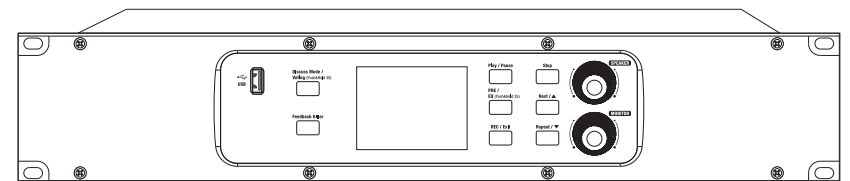


User's Manual

Digital Conference System



Important Safety Instructions



TO REDUCE THE RISK OF ELECTRIC SHOCK PLEASE DO NOT REMOVE THE COVER OR THE BACK PANEL OF THIS EQUIPMENT. THERE ARE NO PARTS NEEDED BY USER INSIDE THE EQUIPMENT. FOR SERVICE, PLEASE CONTACT QUALIFIED SERVICE CENTERS.



This symbol, wherever used, alerts you to the presence of un-insulated and dangerous voltages in the product enclosure. These are voltages that may be sufficient to constitute the risk of electric shock or death.



This symbol, wherever used, alerts you to important operating and maintenance instructions. Please read.



Protective Ground Terminal



AC mains (Alternating Current)




Hazardous Live Terminal

ON: Denotes the product is turned on.

OFF: Denotes the product is turned off.

CAUTION

Describes precautions that should be observed to prevent damage to the product.

1. Read this Manual carefully before operation.
2. Keep this Manual in a safe place.
3. Be aware of all warnings reported with this symbol. 
4. Keep this Equipment away from water and moisture.
5. Clean it only with dry cloth. Do not use solvent or other chemicals.
6. Do not damp or cover any cooling opening. Install the equipment only in accordance with the Manufacturer's instructions.
7. Power Cords are designed for your safety. Do not remove Ground connections! If the plug does not fit your AC outlet, seek advice from a qualified electrician. Protect the power cord and plug from any physical stress to avoid risk of electric shock. Do not place heavy objects on the power. This could cause electric shock or fire.
8. Unplug this equipment when unused for long periods of time or during a storm.
9. Refer all service to qualified service personnel only. Do not perform any servicing other than those instructions contained within the User's Manual.
10. To prevent fire and damage to the product, use only the recommended fuse type as indicated in this manual. Do not short-circuit the fuse holder.

WARNING

To reduce the risk of electric shock and fire, do not expose this equipment to moisture or rain.



Dispose of this product should not be placed in municipal waste and should be separate collection.

Before replacing the fuse, make sure that the product is OFF and disconnected from the AC outlet.

11. Move this Equipment only with a cart, stand, tripod, or bracket, specified by the manufacturer, or sold with the Equipment. When a cart is used, use caution when moving the cart/equipment combination to avoid possible injury from tip-over.



12. Permanent hearing loss may be caused by exposure to extremely high noise levels. The US Government's Occupational Safety and Health Administration (OSHA) has specified the permissible exposure to noise level. These are shown in the following chart:

Hours x day	SPL	Example
8	90	Small gig
6	92	Train
4	95	Subway train
3	97	High level desktop monitors
2	100	Classic music concert
1.5	102	
1	105	
0.5	110	
0.25 or less	115	Rock Concert

According to OSHA, an exposure to high SPL in excess of these limits may result in the loss of heat. To avoid the potential damage of heat, it is recommended that Personnel exposed to equipment capable of generating high SPL use hearing protection while such equipment is under operation.

The apparatus shall be connected to a mains socket outlet with a protective earthing connection.

The mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

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under the EM disturbance, the ratio of signal-noise may be changed above 3dB.

* The mixer for professional use. They can be used in following electromagnetic environment: residential, commercial and light industrial, urban outdoors.
They are the apparatus not intended for rack mounting.

* The peak inrush currents equal to 8.33 A.

*This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1)this device may not cause harmful interference, and (2)this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

1

Introduction

Thank you for purchasing digital conference system. It is a new generation of advanced digital conference system, all data and audio are used digital signal processing. The system includes the host, chairman machine, attendance machine, expansion machine and multiple video switcher. Software includes the scene preset, microphone management, voting management, feedback suppression, audio equalization and other functions.

It is recommended that you carefully read the manual before using it to familiarize yourself with its features, applications, and proper connection. Thank you again for purchasing our products.

2

Features

- Built-in digital feedback suppressor.
- Integrated recording function, the recording data can be stored in external USB device at real-time.
- Expand maximum to 72 pcs.
- Discussion mode can be configured by software.
- Optional module expansion interface: Dante module.
- Voting function.
- Simultaneous interpretation function.
- Report function.
- Camera-tracking function.

3

Usefull Data

Please write your serial number here for future reference.

Serial Number:

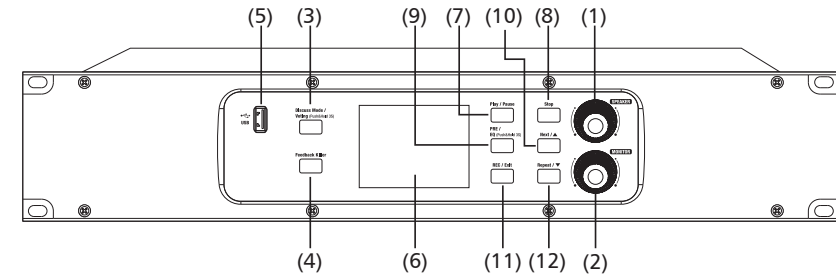
Date of Purchase:

Purchased at:

12 Electrical Specifications

Microphone input	Electronically balanced
Frequency Response to Main Output	200Hz~6KHz at 0dBu ± 1.5 dB Vocal (can be updated by software to get a wider frequency)
Distortion(THD&N) to Main Output	<0.01% at 0dBu 1KHz
SNR(Signal to Noise Ratio)	97dB
Maximum Input Level	-20dBu
Phantom Power(+/-3V)	+48VDC
input	Unbalanced
Frequency Response to Main Output	200Hz~6KHz at 0dBu ± 1.5 dB Vocal (can be updated by software to get a wider frequency)
Distortion(THD&N) to Main Output	<0.01% at 0dBu 1KHz
Maximum Input Level(Gain at 0dBu)	+10dBu
MP3 input	Balanced
Frequency Response to Main Output	200Hz~6KHz at 0dBu ± 1.5 dB Vocal (can be updated by software to get a wider frequency)
Distortion(THD&N) to Main Output	<0.01% at 0dBu 1KHz
Maximum Input Level	+10dBu
OUTPUT A/B	
Maximum Output Level	+10dBu
RCA OUTPUT A/B	
Maximum Output Level	+10dBu
MP3 Play Outputs	
Maximum Output Level	-3dBu
EQ	
Low (LowPass or LowShelf)	21Hz~19.2KHz +/- 24dB
Low Mid	21Hz~19.2KHz +/- 24dB
High Mid	21Hz~19.2KHz +/- 24dB
High(HighPass or HighShelf)	21Hz~19.2KHz +/- 24dB
Digital Audio	
AD/DA Dynamic Range	114dB
Internal Processor	32-bit , floating point
ADC,DAC bit depth	32bit

Panel Description



1) Speaker volume control

Short Press: Rotate left and right to adjust the volume, short press has no function.
Long Press: Lock the device, any operation in the locked state requires a password to unlock.

2) Discussion device volume control

It is used to adjust the output volume of the chairman machine' and attendance machine' speakers and headphones in the main interface.
It also can be used to move the cursor left and right in the EQ adjustment interface.

Monitor:

Short press: Rotate left and right to adjust the volume, short press has no function
Long Press: Perform device password change when unlocked

Password setting: long press monitor to enter the password setting interface (four-digit password). Move the monitor cursor to select the appropriate position, turn the speaker knob to select the number, short press of the speaker knob to confirm. After the whole password is set, short press the speaker knob to confirm the password. Long press the speaker knob to lock system, when locked, pressing any button on the panel is required to enter the password in order to unlock the operation.

3) Voting mode/Discuss mode selection button

Long press: Entering voting mode, there are three options for agreeing, disagreeing, and dropping. Short press the play/pause button and the host will start voting.
Short press: Switch the discussion modes: 1 person, 3 persons, 6 persons, 9 persons and all.

4) Feedback suppression button

Long Press: Initialize FBC related filter configuration
ShortPress: Turn on or off the Feedback function. Turn on the Feedback function, its backlight will light up, and the feedback suppression function will turn on to suppress howling caused by the microphone.

Panel Description

5) USB port

Insert USB, it can store meeting recording, play meeting recording and background music. Support format: MP3, WMA, AAC, WAC.

6) LCD

This LCD screen displays information such as volume, recording, and discussion mode, etc.

7) Play / Pause

Pressing this button can start playing and pause playing.

This button can bypass all EQ high and low pass, press again can restore to the state before Bypass in EQ adjustment interface.

8) Stop button

Short Press: Stop playing audio files when USB is inserted.

Long Press: Fire alarm function.

9) EQ/Pre recording button

Long press: Enter EQ setting interface.

Short press: Start to play the previous recorded recording in the main interface.

10) Next recording/Up button

Short Press: When the USB is plugged in, play the next audio file.

Long Press: Switch FIFO function.

11) Record/ Exit button

In the main interface, press this button to start recording the audio. Press again to end the recording and save the audio. In other interfaces, press this button to exit the current interface and return to the main interface.

12) Repeat/Down button

Press this button in the main interface to repeat the recording. Press again to cancel loop playback.

In the EQ interface, press this button to move the cursor down.

Short press: return key.

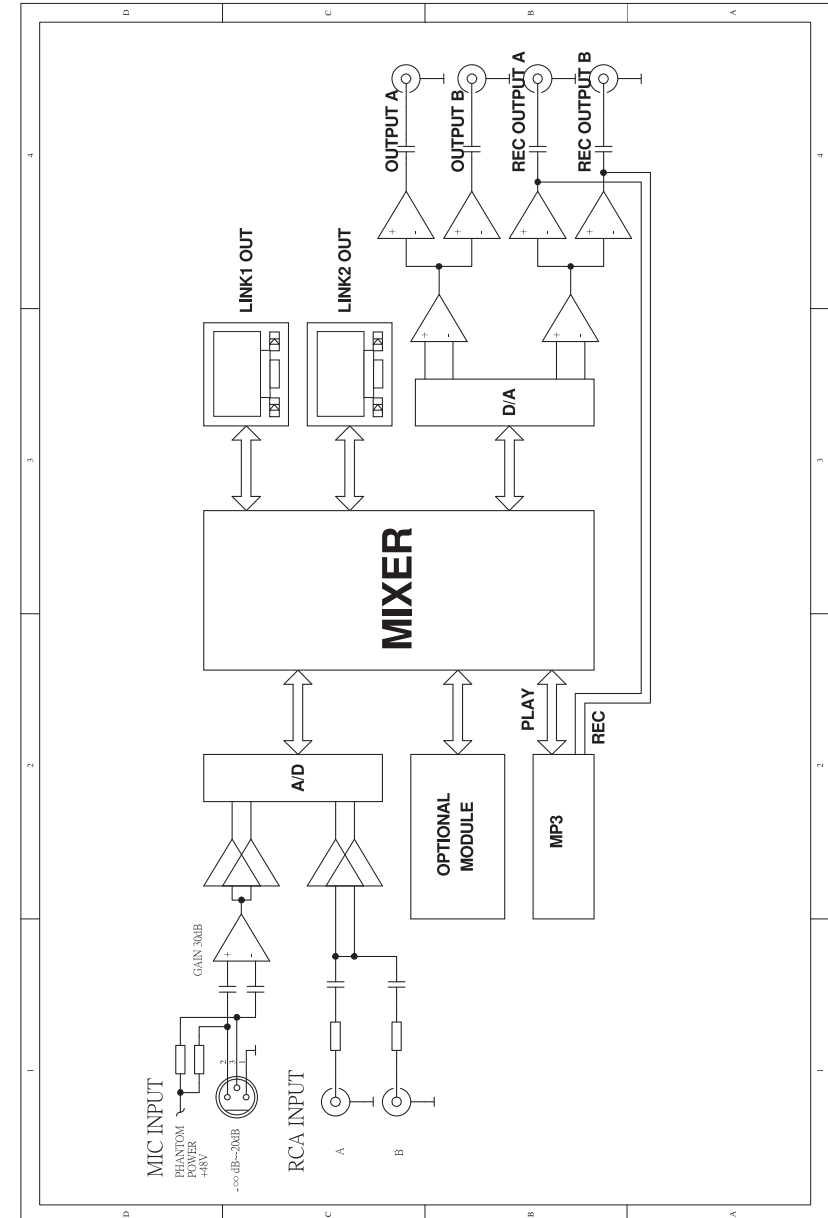
Long press: switch. simultaneous interpretation function.

13) Combination keys

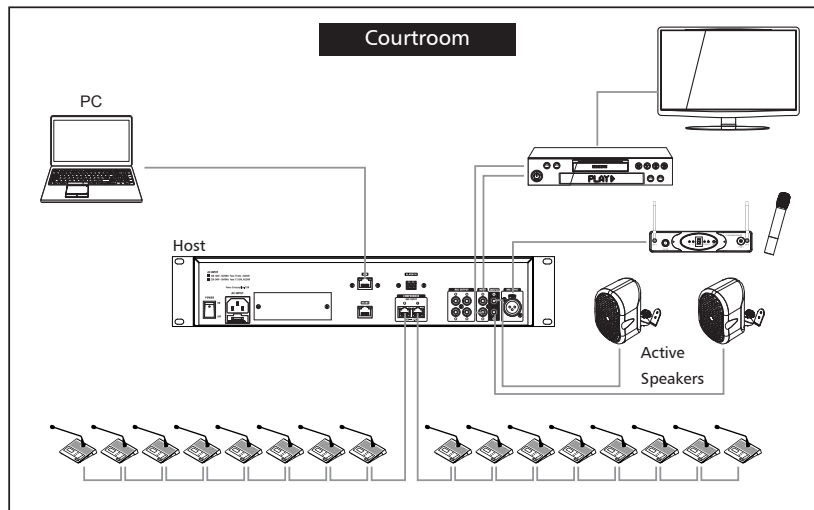
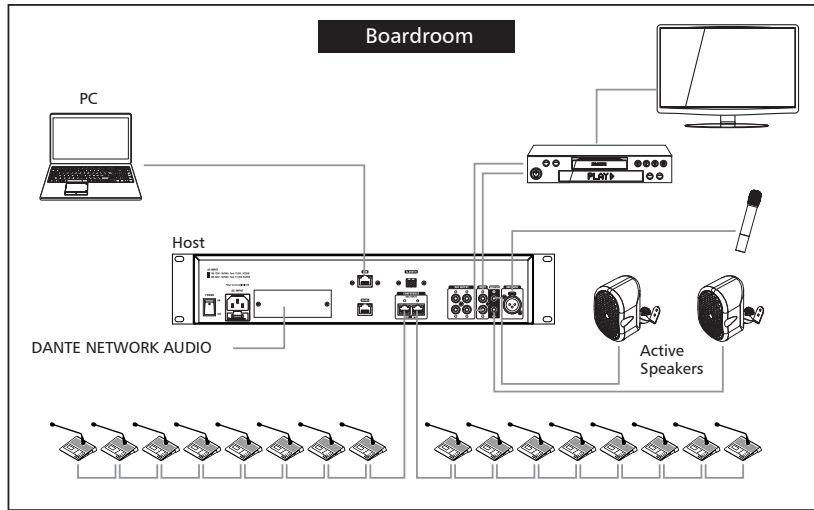
1. Discuss Mode+Feed Back The combination buttons are long press to enter the factory button detection.

2. Stop+Next+Repeat The combination of buttons are long press to restore all online machines in the unlocked state.

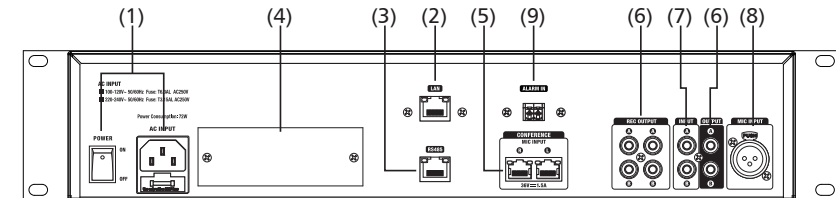
Block Diagram



10 System Application Diagram



Rear Panel Description



1) Power outlet and switch

It is used to turn on or off the device.

Note: before operating, observe the factory voltage, select the appropriate voltage.

2) Ethernet port

This port is the Ethernet port for connecting network cables.

3) RS485

It is used for multiple video tracking switching.

4) Optional module

Connect to the 2 IN 2 OUT DANTE module, and can connect to the MATRIX SYSTEM.

5) Discussion device jack

It is used for connecting to the chairman machine and the attendance machine.

6) RCA audio output

Used for connecting external input devices.

7) RCA audio input

It is a fire alarm signal input interface. When the fire alarm function is not turned on, the input interface signal will be directly mixed and output; when the fire alarm function is turned on, the input interface signal is not output in normal state, only when the device receives the fire alarm information from the emergency system Output only when At this time, other inputs will be blocked, and the fire alarm signal will be played at the maximum power of the device.

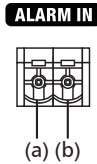
8) Microphone input

It is a simultaneous interpretation interface, generally used as the input source of simultaneous interpretation, which needs to be used with the simultaneous interpretation selection switch on Chairman/Delegate.

Rear Panel Description

9) Alarm In

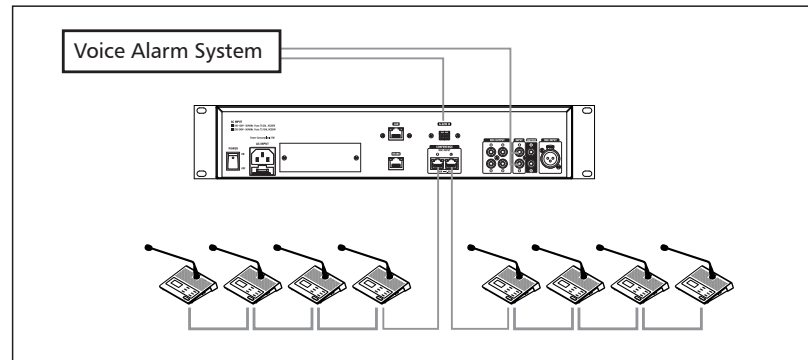
When this port receives a continuous alarm signal from a third-party system (such as the Voice Alarm System), the conference system will automatically turn off all microphone input and turn on the alarm broadcast input. At this time, the alarm system will play the alarm at the maximum volume. The words "Alarm input..." are displayed on the screen, as shown in the screenshot below. When the continuous alarm signal is disconnected, the conference system will return to normal use status.



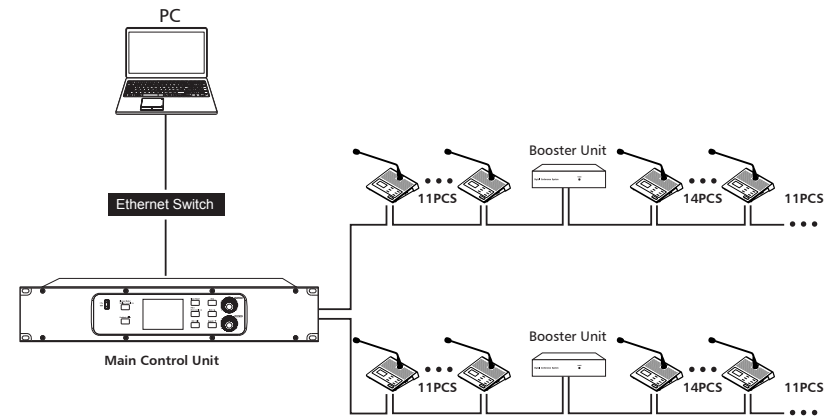
- a. GND
- b. ALARM IN

The alarm is triggered when the TX receives a low level.

Connection diagram:

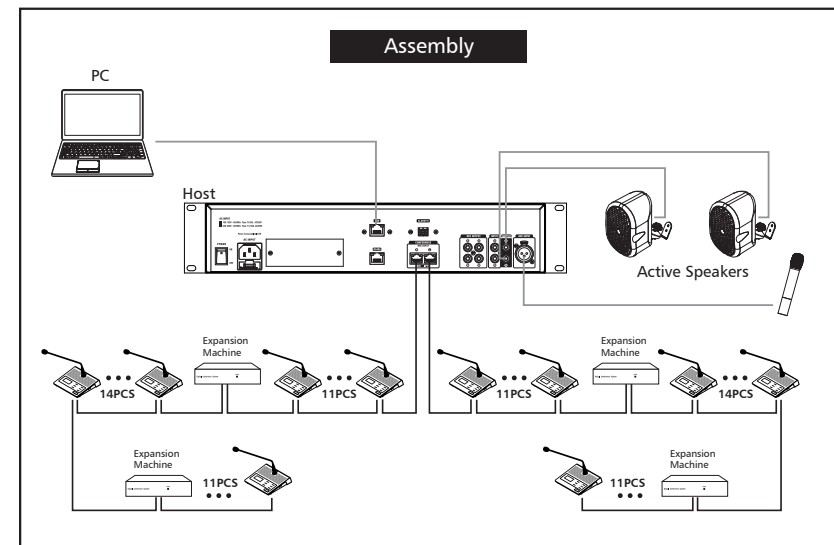


System Application Diagram



The conference system is a plug and play system, mainly used in small and medium-sized conference venues.

1. The distance from the main control unit to the first microphone is Less than (or equal to) 15 meters.
2. The maximum distance between each mic unit is 2 meters (by using CAT-5E FTP cables).
3. The maximum microphone unit is 11pcs *2 lines =total 22 mic units (with only one chairman unit allowed per system).
4. With an extra booster unit, 14 more microphone units can be added to each line.
5. Maximum 72 microphone units are allowed.



PC Software Editor

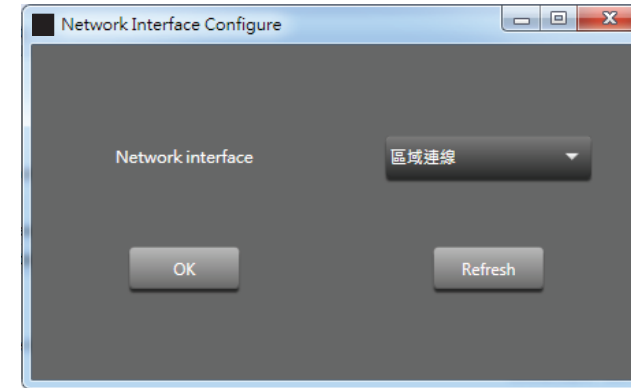
5. Boost: Enlarge the field of view in this area.
6. Volume: Set the decibel value of compression.
7. Flat: Click this button to restore the default parameters.
8. Bypass: After the signal here is not processed, skip directly to the next module.
9. Save: Save the preset to the device.
10. Load: Load the preset from the PC to the device.

Regard to EQ:

11. Freq: Touch this button to set the center frequency of the EQ low / mid-low / mid-high / high band. The center frequency is the midpoint of the passable frequency. It is between the lower and higher cut-off frequency (used to define the frequency limit). The center frequency can be set in the range: 20Hz-20KHz.
12. Q: Touch this button to set the Q value of the low / middle-low / middle-high / high frequency band of EQ. The range is 1.0~20. The Q value is the ratio of the center frequency to the broadband. If the center frequency does not change, the broadband and Q are inversely proportional, That is, increase the Q value and narrow the bandwidth.
13. Gain: Increase the volume in dB.
14. Type: Type indicates the selected filter type, and different types indicate different waveforms and different filter frequency ranges.
15. Flat: Restore the preset parameters currently set to the default parameters.
16. Bypass: Press this key, this area function is invalid.
17. Save: Save the current preset parameters.
18. Load: Load the preset from the PC to the device.

PC Control

1. Firstly, after the device is connected successfully , then open the PC software.



Refresh: Refresh the network connection status.

OK: After the language/network connection is successful, you can enter the software interface.

2. After entering the software, the status light (green) in the upper left corner will automatically light up, indicating that the communication is normal. The status light (gray) indicates communication failure. If manually disconnected, please click connect after 3 seconds.
- Lock: Click to lock.

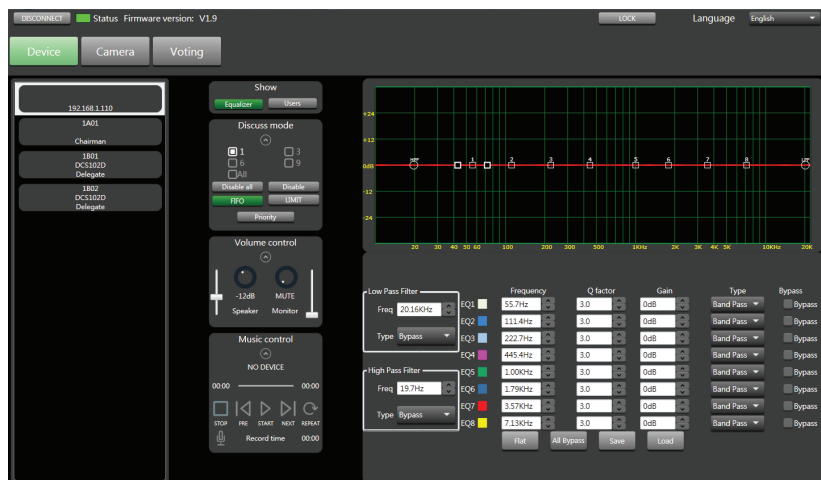
Attention:

Super administrator password is "9825". The super administrator password cannot be changed after leaving the factory and is unique. It can be used to reset the system password to "0000".

Step:

- 1) After the system is locked, enter the system password to unlock it, and an additional prompt will appear when the password is entered incorrectly.
- 2) Follow the additional prompts and press [play] to enter the reset interface.
- 3) Enter the super administrator password to confirm success and exit.
- 4) Or when setting a new password by entering the old password, press [play] to enter the reset interface.
- 5) Enter the super administrator password to confirm success and exit.

-Language: Chinese/English.



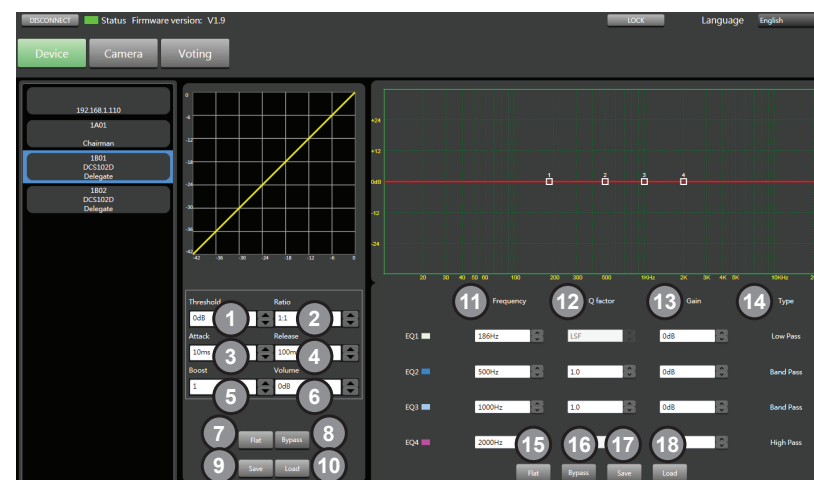
2.1 Interface switching

1-Equalizer: Click this button to display the EQ debugging interface

There are 8 EQ points on this page, you can debug EQ parameters including Low/High filter/type/Freq, Q/Gain, etc.

- 1) High/low pass type filter: 19.7Hz~20.16kHz.
- 2) High/low pass type: BW6/BW12/BS16/lk48 etc.
- 3) Frequency: 19.7Hz~20.16kHz
- 4) Q: There are 8 frequency points, the interval is 0.4~128.
- 5) Gain: -12dB~12dB
- 6) Type: Peak/Low Pass/High Pass
- 7) Bypass: The signal is not processed here and jumps directly to the next module.
- 8) Default: Click this button to restore the parameters to default.
- 9) All Bypass: Shield all frequency points.
- 10) Save preset saves the current parameters to the device.
- 11) Load preset: Load the preset from the local to the device.

Delegate Device



The compressor can reduce the dynamic range of the signal, for example: input signal with a dynamic range of 110db. When the compressor is output again, the new dynamic range becomes 70dB.

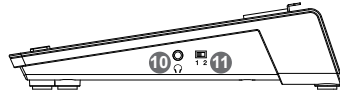
1. Threshold: Touch the button to set the compression trigger level of the selected channel. If the signal amplitude exceeds the trigger level, the compressor will work to reduce the signal level. The trigger level setting range is -42dB~0dB.
2. Compression ratio: Touch this control to adjust the compression ratio of the selected channel. The range is: 1:1~12.0:1. This ratio sets the slope of the compression, that is, the ratio of the output level to the input level. For example, if the ratio is set to 4:1, any signal higher than the trigger level will be It will be compressed at a ratio of 2:1. This means that for a signal above the trigger level, for every 4dB increase, the compressed output only increases by 1dB, and the ratio ranges from 10:1 to 1:1 until limited.
3. Attack: Touch this control to set the compression start speed of the selected channel. Start to set the speed at which compression will act on the signal. The starting time setting range is: 0.08ms~100ms.
4. Release: Touch this button to set the compression release time of the selected channel, how long it takes to release the signal below the trigger level to return to its normal gain, the release time is set to: 10ms~5000ms.

Chairman Device & Delegate Device

Chairman / Delegate Side panel

Simultaneous interpretation function:

The MIC INPUT on the rear panel is the simultaneous interpretation interface, which is generally used as the simultaneous interpretation input source. It needs to be used with (10) earphones and (11) simultaneous interpretation selection switches on the Chairman / Delegate.



1-When the simultaneous interpretation function is turned on :

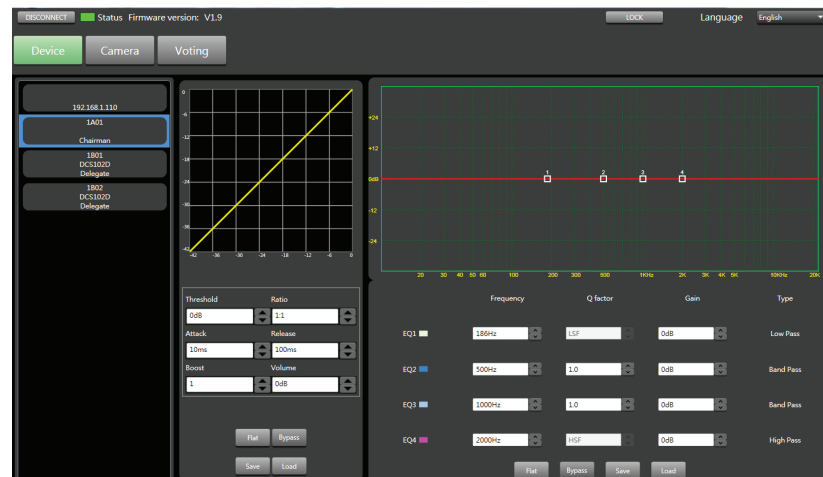
-Turn the switch to the "2" position, the audio source is selected as "simultaneous interpretation input", at this time the earphone (10) has only simultaneous interpretation input source.

2-When the simultaneous interpretation function is turned off,

-Turn the switch to the "1" position, and the audio source is selected as "mixed audio". At this time, the audio heard by the earphone (10) is played by the microphone, MP3, RCA input, and simultaneous interpretation input mixed audio source.

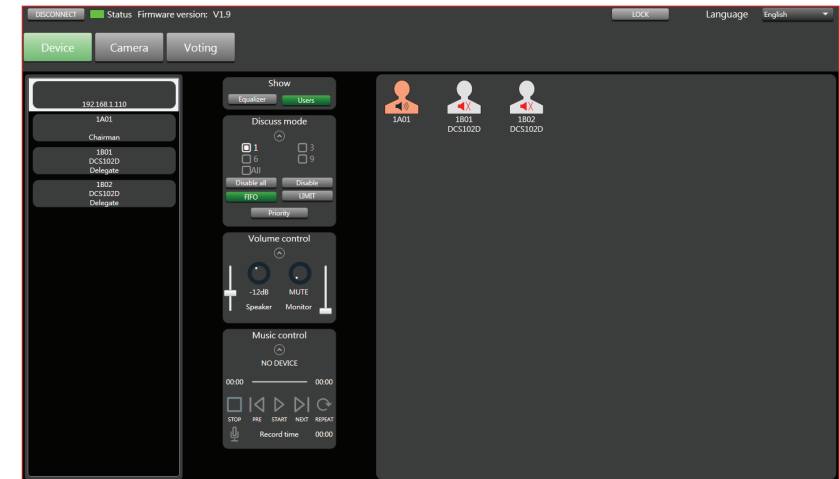
PC Software Editor

Chairman Device



PC Control

2.2 User



User: Click this button to display the member list. Enter the following interface (2.2)

Speaker icon with a black speaker means the microphone is active

Speaker icon with a red X means the microphone is off

Speaker icon with a red exclamation mark indicates that the microphone is disabled.

Double-click the name under the avatar to modify it.

2.3 Discuss mode:

1) 3 person: Allow up to 3 people to speak at the same time.

6 person: Allow up to 6 people to speak at the same time.

9 person: Allow up to 9 people to speak at the same time.

2) All: Everyone can talk at the same time.

Disable All: Click Disable All would mute all device except chairman device. Muted devices will not be able to vote. You can click Disable All again to cancel the mute status of all devices.

3) Disable: After clicking the muted machine, click the portrait icon to unmute the corresponding device outside the chairman machine, and click the muted device to remove mute status. You can click Disable again to turn off the select mute mode. Clicking the portrait icon will only activate or deactivate the microphone.

4) FIFO: First Input First Output.

5) LIMIT: Answer mode.

6) Priority: Click Priority button that chairman has priority to speak.

Attention: This button has no function when you did not connect the chairman device.

2.4 Volume Controller

1) Speaker: It was used to control the volume of speaker.

2) Monitor: It was used to control the volume of microphone.

2.5 Music Control

1) Show song name.

2) Show the current playback progress of the song

3) STOP: Press this button to stop the song. And it start from 00:00 when you press STOP again.

4) Pre: play next song.

5) Pause/Start: Pause / play the song.

5) Next: play next song.

6) Repeat: single circle.

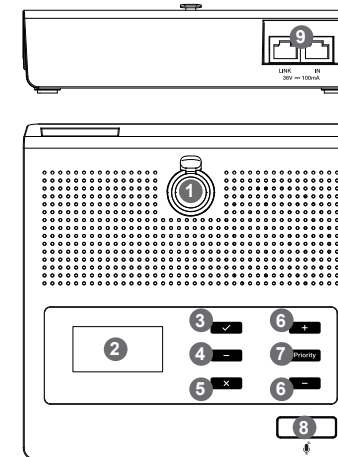
7) Record: Press record icon. it would recording at once. The routing often saves to USB.

Attention:

1. Please insert USB before you use MUSIC CONTROL. When a mobile storage device is inserted, the host will detect the device and read the storage device MP3 files. Click the record button to stop playing music and start recording.

2. If the storage device cannot be detected, the power supply may be insufficient. Please try to replace the storage device. If the device is severely stuck, please check whether your storage device contains non-MP3 files with large contents (it is recommended to use an empty storage device to put the files you want to play).

The difference between the appearance of the Chairman chairman unit and the Delegate attending unit is that Chairman has a Priority button (7) but Delegate does not have this button. Put two kinds of machines together to explain and introduce:



1. Microphone interface

The interface in the middle is used to connect a gooseneck microphone. Please note that if you need to replace it, please use a gooseneck microphone with LED, otherwise it may cause unpredictable results. (Pin 1 is grounding, pin 2 is LED power supply, pin 3 is signal, and there is a label above the socket.)

2. LCD screen

Used to display the current speaking status and recording information.

3. Agree

Touch Agree on the voting interface, and then click to confirm the selection.

4. Drop

Touch Drop on the voting interface, and then click to confirm the selection.

5. Disagree

Touch Drop on the voting interface, and then click to confirm the selection.

6. Volume adjustment

Touch "+" to increase the earphone volume.

Volume adjustment

Touch "-" to decrease the earphone volume.

7. Priority button

When the chairman machine is set to be the discussion device, touch "Priority" to cover the microphone of all other attendees and give priority to speaking.

8. MIC

Press this key on the main interface to activate and deactivate the microphone.

9. Conference system expansion

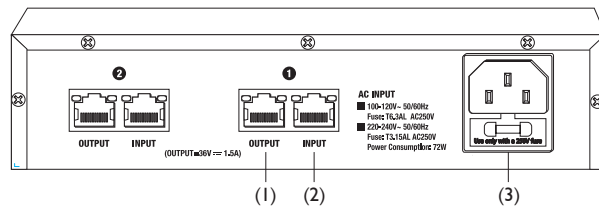
These two interfaces are used to connect multiple discussion devices. For example, the left interface connects to the previous device, the right interface connects to the next device, and so on.

Sub-device Description

Extender



Power: LED power on indicator



This device can be plug and play, mainly used in small and medium-sized meeting places.

Two-way expansion function, one way to expand 14 units.

- 1) Output: Network cable output, connect to the input of the next delegate.
- 2) Input: Network cable input, connect to the LINK output of an delegate.
- 3) AC Input: Power socket.

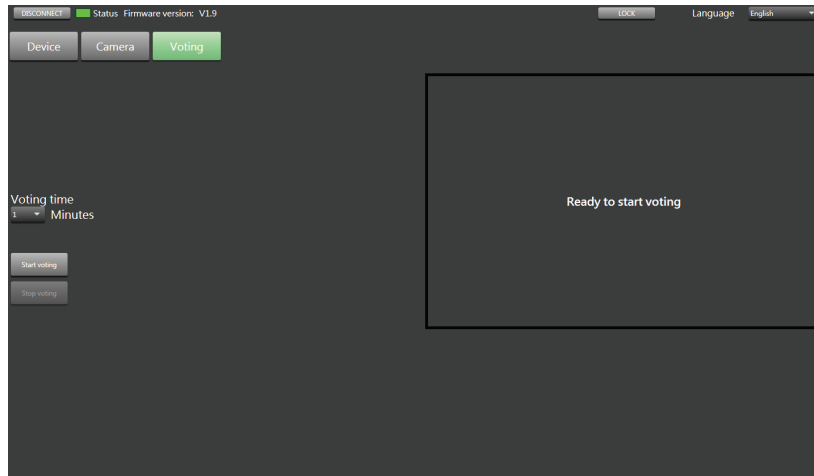
PC Control

2.6 Camera



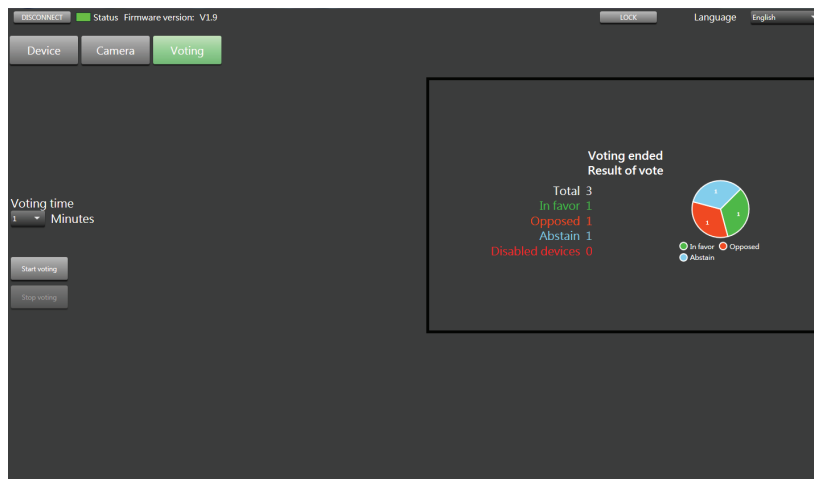
- 1) Serial Port: 485RS
- 2) Camera address: Connect to only 1 camera and selection of address set only be fixed 1 as above image.
- 3) Protocol: Protocol type selection.
- 4) Speed: Camera rotation speed setting
- 5) U P/ Left / Right / Down: Camera rotation direction.
- 6) Zoom In/Zoom Out/ Focus-/Focus+: Long press to adjust, release to stop.
- 7) Preset: Select the attending machine (its ID) to save the preset of the above settings.
- 8) Save: Click the button to save current preset.
- 9) Clear: Click Clear to clear the preset.
- 10) Preview: Preview the preset.

2.7 Voting



- 1) Voting Time: Here you can choose the voting duration, the interval is 1~18 minutes.
- 2) Start Voting: After choosing the voting duration, click Start voting to start voting. At the same time, the voting time countdown appears in the box on the right.
- 3) Stop Voting: Click the button to stop vote.

Function Example:



1 min voting as example:

- 1) Set voting time to 1 minute.
- 2) Click to start voting.
- 3) The time automatically enters a countdown. The speaker needs to press (double-click) Agree / Disagree / Drop on the touch screen of the chairman / delegate device.
- 4) Wait for finished the voting or click Stop voting to completed the voting.
- 5) The box on the right shows the statistics of the poll results.