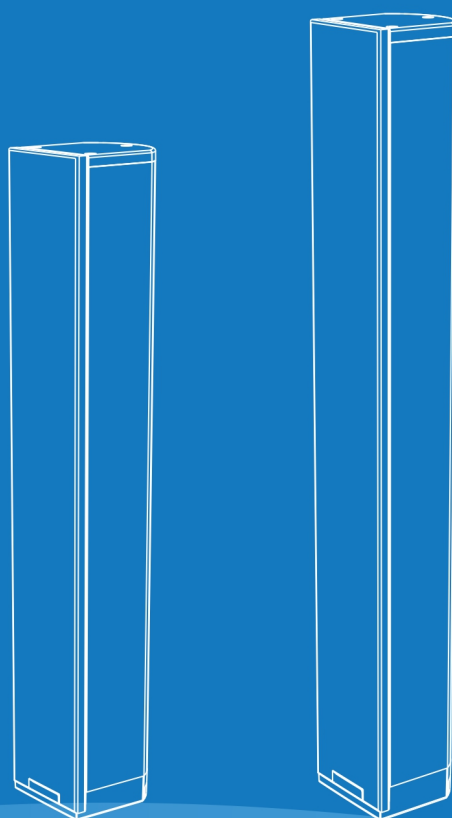


SPON

SIP COLUMN LOUDSPEAKER

User Manual



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Summarize

Safety precaution

Please abide by the warning and the relevant safety tips.

Please take this manual in convenient place after you reading the guide for future reference.

Warning



The sign means there is potential safety hazard, when operate wrong may result in death or serious injury.



The sign is used to remind the user that attached is the important operation and maintenance data.

Setting and Installation

(1) Avoid being wet with the water.

Don't make the machine or exposed to rain water or other liquid contamination of the environment, or lead to fire or get an electric shock.

(2) Don't use unspecified voltage.

Using the marked voltage on the machine.

Using more than the logo of voltage could lead to fire or shock.

(3) Don't scratch the power cord.

Don't scratch the power cord or cut it.

Simultaneously, keep the power line far way from heated objects, put heavy things on it will lead to fires or electric shock.

Using machine

(1) In case of the anomalies

Please turn off the power supply immediately when finding the abnormal phenomena, please connect with the agency.if you continue to use, it will likely fires or shock.

- The smoke or odor of the machine.
- The inside of the machine is flooded by water or foreign bodies intrusion.
- Machine falling or machine shell damage.
- The power cord damage(wire core is exposed of broken, etc)
- Fault(eg it can't network, no sound ect)

(2) Don't open the machine internal or modify the machine.

Do not let foreign matters invade the machines internal.

Don't let the metal items or inflammable objects inserting machine such as foreign inserting machines or throw into the vents machines internal, otherwise will likely cause fires or electric shock.

(3) Please do not touch it when thundering

To avoid electric shock, please do not touch the machine and the plug when lightning, etc.

(4) Please do not place containers with liquid or small metal objects on machine above.

If gets upset containers, and let the fluid inflow to the machine that will likely fires or cause shock.

(5) Do not open the machine internal or modify the machine.

The machine internal contains high voltage parts, once open the cover or modify the machine, it will likely fires or cause shock.

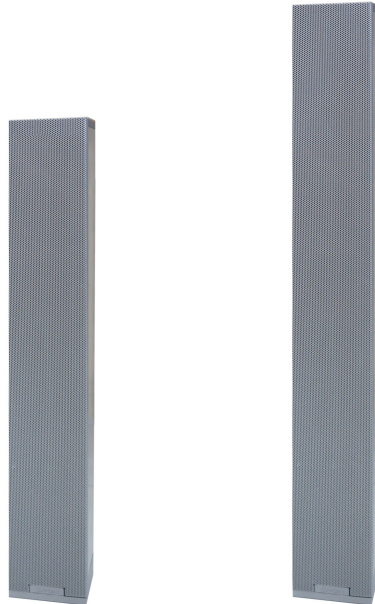
All the maintenance and other machine modification should be operated by professional personnel.

(6) Maintenance and the precautions for not using in a long time.

While maintenance, if the machine is not using for 10 days or more , please shut off power supply switch for safety. If do not comply with this provision, it will likely cause electric shock or fires.

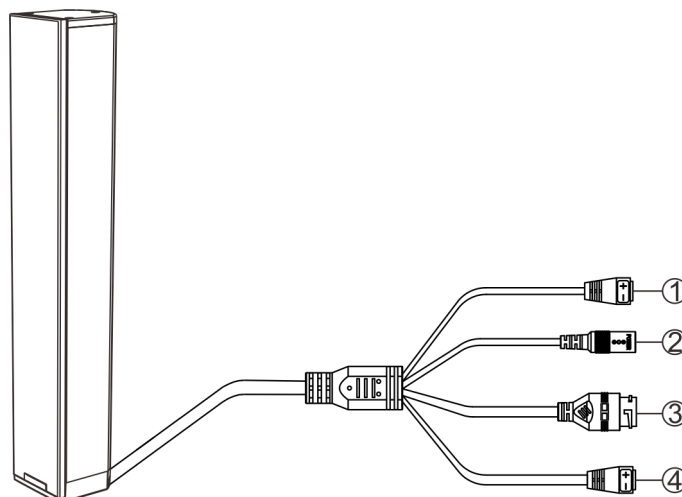
Products Introduction

SIP column loudspeaker adopts wall mounted installation design, equipping with power input interface, line input interface, RJ45 network interface ect. The device supports receiving broadcasting initiating from terminal or software with clear and powerful sound quality .



- Integration of wall-mounted design, excellent workmanship, network audio decode, amplifier and loudspeaker.
- Using high quality waterproof aluminum .
- High speed industrial grade dual-core (ARM+DSP) chips, run-up time ≤ 1 second.
- Built-in power amplifier , 30W/40W is available
- Capable of realizing on-time belling , real-time sound collecting and playing, remote adjusting sound volume together use of software.
- Possessing loop-fault-detect function to check the speaker's working status and to display it on the software.
- With 1 line alarm input
- With 1 line input
- 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



- ① Line input (2P green end)
- ② Power supply interface :DC24V
- ③ Network interface : plugging network cable and connecting to switch
Status of network light : no light means the device is offline . Slowly flash means the device is online ; Fast flash means the device is receiving broadcast .
- ④ Alarm input (2P Black End) : When alarm input is triggered , the device will automatically play pre-set up audio file under FTP server [Ringtone]-[ShortIn]. (At the status of device offline)

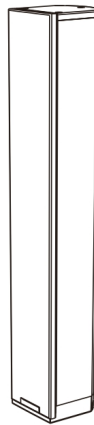
Supplementary Information

Packing list

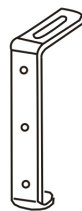
The SIP Column Loudspeaker includes the following accessories.

Please check following parts. Contact your reseller if any parts are missing.

- (1) SIP Column Loudspeaker 1pcs



- (2) Mounting bracket 1pcs



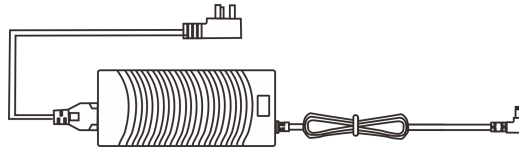
- (3) Fixed bracket 1pcs



- (4) Connecting bridge 2 pcs (3.81-2P)



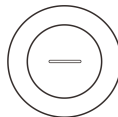
- (5) Power adapter 1pcs



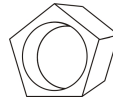
(6) Plastic coil 1pcs



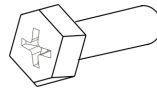
(7) Silica gel coil 1pcs



(8) Nut 1pcs (M6)



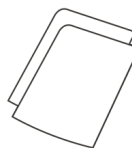
(9) Screws (M6*20) 1pcs



(10) Waterproof sets 1 set



(11) Quick installation manual 1PCS



(12) Certification 1pcs

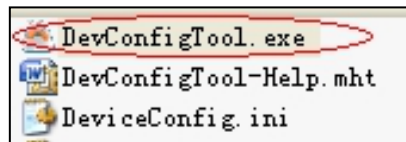


Basic Network Configuration

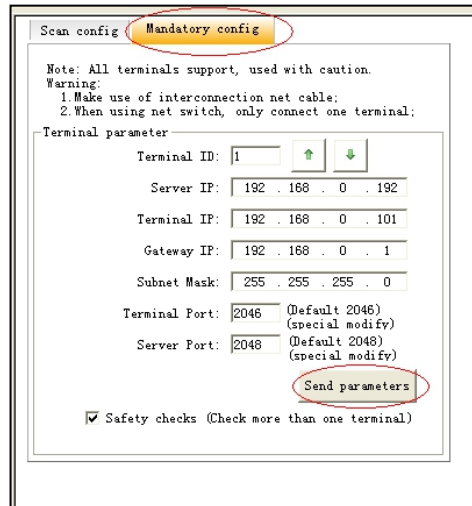
Connect the cable and power on as per the installation manual, then revise the terminal network parameters according to the live environment, There are below two methods:

Terminal Equipment Scanning Tools

1. From [CD: \ tools \] directory to find and run "IP configuration tool" audio terminal, after start it , please enter the default password "123456"



2. From the right menu choose **【Mandatory config】**, then fill the correct parameters in the **【terminal parameters】**, then click "send parameters" button



Note:

1. Please use the administrator mode to run and close the firewall or other related software when using the Windows 7/10 operating system;
2. Terminal equipment scanning tools can only configure one terminal at one time. Please make sure that a computer only connect one target terminal when using this method.
3. Please contact us for asking IP Config Tool if you don't find it at software package.

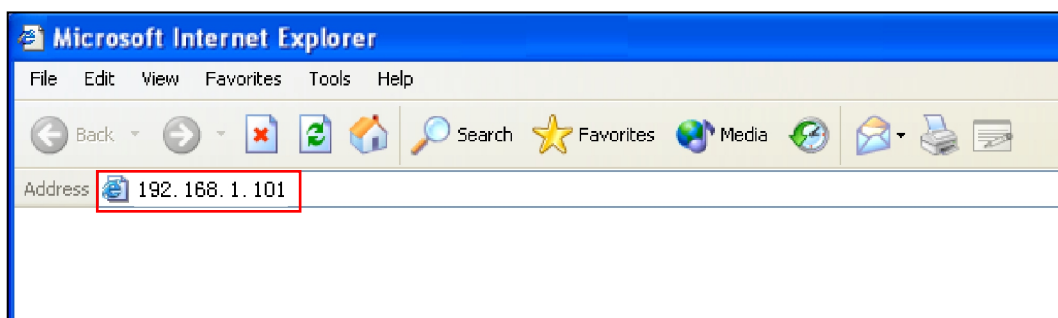
Webpage Mode

Enter into the SIP Column Loudspeaker web interface, then modify each parameters according to the live environment, after setting completed, click "save".

Specific operation steps please refer to custom terminal parameters in the network settings.

User-defined web page settings

- (1) Use a web browser and navigate to the IP address of the SIP Column Loudspeaker (factory default is http://192.168.1.101), then press Enter.



- (2) Enter user name and password in the login window of the Web page (the default is : admin, password : admin).



Login

Login safely request username and password.

User name:

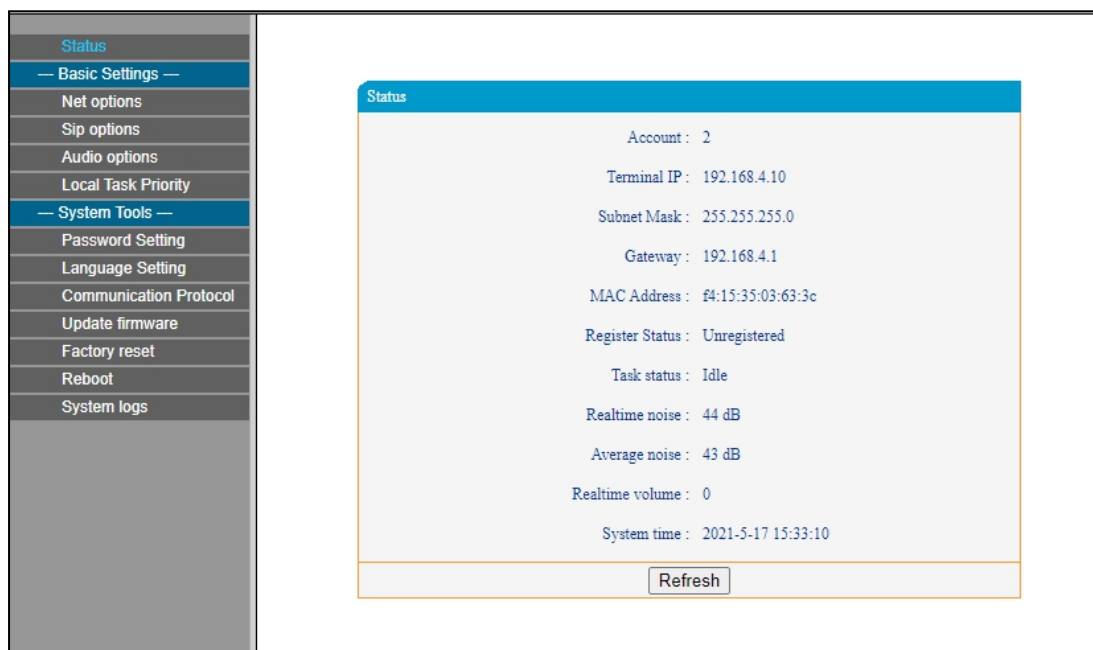
Password:

OK Cancel

(3) After pressing Enter, you will arrive in the configuration web page of the SIP Column Loudspeaker. (Note :After saving the parameters in web page , if it doesn't take effect , please clear your browser caches , then re-configuring it)

System Tools

In this window , user can check device 's ID, IP address , subnet mask ect. parameters , simultaneously checking the status of device and task , noise level , real time volume and so on.



System Tools menu:

- Status
- Basic Settings
 - Net options
 - Sip options
 - Audio options
 - Local Task Priority
- System Tools
 - Password Setting
 - Language Setting
 - Communication Protocol
 - Update firmware
 - Factory reset
 - Reboot
 - System logs

Status window content:

Account : 2

Terminal IP : 192.168.4.10

Subnet Mask : 255.255.255.0

Gateway : 192.168.4.1

MAC Address : f4:15:35:03:63:3c

Register Status : Unregistered

Task status : Idle

Realtime noise : 44 dB

Average noise : 43 dB

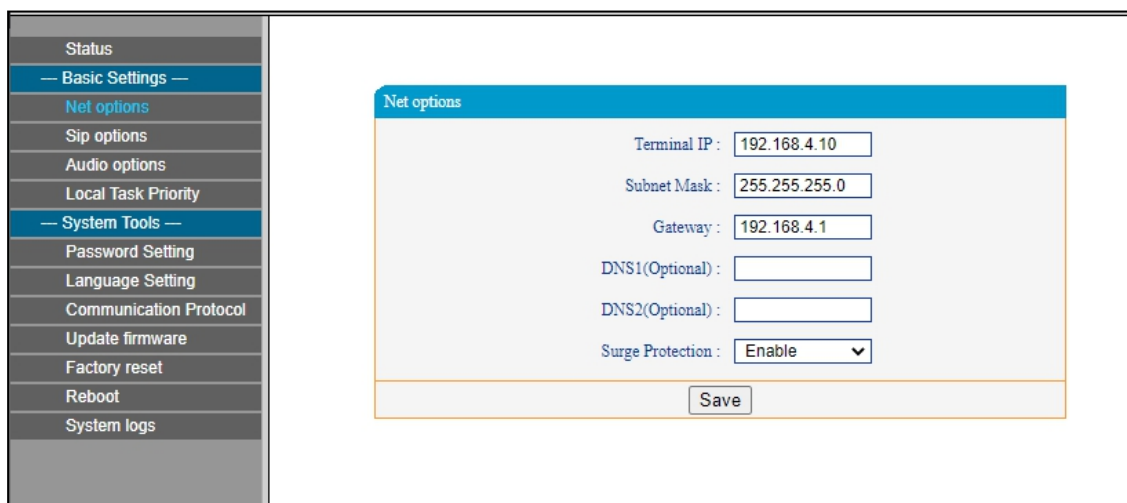
Realtime volume : 0

System time : 2021-5-17 15:33:10

Refresh

Network Parameters

To set up the network parameters, please modify the parameters in the network parameters according to the on-site environment. After the setting is completed, click [Save] to restart the device to take effect.



System Tools menu:

- Status
- Basic Settings
 - Net options
 - Sip options
 - Audio options
 - Local Task Priority
- System Tools
 - Password Setting
 - Language Setting
 - Communication Protocol
 - Update firmware
 - Factory reset
 - Reboot
 - System logs

Net options window content:

Terminal IP :

Subnet Mask :

Gateway :

DNS1(Optional) :

DNS2(Optional) :

Surge Protection :

Save

The parameters have the following meanings:

Device IP	Device IP address (the default is 92.168.1.101 and it cannot be repeated against other device)
Subnet mask	The subnet mask of the LAN network
Default gateway	The gateway of the network
Preferred DNS server	IP address of the preferred domain name resolver on the network
Alternate DNS server	IP address of the alternate domain name resolver on the network
Surge Protection	After enabling surge protection , when the speaker is attacked by the surge or static electricity, the speaker will automatically detect them ,letting the network restore to normal automatically.(on the premise of all network parts undamaged) Note : This function can only detect the status of network . It will not deal with the issues when other parts not related network are attacked by the surge or static electricity.

Sip parameters （When choosing SIP protocol）

When choosing SIP protocol, user can set up server parameters at SIP options and reboot to take all configurations effect.

Remark: If user want to use NAS protocol , it is necessary to choose NAS server at the communication protocol option first.

The parameters have the following meanings:

SIP Server	SIP address of the device, please do not modify the SIP server port if without special needs (The default port is 5060)
Account	SIP account of the device and it cannot be repeated with other device.
Password	The password of device when login SIP server.
Local Port	Please set up local port based on real situation.
Audio Port	Please set up audio port based on real situation.
Offline auto-time-correction server	Please set up the IP address of offline time-correction server. After turning on speaker , when it isn't connecting to the software within 60s to 100s , the speaker will correct time once . In addition , the speaker will correct time every 6 hours when speaker are offline.

Server parameters (NAS protocol)

After choosing NAS protocol at Communication Protocol option , then user can set up and save all configuration at Server

options and reboot to take them effect.

The parameters have the following meanings:

The device number	Terminal ID, this number identifies SIP column loudspeaker when more than one intercom is in the network. Range 1-999, the factory default is 1.
Local port	The device local port, please do not modify it if without special needs . The factory default is 2046
Preferred server	The IP address of the preferred server for this SIP column loudspeaker, the factory default is 192.168.1.13.
Standby server	When the preferred server is not available, the SIP column loudspeaker will log in to the standby server
Server version	Server version IP. When there are many SIP column loudspeaker in a project and when they all set up same server version IP . Once user upload the new Firmware at server version IP address , all the speaker will automatically update after being restarted.
FTP	User can enable or disable FTP function. When enable FTP function, user can use FTP to update the offline tasks automatically. Note: When user use XC software to push offline tasks, then need to close FTP function.
Method of Login	User can log in with username and password , or login directly without inputting any information.
FTP server	IP User can set up FTP server address.
FTP Name	FTP Name: The factory default is admin;
FTP Password	FTP Password: The factory default is admin
Request Login Interval time	When the intercom is offline, this timer will define the interval of login requests that are sent to the server.
Terminal time-correcting IP address	Input other terminal 's IP address as a reference. When terminal are offline , terminal will correct the time based on yr referenced terminal if offline time-correction server fails to correct the time, and will correct time every 6 hours (Note: all the terminal should use NAS protocol to log in software)

Audio parameters

Here user can set up and save all audio parameters, then reboot to take them effect .

Audio options

Local Amplification Volume : 9 ▼

Offline Broadcast Volume : 9 ▼

Buffer time : 0 ▼

Audio check : Disable ▼

Dynamic volume adjust : Disable ▼

Noise detect adjust(dB) : 16

Noise Reference(dB) : 60

Noise detect interval(s) : 30

Network Adaptabil : Low Band ▼

Receiver Microphone Radio Volume Tuning : Do not ad ▼

Wan Audio Buffering : Disable ▼

EQ Mode : Disable ▼

EQ Value : 0 0 0
0 0 0
0

Power Amplifier Protection : Disable ▼

Power Amplifier Protection Threshold : 150

Slope : 12 ▼

Save

The parameters have the following meanings:

Local sound volume	Controlling the volume of local audio source
Offline speaker broadcast volume	Rang from 0-15 Note: when speaker are online , sound volume will be controlled by software
Buffer time	Buffer time means when device receiving network task, the time that the device will delay to broadcast to make sure the sound quality under poor network
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 adjustment	After enabling it , the SIP column loudspeaker can automatically adjust broadcasting sound volume as per the noise level. For example : when nearby noise sound larger than referenced noise value , and larger than noise detection correction value , the SIP speaker 's real time sound volume will be increased. And vice versa When disable it, no this function.
Noise detection correction(dB)	The default is 16dB. Note: Noise detection correction value = the noise value of decibel test machine- Noise reference value (under the premise of setting up noise detection correction value as 0).
Noise reference(dB)	It means the average noise level when under normal environment. The default is

	60dB.
Noise detect interval(s)	It means setting the intervals of average noise detection time . The default is 30s. And it changes based on what user set up.
Software Amplifiers	It can set up the quality of digital audio source. It has two choices , one priority of audio quality, another priority of audio loudness. We recommend you to choose the option of priority of audio loudness if requiring higher audio loudness.
Network Adaptability	User can set up the network adaptability . The default is low band. If user choose the option of low band , it can make sure to broadcast complete audio data when receiving network broadcast tasks . But it may occur broadcast delay when under poor network. If user choose the option of proper delay , it can make sure to broadcast real time. But it may occur the situation of discontinuous packet loss when under poor network. Note: We recommend you to choose the option of low band if requiring higher complete audio data. ; And recommending you to choose the option of proper delay if requiring synchronous broadcasting.
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.
Wan Audio Buffering	Once enable this function , it can improve the audio sound quality when the network is congested
EQ Mode EQ Value	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 do not adjust at will, otherwise it will lead to poor sound quality.
Speaker Protection Speaker Protection Threshold	Parts of the speaker unable to play low sound ,constant low sound may caused speaker damage. Enable the speaker protection threshold can filter out the low sound ,In order to protect the speaker from damage . Speaker Protection Threshold:This value corresponds to the lowest value that the speaker can accept the audio frequency
Slope	For special speakers or special scenes, just keep the default value

Priority of local task.

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

Default priority order :Offline on-time task>IP Broadcasting> Short-circuit input alarm > Line in local sound reinforcement.

Status
— Basic Settings —
Net options
Sip options
Audio options
Local Task Priority
— System Tools —
Password Setting
Language Setting
Communication Protocol
Update firmware
Factory reset
Reboot
System logs

Local Task Priority

Priority1 : Offline Timing Play Task ▼

Priority2 : IP Broadcasts ▼

Priority3 : Short Input Alarm Sound ▼

Priority4 : Line Input Amplification ▼

Save

Password modification

You can change the web page login-in account and password here, it will be effective after clicking on “Save”.

Status
— Basic Settings —
Net options
Sip options
Audio options
Local Task Priority
— System Tools —
Password Setting
Language Setting
Communication Protocol
Update firmware
Factory reset
Reboot
System logs

Password Setting

Original username : admin

Original password :

New username :

New password :

Password Confirm :

Save Clear

Language settings

You can switch the Web page language between Chinese and English, save the modification and restart the speaker to activate the changes.

Status
— Basic Settings —
Net options
Sip options
Audio options
Local Task Priority
— System Tools —
Password Setting
Language Setting
Communication Protocol
Update firmware
Factory reset
Reboot
System logs

Language Setting

Language : English ▼

Save

Protocols

SIP Column Loudspeaker support NAS Protocol and Standard SIP protocol (the default is SIP protocol) . Please select the protocol correspond to the type of software which device will log in . After saving , please clear the browse cache and restart the browse to let it take effect.(Note : Choosing different protocol will have different options at left side , please subject to real interface)

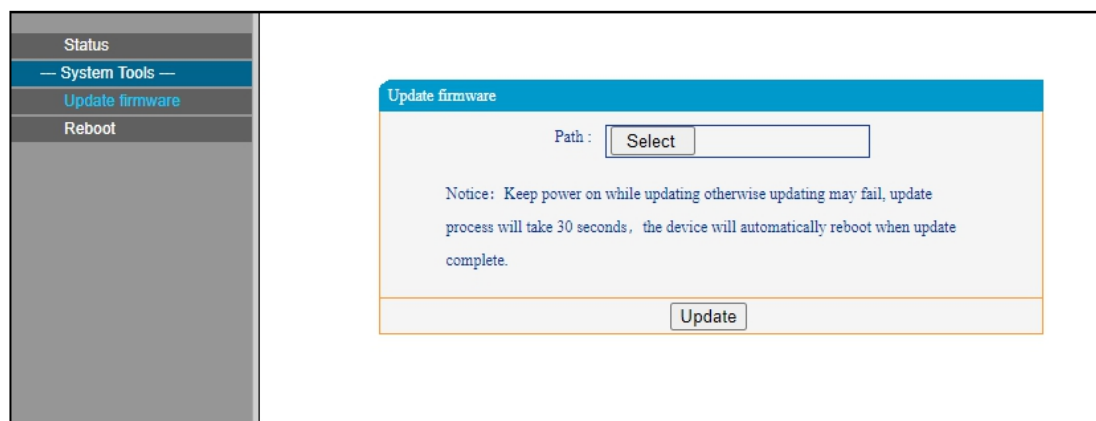
Status	<div>Communication Protocol</div> <div>Protocol Name: <input type="text" value="SIP"/></div> <div>Save</div>
— Basic Settings —	
Net options	
Sip options	
Audio options	
Local Task Priority	
— System Tools —	
Password Setting	
Language Setting	
Communication Protocol	
Update firmware	
Factory reset	
Reboot	
System logs	

Upgrade the firmware (Note: please do not upgrade the firmware without any special needs)

Click “System Tools” and “Upgrade Firmware” to enter the firmware upgrade page.(if meeting abnormal web when enter to upgrade mode , please clear all cache of browser , then re-log in to web page.

Status	<div>Update firmware</div> <div>Firmware version : 1.2.0_20210513 Build 604</div> <div>Notice: The device is going to enter updating mode in 15 seconds, Keep power on while updating otherwise updating may fail.</div> <div>Update</div>
— Basic Settings —	
Net options	
Server options	
Audio options	
Local Task Priority	
— System Tools —	
Password Setting	
Language Setting	
Communication Protocol	
Update firmware	
Factory reset	
Reboot	
System logs	

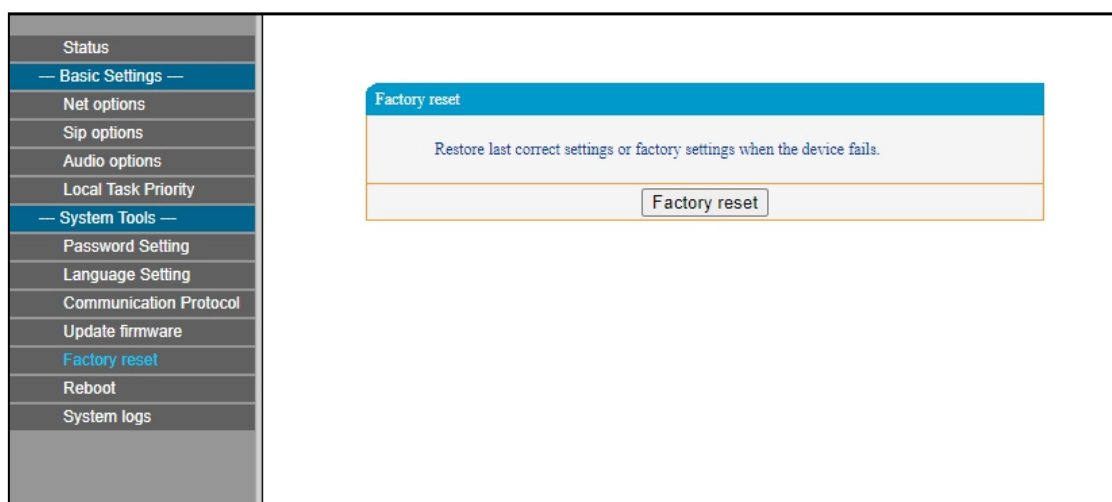
After successfully choosing the right Firmware provided by factory , then click “update” (please note that do not cut off power of device , it will cause upgrade failed.)



Then click reboot and back to normal settings.

Reset to Defaults

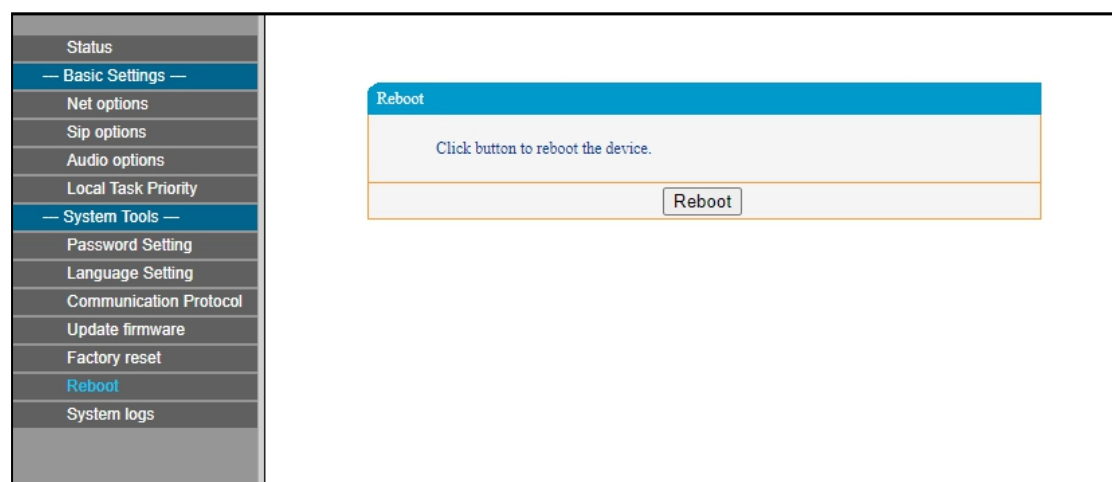
Reset to defaults: all parameters need to be reset to defaults



Restart device

Restart the device

Note: the all modified parameters on the web page will be effective after restarting the device.



System log

The logfile contains all system events of SIP column loudspeaker.

Status

— Basic Settings —

Net options

Sip options

Audio options

Local Task Priority

— System Tools —

Password Setting

Language Setting

Communication Protocol

Update firmware

Factory reset

Reboot

System logs

System logs

Index	Log content
1	May 15 00:36:50 Started successfully
2	May 15 00:36:51 Successful application startup
3	May 14 16:36:54 Time Sync Successfully,From:SIP Server 192.168.1.13,2021-4-14 16:36:54
4	May 14 16:36:54 Login Sip sever 192.168.1.13:5060
5	May 14 16:37:22 Started successfully
6	May 14 16:37:23 Successful application startup
7	May 14 16:37:51 Login Sip sever 192.168.1.13:5060
8	May 14 16:38:04 Receive broadcast from 235.1.0.2:34567,encode: L16,samplerate: 22050
9	May 14 16:39:40 Broadcast end
10	May 14 16:40:15 Disconnect from the server
11	May 14 16:41:00 Start timer_task_MP3 broadcast, samplerate 44100
12	May 14 16:41:17 Broadcast end
13	May 14 16:41:31 Login Sip sever 192.168.1.13:5060
14	May 14 16:41:31 Receive broadcast from 235.1.0.2:34567,encode: L16,samplerate: 22050
15	May 14 16:41:44 Broadcast end
16	May 14 16:41:45 Receive broadcast from 235.1.0.3:34567,encode: MP3,samplerate: 8000
17	May 14 16:41:58 Broadcast end
18	May 14 16:41:58 Receive broadcast from 235.1.0.2:34567,encode: L16,samplerate: 22050
19	May 14 16:45:38 Broadcast end
20	May 14 16:45:59 Receive broadcast from 235.1.0.2:34567,encode: MP3,samplerate: 8000

1 2 3

Refresh

Basic functions

Receive Broadcast

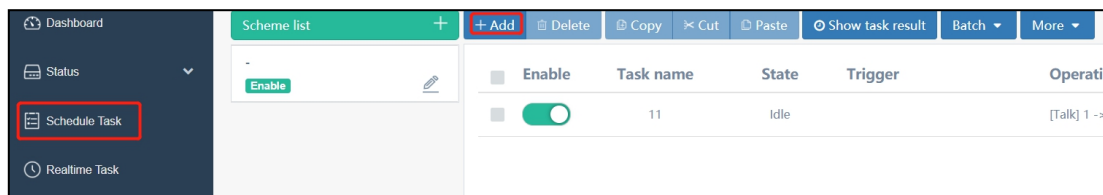
Support receive broadcast initiating by server or other terminals.

Offline Broadcast

SIP column loudspeaker supports offline broadcast, when device is offline, it can play on-time ring bell task set up by the XC 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.



Add task

Task name: Creator:

[+ Add trigger](#) [+ Add trigger\(Batch\)](#)

Trigger	Context	Edit	Delete
Timer	Execute time: 14:30:00 Period: Daily Start date: 2020-01-02		

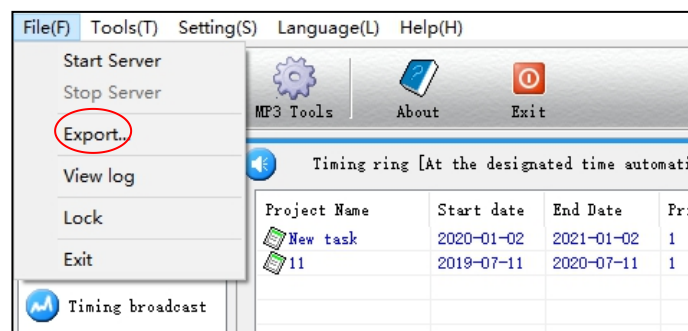
[+ Add operation](#)

Operation	Context	Sort	Edit	Delete
PA	Audio source: File Total: 00:04:56 Durations: Play once			

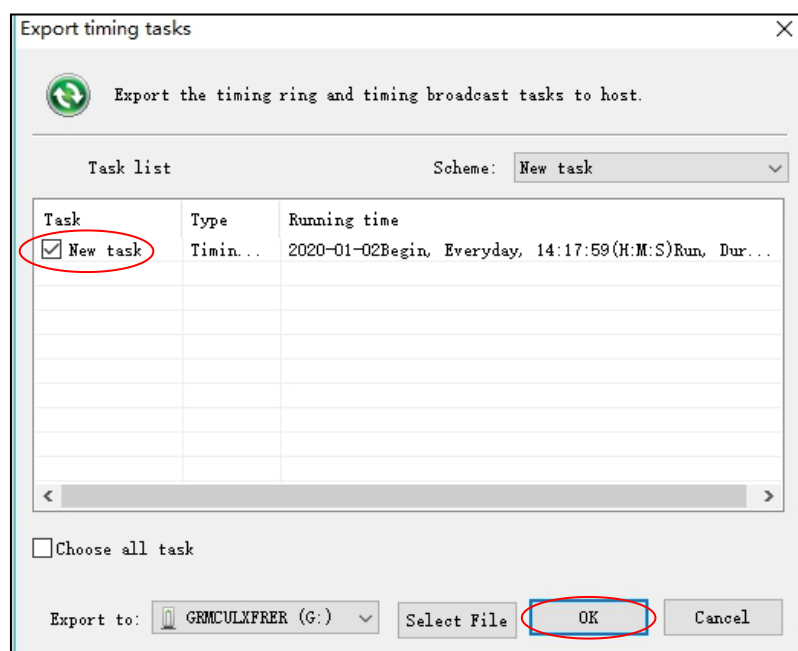
[Push task](#) [Save](#) [Cancel](#)

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].

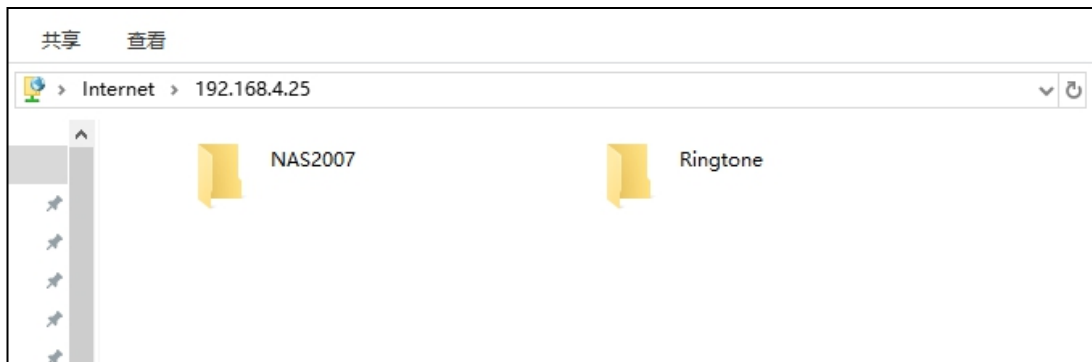


2) Select the task in the "Export timing tasks" list, and then click "OK", tasks will be exported to specified path.



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.



Remark: User should put alarm input audio file to the folder named ShortIn, simultaneously name the audio file as alarmin1 and make sure the audio file format as mp3 and 128Kbps.

Receive Monitor

SIP column Loudspeaker 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.

No broadcast after local offline tasks are set up?

1. Entering into FTP server and making sure that audio file is with MP3 format and with 128Kbps.
2. Synchronizing device itself time and current time.

No sound after alarm input is triggered ?

1. Entering into FTP server, checking whether there are any audio file under file folder [Ringtone]-[ShortIn]. If no audio file there, pls put an pre-record audio there.
2. Checking whether the device is offline or not. This function can only take effect under the premise of device offline.

When web show abnormal?

Please clear the caches or change the browser.

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