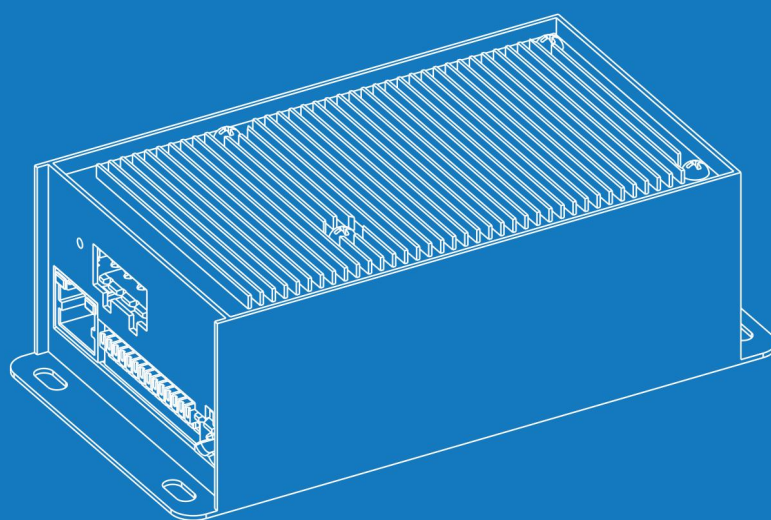


IP NETWORK PA MODULE

User Manual



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Summary

Safety precautions

- Please abide by the warning and the relevant safety tips.
- Please take this manual in convenient place for future reference.

Warning and Reminding



This symbol means there are potential safety issues, it may cause death or serious injury when incorrectly operating.



This symbol draws the attention to important operation and maintenance instructions.

Settings and Installation

- Avoid making the device wet.
- Do not expose the device to rain or water or other humid environment, as it may lead to fire or an electric shock.
- Do not use other power voltages than indicated on the power supply adapter.
- Use the device only with the indicated voltage to connect it.
- It may lead to fire or electric shock if using higher voltage.
- Do not damage, cut or twist the power cord.
- Keep the power cable away from any heating objects and do not put heavy things on it, as it may lead to fire or electric shock.

Using the intercom

Please shut off the power supply immediately when the following phenomena happen. Please contact the supplier. It may cause fire

or electric shock when continuing to use it.

- When the device is smoking or smelling strange.
- When water or other things entered in the device.
- When the device fell or the device housing is damaged.
- When the power cord is damaged (copper wire is exposed or broken etc.).
- When the device is in a faulty state (cannot connect to the network, there is no sound etc.).
- Do not open or modify the device
- Don't let other things enter into the device
- Don't let metal items or inflammable objects enter the device, as this might result in fire or electric shock.
- Do not touch the device when lightning storms are active
- Do not put any liquid containers or metal objects on the device. If the container fell and liquids penetrated the device, this may lead to fire or electric shock.
- The device contains parts under high voltage. Opening the cover or modifying the device may lead to fire or cause shock.

All maintenance and modifications to the device should be done by a qualified professional.

When not using the device for a longer period:

- Please shut down the power and pull out the power adapter when doing maintenance or not using the device for longer than 10 days.

Product introduction

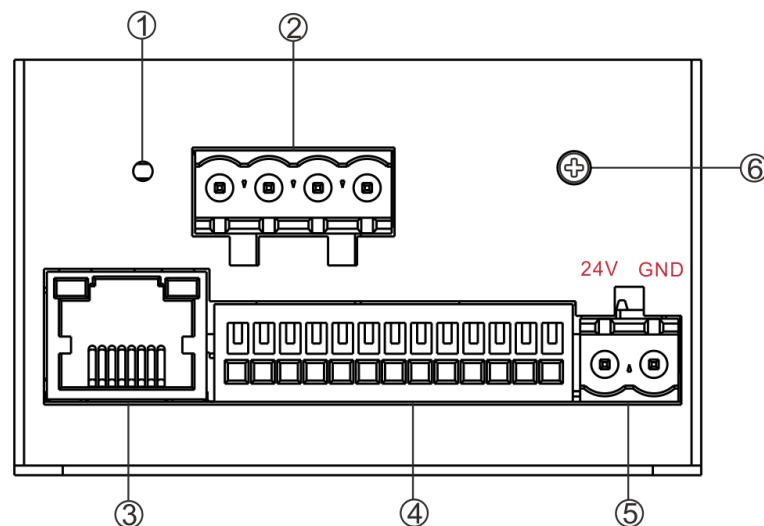
IP Network PA module is a standard-SIP-based sound decoder and converter with an amplifier. It is equipped with power supply interface , Ethernet interface ,etc. having the function of receiving broadcast initiating from IP paging microphone , software or other terminal.



Features

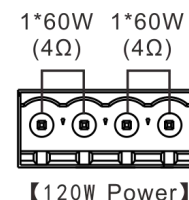
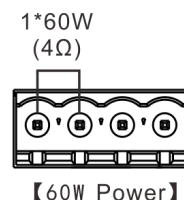
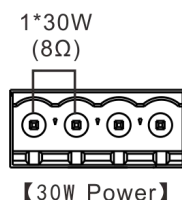
- Modular design, small and light appearance, convenient and simple installation.
- Providing 30W/60W/120W power supply IP Network PA module.
- With 1×Line Input and 1×Line Output.
- Capable of realizing on-time belling , real-time sound collecting and playing , offline broadcasting task ect function with the use of software.
- Possessing loop-fault-detect function to check the speaker's working status and to display it on the software.
- Realizing personalized configuration through managing the speaker's network parameters, audio parameters, task priority in web page.
- Operable in the Ethernet network and LAN network

Hardware Interface Introduction



①Reset Button: When the device is offline, short press this button to broadcast the local IP address of the device, and press it again during the broadcast to stop the broadcast. Long press this button for 5 seconds to restore factory settings and restart the device. Press and hold the reset button and then power on the device to force into the upgrade mode.

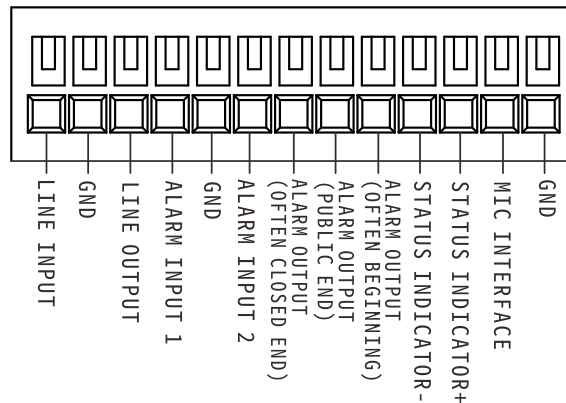
②Amplifier Output Interface: Three optional power level (1*30W/1*60W/2*60W) to choose from:



③Network Interface: Plug in the network cable to connect the device to Ethernet switch so that the device can log on to the server software normally.

Network status indicator light: On the right is the power indicator light: green light will be always on when the device is powered on; On the left is the data transmission indicator light: orange light will be flashing slowly when the network cable is plugged in; orange light will be always on when the device is logged on the server software; orange light will be flashing quickly when there's data transmission, it will flashing faster when there's more data transmission.

④Synthesis Interface, the interface functions are as below:



- 1) Line Input: can be connected to external audio source such as PC or CD player;
- 2) Line Output: can be connected to external active speaker or power amplifier for sound reinforcement;
- 3) Relay Input: the audio file in [Ringtone] - [ShortIn] in the FTP server will be played automatically when the relay input interface is being activated.
- 4) Repaly Output: can be activated on the server software.
- 5) Status Indicator Light: Two-color light, when online, the green light is always on in idle state, and the green light flashes quickly when there is audio playback; when offline: the red light flashes slowly when idle, and the red light flashes quickly when there is audio playback.
- 6) MIC interface: The loop detection function can be enabled on the web page, and the working status of the speaker can be detected through the MIC. At the same time, it supports the automatic volume adjustment function for recognizing environmental noise.

⑤Power Input Interface: DC 24V power input.

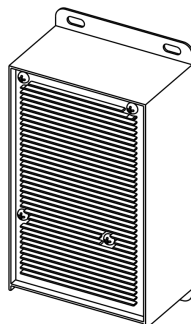
⑥Ground Terminal.

Supplementary Information

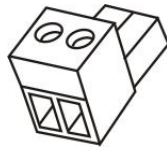
Packing list

The IP Network PA module includes the following accessories. Please check following parts. Contact your reseller if any parts are missing.

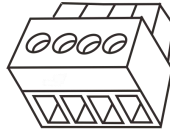
- (1) IP Network PA module 1PCS



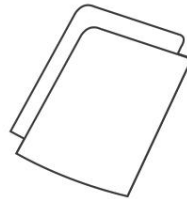
- (2) Wiring Terminal (5.08-2P) 1PCS



(3) Wiring Terminal (5.08-4P) 1PCS



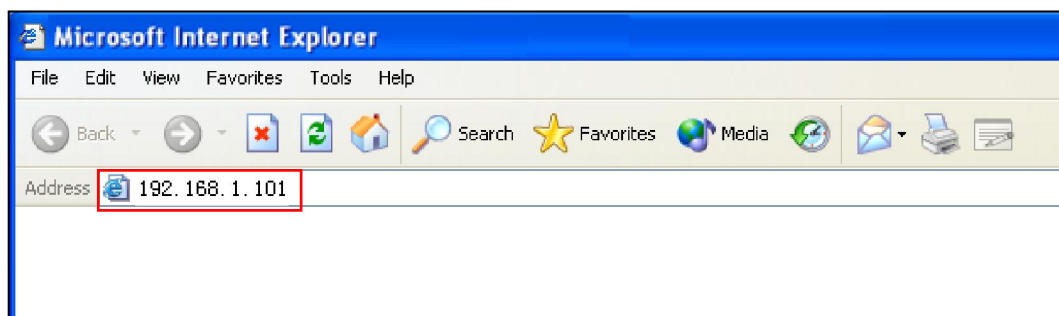
(4) Installation instructions 1PCS



User-defined web page settings

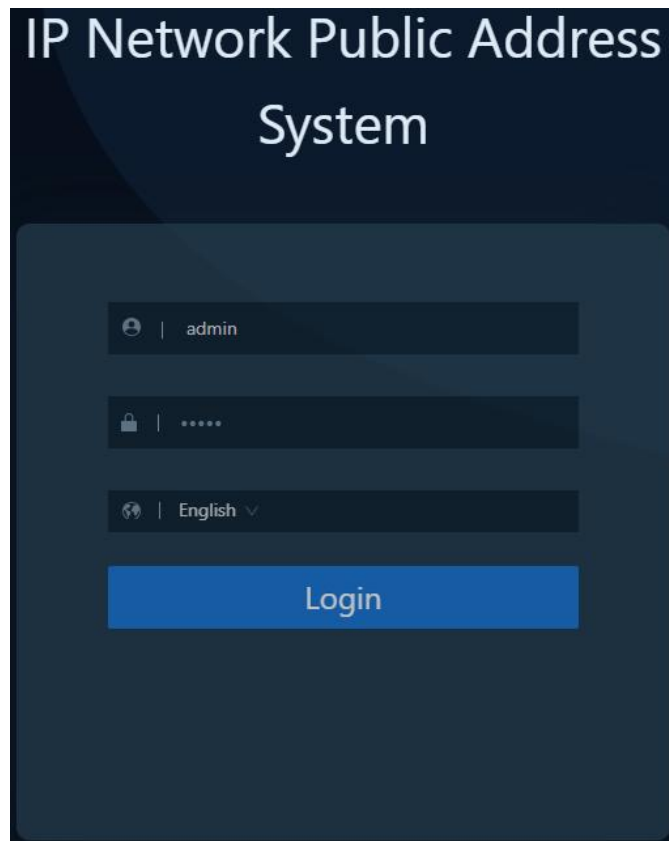
Login web interface

- (1) Use a web browser and navigate to the IP address of the IP Network PA module (factory default is <http://192.168.1.101>), then press Enter.



- (2) Enter the username and password to log in.

Note: Default username and password are both admin.

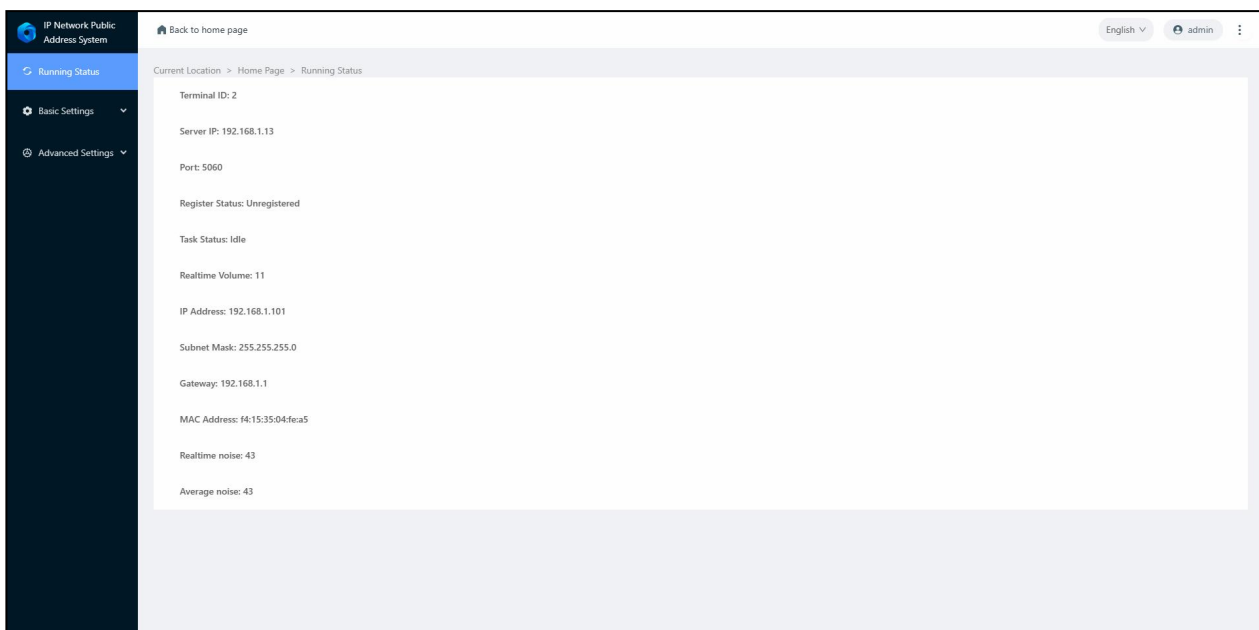


(3) Press login to enter IP audio speaker web page.

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

Running Status

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



Network Params

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

The screenshot shows the 'Network Parameter' configuration page in the 'IP Network Public Address System'. The left sidebar contains navigation options: Running Status, Basic Settings, Network Parameter (selected), Server Parameter, Audio Parameter, and Advanced Settings. The main content area has a breadcrumb trail: 'Back to home page' > 'Current Location' > 'Home Page' > 'Basic Settings' > 'Network Parameter'. A 'Save' button is in the top right. The configuration fields are as follows:

Link Type	DHCP Name	
DHCP	PAClient_04fea5	
IP Address	Subnet Mask	Default Gateway
192.168.1.101	255.255.255.0	192.168.1.1
Primary DNS	Secondary DNS	
192.168.1.1	8.8.8.8	

The relevant Settings of network parameters are as follows:

Link type	Supports static IP or DHCP IP address assignment. Static IP: Default static IP ,user-defined IP address and other information DHCP: Assign IP address via DHCP
DHCP Name	User can edit DHCP name and upload it to DHCP server.
IP Address	The IP address of the device, the factory default IP is 192.168.1.101, which cannot be duplicated with other terminals.
Subnet Mask	The subnet mask of the LAN network.
Default 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.

Server Params

IP audio speaker support with SIP protocol and NAS protocol, you can choose the transport protocol based on the actual server you log in to.

SIP Protocol

The default is SIP protocol. If the device is logged into the 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 Parameter' configuration page within the 'IP Network Public Address System' web interface. The left sidebar contains navigation options: Running Status, Basic Settings, Network Parameter, Server Parameter (selected), Audio Parameter, and Advanced Settings. The main content area shows the 'Server Parameter' settings. At the top, there is a 'Transport Protocol' dropdown menu set to 'SIP'. Below this, there are eight input fields arranged in two rows of four. The first row contains 'Sip Server' (192.168.1.13), 'Sip Server Port' (5060), 'Terminal ID' (2), and 'Password' (masked with four asterisks). The second row contains 'Local Port' (5060), 'Audio Port' (7080), 'Offline Timing Server' (120.25.108.11), and 'Handshake time(s)' (30s). 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.
Sip Server IP, 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)
Terminal 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.
Local port	Configure the local port according to the actual situation; the default is 5060.
Audio port	Configure the audio port according to the actual situation.
Offline timing server	Set the IP of offline timing server, it works when the device is offline.
Handshake time(s)	Set the time to make handshake with server.

NAS Protocol

The screenshot displays the 'Server Parameter' configuration page in the IP Network Public Address System. The interface includes a sidebar with navigation options: Running Status, Basic Settings, Network Parameters, Server Parameter (selected), Audio Parameter, and Advanced Settings. The main content area shows the 'Server Parameter' configuration with the following fields and values:

- Transport Protocol: NAS
- Terminal ID: 1
- Local Port: 2046
- Primary Server: 192.168.1.13
- Primary Server Port: 2048
- Secondary Server: 192.168.1.14
- Secondary Server Port: 2048
- Login Interval(s): 3
- Terminal Timing Server: 192.168.1.13
- Offline Timing Server: 120.25.108.11
- Handshake time(s): 30s

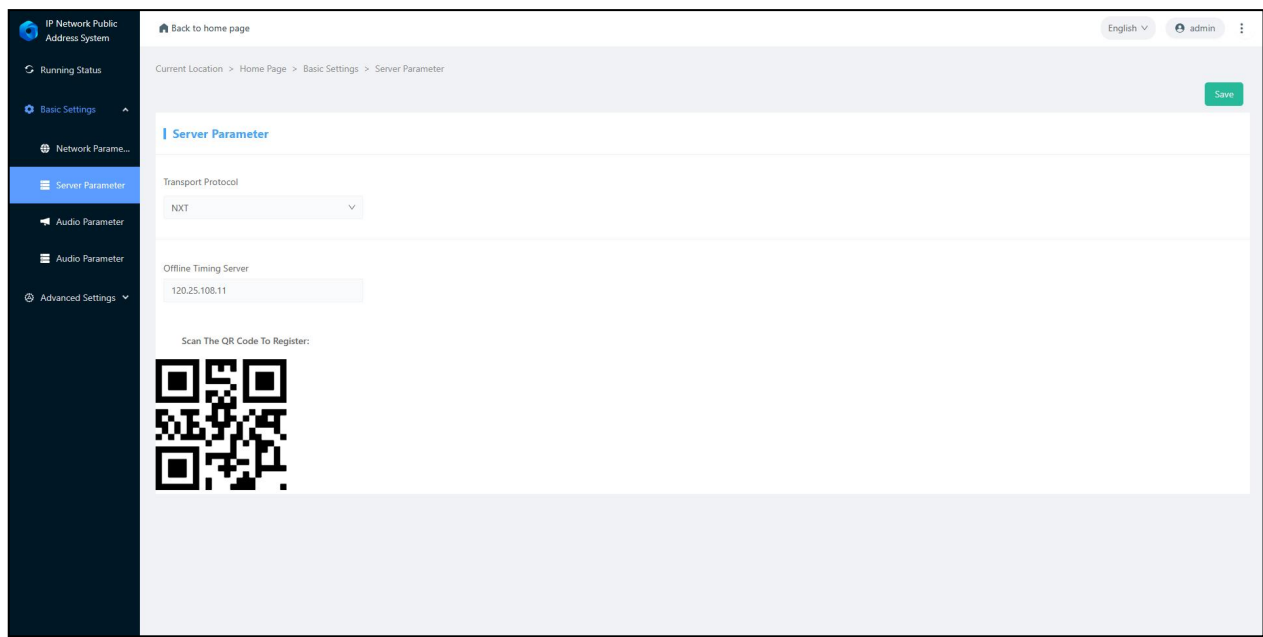
A 'Save' button is located in the top right corner of the configuration area.

The relevant Settings are as follows:

Transport Protocol	Setting the protocol for normal communication between device and sever.
Terminal ID	Unique number to identify the terminal and cannot be duplicated with terminals or other hosts.
Local port	Configure the local port according to the actual situation; the default is 5060.
Primary Server IP, 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, Port.	The IP address and port of the backup NAS server.
Login Interval(s)	Interval of login server.
Terminal Timing Server	Set the terminal timing address (the IP address of other IP audio speakers). The terminal will correct the time after the offline timing server fails to correct the time. it works when the device is offline.It Correct the time once about every 6 hours.
Offline Timing Server	Set the IP of offline timing server, it works when the device is offline.
Handshake time(s)	Set the time to make handshake with server.

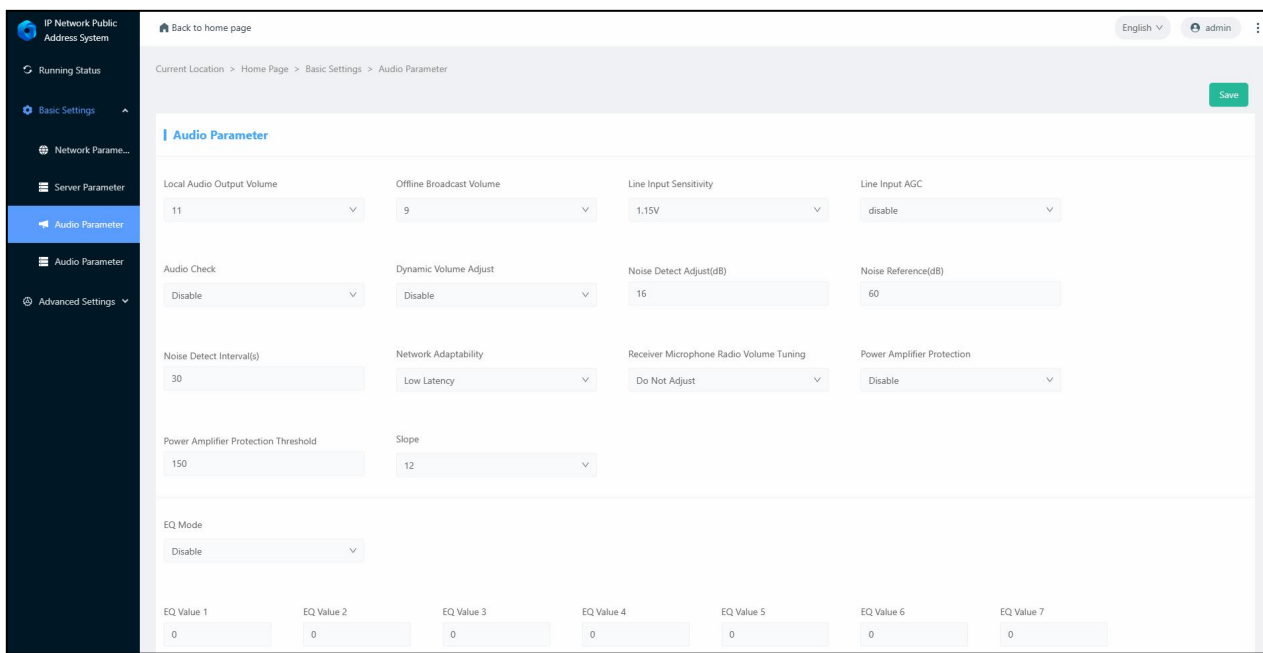
NXT Protocol

Reserved.



Audio Params

Set the audio related parameters of the device, Click [save] after setting, the parameters will take effect after reboot.



The relevant Settings are as follows:

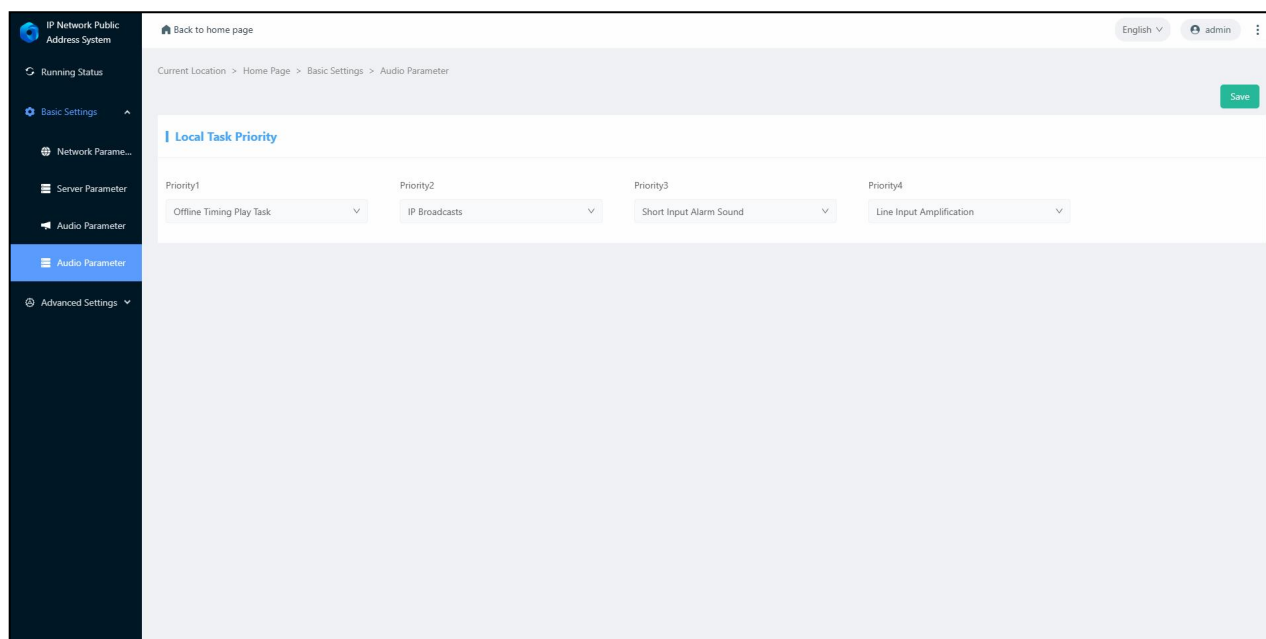
Local Audio Output Volume	Set the Local Audio Output Volume, configuration range from 0 to 15.
Offline Broadcast Volume	Set the Offline Broadcast Volume, configuration range from 0 to 15.
Line Input Sensitivity	Set line input sensitivity,the default is 1.15V.
Line Input ACC	Volume balance, low sound will compensate, high sound will suppress, the value set is the maximum value for compensation. Default is disabled.
Audio Check	Audio check means loop detection function .After enabling the function, the device will play sound through built-in microphone after receiving server tasks. When

	there are problem like speaker unit fault or cable fault, the device will self-judge the problem and feedback to server.
Dynamic Volume Adjust	When you enable dynamic volume adjustment, the device will adjust the output volume during broadcasting according to the surrounding environment noise level. For example, when the average noise of the surrounding environment is greater than the reference noise and the range exceeds the set noise detection calibration value, the real-time volume level of equipment broadcasting will increase; When the average noise of the surrounding environment is less than the reference noise and the range of less than the set noise detection calibration value, the real-time volume level of the equipment broadcast will be reduced. Dynamic volume adjustment function is invalid when it is disabled.
Noise Detect Adjust	Set the calibration value of noise detection (default is 16dB). The larger the value, the larger the real-time noise value detected. Remarks: Noise detection calibration value = noise decibel value measured by decibel meter when calibration value is 0-average noise decibel value detected by equipment.
Noise Reference	The average decibel value of noise in normal environment. The default is 60dB.
Noise Detect Interval	Set the average noise detection interval. It is 30S by default. Average noise varies according to the setting time.
Network Adaptability	Audio quality can be adjusted according to network environment. Low latency, low bandwidth, and custom are optional. You can customize the audio cache time when you choose Custom.
Receiver Microphone Radio Volume Tuning	The volume of the receiving microphone broadcast can be properly attenuated (1dB, 2dB, 3dB or 4dB) to avoid sound distortion due to excessive volume. The default is no adjustment.
Power Amplifier Protection,Power Amplifier Protection Threshold	Some speakers can't play low frequency sound. Continuous low frequency sound may cause speaker damage. Enabling the power amplifier protection threshold, it can filter out the low frequency sounds in the playback sound and protect the speaker from damage Loudspeaker . Power amplifier protection threshold: This value corresponds to the lowest audio frequency that the loudspeaker can accept.
Slape	For special speakers or special scenes, just keep the default value.
EQ Mode	The sound effect of current network task can be adjusted after enable the EQ. Note:EQ value must be adjusted by personnel with relevant professional knowledge, non-professional personnel should not adjust at will, otherwise it will lead to poor sound quality.

Priority of local task.

In this window, user can set up the priority of task.

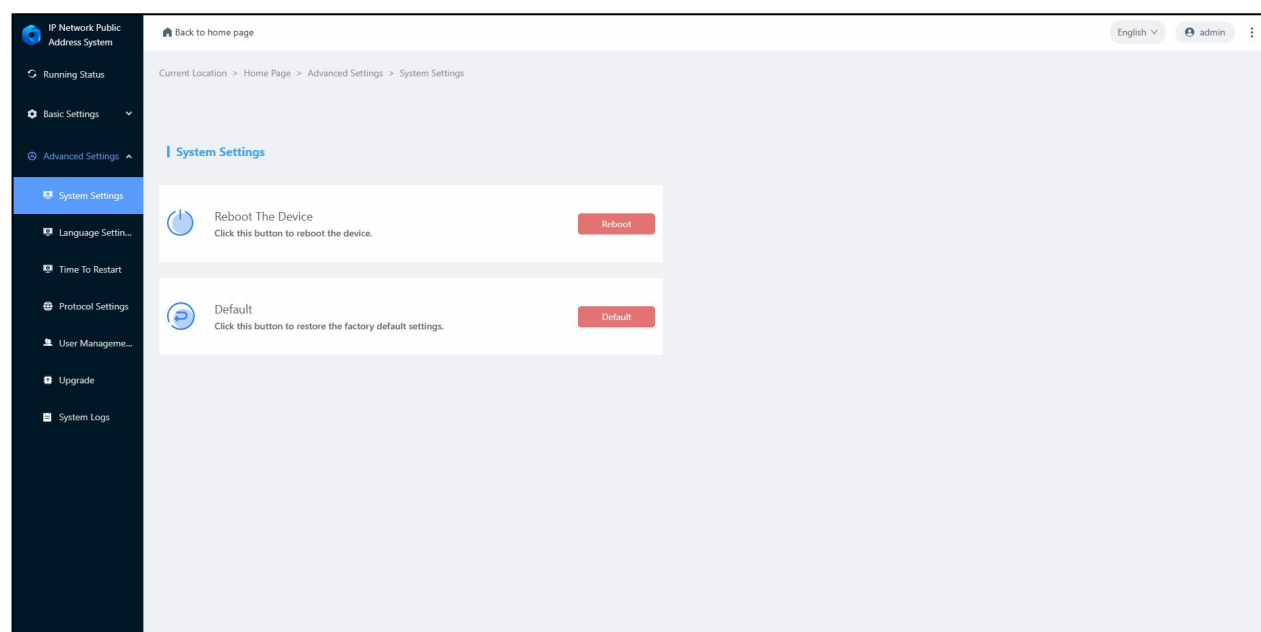
Default priority order :Offline timing play task>IP Broadcasts> Short input alarm sound> Line input amplification.



System Maintenance

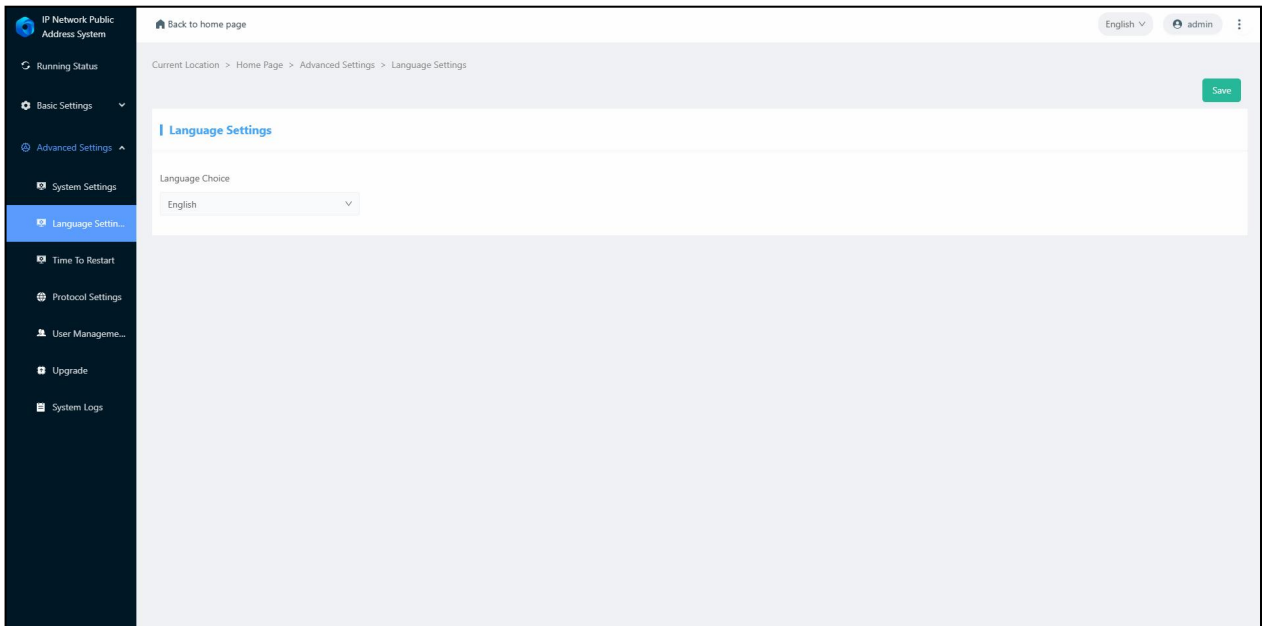
Reboot the device: Click on this button will reboot the device.

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



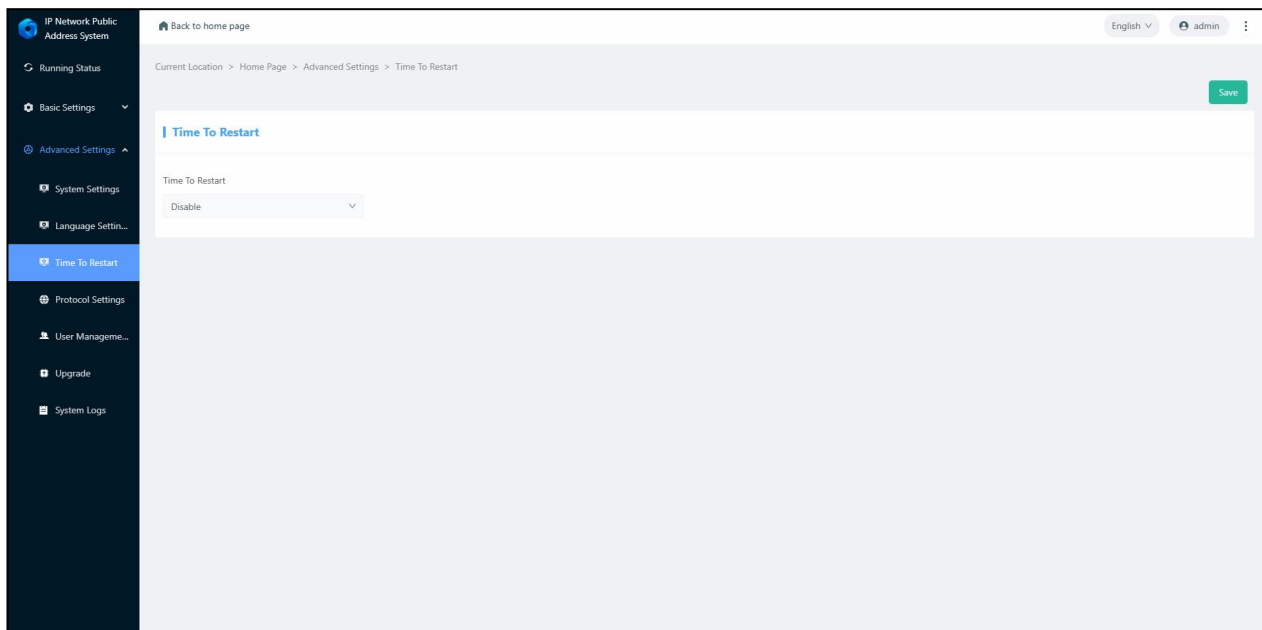
Language Settings

You can change the language in this page. It supports Chinese and English.
After save the setting, rebooting the web page to take effect.



Time To Restart

After this function is enabled, you can set the time for restarting the device every day. The default value is disabled.



Protocol Settings

ICMP: You are advised to disable ICMP when using the new IP configuration tool to configure network parameters.

FTP: Set whether to enable FTP remote file transfer function. The default value is disable.

TELNET: Set whether to enable the TELNET remote login function. The default value is disable.

The screenshot shows the 'Protocol Settings' page in the IP Network Public Address System. The left sidebar contains a menu with options: Running Status, Basic Settings, Advanced Settings (expanded), System Settings, Language Settings, Time To Restart, Protocol Settings (selected), User Management, Upgrade, and System Logs. The main content area has a breadcrumb trail: 'Back to home page' > 'Current Location > Home Page > Advanced Settings > Protocol Settings'. A 'Save' button is in the top right. The 'Protocol Settings' section contains three dropdown menus: FTP (set to 'Disable'), ICMP (set to 'Enable'), and TELNET (set to 'Disable').

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 shows the 'User Management' page in the IP Network Public Address System. The left sidebar is the same as in the previous screenshot, with 'User Management' selected. The main content area has a breadcrumb trail: 'Back to home page' > 'Current Location > Home Page > Advanced Settings > User Management'. A 'Save' button is in the top right. The 'User Management' section contains four input fields: 'Current User Name' (with 'admin' entered), 'Current Password', 'New Password', and 'Confirm Password'.

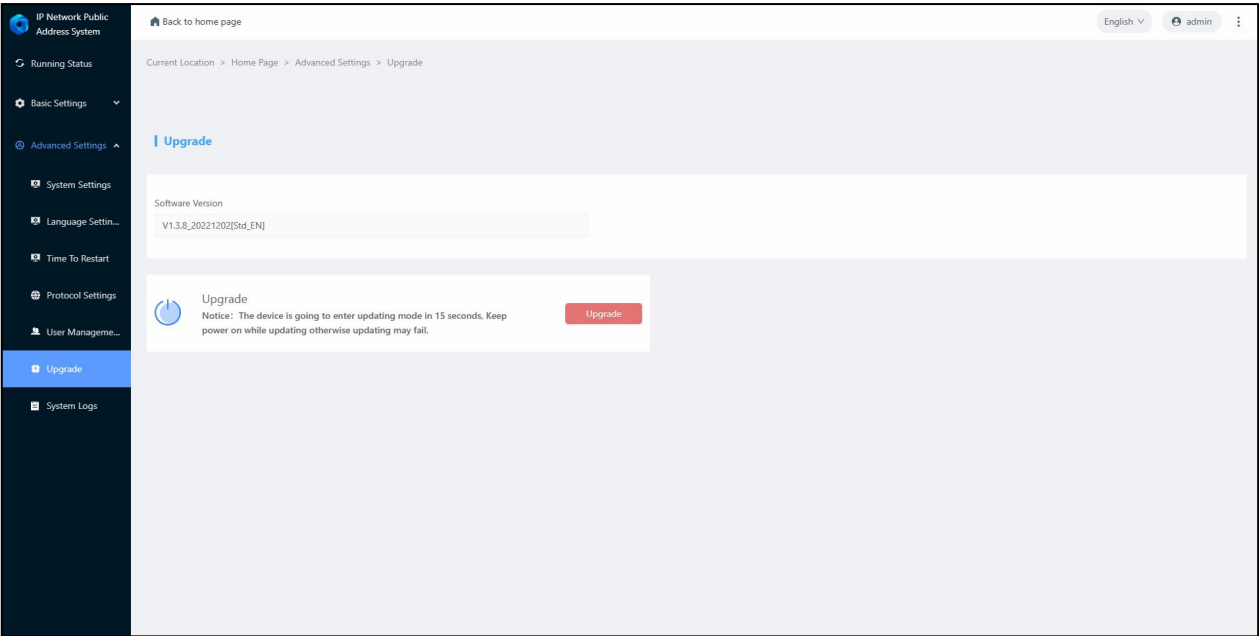
Upgrade

Click the "Upgrade" button, you will enter the firmware upgrade mode after 15 seconds.

Click on "Browser", select the upgrade file provided by the manufacturer, and click "Upgrade" to start the upgrade.

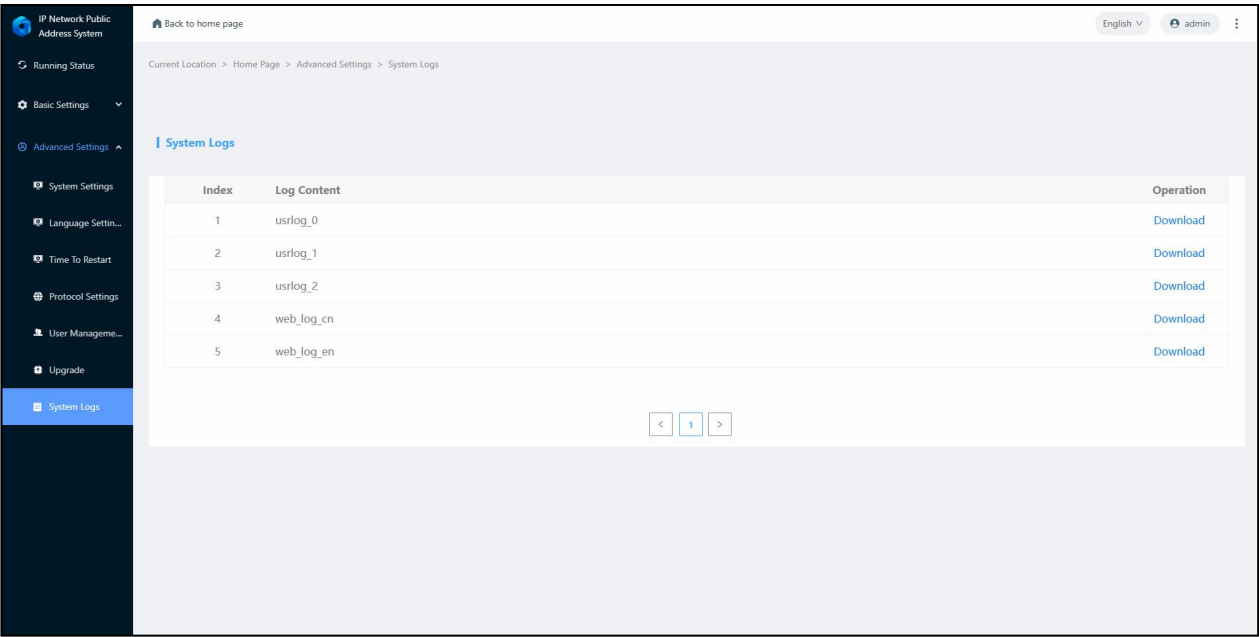
Note: Do not power off during the upgrade process, otherwise the upgrade may fail and the device fails.

Finally, click reboot and back to normal settings.



System Logs

IP audio speaker can automatically record the running process and generate logs, and support users to download system logs.



Basic functions

Receive Broadcast

Support receive broadcast initiating by server or other terminals.

Offline Broadcast

IP Network PA module supports offline broadcast, when device is offline, terminal can play on-time ring bell task set up by the server. the setting steps of offline broadcast as follows:

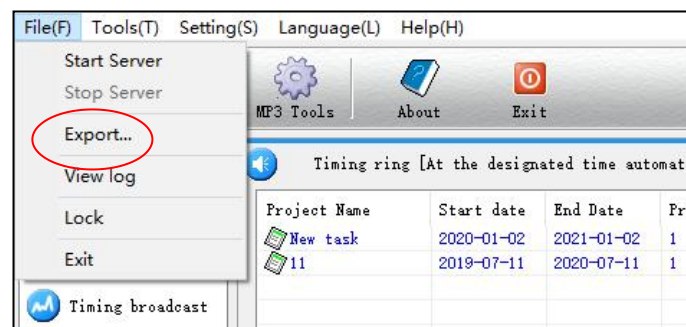
- 1) User can add a "On-time Ringing " task in the schedule task interface .Click icon "Add" to do detailed operations such as setting up executing time and schedule type in Add Trigger interface, or setting up terminal ID and file in Add Operation interface ect.
- 2) After click save, then click push task icon in the left bottom.

Notes: offline broadcast only support MP3 format audio.

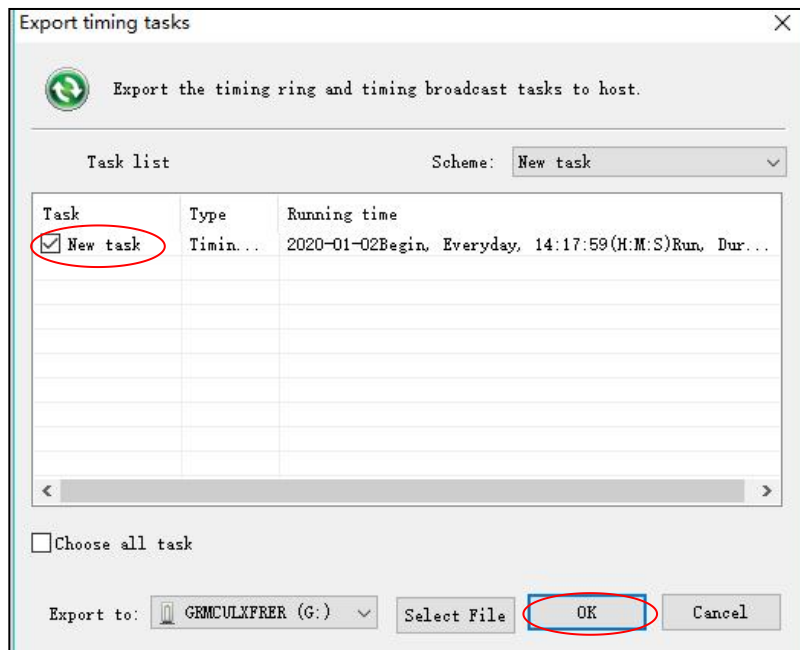
The screenshot shows the 'Add task' interface. At the top, there's a 'Scheme list' with an 'Add' button circled in red. Below it, a table shows a task with ID '11', state 'Idle', and trigger '[Talk] 1'. The 'Add task' form below has fields for 'Task name' (11) and 'Creator' (admin). It has two buttons: '+ Add trigger' and '+ Add trigger(Batch)'. Below these are sections for 'Trigger' and 'Operation'. The 'Trigger' section shows 'Timer' with 'Execute time: 14:30:00 | Period: Daily | Start date: 2020-01-02'. The 'Operation' section shows 'PA' with 'Audio source: File | Total: 00:04:56 | Durations: Play once'. At the bottom left, the 'Push task' button is circled in red. At the bottom right, there are 'Save' and 'Cancel' buttons.

Steps under NAS software

- 1) Setting "time ring bell" task in the server software (for the specific steps, please refer to server software Operation Manual), and then click [File(F)]-[Export].

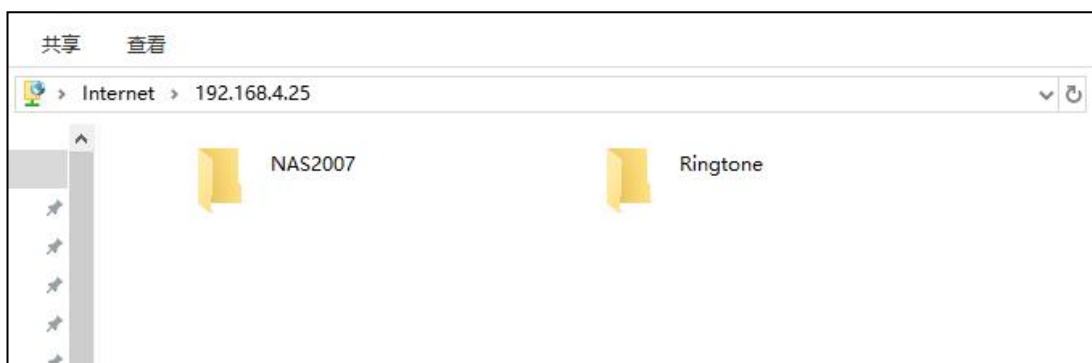


- 2) Select the task in the "Export timing tasks" list, and then click "OK", tasks will be exported to specified path.



3) Access to terminal FTP:// terminal IP(the defaults user name and password is admin), put the exporting timing ring bell document to “NAS2007” under FTP (note :If there is no folder named as NAS2007 ,please crease a new one), It will be effective after reboot device.

Notes: offline broadcast only support MP3 format audio.



Receive Monitor

IP Network PA module can receive monitor initiated by other terminals.

Fault Exclude

Terminal can not login to the server?

1. Check the server software and main control computer is normally open or not. It must close all the firewall before open the service software, (including the systemic firewall and other antivirus software).
2. Check the network connection is normally working or not.
3. Check the terminal IP setting. Checking the terminal ID No., server IP, local IP and gateway IP these parameters is correct or not.

No sound when receiving broadcast

1. Check whether the device is online or not
2. Check whether device sound volume in server and in web page to be 0 , if yes , please increase it.

When web show abnormal?

Please clear the caches or change the browser

No sound after relay input has been activated

1. Enter the device FTP and check whether there are audio files in the [Ringtone]-[ShortIn] folder. If not, please place the audio file in the following format:
The naming is fixed as: alarmin1 or alarmin2 (alarmin1 is alarm input 1 prompt sound, alarmin2 is alarm input 2 prompt sound), the file must be in mp3 format, 128Kbps file.
2. The alarm input trigger tone only takes effect when the device is offline.

Copyright Announcement

Copyright

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