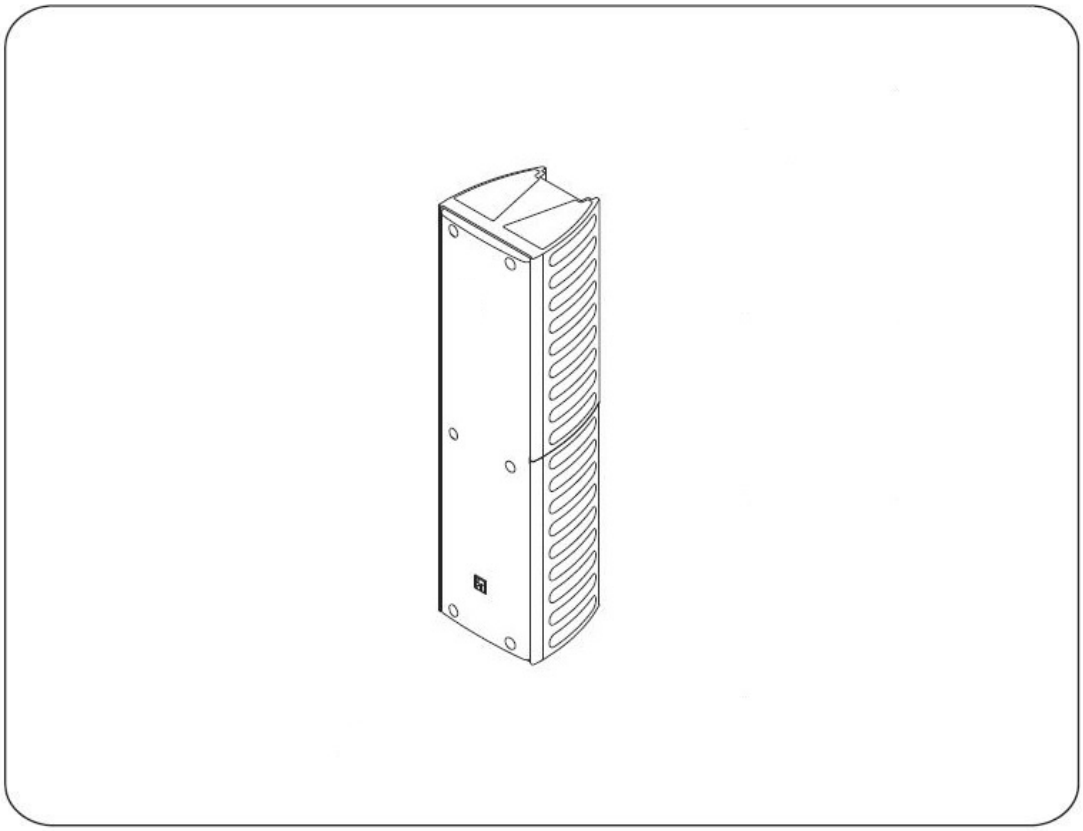
User’s Manual

IP audio column speaker TZ-P406BIP1/WIP1



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

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 exposed to rain water or other liquid contamination of the environment, or lead to fire or get an 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 external substance getting into the equipment.

Please do not put any metallic or inflammable objects into the machine, otherwise it may cause fires 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 machine above.

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

Products description

Chapter 2: products description

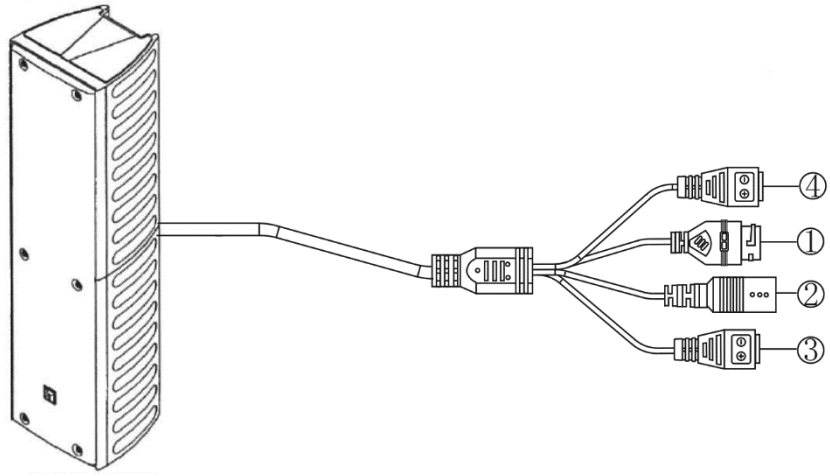
2.1 Summary

2.1 Summary

TZ-P406BIP1/WIP1 is an IP audio column speaker, which can receive broadcast from other terminals or servers, it supports system settings via browser. It comes with a loop detection function to detect the working status of IP column horn speaker and indicate on the server software.

- Line input
  IP audio column speaker can connect to other machines as broadcasting audio source.
- The loop detection
  IP audio column speaker has a self-checking function showing equipment working status through the loop detection.
- Receive broadcast
  IP audio column speaker can receive broadcast from other devices or server.
- Program Timer
  Uploading the required sound source to the server, setting broadcasting program, IP audio column speaker can self-automatic broadcasting according to the server plan.
- System settings through browser
  User can configure the network parameters, audio parameters and password modification etc, through browser.
- Easily installation
  IP audio column speaker is not only suitable for indoor, but also for outdoor, and it is easily installation.

2.2 Connector description



① **Network connector:** the specification is the RJ-45,insert the network cable to connect with server, the network interface comes with a dual color (green, orange)indicator light ,the indicator light can show the working status of the IP audio column speaker.

Working status	Indicator light
Network cable not connected	Green light flash slowly, orange light goes out
Offline status	Green light flash slowly ,orange light is normally on
Free status	Green light is always bright
Receiving broadcast	Green light and orange light both flash quickly

②**Power connector**: DC24V/2.7A, supply power for the IP audio column speaker.

③**Line input connector**: the interface color is green, the specification is 3.81-2P, it can receive other audio signals as the broadcast source.

Rated audio input (unbalance):1Vrms (Max input: 2Vrms), Audio input impedance:10KΩ

"+"is the signal port "-"is the signal ground end

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

④**2P European standard connector (black):** nonuse.

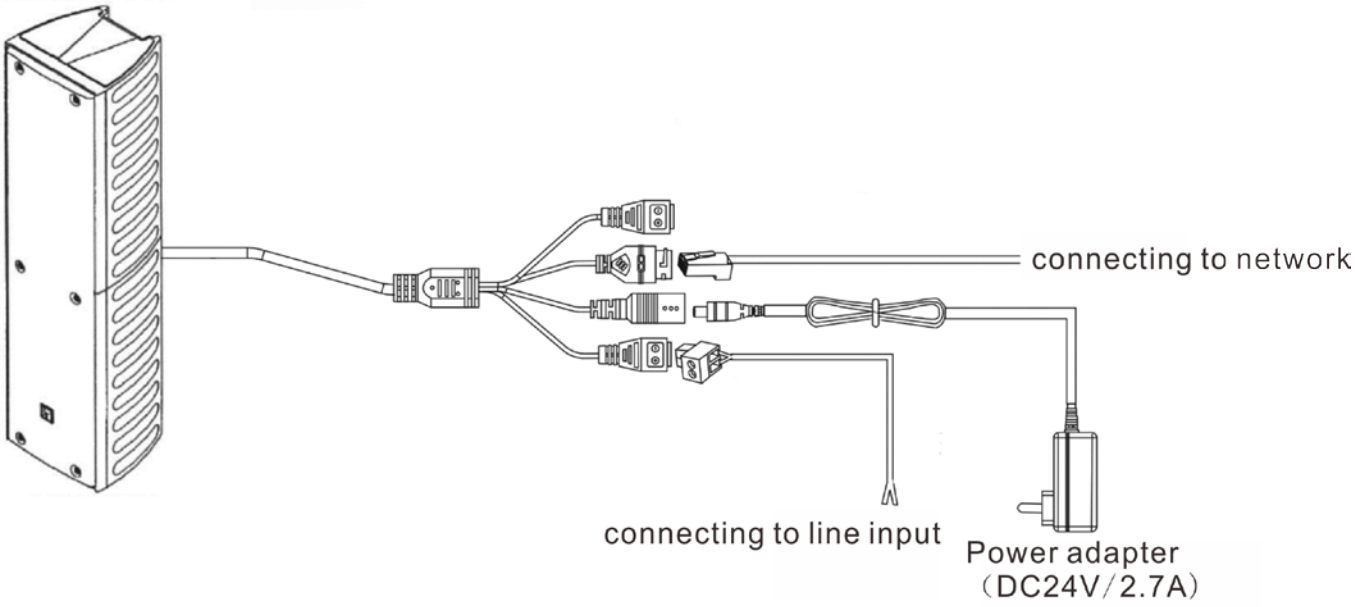
Chapter 3

Wiring

Chapter 3: wiring

3.1 IP audio column speaker wiring

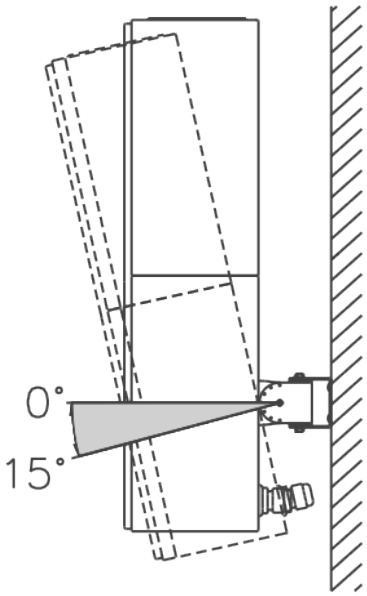
3.1 Wiring diagram



3.2 Installation description

Outdoor installation notes

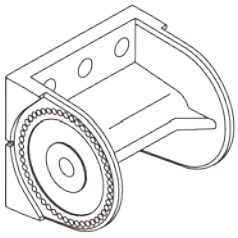
- The IP audio column speaker must be installed in the vertical direction.
- The incline angle in accordance with the following picture.
- Note: please put the reverse input terminal at the below of the loudspeaker.
- The running condition temperature is -10℃to +50℃, exceed the temperature may cause machine problem.

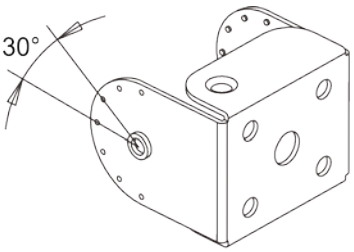


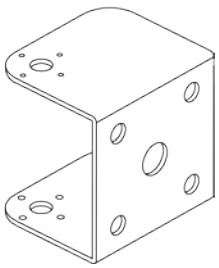
3.2.1 Wall-mounted installation

IP audio column loudspeaker is equipped with mounting bracket, as follows:

[mounting bracket A} **[mounting bracket B}** **[mounting bracket C}**

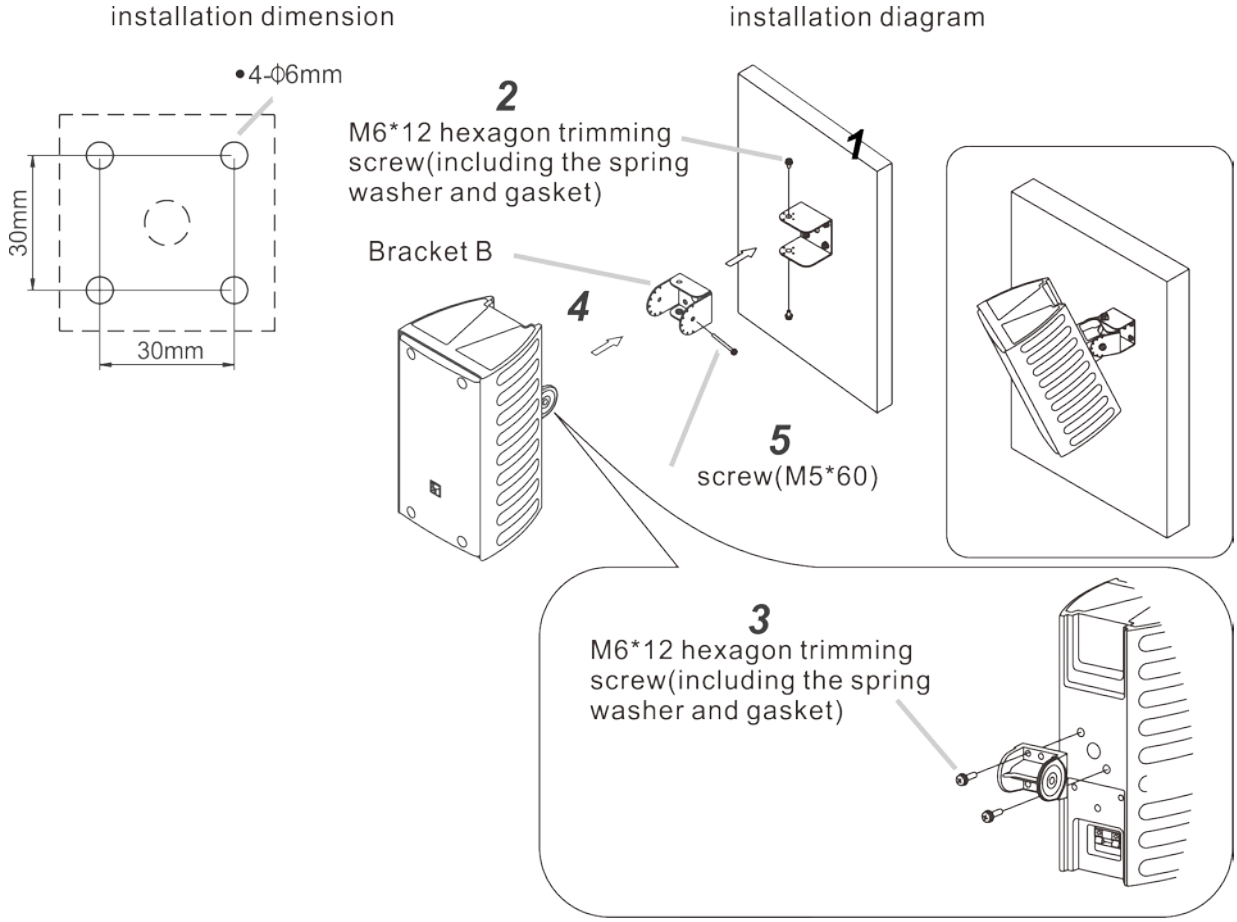






3.2.1.1 Horizontal and vertical installation

The mounting screw and bracket are included in the fittings of the IP audio column speaker.
The highest level is 60 degrees, vertical: 15 degrees downward maximum
The installation steps, please refer to the following pictures:

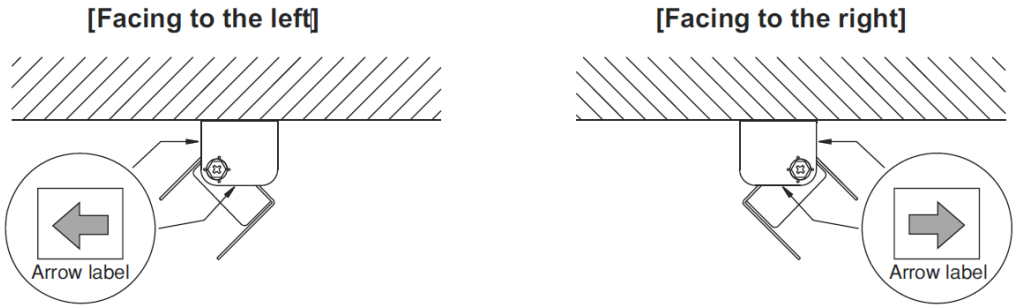


Step1: Please install the mounting bracket C on the wall**.**

Aimed at the positive side speaker along with the arrow marked horizontal direction (left or right).

Note: the installation tools are not included in the accessories.

The arrow marked direction (bracket C)



Step 2: Connecting the screw (M6*12) of mounting bracket A and C, adjust the angle of bracket B and tighten for it.

Note: aligning the direction of the bracket B and C as arrow indicated.

Step3: Installing the bracket A on the back of the speaker by screw（M5*20）.

Step 4: Insert the reverse bracket A into the back of the speaker, and put the screw (M5*60) into the screw hole of connection the bracket A and B, but no need to tighten it.

Step 5: Adjust the vertical angle of the speaker and tighten the screw (M5*60) .

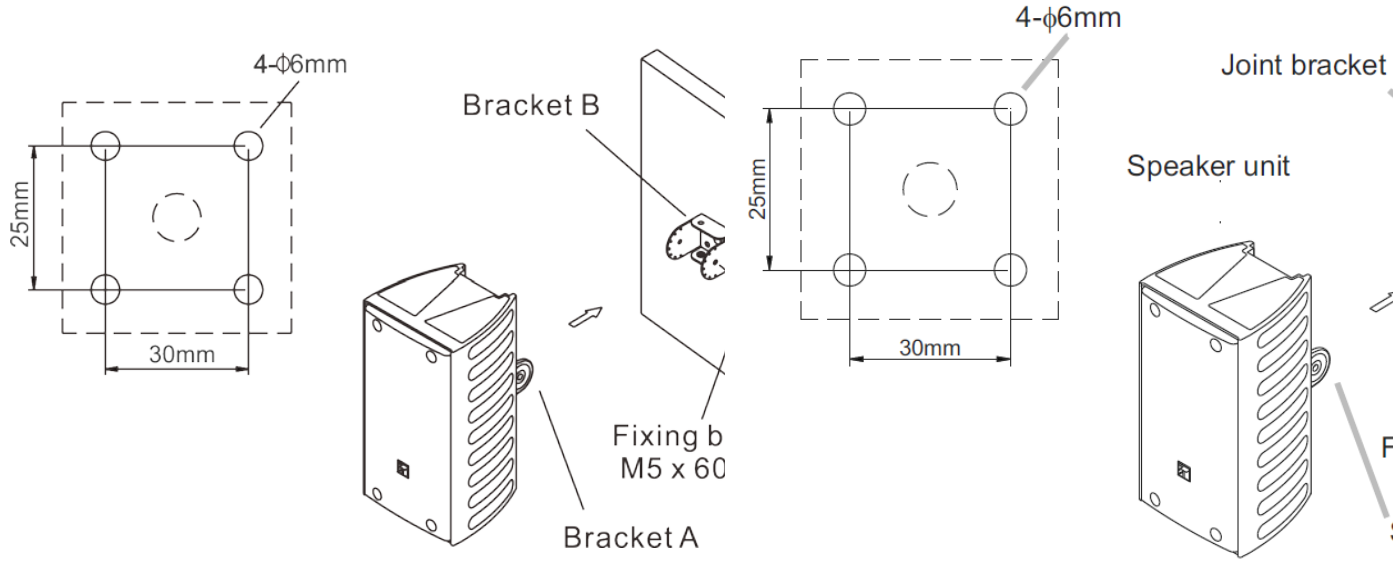
The angle adjustment range of the speaker is 0-7.5°

Note: The closed surfaces of the bracket A and B is designed for lock each other, it's to ensure two sides are firmly connected after installation.

3.2.1.2 Vertical installation

Installing the speaker by bracket A and B. After the bracket B is fixed on the wall, please install the speaker according to the step 3 to 5. This is for vertical direction adjustment only.

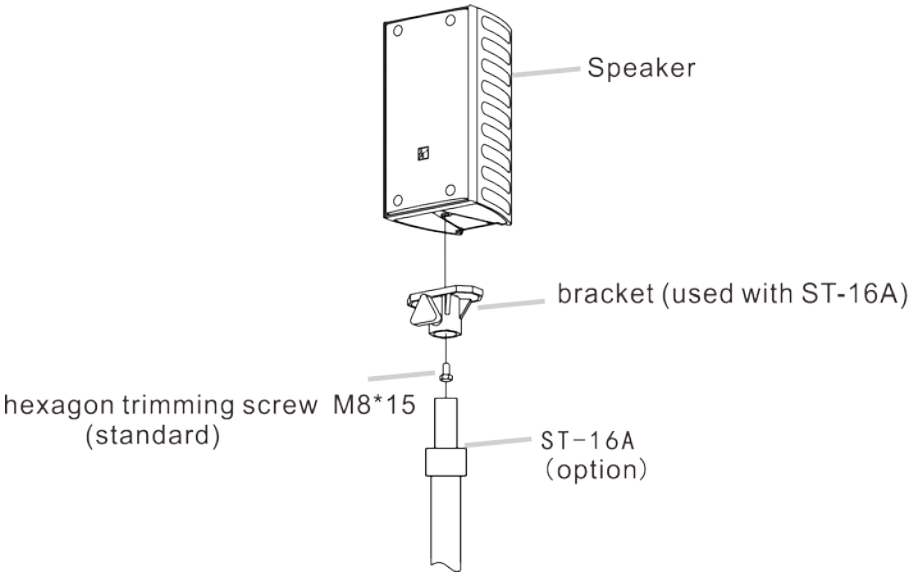
Vertical installation: 22.5 degrees downward at maximum.

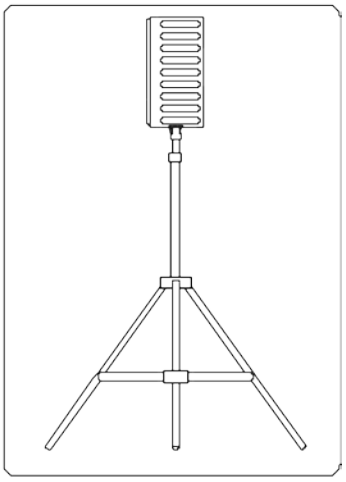


3.2.2 Portable installation

IP audio column speaker can be installed on the moveable bracket (TOA model ST-16A (optional))

Please refer to the following steps:



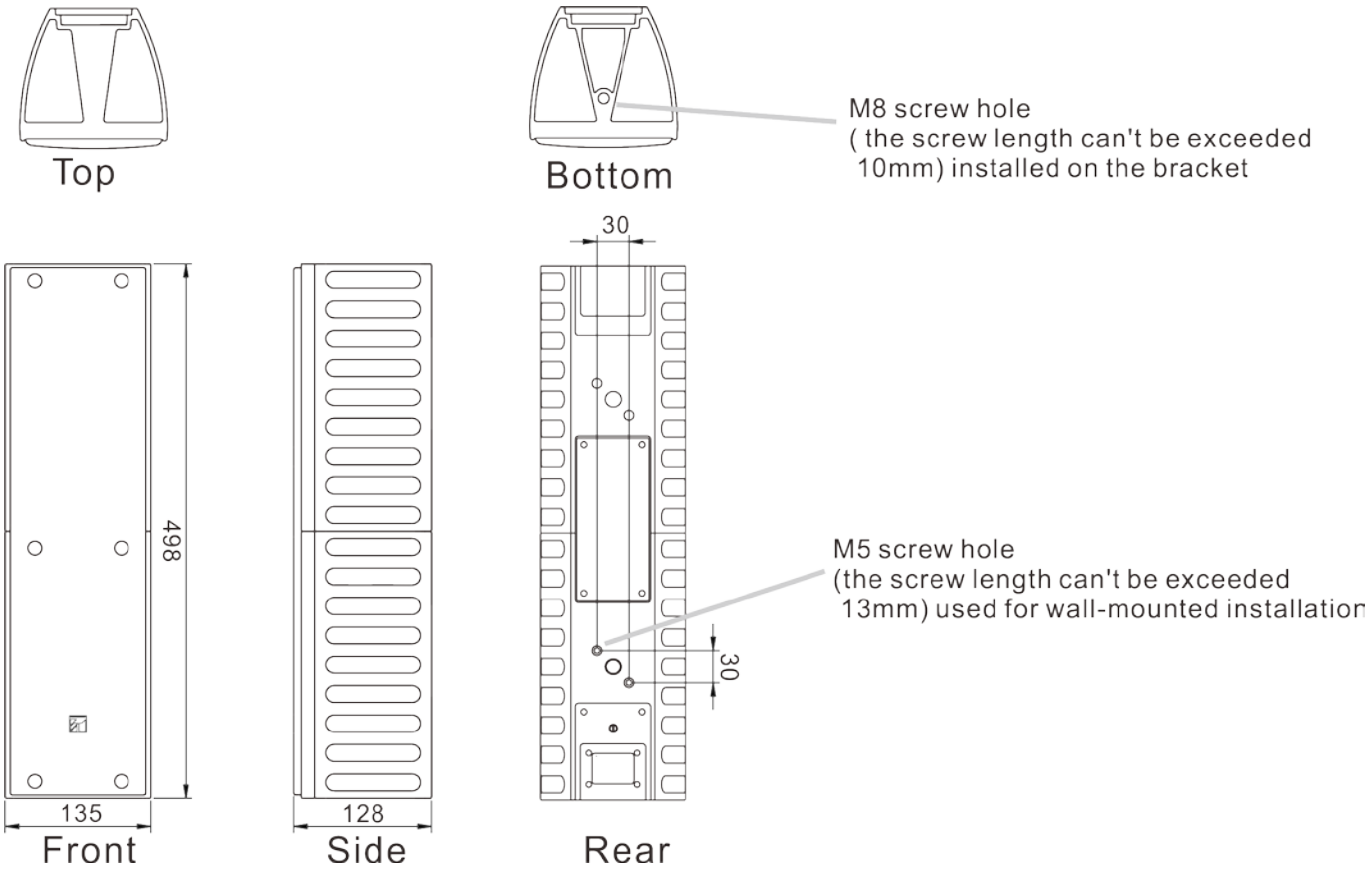


Step 1: Installing the bracket on the bottom of the speaker with screw (M8*15 screw)

Step 2: Installing the speaker bottom bracket on the ST-16A.

Note: More details, please refer to the attached ST-16A installation instruction.

3.3: Reference dimension (unit: mm)

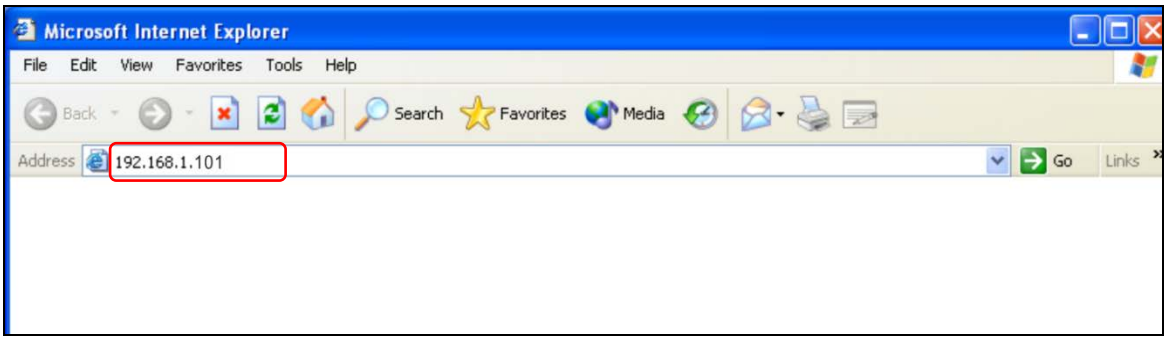


Chapter 4

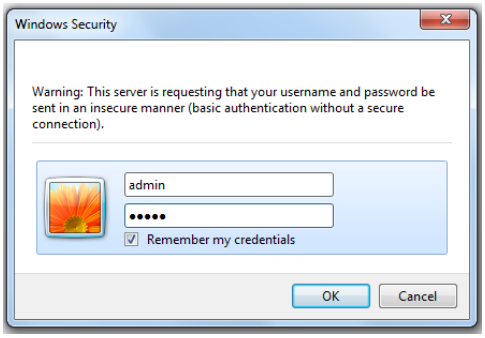
System settings by browser

4.1 Entering the browser

Step1: Please input: **IP address of the speaker** (factory defaults is 192.168.1.101),then press Enter.

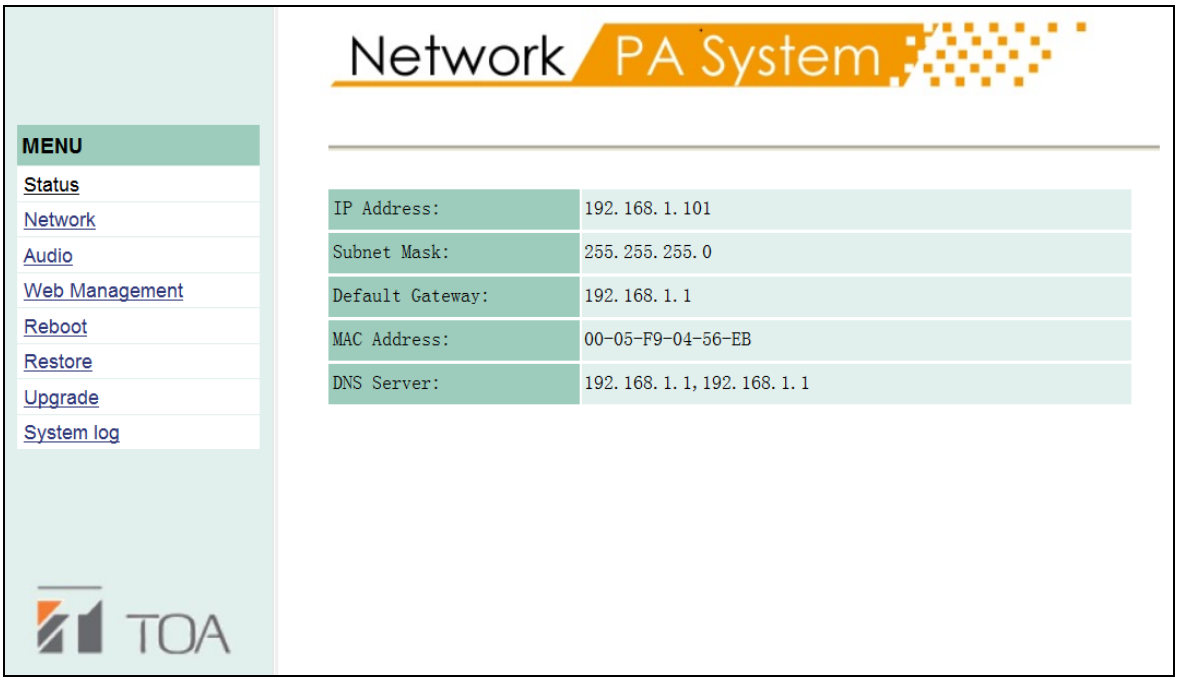


Step 2: Please input the user name and password in the login window of the Web page (the defaults is admin)

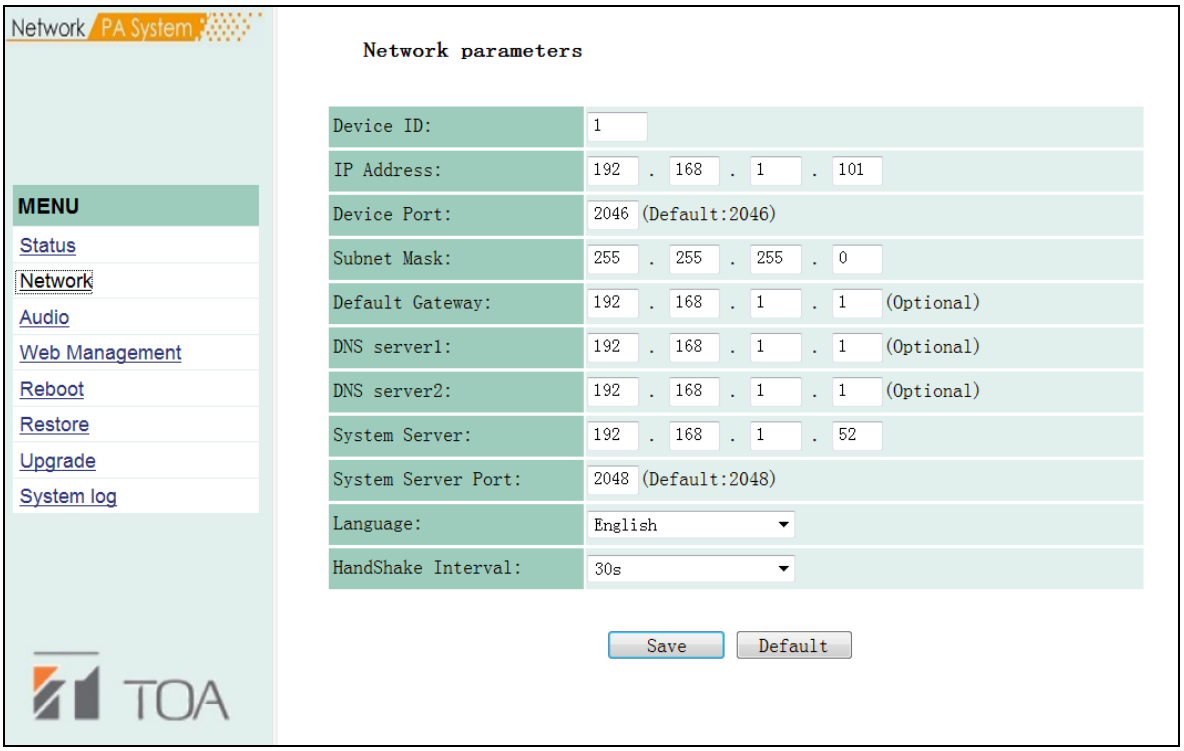


Note: There is different letter of the use name and password.

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

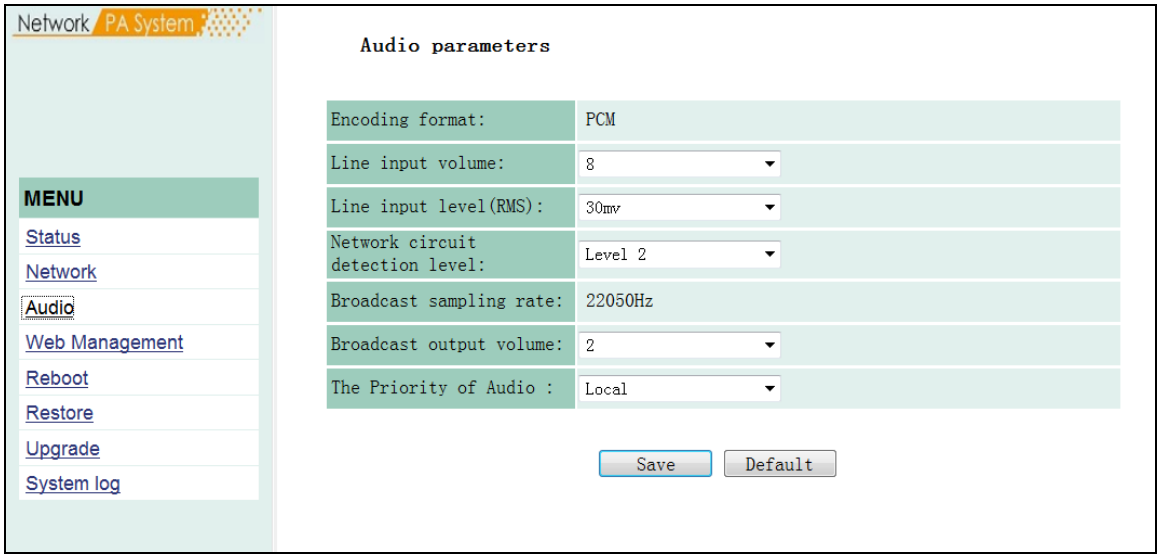


4.2 Network parameters



Device number	Identify the unique number of the speaker and it can't be repeated with other terminals or hosts.
IP address	IP address of the 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 is :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 the IP broadcast server
System server port	The defaults sever 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.

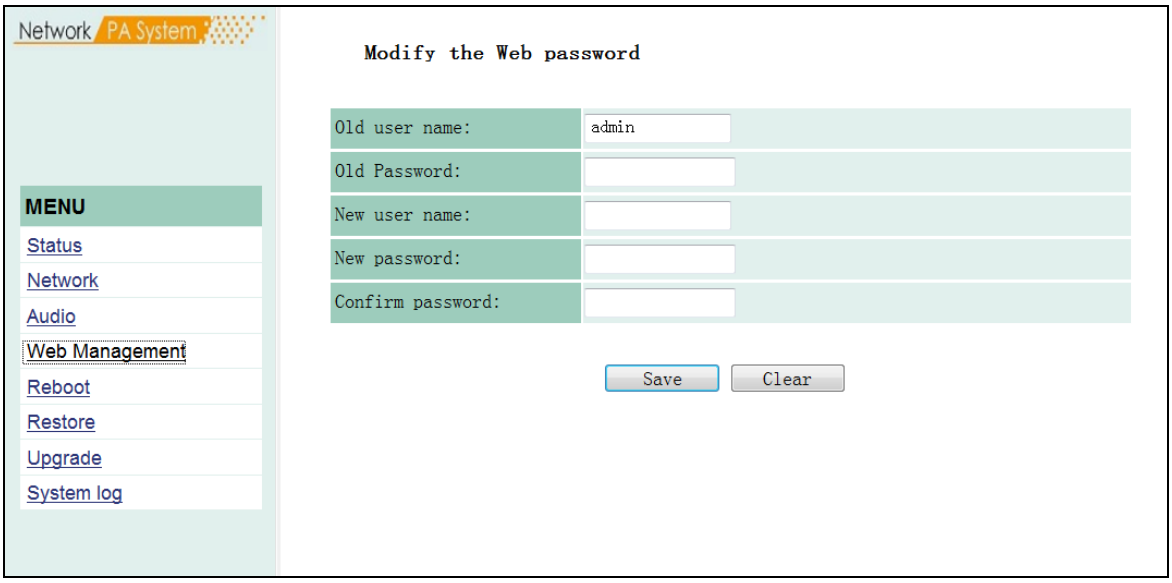
4.3 Audio parameters



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 output of 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 pop display fault information. Does not detect to enable IP circuit detection function; 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 active speaker sampling rate in broadcasting
Broadcast output volume	IP active speaker total output volume in broadcasting (0~15)
Audio priority	Network priority: network sound source (broadcast initiate by server) priority is higher than the local one. local priority：local sound source (line input sound source) priority is higher than the network audio source. Higher priority tasks can interrupt lower priority tasks.

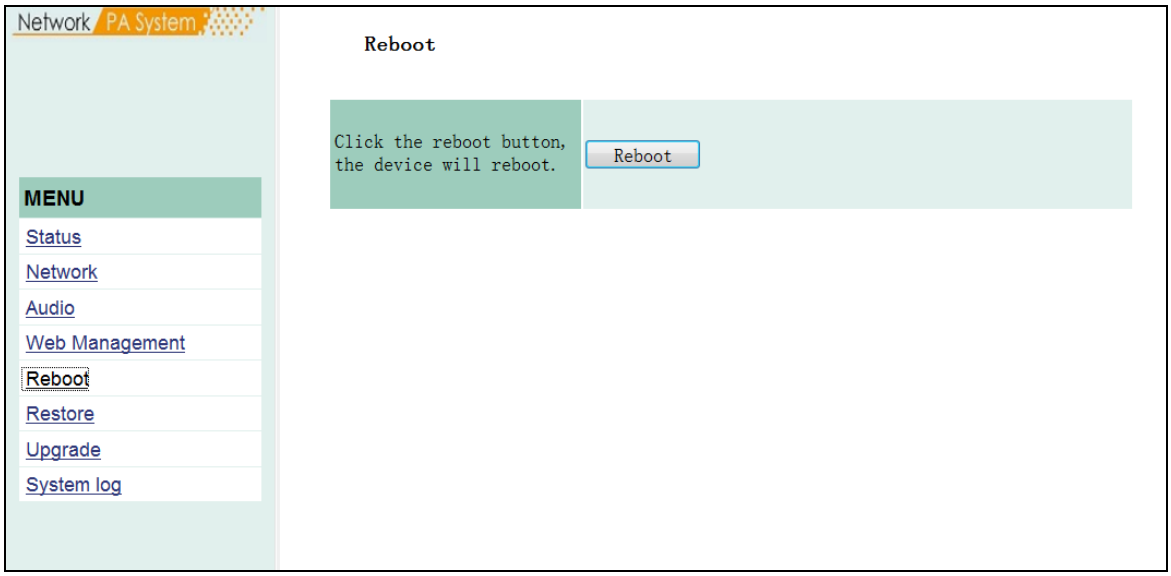
4.4 Web management

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



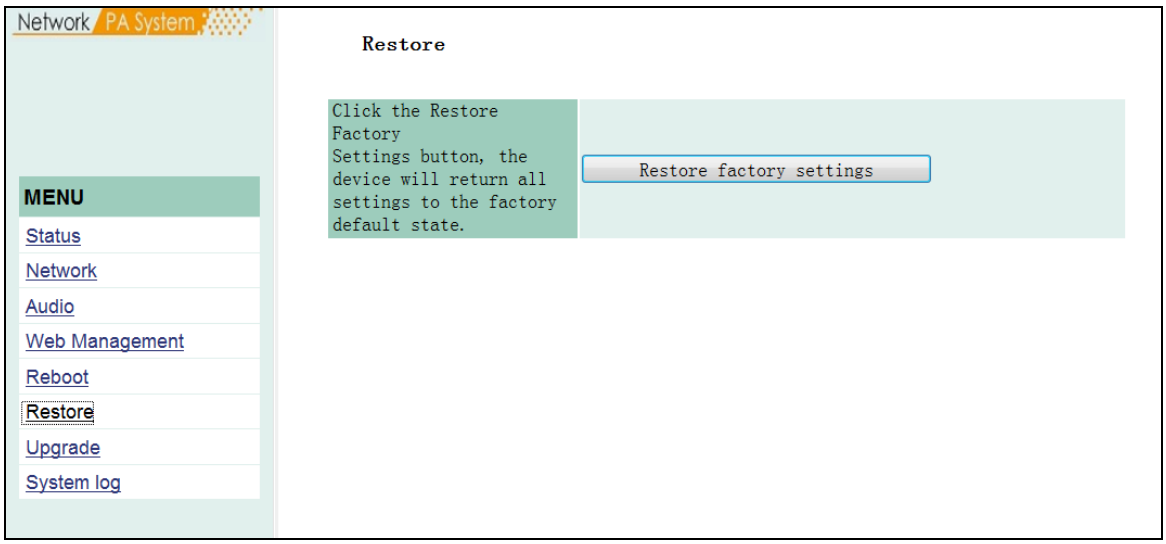
4.5 Restart device

User can click the “restart device” to restart the speaker.



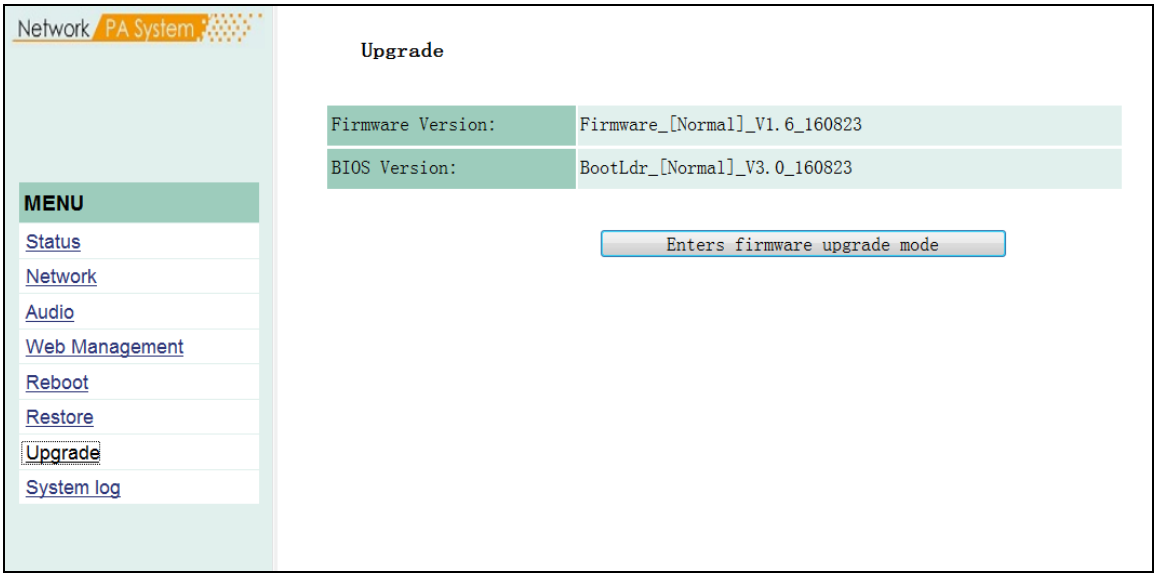
4.6 Reset to defaults

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



4.7 Firmware upgrade

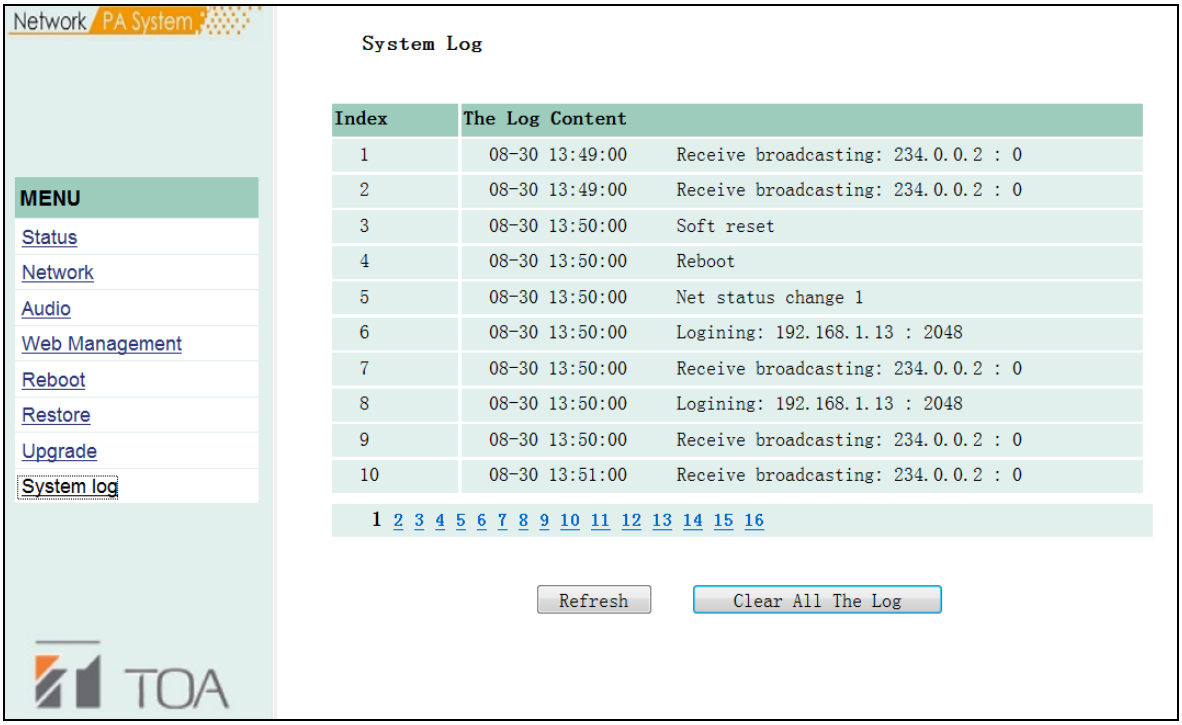
Click “firmware upgrade mode”, then enter into the firmware upgrade interface.



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

4.8 System log

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



Chapter 5

Appendix

Chapter 5: appendix

5.1 Specification

5.1.1 IP audio column speaker TZ-P406BIP1/WIP1

Model number	TZ-P406BIP1	TZ-P406WIP1
Loudspeaker assembly	10cm cone type X 4, waterproof	
Power	DC24V / 2.7A	
Power consumption (static power)	1.85 W	
Load impedance	4Ω，40W	
Sound pressure level (SPL)（1m/1w）	92dB	
Frequency response	150-13,000Hz	
Input terminal	European standard 2P	
Line input	Range: 1Vrms (Max:2Vrms), unbalanced, 10K	
Network I/F	10BASE-T/100BASE-TX,automatic determination	
Networking protocol	UDP,ARP,ICMP,HTTP,IGMP	
Working temperature	-20℃~+40℃	
Working humidity	Lower than 90%RH(No junction dew point)	
Appearance	Speaker: HIPS, black paint Punching net: surface steel plate, black antirust paint Speaker bracket: aluminum alloy press casting, black paint	Speaker: HIPS, white paint Punching net: surface steel plate, white antirust paint Speaker bracket: aluminum alloy press casting, black paint
Protection level	IP-65	
Color	Black	White
Size	135（W）×498（H）×128（D）mm	
Accessories	Speaker bracket(1 PC),connecting bracket(1PC),wall mounting bracket (1PC), fixed bolt M5 x 60 (1PC), six angle bolt M6 x 12 (with flat washer and spring washers) (2PCS), six angle bolts M8 x 15 (1PC), 2P wiring terminal (2PCS), Network port cover (1 set)	

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