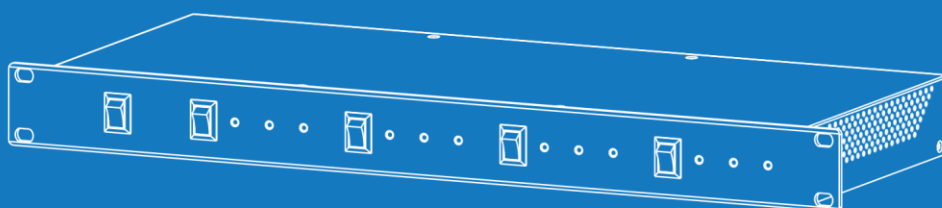


***SPON***

MULTICHANNEL AUDIO FREQUENCY AMPLIFIER  
User Manual



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## Summary

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 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.

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) 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)

·Fault(eg it can't network, no sound ect)

(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

Multichannel audio frequency amplifier, embedded with digital network audio technology of SPON independent intellectual property rights, equipped with audio input, RJ45 network, short-circuit input interface, and etc, which can be used to broadcast over the network to other terminals, also can receive broadcast of other terminals or server-initiated .

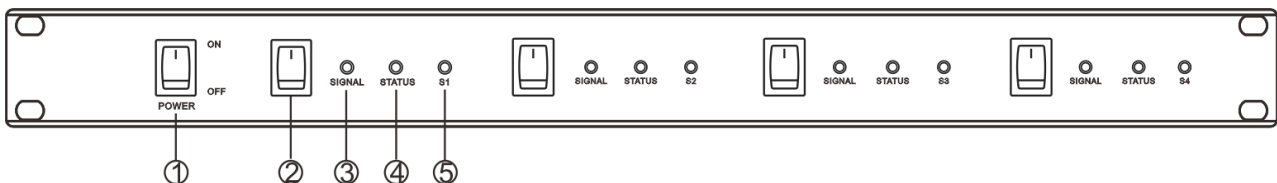


## Features

- 4-way independent network modules, each with a network interface, any one of the networks or modules failure will not affect other modules, 4-way independent module has a separate power switch.
- With 4-way independent network decoder chip, it can simultaneously decode four digital audio. It receives the timing ring / live broadcasting and so on by the server or other terminals initiated.
- With 4-way alarm input and output, it can be used for linkage trigger and can output alarm without voltage signal to the third party equipment to achieve on-line automatic control, which is adapted to the external equipment linkage.
- With 4-channel audio encoding and 4-way simultaneous encoding. Analog audio source can be simultaneously encoded to broadcast to any group and terminal through the server. It Supports MP3/PCM/ADPCM audio encoding. The 4-way input channel can be used to remotely adjust the volume through network and the volume can be adjusted individually.
- Users can configure the network parameters, audio parameters, modify the login password of multichannel audio frequency amplifier to realize the personalized configuration through browser.

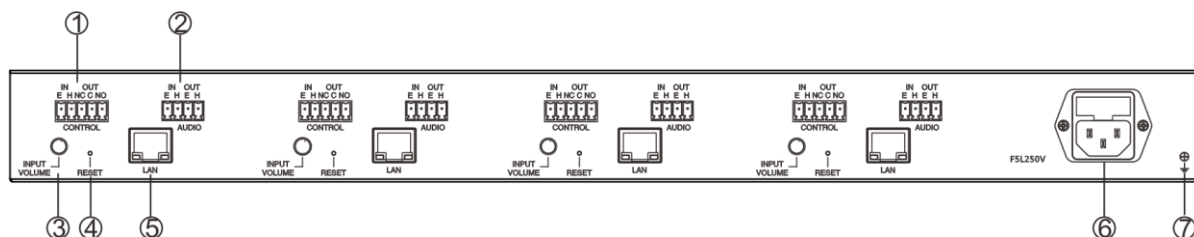
## Interface Introduction

### Front

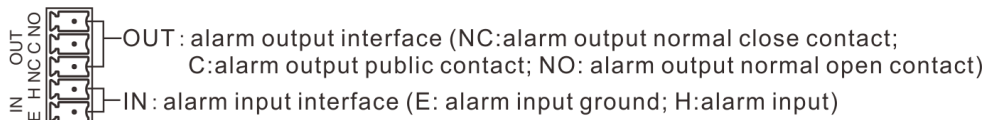


- ① Main power switch
- ② Power switch of each module
- ③ SIGNAL: signal indicator light, the light is OFF in idle status, when the line input signal, the light is ON in orange, brightness with audio signal strength change (the louder the volume, the light is brighter).
- ④ STATUS: status indicator light, the light is ON in green in online status; when receiving broadcasting or in the firmware upgrade mode, the green light is quickly flash, and OFF in offline status.
- ⑤ S1: power indicator light of each module, the light is ON in green after power on; when power off, the light is OFF.

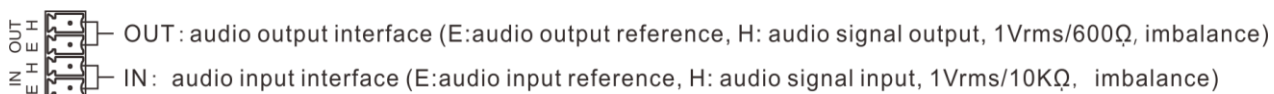
## Back



### ① Alarm input/output interface



### ② AUDIO: audio input/output interface



③ INPUT VOLUME: input volume adjustment knob, clockwise increase the volume, counterclockwise reduce the volume.

④ RESET: Press the button to reset to defaults (or firmware upgrade), broadcast IP .

| Status                                      | Operation   |
|---|---|
| Mandatory restore IP address                | Press the button with power 3s continuously   |
| Mandatory access firmware upgrade interface | Press the button, and then power the device, hold the button for 5 seconds            |
| Broadcast IP                                | Power ON, under the situation of network offline, short press the button and release. |

⑤ LAN: Network interface

⑥ Power interface

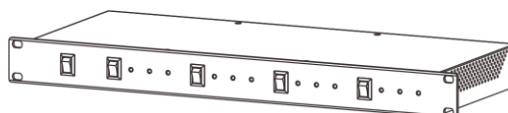
⑦ Grounding switch

## Introduction

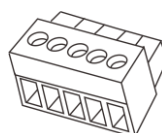
### Packing List

Multichannel audio frequency amplifier is including the following fittings, please check the fittings before the installation, if any missing, please contact the distributor.

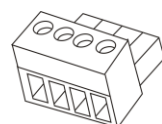
(1) Multichannel audio frequency amplifier 1 PCS



(2) Wiring terminal (3.5-5P) 4 PCS



(3) Wiring terminal (3.5-4P) 4 PCS



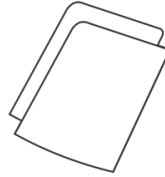
- (4) Power line (3\*1.0mm<sup>2</sup>/1.5m) 1 PCS



- (5) Audio cable 4 PCS



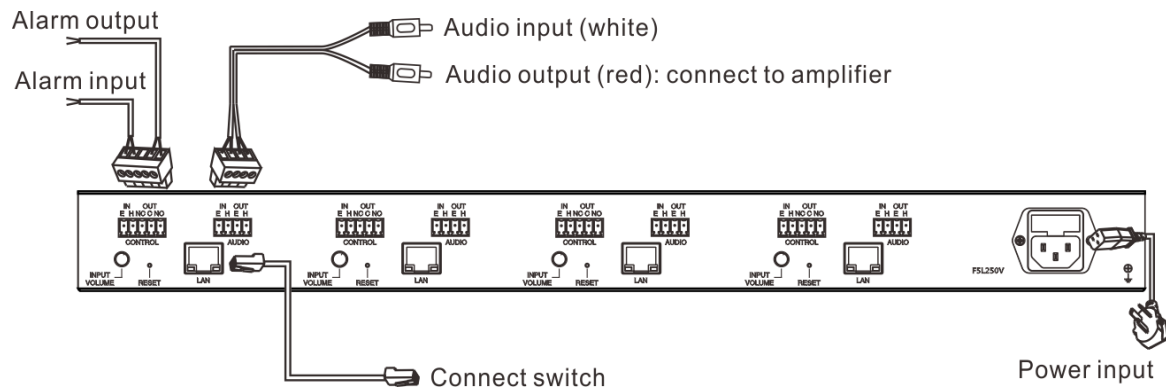
- (6) Installation Manual 1 PCS



- (7) Certification 1 PCS



## Wiring



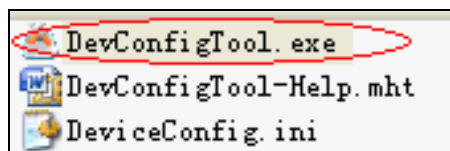
**Note:** each module needs independently wiring.

## Basic Network Settings

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

## Terminal Devices Scanning Tool

- (1) Under the menu of [optical disc:\tool software\] find "DevConfigTool" and run it, after starting, input the defaulted password "123456"



(2) Please select the **【Mandatory config】** from the right menu, then filling each correct parameters in the [terminal parameter]. It will be finished IP parameter configuration once pressed "sending parameter".

Scan config Mandatory config

Note: All terminals support, used with caution.

Warning:

1. Make use of interconnection net cable;
2. When using net switch, only connect one terminal;

Terminal parameter

Terminal ID: 1

Server IP: 192 . 168 . 0 . 192

Terminal IP: 192 . 168 . 0 . 101

Gateway IP: 192 . 168 . 0 . 1

Subnet Mask: 255 . 255 . 255 . 0

Terminal Port: 2048 (Default 2048) (special modify)

Server Port: 2048 (Default 2048) (special modify)

Send parameters

☒ Safety checks (Check more than one terminal)

**Remark: 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 ways.

#### Webpage Way

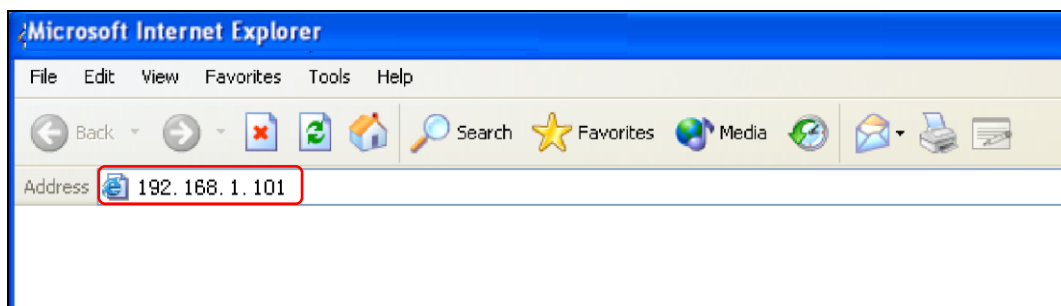
Enter the web webpage of multichannel audio frequency amplifier, modify the parameters of the network parameters according to the scene environment, and click "save" after setting up.

The specific operation steps refer to the network parameters settings in the user-define terminal parameters.

## User-define Terminal Parameters

### Login Web Interface

(1) Please input the multichannel audio frequency amplifier IP address to the address column of the browser (the factory default IP address is 192.168.1.101, it will automatically play the IP address when the press the terminal key without the cable inserted), then enter.



(2) Enter the user name and password in the web interface (the default user name and password is admin)



(3) Click OK to enter multichannel audio frequency amplifier web interface.

|                         |   |
|-------------------------|---|
| Status                  | Status  |
| -- Basic Settings --    |   |
| Network                 |   |
| Audio and Alert         |   |
| -- Advanced Settings -- |   |
| Web Management          |   |
| -- Maintenance --       |   |
| System Tools            |   |
|                         | <p><b>Network parameters:</b></p> <p>MAC Address: 00-E0-4C-EA-10-09</p> <p>IP Address: 192.168.4.50</p> <p>Subnet Mask: 255.255.255.0</p> <p>Default Gateway: 192.168.4.1</p> <p>DNS Server: 192.168.1.1, 192.168.1.1</p> <hr/> <p>Running time: 0 day(s) 00:00:02 <span style="float: right;">Refresh</span></p> |

## Network Parameters

|                         |   |
|-------------------------|---|
| Status                  | Network parameters  |
| -- Basic Settings --    |   |
| Network                 |   |
| Audio and Alert         |   |
| -- Advanced Settings -- |   |
| Web Management          |   |
| -- Maintenance --       |   |
| System Tools            |   |
|                         | <p>Device ID: <input type="text" value="1"/></p> <p>IP Address: <input type="text" value="192.168.4.50"/> : <input type="text" value="2046"/> (Default:2046)</p> <p>Subnet Mask: <input type="text" value="255.255.255.0"/></p> <p>Default Gateway: <input type="text" value="192.168.4.1"/> (Optional)</p> <p>DNS server1: <input type="text" value="192.168.1.1"/> (Optional)</p> <p>DNS server2: <input type="text" value="192.168.1.1"/> (Optional)</p> <p>System Server: <input type="text" value="192.168.4.105"/> : <input type="text" value="2048"/> (Default:2048)</p> <p>Second server: <input type="text" value="192.168.1.14"/> : <input type="text" value="2048"/> (Default:2048)</p> <p>Language: <input type="text" value="English"/> ▼</p> <p>HandShake Interval: <input type="text" value="30s"/> ▼</p> <hr/> <p style="text-align: right;"><span>Save</span> <span>Default</span></p> |

The parameters specification as following:

|            |   |
|------------|---|
| Device NO. | The only identify device No., it can't repeat with other host. . The defaults is 1.<br><b>Note: The factory default NO. of the 4-way module is 1, please set 4 - channel module to different numbers.</b> |
| IP address | IP address of multichannel audio frequency amplifier, the default is 192.168.1.101.<br><b>Note: the IP address of the 4-way module is 192.168.1.101, please set different IP</b>                          |



|                      |  |
|----------------------|--|
|                      | <b>address for 4 - channel module.</b>   |
| Device port          | The device port number defaults to be 2046, please don't modify without special situation  |
| Subnet mask          | Please set the subnet mask.( the defaults is 255.255.255.0)  |
| Default gateway      | Network gateway of multichannel audio frequency amplifier. ( the default is 192.168.1.1 )  |
| Preferred DNS server | Preferred domain name resolver IP of multichannel audio frequency amplifier network  |
| Alternate DNS server | Network alternate domain name resolver IP of multichannel audio frequency amplifier  |
| System server        | The IP address to log in the server, the default is 192.168.1.13.<br>The port default to be 2048, please don't modify without special situation. |
| Alternate server     | When the preferred server cannot log in, you can choose the alternate server, the defaulted IP is 192.168.1.14.                                  |
| Language             | The application (firmware) procedure can switch between Chinese and English. On the BIOS procedure webpage cannot switch the language.           |
| Handshake interval   | Set the handshake interval time between the server and multichannel audio frequency amplifier interval.  |

## Audio and Alarm

|  |  |
|--|--|
| <div> <div>Status</div> <div>--- Basic Settings ---</div> <div>Network</div> <div>Audio and Alert</div> <div>--- Advanced Settings ---</div> <div>Web Management</div> <div>--- Maintenance ---</div> <div>System Tools</div> </div> | <div>Audio and Alert</div> <div> <div>Encoding format:</div> <div>PCM</div> </div> <div> <div>Line input volume:</div> <div>15</div> </div> <div> <div>Broadcast sampling rate:</div> <div>22050Hz</div> </div> <div> <div>Broadcast output volume:</div> <div>11</div> </div> <div> <div>Alertin status:</div> <div>Normally Open</div> </div> <div> <div>Alarm input linkage alarm output:</div> <div>No linkage</div> </div> <div> <div>Alarm output linkage recovery time:</div> <div>0</div> </div> <div> <div>Save</div> <div>Default</div> </div> |
|--|--|

The parameters specification as following:

|  |   |
|--|---|
| Code mode                                  | The code mode of broadcasting, default is PCM.  |
| Line input volume                          | The volume of the audio line input (0~15) .   |
| Broadcast sampling rate                    | The sampling frequency of multichannel audio frequency amplifier when broadcasting, the default is 22050Hz.   |
| Broadcast output volume                    | The volume of the multichannel audio frequency amplifier when broadcasting.   |
| Alarm input status                         | The status of alarm input interface when the alarm input is not triggered. This status decides the alarm method.<br>When the status is normally open, the alarm input interface be closed to trigger alarm.<br>When the status is normally close, the alarm input interface be open to trigger the alarm. |
| Alarm input linkage alarm output           | When the alarm input is triggered, configure whether linkage alarm output.  |
| The time for alarm output linkage recovery | The durable time after the alarm output is triggered by linkage.<br><b>Note: the effective durable time is 1-29 seconds. When the setting is 0, the alarm output will continually link.</b>   |

## Web Management

On the Web management parameters, the account and password to log in the browser can be changed.

|                       |   |
|-----------------------|---|
| Status                | <div><b>Modify the Web password</b></div> <div>Old user name: <input type="text" value="admin"/></div> <div>Old Password: <input type="password"/></div> <div>New user name: <input type="text"/></div> <div>New password: <input type="password"/></div> <div>Confirm password: <input type="password"/></div> <div><input type="button" value="Save"/> <input type="button" value="Clear"/></div> |
| — Basic Settings —    |   |
| Network               |   |
| Audio and Alert       |   |
| — Advanced Settings — |   |
| Web Management        |   |
| — Maintenance —       |   |
| System Tools          |   |
|                       |   |
|                       |   |

## Reboot Device

Click “Reboot” to manually reboot the devices.

|                       |   |
|-----------------------|---|
| Status                | <div><b>Reboot</b></div> <div>Click the reboot button, the device will reboot.</div> <div><input type="button" value="Reboot"/></div> |
| — Basic Settings —    |   |
| Network               |   |
| Audio and Alert       |   |
| — Advanced Settings — |   |
| Web Management        |   |
| — Maintenance —       |   |
| System Tools          |   |
| – Reboot              |   |
| – Restore             |   |

## Reset to Defaults

Resort to Default: all the parameters reset to defaults.

|                       |  |
|-----------------------|--|
| Status                | <div><b>Restore</b></div> <div>Click the Restore Factory Settings button, the device will return all settings to the factory default state.</div> <div><input type="button" value="Restore factory settings"/></div> |
| — Basic Settings —    |  |
| Network               |  |
| Audio and Alert       |  |
| — Advanced Settings — |  |
| Web Management        |  |
| — Maintenance —       |  |
| System Tools          |  |
| – Reboot              |  |
| – Restore             |  |

## Firmware Upgrade

Click “Enters Firmware Upgrade Mode” to enter the firmware upgrade interface, on which, click “Scan” to choose the correct file and click the “Firmware Upgrade” to upgrade. After finishing upgrading devices, it will automatically reboot.

|                       |                        |
|-----------------------|------------------------|
| Status                |                        |
| — Basic Settings —    |                        |
| Network               |                        |
| Audio and Alert       |                        |
| — Advanced Settings — |                        |
| Web Management        |                        |
| — Maintenance —       |                        |
| System Tools          | <b>Upgrade Upgrade</b> |
| — Reboot              |                        |
| — Restore             |                        |
| — Upgrade             |                        |
| — System log          |                        |

Firmware Version:

Firmware\_[Normal]\_V1.0\_170809

BIOS Version:

BootLdr\_[Normal]\_V1.0\_170705

Enters firmware upgrade mode

## System Log

On the web page, the log of multichannel audio frequency amplifier can be scanned. The log content on the web page can be cleaned by clicking “Clear All The Log”.

|                       |                   |
|-----------------------|-------------------|
| Status                |                   |
| — Basic Settings —    |                   |
| Network               |                   |
| Audio and Alert       |                   |
| — Advanced Settings — |                   |
| Web Management        |                   |
| — Maintenance —       |                   |
| System Tools          | <b>System Log</b> |
| — Reboot              |                   |
| — Restore             |                   |
| — Upgrade             |                   |
| — System log          |                   |

| Index | The Log Content                                    |
|-------|--|
| 1     | 00-00 00:00:00 Reboot                              |
| 2     | 00-00 00:00:00 Reboot                              |
| 3     | 00-00 00:00:09 Net status change 1                 |
| 4     | 00-00 00:00:15 Logining: 192.168.1.13 : 2048       |
| 5     | 00-00 00:00:00 Reboot                              |
| 6     | 00-00 00:00:03 Net status change 1                 |
| 7     | 00-00 00:04:15 Logining: 192.168.1.13 : 2048       |
| 8     | 08-15 08:36:00 Logining: 192.168.1.13 : 2048       |
| 9     | 08-15 09:26:00 Receive broadcasting: 234.0.0.2 : 0 |
| 10    | 08-15 09:26:00 Receive broadcasting: 234.0.0.2 : 0 |

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Refresh Clear All The Log

## Fault Exclude

### Why it appears "terminal network services (UDP) start fail" warning within the process of start server software?

Appearing this warning information, it's usually the local network connection has been disconnected, please connect the local network cable well and exit the software, then restart it.

### Why the terminal is still "offline"?

1).Check the software server and the main controller is normal opened or not. It's required to close all firewall before open the software server (including system built-in firewall and other antivirus software firewall) .

2).Check the network connection is normal or not. After the terminal powered on, the network port green light is norm on, meantime the orange light will be short and fast flash, it means the network cable hard-connected normal. If the network port green light is not on, it means the network hard-connected problem, please check the terminal network cable and switcher whether they work normal, damaged and disconnect or not etc.

3).Check the terminal IP setting. Please check the terminal ID, sever IP, local IP, gateway IP ...etc parameters

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