XonTel XT-21 Wall Mounted SIP Speaker
User Manual

Contents

Summary

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 user of this equipment is attached the important data of operation and maintenance.**

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 voltage outside of the designation.
   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. Simultaneous, keep the power line far away from heated objects, put heavy things on it will lead to fires or electric shock.

Using machine

1. Once the anomalies in use, immediately cut off power supply 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).

2. Don't open the machine internal or modification of 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 thunder.
   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 modification of the machine.
   The machine internal contains high voltage parts, once the open cover, or modification of the machine, it will likely fires or cause shock. All about maintenance and other such matters within the machine to transform should be operated by professional personnel.

6. Maintenance or the precautions when not in use for long time.
   When Maintenance, if the machine not in use in 10 days or more than 10 days, in order to ensure the safe, please shut off power supply switch, and will power plug. If failure to comply with this provision, it will likely cause electric shock or fires.

Product Introduction

Summary

XonTel XT-21 SIP speaker which is embedded with the IP Audio digital network audio technology of independent intellectual property rights, the terminal is equipped with power input interface, network interface, short-circuit input / output interface.

Features

- Integration wall-mounted design, exquisite workmanship, integrated network audio decoding, amplifier and column speaker.
- Waterproof and dustproof design, protection degree is IP 55.
- With built-in loop detection to remotely monitoring the working status of the speaker, easily to maintenance.
- Remotely digital volume adjustment.
- Support one-way alarm input and alarm output.
- Support environmental noise detection in free status, adjusting broadcast output volume according to the noise level.
- Accessible to the system if the Ethernet is available, support cross network segment and router.

Hardware Interface Introduction
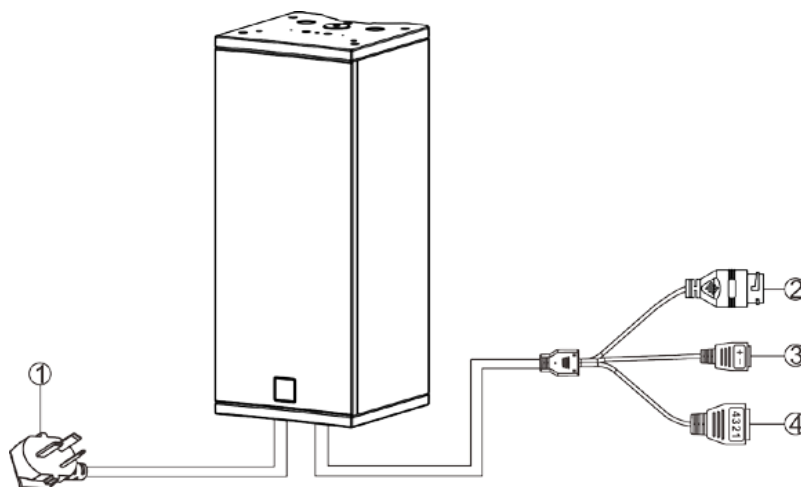
① Power plug

② Network interface: connect to network

③ Short-circuit input interface: when the short-circuit interface is triggered, the speaker will automatically play audio files under the alarming catalog of FTP.

④ Short-circuit output interface:

1： Short-circuit output NO port；
2： Short-circuit output common port；
3： Short-circuit output NC port；
4： Free port.

Back view
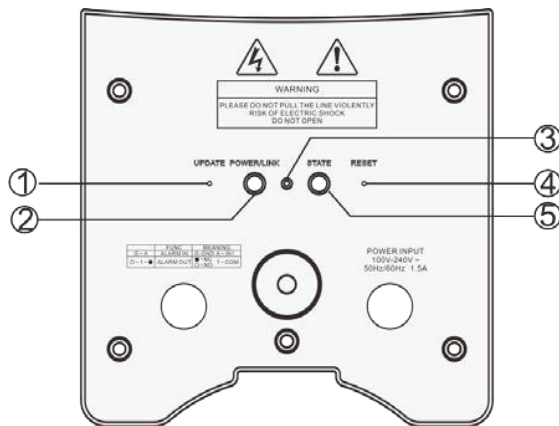
① Mandatory upgrade key

Use tweezers or small pin to press the button and connect the power about 5 seconds, it can force the terminal to upgrade status.

② Power and network indicator light

After connected the power, if internet is connect, the green light is on; If offline, the red light is ON.

③ Microphone

④ Reset button

⑤ Status indicator light

Offline: red light slowly flashes. Online: green light normally ON.

Receive broadcast task: green light quickly flashes.
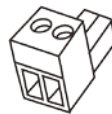
Introduction

Packing List

XonTel XT-21 SIP speaker column including the following parts, please check all the parts before the installation, if any missing, please contact your supplier.
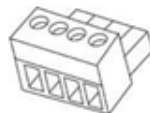
（1） XonTel XT-21 SIP speaker 1 pcs

（2） Wiring port(3.81-2P) 1 pcs

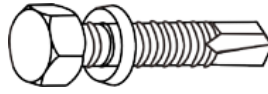（3） Wiring port (3.81-4P) 1 pcs

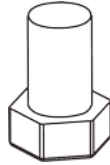（4） Expansion screw (M8*100) with spring washer/big gasket/nut) 2 sets.

（5） Hexagonal self-drilling screws (M5.2*2 with gasket) 4 pcs
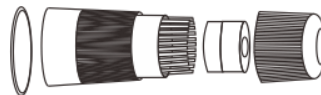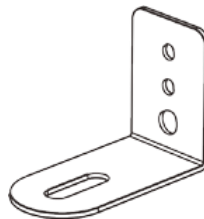
（6） Hexagonal screw (M8*10) 2 pcs

（7） Spring washer 2 pcs

（8） Gasket 2 pcs

（9） Waterproof tail circuit connector 1 set

（10） Bracket 2 pcs

Wiring

（1） Connect power plug to the electricity socket.
（2） Connect the one port of Ethernet to the speaker and the other port connect to the switcher.
（3） Connect other ports to the corresponding interface.

Connect power

Ethernet switch   Computer

1： Short-circuit output NO port
2： Short-circuit output common port
3： Short-circuit output NC port
4： Free port

Basic Network Settings

Connect the terminal with cable, then modify the terminal network parameter according to the live environment. There are two ways:

Terminal Devices Scanning Tool

1. Run XT-21 speaker IP configuration tool "**Devconfigtool.exe**" and after starting, input the default password "**123456**"

2. Please select the [**mandatory config**] from the right menu, then filling each correct parameter in the [**Terminal parameter**]. It will be finished IP parameter configuration once pressed "**sending parameters**". **(It will be effective after reboot the device if you modified the IP.)**

Note:

1. **If use Win7 system operating, please taking the administrator mode to run and close all the firewall and related software.**

2. **The terminal scanning tools can only set the network parameter configuration to one terminal at one time, so please ensure one computer only connect with the one target terminal when using this way.**

Web page Mode

Enter into the SIP speaker column interface, then modify the terminal each parameters according to the environment, after setting completed, click "**save**".

Specific operation please refer to the custom terminal network parameters setting.

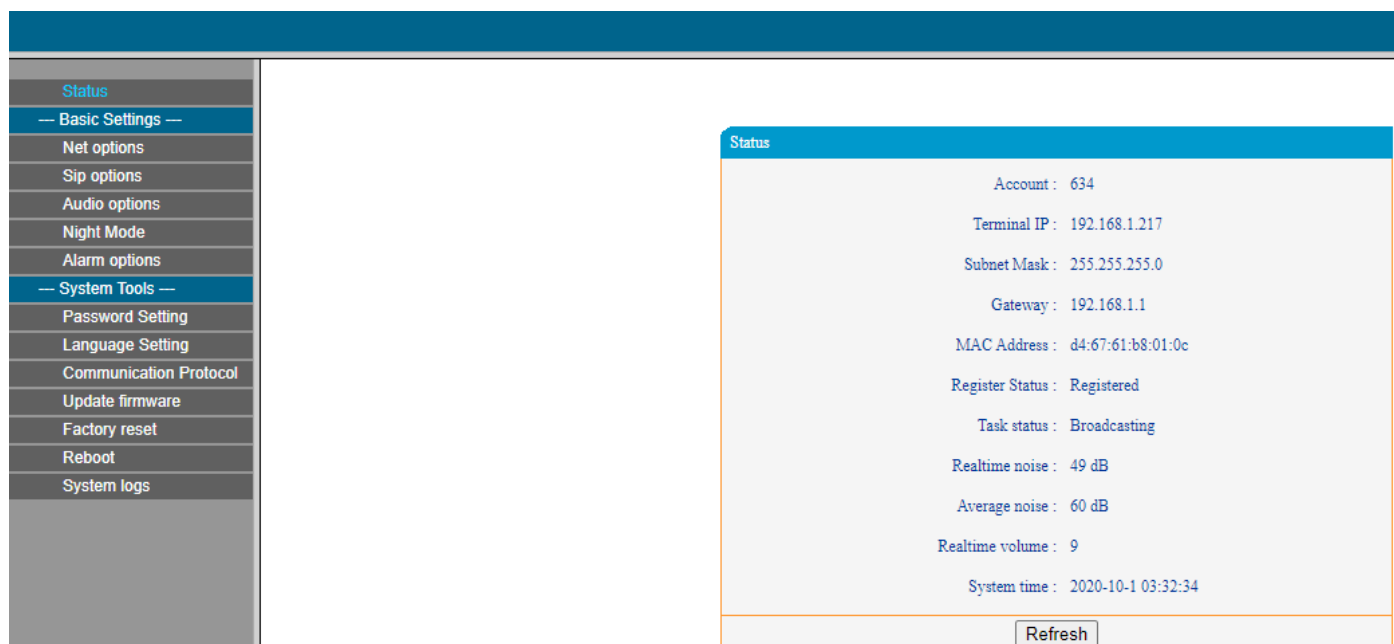# User-define Terminal Parameters

Login Web interface

1. Please input the SIP speaker IP address to the browser address then enter.

2. Enter the user name and password in the web page （the default user name and password is **admin**）.

3. Click OK to enter terminal web page.

Communication Protocol

XonTel XT-21 supports XonTel protocol **(NAS) and SIP** protocols (the default is SIP protocol), please select the corresponding protocol as per the server type of the log-in terminal, then set up accordingly. After completing setting and saving it, please restart the device. At the same time, it is necessary to restart the browser.

Note: The web pages for different protocols are slightly different. Please refer to the actual interface.

Network Parameters

Click "**Net options**" and enter into the basic settings and network parameters modification interface, you can modify network parameters as the following picture shows, and then click save to finish network parameters settings.

Parameters as following:

Terminal IP	XT-21 speaker IP address.
Subnet mask	The subnet mask of the terminal.
Default gateway	The network gateway of the XT-21 speaker.
Preferred DNS server	The preferred domain name interpreter IP of terminal.
Alternate DNS server	The standby domain name interpreter IP of terminal.

Status
— Basic Settings —
Net options
Server options
Audio options
Night Mode
Alarm options
— System Tools —
Password Setting
Language Setting
Communication Protocol
Update firmware
Factory reset
Reboot
System logs

Server options

Terminal ID :	1
Local Port :	2046
Primary Server :	192.168.1.55 : 2048
Secondary Server :	192.168.1.14 : 2048
Version Server :	192.168.1.13 : 2051
FTP Server :	192.168.1.13 : 21
FTP Username :	admin
FTP Password :	•••••
Login Interval(s) :	3

Save

Parameters as following:

Terminal ID	The only Number to identify terminal, it can`t repeat with other device or hosts, the factory default is 1.
Local port	The terminal port. Note: can't modify otherwise special situation of terminal (default is 2046).
Primary Server	Server address of terminal login, factory default is 192.168.1.13.
Secondary Server	Login alternate server, when the primary server cannot be connected. When preferred DNS server can be connected, terminal re-login the preferred server.
Version Server	Version server IP, connecting version server to automatically upgrade program when terminal restart.
FTP server	File server IP, download the pointed files by FTP server to built-in memory via FTP.
FTP User name	User name of login FTP server.
FTP password	Password of login FTP server.
Login interval(s)	Interval of login FTP server.

Sip options

Click "**Sip options**" to register XonTel XT-21 speaker to a SIP server. Before registering, please make sure that you have valid login information with a valid SIP server. If this information is not valid, the speaker cannot be registered.

Parameters as following:

Sip Server	The IP address of the SIP Server.
Account	XT-21 speaker SIP account number in the SIP server.
Password	Registration password for XT-21 speaker SIP account.
Local Port	Local SIP port in the XT-21 speaker
Audio Port	Audio port in the XT-21 speaker.
Multicast Contact	Here you can enable or disable multicast paging feature in the XT-21 speaker.
Multicast Address	Multicast listening IP address in the XT-21 speaker.

Audio Parameters

Parameters as following:

Broadcast Volume	The total output volume of XT-21 SIP speaker in broadcasting (0~15).
Buffer time	Set the broadcast playback buffer time (that is, how many seconds later to broadcast after the broadcast task is received), to ensure the broadcast output quality when the network environment is poor.
Audio check	Enable: when the real-time noise of XT-21 SIP speaker is less than average noise, the server will pop-up trouble information. Disable: not start-up Audio check function;
Dynamic volume adjust（dB）	Enable: XT-21 SIP speaker can adjust broadcast output volume according to the noise level. Disable: dynamic volume adjustment function is invalid, system information interface of Web page displays the real-time volume level.
Noise detect adjust（dB）	Setting noise monitoring calibration figure (defaults as 16dB), calibration figure is greater, the greater the detected real-time noise will be. Notes: noise monitoring calibration figure=when the calibration figure is 0, the noise dB figure of dB tester - average noise dB figure monitored by terminal.
Noise Reference (dB)	Under normal circumstances, the defaults noise average dB figure is 60dB
Noise detect interval(s)	Setting average noise monitoring interval time, defaults as 30s, the average noise is changing according to time setting.

Night Mode

Parameters as following:

Night Mode	Enable or disable night mode in XT-21 speaker
Start Time	Night mode starting time
End Time	Night mode ending time
Night Volume	The total output volume of XT-21 SIP speaker in night mode (0~15).

Alarm options

Alarm Input	Enable or disable alarm input
Alarm input trigger mode	• **Closed circuit alarm**: the external terminal is normally in open circuit status, when it is in closed circuit status, it will trigger alarm. • **Open circuit alarm**: the external terminal is normally in closed circuit status, when it is in open circuit status, it will trigger alarm.
Cycle Continuous Alarm	Enable or disable cycle continuous alarm

Password Settings

Modifying the user-name and password in web parameters of the web page.

Language Settings

Here you can set web interface language.

| Status |
| --- Basic Settings --- |
| Net options |
| Sip options |
| Audio options |
| Night Mode |
| Alarm options |
| --- System Tools --- |
| Password Setting |
| Language Setting |
| Communication Protocol |
| Update firmware |
| Factory reset |
| Reboot |
| System logs |

Language Setting

Language : [English ▼]

[Save]

Update firmware

To upgrade XonTel XT-21 speaker firmware you must do the following steps:

1. In the "**Update firmware**" page then click on "**Update**" and wait for 15 seconds to enter firmware upgrade mode.
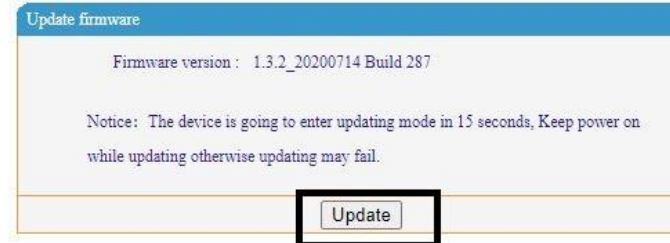
2. Refresh the page by pressing (**Ctrl + F5**) in your keyboard then click on the **Update firmware** page then click on "**Choose file**" and choose the XonTel XT-21 speaker firmware file from your PC then click on "**Update**" to start the upgrading process and wait for 30 seconds.
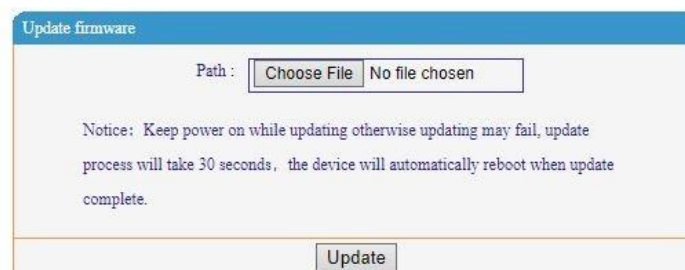
<u>Note:</u>

Don't power off the XonTel XT-21 speaker while upgrading process is running.

Factory reset

If you click on " Factory reset " button, all parameters were restored to factory setting.

Status
— Basic Settings —
Net options
Sip options
Audio options
Night Mode
Alarm options
— System Tools —
Password Setting
Language Setting
Communication Protocol
Update firmware
Factory reset
Reboot
System logs

Factory reset

Restore last correct settings or factory settings when the device fails.

Factory reset

Reboot the device

Here you can reboot XonTel XT-21 speaker

Status
— Basic Settings —
Net options
Sip options
Audio options
Night Mode
Alarm options
— System Tools —
Password Setting
Language Setting
Communication Protocol
Update firmware
Factory reset
Reboot
System logs

Reboot

Click button to reboot the device.

Reboot

System Log

XonTel XT-21 SIP speaker can record the operating condition and form log, the user can browser the system log in web page.

Status	
— Basic Settings —	
Net options	
Sip options	
Audio options	
Night Mode	
Alarm options	
— System Tools —	
Password Setting	
Language Setting	
Communication Protocol	
Update firmware	
Factory reset	
Reboot	
System logs	

System logs

Index	Log content
1	May 7 10:14:21 Handshake timeout
2	May 7 10:14:21 Disconnect from the server
3	May 7 11:19:07 Started successfully
4	May 7 13:12:13 Started successfully
5	May 7 14:55:54 Login sever 192.168.1.13:2048
6	May 7 15:01:12 Handshake timeout
7	May 7 15:01:12 Disconnect from the server
8	May 7 15:02:41 Reboot
9	May 7 15:02:52 Started successfully
10	May 7 15:03:24 Reboot
11	May 7 15:03:35 Started successfully
12	May 7 15:04:05 Login sever 192.168.1.13:2048
13	May 7 15:05:20 Server close
14	May 7 15:05:26 Login sever 192.168.1.13:2048
15	May 7 15:09:26 Handshake timeout
16	May 7 15:09:26 Disconnect from the server
17	May 7 15:16:11 Reboot
18	May 7 15:16:22 Started successfully
19	May 7 15:17:37 Login sever 192.168.1.13:2048
20	May 7 15:20:07 Handshake timeout

1 2 3 4 5 6 7 8 9 10 ...147

Refresh

Fault exclude

Terminal cannot 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. When the terminal is power on, the network port green indicator light will be normal on, and orange indicator light will rapidly short flicker, it means the cable hard-link is normal. If the network port green indicator light is not light up, there is network hard-link problem, please check the cable and switch which is connected the terminal, check if there is any damage and poor contact abnormal working.

3、Check the terminal IP setting. Checking the terminal ID NO, server IP, local IP and gateway IP these parameters is correct or not.

How to solve the warning of "terminal network service (UDP)" failed during the process of the starting the service software?

Server local network connection is disconnected, connect the local network cable, exit the service software and Restart, it will be ok.

Web display abnormal?

Emptying the cache or change the browser.

How to modify the account number and password to login the web page?

1. Click the password setting of the web page.
2. Please input previous user name and password under the original user name and password respectively.
3. Input the new user name and password in the new one.
4. Input the new password in the command confirmation.
5. Click for save.
6. The new user name and password will be workable after restarted the equipment.