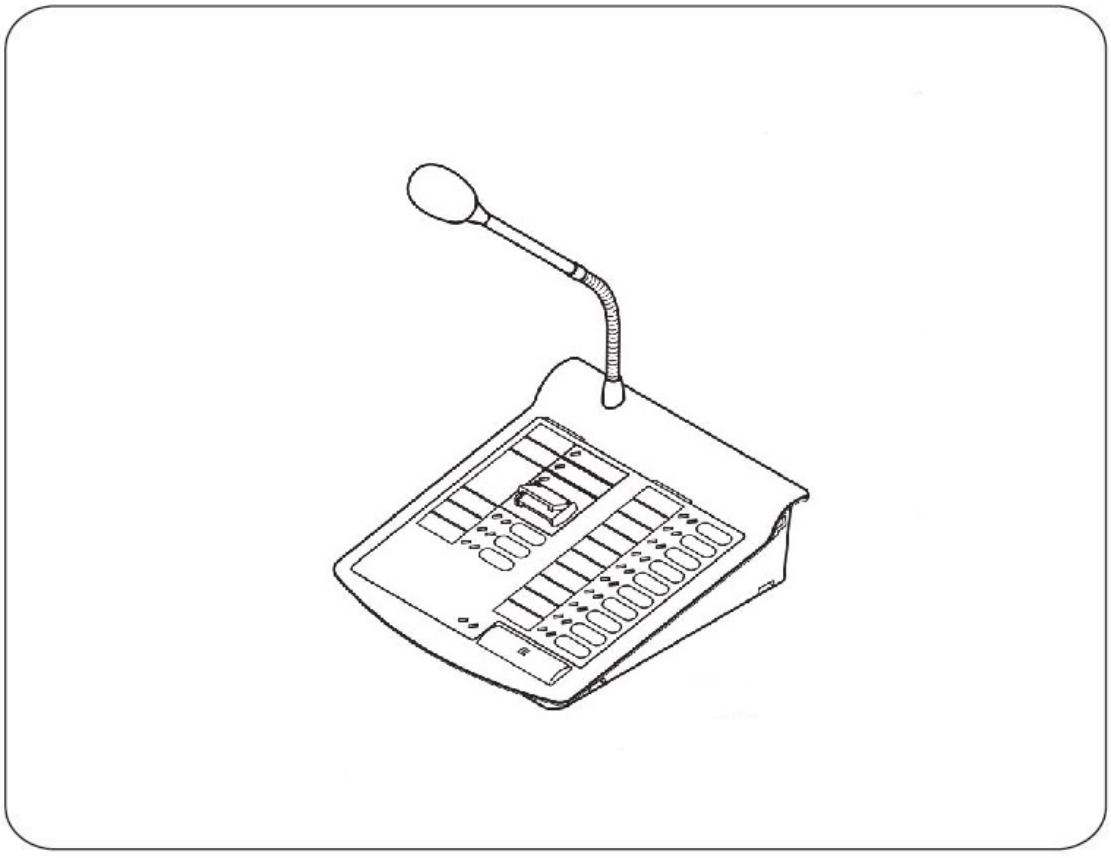
User's Manual

IP Remote Microphone VX-100RM-EA



Thank you very much for purchasing TOA VX-1000 series product.
Please read the instructions in this manual carefully to ensure long-term, trouble-free operation of the machine.

TOA Corporation

1. SAFETY PRECAUTIONS

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 (e.g. it can't network, no sound etc.)

（2）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.

2. PRODUCT DESCRIPTION

2.1 overview

VX-100RM-EA is a IP remote microphone which has the function of initiating general zone broadcast and emergency broadcast and also can trigger the preset broadcasting task by pressing the button.

(1) Functional configuration through vx-1000 configuration tool

User can configure the network parameters of IP Remote Microphone, extend the number of units, and customize function buttons through the vx-1000 configuration tool to achieve personalized configuration.

(2) Audio broadcasting

IP Remote Microphone can transmit incoming audio signals of external lines or microphone poles through the network to broadcast data. Each zone can receive and broadcast audio in real time. The IP Remote Microphone can switch the sound source between the line input and the microphone pole.

(3) Working status indicator light

Each keypad of the IP Remote Microphone is equipped with corresponding indicator lights. By identifying the colors and flashing conditions of each indicator, the work of each zone (or key) can be quickly obtained.

(4) It can connect up to 9 Remote Microphone Extention.

Each expansion unit has 10 keys, user can add 10 pcs expansion unit maximally.

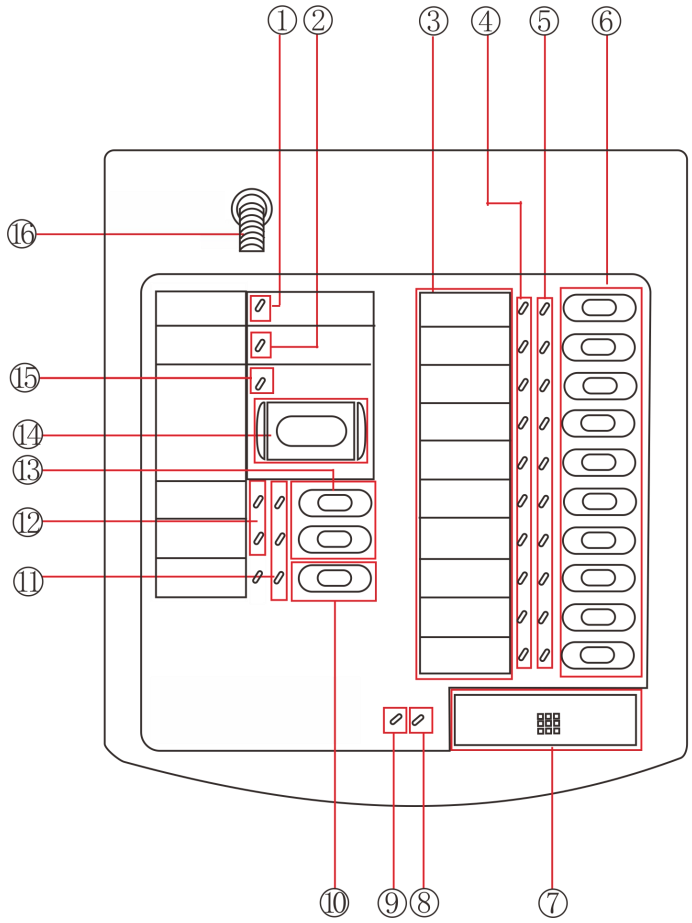
(5) Controlling task execution

When the function button of IP Remote Microphone is defined as the task button in the vx-1000 configuration tool, pressing the corresponding button can control the corresponding tasks (such as broadcast task, control output task, monitoring task) to start and stop.

2.2 interface description

2.2.1 IP Remote Microphone VX-100RM-EA

Front



① Power light: green light will be always on when with power input; No light when without power input

② Work mode indicator: No light when under server mode; Orange light will be always on when under no server mode.

③ Name tag area: Please fill in the name or function specified by the corresponding function button on the sign, and insert the signage into the area.

④ Status light: when the function button is defined as zone button, meanwhile when it is under broadcasting status, the corresponding status light is always on; In the idle status, no lights; When initiating emergency broadcast, the red is always on.

⑤ Zone lights:

1) When the button is defined as a zone button, pressing the button indicates that the zone represented by the key is selected and the zone light of the key is always on green; Press again to stop the task and the zone light is off.
2) When the button is defined as the task button and the binded task is executed, the zone light of the button is always on green; Press again to stop the task and the zone light is off.

⑥ Function buttons: user can customize the function buttons as zone button or task button. (It is configured through“ IP Remote Microphone settings”in the VX-1000 configuration tool)

1) Zone button: Each button represents a zone, pressing the button means that the zone of the key is selected and the corresponding zone light is always on green
2) Task button: pressing the button to execute the corresponding task in the vx-1000 configuration tool (playing preset broadcasting, monitoring task, etc.). When the task is executed, the corresponding task button's zone light is always on green; Pressing the button again to stop the task and the corresponding zone lights will be off.

⑦ Broadcast button: after selecting the zones, then pressing this button to start broadcasting.

⑧ Voice call light: when initiating broadcast , the voice call light will be always on orange . Its brightness will change by the sound volume size and light will be off when there is no sound.

⑨ Broadcast indicator light: when the IP Remote Microphone is under the broadcast, the indicator light is always on green; After the broadcast stops, the indicator lights will be off

⑩ Sound source switch button: press this button to switch between line input and microphone pole sound input. The default of sound source is microphone pole input. User can press the button to switch to line input. Only when the sound source of the IP Remote Microphone is under line sound source, the corresponding input sound source status light will be always on green.

⑪ Function button indicator light: It indicates the current input sound source and volume + / - button’s working status.

⑫ Volume status light: when the volume is adjusted to the maximum, the Volume status light of the button will be always on red. Meanwhile if user presses the volume reduction button, the volume status light of volume increasing button will be off. When the volume is adjusted to a minimum, the corresponding Volume status light will be always on (Red light),meanwhile if the volume is increased, the corresponding Volume status light will be off.

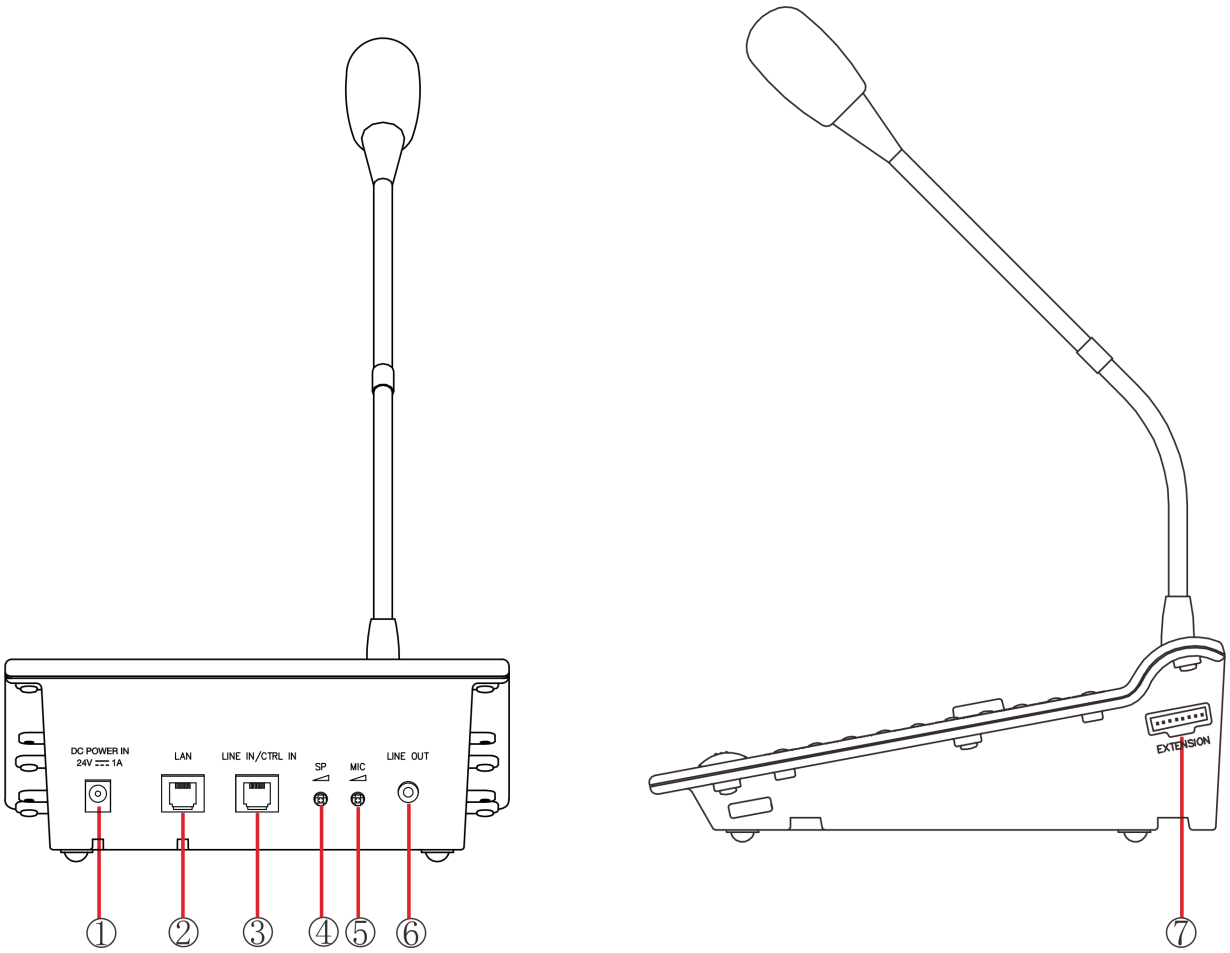
⑬ Volume +/ -button: when IP Remote Microphone is under the progress of broadcasting , user can press the two buttons to adjust the volume.

⑭ Emergency broadcast button: User can press this button to raise microphone priority to emergency level ,then selecting zones and initiating emergency broadcast.

⑮ Emergency broadcast indicator light: It will be always on (Red light) only when pressing the emergency broadcast button.Press again light will be off.

⑯ Microphone bar interface: Connecting microphone pole to collect live sound.

Rear **Side**



① Power input interface: connecting DC24V/1A power adapter. (this device supports Poe power supply. If network interface has been connected to POE switch ,then no need to connect power adapter).

② Network interface: Connecting switch via network cable.

③ Control input interface & line input interface

Control input interface: unused.

Line input interface: receiving audio signals from other devices.

④ SP volume knob: adjusting the volume of monitor speaker output.

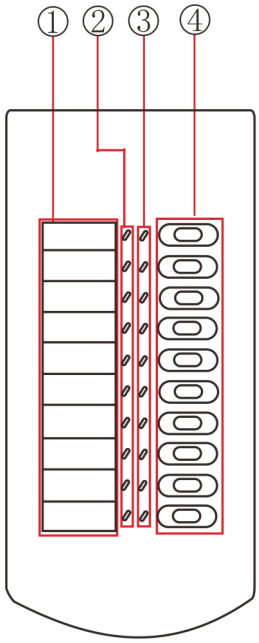
⑤ Mic volume knob: adjusting the volume of the microphone bar input.

⑥ Audio output interface: not used.

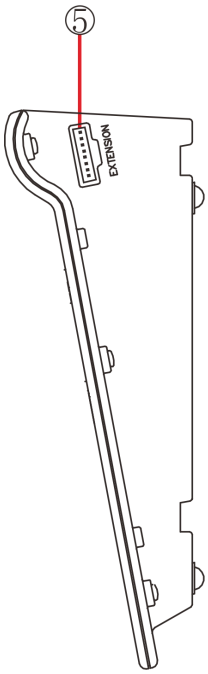
⑦ Extended unit interface: Connecting Remote Microphone Extention RM-110VX-EA.

2.2.2 Remote Microphone Extention RM-110VX-EA

FRONT



SIDE



①Name tag area

②Status light

③Zone light

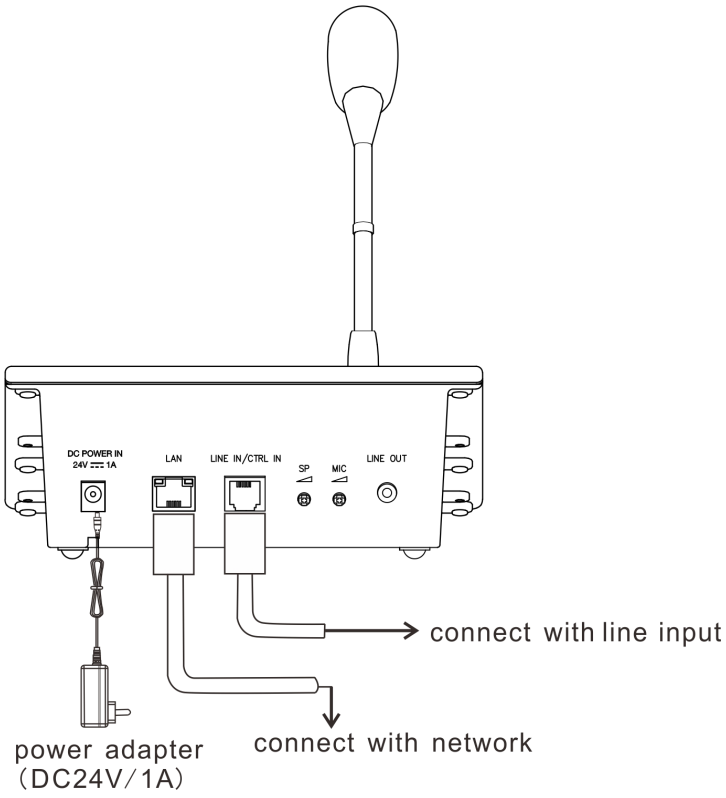
④Function buttons

⑤Extended unit interface

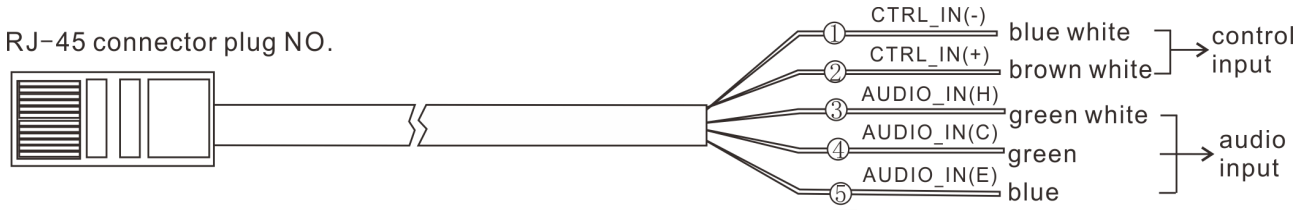
For each interface and function definition, please refer to 2.2.1 IP Remote Microphone VX-100RM-EA.

3. WIRING

3.1 wiring diagram



RJ-45 connector's wiring sequence and its meaning:



Number	Color	Wire Pair	Pin Assignment	Explanation	Remarks
①	BLUE/WHITE		CTRL_IN（-）	CTRL_IN（-）	CTRL_IN Unused
②	BROWN/WHITE		CTRL_IN（+）	CTRL_IN（+）	
③	GREEN/WHITE		AUDIO_IN(H)	AUDIO_IN（H）	
④	GREEN		AUDIO_IN(C)	AUDIO_IN（C）	
⑤	BLUE		AUDIO_IN(E)	AUDIO_IN（E）	

Remarks:

1. Rated Audio Input(Balanced)：1Vrms；Maximum Audio Input:2Vrms；Audio Input Impedance：10kΩ.
2. Network cable adopts 568B line order，cable order from left to right：Orange White、Orange、Green White、Blue、Blue White、Green、Brown White、Brown.

3.2 installation instructions

When the device add extra expansion units, user can use extension cable and connecting bracket to secure two parts.

[required accessories]

Required accessories are included in random accessories.

Connecting bracket A····· 2

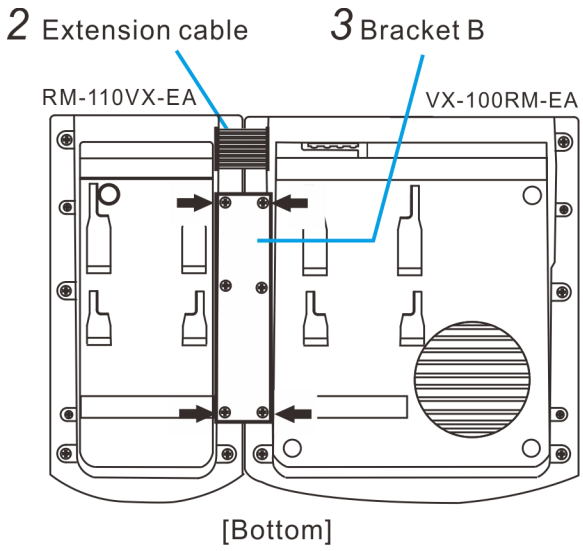
Connecting bracket B····· 1

Screw····· 12

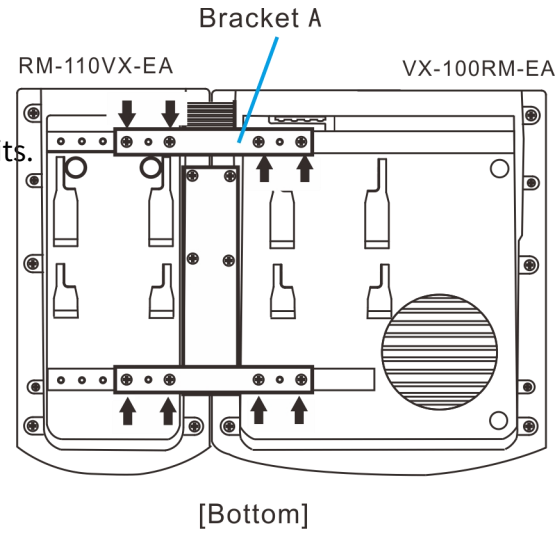
Step 1. Let VX-100RM-EA and RM-110VX-EA close to each other.

Step 2. connecting the two units with extension wire.

Step 3. use the 4 screws provided (follow ➡ shown in the picture) and connecting bracket B to tie the two unit together.



Step 4. Using the 8 screws provided (follow ➡ shown in the picture) and two connecting bracket A to secure two units.



Remarks:

•The connecting bracket A has two spare screw holes. If the specified screw holes are damaged, using them to secure the two units.

•If the connection between the two units is incorrect or loose, please unscrew all fixing screws in bracket and disassemble the two units, then re- secure the two units.

4. OPERATION INSTRUCTIONS

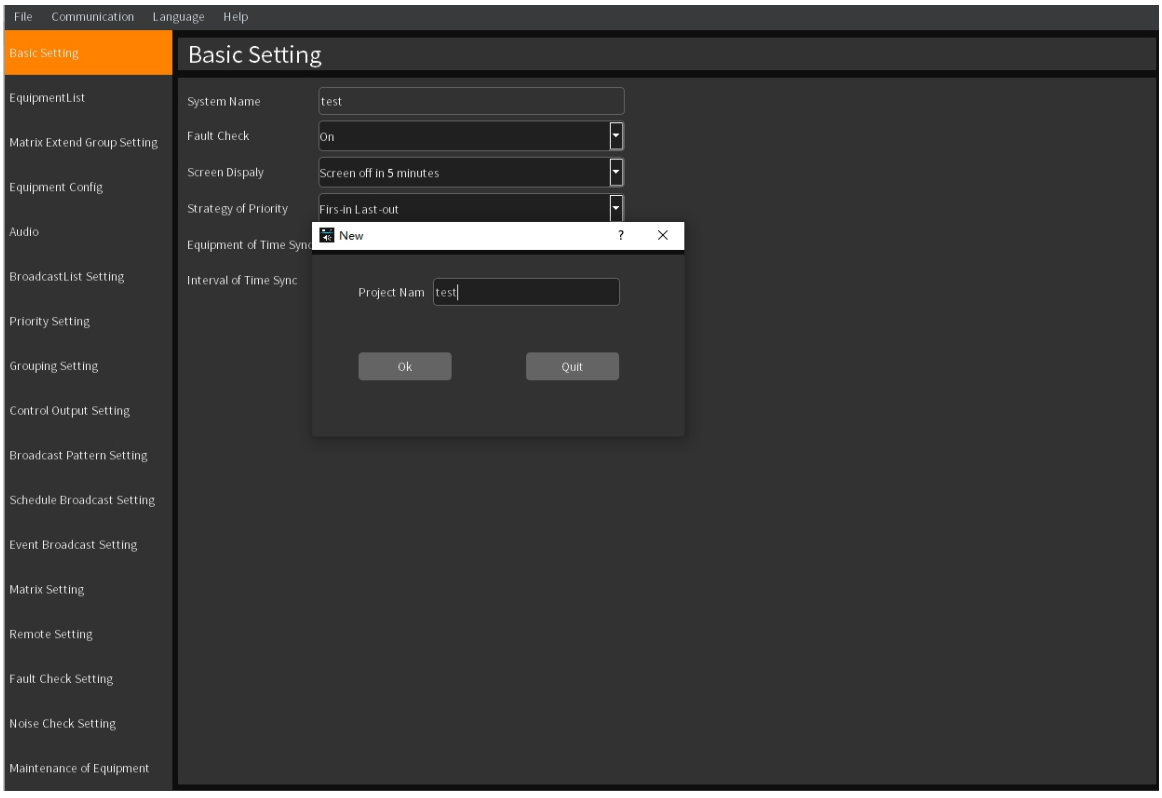
4.1 VX-1000 Configuration tool operating instructions

4.1.1 Software Installation

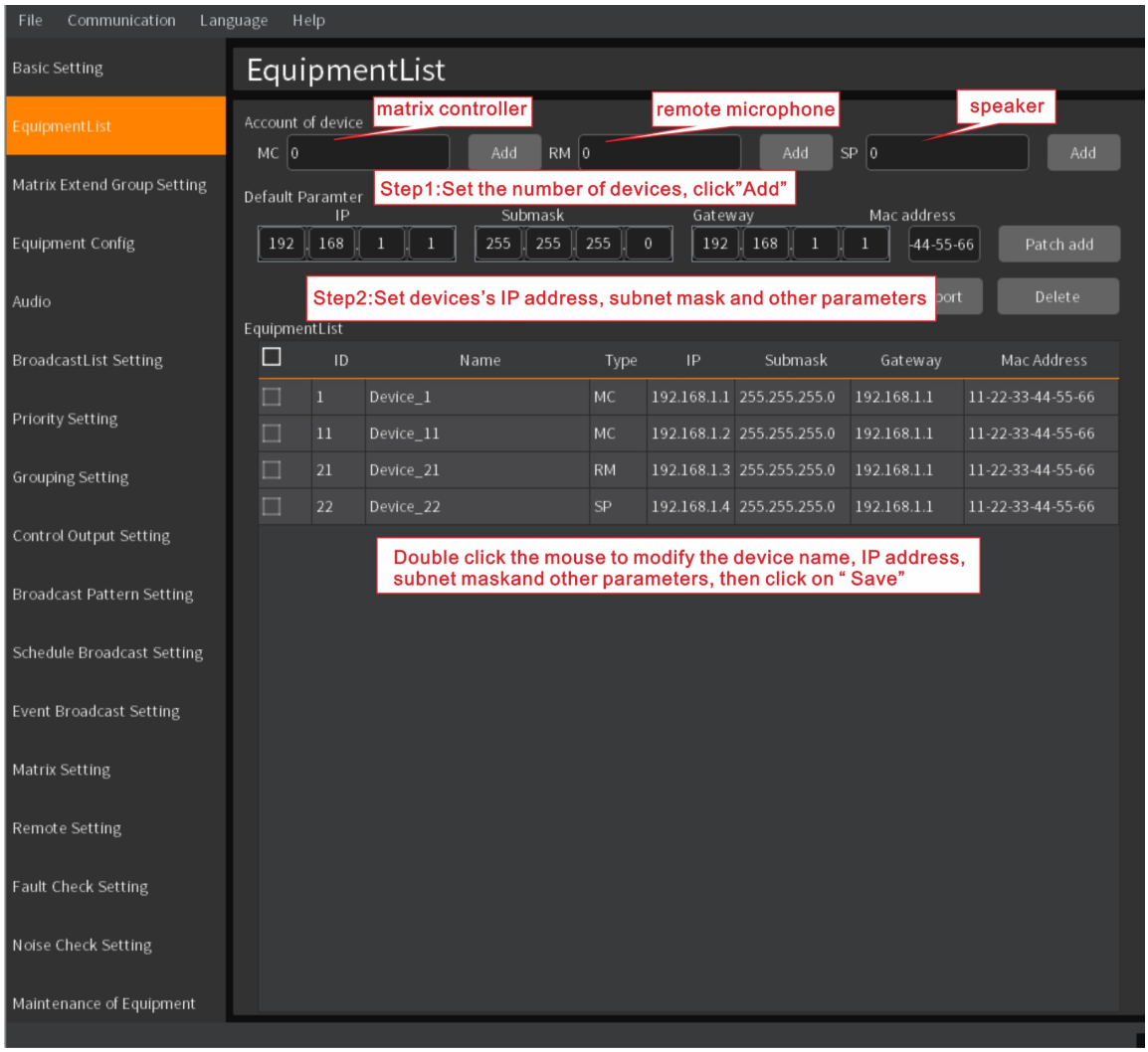
Double-click the VX-1000 installer and press "Next" to install. After the installation is complete, select "Run as administrator" software.

4.1.2 Basic parameter settings

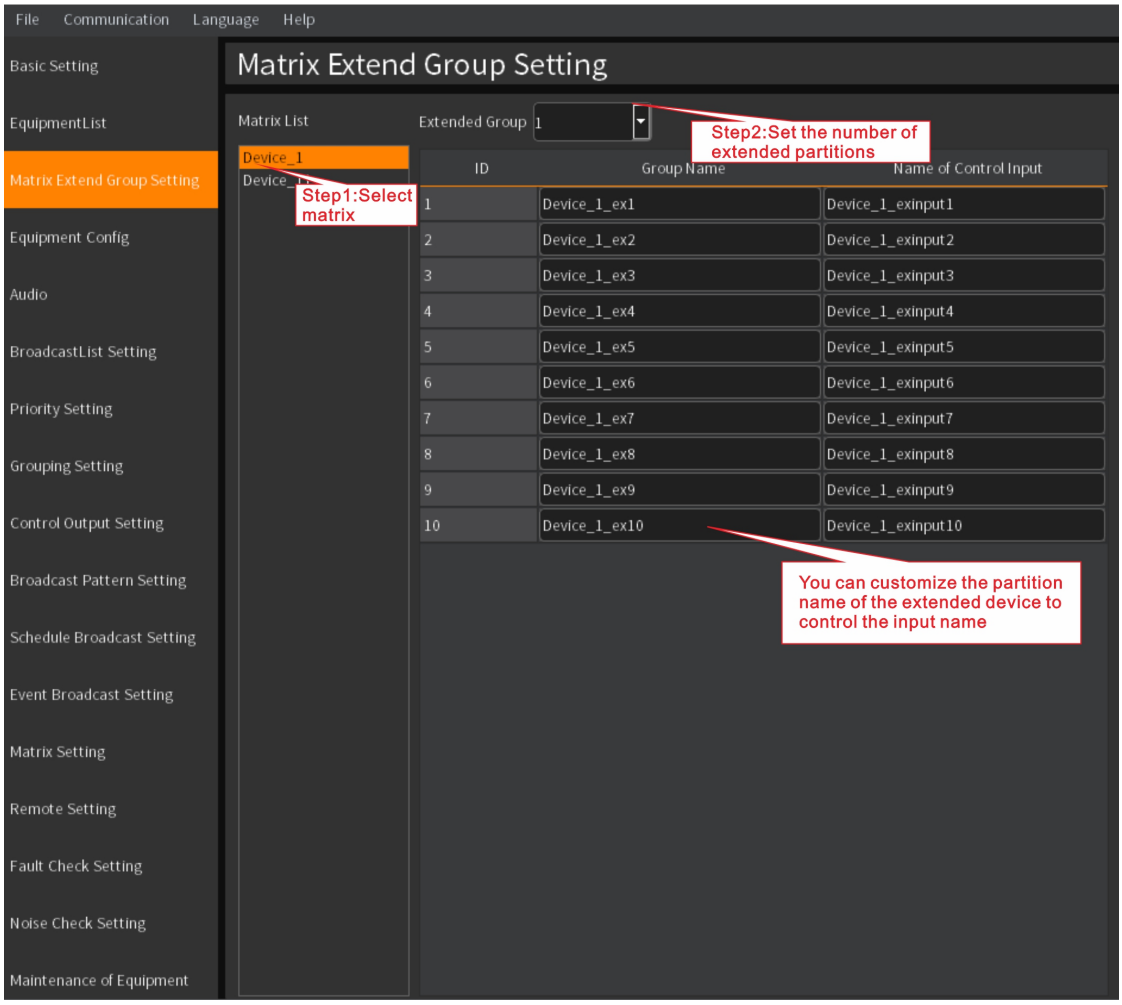
(1) **New project file**：Click "File"-"New" in the main interface of the software, enter the project name in the pop-up dialog box, and create a new project file. After the new creation is complete, related settings such as system name and screen display can be made on the "Basic Settings" interface.



(2) **Add device**：In the "Device List" interface, add devices, set device IP and other operations. After the configurations are completed, the system will save configurations automatically.



(3) **Matrix extended partition configuration:** Set the number of matrix extended partition extenders vX-1010ZE-EA. If the vX-1010ZE-EA is not connected, then you do not need to set this parameter. A maximum of 16 partition extenders can be added.After the configurations are completed, the system will save configurations automatically.



(4) **Device Configuration**：After the device is added, the names of the input and output channels and control input and output channels of each matrix controller can be customized in the device configuration interface. After the configurations are completed, the system will save configurations automatically.

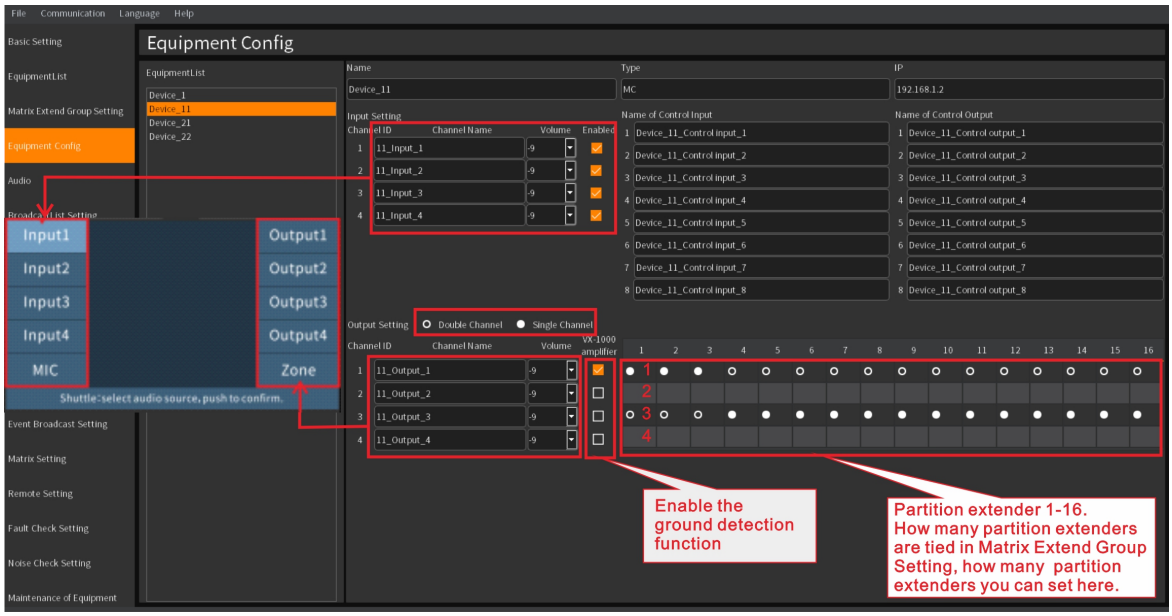
The configuration of the matrix controller is described as follows:

(1) Select the corresponding matrix controller in EquipmentList. You can customize the input/output channel name, volume, whether to enable the ground detection function, and the name of the control input/output channel for each matrix controller.(**Note: Input channels 1-4 respectively correspond to the 4-channel audio source input of the matrix controller, and output channels 1-4 respectively correspond to the 4-channel line output of the matrix controller. Grounding detection is not enabled when using da-X power amplifier.**)

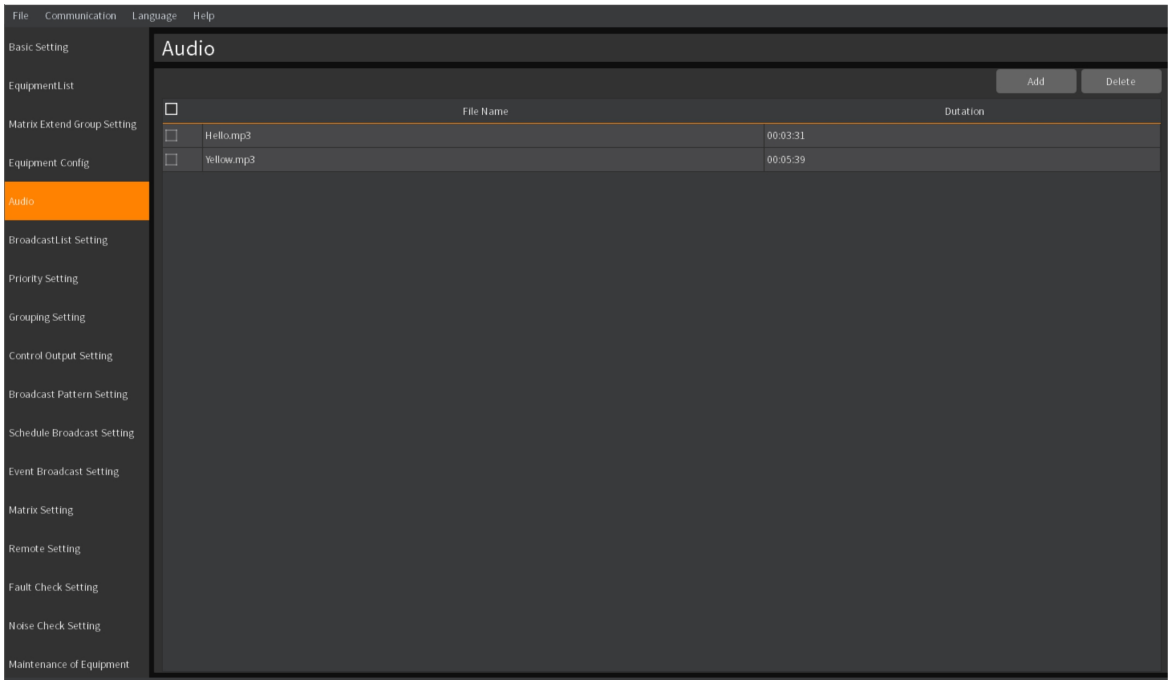
(2) If partition controller extenders VX-1010ZE-EA are connected, set the channel type in Output Settings. To connect one power amplifier to the partition extender, select single channel; to connect two power amplifiers to the partition extender, select double channel.

A single channel supports only one broadcast output. You can select any channel 1, 2, 3, or 4 as the output channel.

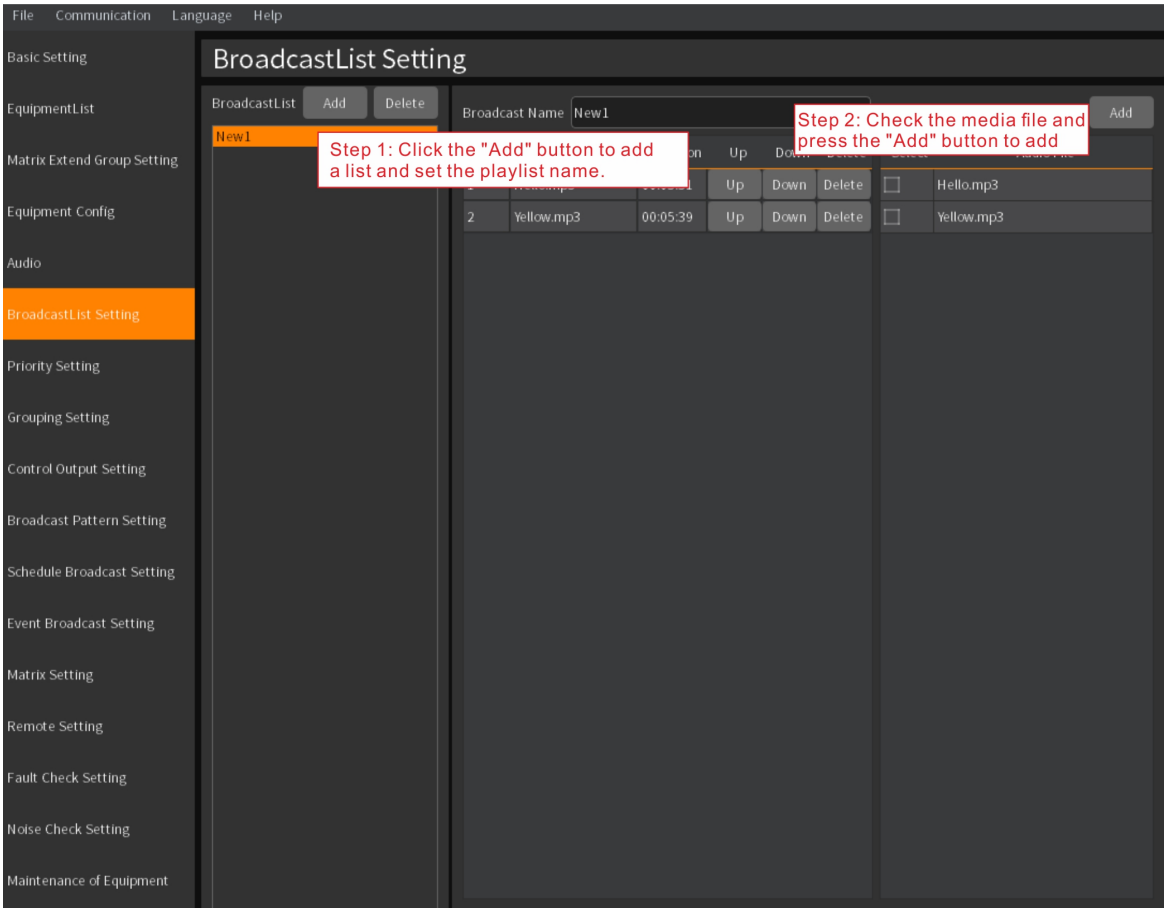
Dual channel Supports BGM and two priority broadcasts. You can select 1, 2, or 3, or 4 output channels (1 indicates channels 1 and 2, and 3 indicates channels 3 and 4). BGM broadcasts output from 2 and 4, and priority broadcasts output from 1 and 3.



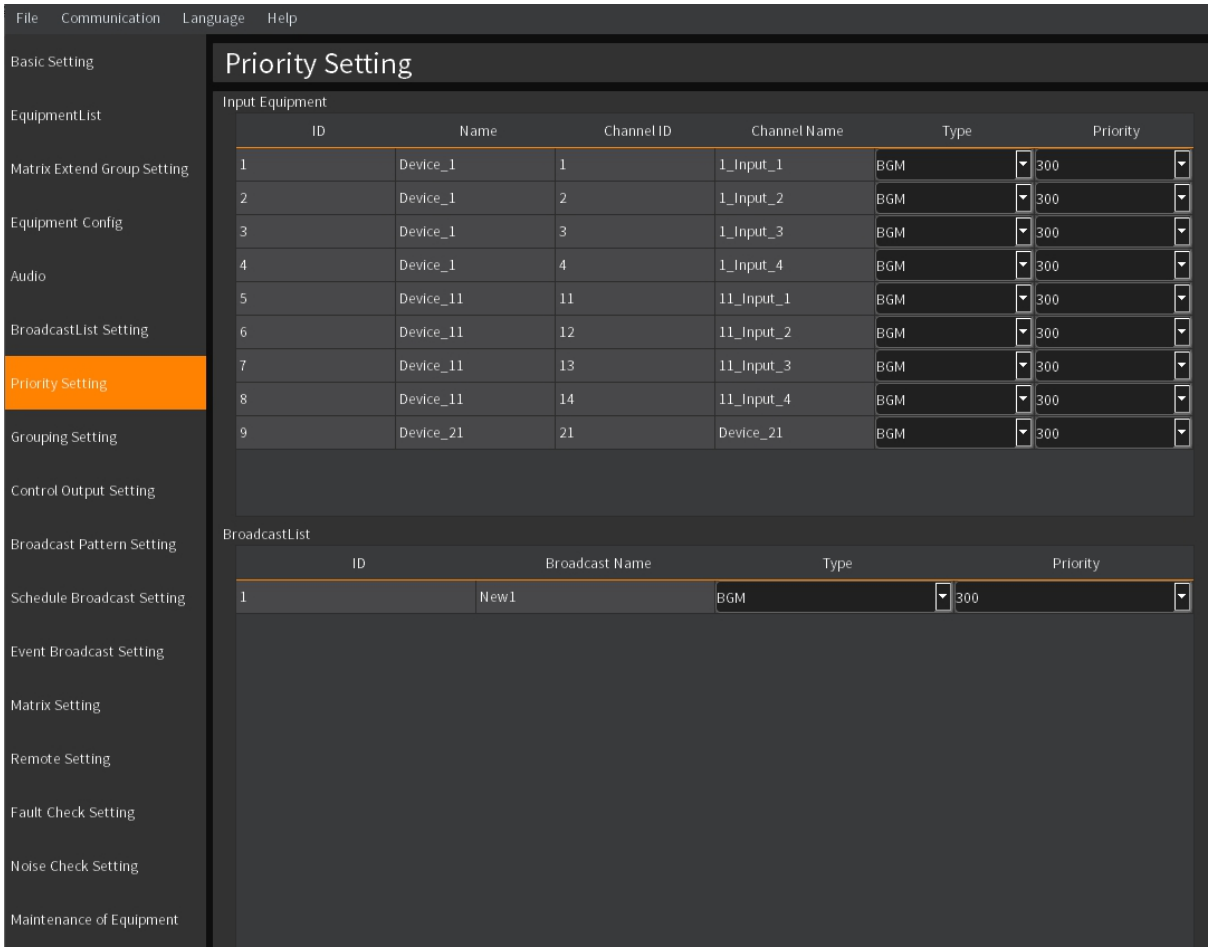
(5) **Create a media library：** Click the "Add" button in the "Media Library" to add audio files (used as a broadcast source). After the configurations are completed, the system will save configurations automatically.



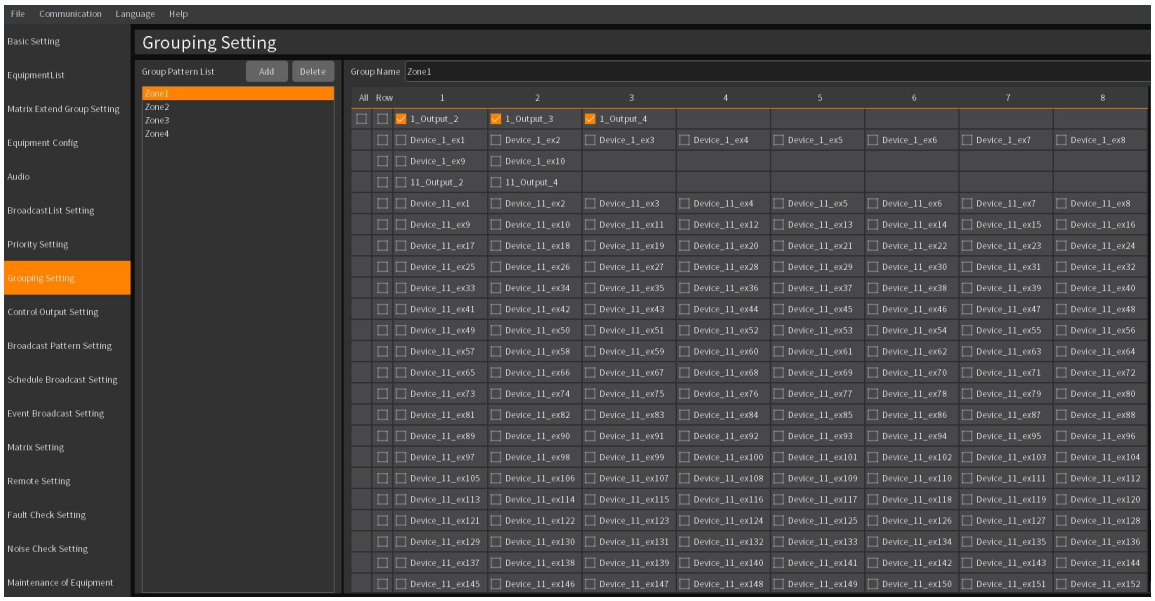
(6) **Broadcast List Setting**：Set the broadcast audio file playlist (need to add audio files in the "Media Library" in advance). After the configurations are completed, the system will save configurations automatically.



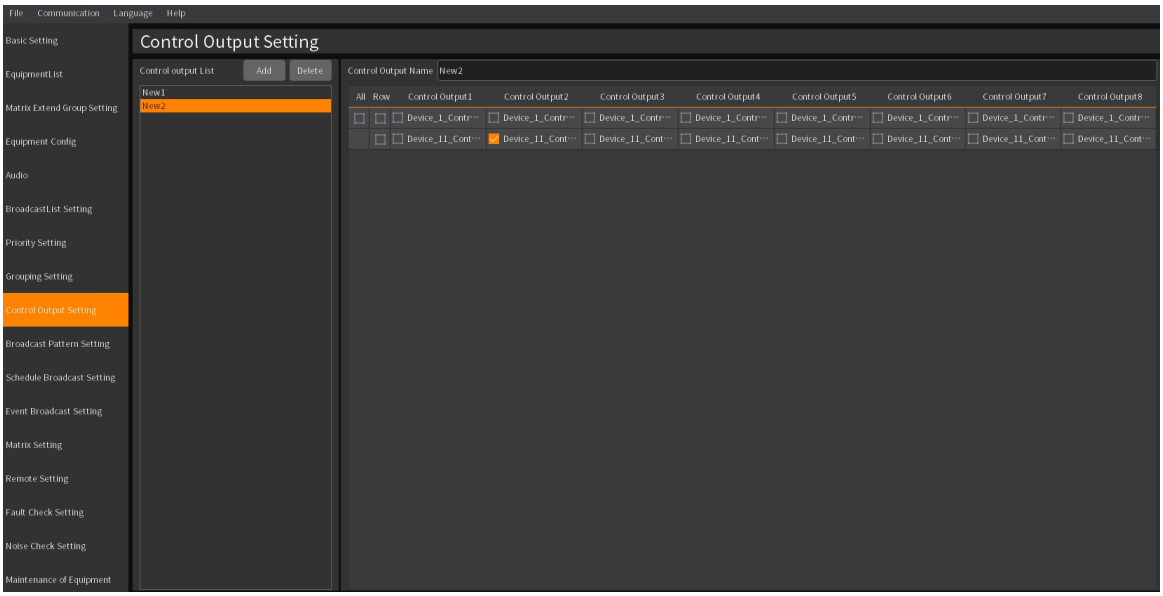
(7) **Set audio source priority**：Set the audio source type (BGM/Business/Emergency) and priority of the device input channel and playlist. After the configurations are completed, the system will save configurations automatically.



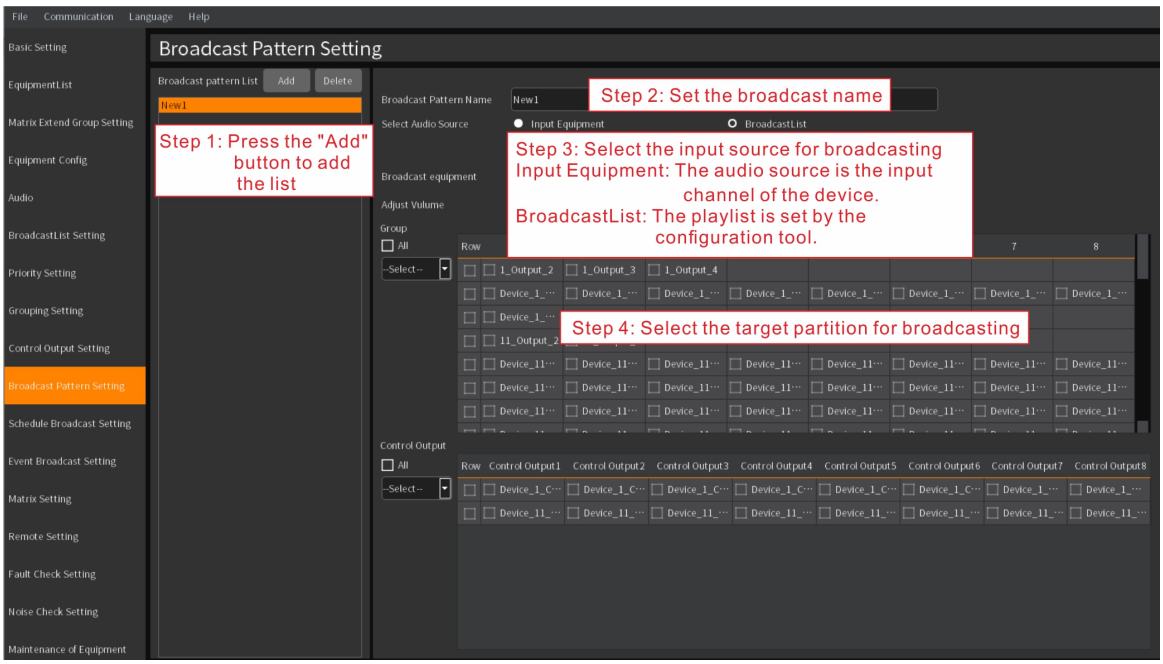
(8) **Set Group:** On Grouping Setting, multi-zone can be conbined to one group.



(9) **Control output**：Enter the name of the Control output, check the control output to be added.After the configurations are completed, the system will save configurations automatically.

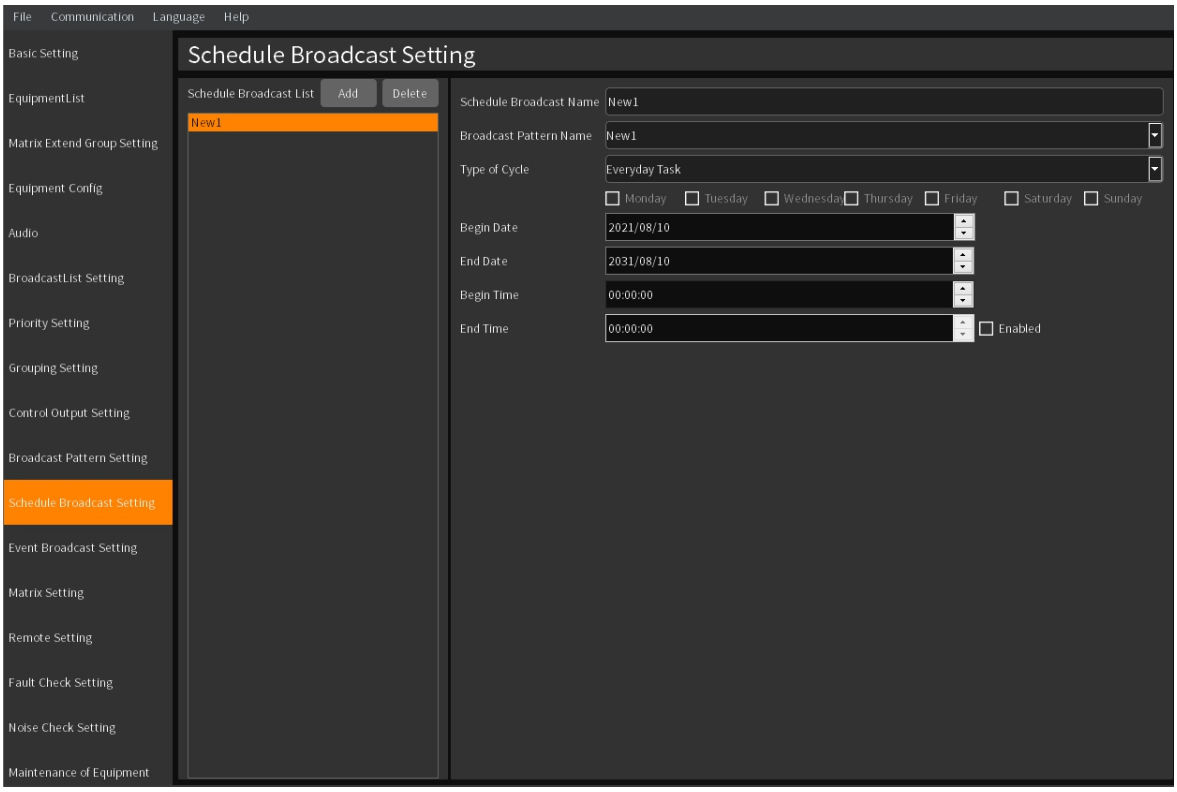


(10) **Set the broadcast pattern**：Set the broadcast pattern, which is used to set the mode selection when schedule broadcast and control broadcast.After the configurations are completed, the system will save configurations automatically.



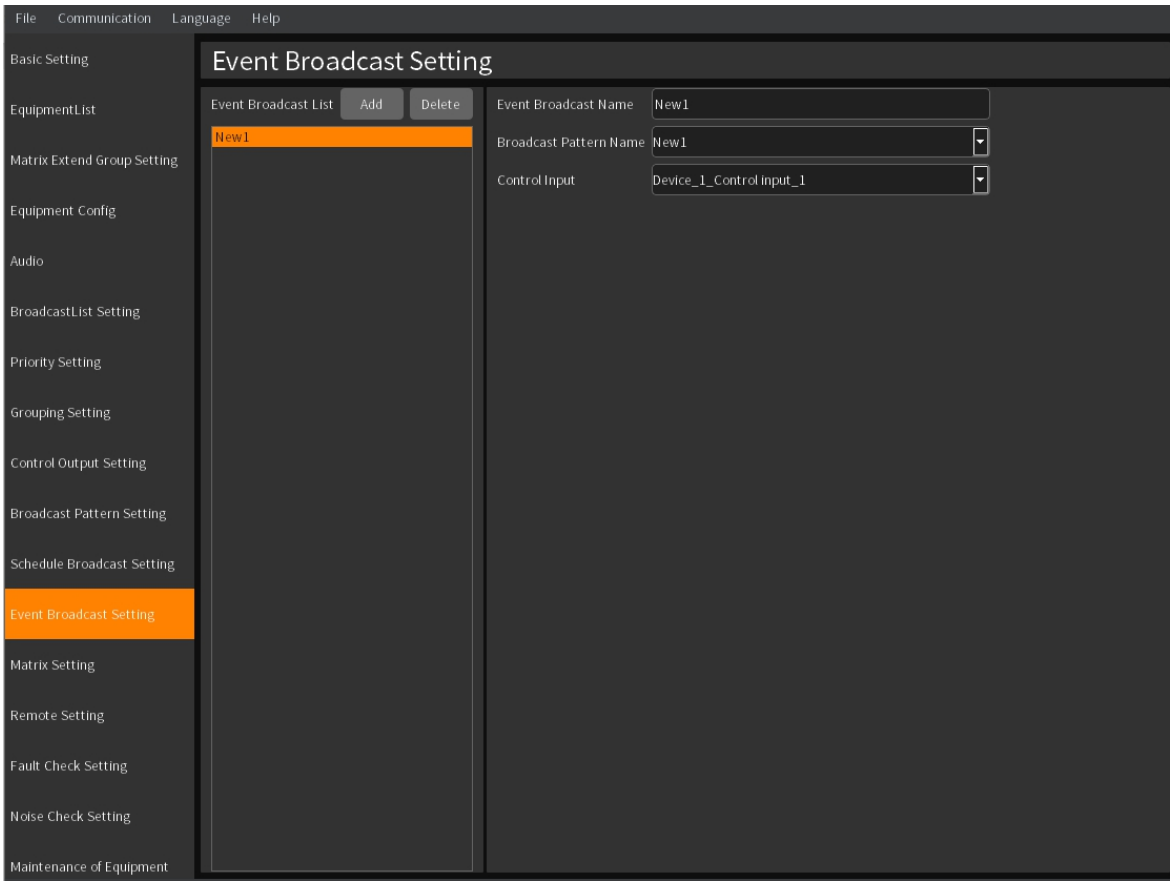
4.1.3 Set the timer to start broadcasting

On the "Schedule Broadcast Settings" interface, set the task name, broadcast pattern, cycle type, start time, etc. When the device reaches the specified time, it will start the specified broadcast pattern.



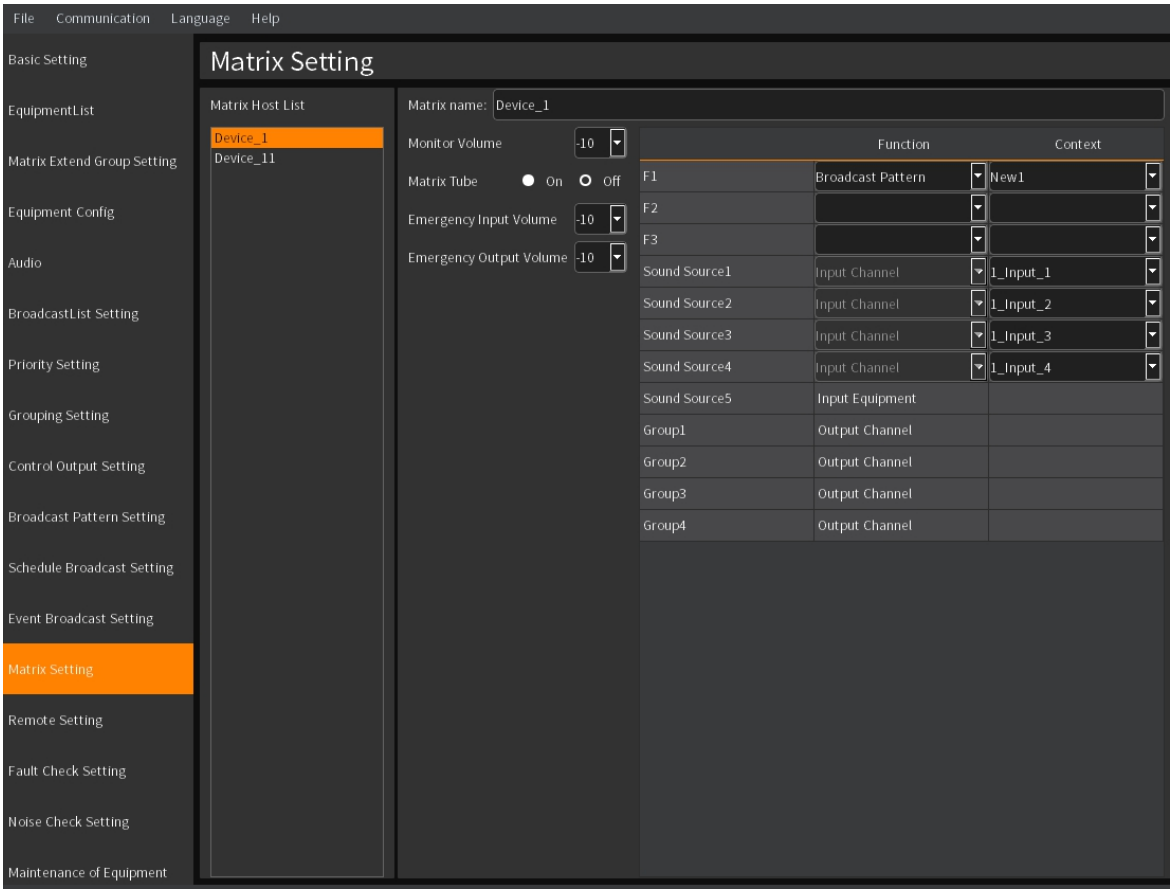
4.1.4 Set control to start broadcasting

On the "Event Broadcast Settings" interface, set the task name, broadcast pattern, and control input. When the control input of the device is triggered, the specified broadcast mode will be activated.



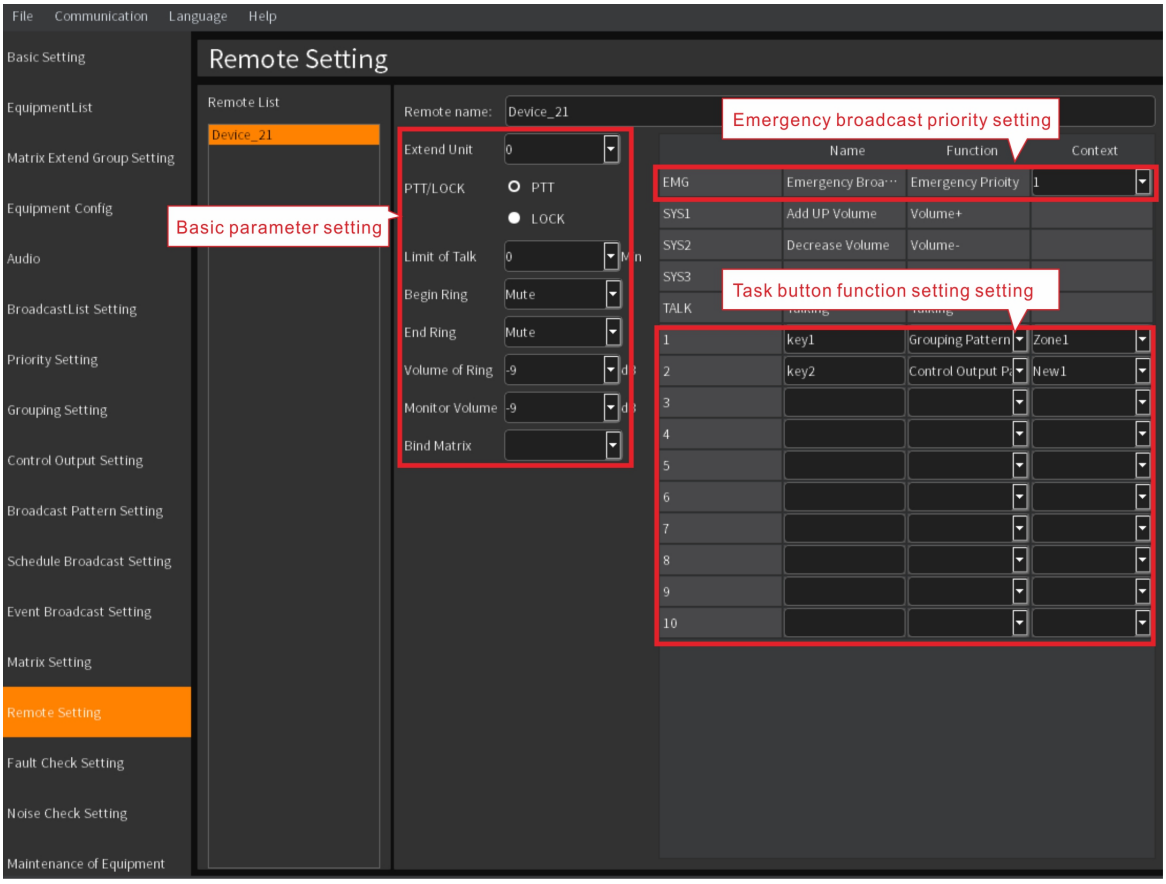
4.1.5 Set button to start broadcast

On the "Matrix Settings" interface, you can set the broadcast pattern corresponding to the [Preset 1]-[Preset 3] keys of the matrix controller. Press the device's [Preset 1]-[Preset 3] key to start the specified broadcast pattern.



4.1.6 Set remote microphone function

On the "Remote Settings" interface, you can configure the remote microphone.



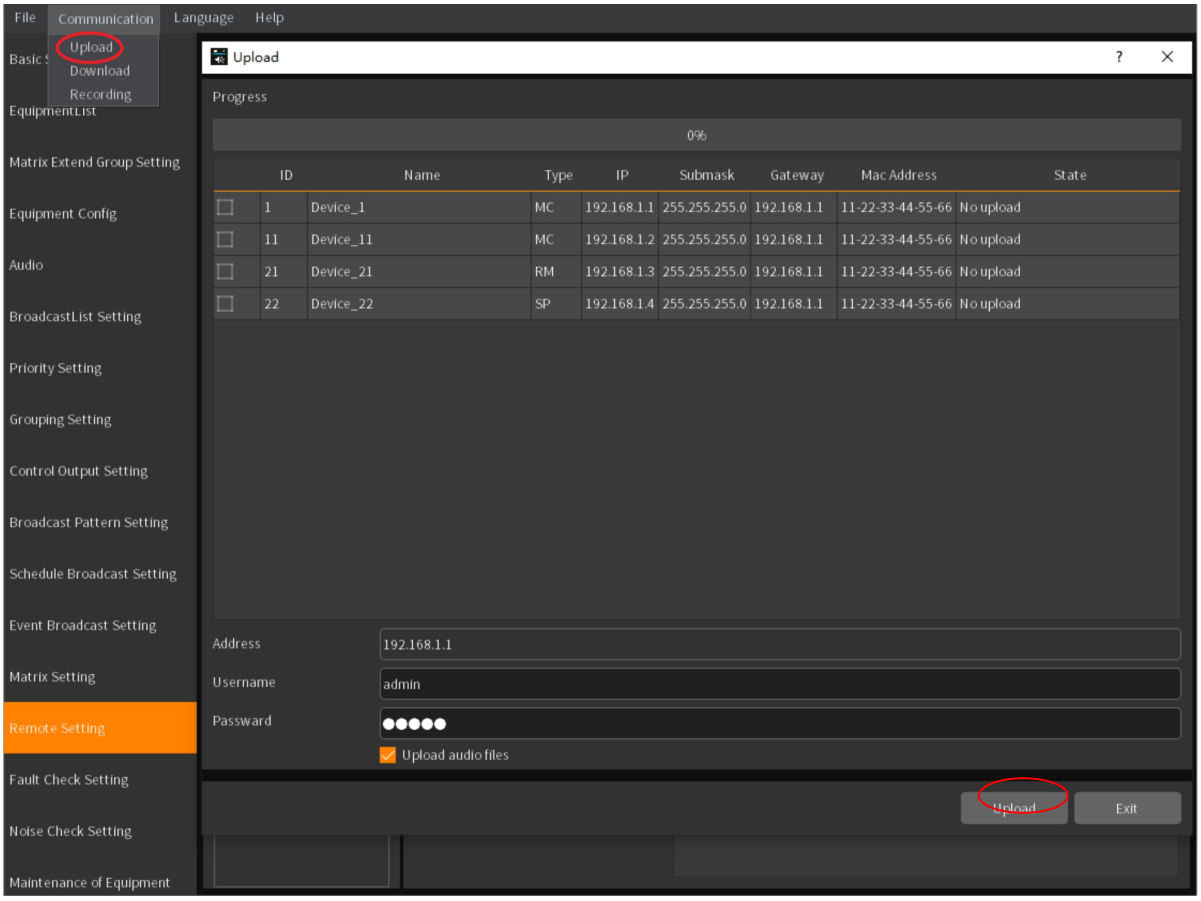
Basic parameter setting	Extention unit setting	Set the number of extention units connected to the remote microphone, and support up to 9 extention units.
	PTT/LOCK	**PTT mode:** When broadcasting, press the selection key first, and then continue to hold the broadcast speech key, then you can initiate a call. Release the talk button to end the broadcast. **LOCK mode:** When broadcasting, press the selection key first, then press the broadcast speech key to initiate a call. Press the talk button again to end the broadcast.
	Limit of Talk	Set the duration of the broadcast call, after the time, the device will automatically end the broadcast. When the time limit is set to 0, the speaking time is not limited, and the broadcast ends manually.
	Pre-announcement tone settings (Begin Ring/ End Ring)	Set the device to start broadcasting and end broadcast pre-announcement tone, when set to mute, there is no pre-announcement tone；
	Pre-announcement tone volume	The volume configuration of the start and end pre-announcement tone.
	Monitor volume	The output volume configuration of the microphone monitor speaker.

EMERGENCY Button priority setting	EMERGENCY Button priority setting	Set the priority of the EMERGENCY Button of the remote microphone, the priority range is 1 ~ 128;
Task button function setting	Broadcast pattern	Select the broadcast mode, the corresponding list shows the preset mode set on the VX-1000 broadcast mode interface. After selecting the corresponding broadcast mode, press the corresponding button to execute the broadcast mode; press the button again to end the broadcast mode.
	Grouping pattern	Select the zone. The corresponding list shows the zone list set on the VX-1000 partition mode interface. After setting the partition mode, press the corresponding button and then press the broadcast talk button to initiate a microphone broadcast.
	Control output pattern	Select the control output mode. The corresponding list shows the control output list set on the VX-1000 control output mode interface. After setting the control output mode, press the corresponding button, the corresponding control output is closed, and press the button again, the corresponding control output is disconnected.
	Monitor pattern	Select the monitor mode, corresponding to the matrix output list displayed in the list. After configuring the

		monitoring object, press the corresponding button, the microphone monitor speaker plays the audio of the corresponding partition, and press the button again to end the monitoring output.
	Failure Check	Select Fault Detection and the Remote Microphone [Fault Information] screen will display a list of amplifiers configured with the VX-1000. When the microphone detects an amplifier fault, it will indicate accordingly.
	Trigger mode	Select the trigger mode, the function of the corresponding key for the remote microphone is the corresponding matrix device selected in the VX-1000 settings (the key trigger task needs to be configured on the SIP server). Pressing the corresponding key will trigger the microphone to initiate a broadcast.

4.1.7 Upload configuration

After the parameters are modified and saved, you must click [Communication]-[Upload], check the relevant device in the pop-up dialog box, and then click the "Upload" button to upload the configured data file to the specified device to take effect.

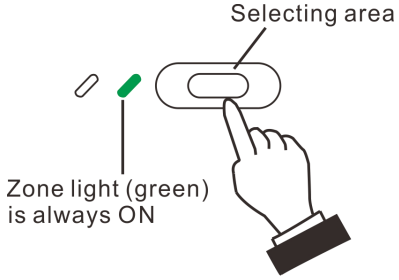


4.2 Zone broadcasting

Prerequisites: Completing relevant configuration, meanwhile IP Remote Microphone function key was set up as “zone pattern”, and upload to the corresponding device.

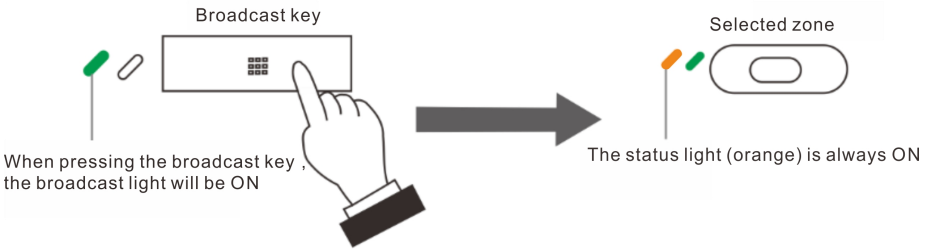
4.2.1 General zone broadcasting

Step 1. manually press the zone button to select the zone, and the corresponding key ’s zone light is always on green.



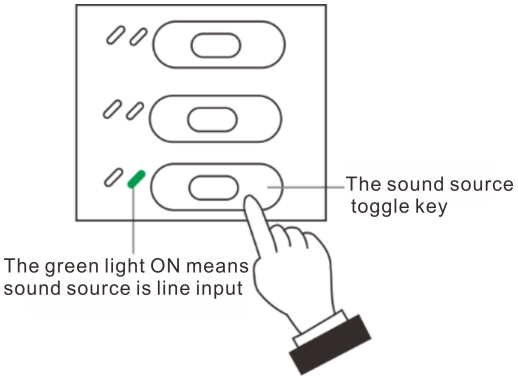
Step 2. Press the broadcast button to start broadcasting. After initiating the broadcast, the status

light of the associated zone is always on orange.



Step 3. call the specified zone (microphone input) or play the external sound source (line input).

The device is default as microphone pole input, then press sound source switch button to switch line input, press again to resume it to default.

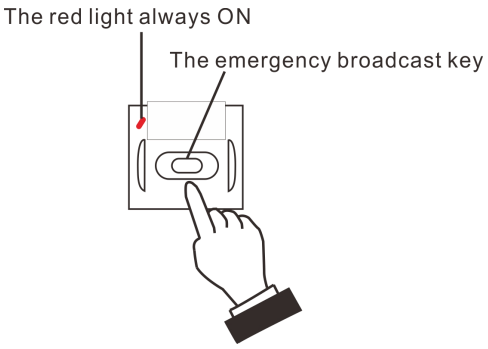


Step 4. press the broadcast key again to end the broadcast, and the broadcasting light and associated status light and area light are all off.

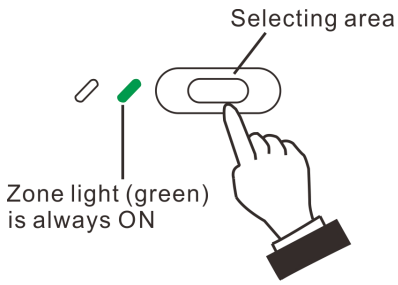
Note: if the device is set up in PTT mode, when user talking ,it is necessary to press broadcast key continuously , or releasing the key to end broadcast.

4.2.2 Emergency broadcast

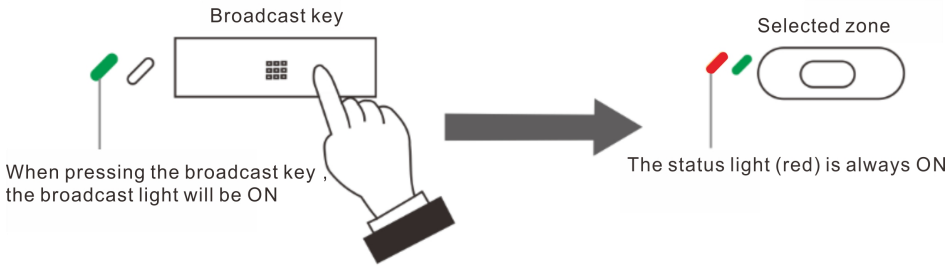
Step 1. press the emergency broadcast key on the microphone, and the emergency broadcast light is always on red.



Step 2. press the zone button to select the zone, and the zone light of the corresponding button is always on green.



Step 3. press the broadcast button to start broadcasting. After successfully initiating broadcast, the status light of the associated zone is always on red, and the broadcasting light is always on green.



Step 4. call the specified area (microphone input) or play the external sound source (line input).

Step 5. press the broadcast key again to end the broadcast, and the broadcasting light and associated status light and area light are all off.

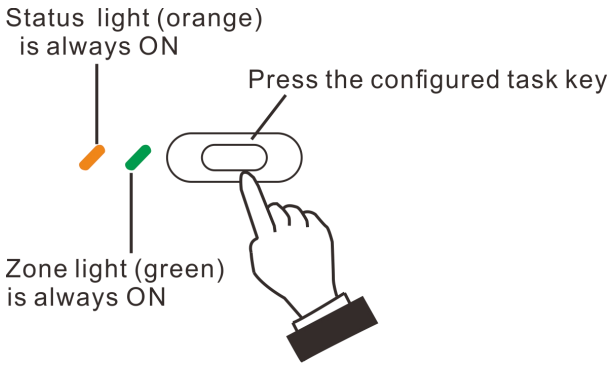
Note: if the device is set up in PTT mode, when user talking, it is necessary to press broadcast key continuously, or releasing the key to end broadcast.

4.3 Preset broadcasting

Prerequisites: After Completing relevant configuration, meanwhile IP Remote Microphone function key was set up as “broadcast pattern”, then upload to the corresponding device.

4.3.1 Preset BGM broadcast

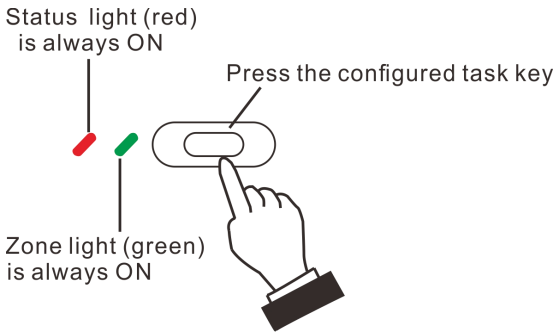
Step 1. Press the configured task key, the corresponding zone light is always on green and the broadcast status light is always on orange, meanwhile the corresponding zone ‘s speaker will play the preset broadcast.



Step 2. Press the configured Task button again to stop broadcasting. All relevant lights will be off.

4.3.2 Preset emergency broadcast

Step 1. press the configured task key, and the corresponding zone light is always on green and the broadcasting status light is always on red, meanwhile the corresponding zone ‘s speaker will play the preset broadcast.

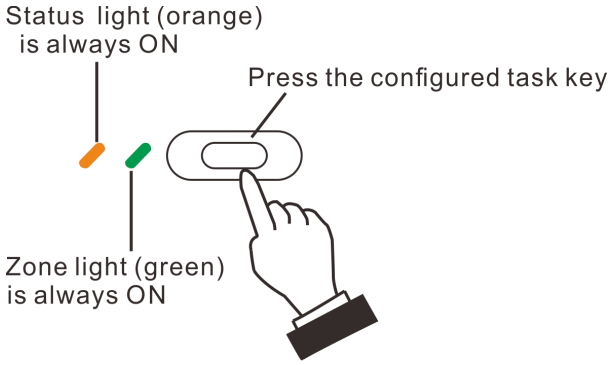


Step 2. meanwhile the corresponding zone ‘s speaker will play the preset broadcast.

4.4 Trigger control output task.

Prerequisites: Completing relevant configuration, meanwhile IP Remote Microphone function key was set up as “control output pattern”, then upload to the corresponding device.

Step 1. Press the configured task key, the corresponding zone light is always on green and the broadcast status light is always on orange, meanwhile the corresponding control output will be closed to execute specified task.



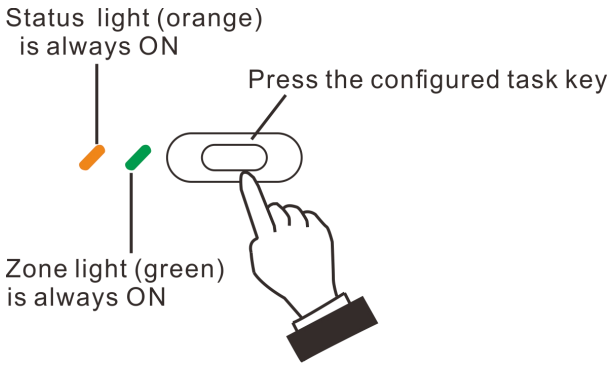
Step 2. press the configured Task button again to disconnect the control output port. At the same time, all relevant lights are off.

4.5 monitoring tasks

Prerequisites: the device configuration has been carried out in the vx-1000 configuration tool. The remote control microphone button function is configured as "monitor mode" and upload to

the corresponding device.

Step 1. Press the configured task key, the corresponding zone light is always on green and the broadcast status light is always on orange, meanwhile the corresponding zone ‘s speaker will output corresponding output channel’s voice.



Step 2. Press the configured Task button again to stop monitoring. All relevant lights will be off.

5. APPENDIX

5.1 specifications

5.1.1 VX-100RM-EA IP Remote Microphone

Model	VX-100RM-EA
Power Supply	DC24V/1A or PoE(IEEE 802.3at)
Consumption current	Less than 200mA (single VX-100RM-EA) Less than 500mA (when connecting 9 set of RM-110VX-EA)
Audio input	Balance, 1Vrms (Max:2Vrms) the input impedance is10K ohm.
monitor speakers	1W
frequency response	20～20,000Hz
Volume control	Microphone volume control, monitor speaker volume control
Number of function keys	Single 10, up to 100 (When connecting 9 rm-110vx-ea)
network interface	RJ45 interface, 10 BASE-T /100BASE-TX,automatic judgment
Network protocol	TCP/IP、UDP、HTTP、ARP、RTP、ICMP、IGMP、SIP
working temperature	0°C~+40°C
Working humidity	Less than 90%, no condensation.
Material	ABS resin, black
size	190 (W) x 76.5 (H) x 215 (D) mm (without gooseneck microphone)

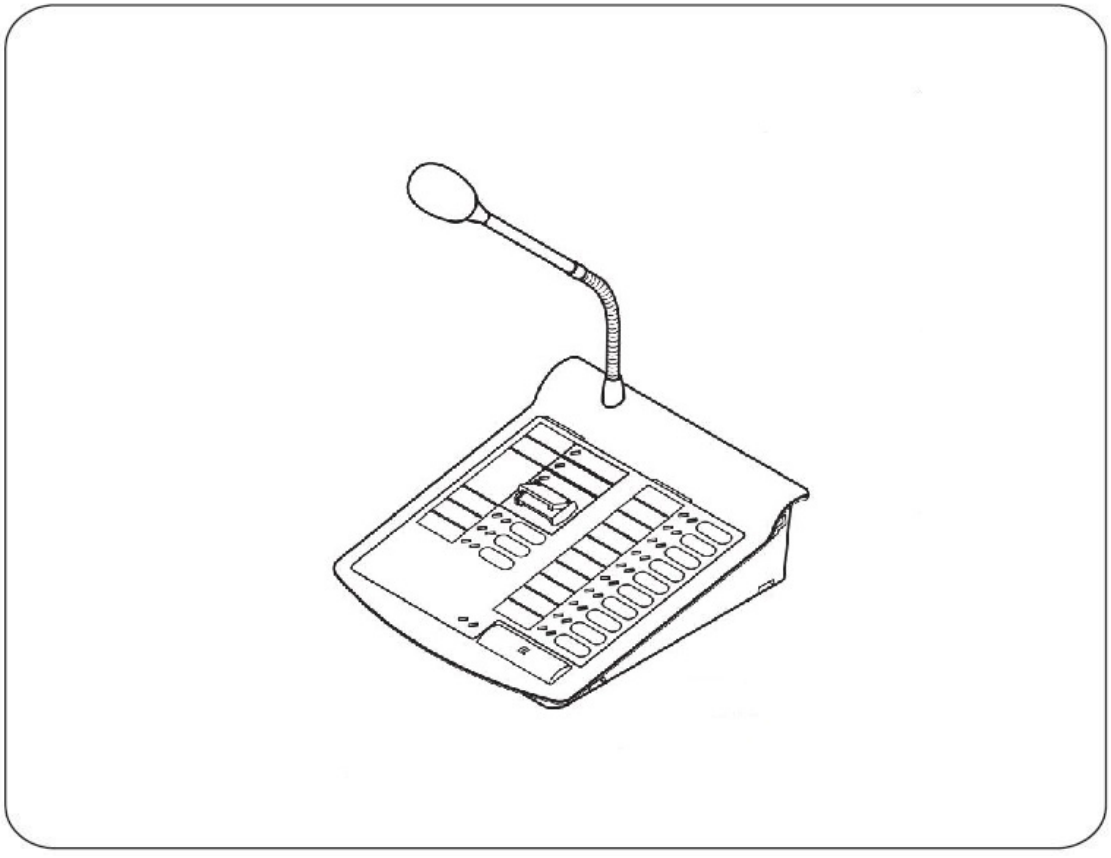
5.1.2 RM-110VX-EA Remote Microphone Extention

Model	RM-110VX-EA
Power Supply	DC24V/1A or PoE(IEEE 802.3at)
Consumption current	Less than 20mA (VX-100RM-EA DC power input)
Number of function keys	10
working temperature	0°C~+40°C
Working humidity	Less than 90%, no condensation.
Material	ABS resin, black
size	110(W)-76.5 (H)-215 (D)mm
Packing list	Extention cable 1 Connecting parts A * 2 Installation parts B * 1 Installation screw * 12

使用说明书

网络遥控话筒

VX-100RM-EA



承蒙您购买 TOA VX-1000 系列产品，深表感谢。
务请仔细阅读本手册的指导使用，以确保机器长期、无故障地运行。

TOA Corporation

第一章：安全注意事项

请遵守警告以及有关安全提示。

请在阅读完毕后，将本手册置于取用方便之处，以备日后参考之用。

警告警示

**该标志表示，设备打开操作潜在安全隐患，非专业人员误操作时可能导致严重伤害或死亡。**

**该标志用于提醒用户，本设备的随附资料中包含了重要的操作和维护(维修)说明。**

设置及安装机器时

（1）避免被水沾湿

请勿将机器暴露于雨天或可能被水或其它液体沾污的环境，否则可能导致火灾或触电。

（2）请勿使用指定外的电源电压

必须使用机器所标识的电压连接机器。

使用高于所标识的电压时，可能会导致火灾或触电。

（3）请勿刮伤电源线

请勿刮伤电源线，也请勿切割、扭绞电源线。

同时避免电源线靠近发热体，禁止在电源线上放置重物（包括机器本身），否则可能引发火灾或触电。

使用机器时

（1）一旦发生异常

在使用中，发现以下异常现象立即切断电源，请与经销商联系。如继续使用，将有可能引发火灾或造成触电。

·机器冒烟、或是发出怪味。

·机器内部被水或异物侵入。

·机器摔落，或机器外壳破损。

·电源线受损（线芯外露或断线等）。

·不能联网、没有声音等。

（2）请勿打开机器内部或改造机器。

请勿让异物侵入机器内部。

请勿让金属类物品或易燃性物体等异物丢入机器内部，否则将有可能引发火灾或造成触电。

（3）打雷时请勿触摸

为避免触电，雷电时请勿触摸机器、插头等。

（4）请勿将装有液体的容器或小的金属物体放置于机器上方

若不慎打翻容器，并让液体渗入机器时，将有可能引发火灾或造成触电。

（5）请勿打开机器内部或改造机器

机器内部包含高电压零件，一旦打开外盖，或改造机器时，将有可能引发火灾或是造成触电。一切有关维修和机器内部改造等事项，需由专业人员操作。

（6）维护保养时或长时间不使用时之注意事项

维护保养时，或机器 10 天或 10 天以上的时间不使用时，为确保安全，请切断电源开关，并将电源插头拔出。若未遵守本项规定，将有可能会造成触电或引发火灾。

第二章：产品说明

2.1 概述

VX-100RM-EA 是一款网络遥控话筒，具有发起普通分区广播、应急广播的功能，同时还可通过按键触发预设的广播任务。

(1) 通过 VX-1000 配置工具进行功能配置

用户可通过 VX-1000 配置工具配置网络遥控话筒的网络参数、扩展单元数量、自定义功能按键等，实现个性化的配置。

(2) 音频广播

网络遥控话筒可将外接线路输入或话筒杆的音频信号通过网络发送广播数据，各分区可实时接收和播放音频。网络遥控话筒可在线路输入和话筒杆之间切换音源。

(3) 工作状态指示灯

网络遥控话筒每个按键都配备相应指示灯，通过识别各个指示灯的颜色和闪烁情况可快速获取各个分区（或按键）的工作情况。

(4) 可连接多达 9 个网络遥控话筒扩展单元

1 个网络遥控话筒扩展单元可使网络遥控话筒的功能按键的数目增加 10 个，最多可有 100 个功能按键设置。

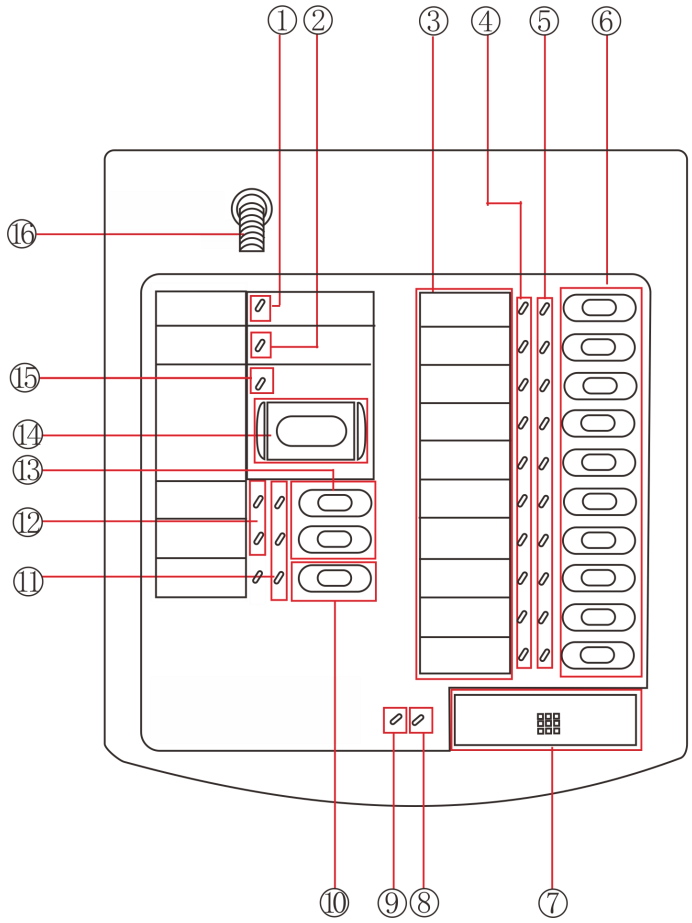
(5) 控制任务执行

当网络遥控话筒的功能按键在 VX-1000 配置工具中定义为任务按键时，按下相应的按键可控制对应的任务（例如广播任务、控制输出任务、监听任务）启动和停止。

2.2 接口说明

2.2.1 网络遥控话筒 VX-100RM-EA

正视图



① 电源灯：有电源输入，绿色灯常亮，无电源输入，不亮灯。

② 工作模式指示灯：处于有服务器模式时不亮，处于无服务器模式时橙色常亮。

③ 名称标牌区：在标牌上填入对应功能按键所指定的分区名称或功能，并将标牌插入该区域。

④ 状态灯：当功能按键定义为区域按键时，对应的状态灯在该区域处于广播状态时橙色灯常亮，闲置状态下，不亮灯，发起应急广播时，红色常亮。

⑤ 区域灯：

1) 当按键被定义为区域按键时，按下按键表示该按键所代表的区域被选择，该按键的区域灯绿色常亮；再次按下取消该区域，该区域灯熄灭。

2) 当按键被定义为任务按键时，该按键所绑定的任务被执行时，该按键的区域灯绿色常亮；再次按下停止该任务，该区域灯熄灭。

⑥ 功能按键：用户可自定义功能按键为区域按键或任务按键。（由用户在 VX-1000 配置工具“遥控话筒设定”中自定义）

1) 区域按键：每个按键代表一个区域，按下按键表示该按键的区域被选择，同时相应的区域灯被点亮（绿色常亮）。

2) 任务按键：按下按键可执行 VX-1000 配置工具中相对应的任务（播放预设广播、监听等）。当任务被执行时，相应的任务按键的区域灯被点亮（绿色常亮）；再次按下按键可停止任务，相

应的区域灯熄灭。

⑦ 广播键：选择分区后按下此键，可开始广播。

⑧ 声音呼叫灯：当发起广播时，声音呼叫灯会点亮（橙色），且它的亮度随音源声音大小变化，当无声音时熄灭。

⑨ 广播指示灯：当话筒处于广播中时，指示灯绿色常亮；广播停止后，指示灯熄灭。

⑩ 音源切换键：按下此键可在线路输入和话筒杆音源输入进行切换，默认为话筒杆输入，按下该按键切换至线路输入，仅当网络遥控话筒的音源为线路输入时，相应的输入音源状态灯才点亮（绿色常亮）。

⑪ 功能按键指示灯：指示当前输入音源、音量+/-键的工作状态。

⑫ 音量大小状态灯：当调整音量达到最大值时，该键的音量大小状态灯会点亮（红色常亮），此时如果按下音量减小键，音量增大键的音量大小状态灯会熄灭。同样当音量调整大最小值时，相应的音量大小状态灯点亮（红色常亮），此时如果增大音量，相应的音量大小状态灯会熄灭。

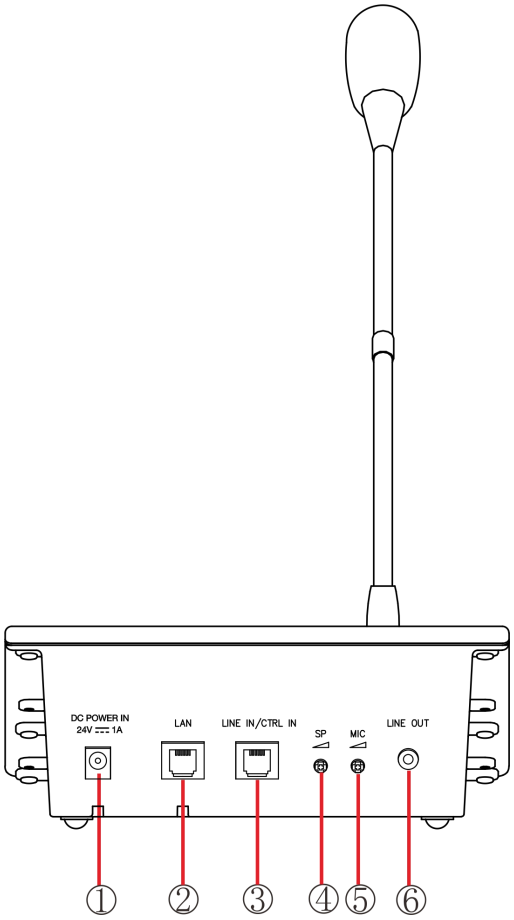
⑬ 音量+/-键：网络遥控话筒在广播过程中可按下这两个键来临时调整音量。

⑭ 应急广播键：按下此键，可临时提升话筒优先级至紧急级别，之后可选择分区并发起应急广播。

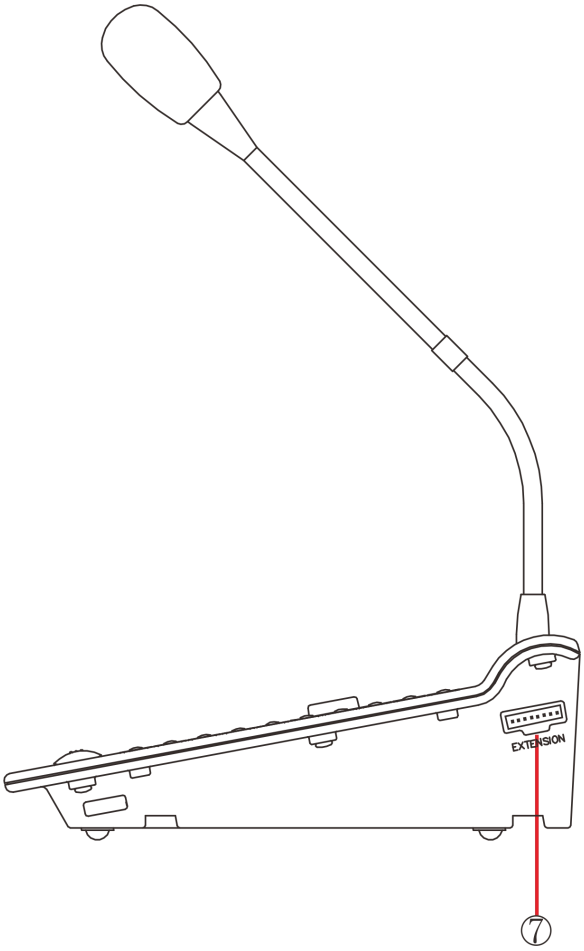
⑮ 应急广播指示灯：仅当按下“应急广播键”才被点亮（红色常亮），再次按下“应急广播键”，指示灯熄灭。

⑯ 话筒杆接口：连接话筒杆，采集现场声音。

后视图



侧视图



① 电源输入接口：连接 DC24V/1A 电源适配器。(本设备支持 POE 供电，如网络接口已接 POE 交换机，则无须再接电源)。

② 网络接口：接入网线，连接交换机。

③ 控制输入接口&线路输入接口

控制输入接口：未使用。

线路输入接口：接收其他设备的音频信号。

④ SP 音量旋钮：调节监听喇叭输出的音量大小。

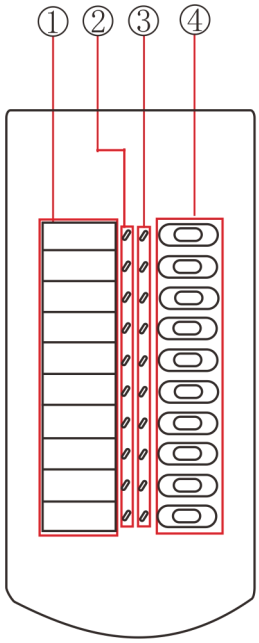
⑤ MIC 音量旋钮：调节话筒杆输入音量的大小。

⑥ 音频输出接口：未使用。

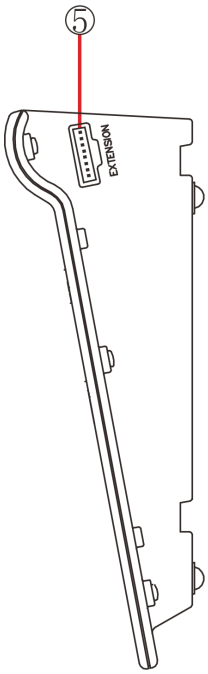
⑦ 扩展单元接口：用于连接网络遥控话筒扩展单元 RM-110VX-EA。

2.2.2 网络遥控话筒扩展单元 RM-110VX-EA

正面



侧面



①名称标牌区

②状态灯

③区域灯

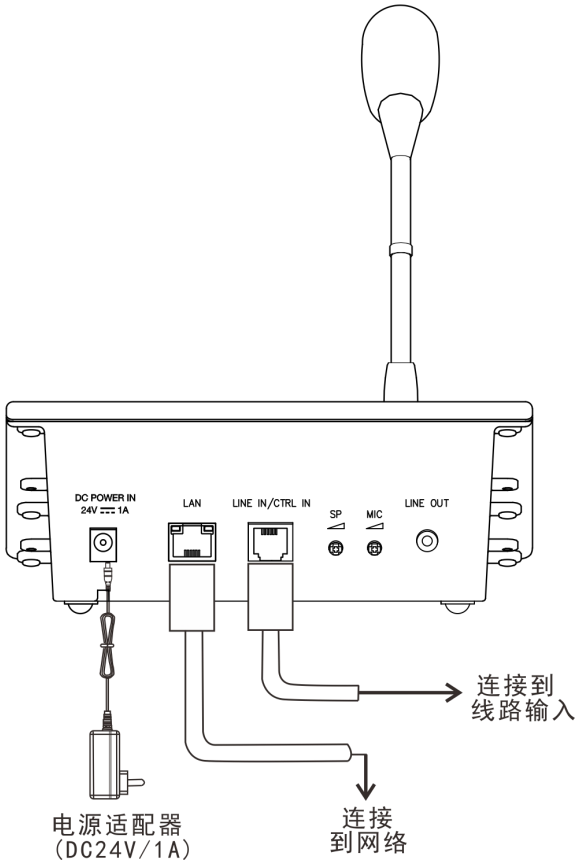
④功能按键

⑤扩展单元接口

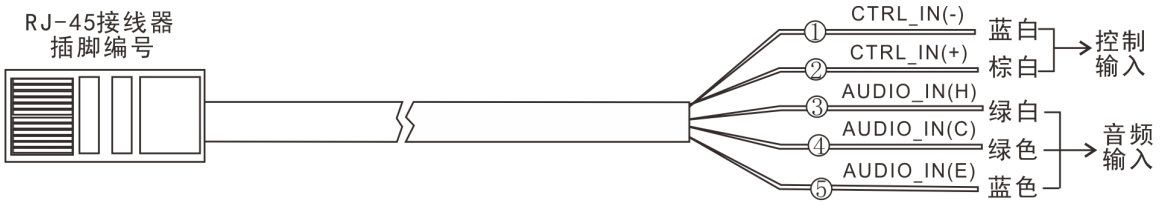
各个接口及功能定义请参考 2.2.1 网络遥控话筒 VX-100RM-EA。

第三章：接线

3.1 接线图



RJ-45 接线器的线序以及含义如下：



编号	颜色	线对	插脚指定	说明	备注
①	蓝白		CTRL_IN（-）	外部控制输入（-）	控制输入口
②	棕白		CTRL_IN（+）	外部控制输入（+）	未使用
③	绿白		AUDIO_IN(H)	输入音频信号（H）	
④	绿色		AUDIO_IN(C)	输入音频信号（C）	
⑤	蓝色		AUDIO_IN(E)	输入音频信号（E）	

备注：

1. 额定音频输入(平衡)：1Vrms；最大音频输入:2Vrms；音频输入阻抗：10kΩ。
2. 网线采用 568B 类线序，排线顺序从左到右依次为：橙白、橙、绿白、蓝、蓝白、绿、棕白、棕。

3.2 安装说明

当网络遥控话筒 VX-100RM-EA 加装网络遥控话筒扩展单元 RM-110VX-EA 时，使用 RM-110VX-EA 的延伸电缆和连接支架将它们连接起来。

[所需的配件]

所需的零件已包括在随机配件中。

连接支架 A……2

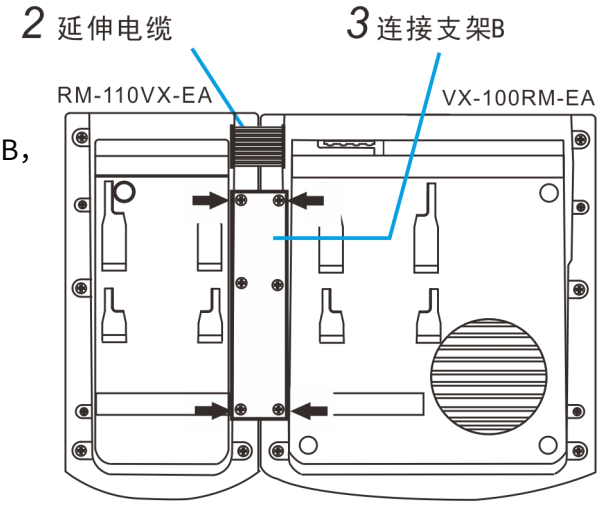
连接支架 B……1

螺钉 ……12

步骤 1.把 VX-100RM-EA 和 RM-110VX-EA 翻转，并把它们紧靠在一起。

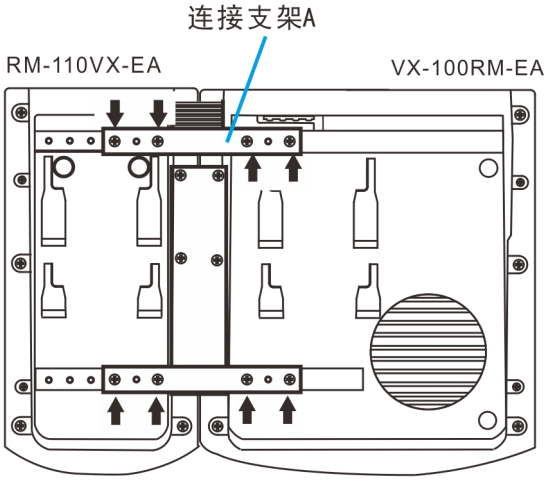
步骤 2.用延伸电缆把两个单元连接起来。

步骤 3.用提供的 4 颗螺钉（图中标有 ➡ ）和连接支架 B，把两个单元连成一体。



[底部]

步骤 4.用提供的 8 颗螺钉（图中标有 ➡ ）和 2 块连接支架 A，把两个单元牢固地固定在一起。



[底部]

备注：

- **连接支架 A 有两个备用螺孔，如果指定的螺钉的螺纹孔损坏，则使用它们来连接两个单元。**
- **如果发现两个单元之间连接不正确或松动，把所有的支架固定螺钉拧下来，把两个单元拆开，然后再用螺钉把它们连接起来。**

第四章：操作说明

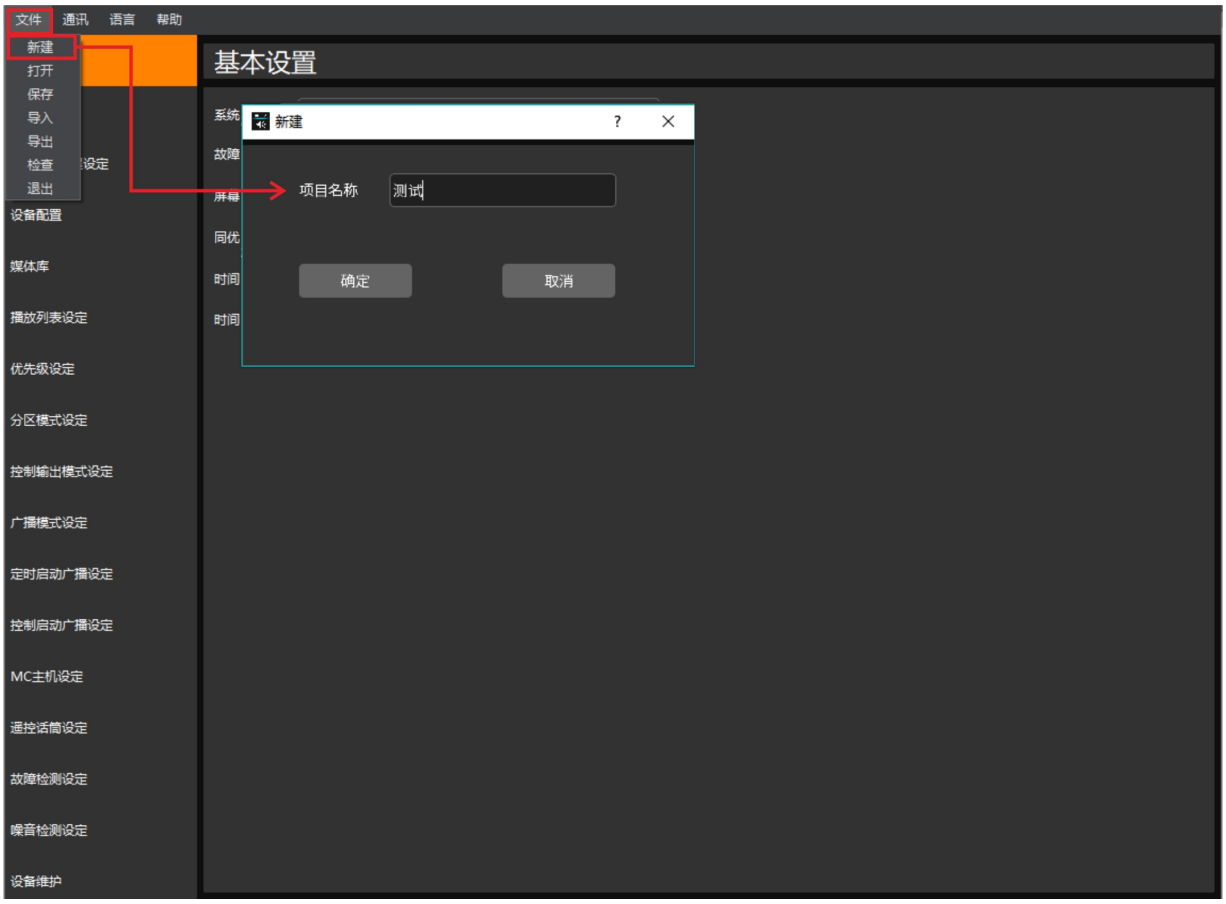
4.1 VX-1000 配置工具操作说明

4.1.1 软件安装

双击 VX-1000 安装程序，按“下一步”进行安装，安装完毕后选择“以管理员身份运行”软件。

4.1.2 基本参数设置

(1) **新建工程文件：**在软件主界面点击【文件】-【新建】，在弹出的对话框中输入项目名称，按【确定】。新建完成后，在“基本设置”界面设置是否启用故障检测功能、屏幕显示方式、广播优先级、时间同步主机等，设置完后会自动保存配置。



(2) **添加设备：**在“设备列表”界面进行设备的添加，同时可设置设备名称、IP 地址、子网掩码等参数，设置完后会自动保存配置。具体操作如下：

①添加设备：在“设备数量设置”处输入需要添加设备的数量，按【添加】按钮，设备将添加到设备列表。**（备注：添加设备时，设备类型必须与实际设备对应，MC 为矩阵控制器，RM 为遥控话筒，SP 为扬声器，例如：MC 处只能添加矩阵控制器，RM 处只能添加遥控话筒）。**

②批量设置设备参数：设备添加后，在“输入起始值”处输入设备的开始 IP 地址、子网掩码、默认网关、MAC 地址，完成后按【批量添加】按钮，即可批量设置设备参数。（注意：参数批量设置只适用于首次添加且还未设置参数的设备。批量设置设备参数，IP 地址将从设置的 IP 依次递增，子网掩码、默认网关、MAC 地址相同）

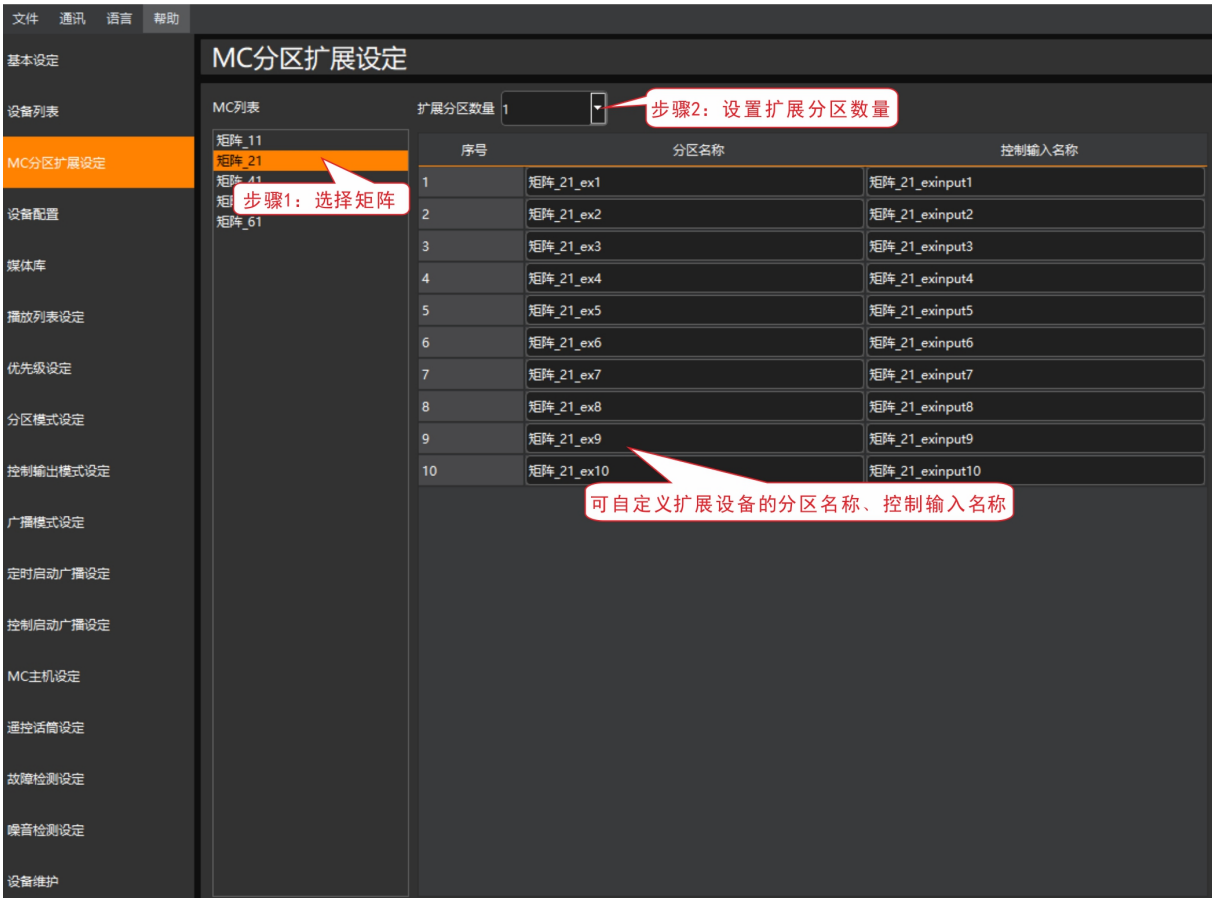
③设备修改：直接双击设备列表中对应设备的设备名称、IP 地址、子网掩码、默认网关或 MAC 地址，即可修改对应的内容。

④设备的删除：在设备列表处勾选设备 ID 前的勾选框选中相应设备，按右侧

按钮，设备将被删除。



(3) **矩阵扩展分区配置：**设置矩阵接入的分区扩展器 VX-1010ZE-EA 的数量，如未接入则无需设置。最多支持接入 16 台分区扩展器，设置完后会自动保存配置。



(4) **设备配置：**在设备配置界面，可以配置矩阵控制器、遥控话筒及扬声器的输入输出名称、音量大小等信息，设置完后会自动保存配置。

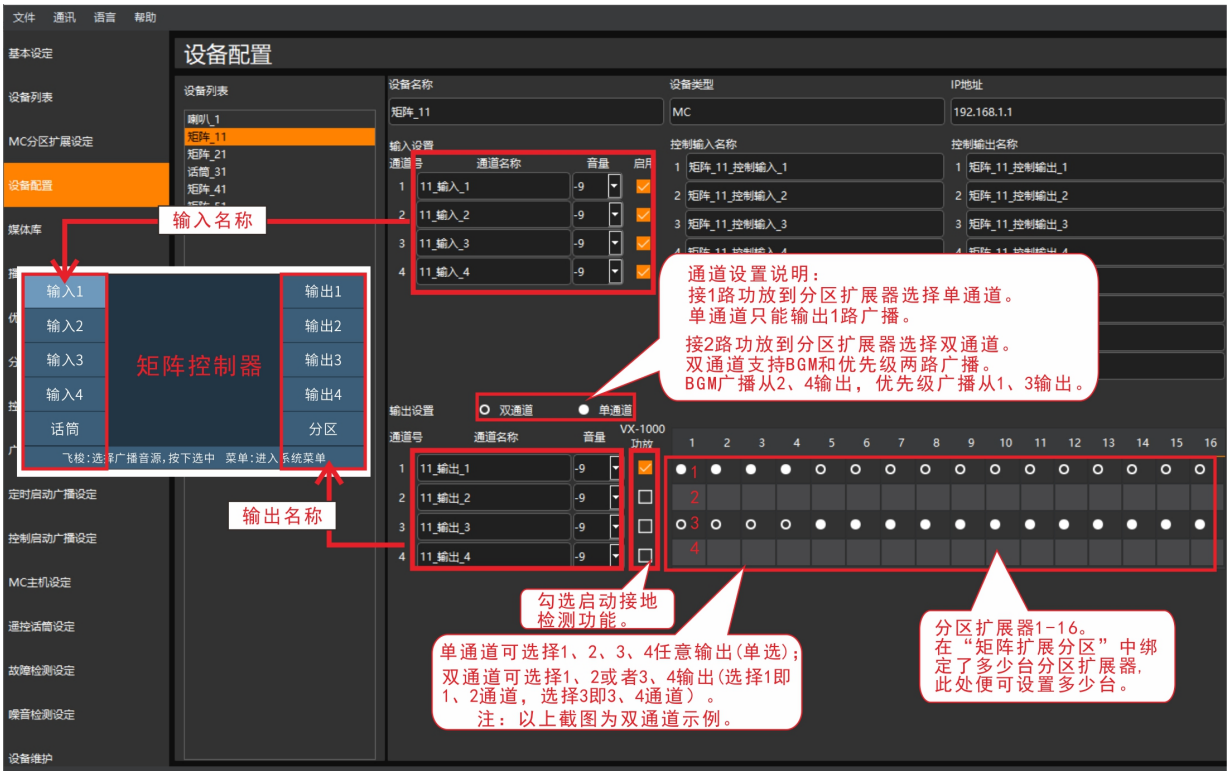
以下主要介绍矩阵控制器配置说明：

①在“设备列表”处选择对应的矩阵控制器，可自定义每台矩阵控制器的输入/输出通道名称、音量大小，是否启动接地检测功能及控制输入/输出通道的名称。**（注：输入通道 1-4 分别对应矩阵控制器的 4 路音源输入，输出通道 1-4 分别对应矩阵控制器的 4 路输出。使用 DA-X 型功放时不启用接地检测。）**

②如矩阵控制器接入了分区控扩展器 VX-1010ZE-EA，则需要在“输出设置”中设置通道类型。接入 1 路功放到分区扩展器，选择单通道，接 2 路功放到分区扩展器，则选择双通道。

- 单通道只支持输出 1 路广播，输出通道可选择 1、2、3、4 任意一个通道。
- 双通道支持 BGM 和优先级两路广播，输出通道可选择 1、2 或者 3、4（选择 1 即为 1、2 通道，

选择 3 即为 3、4 通道）。BGM 广播从 2、4 输出，优先级广播从 1、3 输出。

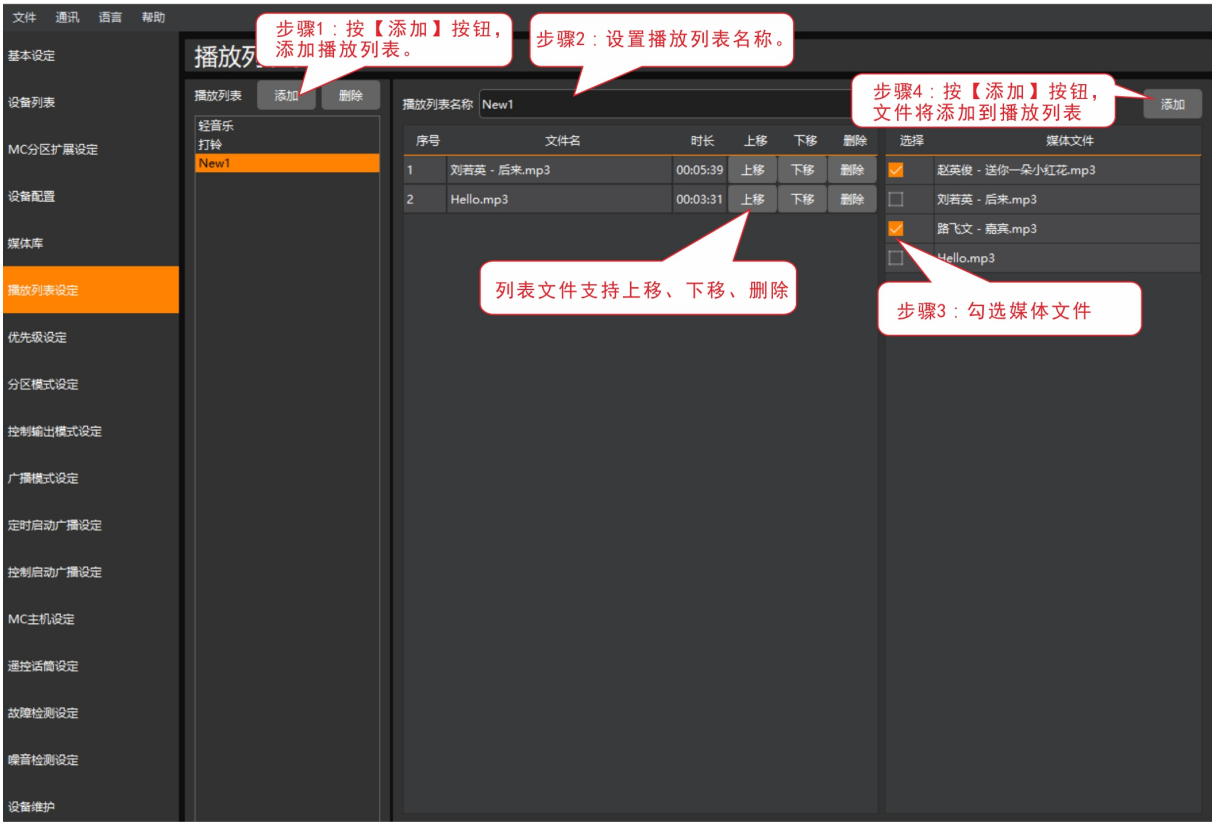


(5) **创建媒体库：**在“媒体库”界面，点击【添加】按钮，添加音频文件（做为广播音源使用），支持 WAV、MP3 格式，设置完后会自动保存配置。

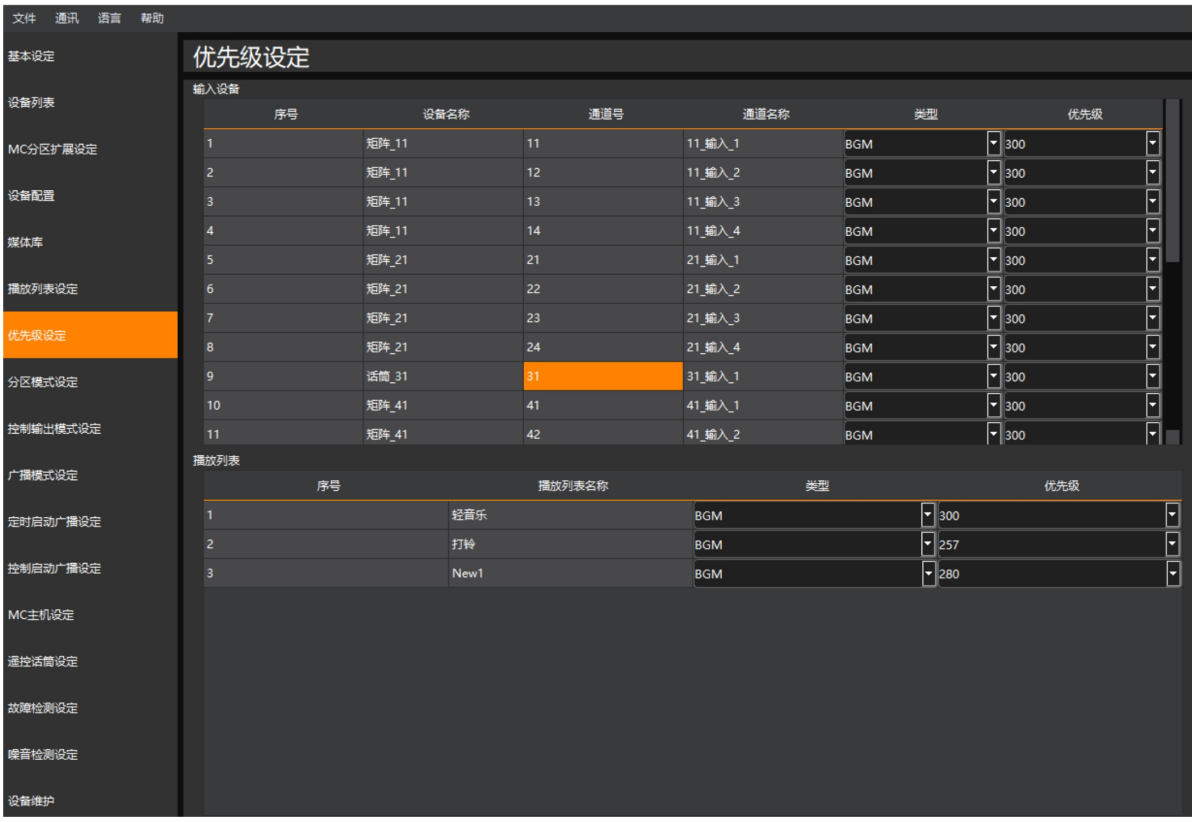
删除媒体库文件：勾选文件名称前的勾选框选中具体文件，按右上角删除按钮，文件将被删除。



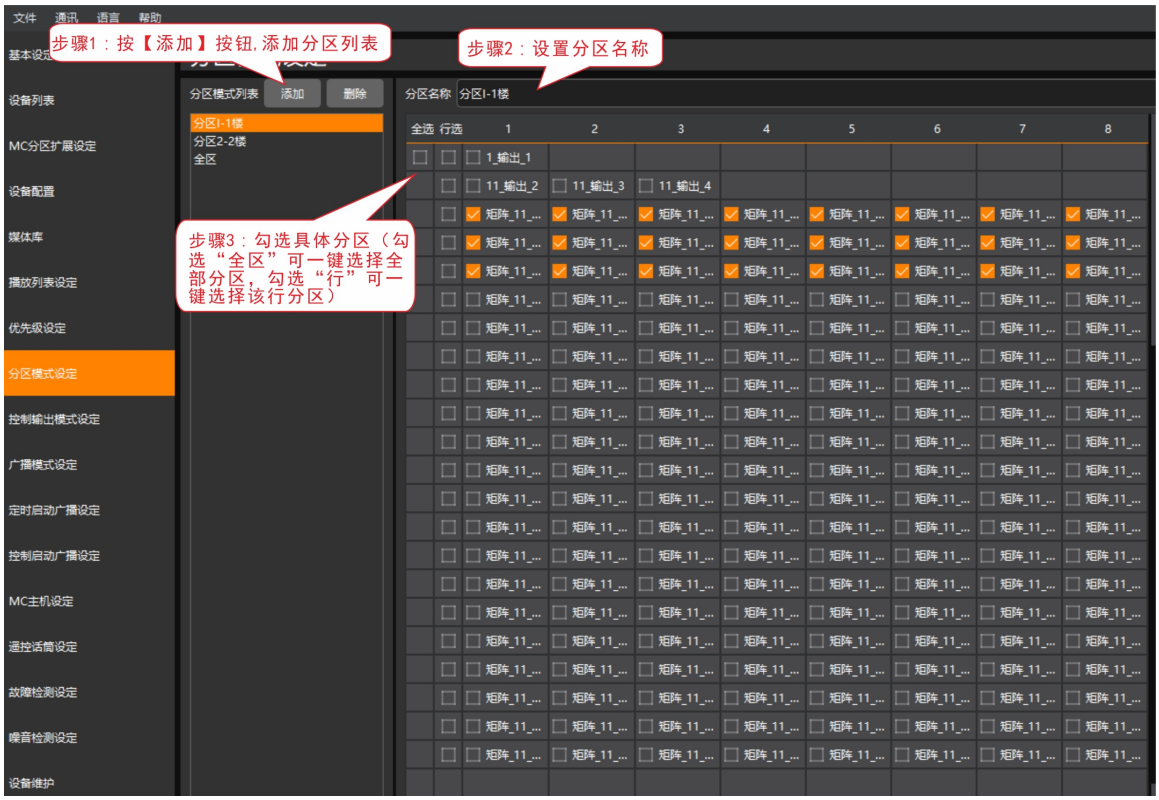
(6) **设置播放列表：**设置广播的音频文件播放列表（需提前在“媒体库”中添加音频文件），设置完后会自动保存配置。



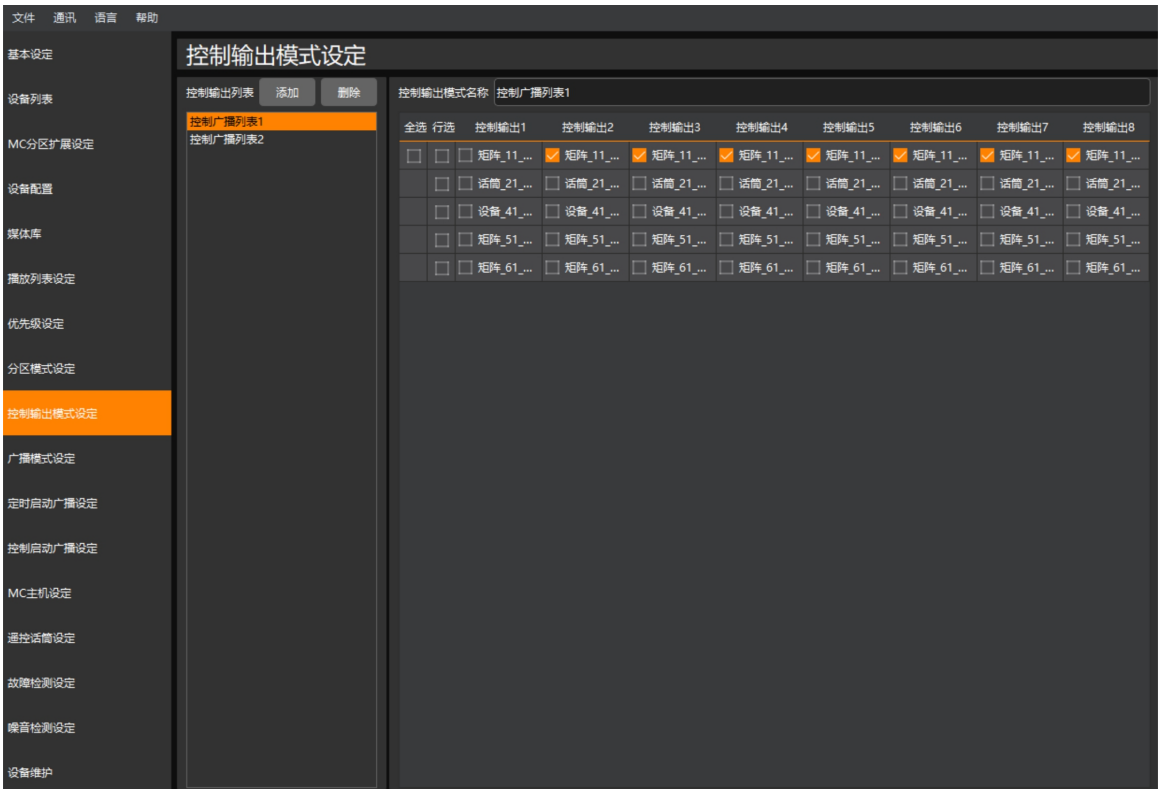
(7) **设置音源优先级：**设置设备输入通道及播放列表的音源类型和优先级，设置完后会自动保存配置。



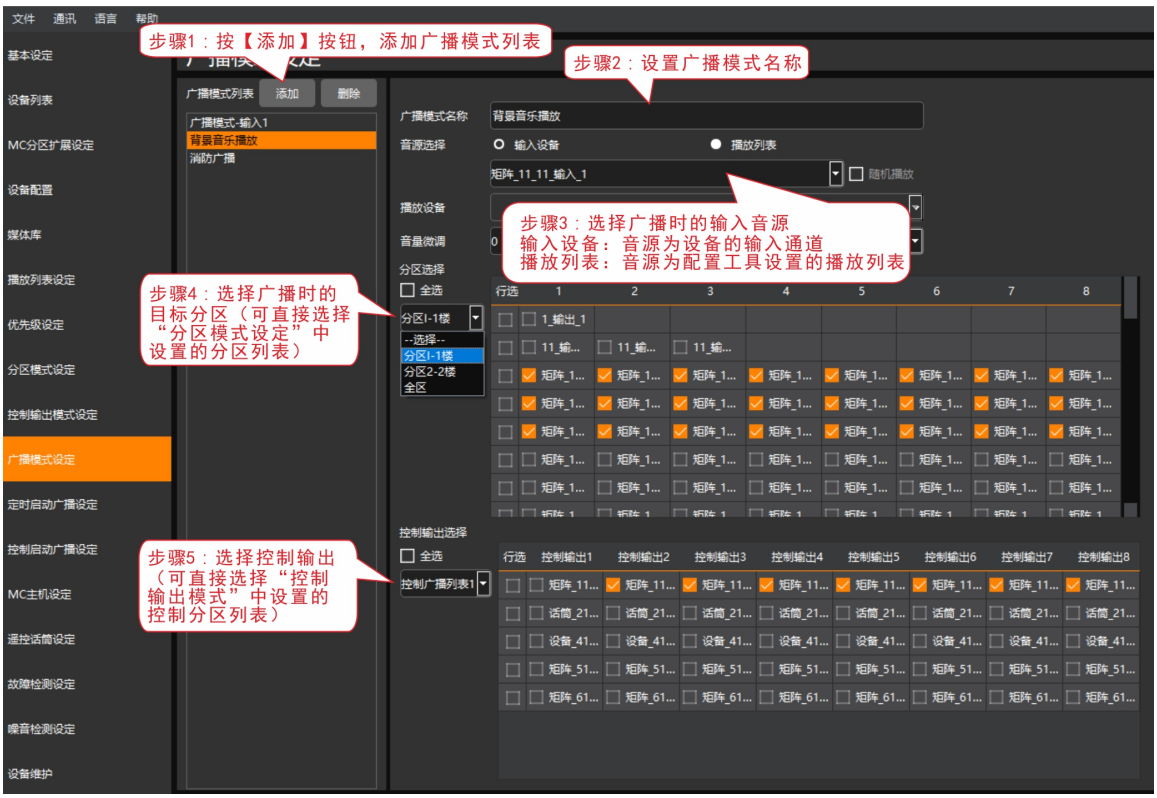
(8) **设置分区模式：**自定义分区模式，作为广播时的分区选择。设置完后会自动保存配置。



(9) **设置控制输出模式：**自定义控制输出模式，作为设置广播模式时，控制输出的模式选择。设置完后会自动保存配置。



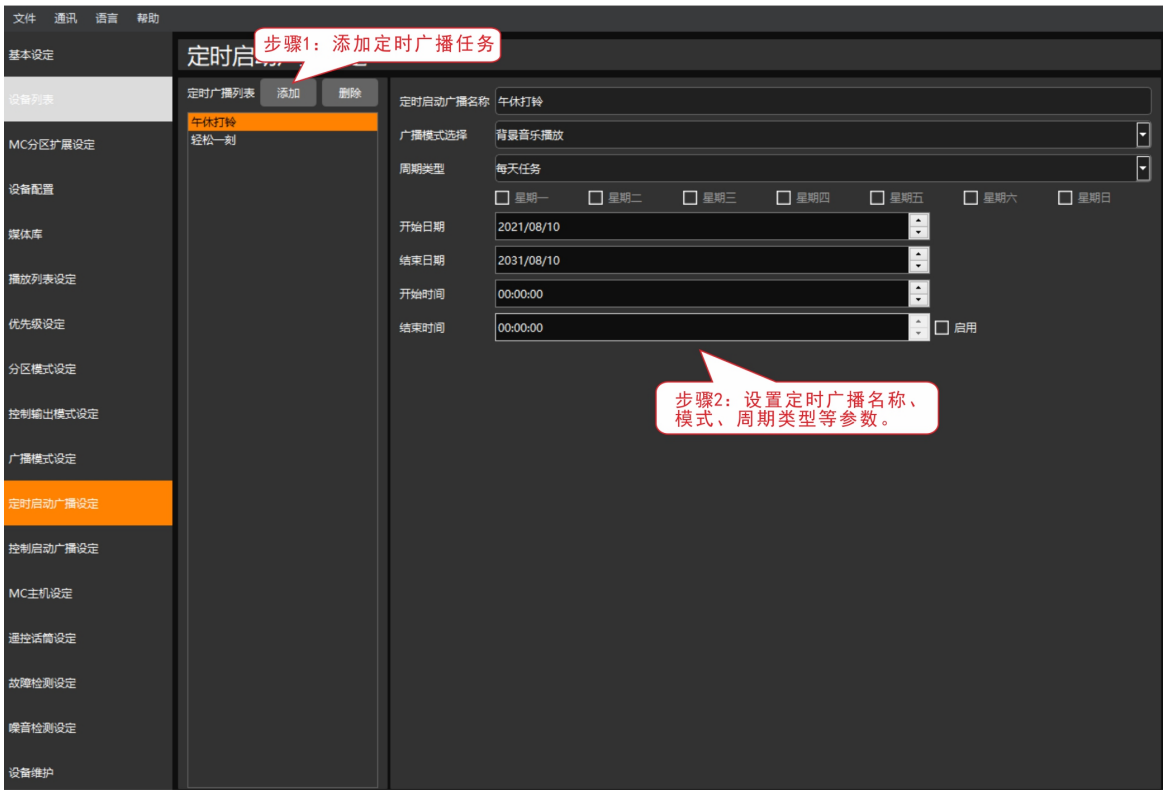
(10) **设置广播模式：**设置广播模式，用于设置定时广播、控制广播、按键广播时的模式选择，设置完后会自动保存配置。



4.1.3 设定定时启动广播

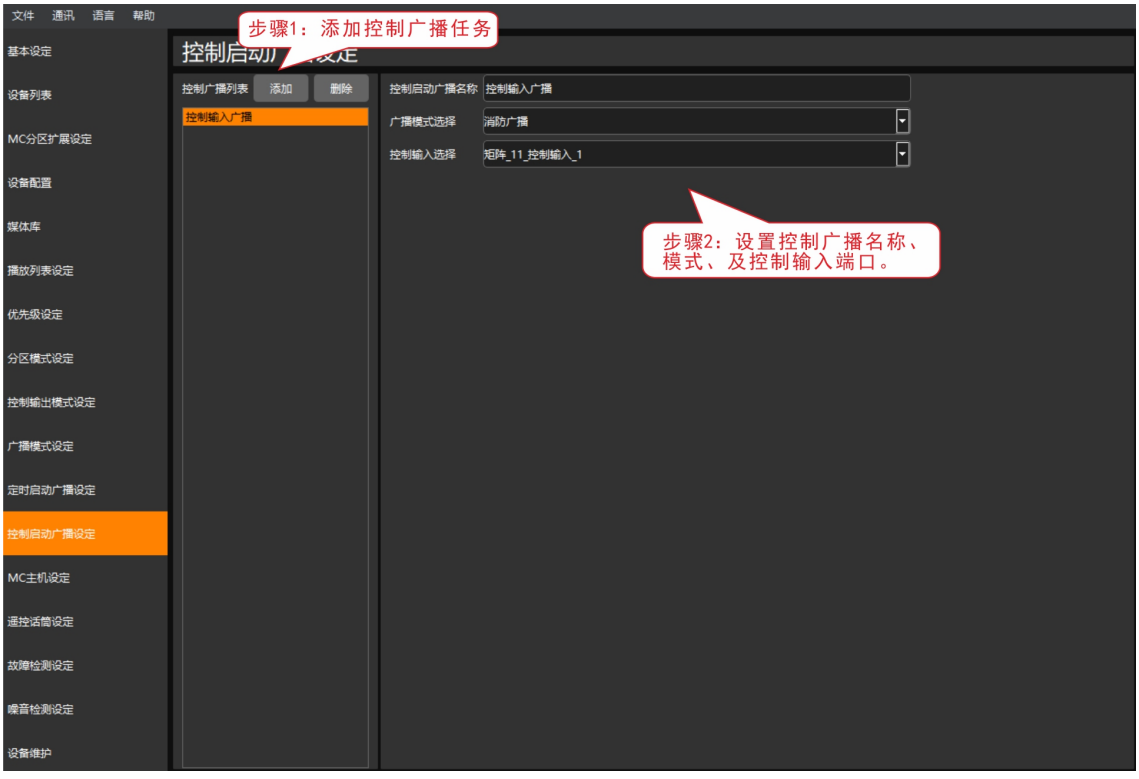
在“定时启动广播设置”界面，设置任务名称、广播模式、周期类型、起始时间等，设置完后会自动

保存配置。设备到了指定时间，将启动指定的广播模式。



4.1.4 设定控制启动广播

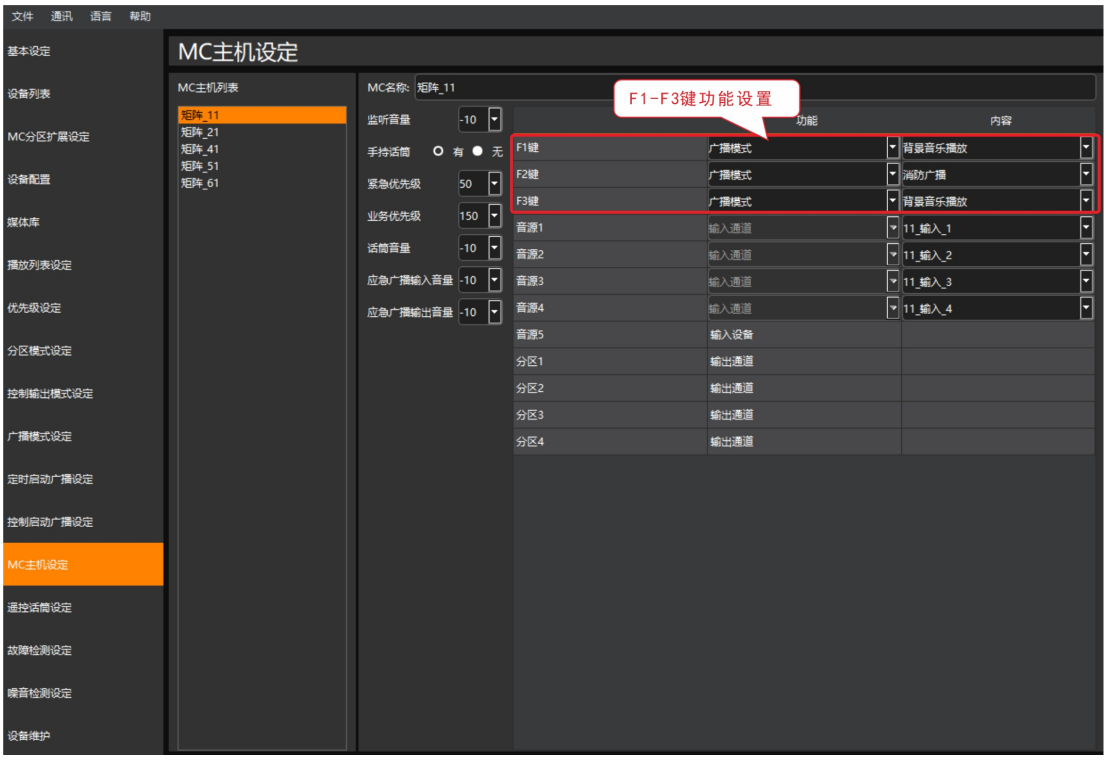
在“控制启动广播设定”界面，设置任务名称、广播模式、控制输入的端口号，设置完后会自动保存配置。当该设备的控制输入被触发后，将启动指定的广播模式。



4.1.5 设定按键启动广播

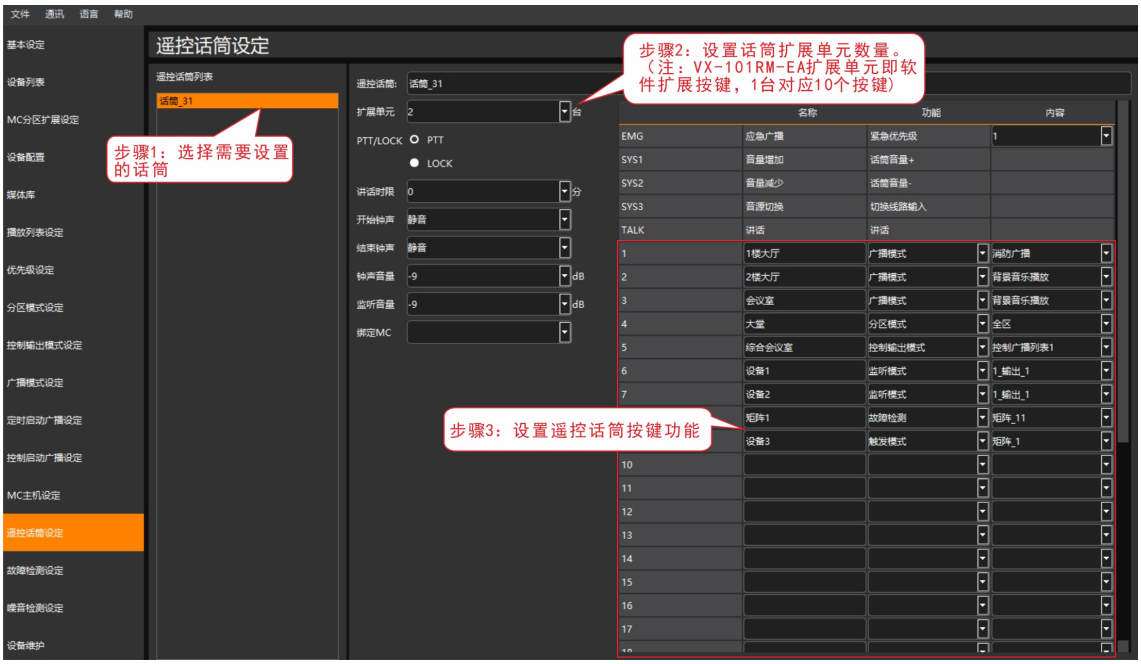
在“MC 主机设定”界面，可设置矩阵控制器【预设 1】-【预设 3】键对应的广播模式，设置完后会自动保存配置。按下设备【预设 1】-【预设 3】键，将启动指定的广播模式。

注：在“MC 主机设定”界面，还可设置矩阵的监听音量大小、是否有手持话筒、广播优先级等参数。请根据实际使用环境进行设置。



4.1.6 设定遥控话筒功能

在“遥控话筒设定”界面，可对遥控话筒进行相关配置。支持 VX-101RM-EA 和 VX-100RM-EA 两种型号遥控话筒。



遥控话筒设置详细说明：

基本参数设置	扩展单元设置	VX-100RM-EA 配置的是遥控话筒所连接的扩展单元数量，最多支持连接 9 个扩展单元。 VX-101RM-EA 配置的是软件扩展按键，对应到 VX-101RM-EA 话筒界面。每个扩展单元对应 10 个任务按键，最多可配置 100 个任务按键。
	PTT/LOCK 模式	PTT 模式：广播时，先按下选区键，再持续按住广播讲话键，才可发起喊话。松开讲话键，结束广播。 LOCK 模式：广播时，先按下选区键，再按下广播讲话键，可发起喊话。再次按下讲话键，结束广播。 **注：此功能仅适用于 VX-100RM-EA，VX-101RM-EA 不支持此设置。**
	讲话时限	设置广播喊话时长，到时间后，设备会自动结束广播。 设置时限为 0 时，则不限制说话时长，以手动结束广播为准。
	开始钟声、结束钟声	设置设备开始广播和结束广播提示音，设置为静音时无提示音；

	钟声音量	开始广播和结束广播提示音的音量配置。
	监听音量	话筒监听扬声器的输出音量配置。
	绑定矩阵	选择遥控话筒绑定的矩阵。
	应急广播键优先级设置	设置遥控话筒应急广播键的优先级，优先级范围为 1~128；
任务按键功能设置（VX-100RM-EA）	广播模式	选择广播模式，遥控话筒对应按键的功能为执行 VX-1000 广播模式下设定的预设广播。 设置广播模式后，按下对应按键，执行该广播模式；再次按下按键，结束广播模式。
	分区模式	选择分区模式，遥控话筒对应按键的功能为 VX-1000 分区模式设定的分区列表。 设置分区模式后，按下任务按键即为选择分区，再按下广播讲话键，可发起话筒分区广播。
	控制输出模式	选择控制输出模式，遥控话筒对应按键的功能为 VX-1000 控制输出模式界面设定的控制输出列表。 设置控制输出模式后，按下对应按键，相应控制输出口闭合，再次按下按键，对应控制输出口断开。
	监听模式	选择监听模式，遥控话筒对应按键的功能为 VX-1000 设置矩阵输出列表。 配置监听对象后，按下对应按键，话筒监听扬声器播放对应分区的音频，再次按下按键，结束监听输出。
	触发模式	选择触发模式，遥控话筒对应按键的功能为 VX-1000 设置中选择对应矩阵设备（需在 SIP 服务器上配置按键触发任务）。 按下对应按键，将触发话筒发起广播。

任务按键功能设置（VX-101RM-EA）	广播模式	选择广播模式，遥控话筒【预设任务】界面会显示 VX-1000 设定的预设模式。按下对应按键，执行该广播模式；再次按下按键，结束广播模式。
	分区模式	选择分区模式，遥控话筒【分区选择】界面会显示 VX-1000 设定的分区列表。在分区列表按下对应按键，再按下开始广播键，可发起话筒分区广播。
	控制输出模式	选择控制输出模式，遥控话筒【预设任务】界面会显示 VX-1000 配置的控制输出列表。按下对应按键，相应控制输出口闭合，再次按下按键，对应控制输出口断开。
	监听模式	选择监听模式，遥控话筒【监听】界面会显示 VX-1000 配置的矩阵输出列表。配置监听对象后，按下对应按键，话筒监听扬声器播放对应分区的音频，再次按下按键，结束监听输出。
	触发模式	选择触发模式，遥控话筒【预设任务】界面会显示 VX-1000 配置的矩阵设备（需首先在 SIP 服务器上配置按键触发任务）。 按下对应按键，将触发话筒发起广播。
	故障检测	选择故障检测，遥控话筒【故障信息】界面会显示 VX-1000 配置的功放列表。话筒检测到功放故障时，会作相应提示。

4.1.7 故障检测设置

在“故障检测设定”界面，可设置矩阵控制器故障检测的启用或禁用，勾选代表启用该故障检测，不勾选则为禁用，设置完后会自动保存配置。

启用对应的故障检测，当矩阵控制器检测到具体故障信息，会有相应提示。



4.1.8 噪声检测设置

在“噪声检测设定”界面，可设置噪声检测 1-4 回路的启用或禁用，勾选代表启用，不勾选则为禁用，设置完后会自动保存配置。

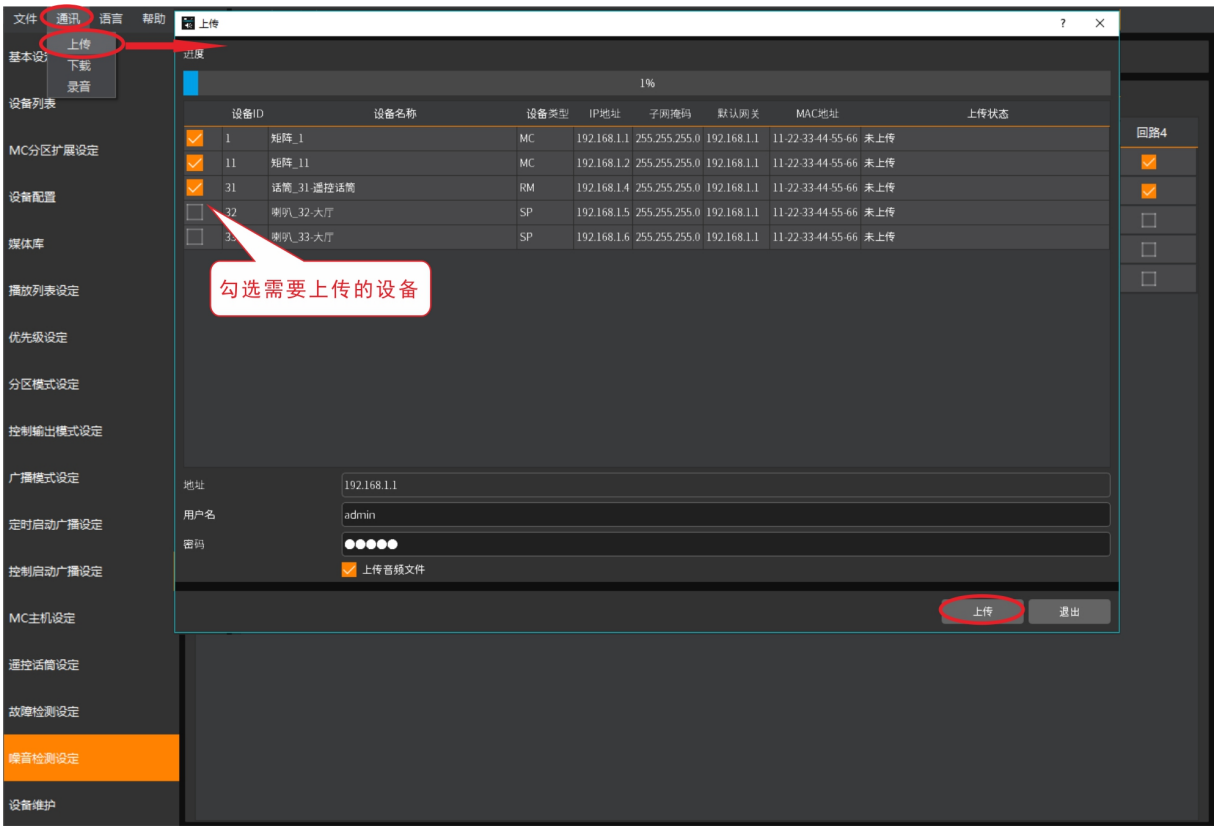
启用噪声检测，矩阵能自动检测周边的环境噪声音量，对应通道的噪声检测值会根据周边环境噪声变化。且广播音量会在原本音量的基础上，随着噪声音量的增加而增加（增加范围为 1-15dB）。例如，当噪声检测仪检测到的噪声每增加 1dB，对应的广播声音也会跟着增加 1dB；当噪声检测仪检测到的噪声减小 1dB，对应的广播声音也会减小 1dB，直到噪声为 0 时，广播音量恢复原本音量。



4.1.9 上传配置

参数修改保存后，必须点击【通讯】-【上传】，在弹出的对话框中勾选相关设备，然后点击“上传”按钮，将配置好的数据文件上传至指定设备，方可生效。

备注：如相关设置未按要求配置好，将无法上传，屏幕会弹窗提示上传失败原因，请根据提示内容修改对应选项，保存后再重新进行上传。

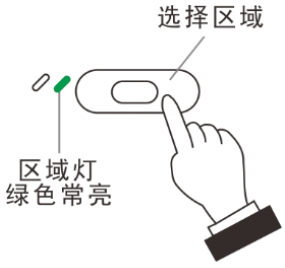


4.2 分区广播

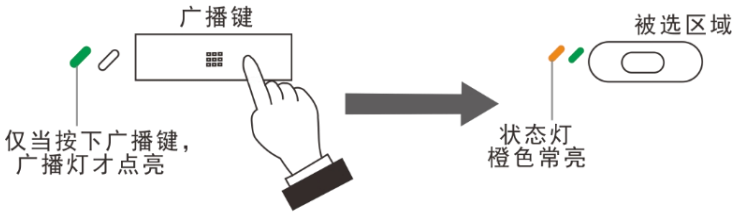
前提条件：已在 VX-1000 配置工具进行设备的相关设置，其中遥控话筒按键功能配置为“分区模式”，并上传至对应设备。

4.2.1 普通分区广播

步骤 1.手动按下区域按键选择分区，相应按键的区域灯绿色常亮。

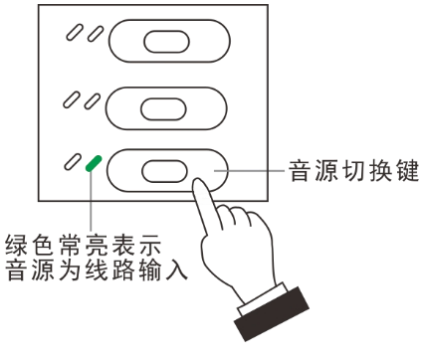


步骤 2.按下广播键开始广播，发起广播成功后，相关联区域的状态灯橙色常亮。



步骤 3.向指定分区喊话（话筒杆输入）或播放外部音源（线路输入）。

网络遥控话筒默认为话筒杆输入，按下音源切换键可切换至线路输入，再次按下该键则切回话筒杆输入。

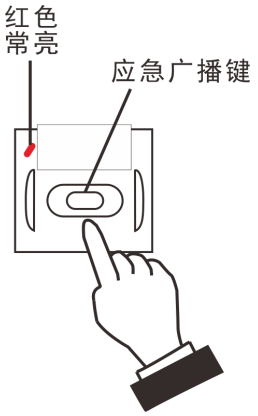


步骤 4.再次按下广播键结束广播，广播灯及相关联的状态灯和区域灯均熄灭。

注：如遥控话筒广播模式设置的是 PTT 模式，话筒杆发起喊话时需一直按住广播键，松开广播键结束喊话。

4.2.2 应急广播

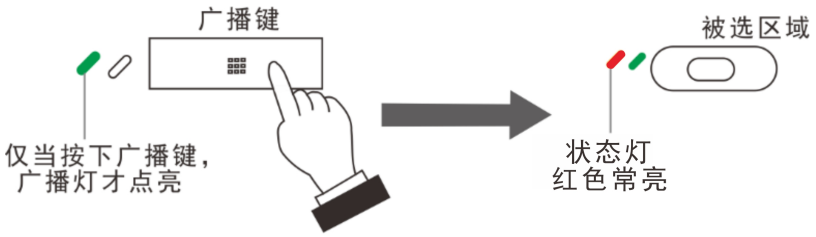
步骤 1.按下话筒上的应急广播键，应急广播按键灯红色常亮。



步骤 2.按下区域按键选择分区，相应按键的区域灯绿色常亮。



步骤 3.按下广播键开始广播，发起广播成功后，相关联区域的状态灯红色常亮，广播灯绿色常亮。



步骤 4.向指定分区喊话（话筒杆输入）或播放外部音源（线路输入）。

步骤 5.再次按下广播键结束广播，广播灯及相关联的状态灯和区域灯均熄灭。

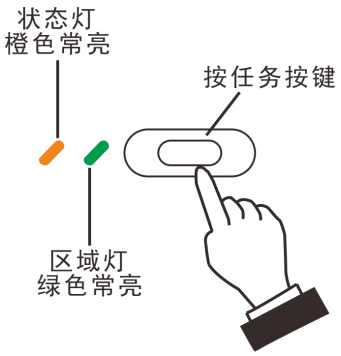
注：如遥控话筒广播模式设置的是 PTT 模式，话筒杆发起喊话时需一直按住广播键，松开广播键结束喊话。

4.3 预设广播

前提条件：已在 VX-1000 配置工具进行设备的相关设置，其中遥控话筒按键功能配置为“广播模式”，并上传至对应设备。

4.3.1 预设 BGM 广播

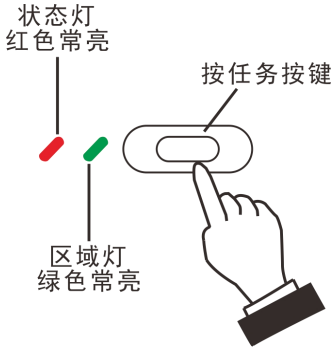
步骤 1.按下已配置的任务按键，对应按键的区域灯绿色常亮，广播状态灯橙色常亮，对应分区喇叭开始播放预设广播。



步骤 2.再次按下配置的任务按键，停止广播。对应按键灯和广播状态灯熄灭。

4.3.2 预设应急广播

步骤 1.按下已配置的任务按键，对应按键的区域灯绿色常亮，广播状态灯红色常亮，对应分区喇叭开始播放预设广播。

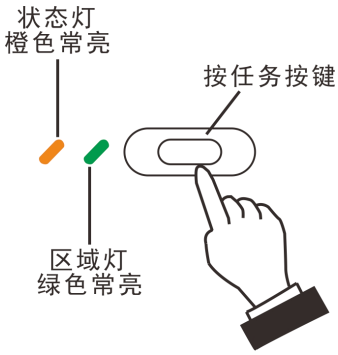


步骤 2.再次按下配置的任务按键，停止广播。对应按键灯和广播状态灯熄灭。

4.4 触发控制输出任务

前提条件：已在 VX-1000 配置工具进行设备的相关设置，其中遥控话筒按键功能配置为“控制输出模式”，并上传至对应设备。

步骤 1.按下已配置的任务按键，对应按键的区域灯绿色常亮，广播状态灯橙色常亮，对应控制输出口闭合，执行指定任务。



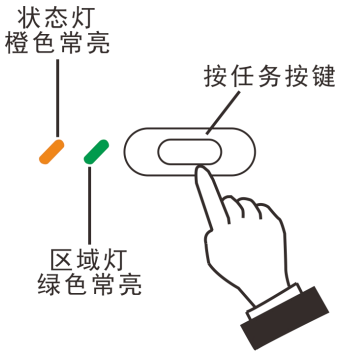
步骤 2.再次按下配置的任务按键，对应控制输出口断开。同时按键灯和广播状态灯熄灭。

4.5 监听任务

前提条件：VX-1000 配置工具已进行相关设置，其中遥控话筒按键功能配置为“监听模式”，并上传

至对应设备。

步骤 1.按下已配置的任务按键，对应按键的区域灯绿色常亮，广播状态灯橙色常亮，本地扬声器输出对应输出通道的声音。



步骤 2.再次按下配置的任务按键，监听结束。对应按键灯和广播状态灯熄灭。

第五章：附录

5.1 规格

5.1.1 VX-100RM-EA 网络遥控话筒

型号	VX-100RM-EA
电源	DC24V/1A 或 PoE(IEEE 802.3at)
消耗电流	小于 200mA（单台 VX-100RM-EA） 小于 500mA（连接 9 台 RM-110VX-EA 时）
音频输入	平衡，1Vrms(Max:2Vrms)，输入阻抗 10KΩ
监听喇叭	1W
频率响应	20～20,000Hz
音量控制	话筒音量控制、监听喇叭音量控制
功能键数目	单机 10，最多 100（连接 9 台 RM-110VX-EA 时）
网络接口	RJ45 接口，10BASE-T/100BASE-TX，自动判定
网络协议	TCP/IP、UDP、HTTP、ARP、RTP、ICMP、IGMP、SIP
工作温度	0°C~+40°C
工作湿度	≤90%，不结露
材料	ABS 树脂，黑色
尺寸	190（W）×76.5（H）×215（D）mm（不含鹅颈话筒）

5.1.2 RM-110VX-EA 网络遥控话筒扩展单元

型号	RM-110VX-EA
电源	DC24V/1A 或 PoE(IEEE 802.3at)
消耗电流	小于 20mA（VX-100RM-EA DC 电源输入）
功能键数目	10
工作温度	0°C~+40°C
工作湿度	≤90%，不结露
材料	ABS 树脂，黑色
尺寸	110（W）×76.5（H）×215（D）mm
附件	扩充缆线×1 连结用安装零件 A×2 安装零件 B×1 安装螺丝×12