AUDIOCENTER

Dynamic Audio Solutions

User's Manual

Artist T88D/T88

Audio Matrix



Revision A3-2023-10

Important Precautions



This symbol is used to alert the operator to follow important operating and precautions detailed in documentation.



This symbol is used to warn operators that uninsulated“dangerous voltages” are present within the equipment that may pose a risk of electric shock.

1.Save the carton and packing materials even if the equipment is arrived in good condition. Should you ever need to ship the device (back to the factory), you can only use the original manufacturer’s packaging.

2.Read all documentation before operating your equipment. Retain all documentation for future reference.

3.Follow all instructions printed on unit chassis for proper operation.

4.Do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.

5.Make sure power outlets conform to the power requirements listed on the back of the unit.

6.Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.

7.Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.

8.Mains voltage must be correct and same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.

9.Have gain controls on processors turned down during power-up to prevent amplifier or speaker damage if there are high signal levels at the inputs.

10.Power down and disconnect units from mains voltage beforemaking connections.

11.Never hold a power switch in the “ON” position if it won’t staythere itself.

12.Do not use the unit near stoves,heat registers,radiators,or other heat producing devices.

13.Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, weather sheet, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically “blown free” of foreign matter.

14.Do not remove the cover. Removing the cover will expose you to potentially dangerous voltages. There are no user serviceable parts inside.

15.Do not connect the inputs / outputs of processor or consoles to any other voltage source, such as a battery, mainssource, or power supply, regardless of whether the processor or console is turned on or off.

16.Non-use periods: The power cord of equipment should beunplugged from the outlet when left unused for a long period of time.

17.Service information: Equipment should be serviced by qualified service personnel when:

A.The power supply cord or the plug has been damaged;

B.Objects have fallen,or liquid has been spilled into the equipment;

C.The equipment has been exposed to rain;

D.The equipment does not appear to operate normally,or exhibits amarked change in performance;

E.The equipment has been dropped,or the enclosure damaged.

18.To obtain service, contact your nearest AUDIOCENTER service centre, distributor or dealer.

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Introduction

Congratulations on your ownership of a new Artist Audio Matrix , and thank you for your confidence in AUDIOCENTER products. You are among the growing number of audio professionals who have made AUDIOCENTER one of the world's leading suppliers of professional and commercial/industrial audio systems.

For your safety, please read the Important Precautions section before installing and operating the Audio Matrix, and please take some time to read this manual so that you can make full use of the Audio Matrix.

In order to maintain strict quality assurance standards, all Artist Audio Matrix are built in AUDIOCENTER's state-of-the-art manufacturing faculty. Internal components are the finest available,and key sub assemblies are pre-tested before final assembly. Finally, each power Audio Matrix is "burned in" and thoroughly tested (using audio precision test equipment) before shipping. You can depend on consistent and stable performance even when your Artist Audio Matrix is subject to punishing extremes in the most demanding fixed or mobile sound reinforcement applications.

Artist T88D/T88 is a powerful8-in-8-out audio matrix that supports 8 analog audio inputs and 8 analog audio output. Artist T88D also supports 4 * 4 Dante network audio input and output. Diverse I/O options provide you with the flexibility required to integrate into the system. It can meet the control and audio processing for various places.

Through the computer software BrainCore Net of the Windows system, all devices in the local area can be controlled remotely, and all the parameters of the Audio Matrix can be effectively controlled. Through the joint debugging function, multiple devices of the same model can be debugged. Part of the function control can also be achieved through the wall controller and the mobile APP (Android). With the scene preset function, users can directly use the wall controller or intelligent central control to achieve scene calling, volume adjustment and other functions.

- 24 bit AD/DA conversion, 96KHz sampling rate, 10Hz ~ 28KHz bandwidth, over 116dB dynamic range
- 8 analog audio inputs, 8 analog audio outputs, Artist T88D supports 4 * 4 Dante network audio input and output
- With both microphone input and line input, with 48V phantom power
- Built-in camera tracking function to control the camera by sound
- GPIO programmable connector
- In built with functions of AFC, auto mixing, matrix mixing, equalizer, crossover, limiter by DSP to deliver clear sound dynamic
- Work Seamlessly with Artist speakers and power amplifiers, providing a variety of classical speaker presets to quickly establish a complete sound system
- USB drive-free automatic connection software, open RS-232, RS-485 protocol to achieve third-party control, support TCP/IP remote control
- All functions can be configured through Windows system, supporting networking, joint debugging and remote control of multiple devices



Wall controller


Wall controller


Laptop computer

Unpacking

Please inspect the audio matrix carefully immediately after unpacking. If you find any damage, notify your supplier /dealer immediately. Only the shipper may file a damage claim with the carrier for damage incurred during shipping. Be sure to save the carton and all packing materials for the carrier's inspection. If you ever need to ship the unit back to AUDIOCENTER or an authorized service center, you should use only the original manufacturer's packaging.

Installation

Artist T88D/T88 is one-rack-space high. Four front-panel mounting holes are provided on each audio matrix. All mount in standard 19-inch racks.

Front Panel

Artist T88D

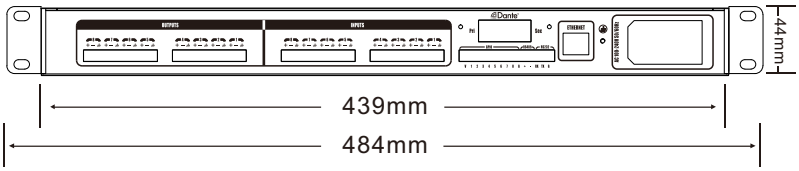


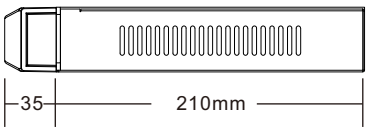
Artist T88



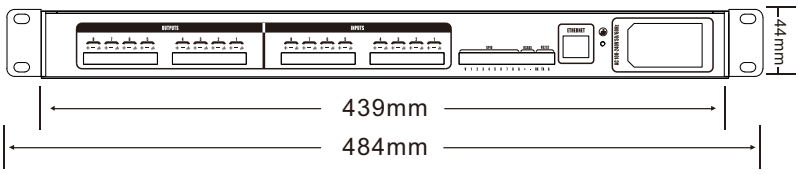
Rear & Side Panel

Artist T88D

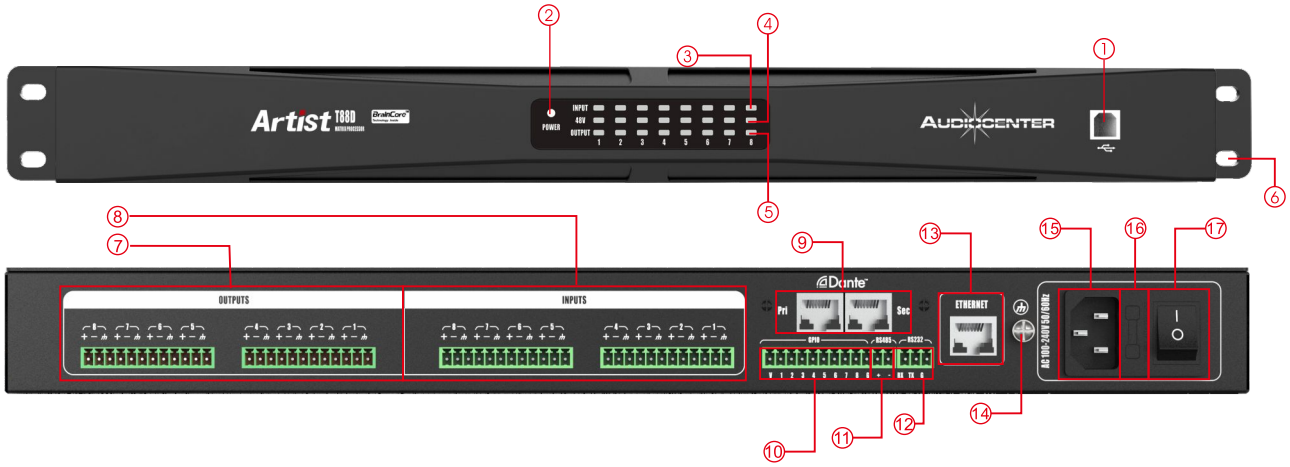




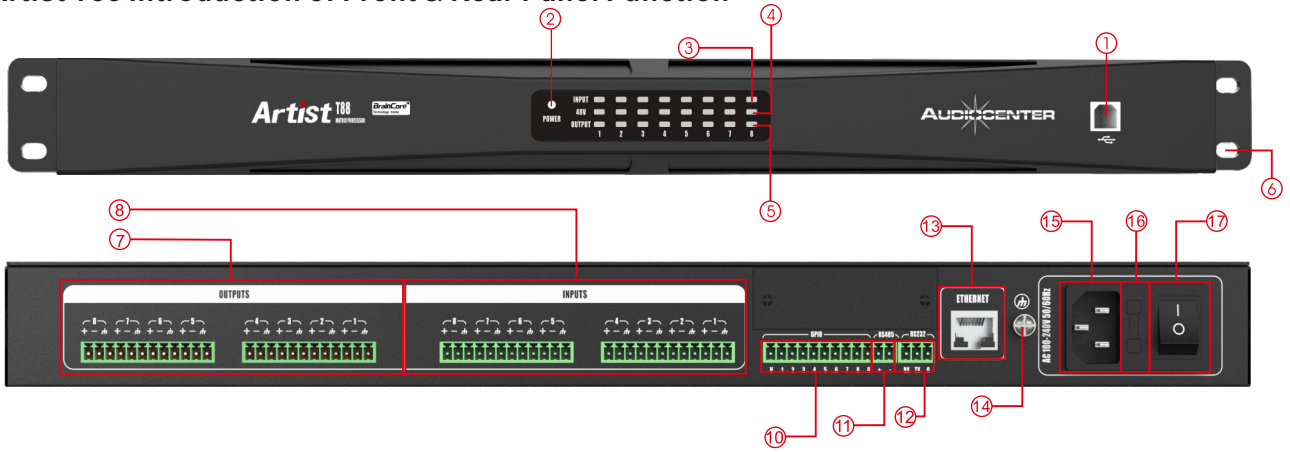
Artist T88



Artist T88D Introduction of Front & Rear Panel Function



Artist T88 Introduction of Front & Rear Panel Function



1.USB port
The computer control software can be connected through USB port.

2.Power LED
The white light indicates that AC power is connected and the processor is turned on.

3.Input LED
The blue light indicates that the channel has signal input.

4.48V phantom power LED
The yellow light indicates that 48V phantom power is turned on, which can be turned on or off by computer control software.

5.Output LED
The blue light indicates that the channel has signal output.

6.Rack mounting ears
Two front panel mounting holes are provided on each mounting ear.

7.8-channel analog output
Euro-block connector, balanced output

8.8-channel analog input
Euro-block connector, balanced input

9.Dante audio transmission interface
2 * RJ45 interface, standard CAT5 or CAT6 cable connection, can be configured as daisy chain connection (up to 8 devices).

10.GPIO interface
GPIO control extension

11.RS 485 interface
It can be used as central control, panel control, camera tracking and expansion interface.

12.RS 232 interface
It can be used as central control, panel control, camera tracking and expansion interface.

13.ETHERNET computer control interface
Rj45 interface, based on TCP / IP protocol, standard CAT5 or CAT6 network cable connection.

14.Grounding terminal

15.Power supply socket
Connected via standard IEC plug

16.Fuse
5mm x 20mm/3A/250V

17.Power switch
When the processor is not in use, please keep its power switch off.

Software operation instructions

“BrainCoreNet” is a software for users to quickly interact with the parameters of one or more devices. Configuration parameters of the device can be stored in the disk file. It provides a very convenient means for the preset configuration of multiple devices or different applications and the switching and returning of parameters. This product has high execution efficiency and clear interface structure. The UI of this product adopts the self-developed control library.

The software can be downloaded from the USB flash drive packed with the product or from the Audiocenter official website: http://www.audiocenter.net.

Operating environment

The software is suitable for WIN7 / WIN8 / WIN10 any x86 / x64 operating system with Microsoft and NET Framework4.0 runtime libraries.

Software installation

Double-click the software installation package "BrainCore Net.exe" and follow the instructions to install it.

Software operation

Operation steps: double click the executive document to enter the software theme interface, as shown in the figure below



Precaution

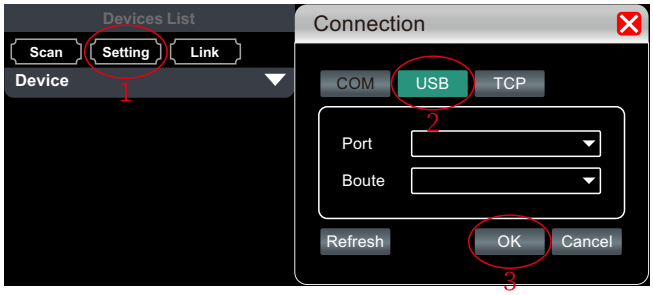
Some connection modes do not support multiple software opened at the same time. Please keep only one software opened on each PC at most.

Software connection

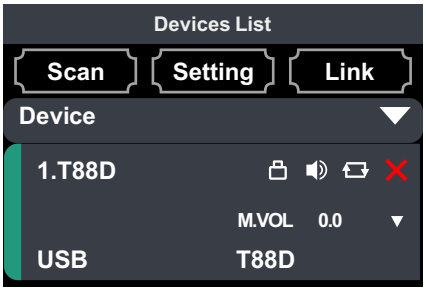
Artist T88D/T88 audio matrix can be connected to “BrainCore Net” management software in a variety of ways.

USB connection

Users can quickly connect to the “BrainCore Net” management software through the USB interface of the processor panel. First of all, the user needs to set the connection port as "USB" port, and the software will scan the currently connected device and connect it.



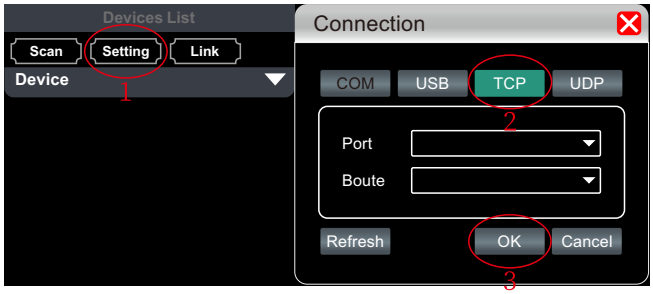
Note: 1, 2 and 3 are the sequence of operation steps



The green color indicates that "USB" of the current device has been connected.

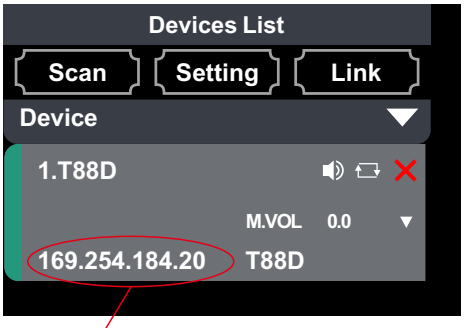
Ethernet connection

Users can connect to the "BrainCore Net" management software through the “Ethernet” interface (RJ45) on the back of the audio matrix. First, the user needs to set the connection port as the "TCP" port, and the software will scan the currently connected device.

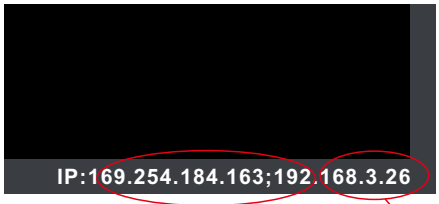


Note: 1, 2 and 3 are the sequence of operation steps

Then we need to change the IP address of the audio matrix to be in the same IP segment with the computer, and there is no IP conflict in the LAN.



Device IP



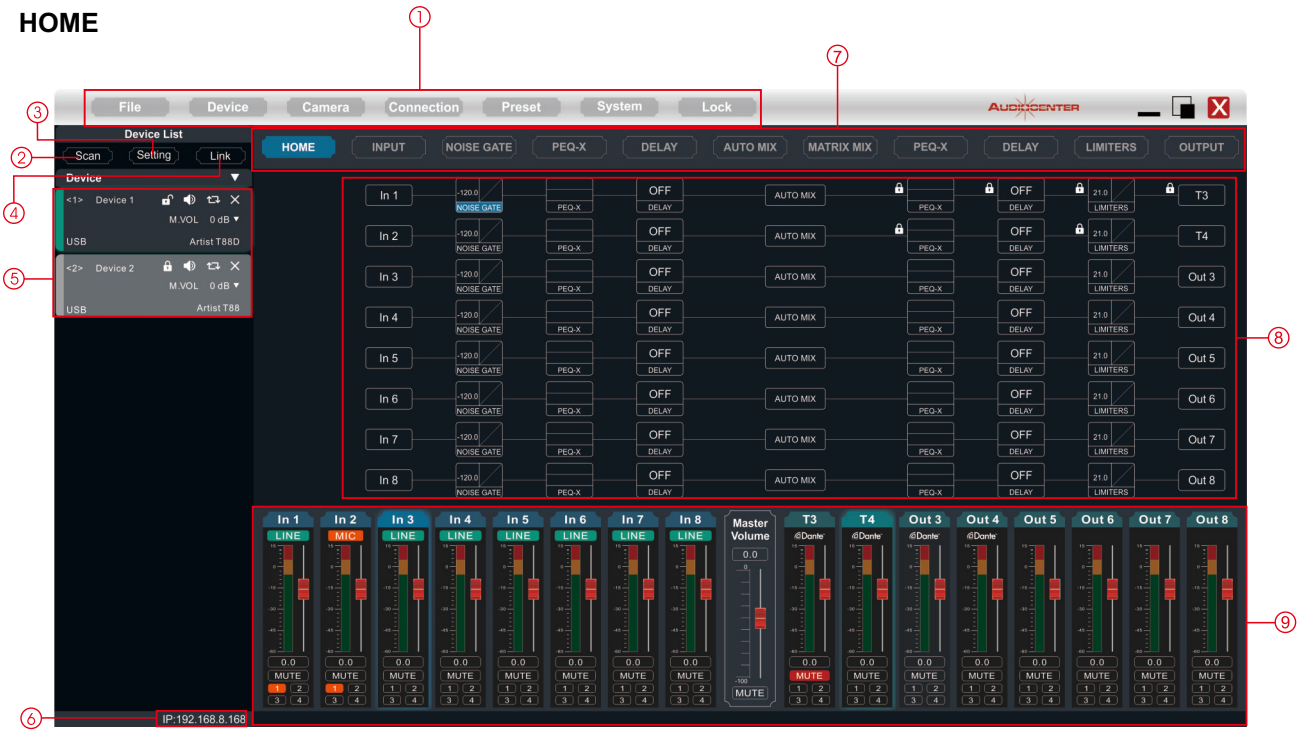
IP address of computer local connection

IP address of computer wireless network card

Note: If it is directly connected to the computer through the network cable, please change the IP of the processor to the local IP of the computer and connect it in the same IP segment.

If it is a wireless connection through a router, please change the IP of the audio matrix to the IP of the computer wireless network card and connect it in the same IP segment.

HOME



(1)Menu (4)Link (7)Module

(2)Scan (5)Device (8)Module function

(3)Setting (6)Computer IP address (9)List of input and output channels

Menu column

File :

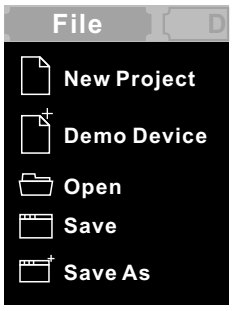
1.New project: the software can create the model of each device in this menu when the device is not connected,

2.Demo device: add virtual devices will not affect existing devices,

3.Open: open an existing device management project from the computer disk,

4.Save: save the current device management project in the computer disk,

5.Save AS: save the current device management project as a file.



Device

1.Devices: view or modify the firmware information, device name and IP address of the device,

2.Channels: output channel preset management,

3.Channel copy: copy the parameters of the same type of channel,

4.Central Control: users can click to view the central control protocol for quick configuration,

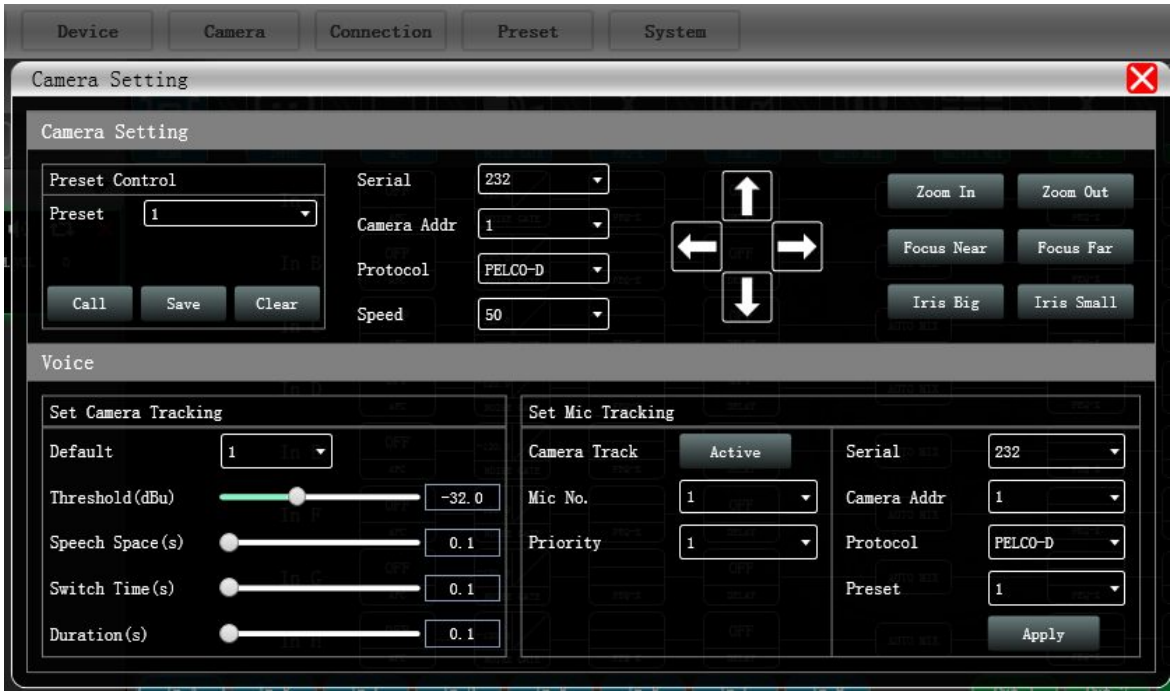
5.GPIO: customize configuration of 8 GPIOs on the back board.



Camera

Click "Camera" in the menu, and then the camera interface as shown in the right figure will come out, which is used for camera voice tracking settings.

Please refer to "Camera Settings" on page 23 for detailed camera settings.



Connection

1.Port: set connection mode, port number and baud rate.

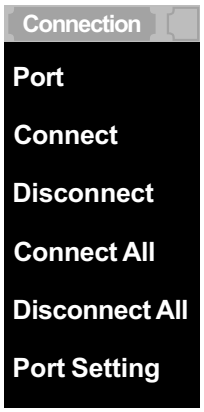
2.Connect: connect and download the device parameters.

3.Disconnect: disconnect the connected device.

4.Connect ALL: connect and download the parameters of all devices in the device list.

5.Disconnect ALL: disconnect all connected devices in the device list.

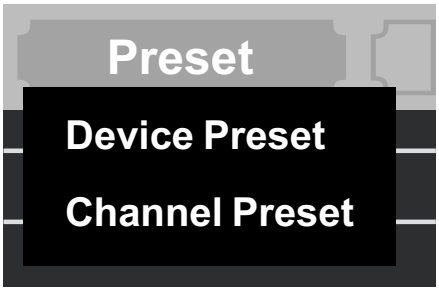
6.Port Setting: set the baud rate of the device.



Preset

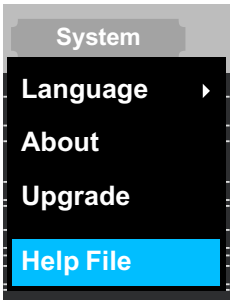
1.Device Preset: Click the preset management interface to manage the preset. For details, please refer to "Preset Management" on page 20.

2.Channel Preset: Click the preset management interface for output channel, and the users can load Audiocenter standard presets or customized presets for the speakers through this function. For details, please refer to "Preset Management" on page 20.



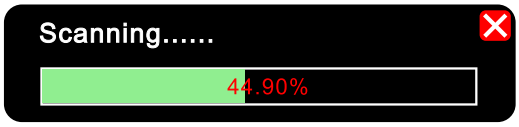
System

1.Language: multi languages switch.
2.About: for the current firmware and device version information.
3.Upgrade: upgrade the firmware of the device.
4.Help File



Scan

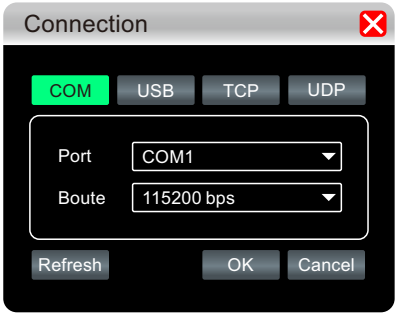
Click the "Scan" button to directly scan all devices currently in connection mode, and display the scanning progress as shown in the right figure.



Setting

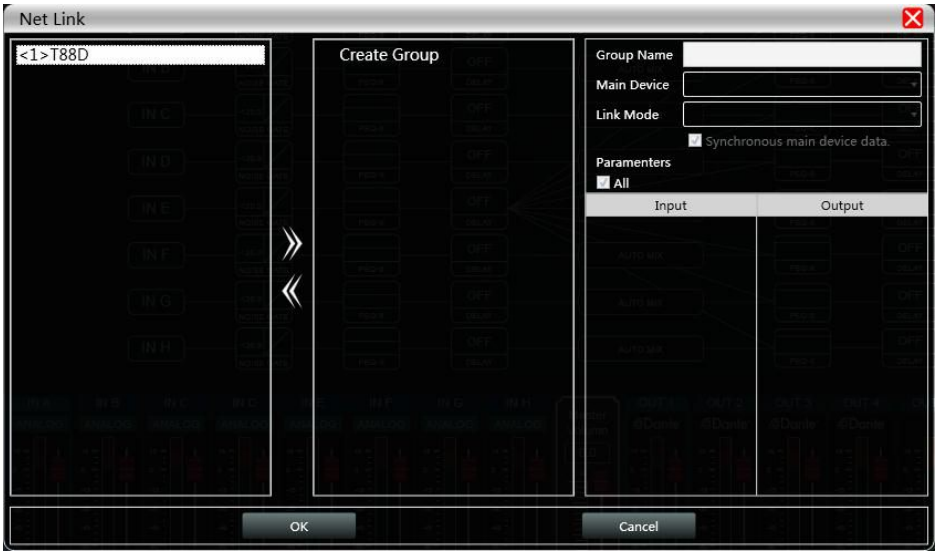
Set the connection mode of the scanning device and click the “Setting” button, and then the right figure will come out.

If the device port changes, click the "Refresh" button to update the port list instantly.



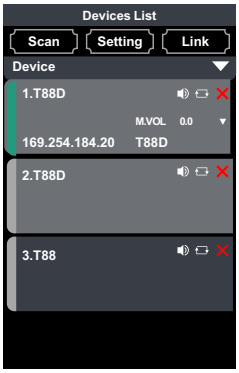
Link

To set the parameters of multiple devices at the same time, click the "Link" button, and the net link interface as shown in the following figure will come out. Select the devices to be set at the same time on the left, move to the create group in the middle, and then select the group setting parameters on the right. Finally, press the "OK" button to make the group function effective. You can also use the same operation to correct the net group settings.



Device

When the software scans or you add a simulation device, the corresponding device will be automatically added to the device list, which is convenient for users to interact with the required devices and operate multiple devices at the same time.



Local IP address

When the software is opened, it will automatically obtain the address of the network connection corresponding to the network adapter that has been in effect in the current computer system, which is convenient to manage the IP address of the device.

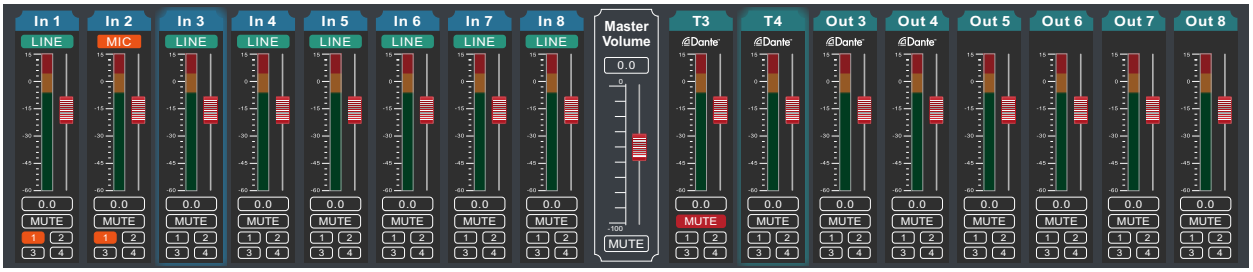


Function module control key



You can click the corresponding module to enter the corresponding operation page.

List of input and output channels



It can display the level, gain, input mode, channel name and other information of each channel, control the main switch of corresponding channel gain and mute, and turn on the group link function of input and output channels, so as to realize more powerful and convenient operation.

Introduction to function interface



INPUT

Click INPUT in the module button, and the channel input module shown on the right will pop up.

As shown in the figure on the right, the polarity, mute and input mode of the corresponding input channel can be operated.

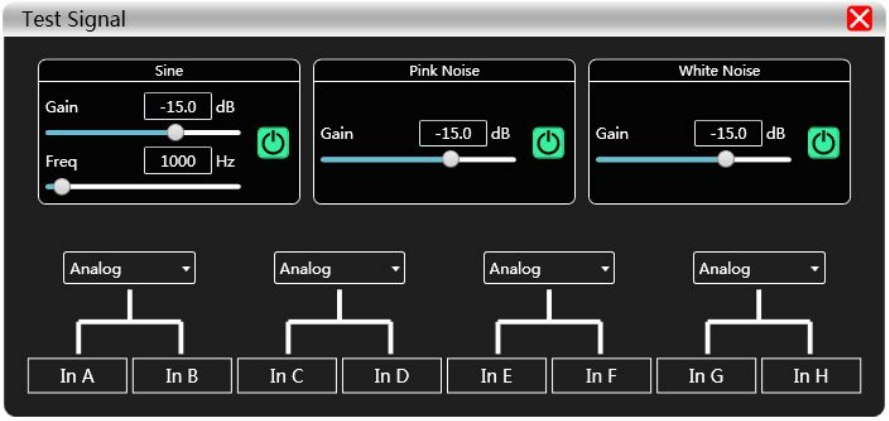
Three input modes are optional: analog input, digital input and test signal. One channel can only have one input mode.

Dante and test signal switch together for every two channels.

A:Analog input is divided into LINE and MIC. MIC input can set 48V phantom power supply (NONE/48V), sensitivity selection (0 ~ 40dB) and AFC function.

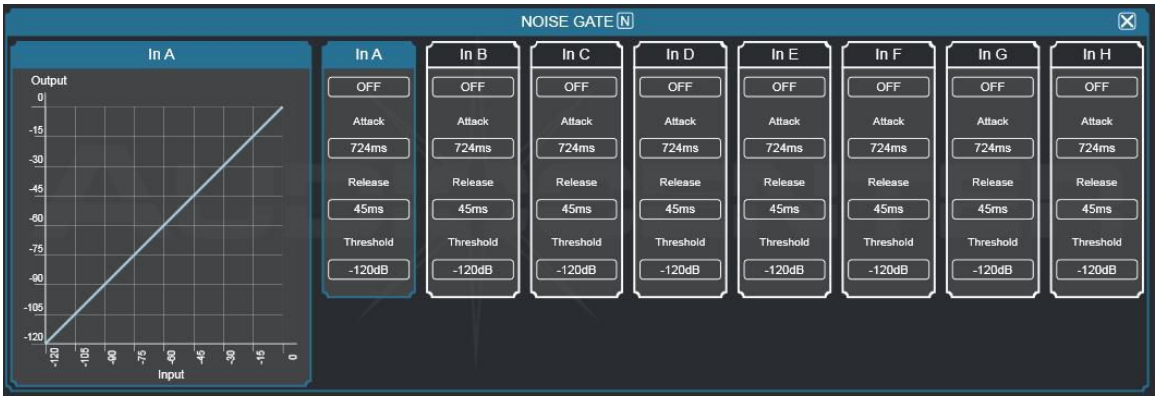
B:T88D supports four Dante network audio inputs (channel1 to 4).

C:As shown in the figure below, the channel test signal is set to switch every two channels together, and the test signal can be "sine wave", "pink noise" and "white noise". If it is selected as an analog signal, it will be switched back to the analog signal input.



NOISE GATE

Click NOISE GATE in the module button to enter the input noise gate to set the module.



As shown in the figure above, click the noise gate switch ON to turn on or off the function of the noise gate of the channel. Green means turn on and red means turn off.

Attack time Attack 1.00 ms : Enter the corresponding value in the value box to control the Attack time.

Release time Release 1.00 ms : Enter the corresponding value in the value box to control the release time.

Threshold level Threshold -120.00 dBu : Enter the corresponding value in the value box to control the threshold level.

Input equalizer (PEQ-X)

Click PEQ-X in the module button, and then the PEQ setting interface as shown in the following figure will pop up.

The button at the upper right corner of the module can enlarge the module, which can make the interface more clear.



Phase: display the phase curve of the current channel.

View: show or hide all equalization control points.

Bypass: turn on or off all EQ equalizers of the current channel at the same time.

Preset: save the current equalizer setting parameters to the computer, and recall and overwrite the existing equalizer parameters.

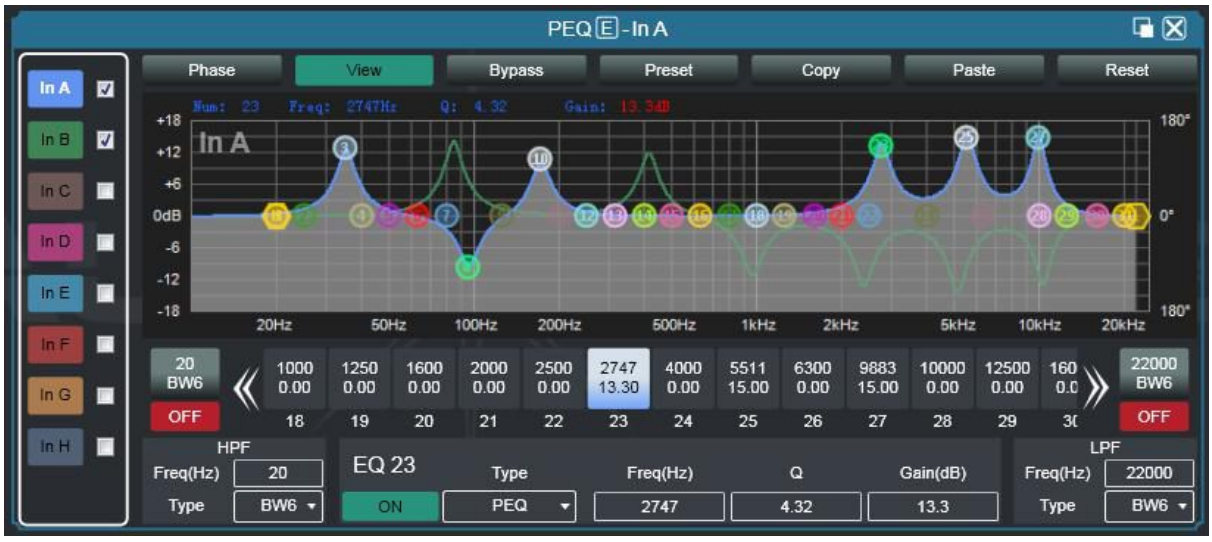
Copy:copy the current equalizer parameter value and paste it into another input channel.

Paste: can be used together with the copy button, And can paste the equalizer parameter values copied by the copy function to the current channel.

Reset: reset the equalizer parameters to the default values.

EQ curve display of multi channels

As shown in the figure below, EQ curve display switch of each channel is shown on the left. When turn it on, the EQ curve of the corresponding channel will be displayed in the EQ curve chart.



DELAY

Click DELAY in the module button to enter the I / O delay setting module.

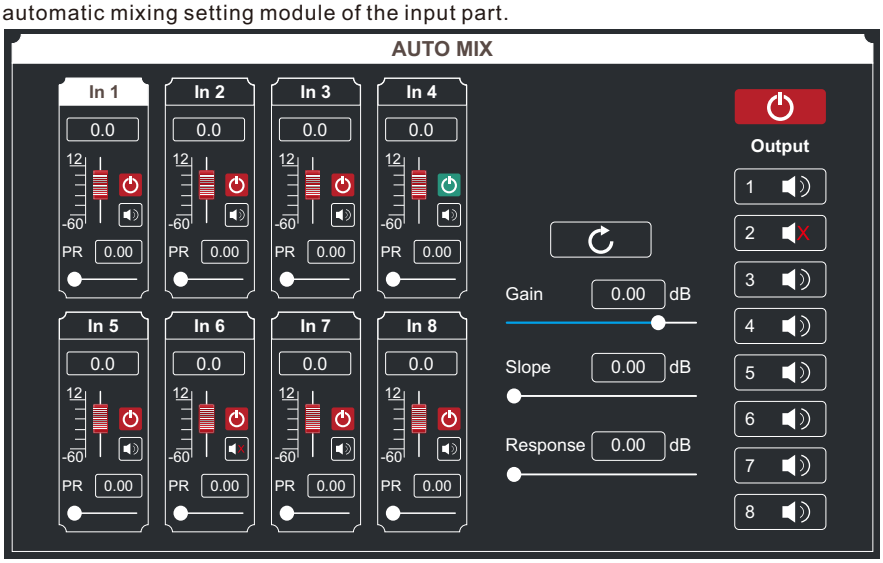


As shown in the figure above, the time delay control contents of all input / output channels are listed.

Input the corresponding number in the value box 0.00 ms, and the delay unit can be selected through ft cm ms; Bypass is the switch of delay function: red means off, green means on; upper reset button n directly reset the default value of channel delay.

MIX

Double click AUTO MIX in the module button, and then the automatic mixing setting module in the figure below will pop up, which can control the corresponding relationship (many-to-many relationship) between the input and output channels when the automatic mixing function takes effect. Input part, as shown in the figure below, the left part is the automatic mixing setting module of the input part.





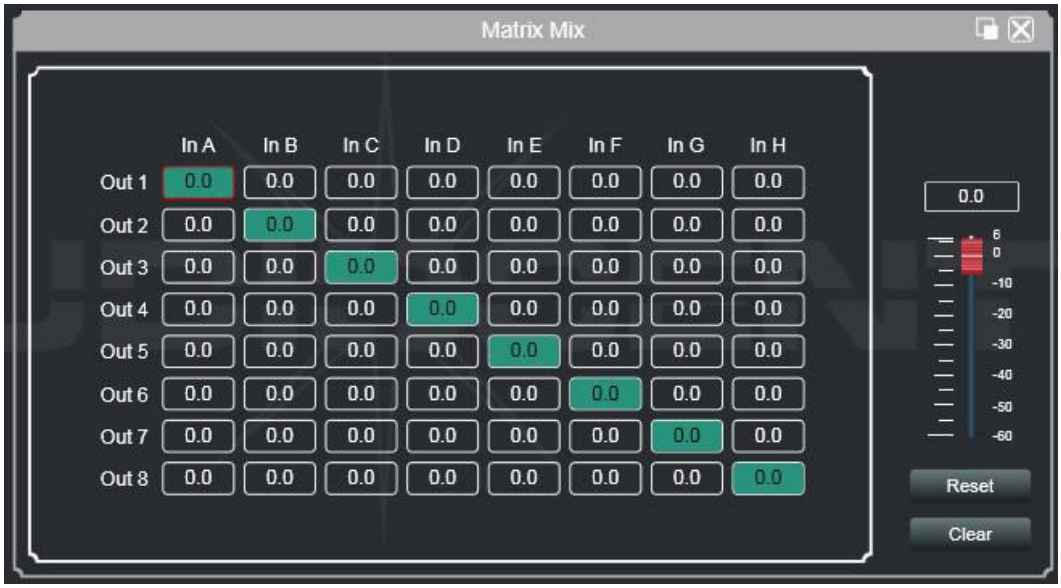
is the input mixing gain of the corresponding channel. Drag the slider or input the corresponding value in the value box at the top; channel input mixing switch and mute switch control whether it is effective (red means off, green means effective); You can adjust the priority of the channel 0-10 to control PR value. The highest priority is level 10.

The middle part from top to bottom is all parameters reset button, input mix total gain, mix slope, mix response time.

In the output section, the top right corner is the main output switch. To turn on the mixing function of the output section, the switch must be turned on (red means off, green means on), and below are the switches of each output channel.

MATRIX MIX

Click MATRIX MIX in the module button, and then the matrix mix setting module as shown below will pop up.

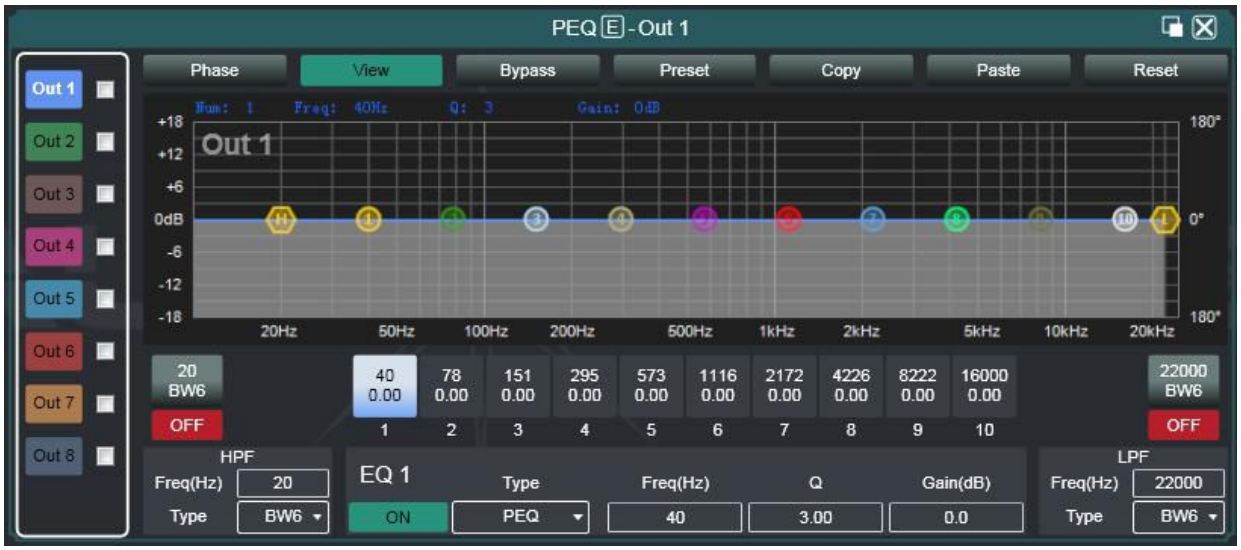


In the figure above, the left is output channel, and the upper is input channel. The value box with the value is the input / output channel mixing key. When the mixing key is green (double-click the value box to switch the state), signals of input and output channel realize the mixing function.

The right part of the above figure includes the gain, reset button, and clear button of the matrix mix. Click the value box on the left, drag the sliding block of matrix mixing gain or input value in the value box to adjust the gain in this matrix block, Click the reset button to reset the matrix mixing function to the initial one-to-one state, Click the clear button to clear all matrix mixing functions, and there is no corresponding relationship between the input and output of the device.

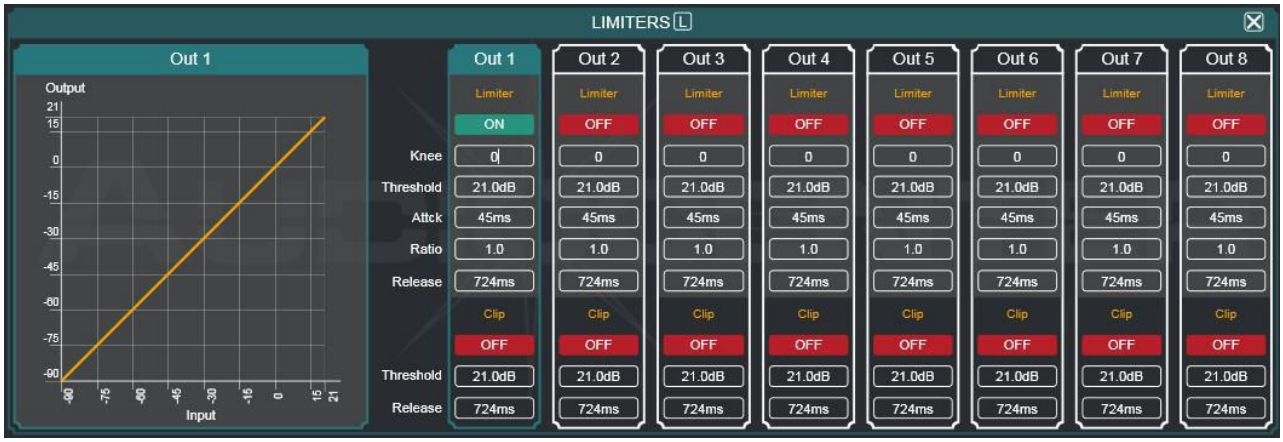
Output equalizer (PEQ-X)

Click PEQ-X in the module button, and then theinterface of the output equalizer setting module as shown in the following figure will pop up. The function and operation mode are the same as those of the input equalizer.



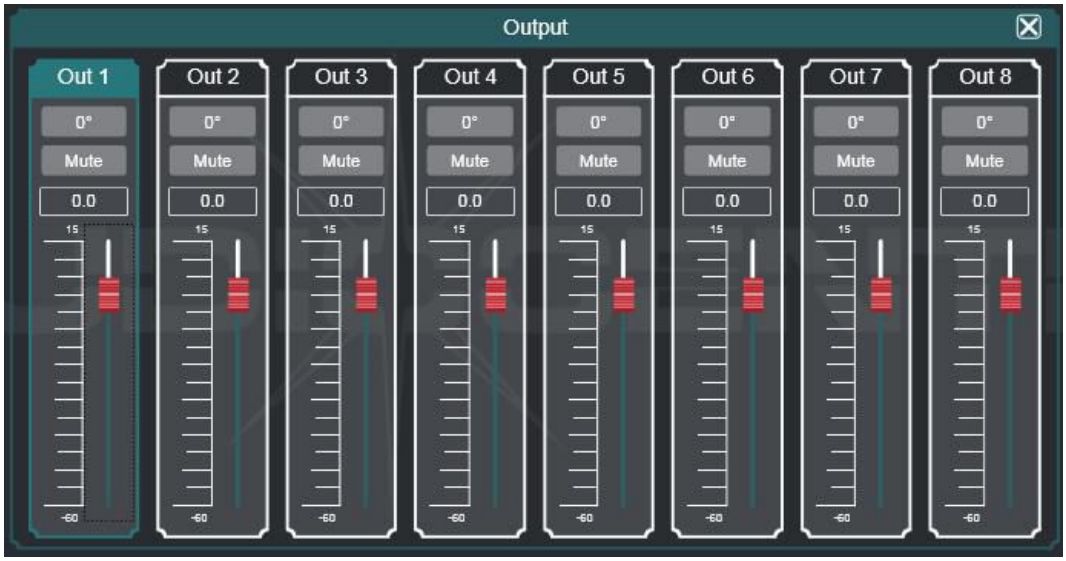
LIMITERS

Click LIMITERS in the module button, and then the output setting module as shown in the following figure will pop up.



OUTPUT

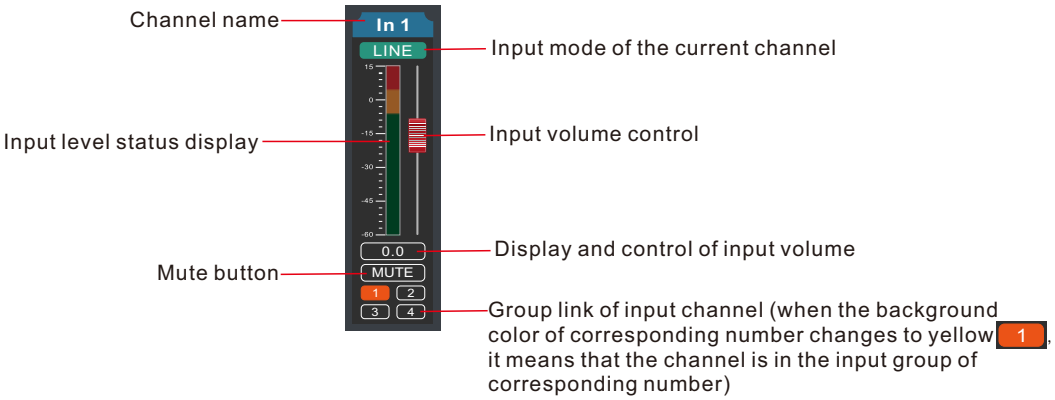
Click OUTPUT in the module button, and then the output setting module as shown in the following figure will come out.



As shown in the figure above, the polarity and mute setting of the corresponding output channel can be controlled.

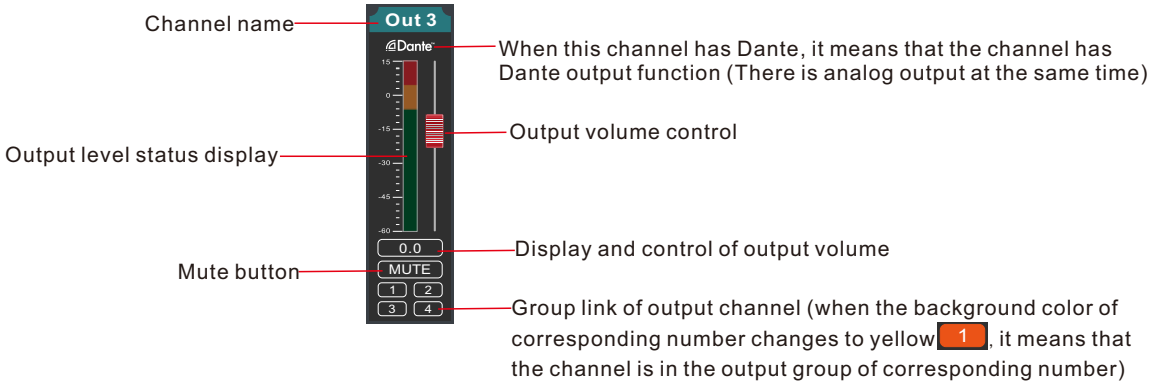
Input channel

On the list of input and output channels in the software homepage, the left part is the input channels, as shown in the figure below.



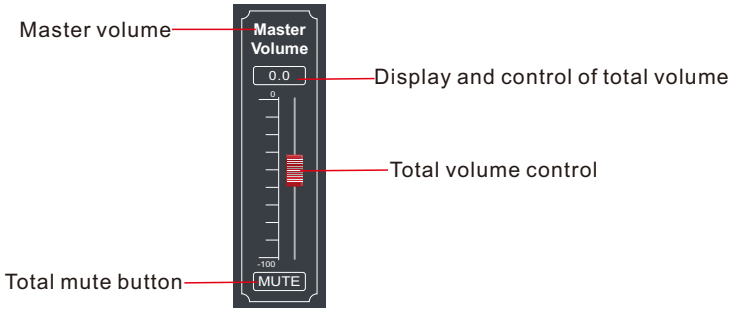
Output channel

On the list of input and output channels in the software homepage, the right part is the output channels, as shown in the figure below.

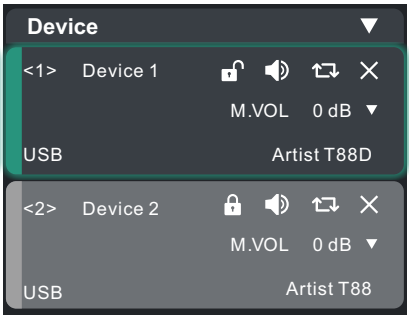


Total volume control

On the list of input and output channels in the software homepage, the middle part is the total volume control, as shown in the figure below.



The device list of the software homepage is shown in the figure on the right



<1> is the number of the device connected

Device 1 is the device name (user can change the device name in the software)

Artist T88D is the product name (user cannot modify, this example picture shows Artist T88D)

USB is the connection mode used by the device (USB, TCP, COM, this example picture shows USB)

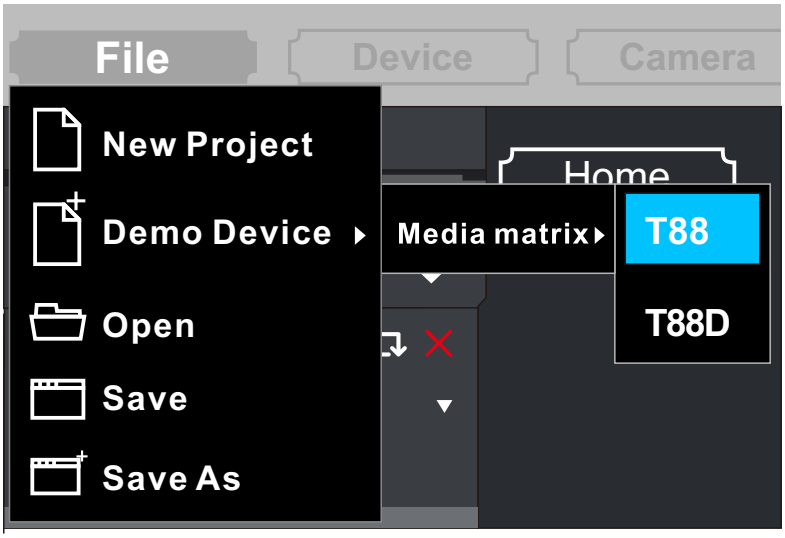
from left to right, shows device lock display, mute control state, refresh button and remove device button

If you need to debug different devices, you can click to select the target device, and the interface will be updated to the device function page.

Demo Device

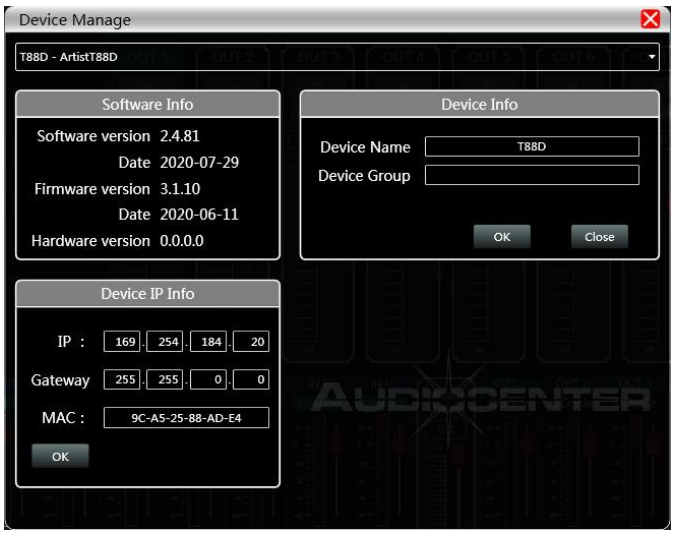
Click "File"→"Demo Device" in the menu bar of the main interface of the software, and then the interface of adding devices as shown in the figure below will pop up. Select the virtual device model to be added and add it to the device list.

Note: virtual devices cannot connect to real devices.



Devices management

Click " Device "→" Device " in the menu bar of the main interface of the software, and then the interface of device management as shown in the figure below will pop up.
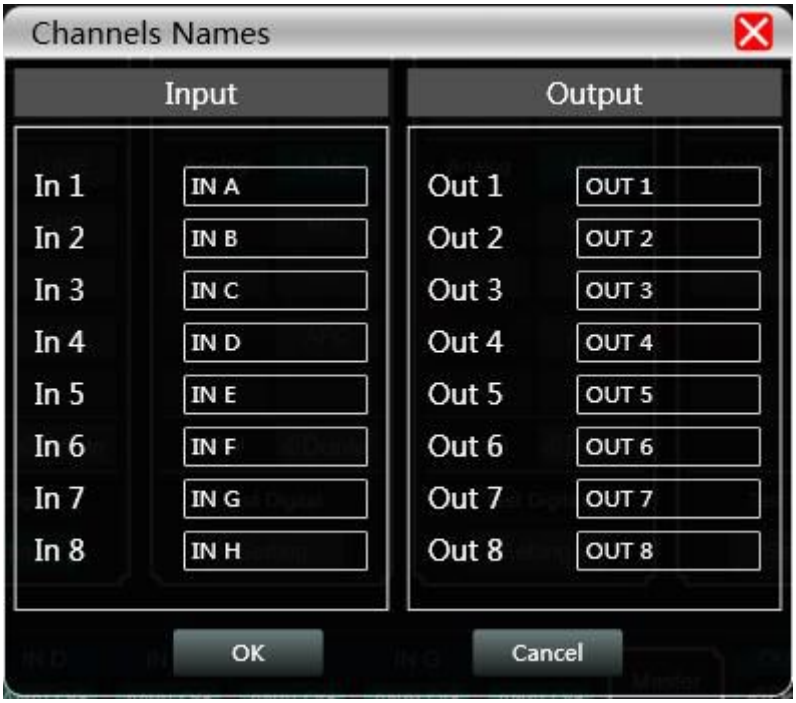


Software Info：display the version number and date of the upper and lower computer of the current device.

Device Info：display the current device name, device group and factory information. To display the factory name, you need to press the hide shortcut key Ctrl + Alt + F12, where a new name can be input in "Device Name" and "Factory Name", and then click button to save.

Device IP information: if the current device is connected with network information, the IP address, gateway and MAC address of the device will be displayed here. The IP and gateway can enter new information and click the OK button to save and restart the device network module. The newly entered network information will take effect in time.

Preset management of output channel (Channels)

Click " Device "→" Channel Name" in the menu column of the main interface of the software, The channel name management will pops up as the following picture shows.



channel copy

Click " Device "→" Channel copy " in the menu column of the main bar of the software, and then the interface of channel copy as shown in the figure below will pop up.

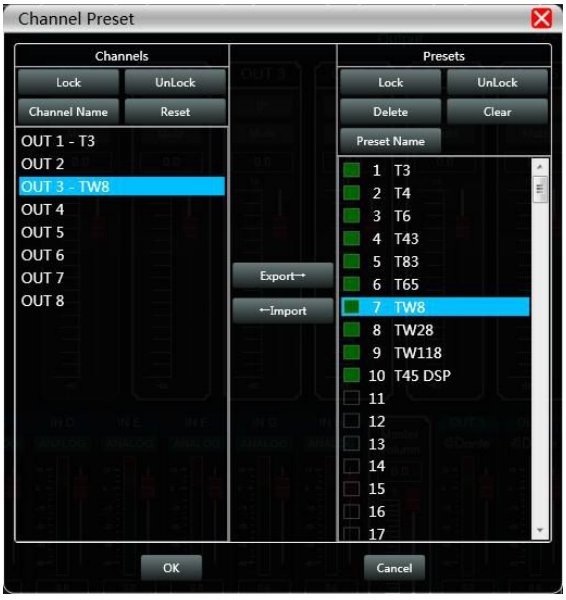


As shown in the figure above, channel copy is to select the channel parameters of one source device and copy them to the target channel of other target devices. Input channels and output channels cannot be copied with each other. The left side is the corresponding channel, and the right side is the copied parameters. The "Input" and "Output" buttons at the top of the interface can switch the channel type of the copy.

Output channel preset management(Channel Preset)

Artist audio matrix T88D/T88, according to the characteristics of Audiocenter speaker, is built-in rich speaker presets. Users can load a preset for each output channel separately according to the speaker equipped with the system.

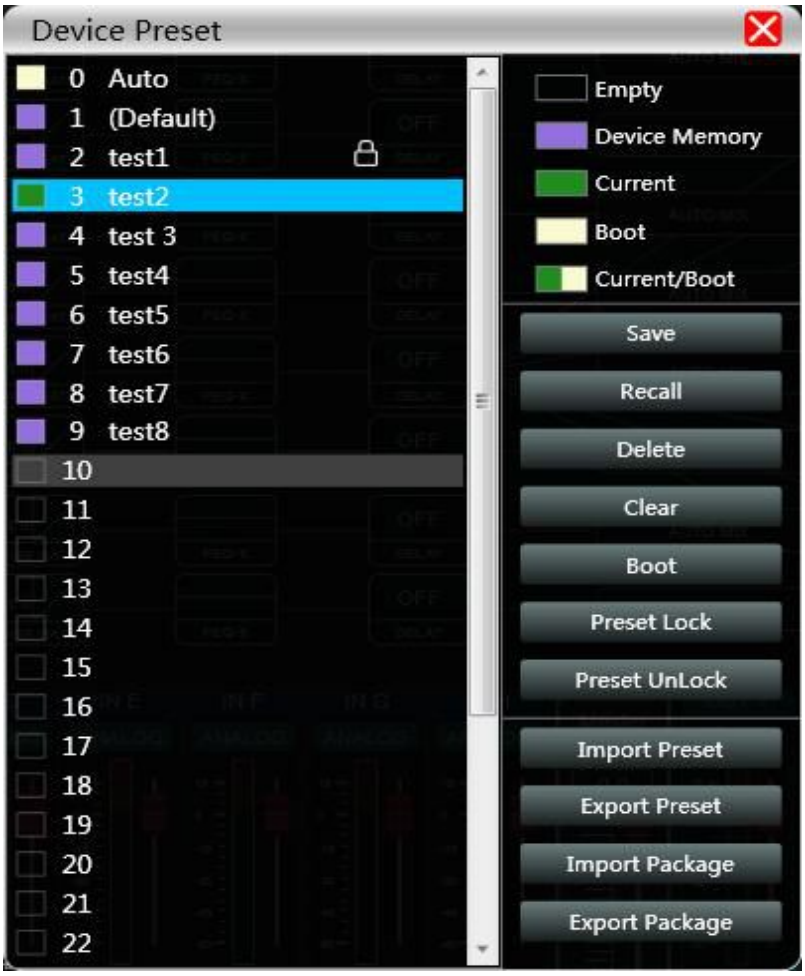
“Preset” →”Channel Preset”



As shown in the picture, there are 8 output channels on the left, you can choose to save the preset for each channel through the "Export" key. You can also load the preset from the right output channel to any other output channel with the "Import" key. Encryption management is available for the presets (only for output EPQ and LIMIT encryption).

Whole device preset management

After debugging the system, user can save the presets of the whole device through "Preset", and a total of 30 preset gears are available.



As shown in the figure above, the left side of the archive interface shows gears, where "0 Auto" is the system gear and cannot be used directly; "1 (Default)" is the default gear of the device, which can only be recalled, but cannot be deleted or ovewrritten. After recalling, all the device parameters will be restored to the factory default parameters; other gears can be freely saved, recalled, deleted, etc.

The function buttons on the right side of the archive interface are as follows:

Save: save the existing device parameters to the corresponding selected archive.

Recall: recall the selected archive to the parameters of the current device.

Delete: delete the selected archive parameter.

Clear : clear all non system archived parameter records.

Boot: set the selected gear as the gear that will be called automatically to work when the device is turned on next time;

Preset lock: when preset is locked, relevant parameters cannot be changed and viewed.

Preset unlock:preset is unlocked.

Import Preset: import a single device parameter file in the computer system to directly overwrite the existing parameter data.

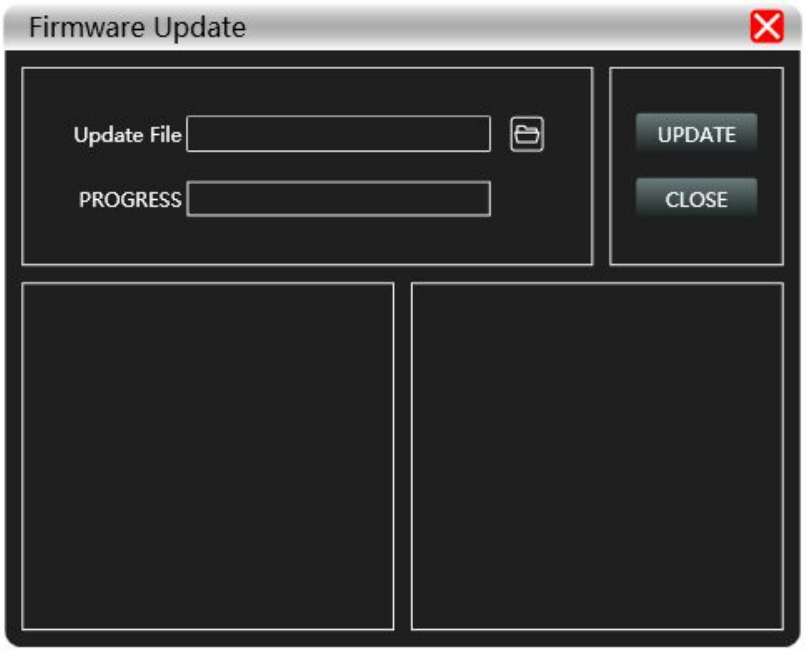
Export Preset: save the parameters of the current device to the computer system, and generate a single device parameter archive file.

Import Package: import the archived parameter package in the computer system.

Export Package : export all gear parameters of the device archive to the computer system, and generate a parameter package file.

Firmware upgrade

Click the main interface menu of the software, you will access to the firmware upgrade interface as shown in the pictures.



When firmware is updated, you can access to the firmware upgrade interface once got the upgraded file.
After selecting the corresponding upgrade file in the “Update File” column, click “UPDATE” in the upper right corner, the system will automatically transfer the upgrade file to the firmware for upgrade operation, and display the operation log in the progress box below. After the upgrade is completed, the machine system firmware will automatically restart or manually restart the machine to complete the upgrade.

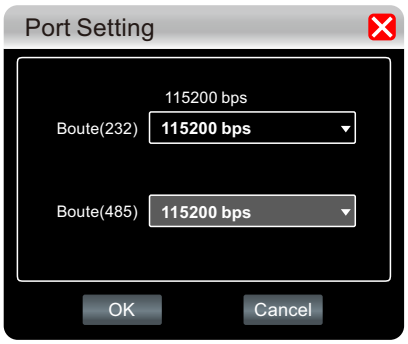
Camera tracking

Camera connection settings

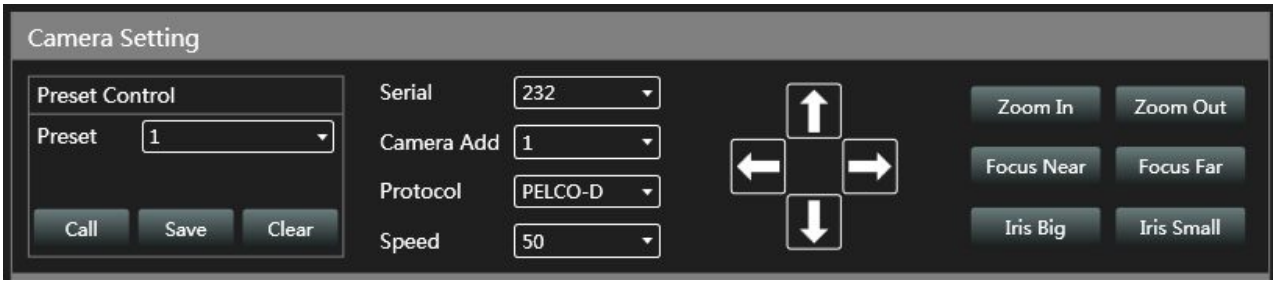
Set device baud rate, "Connection" → "Port Setting”

The device can be controlled by RS232 or RS485, and the relative baud rate can be set according to the baud rate required by the camera. (Baud rate of device and camera should be consistent)





Camera settings

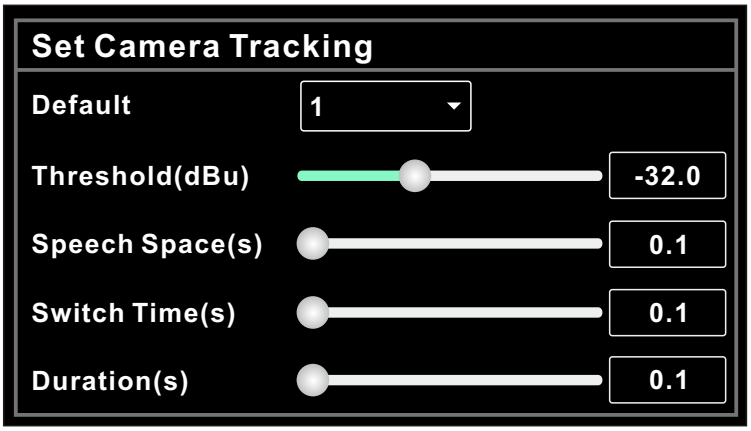


The camera setting is a camera debugging interface. Generally, the camera position is adjusted before the tracking starts, and finally the parameters of this part will remain on the camera.

First, set up the serial port. There are 2 serial ports (232, 485), which correspond to the backplane port connected to the PTZ, next is the camera address and protocol type. For the camera address, please refer to the actual address of the camera. The protocol is related to the camera model; The set point number is the identification defined by the user for the camera, and then adjust the up, down, left, right, and focal length, the aperture and other parameters will define the position and settings of the camera; finally click "Save" to save the parameters to the camera, "Clear" Is to delete the information of the current preset point, "Call" is used to view the camera saved in the current preset point.

Note: a camera address can contain multiple preset points, but a preset point only corresponds to one camera address. Camera settings and microphone settings have preset points, serial port number, camera address, and protocol parameters. The actual situation needs to be considered when applying.

Camera tracking



Default: when all mics have no input, turn the camera to the position set by default mic or send the association command defined by default mic.

Threshold(dBu) : the detected input signal must be greater than or equal to the tracking threshold, and the system will automatically start the tracking parameters.

Speech Space(S): the maximum interruptible time of effective signal. If a microphone is used to speak, the response time is set to 3 seconds. When you are speaking, the signal is valid if your pause is within 3 seconds, but invalid if more than 3 seconds.

Switch Time(S): the shortest speaking time required for camera to switch to an effective position. If the microphone is used to speak, the speech time must be longer than the "rotation time" and longer than the "rotation cycle".

Duration(S) : the interval time of sending the camera switch command or customized command. If it is 0, the command will not be sent.

Microphone tracking settings



Mic NO.：corresponding to the input channel of the device, that is, the channel number to which the mic is connected. (Parameters need to be set separately for each channel)

Priority：the larger the number, the higher the priority. When the priority is the same, the priority will be handled according to the trigger priority. If two microphones speak at the same time, the camera will automatically turn to the command corresponding to the microphone with high priority level. However, if the priority of the two microphones is the same, the signal detected first shall be handled first.

Camera Track： Start camera tracking

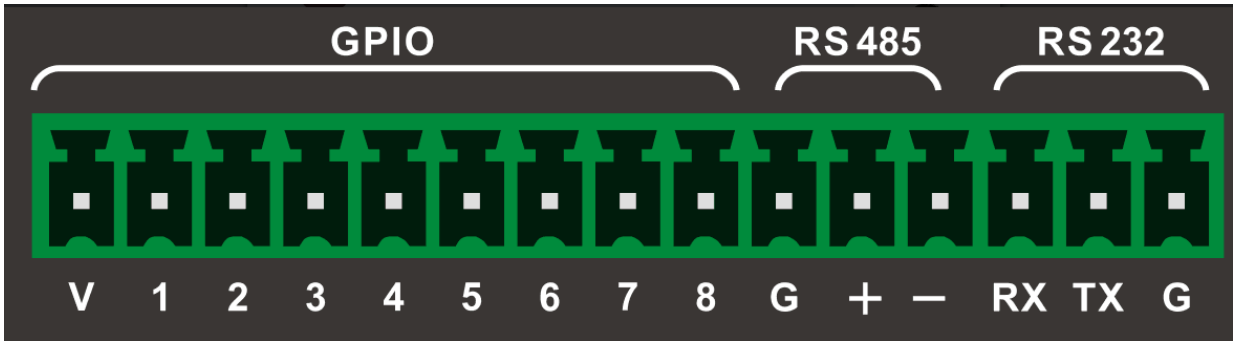
Apply：save the current microphone and camera tracking parameters to the device. (After the camera tracking is started, application parameters are required to be clicked to be effective)

The preset point, serial port number, camera address, protocol and others related to the camera must correspond to the actual connection of the camera.

GPIO and central control instruction

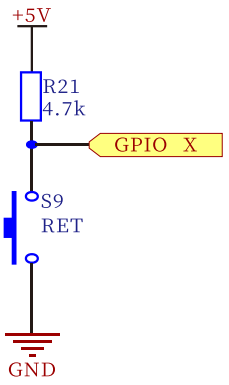
GPIO description

8 GPIO ports are configured on the back of the device, as shown in the below figure. The number or letter below the GPIO port indicates the name of the GPIO port. GPIO 1-7 port has input and output function, while GPIO 8 only has output function.

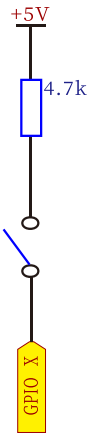


V: means 5V, the internal stabilized voltage output of the device, DC 5V 600mA G: GND.

For the method of generating the falling edge, the circuit schematic diagram is shown in the figure on the right. + 5V can use output 5V from GPIO V port. GPIO X represents the GPIO port that you want to operate. A touch switch is connected below. When you press the switch, a falling edge is generated.



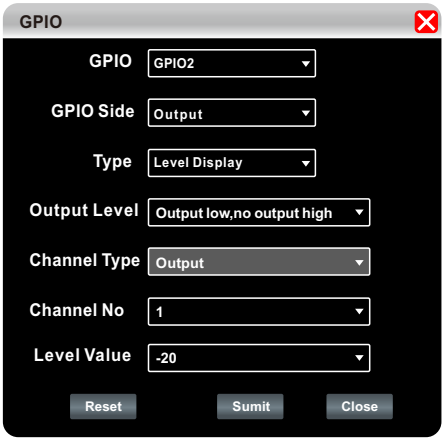
For the method of generating rising edge, the circuit schematic diagram is shown in the figure on the right. + 5V can use output 5V from GPIO V port. GPIO X represents the GPIO port that you want to operate. A touch switch is connected in the middle. When you press the switch, a rising edge is generated.





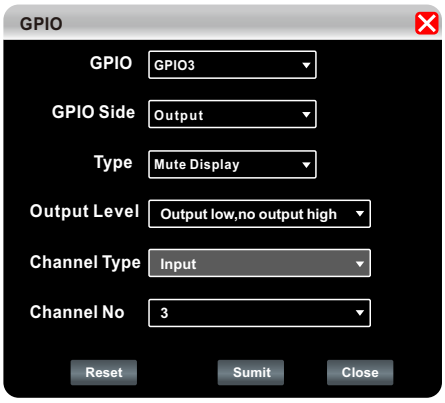
After the device GPIO is connected according to the above method, it needs to be set on the PC as shown on the left. Connect the device in the software, and select Device->GPIO on the menu to start the setting.

1. For example: when set GPIO side to output, as shown in the left figure, click "Submit" below to make it effective. When calling archive 1, the instrument can test the output low electrical level of GPIO 1 port. The same effect can be obtained by changing the output electrical level type and archive number.



2. For example: when set GPIO side to output, as shown in the left figure, click "Submit" below to make it effective. When the electrical level of "output channel 1" reaches – 20 dB, the same effect can be obtained by changing the output electrical level type, channel number and electrical level threshold.

3. For example: when set GPIO side to output, as shown in the right figure, click "Submit" below to make it effective. When the "input channel 3" of the device is set to "mute", the GPIO 3 port output low electrical level can be obtained by changing the output electrical level type, channel type and channel number.



4. For example: when set GPIO side to output, as shown in the right figure, click "Submit" below to make it effective. When the device "system" is set to "mute", GPIO 4 port output low electrical level can be obtained by changing the output electrical level type.



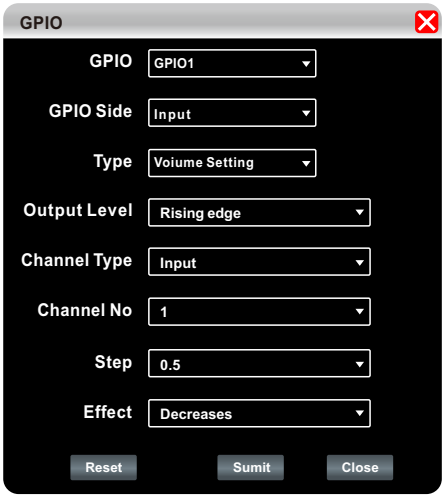


5. For example: when set GPIO side to input, as shown in the left figure, click "Submit" below to make it effective. When the rising edge of GPIO 1 Port is open, call to "archive 1", and the same effect can be obtained by changing the output trigger type.

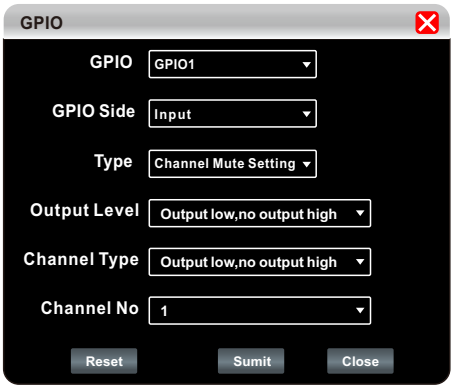


6. For example: when set GPIO side to input, as shown in the left figure, click "Submit" below to make it effective. When the rising edge of GPIO 1 Port is open, the signal of input channel 3 is routed to output channel 4. The same effect can be obtained by changing the output trigger type.

7. For example: when set GPIO side to input, as shown in the left figure, click "Submit" below to make it effective. When the rising edge is opened, input channel 1 decreases by 0.5dB. The same effect can be obtained by changing the channel type and step number.

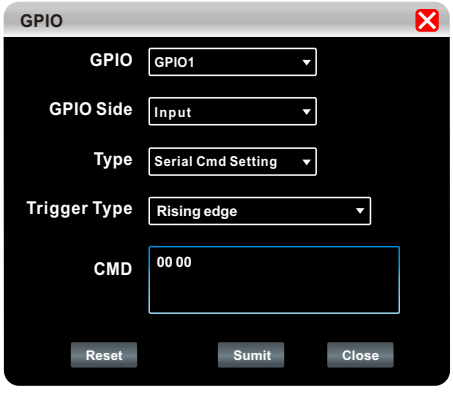


8. For example: when set GPIO side to input, as shown in the left figure, click "Submit" below to make it effective. When the rising edge of GPIO 1 port is opened, the input channel 1 is mute. The same effect can be obtained by changing the trigger type, channel type and channel number.





9. For example: when set GPIO side to input, as shown in the left figure, click "Submit" below to make it effective. When the rising edge of GPIO 1 port is opened, the system is mute. The same effect can be obtained by changing the trigger type.



10. For example: when set GPIO side to input, as shown in the left figure, click "Submit" below to make it effective. When the rising edge of GPIO 1 port is opened, the instruction can be sent through 232 port. The same effect can be achieved by changing the content of the instruction.

Central control protocol

1. Serial port parameters

Baud rate: the default value can be set to 115200 (it can be set to 2400, 4800, 9600, 19200, 38400, 57600 or 115200 through the firmware)

Check bit	NONE
Data bit	8
Stop bit	1

The instruction sending interval is more than 200ms. The time interval should be more than 3S when the scene is called.

2.Protocol format

2.1 Instruction sending:

1	2	3	4	5	6	7	8	9	10	···	11	12
Frame header				ID	Read-write bit	Function code	Data length	Data 1	Data 2	···	Data N	End of frame
0xA5	0xC3	0x3C	0x5A	0xFF	0x36	0x00-0xFF	0x00-0x03	0x??	0x??	···	0x??	0xEE

1-4 bit: communication command frame header, 4 bytes.

5 bit: device ID, the default is 0xff.

6 bit: read-write bit, 0x36 represents write, and 0x63 represents read.

7 bit: function code, refer to function description.

8 bit: data length, i.e. the number of bytes from data 1 to data n, generally between 1 and 4.

9-11 bit: data, refer to function description.

12 bit: end of communication command frame, one byte.

2.2 Command return:

2.2.1 When the sending instruction is a write instruction (read-write bit 0x36), the device returns 1:0x00, which indicates the success of the write, and 0x01 indicates the failure of write.

1
Response bit
0x00/0x01

2.2.2 When the sending instruction is read instruction (read-write bit 0x63), and the instruction format is correct, the device returns the instruction format:

1	2	3	4	5	6	7	8	9	10	···	11	12
Frame header				ID	Read-write bit	Function code	Data length	Data 1	Data 2	···	Data N	End of frame
0xA5	0xC3	0x3C	0x5A	0xFF	0x63	0x00-0xFF	0x00-0x03	0x??	0x??	···	0x??	0xEE

1-4 bit: communication command frame header, 4 bytes.

5 bit: device ID, the default is 0xff.

6 bit: read-write bit, 0x36 represents write, and 0x63 represents read.

7 bit: function code, refer to function description.

8 bit: data length, i.e. the number of bytes from data 1 to data n, generally between 1 and 4.

9-11 bit: data, refer to function description.

12 bit: end of communication command frame, one byte.

If the instruction format is wrong, the device returns 1:0x01, which indicates the failure of read.

1
Response bit

3 Function description

3.1 Scene (archive) call function code: 0x02

1	2	3	4	5	6	7	8	9	10
Frame header				ID	Read-write bit	Function code	Data length	Scene number	End of frame
0xA5	0xC3	0x3C	0x5A	0xFF	0x36	0x02	0x01	0x01-0x1F	0xEE

Read-write bit:0x36.

Scene number: the value range is 1 to 30 (0x01-0x1f), in which scene 1 is the factory default setting.

Example: A5 C3 3C 5A FF 36 02 01 01 EE stands for calling scene 1.

(The instructions in the example are hexadecimal numbers, with the prefix "0x" removed).

Instruction return: reply bit: 0x00 indicates the success of write, 1:0x0 indicates the failure of write.

1
Response bit

3.2 Scene (archive) read

1	2	3	4	5	6	7	8	9
Frame header				ID	Read-write bit	Function code	Data length	End of frame
0xA5	0xC3	0x3C	0x5A	0xFF	0x63	0x02	0x01	0xEE

Instruction return:

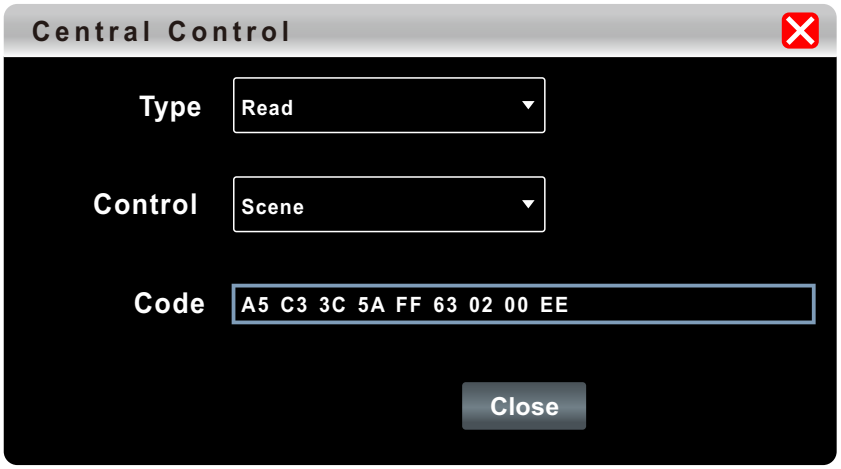
1	2	3	4	5	6	7	8	9	10
Frame header				ID	Read-write bit	Function code	Data length	Scene number	End of frame
0xA5	0xC3	0x3C	0x5A	0xFF	0x36	0x02	0x01	0x01-0x1F	0xEE

Read-write bit:0x63

Scene number: represents the scene number of the current call, with a range of 1 to 30 (0x01-0x1E).

Example: the device returns A5 C3 3C 5A FF 36020101 EE indicating that the current call scene number is 1.

Users can quickly find the central control code through "device central control protocol"



Appendix 1 Common central control protocol instructions

1.Scene (archive) management

1.1 Scene call

Call scene 1 (factory default scene)	A5 C3 3C 5A FF 36 02 01 01 EE
Call scene 2	A5 C3 3C 5A FF 36 02 01 02 EE
Call scene 3	A5 C3 3C 5A FF 36 02 01 03 EE
Call scene 4	A5 C3 3C 5A FF 36 02 01 04 EE
Call scene 5	A5 C3 3C 5A FF 36 02 01 05 EE
Call scene 6	A5 C3 3C 5A FF 36 02 01 06 EE
Call scene 7	A5 C3 3C 5A FF 36 02 01 07 EE
Call scene 8	A5 C3 3C 5A FF 36 02 01 08 EE
Call scene 9	A5 C3 3C 5A FF 36 02 01 09 EE
Call scene 10	A5 C3 3C 5A FF 36 02 01 0A EE
Call scene 11	A5 C3 3C 5A FF 36 02 01 0B EE
Call scene 12	A5 C3 3C 5A FF 36 02 01 0C EE
Call scene 13	A5 C3 3C 5A FF 36 02 01 0D EE
Call scene 14	A5 C3 3C 5A FF 36 02 01 0E EE
Call scene 15	A5 C3 3C 5A FF 36 02 01 0F EE
Call scene 16	A5 C3 3C 5A FF 36 02 01 10 EE
Call scene 17	A5 C3 3C 5A FF 36 02 01 11 EE
Call scene 18	A5 C3 3C 5A FF 36 02 01 12 EE
Call scene 19	A5 C3 3C 5A FF 36 02 01 13 EE
Call scene 20	A5 C3 3C 5A FF 36 02 01 14 EE
Call scene 21	A5 C3 3C 5A FF 36 02 01 15 EE
Call scene 22	A5 C3 3C 5A FF 36 02 01 16 EE
Call scene 23	A5 C3 3C 5A FF 36 02 01 17 EE
Call scene 24	A5 C3 3C 5A FF 36 02 01 18 EE
Call scene 25	A5 C3 3C 5A FF 36 02 01 19 EE
Call scene 26	A5 C3 3C 5A FF 36 02 01 1A EE
Call scene 27	A5 C3 3C 5A FF 36 02 01 1B EE
Call scene 28	A5 C3 3C 5A FF 36 02 01 1C EE
Call scene 29	A5 C3 3C 5A FF 36 02 01 1D EE
Call scene 30	A5 C3 3C 5A FF 36 02 01 1E EE

1.2 scene (archive) read

Read current archive	A5 C3 3C 5A FF 63 02 00 EE

2. Mute control

2.1 I / O channel mute

1 Mute	A5 C3 3C 5A FF 36 03 03 01 01 01 EE
Input channel 2 mute	A5 C3 3C 5A FF 36 03 03 01 02 01 EE
Input channel 3 mute	A5 C3 3C 5A FF 36 03 03 01 03 01 EE
Input channel 4 mute	A5 C3 3C 5A FF 36 03 03 01 04 01 EE
Input channel 5 mute	A5 C3 3C 5A FF 36 03 03 01 05 01 EE
Input channel 6 mute	A5 C3 3C 5A FF 36 03 03 01 06 01 EE
Input channel 7 mute	A5 C3 3C 5A FF 36 03 03 01 07 01 EE
Input channel 8 mute	A5 C3 3C 5A FF 36 03 03 01 08 01 EE
Input channel 1 unmute	A5 C3 3C 5A FF 36 03 03 01 01 00 EE
Input channel 2 unmute	A5 C3 3C 5A FF 36 03 03 01 02 00 EE
Input channel 3 unmute	A5 C3 3C 5A FF 36 03 03 01 03 00 EE
Input channel 4 unmute	A5 C3 3C 5A FF 36 03 03 01 04 00 EE
Input channel 5 unmute	A5 C3 3C 5A FF 36 03 03 01 05 00 EE
Input channel 6 unmute	A5 C3 3C 5A FF 36 03 03 01 06 00 EE
Input channel 7 unmute	A5 C3 3C 5A FF 36 03 03 01 07 00 EE
Input channel 8 unmute	A5 C3 3C 5A FF 36 03 03 01 08 00 EE
Output total mute	A5 C3 3C 5A FF 36 03 03 02 01 01 EE
Output total unmute	A5 C3 3C 5A FF 36 03 03 02 02 00 EE
Output channel 3 mute	A5 C3 3C 5A FF 36 03 03 02 03 01 EE
Output channel 4 mute	A5 C3 3C 5A FF 36 03 03 02 04 01 EE
Output channel 5 mute	A5 C3 3C 5A FF 36 03 03 02 05 01 EE
Output channel 6 mute	A5 C3 3C 5A FF 36 03 03 02 06 01 EE
Output channel 7 mute	A5 C3 3C 5A FF 36 03 03 02 07 01 EE
Output channel8 mute	A5 C3 3C 5A FF 36 03 03 02 08 01 EE

Output channel 1 unmute	A5 C3 3C 5A FF 36 03 03 02 01 00 EE
Output channel 2 unmute	A5 C3 3C 5A FF 36 03 03 02 02 00 EE
Output channel 3 unmute	A5 C3 3C 5A FF 36 03 03 02 03 00 EE
Output channel 4 unmute	A5 C3 3C 5A FF 36 03 03 02 04 00 EE
Output channel 5 unmute	A5 C3 3C 5A FF 36 03 03 02 05 00 EE
Output channel 6 unmute	A5 C3 3C 5A FF 36 03 03 02 06 00 EE
Output channel 7 unmute	A5 C3 3C 5A FF 36 03 03 02 07 00 EE
Output channel 8 unmute	A5 C3 3C 5A FF 36 03 03 02 08 00 EE

2.2 Read the mute state of input and output channels

Read the mute state of input channel 1	A5 C3 3C 5A FF 63 03 02 01 01 EE

3. I / O channel volume gain setting

The volume gain of input channel 1 is set to - 20.0db	A5 C3 3C 5A FF 36 04 04 01 05 69 00 EE
The volume gain of output channel 8 is set to 6.0db	A5 C3 3C 5A FF 36 04 04 02 08 3C 00 EE

3.1 Volume reading of I / O channel volume gain

Read volume gain input channel 1	A5 C3 3C 5A FF 63 04 02 01 01 EE

4. I / O volume gain increases and decreases progressively

Input channel 1 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 01 01 00 0A EE
Input channel 2 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 01 02 00 0A EE
Input channel 3 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 01 03 00 0A EE
Input channel 4 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 01 04 00 0A EE
Input channel 5 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 01 05 00 0A EE
Input channel 6 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 01 06 00 0A EE
Input channel 7 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 01 07 00 0A EE
Input channel 8 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 01 08 00 0A EE

Input channel 1 volume gain reduce by 1.0 DB	A5 C3 3C 5A FF 36 05 04 01 01 0A EE
Input channel 2 volume gain reduce by 1.0 DB	A5 C3 3C 5A FF 36 05 04 01 02 01 EE
Input channel 3 volume gain reduce by 1.0 DB	A5 C3 3C 5A FF 36 05 04 01 03 01 EE
Input channel 4 volume gain reduce by 1.0 DB	A5 C3 3C 5A FF 36 05 04 01 04 01 EE
Input channel 5 volume gain reduce by 1.0 DB	A5 C3 3C 5A FF 36 05 04 01 05 01 EE
Input channel 6 volume gain reduce by 1.0 DB	A5 C3 3C 5A FF 36 05 04 01 06 01 EE
Input channel 7 volume gain reduce by 1.0 DB	A5 C3 3C 5A FF 36 05 04 01 07 01 EE
Input channel 8 volume gain reduce by 1.0 DB	A5 C3 3C 5A FF 36 05 04 01 08 01 EE
Output channel 1 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 01 00 0A EE
Output channel 2 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 02 00 0A EE
Output channel 3 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 03 00 0A EE
Output channel 4 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 04 00 0A EE
Output channel 5 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 05 00 0A EE
Output channel 6 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 06 00 0A EE
Output channel 7 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 07 00 0A EE
Output channel 8 volume gain increase by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 08 00 0A EE
Output channel 1 volume gain reduce by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 01 01 0A EE
Output channel 2 volume gain reduce by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 02 01 0A EE
Output channel 3 volume gain reduce by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 03 01 0A EE
Output channel 4 volume gain reduce by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 04 01 0A EE
Output channel 5 volume gain reduce by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 05 01 0A EE
Output channel 6 volume gain reduce by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 06 01 0A EE
Output channel 7 volume gain reduce by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 07 01 0A EE
Output channel 8 volume gain reduce by 1.0 dB	A5 C3 3C 5A FF 36 05 04 00 08 01 0A EE

5. Line / Mic switch settings

Input channel 1 sets Line input	A5 C3 3C 5A FF 36 06 02 01 01 EE
Input channel 2 sets Line input	A5 C3 3C 5A FF 36 06 02 02 01 EE
Input channel 3 sets Line input	A5 C3 3C 5A FF 36 06 02 03 01 EE

Input channel 4 sets Line input	A5 C3 3C 5A FF 36 06 02 04 01 EE
Input channel 5 sets Line input	A5 C3 3C 5A FF 36 06 02 05 01 EE
Input channel 6 sets Line input	A5 C3 3C 5A FF 36 06 02 06 01 EE
Input channel 7 sets Line input	A5 C3 3C 5A FF 36 06 02 07 01 EE
Input channel 8 sets Line input	A5 C3 3C 5A FF 36 06 02 08 01 EE
Input channel 1 sets Mic input	A5 C3 3C 5A FF 36 06 02 01 00 EE
Input channel 2 sets Mic input	A5 C3 3C 5A FF 36 06 02 02 00 EE
Input channel 3 sets Mic input	A5 C3 3C 5A FF 36 06 02 03 00 EE
Input channel 4 sets Mic input	A5 C3 3C 5A FF 36 06 02 04 00 EE
Input channel 5 sets Mic input	A5 C3 3C 5A FF 36 06 02 05 00 EE
Input channel 6 sets Mic input	A5 C3 3C 5A FF 36 06 02 06 00 EE
Input channel 7 sets Mic input	A5 C3 3C 5A FF 36 06 02 07 00 EE
Input channel 8 sets Mic input	A5 C3 3C 5A FF 36 06 02 08 00 EE

5.1 Read Line / Mic status

Read Line / Mic status of input channel 1	A5 C3 3C 5A FF 63 06 01 01 EE

6. Phantom power settings

Set input channel 1 phantom power on	A5 C3 3C 5A FF 36 07 02 01 01 EE
Set input channel 2 phantom power on	A5 C3 3C 5A FF 36 07 02 02 01 EE
Set input channel 3 phantom power on	A5 C3 3C 5A FF 36 07 02 03 01 EE
Set input channel 4 phantom power on	A5 C3 3C 5A FF 36 07 02 04 01 EE
Set input channel 5 phantom power on	A5 C3 3C 5A FF 36 07 02 05 01 EE
Set input channel 6 phantom power on	A5 C3 3C 5A FF 36 07 02 06 01 EE
Set input channel 7 phantom power on	A5 C3 3C 5A FF 36 07 02 07 01 EE
Set input channel 8 phantom power on	A5 C3 3C 5A FF 36 07 02 08 01 EE
Set input channel 1 phantom power off	A5 C3 3C 5A FF 36 07 02 01 00 EE
Set input channel 2 phantom power off	A5 C3 3C 5A FF 36 07 02 02 00 EE
Set input channel 3 phantom power off	A5 C3 3C 5A FF 36 07 02 03 00 EE
Set input channel 4 phantom power off	A5 C3 3C 5A FF 36 07 02 04 00 EE

Set input channel 5 phantom power off	A5 C3 3C 5A FF 36 07 02 05 00 EE
Set input channel 6 phantom power off	A5 C3 3C 5A FF 36 07 02 06 00 EE
Set input channel 7phantom power off	A5 C3 3C 5A FF 36 07 02 07 00 EE
Set input channel 8phantom power off	A5 C3 3C 5A FF 36 07 02 08 00 EE

6.1 Read phantom power status

Read the phantom power state of input channel 1	A5 C3 3C 5A FF 63 07 01 01 EE

7. Feedback suppression settings

Turn off the feedback suppression state of input channel 1	A5 C3 3C 5A FF 36 08 02 01 00 EE
Turn off the feedback suppression state of input channel 2	A5 C3 3C 5A FF 36 08 02 02 00 EE
Turn off the feedback suppression state of input channel 3	A5 C3 3C 5A FF 36 08 02 03 00 EE
Turn off the feedback suppression state of input channel 4	A5 C3 3C 5A FF 36 08 02 04 00 EE
Turn off the feedback suppression state of input channel 5	A5 C3 3C 5A FF 36 08 02 05 00 EE
Turn off the feedback suppression state of input channel 6	A5 C3 3C 5A FF 36 08 02 06 00 EE
Turn off the feedback suppression state of input channel 7	A5 C3 3C 5A FF 36 08 02 07 00 EE
Turn off the feedback suppression state of input channel 8	A5 C3 3C 5A FF 36 08 02 08 00 EE
Set feedback suppression level 1 for input channel 1	A5 C3 3C 5A FF 36 08 02 01 01 EE
Set feedback suppression level 1 for input channel 2	A5 C3 3C 5A FF 36 08 02 02 01 EE
Set feedback suppression level 1 for input channel 3	A5 C3 3C 5A FF 36 08 02 03 01 EE
Set feedback suppression level 1 for input channel 4	A5 C3 3C 5A FF 36 08 02 04 01 EE
Set feedback suppression level 1 for input channel 5	A5 C3 3C 5A FF 36 08 02 05 01 EE
Set feedback suppression level 1 for input channel 6	A5 C3 3C 5A FF 36 08 02 06 01 EE
Set feedback suppression level 1 for input channel 7	A5 C3 3C 5A FF 36 08 02 07 01 EE
Set feedback suppression level 1 for input channel 8	A5 C3 3C 5A FF 36 08 02 08 01 EE
Set feedback suppression level 1 for input channel 1	A5 C3 3C 5A FF 36 08 02 01 01 EE
Set feedback suppression level 2 for input channel 2	A5 C3 3C 5A FF 36 08 02 02 01 EE
Set feedback suppression level 3 for input channel 3	A5 C3 3C 5A FF 36 08 02 03 01 EE
Set feedback suppression level 4 for input channel 4	A5 C3 3C 5A FF 36 08 02 04 01 EE

Set feedback suppression level 5 for input channel 5	A5 C3 3C 5A FF 36 08 02 05 01 EE
Set feedback suppression level 6 for input channel 6	A5 C3 3C 5A FF 36 08 02 06 01 EE
Set feedback suppression level 7 for input channel 7	A5 C3 3C 5A FF 36 08 02 07 01 EE
Set feedback suppression level 8 for input channel 8	A5 C3 3C 5A FF 36 08 02 08 01 EE

7.1 Read feedback suppression status

Read the feedback suppression status of input channel 1	A5 C3 3C 5A FF 63 08 01 01 EE

8. Matrix mix settings

Set input channel 1 - output channel 1 on	A5 C3 3C 5A FF 36 09 03 01 01 01 EE
Set input channel 1 - output channel 2 on	A5 C3 3C 5A FF 36 09 03 01 02 01 EE
Set input channel 1 - output channel 3 on	A5 C3 3C 5A FF 36 09 03 01 03 01 EE
Set input channel 1 - output channel 4 on	A5 C3 3C 5A FF 36 09 03 01 04 01 EE
Set input channel 1 - output channel 5 on	A5 C3 3C 5A FF 36 09 03 01 05 01 EE
Set input channel 1 - output channel 6 on	A5 C3 3C 5A FF 36 09 03 01 06 01 EE
Set input channel 1 - output channel 7 on	A5 C3 3C 5A FF 36 09 03 01 07 01 EE
Set input channel 1 - output channel 8 on	A5 C3 3C 5A FF 36 09 03 01 0 01 EE
Set input channel 1 - output channel 1 off	A5 C3 3C 5A FF 36 09 03 01 01 00 EE
Set input channel 1 - output channel 2 off	A5 C3 3C 5A FF 36 09 03 01 02 00 EE
Set input channel 1 - output channel 3 off	A5 C3 3C 5A FF 36 09 03 01 03 00 EE
Set input channel 1 - output channel 4 off	A5 C3 3C 5A FF 36 09 03 01 04 00 EE
Set input channel 1 - output channel 5 off	A5 C3 3C 5A FF 36 09 03 01 05 00 EE
Set input channel 1 - output channel 6 off	A5 C3 3C 5A FF 36 09 03 01 06 00 EE
Set input channel 1 - output channel 7 off	A5 C3 3C 5A FF 36 09 03 01 07 00 EE
Set input channel 1 - output channel 8 off	A5 C3 3C 5A FF 36 09 03 01 08 00 EE

8.1 Read matrix mixing status

Read the feedback suppression status of input channel 1	A5 C3 3C 5A FF 63 09 02 01 01 EE

9. Camera position return

The camera should be rotated back to the default position	A5 C3 3C 5A FF 63 0A 01 00 EE
The camera should turn to the corresponding position of channel 1	A5 C3 3C 5A FF 63 0A 01 01 EE
The camera should turn to the corresponding position of channel 2	A5 C3 3C 5A FF 63 0A 01 02 EE
The camera should turn to the corresponding position of channel 3	A5 C3 3C 5A FF 63 0A 01 03 EE
The camera should turn to the corresponding position of channel 4	A5 C3 3C 5A FF 63 0A 01 04 EE
The camera should turn to the corresponding position of channel 5	A5 C3 3C 5A FF 63 0A 01 05 EE
The camera should turn to the corresponding position of channel 6	A5 C3 3C 5A FF 63 0A 01 06 EE
The camera should turn to the corresponding position of channel 7	A5 C3 3C 5A FF 63 0A 01 07 EE
The camera should turn to the corresponding position of channel 8	A5 C3 3C 5A FF 63 0A 01 08 EE

10. Troubleshooting

If the device can not work normally after opening, please follow the following steps to remove the fault:

1. Check whether the mute is turned on, and connect the BraincoreNet software to check;
2. Check whether the matrix router configuration of the device is correct, and connect the BraincoreNet software to check.
3. Dante system connects DanteController to check whether the sampling rate is set at 48K.

Appendix 2 Specifications

	Artist T88D	Artist T88
DSP chip		
Signal processing	32-bit fixed/floating - point DSP 300MHz	
Audio system delay	< 1ms (analog in - analog out)	
AD / DA converter	24-bit	
Sampling rate	96KHz	
Analog audio input and output		
Input channel	8-channel electronic balanced line input, 4-channel Dante input	8-channel electronic balanced microphone, line input
Output channel	8-channel electronic balanced line output, 4-channel Dante output	8-channel electronic balanced microphone, line output
Input audio port	Euro-block(Analog input), RJ-45(Dante input)	3.81mm Euro-block(Analog input)
Output audio port	Euro-block(Analog output), RJ-45(Dante output)	3.81mm Euro-block(Analog output)
Input impedance	>10KΩ	
Output impedance	<150Ω	
Maximum input level	>+14dBu/Line,-7dBu/microphone	
Phantom power	+48VDC,6.5mA(Each channel can be selected)	
Audio index		
Frequency response	20Hz-20kHz(+-0.5dB)/Line 20Hz-20kHz(+-0.5dB)/mic	
Dynamic range	105dB(@12dBu,1kHz,A Weighting)/Line 95dB(@-7dBu,1kHz,Aweighted)/mic	
Total harmonic distortion	-90dB(@12dBu,1kHz,A Weighting)/Line 86dB(@-7dBu,1kHz,Aweighted)/mic	
Connection and display		
USB	Micro-B type,drive free	
RS485/RS232 interface	serial communication	
TCP/IP Network port	RJ-45	
Indicator light	Power,+48V,Input,Output	
Electrical and physical parameters		
Power supply scope	AC100V---240V @ 50/60 Hz	
Dimension (L * W * H)	484mm*44mm*245mm	
Net weight	3.5kg	

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