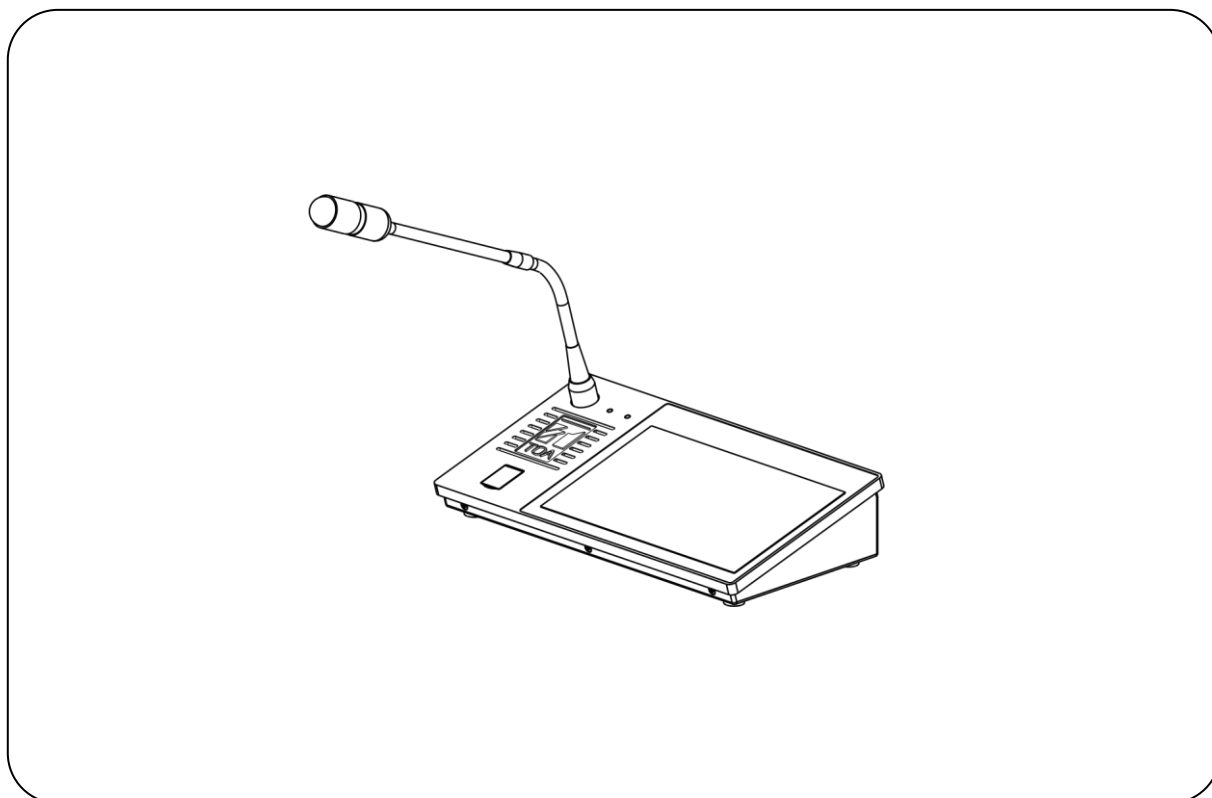




## User's manual

IP remote control microphone IP-101RM(0000.18EN.0000)



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***

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.

### Setting and Installation

(1) Avoid getting the equipment wet.

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 contact with the agency. If you continue to using the equipment, it is likely to catch fire or result 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 above.

If containers drop, and liquid get into the machine that is likely catch fire or cause electric 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 may result in fire 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 used for 10 days or more, please turn off power supply switch for safety. If do not comply with this provision, it is likely cause electric shock or fire..

## ***Chapter 2***

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### ***Products description***

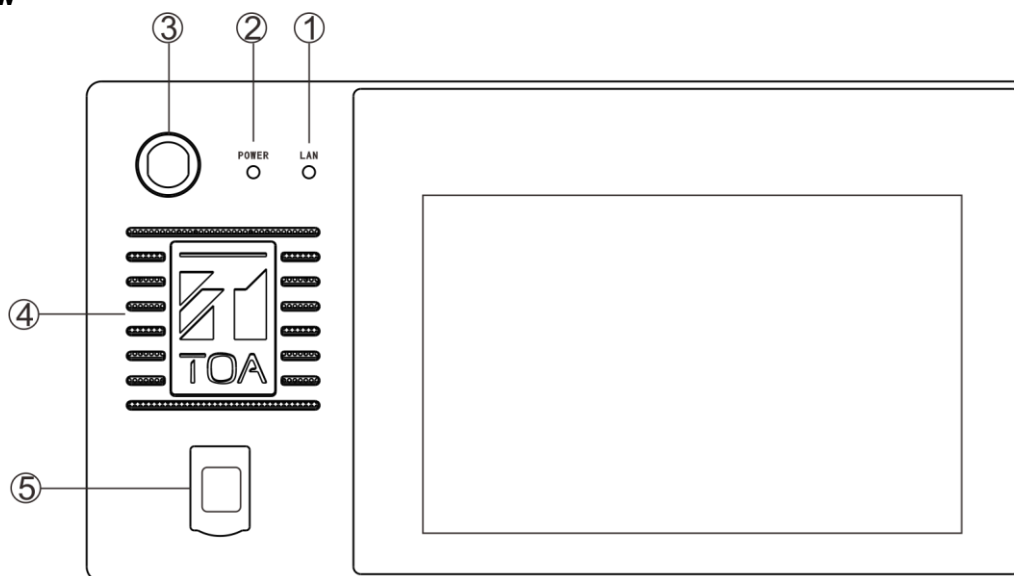
### 2.1 Summary

IP-101RM is an IP network remote control microphone, equipped with power input connector, USB connector, audio input and output connector, RJ45 network connector, and so on. IP network remote control microphone is not only used in IP PA paging communication, but also can initiate emergency broadcast and realize two-way talk with other devices.

- ◆ Professional console design, durable and high-end aluminum panel, all-metal shell.
- ◆ 7 inch touch screen, capacitance screen, with resolution 800\*480.
- ◆ Built-in 3W speaker and MIC used for hand-free calls, broadcast receive and monitoring (DNR).
- ◆ It can broadcast to all-zones, zones or individual device respectively.
- ◆ Files broadcast and pre-recorded broadcast function, broadcasting local audio file and recording to appointed device.
- ◆ With red emergency key, support one-key broadcast to presupposed zones.
- ◆ Support incoming calls and outgoing calls display function, with the common telephone directory query function.
- ◆ Support USB, it can play audio files to other devices.
- ◆ Built-in Flash storage, store audio files, configure information and backups, support remote modify and upgrade.
- ◆ Standard RJ45 connector, support cross network segment and router, accessible to the system if the Ethernet is available.

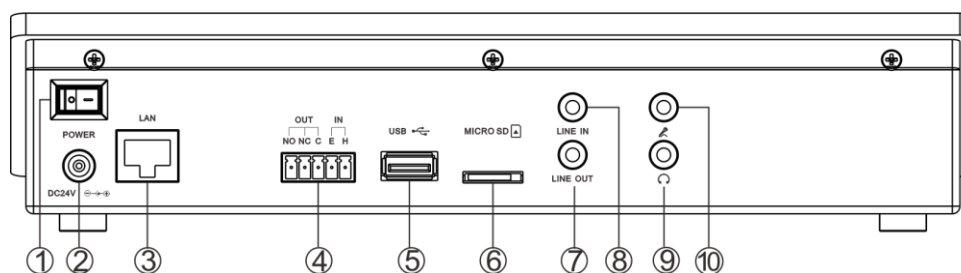
## 2.2 Connector description

### Front view



- ① Network indicator light: indicator light slowly flashes when network is offline, indicator light is on when network is connected.
- ② Power indicator light.
- ③ Microphone pole connector: plug in microphone pole.
- ④ Loudspeaker: restore remote and local voice.
- ⑤ Emergency broadcast key: open the protection cover and press emergency broadcast key to initiate all-zones broadcast in 3-5 seconds.

### Rear view



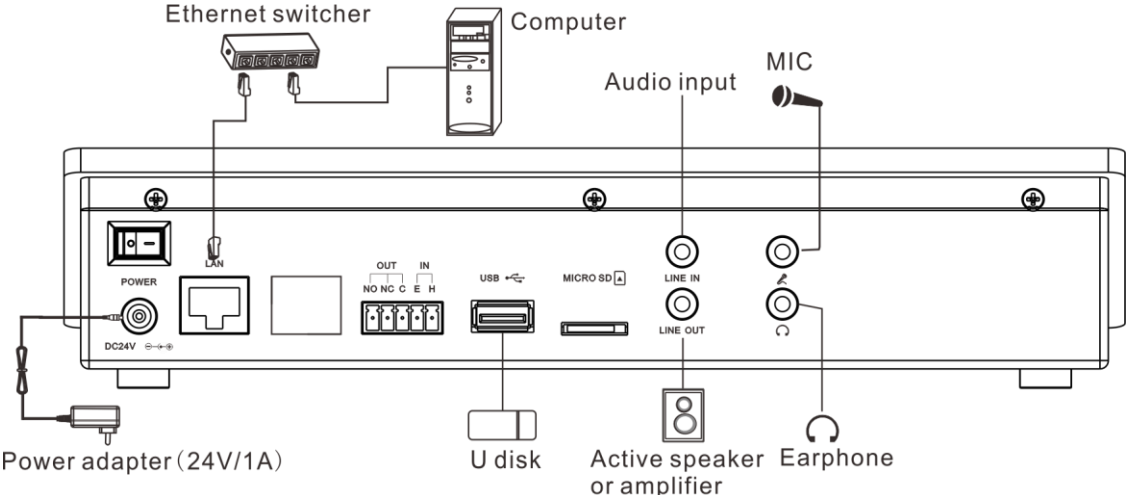
- ① Power switch: pressing “O” for off, pressing “—” for on.
- ② Power input connector: connect power of 24V/1A.
- ③ Network connector: insert cable to connect with switcher and the terminal can normally login server.
- ④ Alarm input/output connector: it connect with other devices to realize the linkage control.
- ⑤ USB connector
- ⑥ TF connector
- ⑦ Line output connector
- ⑧ Line input connector
- ⑨ Earphone output connector
- ⑩ MIC input connector

## ***Chapter 3***

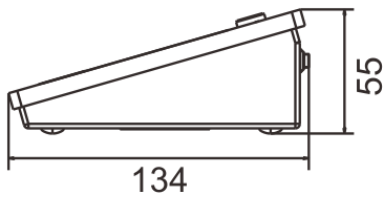
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### ***Wiring***

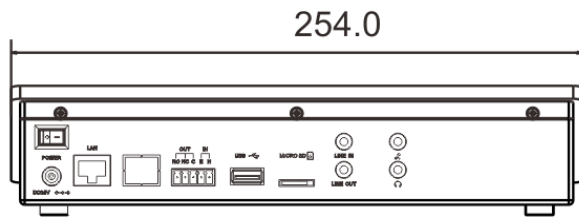
3.1 IP remote control microphone wiring



**3.2 Reference size (unit: mm)**



Side view

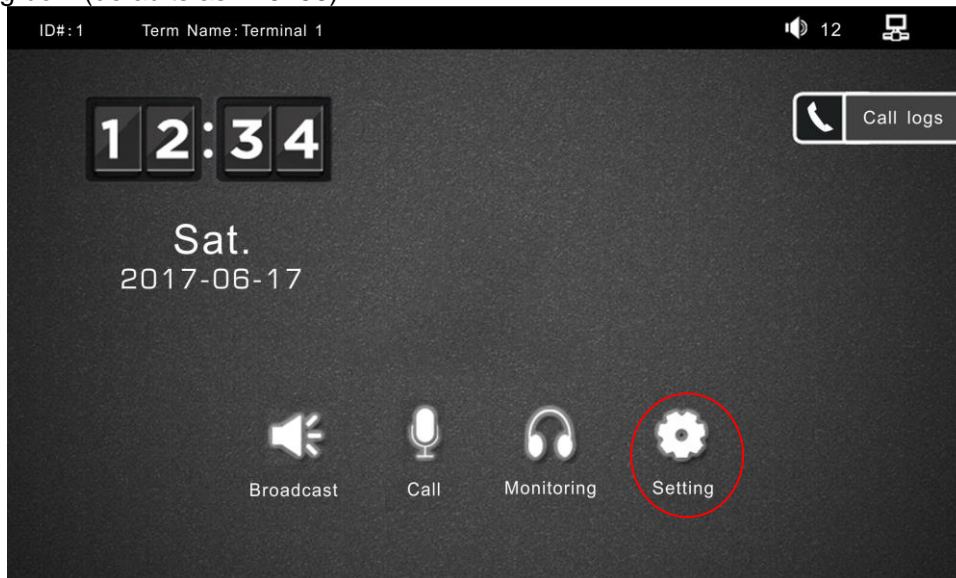


Rear view

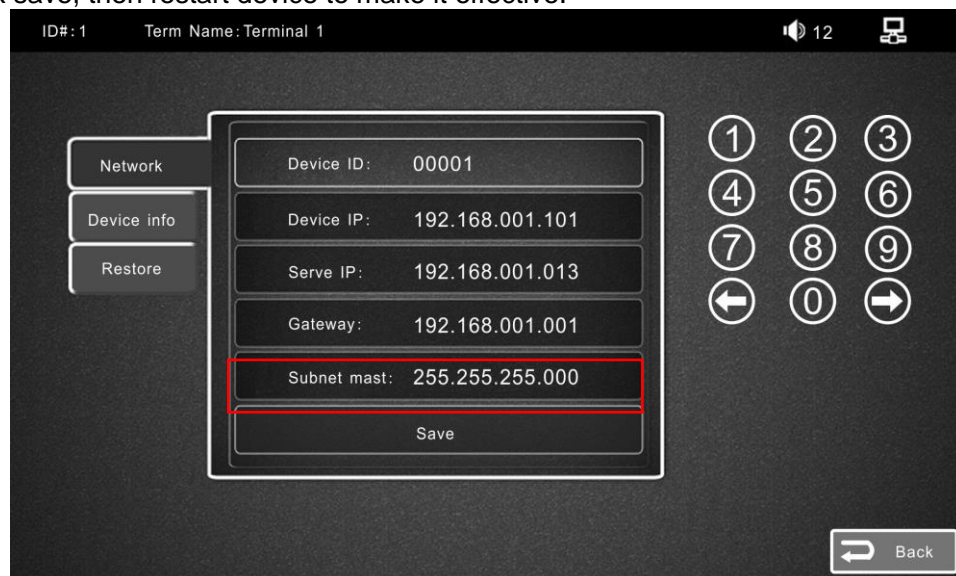
### 3.3 Basic network setting

#### 3.3.1 Touch screen operation

(1) Click “setting” in the home interface of IP remote control microphone, input password in the pop-up dialog box. (defaults as 123456)

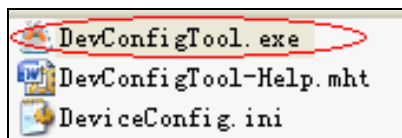


(2) Click the needed to be modified parameters in the setting interface and click the side number key and click save, then restart device to make it effective.

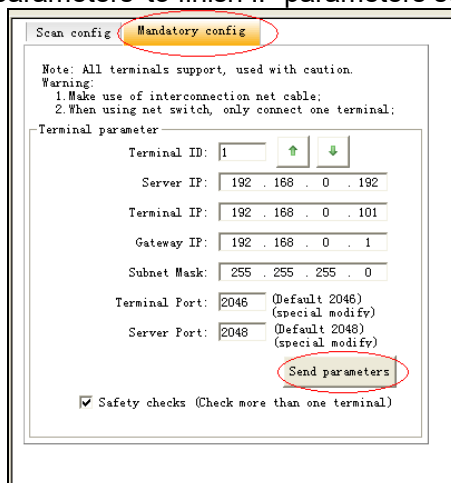


### 3.3.2 Device scanning tool

(1) Under the menu of [optical disc:\tool software\], find 'DevConfigTool.exe' and runing it ,after starting, input the defaults password'123456'



(2) Please select the 'Mandatory config', from the right menu, then input each correct parameters in the 'device parameters'. Click 'send parameters' to finish IP parameters settings.



**Note:1. If use Win7 system to operate, please using the administrator mode to run and close all the firewall and related software.**

**The device scanning tool can only set the network parameters configuration to one device at one time, so please ensure a computer only connect with the one target device when using this way to configure parameters.**

### 3.3.3 Web page mode

Enter the IP remote control microphone web interface, then according to the site environment modify the each parameters ,after settings completed, click 'save'.

Specific operations please refer to the custom device network parameters settings.

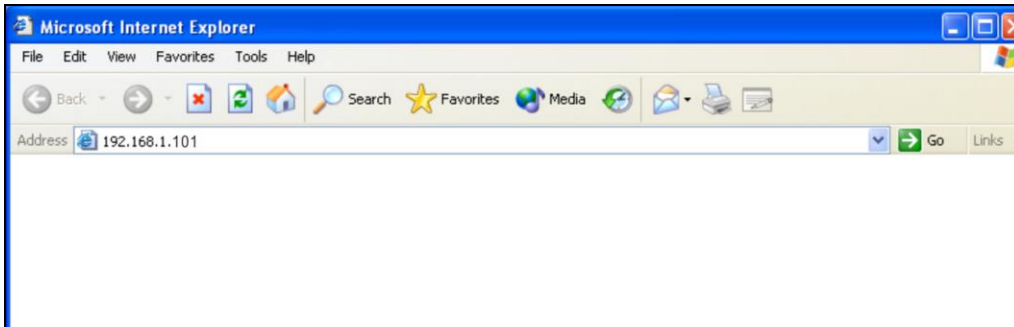
## ***Chapter 4***

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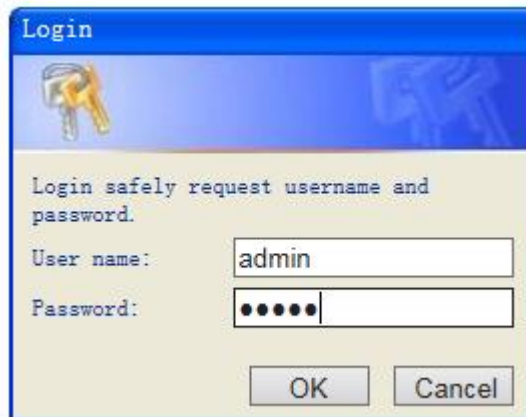
### ***System settings by browser***

### 4.1 Entering browser

**Step1:** inputting MIC IP address in the IE browser (the defaults is 192.168.1.101), then press the Enter.

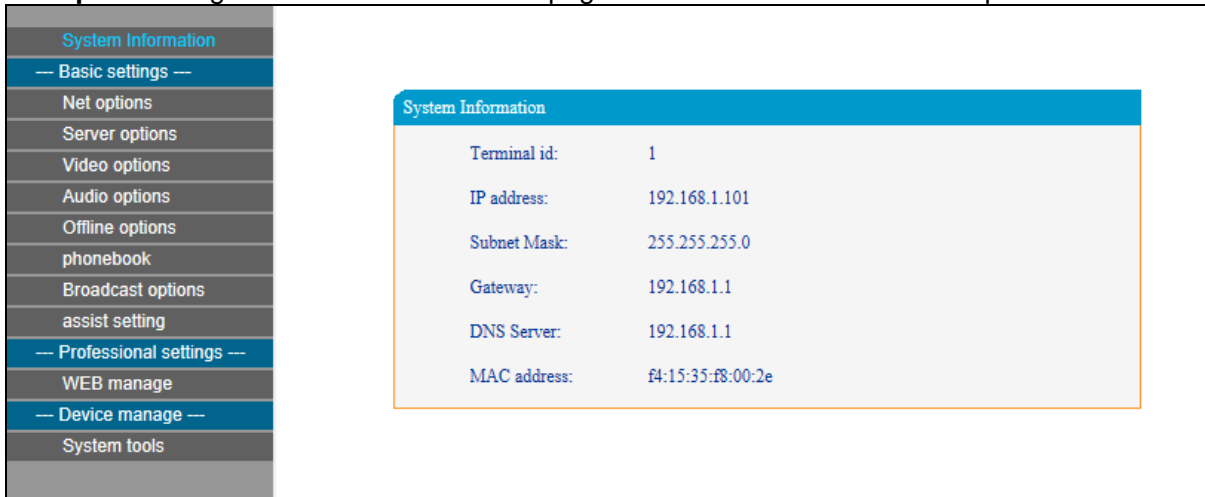


**Step 2:** inputting the user name and password in the login window of Web page( defaults as admin)



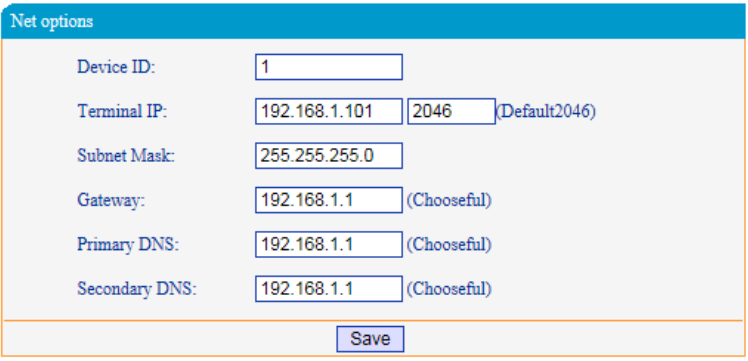
**Note:** the user name and password have upper and lowercase.

**Step 3:** clicking OK to enter into the Web page of the IP remote control microphone.



## Chapter 4: System settings by browser

### 4.2 Network parameters

System Information	
--- Basic settings ---	
Net options	
Server options	
Video options	
Audio options	
Offline options	
phonebook	
--- Professional settings ---	
WEB manage	
--- Device manage ---	
System tools	

Parameters as follows:

Device number	The unique MIC number, it can't be same with terminals and other hosts.
IP address	Device IP address and connector, the defaults IP address is 192.168.1.101 Note: the defaults is 2046, please don't make any modification if not in special situation.
Subnet mask	The mask of device subnet.
Defaulted gateway	The gateway of device network.
Primary DNS server	The primary domain name resolver IP of device.
Secondary DNS server	The secondary domain name resolver IP of device.

### 4.3 Service parameters

System Information	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <div style="background-color: #0070c0; color: white; padding: 2px; border: 1px solid #ccc; margin-bottom: 5px;">Server options</div> <p>Primary server: <input style="width: 100px;" type="text" value="192.168.1.13"/> <input style="width: 50px;" type="text" value="2048"/></p> <p>Secondary server: <input style="width: 100px;" type="text" value="192.168.1.14"/> <input style="width: 50px;" type="text" value="2048"/> (Chooseful)</p> <p>Version server: <input style="width: 100px;" type="text" value="192.168.1.15"/> <input style="width: 50px;" type="text" value="2048"/> (Chooseful)</p> <p>File server: <input style="width: 100px;" type="text" value="192.168.1.13"/> <input style="width: 50px;" type="text" value="2048"/> (Chooseful)</p> <p>File server user name: <input style="width: 100px;" type="text" value="admin"/></p> <p>File server password: <input style="width: 100px;" type="text" value="admin"/></p> <p>Login Request interval: <input style="width: 50px;" type="text" value="0S"/> <input type="button" value="v"/></p> <div style="text-align: right; margin-top: 10px;"><input type="button" value="Save"/></div> </div>
— Basic settings —	
Net options	
Server options	
Video options	
Audio options	
Offline options	
phonebook	
Broadcast options	
assist setting	
— Professional settings —	
WEB manage	
— Device manage —	
System tools	

Parameters as follow :

Primary server	Server address of device login
Secondary server	Device can login to secondary server, when it can't login to the primary server.
Version server	Auto-update IP address and port of appointed device.
File server	Store file, device will auto-use configured user-name and password, through FTP to connect configured files server address and update related ringing source files.
File server user-name	Defaults as admin
File server password	Defaults as admin
Login request time interval	How long to deliver a login requirement to server when the device is offline.
Note: the reserved function and settings of "version server"- "file server" are invalid.	

## Chapter 4: System setting by browser

### 4.4 Audio parameters

The screenshot shows a web interface for configuring audio parameters. On the left is a navigation menu with options like System Information, Basic settings, Net options, Server options, Video options, Audio options (highlighted), Offline options, phonebook, Broadcast options, assist setting, Professional settings, WEB manage, Device manage, and System tools. The main content area is titled 'Audio options' and contains the following settings:

- in volume: 8
- out volume: 12
- Volume ring: 13
- PTT control method:  click trigger  press trigger
- Conference talk:  Enable  Disable
- Auto answer:  Enable  Disable

A 'Save' button is located at the bottom right of the configuration area.

Parameters as follows:

Input volume	The total input volume of the microphone is 0~15 in intercom and broadcasting.
Output volume	The total output volume of the microphone is 0~15 in intercom and broadcasting
Ringing volume	The vibrant ringing volume of incoming calls.
PTT control method	Set PTT control method, the default is click trigger, that is, during the process of talking,, press PTT key to enter PTT mode, microphone (microphone stick) closed (only listen to not speak), press PTT key again, microphone open (only speak not listen). When switching to press trigger, the speaker must hold down the PTT key in order to hear the voice.
Third party intercom	Enabled: click the third party and input device ID to initiate third party intercom. Three parties can hear other two parties voice clearly.
Auto answer	Set whether auto answer function is enabled when answering the talk.

### 4.5 Offline parameters

Configure every ID corresponding target device, device can call to corresponding target device which is settings in the offline status.

The screenshot displays the 'Offline options-1' configuration page. On the left is a navigation menu with the following items: System Information, Basic settings, Net options, Server options, Video options, Audio options, Offline options (highlighted in blue), phonebook, Broadcast options, assist setting, Professional settings, WEB manage, Device manage, and System tools. The main content area is titled 'Offline options-1' and contains a table with 16 rows. Each row has three columns: ID, IP, and port. The ID column contains numbers 1 through 16. The IP column contains empty text input fields. The port column contains the number 2046. Below the table are four small buttons labeled 1, 2, 3, and 4, with button 2 selected. A 'Save' button is located at the bottom right of the table area.

ID	IP	port
1	<input type="text"/>	2046
2	<input type="text"/>	2046
3	<input type="text"/>	2046
4	<input type="text"/>	2046
5	<input type="text"/>	2046
6	<input type="text"/>	2046
7	<input type="text"/>	2046
8	<input type="text"/>	2046
9	<input type="text"/>	2046
10	<input type="text"/>	2046
11	<input type="text"/>	2046
12	<input type="text"/>	2046
13	<input type="text"/>	2046
14	<input type="text"/>	2046
15	<input type="text"/>	2046
16	<input type="text"/>	2046

1 2 3 4

Save

## Chapter 4: System settings by browser

### 4.6 Telephone book

Telephone book configuration is the quick dialing when initiate intercom, the maximum configured number is total 40 for 4 groups, corresponding related group 1,group2,group3, group4 of the LED screen “Telephone book”

Settings “device number” as the target device ID number in the telephone book page, function is intercom, press corresponding related key to realize one-button intercom with target device.

Note: pickup call number, name and SIP function for reserved at present.

ID	Terminal id	Pickup Number	name	Function
1:	<input type="text" value="1"/>	<input type="text" value="*08"/>	<input type="text"/>	<input checked="" type="radio"/> Talk <input type="radio"/> SIP
2:	<input type="text" value="2"/>	<input type="text" value="*08"/>	<input type="text"/>	<input checked="" type="radio"/> Talk <input type="radio"/> SIP
3:	<input type="text" value="3"/>	<input type="text" value="*08"/>	<input type="text"/>	<input checked="" type="radio"/> Talk <input type="radio"/> SIP
4:	<input type="text" value="4"/>	<input type="text" value="*08"/>	<input type="text"/>	<input checked="" type="radio"/> Talk <input type="radio"/> SIP
5:	<input type="text" value="5"/>	<input type="text" value="*08"/>	<input type="text"/>	<input checked="" type="radio"/> Talk <input type="radio"/> SIP
6:	<input type="text" value="6"/>	<input type="text" value="*08"/>	<input type="text"/>	<input checked="" type="radio"/> Talk <input type="radio"/> SIP
7:	<input type="text" value="7"/>	<input type="text" value="*08"/>	<input type="text"/>	<input checked="" type="radio"/> Talk <input type="radio"/> SIP
8:	<input type="text" value="8"/>	<input type="text" value="*08"/>	<input type="text"/>	<input checked="" type="radio"/> Talk <input type="radio"/> SIP
9:	<input type="text" value="9"/>	<input type="text" value="*08"/>	<input type="text"/>	<input checked="" type="radio"/> Talk <input type="radio"/> SIP
10:	<input type="text" value="10"/>	<input type="text" value="*08"/>	<input type="text"/>	<input checked="" type="radio"/> Talk <input type="radio"/> SIP

1 2 3 4

Save

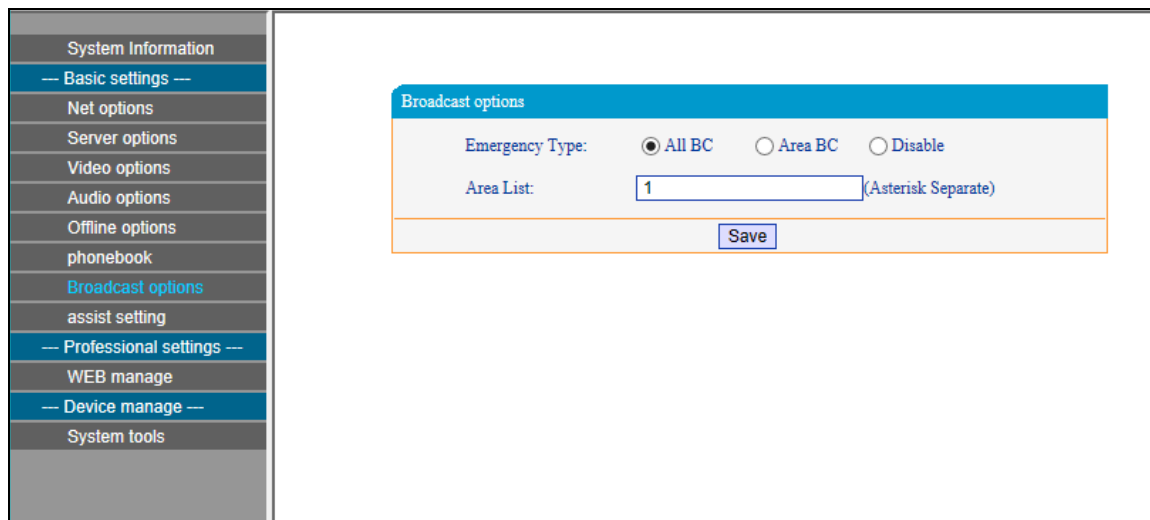
### 4.7 Broadcast option

Set “Emergency Broadcast” button function of the device.

All BC: check “All BC”, then press “Emergency Broadcast” button to initiate all zones broadcast.

Area BC: check “Area BC”, and set target zones (multiple zones are separated by \*), then press “Emergency Broadcast” button to initiate targeted zones broadcast.

Disable: the the “Emergency Broadcast” button function is invalid.



The screenshot shows a web interface for configuring broadcast options. On the left is a vertical navigation menu with the following items: System Information, -- Basic settings --, Net options, Server options, Video options, Audio options, Offline options, phonebook, Broadcast options (highlighted in blue), assist setting, -- Professional settings --, WEB manage, -- Device manage --, and System tools. The main content area displays the 'Broadcast options' configuration form. This form has a blue header and contains the following elements: 'Emergency Type:' with three radio buttons: 'All BC' (selected), 'Area BC', and 'Disable'; 'Area List:' with a text input field containing the number '1' and a '(Asterisk Separate)' label to its right; and a 'Save' button at the bottom center.

### 4.8 Assist setting

Lockerscreen: close/open the lock screen function;

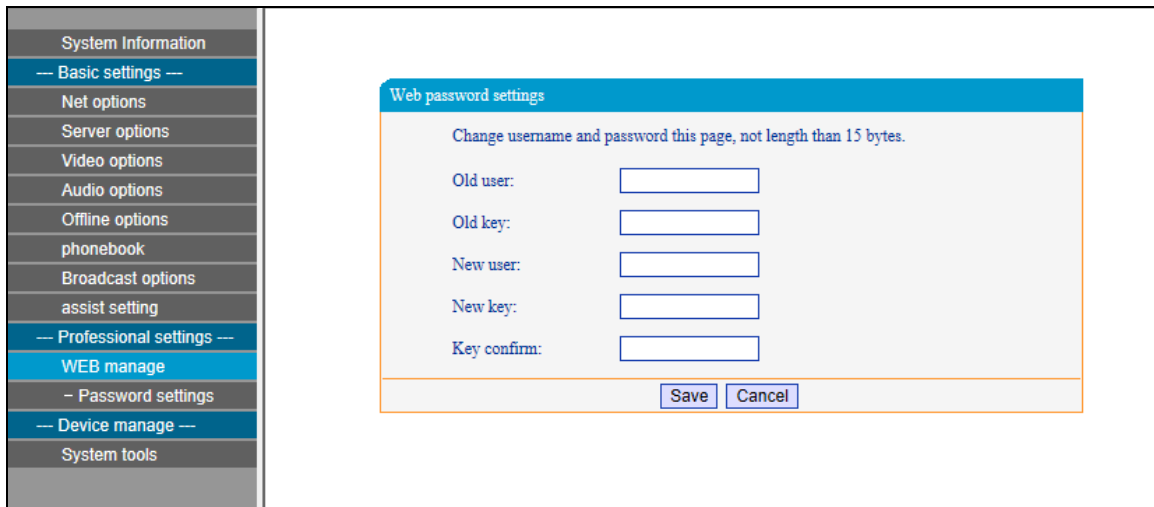
Auto update url: input the correct server IP and port in the bar (format: http:// server IP:port/firmware/device model/, eg.http://192.168.1.13:80/firmware/IP-101RM/). After power on, the terminal will automatically obtain program and upgrade firmware from the server. [note: please upload terminal firmware in “Advanced”- “Device Upgrade” in advance.]

The screenshot displays the 'assist setting' configuration page. On the left, a vertical menu lists various system settings, with 'assist setting' currently selected. The main content area is titled 'assist setting' and contains two configuration items: 'lockerscreen' and 'auto update url'. The 'lockerscreen' item has two radio button options: 'close' (which is selected) and 'open'. The 'auto update url' item has a text input field containing the URL 'http://192.168.6.200/firmware/NAS-8532V/'. Below the input field is a 'Save' button.

## Chapter 4: System setting by browser

### 4.9 Password modification

The account number and password of web login page can be modified in the Web management parameters.



The screenshot shows a web management interface with a sidebar on the left and a main content area. The sidebar contains a list of menu items: System Information, -- Basic settings --, Net options, Server options, Video options, Audio options, Offline options, phonebook, Broadcast options, assist setting, -- Professional settings --, WEB manage (highlighted in blue), - Password settings, -- Device manage --, and System tools. The main content area displays a dialog box titled "Web password settings". The dialog box has a blue header and a light gray body. It contains the following text and fields:

Change username and password this page, not length than 15 bytes.

Old user:

Old key:

New user:

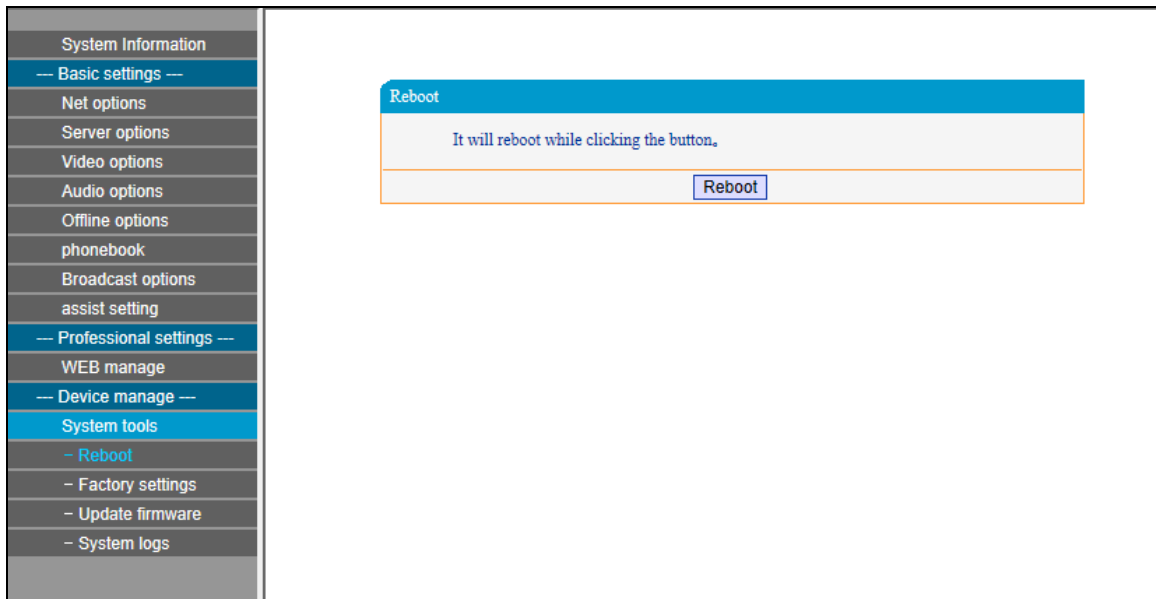
New key:

Key confirm:

At the bottom of the dialog box, there are two buttons: "Save" and "Cancel".

### 4.10 Restart device

Restarting device. (Note: all Web page parameters will be effective after restarting device.)



The screenshot shows a web management interface with a sidebar on the left and a main content area on the right. The sidebar contains a list of menu items: System Information, -- Basic settings --, Net options, Server options, Video options, Audio options, Offline options, phonebook, Broadcast options, assist setting, -- Professional settings --, WEB manage, -- Device manage --, System tools (highlighted in blue), - Reboot (highlighted in blue), - Factory settings, - Update firmware, and - System logs. The main content area displays a 'Reboot' dialog box with a blue header, the text 'It will reboot while clicking the button.', and a 'Reboot' button.

### 4.11 Resetting to defaults

Resetting to defaults: all parameters are recovered to factory settings.

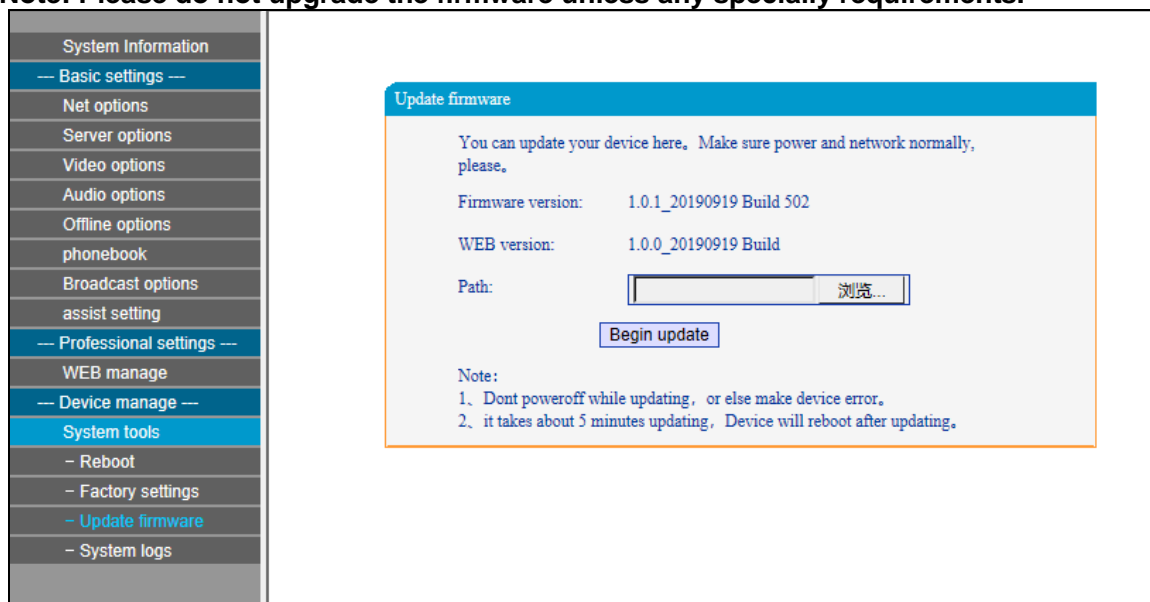
The screenshot displays a web interface with a sidebar menu on the left and a main content area on the right. The sidebar menu includes the following items: System Information, -- Basic settings --, Net options, Server options, Video options, Audio options, Offline options, phonebook, Broadcast options, assist setting, -- Professional settings --, WEB manage, -- Device manage --, System tools, - Reboot, - Factory settings, - Update firmware, and - System logs. The 'System tools' item is highlighted in blue. In the main content area, a dialog box titled 'Factory settings' is shown. The dialog box contains the text: 'Device will back to factory settings while clicking the button.' and a button labeled 'Factory settings'.

### 4.12 Firmware upgrade

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

Click on " browse" in firmware upgrade page, then select the firmware upgrade file which is provided by factory, after that click " begin upgrade" key to starting it.

**Note: Please do not upgrade the firmware unless any specially requirements.**



#### Other functions

In addition to above functions, IP remote control microphone also can coordinate with server to accomplish timing ringing, real-time broadcasting, timing broadcasting all functions, for the details please refer to server software operation instructions.

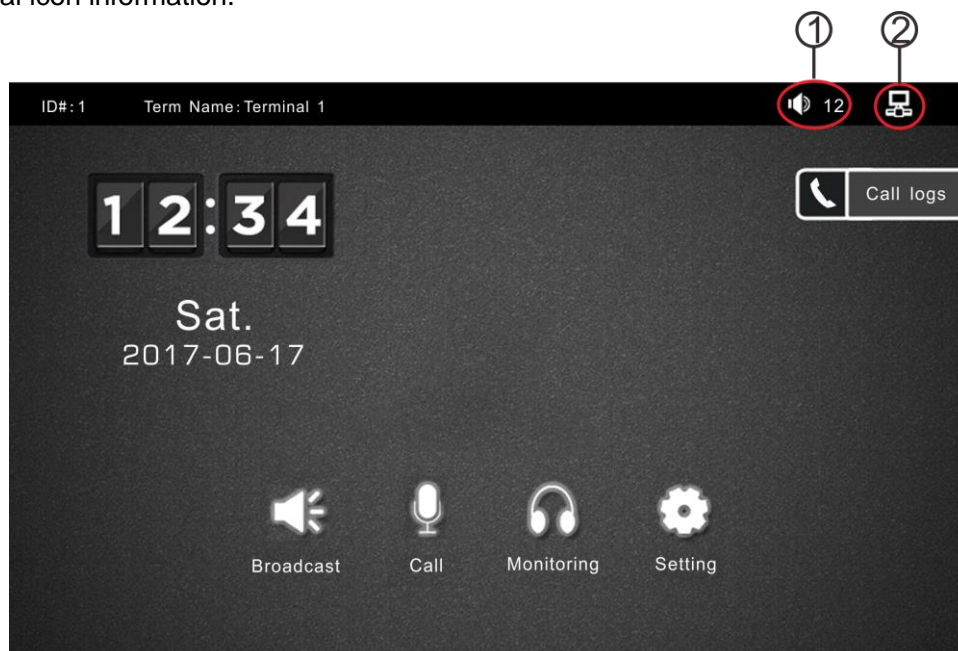
## ***Chapter 5***



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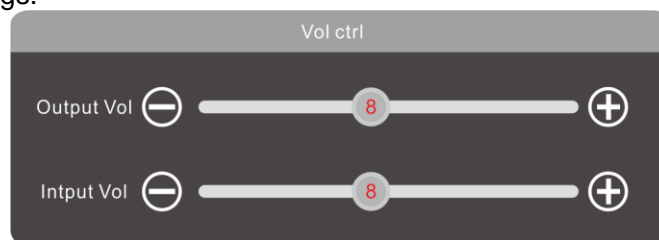
### ***Basic function***

### 5.1 Interface instruction

Enter into the home interface will take about 40s after power on, home interface display time, date and functional icon information.






① Volume adjustment: press volume icon , click “+” “-” on pop-up volume control interface (or slide middle circular icon ) to add or reduce input/output volume, click “back” key to return to home interface after settings.



Note: the input and output volume of IP remote control microphone can be settings in web page and service software. (detailed information please refer to settings and server service operation manual).

② Device status icon

Icon (color)	Device status
	Device login to the server
	Device not login to the server
	Cable disconnected

## 5.2 Broadcast



### 5.2.1 Initiating broadcast

- 1) Click **【Broadcast】** key to enter into intercom interface of the IP remote control microphone.
- 2) Initiating device broadcast according the needs in broadcasting operation interface (option device), zone broadcast(select zone /select zone chart[note: zone chart is settings by server],all-zones broadcast (select all zones).
- 3) Click number key and input device ID or zone number (click to cancel the input).
- 4) Click right broadcast key to initiate the broadcast to the appointed device.
- 5) Click stop key to finish broadcasting, click to back the last interface and stop the broadcasting).

### 5.2.2 File broadcast

After the broadcasting, click “File” key and select the audio of the menu, it will broadcasting audio to appointed device. Click to stop broadcasting and return to broadcasting interface.



Audio files settings method: build a new “TOA” file folder under U dick catalog, storage WAV format in the folder, 22KHz single track audio file( It can use the “WAV programming tool” of itself to switch the format),after finish the settings and connect the U disk with the interface of IP remote control microphone is ok.




### 5.2.3 Receiving broadcast

Auto-answer without click key.


## 5.3 Intercom



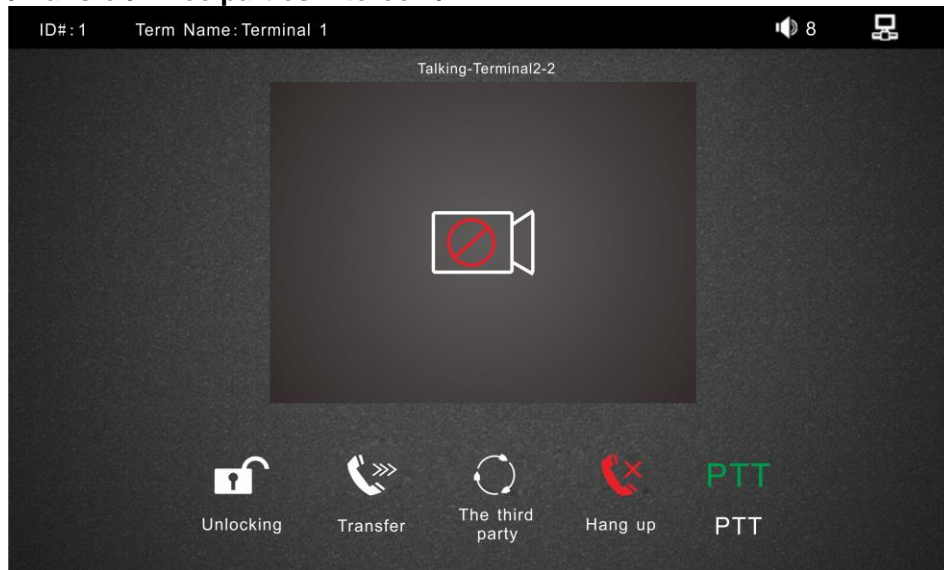
### 5.3.1 Initiating intercom

- 1) Click **【Intercom】** to enter into intercom interface of the IP remote control microphone.
- 2) Click number key and input the ID of target device (or click ID##+panel ID) ;(click  to cancel the input)
- 3) Click intercom key can initiate talking.
- 4) Click hang up key , finish monitor, click  to back the last interface.

### Telephone book

Press the telephone book interface  to enter into the shortcut dialing list, directly press target device and initiate intercom without any key-click operation; (Note: for specific web operation please refer to telephone book settings).

### 5.3.2 Unlock /Transfer/Three parties intercom/PTT



1) Unlock: click **【Unlock】** key during the intercom can trigger circuit input of the other party (it needs the support of the other party).

2) Transfer: click **【Transfer】** key during the intercom ,input target device ID number, then click intercom key, intercom will auto-transferred calling to the appointed device and break off the device intercom.

3) Three parties intercom: click **【Three parties intercom】** key during the intercom, adding the needed device ID and click **【Intercom】** key to initiate three parties intercom. The three parties can hear the sound of other two parties clearly (click break off key to finish the intercom between target device).**Note: the settings of three parties intercom can be enabled or disabled in the web page.**

4) PTT talk: during the process of talking, press PTT key to enter PTT mode, microphone (microphone stick) closed (only listen to not speak), press PTT key again, microphone open (only speak not listen).

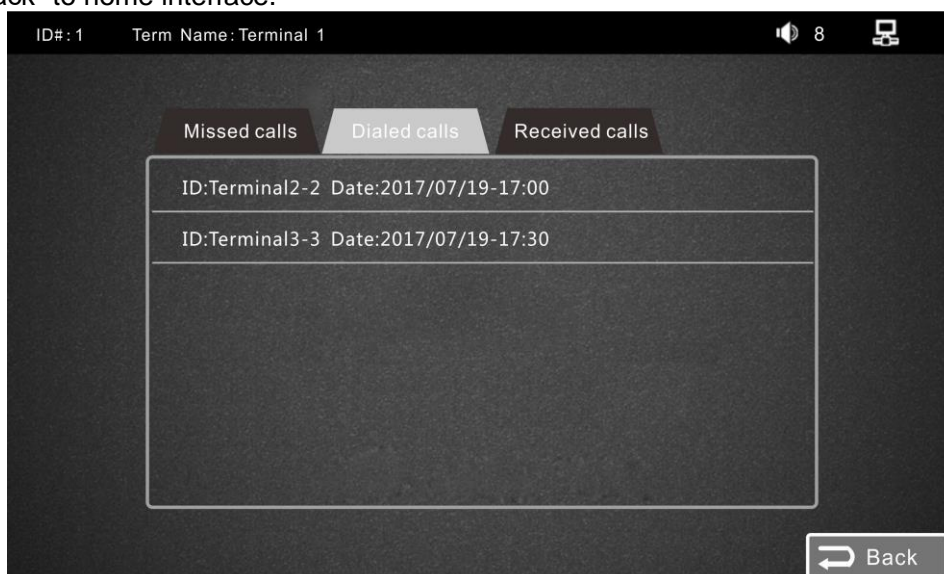
Note: it is available to set the PPT control way as press to trigger, when switching to press trigger, the speaker must hold down the PTT key in order to hear the voice.

### 5.3.3 Call log

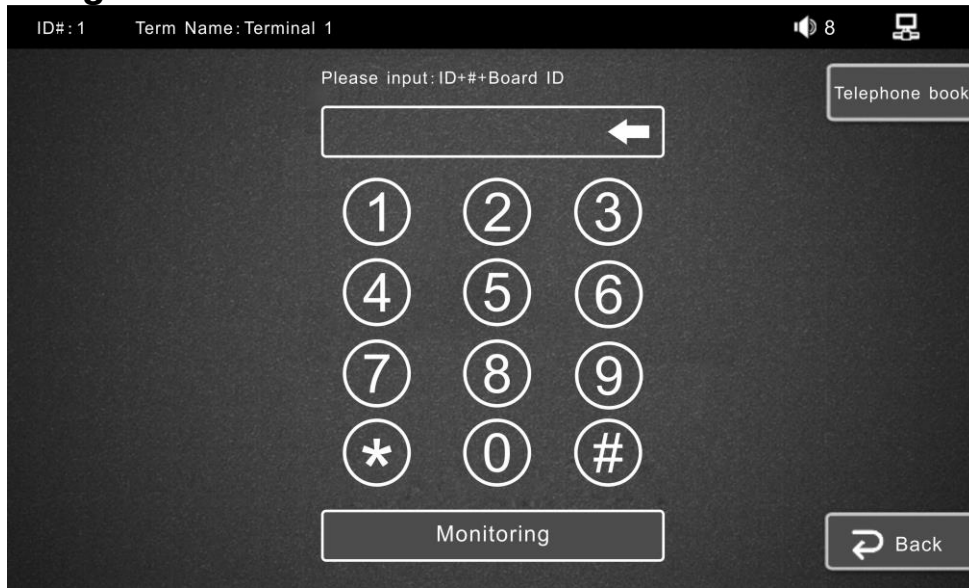
Click "Call log" key in the LED screen to check missed call/dialed call/received call.




Click any logs can directly initiate call to the device and this log will auto-disappeared after initiate calling.

Click "Back" to home interface.



5.4 Monitoring



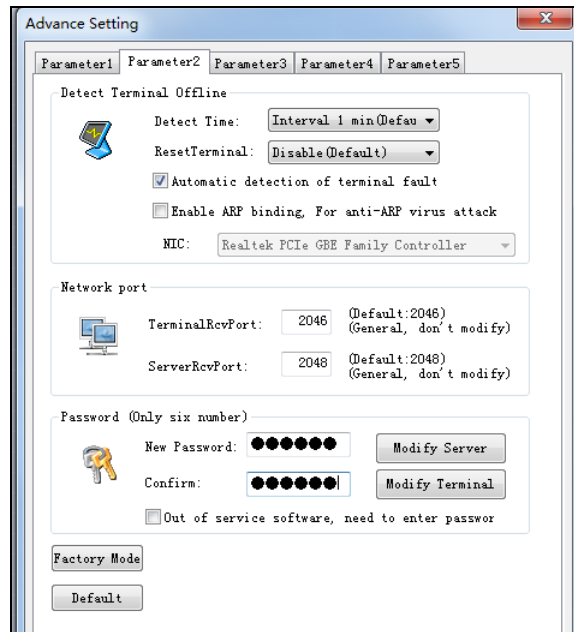
- 1) Click **【Monitoring】** to enter into monitoring interface of the IP remote control microphone.
- 2) Click number key and input the ID of monitored device; (click  to cancel the input)
- 3) Click monitoring key to monitoring the target device.
- 4) Click hang up key , finish monitoring, click  to back the last interface.

**Notes: IP remote control microphone can not support to be monitored.**

### 5.5 Settings

Click **【setting】**, input password (defaults as 123456) in the IP network remote microphone interface to enter into settings interface. Setting parameters of device ID, IP, server IP, factory defaults; Also it can check the device information.

Note: device password modification only can be realized by server, specific process: settings-superior settings -input server password (defaults as 123456)-parameter 2-input new password-modify all device password-ok.



### **5.6 Switch background picture**

The background picture of LED screen and operation interface can be changed of IP remote control microphone. The operation methods as follows:

Enter into my computer/FTP:// Device IP/user-res/background catalog, place the picture for replacement ,the unified format should be png,800\*480 pixel; The main interface background picture is named as mainwindowbg.png ; Operation interface background picture is named as othermainwindowbg.png;

After changed the picture and reboot the device to come into effective.(Click IP remote control mic-settings-general settings ,click "save" to reboot device under any parameter won't be modified).

**Note: directly turning off the power can not restart the device.**

## ***Chapter 6***

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### ***Appendix***

**6.1 Specification**

**6.1.1 IP remote control microphone IP-101RM(0000.18EN.0000)**

Input power	DC24V/1A
Connector	Power input connector, Network connector, MIC input connector, Earphone output connector, Line in connector, Line out connector, Short-circuit input, short-circuit output, USB connector, Power switch, TF connector.
Network I/F	10BASE-T/100BASE-TX,automatic determination
LED screen	7.0 inch, 800x480 resolution, with touch screen.
MIC input	Range: imbalance 1Vrms Impedance 10kΩ
Earphone output	Imbalance, output power10mW impedance 32Ω
Intercom speaker	8Ω/3W
Network protocol	ARP、UDP、TCP/IP、ICMP、IGMP、SIP
Audio sampling rate	8K~44KHz
Working temperature	0℃~+40℃
Working humidity	Lower than 90%RH (No dew point)
Accessories	Plug-in wall power adapter (DC24V/1A) 1pcs Wiring connector (3.5-5P) 1pcs; Microphone pole (IM-320) 1pcs

