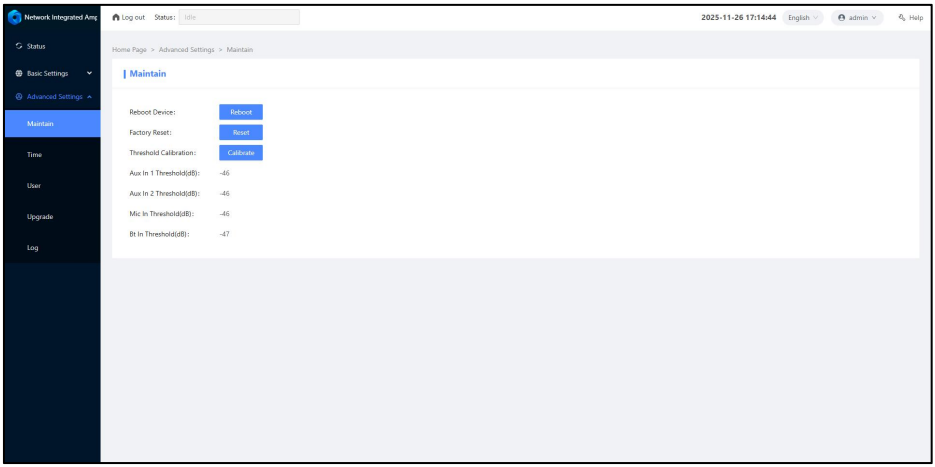
### 4.1.4. Advanced Settings

#### 4.1.4.1. Maintain

**Reboot:** Restarts the device. Use this button when applying setting changes or performing other operations that require restart.

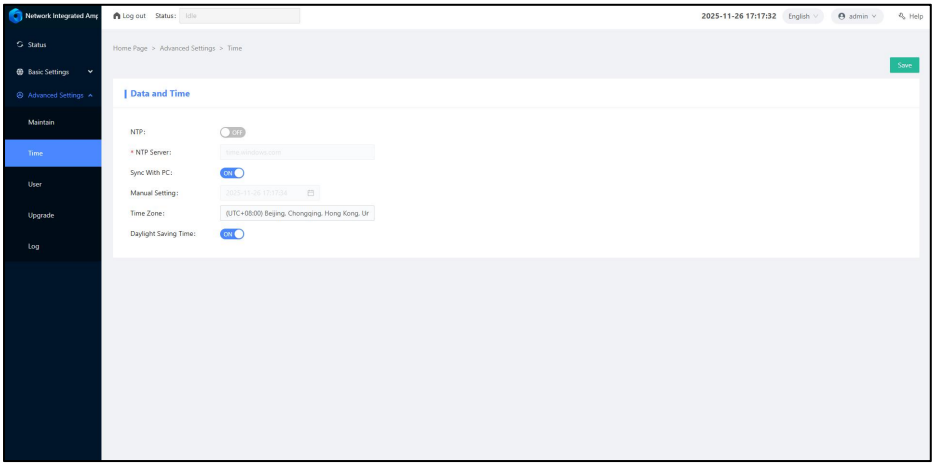
**Reset:** Resets all of the device's settings to their initial status as shipped from the factory. Internally saved sound source files will also be deleted.

**Threshold calibration:** Click this button to calibrate the Aux In 1, Aux In 2, Mic input and Bluetooth input threshold. Please ensure that there is no audio input during calibration. Line input and Bluetooth input activate based on audio signal amplitude. If tasks don't start or stop correctly, recalibrate.



#### 4.1.4.2. Time

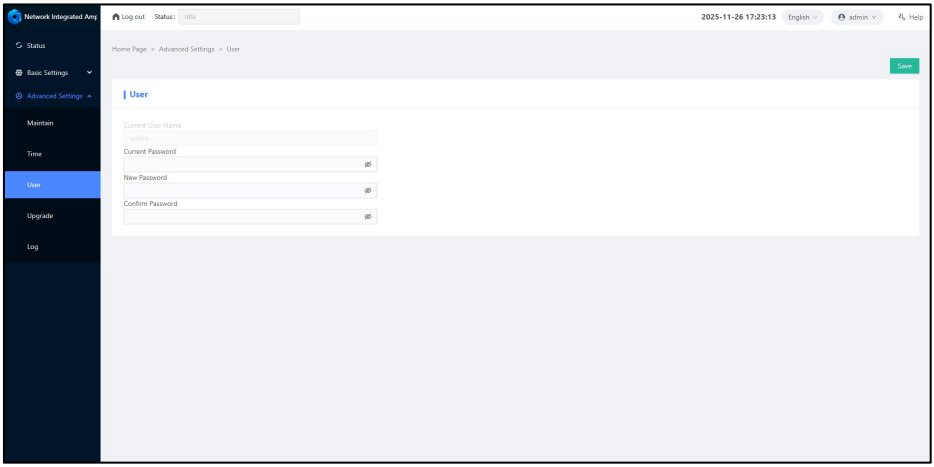
Set the device time. Click on [save] button after setting, the parameters will be applied immediately.




| Time | |
|---|---|
| NTP | When NTP is enabled, the system will request time from the specified NTP server; if you need to set the time manually, you should disable this option. |
| NTP Server | The NTP server address can be an IP address or a domain name. If you set a domain name, you need to configure the correct DNS address accordingly. |
| Sync With PC | Synchronize the time with the PC currently accessing the web based on actual needs. |
| Manual Setting | Users can set the time zone and time according to their needs. |
| Time Zone | Users can set the time zone for their current region according to their needs. |
| Daylight Saving Time | Users can set the daylight saving time (DST) configuration for their current region according to their needs. When enabled, the system will calculate the DST time based on the DST rules. |

#### 4.1.4.3. User

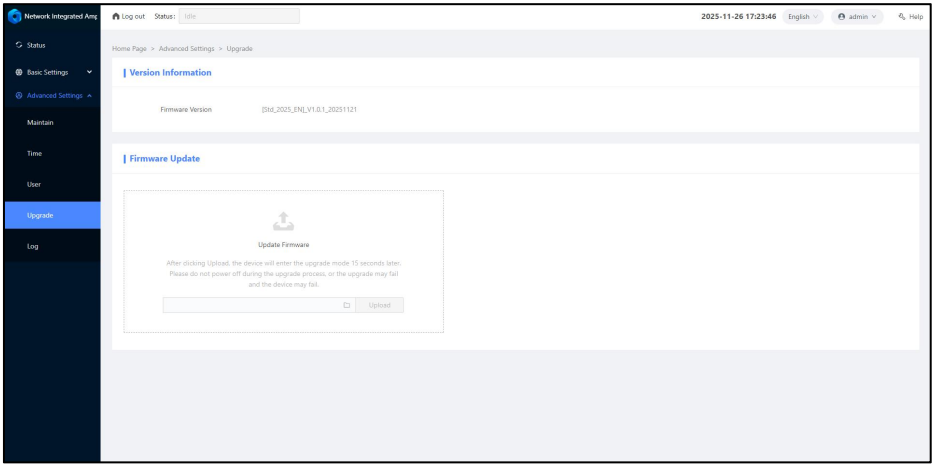
You can change the password for logging into the web page. After saving the password change, restart the web page to take effect. (Advised to change passwords periodically to ensure security).



#### 4.1.4.4. Upgrade

On the upgrade page, click on"" button, select the firmware upgrade file provided by the manufacturer, and click on "Upload" button to start the upgrade.

Note: 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, and the device and web page will restart automatically after the upgrade is completed. (Do not upgrade the firmware unless you have special needs)



#### 4.1.4.5. Log

Record the system logs and web logs of the current device for maintenance personnel to check and verify operation records.

# 5. Troubleshooting

## 5.1. Common Issues and Solutions

| Issue | Possible Causes | Solutions |
|---|---|---|
| **Unable to log in via the Web Interface** | - The device and PC are not on the same network segment.<br>- IP address conflict.<br>- Network connection issues or interruption.<br>- Firewall blocking Web access. | - Ensure the device and PC are on the same local network and check if the network connection is stable.<br>- Use tools like ping to test if the device's IP address is reachable.<br>- Verify the device's IP address settings to ensure there is no conflict.<br>- Temporarily disable the firewall or add an exception rule to allow access to the device's Web interface. |
| **Unable to connect to the SIP server** | - Incorrect SIP server address or port configuration.<br>- Network connectivity issues preventing communication with the SIP server.<br>- The SIP server is not running or is unreachable.<br>- Firewall blocking the SIP port (default 5060). | - Check the SIP server's IP address and port settings in the device's Web interface to ensure they are correct.<br>- Use ping or telnet to test the connectivity to the SIP server.<br>- Confirm that the SIP server is running and accessible.<br>- Check firewall settings to ensure the SIP port is not blocked. |
| **Low or High Audio Input Volume** | - Input volume settings are incorrect.<br>- Cable connection issues. | - Log in to the web page, go to the "Audio" page, and adjust the "MIC Input Volume" and "Local Output Volume" settings.<br>- Check the volume settings of the external input device (e.g., microphone).<br>- Check the audio input cable connections to ensure they are secure and undamaged. |
| **Poor Audio Output Quality** | - Audio codec settings are incorrect.<br>- Unstable network environment.<br>- Output device issues. | - Log in to the web page, go to the "Audio" page, and adjust the "Equalizer" settings to suit the current network environment.<br>- Check the network environment to ensure a stable connection and avoid network fluctuations.<br>- Check the audio output device (e.g., speaker) to ensure it is functioning correctly and properly |

| Issue | Possible Causes | Solutions |
|---|---|---|
| | | connected. |
| **Incorrect Multicast Address Configuration** | - Multicast address settings are incorrect.<br>- Multicast address conflict. | - Log in to the web page, go to the "Multicast" page, and check the multicast address settings to ensure they are within the Class D IP address range (239.0.0.0 - 239.255.255.255).<br>- Ensure the multicast address does not conflict with other devices, and each multicast address should be unique. |
| **Control Input Signal Fails to Trigger Task** | - Control input signal settings are incorrect.<br>- Signal mode settings are incorrect.<br>- External device connection issues. | - Log in to the web page, go to the "Event" page, and check the control input signal settings to ensure the signal mode (level signal or edge signal) is set correctly.<br>- Check the external device (e.g., switch) to ensure it is functioning correctly and properly connected.<br>- Check the control input port for damage and replace or repair if necessary. |
| **High-Priority Tasks Not Executing** | - Task priority settings are incorrect.<br>- High-priority tasks are being overridden by low-priority tasks. | - Log in to the web page, go to the "Priority" page, and check the task priority settings to ensure high-priority tasks are placed at the top.<br>- Ensure no other tasks are occupying high-priority positions and adjust the task order if necessary. |
| **System Time Not Synchronized** | - Incorrect NTP server settings.<br>- Inaccurate manual time settings. | - Log in to the web page, go to the "Time" page, and check the NTP server settings to ensure the address is correct and accessible.<br>- If manually setting the time, ensure the time is set accurately and synchronize with the PC time if necessary. |
| **Failed to Upload Media Files** | - Unsupported file format.<br>- Insufficient storage space.<br>- Network connection issues. | - Ensure the media files are in the supported formats (WAV or MP3).<br>- Check the device's remaining storage space to ensure there is |

| Issue | Possible Causes | Solutions |
|---|---|---|
| | | enough space for media files.<br>- Check the network connection to ensure stability during file upload. |
| **Settings Lost After Device Reboot** | - Settings not saved.<br>- Storage medium failure. | - Ensure settings are saved by clicking the "Save" button after making changes and wait for the device to confirm the save.<br>- Check the device's storage medium for proper functioning and contact technical support if necessary. |
| **Forgot password** | -Press and hold the reset button for about 5 seconds to release the device | -After the device triggers the reset, all parameters are initialized and the device automatically restarts. After the reset, the IP address is 192.168.1.101. WEB User name and password: admin/admin. Turn off the lock screen, etc |
| **Forgot IP address** | -Use the IP scanning and configuration tool on the LAN | -After the terminal is detected, you can select and change the IP address based on the terminal model and MAC address.<br>-You can also directly connect the device network port to the computer network port to forcibly configure an IP address for the terminal. |

#### 5.1.1. Summary

The above table lists additional faults and their troubleshooting solutions, which can help customers conduct a comprehensive analysis of product issues. If problems persist, customers are advised to contact SPON Communications' technical support for further assistance. We hope this information is helpful to you!

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