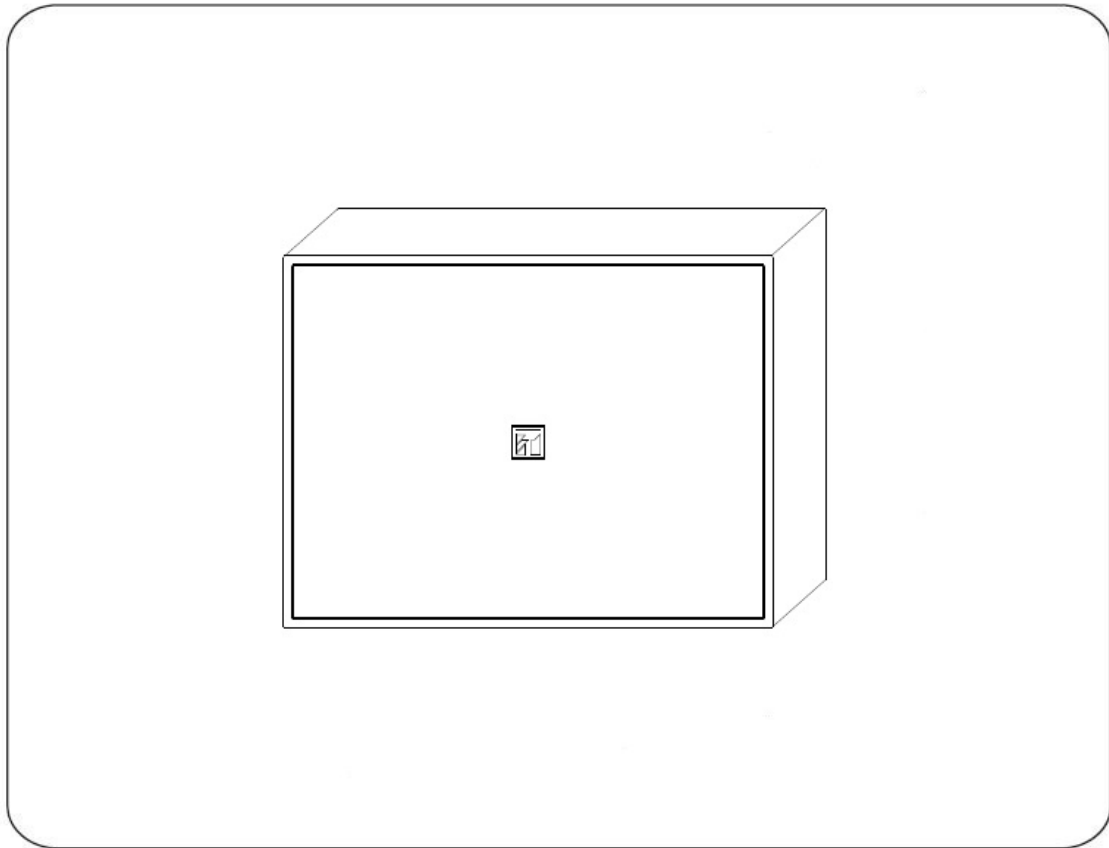




## User's manual

**IP Wall-mounted Speaker**

**BS-P678IP1**



Thanks for your purchase of TOA products IP-1000 series.  
Please read the manual carefully to ensure the machine operating in long time and fault-free.

**TOA Corporation**

# **Chapter 1**

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## **Safety precaution**


## Chapter 1: safety precaution

Please abide by the warning and the relevant safety tips.

Please place 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.**

(1) Avoid getting wet by water.

Do not make the machine wet or expose to rain water or other liquid contamination of the environment, or lead to fire or electric shock.

(2) Do not use unspecified voltage.

Using the marked voltage on the machine.

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

(3) Do not scratch the power cord.

Do not 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 continue to using the equipment, it is likely to catch fire or resulted in electric shock.

- The smoke or smell of the machine.
- The inside of the machine is flooded by water or external intrusion.
- Machine falling or machine case damage.
- The power cord damage (wire core is exposed of broken, etc)
- Malfunction (e.g no network connection, no sound etc.)

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

Do not let external substance getting into the equipment.

Please do not put any metallic or inflammable objects into the machine, otherwise it may cause fire or electric shock.

(3) Please do not touch it during thundering

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

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

If containers drop and liquid get into the machine, that will likely catch fires or cause electric shock.

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

The machine contains high voltage parts, once open the cover or modify the machine, it may result in 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 been used for 10 days or more, please turn off power supply switch for safety. If do not comply with this provision, it will likely cause electric shock or fires.

## ***Chapter 2***

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### ***Products description***

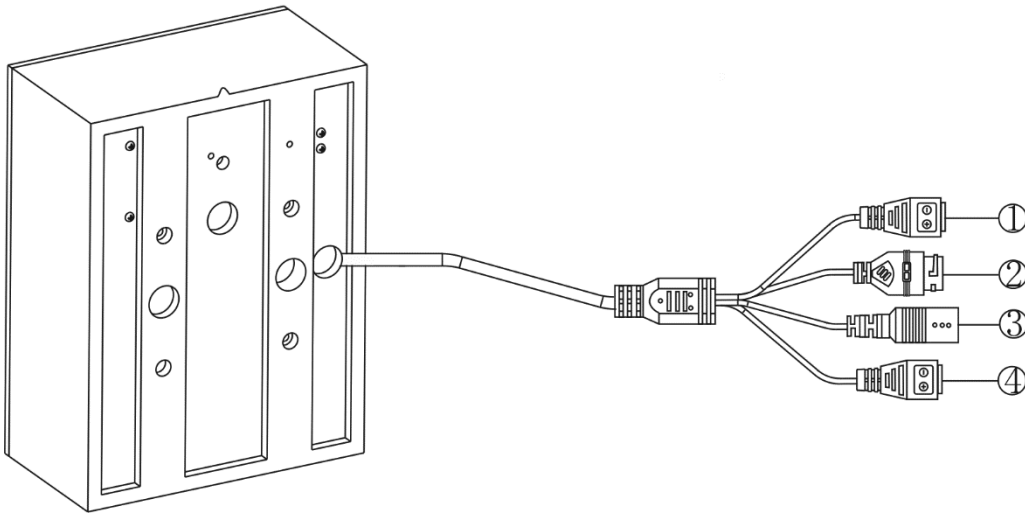
#### **2.1 Summary**

BS-P678I is an IP wall-mounted speaker, which can receive broadcast from other devices or servers. It supports system setting via browser with loop detection function to check the speaker, and to select sound source at the same time.

- ◆ **Line input**  
Speaker can connect to other audio signal devices for broadcasting sound source.
- ◆ **Loop detection**  
Speaker has self-detection function showing equipment status via loop detection.
- ◆ **Receiving broadcast**  
Speaker can receive broadcast from other devices or servers.
- ◆ **Program timer**  
Uploading every day sound source to the server, programming the broadcasting plan, the speaker can automatically broadcast according to the server configuration plan.
- ◆ **Working status indicator**  
Speaker has working status indicator, which shows the working status via the color and flash of the indicator light.
- ◆ **System setting via browser**  
User can set network parameters, audio parameters, login password modification via browser to realize personalized configuration.

## Chapter 2: products description

### 2.2 Connector description



① Amplifier output connector: connector color is black, specification is 3.81-2P, connecting external speaker, when the speaker receives the broadcasting, the same sound can be heard from the speaker. The Rated impedance:  $8\Omega$ , the rated output power: 10W

The "+" is positive pole of amplifier output, "-" is negative pole of amplifier output.

② Network connector: the specification is RJ-45, inserting cable to connect with server, the network connector with green and orange indicator light, which can indicate the speaker working status.

Working status	Indicator light
Cable not connected	Green light flashes slowly, orange light off
Offline	Green light flashes slowly, orange light always on
Free	Green light always on
Receiving broadcast	Green and orange light is flashes quickly

③ Power connector: DC24V/1A, supplying power for speaker.

④ Line input connector: connector is green, the specification is 3.81-2P, the audio signal of other devices can be accessed as audio sound source.

Rated audio input (unbalance): 1Vrms (Max: 2Vrms), the max audio input 2Vrms, audio input impedance:  $10K\Omega$ ;

The "+" is the signal end, "-" is ground signal end;

The line input sound source as local one, it can interrupt the audio program of network sound source, it needs audio priority configuration in the web page.

## ***Chapter 3***

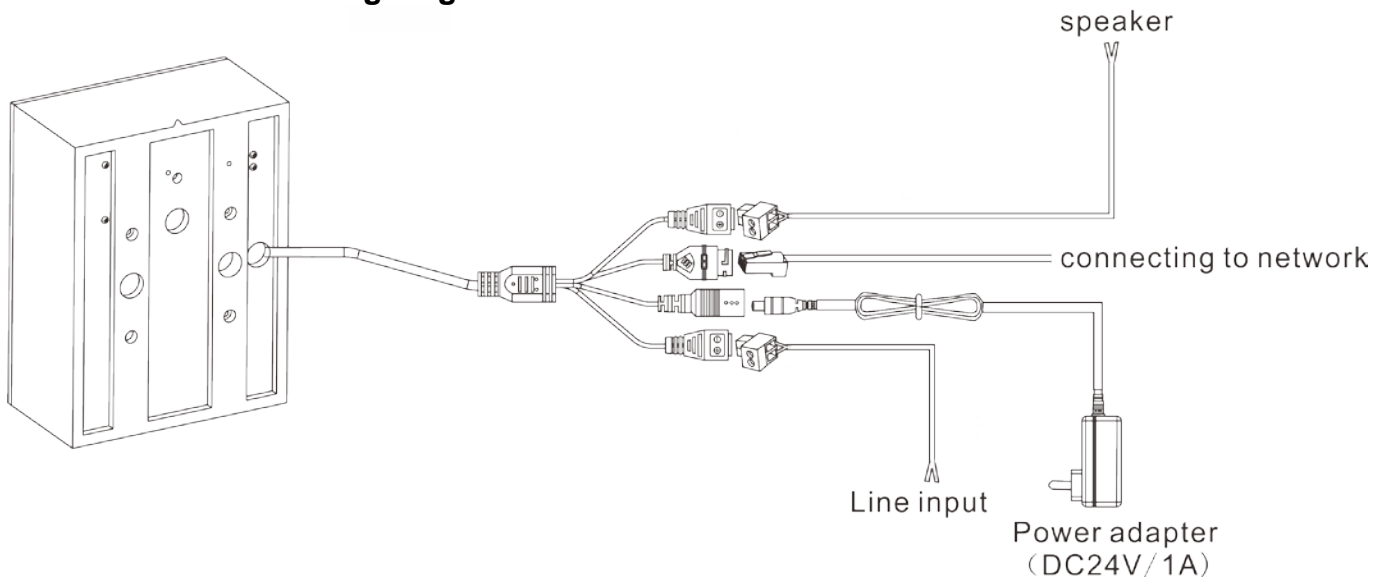
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### ***Wiring***

## Chapter 3: wiring

### 3.1 Wiring

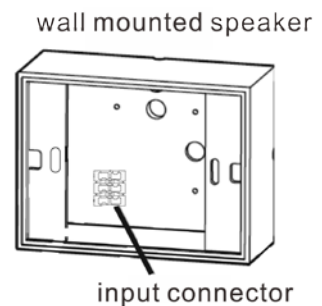
#### 3.1 .1 BS-P678IP1 Wiring diagram



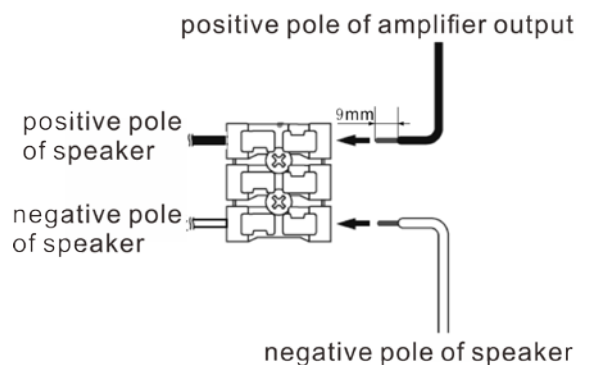
Note: 2P green connector is for line input, 2P black connector is for amplifier output.

#### 3.1.2 BS-P678E wiring diagram

(1) Separating the cover and the back shell, the specific steps please refer to P3-2.



(2) Please refer to the picture to insert the cable into the connector according, and connecting BS-P678IP1 and BS-P678E.





## Chapter 3: wiring

### 3.2 Installation description

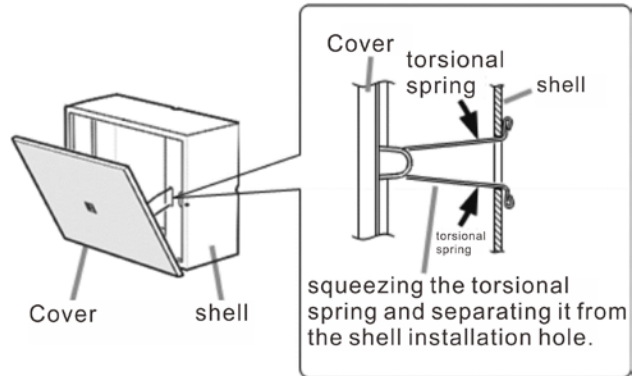
#### 3.2 Installation description

**[Required accessories]**

The required parts are included in accessories.

Screw M4\*3 ..... 2

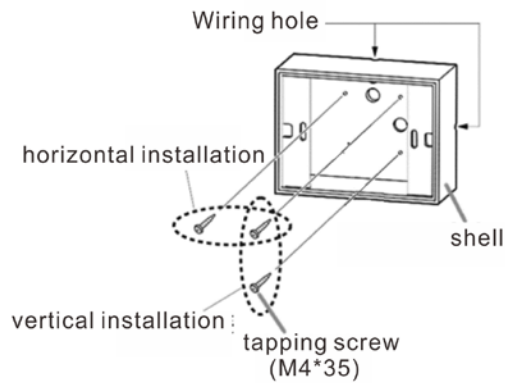
Step 1: open the IP wall-mounted speaker's mask, loosen the two torsion springs, separating the mask and the shell.



Step 2: the speaker is installed with the attached tapping screw(M4\*35)

Note:

**The speaker can be installed in horizontal or vertical direction. No matter it is concealed wiring (wall wiring) or open wire ( outside wall wiring) all suitable for IP wall-mounted speaker.**



Ⓐ Cable inlet

( it suitable for open wire horizontal installation)

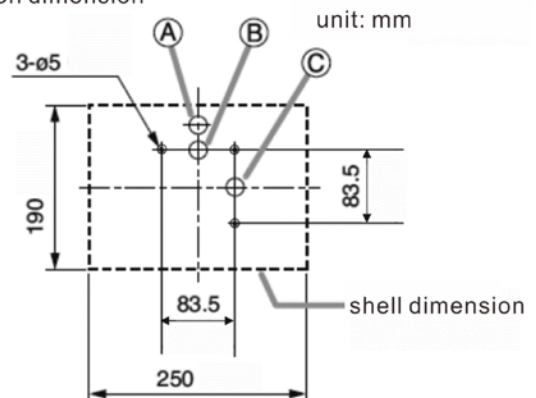
Ⓑ Cable inlet

(it suitable for horizontal concealed wiring)

Ⓒ Cable inlet

(it suitable for vertical open wire and concealed wiring).

installation dimension



Step 3: the mask is re-installation on the shell.

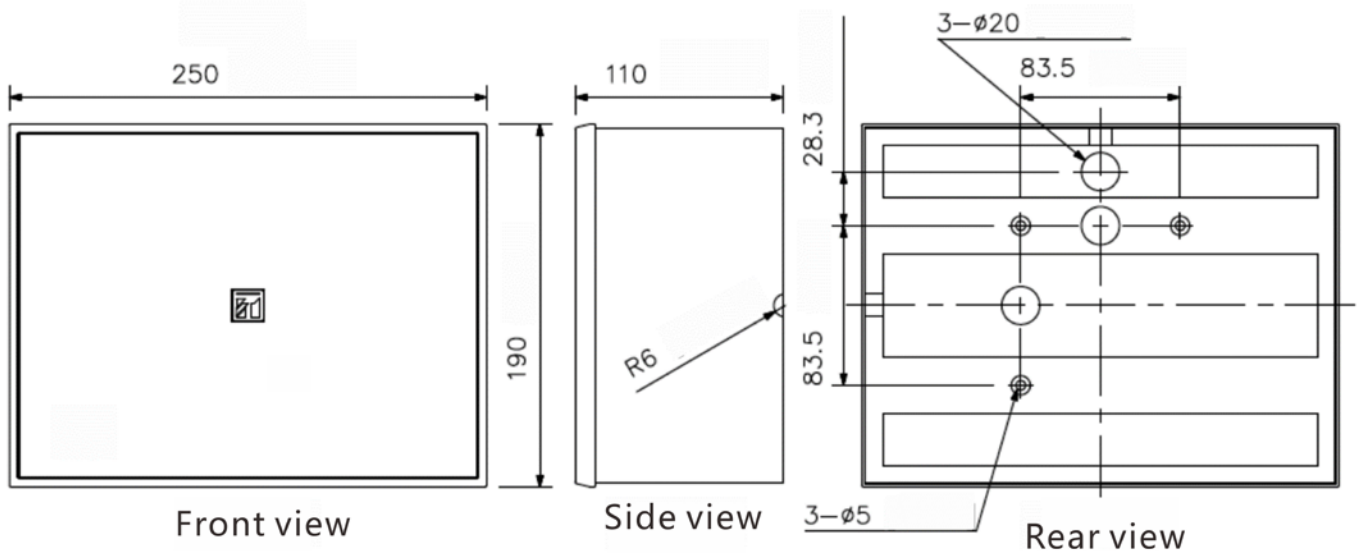
Note: When the angle of the speaker and trademark is different, please pull up it gently and turning it to the appropriate location.

**Note: BS-P678E and BS-P678IP1 is in the same installation.**

## Chapter 3: wiring

### 3.3 Reference size

#### 3.3 Reference size (unit: mm)



## ***Chapter 4***

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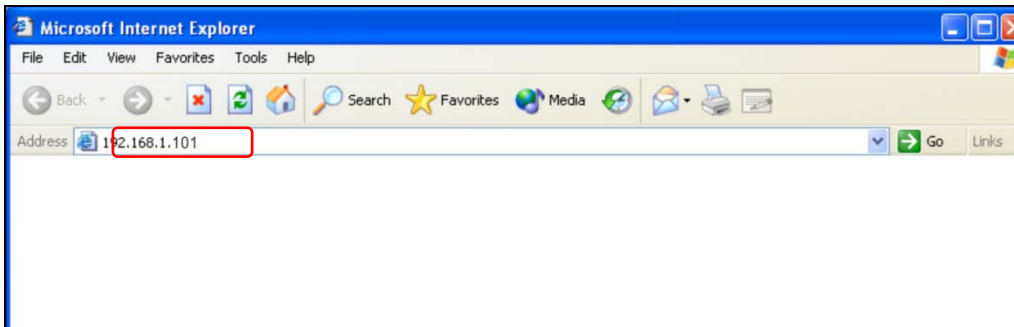
### ***System setting via browser***

## Chapter 4: system setting via browser

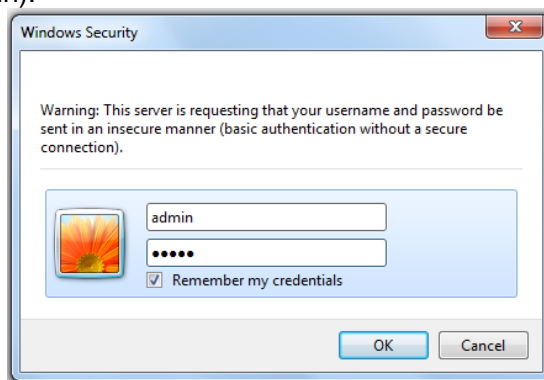
### 4.1 Entering browser

#### 4.1 Entering the browser

Step 1: Please input: **IP address of the speaker** (factory defaults is 192.168.1.101), then press Enter.

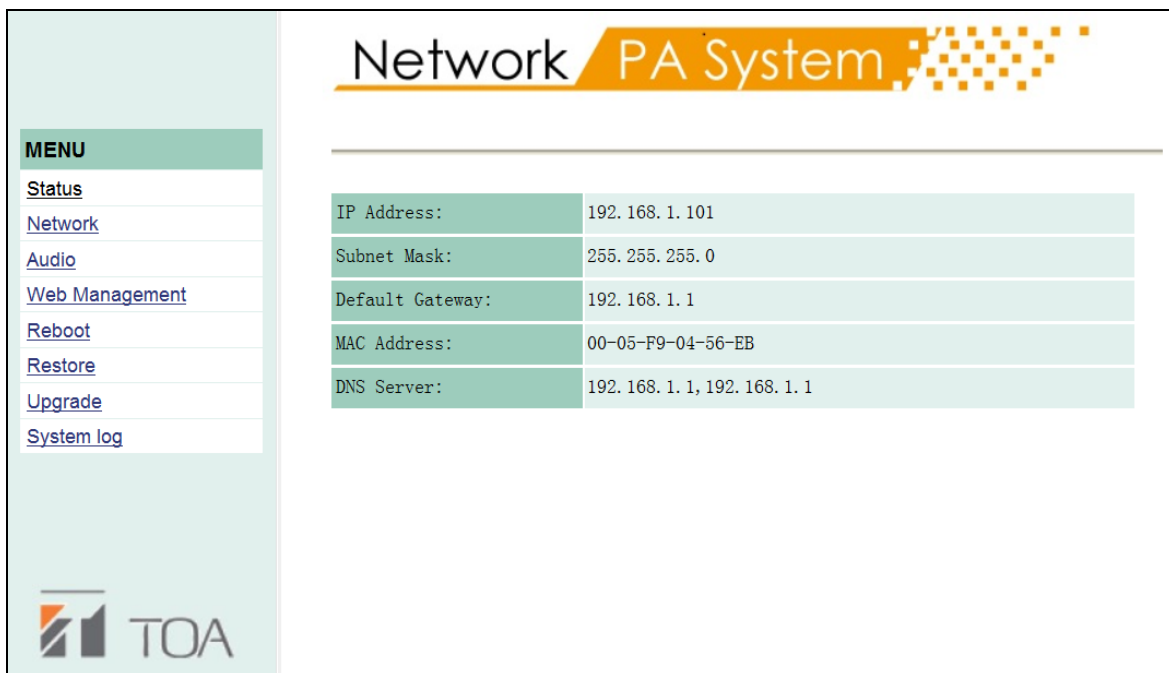


Step 2: Please input the user name and password in the login window of the Web page ( the defaults is admin).



**Note:** there is different letter of the user name and password.

Step 3: It can enter into the Web page after pressing Enter.

A screenshot of the Network PA System web interface. On the left is a vertical menu with the following items: MENU, Status, Network, Audio, Web Management, Reboot, Restore, Upgrade, and System log. The main content area displays the "Network PA System" logo at the top, followed by a table of network configuration details:

IP Address:	192. 168. 1. 101
Subnet Mask:	255. 255. 255. 0
Default Gateway:	192. 168. 1. 1
MAC Address:	00-05-F9-04-56-EB
DNS Server:	192. 168. 1. 1, 192. 168. 1. 1

At the bottom left of the interface is the TOA logo.

# Chapter 4: system setting via browser

## 4.2 Network parameters

### 4.2 Network parameters

**Network parameters**

Device ID:	1
IP Address:	192 . 168 . 1 . 101
Device Port:	2046 (Default:2046)
Subnet Mask:	255 . 255 . 255 . 0
Default Gateway:	192 . 168 . 1 . 1 (Optional)
DNS server1:	192 . 168 . 1 . 1 (Optional)
DNS server2:	192 . 168 . 1 . 1 (Optional)
System Server:	192 . 168 . 1 . 52
System Server Port:	2048 (Default:2048)
Language:	English
HandShake Interval:	30s

Save Default

Device number	Identify the unique number of the speaker and it can't be repeated with other devices or hosts.
IP address	IP address of speaker
Device port	The defaults port number is 2046, please don't modify it if not in specially situation.
Subnet mask	please setting subnet mask(the defaults to :255.255.255.0)
Defaults gateway	The gateway of the speaker (the defaults is :192.168.1.1)
DNS server 1	The IP of preferred domain interpreter in the speaker's network.
DNS server 2	The IP of standby domain interpreter in the speaker's network.
System server	IP address of IP broadcast server
System server port	The defaults server number is 2048, please don't modify it if not in specially situation.
Language	The Web page of the speaker's application segment procedure (Firmware) is support for switchover of English and Chinese, but the Web page of bottom segment procedure (BIOS) isn't support for switchover of English and Chinese.
Handshake interval	Setting the interval time between the speaker and the server.

## Chapter 4: system setting via browser

### 4.3 Audio parameters

#### 4.3 Audio parameters

The screenshot shows the 'Audio parameters' configuration page. On the left is a 'MENU' sidebar with links for Status, Network, Audio, Web Management, Reboot, Restore, Upgrade, and System log. The main area is titled 'Audio parameters' and contains the following settings:

Encoding format:	PCM
Line input volume:	8
Line input level (RMS):	30mv
Network circuit detection level:	Level 2
Broadcast sampling rate:	22050Hz
Broadcast output volume:	2
The Priority of Audio :	Local

At the bottom of the settings area are two buttons: 'Save' and 'Default'.

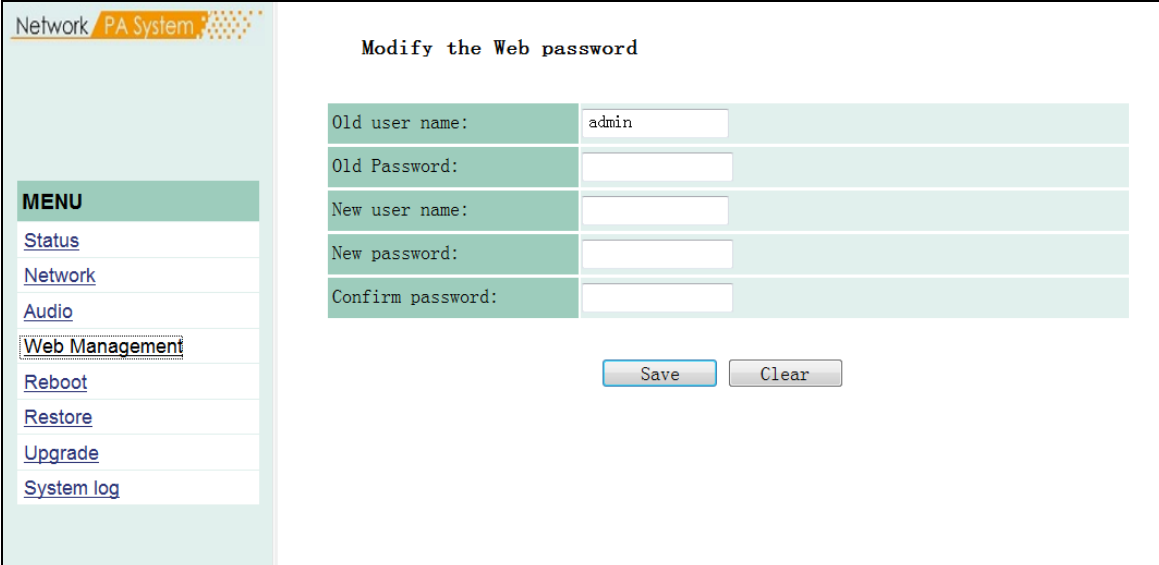
Coding mode	Broadcast coding, PCM means no data be compressed, ADPCM means packed data (low network data value).
Line input volume	The volume of audio line input
Line input threshold value	In order to avoid circuit and sound source noise, when the line input audio range is smaller than the value (line input threshold value), it will turn off the amplifier automatically within 1min. Line input threshold value is divided into to 3 levels, 20mV, 30mV, 50mV respectively, 20mV audio range is the lowest, 50mV audio range is the highest.
Network loop detection threshold value	The speaker will detect the voice according to the level of IP loop detection threshold value of the device, when there is no sound output, the server will have pop up display for the fault information. IP circuit detection function can be disabled; The sensitivity of the first level detection is the highest, and the sensitivity of the five stage detection is the lowest.
Broadcasting sampling rate	IP wall-mounted speaker sampling rate in broadcasting
Broadcast output volume	IP wall-mounted speaker total output volume in broadcasting ( 0~15,level 6 is 0dB )
Audio priority	It can select local and network priority, the defaults is network priority. Network priority: IP broadcast>PTT broadcast>ling input; local priority: line input>IP broadcast>PTT broadcast.

## Chapter 4: system setting via browser

### 4.4 Web management

#### 4.4 Web management

You can modify the account number and password in the Web management parameters.



The screenshot displays a web management interface. At the top left, there are navigation tabs for 'Network' and 'PA System'. Below these is a 'MENU' section with links for 'Status', 'Network', 'Audio', 'Web Management' (which is highlighted), 'Reboot', 'Restore', 'Upgrade', and 'System log'. The main content area is titled 'Modify the Web password' and contains a form with the following fields:

Old user name:	<input type="text" value="admin"/>
Old Password:	<input type="password"/>
New user name:	<input type="text"/>
New password:	<input type="password"/>
Confirm password:	<input type="password"/>

At the bottom of the form, there are two buttons: 'Save' and 'Clear'.

## Chapter 4: system setting via browser

### 4.5 Restarting device

#### 4.5 Restarting device

User can click "restart device" to restart the speaker.



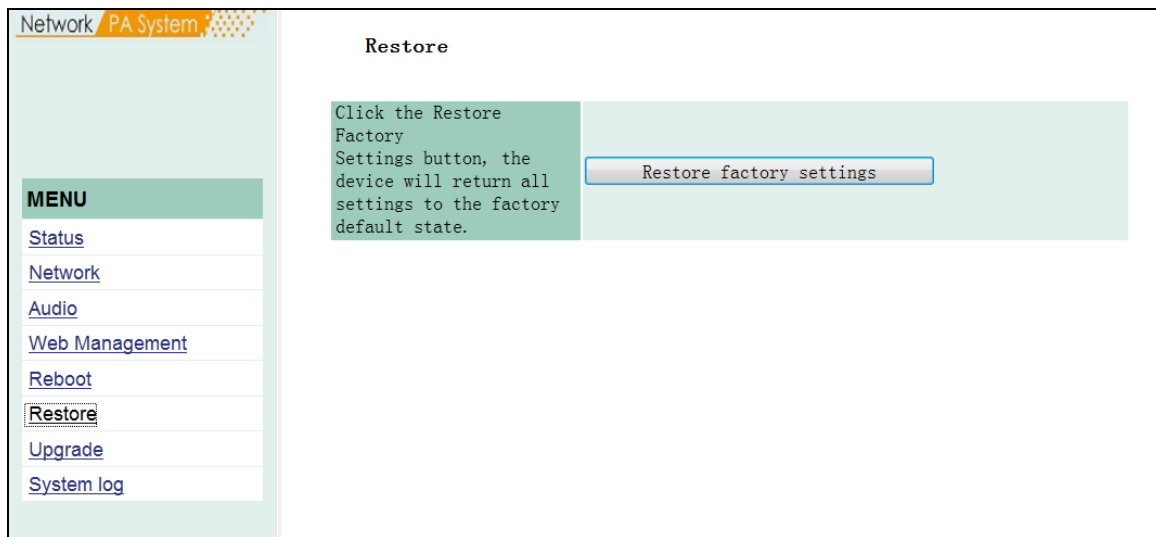


## Chapter 4: system settings via browser

### 4.6 resetting to defaults

#### 4.6 Resetting to defaults

resetting to defaults: all the parameters will reset to defaults.

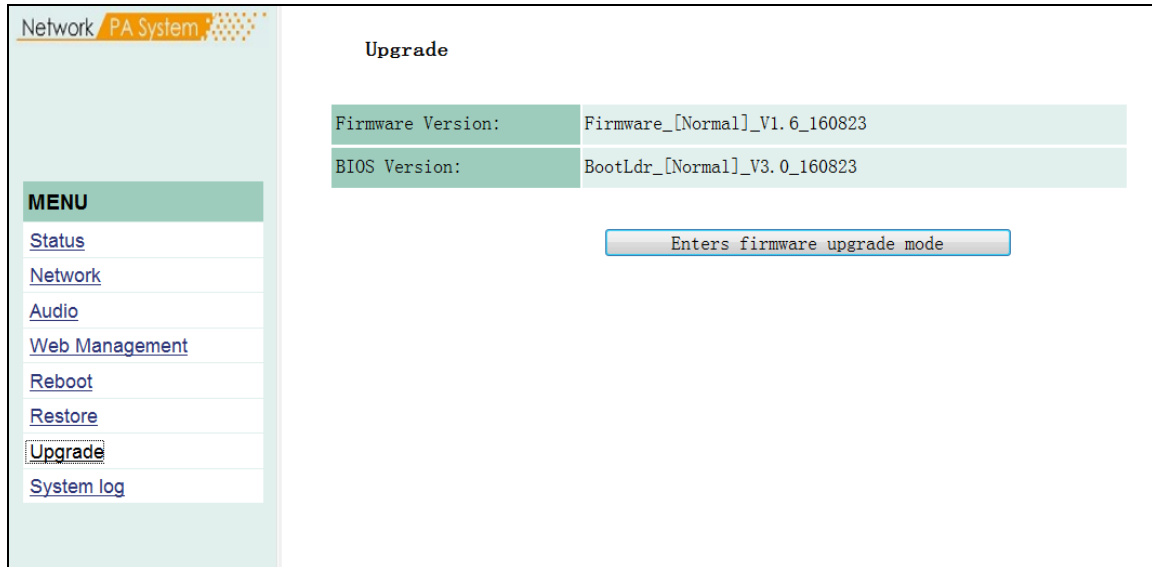


## Chapter 4: system setting via browser

### 4.7 Firmware upgrade

#### 4.7 Firmware upgrade

clicking "into the firmware upgrade mode" to enter the firmware upgrade interface.



Click browse in the upgrade firmware interface, please select the correct upgrade files, click on "upgrade", it will automatically restart after completed the upgrade.

## Chapter 4: system setting via browser

### 4.8 System log

#### 4.8 System log

Browser the log of the speaker in the Web page, clicking “delete all logs”, all logs can be deleted in the Web page.

The screenshot shows the TOA PA System web interface. The top navigation bar includes 'Network' and 'PA System'. A left-hand menu lists various system functions: Status, Network, Audio, Web Management, Reboot, Restore, Upgrade, and System log (which is currently selected). The main content area is titled 'System Log' and contains a table with 10 entries. Each entry has an index, a timestamp, and a description of the event. Below the table is a pagination bar with links for pages 1 through 16. At the bottom of the log area are two buttons: 'Refresh' and 'Clear All The Log'.

Index	The Log Content
1	08-30 13:49:00 Receive broadcasting: 234.0.0.2 : 0
2	08-30 13:49:00 Receive broadcasting: 234.0.0.2 : 0
3	08-30 13:50:00 Soft reset
4	08-30 13:50:00 Reboot
5	08-30 13:50:00 Net status change 1
6	08-30 13:50:00 Logining: 192.168.1.13 : 2048
7	08-30 13:50:00 Receive broadcasting: 234.0.0.2 : 0
8	08-30 13:50:00 Logining: 192.168.1.13 : 2048
9	08-30 13:50:00 Receive broadcasting: 234.0.0.2 : 0
10	08-30 13:51:00 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

## ***Chapter 5***

---

### ***Appendix***

## Chapter 5: appendix

### 5.1 Specification

#### 5.1.1 IP Wall-mounted Speaker BS-P678IP1

Model number	BS-P678IP1
Loudspeaker assembly	6 "(16 cm) double cone type
Power	DC24V / 1A
Power consumption (static power)	1.85W
Load impedance	8Ω, 10W
SPL (1m/1w)	94dB
Frequency response	150-20,000Hz
Input terminal	European standard 2P
Line input	Range: 1Vrms (Max:2Vrms), unbalance, 10KΩ
Network I/F	10BASE-T/100BASE-TX,automatic determination
Network protocol	UDP,ARP,ICMP,HTTP,IGMP
Working temperature	-20 °C ~ +40°C
Working humidity	Lower than 90%RH(No dew point)
Appearance	Box: wood ,gray white color Grid: steel mesh surface treatment, gray white color
Accessories	Retaining screw M4x35 (2PCS),2P connection terminal (2 PCS), Network port cover (1set)

#### 5.1.2 Wall-mounted speaker BS-P678E

Model number	BS-P678E
Loudspeaker assembly	6"(16cm) double cone type
Load impedance	8Ω, 10W
SPL (1m/1w)	94dB
Frequency response	150-20,000Hz
Working temperature	-20°C ~ +40°C
Working humidity	Lower than 90%RH(No dew point)
Appearance	Box: wood ,gray white color Grid: steel mesh surface treatment, gray white color
Accessories	Screw M4x35 (2pcs)

