

Paperless Multimedia Congress System



Remark:

- All rights reserved for translation, reprint or reproduction
- Contents may change without prior announcement
- All technical specifications are guideline data and not guaranteed features
- Taiden Co., Ltd. is not responsible for any damage caused by improper use of this manual
- The equipment must be connected to earth!
- This product conforms to the rules of the European directive 2014/30/EU.
- To protect your hearing, avoid high pressure level on earphones. Adjust to a lower and convenient level.
- If any detailed information is needed, please contact your local agent or **TAIDEN** service center in your region.
Any feedback, advice and suggestion about the products is appreciated.
- **TAIDEN** CongressMatrix、mMediaCongress are the registered trademarks of **TAIDEN** Co., Ltd.
- CobraNet is the registered trademark of Cirrus Logic, Inc.
- Dante is the registered trademark of Audinate Pty Ltd.
- **In order to extend the life time of the whole system, we strongly recommend that the congress system be scheduled to shut down every day in the evening when not in use.**

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
6. The MAINS plug serving as a disconnection device, should be easy to operate.
7. The apparatus should be connected to the MAINS socket-outlet with protective earth.
8. Clean only with dry cloth.
9. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
10. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
11. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade and the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
12. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
13. Only use attachments/accessories specified by the manufacturer.
14. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
15. Unplug this apparatus during lightning storms or when unused for long periods of time.
16. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
17. Do not place the equipment on any uneven or unstable stand; original product package or appropriate package should be used to avoid damage caused by strong impacts during transportation.
18. Power supply cords:
AC 100 V - 240 V 50/60 Hz
19. The quantity of connected transceivers in one system should not exceed prescribed quantity. For service, please contact the nearest TAIDEN Service Center.
20. All TAIDEN products are guaranteed for definite time (see the WARRANTY CARD for details) excluding the following cases:
 - A. All damage or malfunction caused by human negligence;
 - B. Damage or malfunction caused by improper operating by operator;
 - C. Parts damage or loss caused by disassembling the product by non-authorized personnel.
21. Use ONLY specified connection cable to connect the system equipment.
22. Upon receipt of the product, please fill out the Warranty Card enclosed and post it to TAIDEN Service Center nearby in your region.



TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION: To reduce the risk of electric shock, DO NOT open covers, no useable serviceable parts inside. Refer servicing to qualified service personnel only.

CAUTION: DO NOT use alcohol, ammonia or petroleum solvents or abrasive cleaners to clean the devices.



The lightning flash with an arrowhead symbol, with an equilateral triangle, is intended to alert the user to the presence of uninsulated 'dangerous voltage' within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Important Safety Instructions



The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: To reduce the risk of fire or electric shock, DO NOT expose units to rain or moisture.



Attention: Installation should be performed by qualified service personnel only in accordance with the National Electrical or applicable local codes.



Power Disconnect: Units with or without ON – OFF switch have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON – OFF switch is in the ON position. The power cord is the main power disconnect for all units

WARNING: The apparatus should be connected to a mains socket outlet with a protective earthing connection.

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Installation & User Guide

About this manual

This manual is a comprehensive guide to the installation and operation of the **TAIDEN** HCS-8600 Series Fully Digital Congress System. It includes the detailed description of the functions and interfaces as well as of the components, connection, installation, set-up and operation of the HCS-8600 system.

The manual is divided into the following chapters:

Chapter 1: Introduction

An introduction to the HCS-8600 Series Fully Digital Congress System composition, technology, functions and features.

Chapter 2: Congress main unit

Detailed descriptions of the functions and indications, installation and connection, configuration and operation of the HCS-8600 series fully digital congress main unit (CMU), extension main unit (EMU) and the extension unit (HCS-8600MES).

Chapter 3: Congress unit

Detailed descriptions of the functions and indications, installation and connection, configuration and operation of the HCS-8600 series discussion units.

Chapter 4: Interpreter unit

Detailed descriptions of the functions and indications, installation and connection, configuration and operation of the HCS-8600 series Interpreter unit.

Chapter 5 : System connection and basic configuration

Detailed descriptions of the connection between system devices. An example is taken to introduce the basic configuration of the congress system.

Chapter 6: Peripheral equipment and accessories

An introduction to the HCS-8600 series peripheral equipment and accessories, e.g. stem microphone and earphones.

Chapter 7: Environment and maintenance

An introduction to the work environment and maintenance of HCS-8600 Series Fully Digital Congress System.

Chapter 8: Specifications

Main technical parameters of HCS-8600 Series Fully Digital Congress System.

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This manual is applicable to:

■ Congress main units

HCS-8600MA

Fully Digital Congress System Main Unit (discussion, voting, 64 CHs, single-mode optical fiber interface, AES/EBU digital input/output, Dante interface, Mic. group output)

HCS-8600MB

Fully Digital Congress System Main Unit (discussion, voting, 64 CHs, single-mode optical fiber interface, Mic. group output)

HCS-8600MEA2

Fully Digital Congress System Extension Main Unit (dual backup power inputs, with 2 single-mode optical fiber interfaces, 5 congress unit outlets)

HCS-8600MEA

Fully Digital Congress System Extension Main Unit (with 2 single-mode optical fiber interfaces, 5 congress unit outlets)

HCS-8600MES

Fully Digital Congress System Extension Unit (3 congress unit outlets)

■ Congress Unit

HCS-8668 Series:

HCS-8668ACE chairman unit

HCS-8668ADE delegate unit

Paperless Multimedia Congress Terminal (14" 1920×1080 LCD, capacitive touch panel, camera with 8 megapixel, speech, voting, 64 CHs, paperless conference functions, video conversation, video display, multiple channel VOD and broadcasting, conference service, built-in contactless IC-Card reader, fingerprint identification, internet access, video source selection, HCS-1082 series E-ink nameplate can be connected, support PoE, black)

HCS-8668BCE chairman unit

HCS-8668BDE delegate unit

Paperless Multimedia Congress Terminal (14" 1920×1080 LCD, capacitive touch panel, camera with 8 megapixel, speech, voting, 64 CHs, paperless conference functions, video conversation, video display, multiple channel VOD and broadcasting, conference service, built-in contactless IC-Card reader, internet access, video source selection, HCS-1082 series E-ink nameplate can be connected, support PoE, black)

HCS-8668BDD delegate unit

Paperless Multimedia Congress Terminal (14" 1920×1080 LCD, capacitive touch panel, camera with 8 megapixel, dual stem microphones, speech, voting, 64 CHs, paperless conference functions, video conversation, video display, multiple channel VOD and broadcasting, conference service, internet access, video source selection, HCS-1082 series E-ink nameplate can be connected, support PoE, black)

HCS-8638/50 Series:

HCS-8638ACE/50 chairman unit

HCS-8638ADE/50 delegate unit

Paperless Multimedia Congress Terminal (10" 1920×1200 LCD, capacitive touch panel, camera with 8 megapixel, speech, voting, 64 CHs, paperless conference functions, video conversation, video display, multiple channel VOD and broadcasting, conference service, fingerprint identification, internet access, HCS-1082 series E-ink nameplate can be connected, support PoE, black)

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HCS-8638BCE/50 chairman unit

HCS-8638BDE/50 delegate unit

Paperless Multimedia Congress Terminal (10" 1920×1200 LCD, capacitive touch panel, camera with 8 megapixel, speech, voting, 64 CHs, paperless conference functions, video conversation, video display, multiple channel VOD and broadcasting, conference service, built-in contactless IC-Card reader, internet access, HCS-1082 series E-ink nameplate can be connected, support PoE, black)

HCS-8665 Series:

HCS-8665CE chairman unit

HCS-8665DE delegate unit

Compact Multimedia Congress Terminal (14" 1920×1080 LCD, 128x36 OLED, speech, voting, 64 CHs, HD video display, HDMI input, video source selection, HCS-1082 series E-ink nameplate can be connected, support PoE, black)

HCS-8635 Series:

HCS-8635CE chairman unit

HCS-8635DE delegate unit

Compact Multimedia Congress Terminal (10" 1280×800 LCD, speech, voting, 64 CHs, HD video display, SDI input and loop output, built-in contactless IC-Card reader, black)

■ **Multi-channel Video Monitor**

HCS-8665MON

Multi-channel Video Monitor (14" 1920×1080 LCD, HD video display, HDMI input, support PoE, black)

■ **Interpreter Unit**

HCS-8685

Fully Digital Congress System Interpreter Unit (64 CHs, 6.8" TFT LCD, microphone, loudspeaker)

■ **Congress Gigabit Network Switcher**

HCS-8600KMX

Congress Gigabit Network Switcher (for paperless multimedia congress terminal, supports PoE)

■ **Congress PoE Network Switcher**

HCS-8600POE

Congress PoE Network Switcher (supports PoE, KMX mode for HCS-8668/8638 series multimedia terminal, Normal mode for HCS-8665 series multimedia terminal and HCS-1082N series E-ink Electronic Nameplate)

■ **Distributor**

HCS-8368T/50

Distributor (for HCS-8668/ 8638/ 8665 series multimedia terminal and HCS-1082N series E-ink Electronic Nameplate)

■ **Booth Manager**

HCS-8685BM

Booth Manager (for HCS-8685 interpreter unit)

■ **Audio Input & Output Device**

HCS-8600MIO/16AD

16 Channels Audio Input & Output Device (16 channels audio inputs & outputs, Dante interface, single-mode optical fiber interface)

HCS-8600MIO/08A

8 Channels Audio Input & Output Device (8 channels analog audio inputs & outputs, single-mode optical fiber interface)

HCS-8600MIO/08D

8 Channels Audio Input & Output Device (Dante interface, single-mode optical fiber interface)

■ **Pluggable microphone**

MS33EGF1S/B 330 mm pluggable (silver/black)

MS41EGF1S/B 410 mm pluggable (silver/black)

MS47EGF1S/B 470 mm pluggable (silver/black)

■ **Clip microphone**

HCS-1020 Clip Microphone

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■ Earphone

EP-830	Single earphone
EP-820AS	Single earphone
EP-822	Single earphone
EP-823L	Single earphone (left, TRS connector, Ring: NC)
EP-823R	Single earphone (right, TRS connector, Ring: NC)
EP-960AN	Interpreter headset (for HCS-8685)
EP-960BH	Interpreter headphone
HCS-5100PA	Headphone

Chapter 1 Introduction

1.1 Summary

The world's first paperless multimedia congress system, developed by TAIDEN as early as in 2010, has ushered in a new era for the conferencing industry. TAIDEN later launched its third generation paperless multimedia congress system in 2016 and has been used at many high-profile international conferences and meeting venues, testifying in return to its excellence and superiority. Not stopping there, TAIDEN now releases new addition to the existing range with upgraded look, biometric and RFID card identification of conference attendees, tactile buttons United Nations Office at Geneva and braille indication, offering better user experience.

1. Paperless Multimedia Digital Congress System

Problems in modern high-level meetings:

- Many functional requirements but multiple systems - independent from each other (digital conference system, sign-in system, video display system, file system, data service, etc.) and systems cannot be integrated effectively
- Preparation/issuance of verbose meeting papers is time-consuming with both low efficiency and low feedback quota
- Waste of resources through large amounts of paper needed in the meeting
- Risk of leaks due to issuance of printed materials
- Manifold interactive multimedia information required (conference materials, computer files, videos, web browsing, voice communication, etc.)
- Perfect readability of information displayed on large screen must be available for every attendee usually more than one screen is installed, but impossibility to focus on the meeting topics if viewing distance is too high and if view is obstructed
- Deficient communication between participants among each other and between participants and their attendants and assistants
- Operating the variety of desktop devices is very complicated

TAIDEN integrated abundant high-end conference system applications and design experience to develop the world's first multimedia conference which was

based on the paperless multimedia conference (mMediaCongress™) operation platform with independent intellectual property rights. It realizes the "paperless meeting" – namely the total electronic mode of conference operation - and management. It reduces the paper consumption and improves the conferencing efficiency. It also realizes a variety of HD video services, video intercom, conference services, E-ink nameplate, interactive conference control and management (discussion, vote, SI), etc., and provides a perfect solution for modern high level meetings.

HCS-86*8 series Paperless Multimedia Congress Terminal

HCS-86*8 series Paperless Multimedia Congress Terminal based on TAIDEN originated GMC-STREAM Gigabit Multimedia Congress Stream technology, all audio and video signals are transmitted via a Cat.5e/Cat.6 cable. From the 1000M bandwidth, a priority of 100M is used to transmit important data, such as audio, voting information and control information. The remaining 900M bandwidth is used for videos, files, Internet data and other multimedia data stream. By this splitting real-time performance and stability of the important audio, voting information, and control information data stream of the meeting is guaranteed.

The Terminal is equipped with a 14" (1920X1080) or 10" (1920X1200) HD TFT LCD, capacitive touch panel and an integrated 8 megapixel camera. HCS-8668/8638 series Congress Terminal realize the functions of a two-way communication Multimedia Congress Terminal, e.g. conference control & management (speech, vote, simultaneous interpretation), sign-in, conference documents management, speech text guidance, conference documents reader and editor, memorandum editing, desktop sharing, delegate information and conference agenda display, take photo, internet access, delegate photo for attendance check and record facility on important conferences, video conversation, video display, multiple channel VOD (up to 10 channels) and broadcasting, short message, call service, etc.



Figure 1.1.1 HCS-8668 Series Paperless Multimedia Congress Terminal (14" 1920x1080)



Figure 1.1.2 HCS-8638/50 Series Paperless Multimedia Congress Terminal (10" 1920x1200)



Figure 1.1.3 Design sketch of HCS-8668 Series Paperless Multimedia Congress System

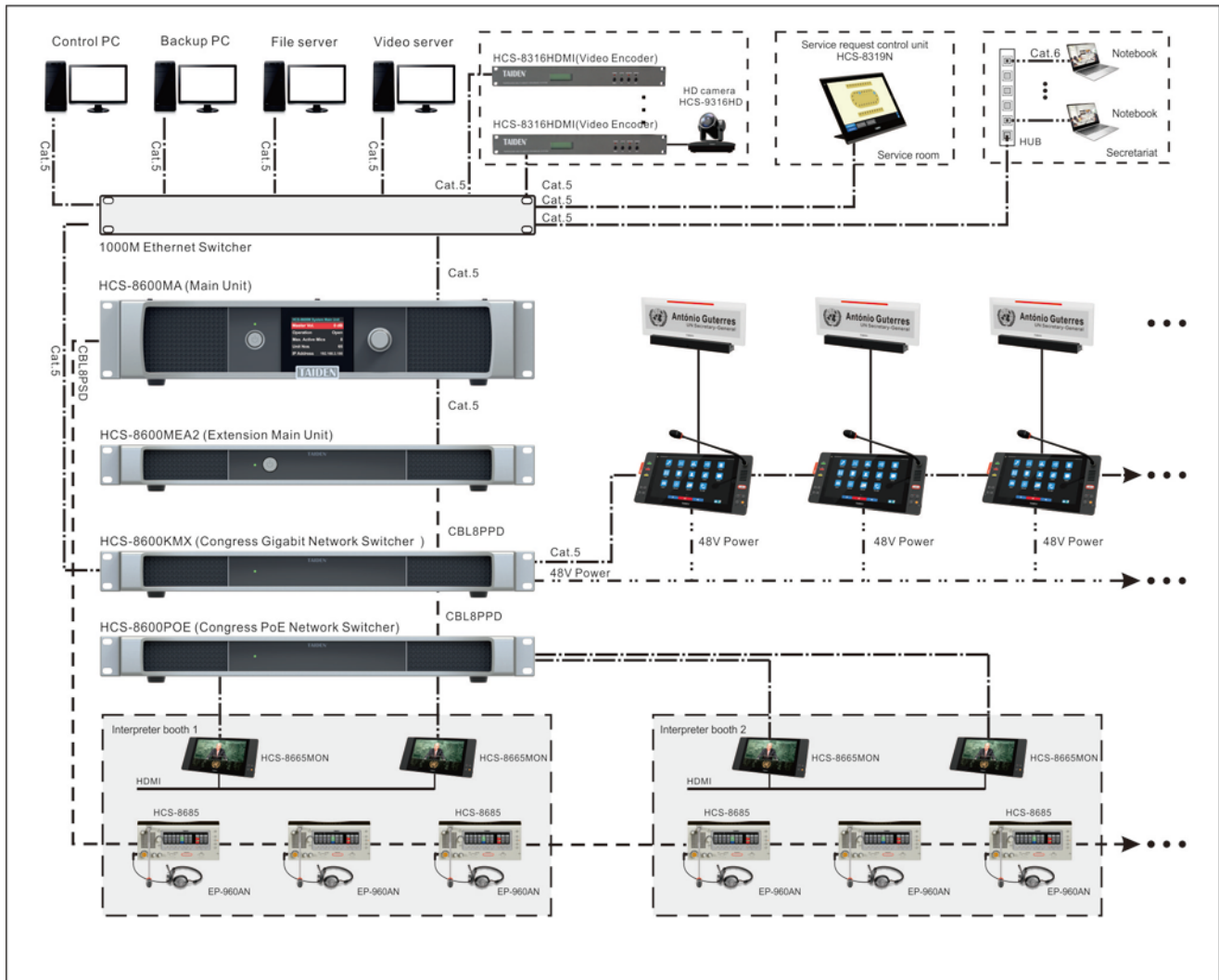


Figure 1.1.4 HCS-8668 Series Paperless Multimedia Congress System connection diagram

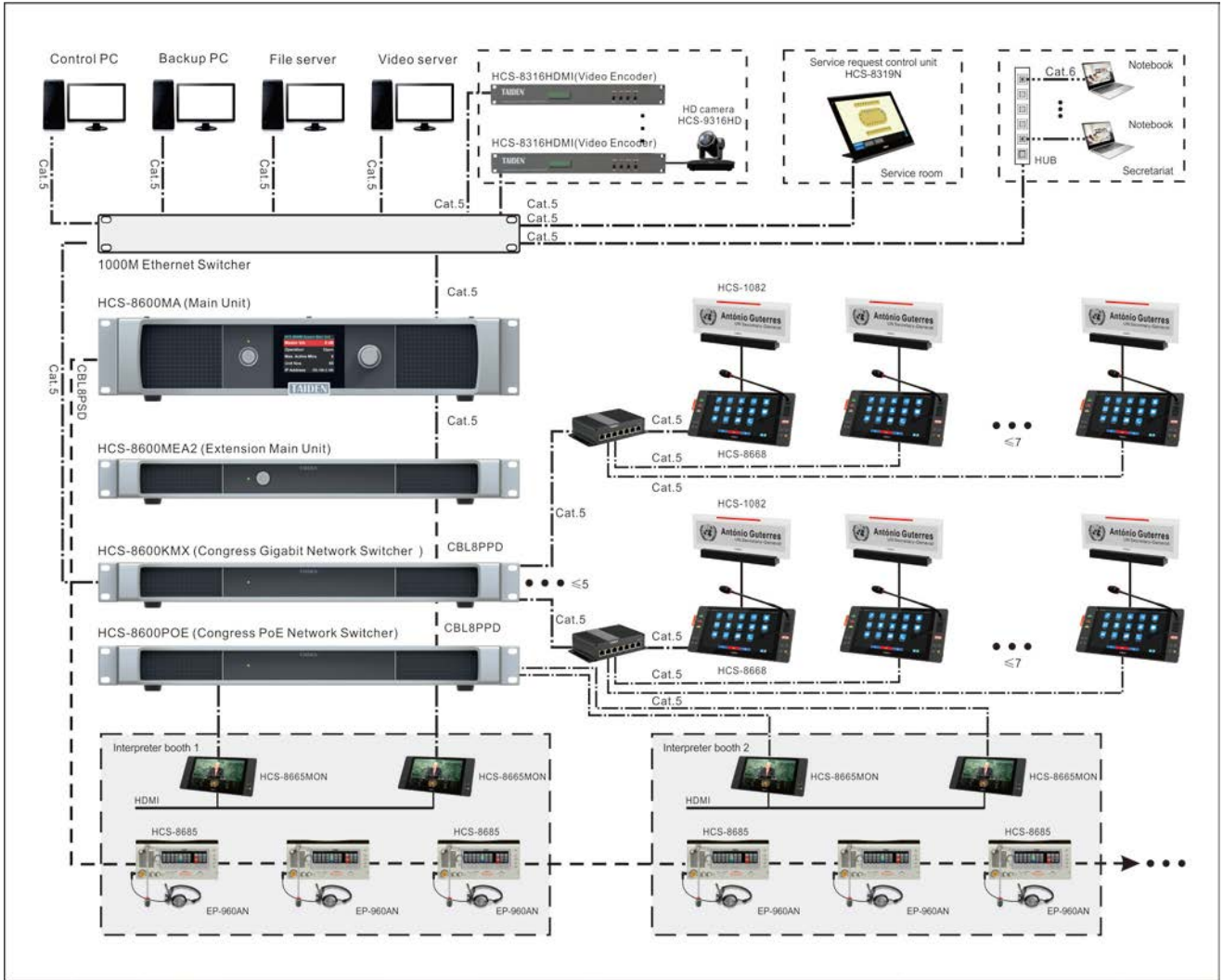
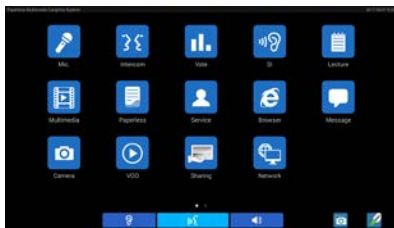
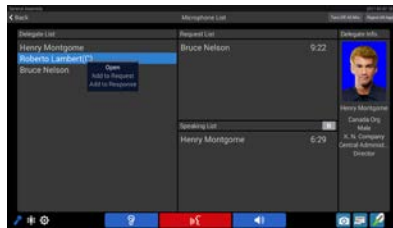


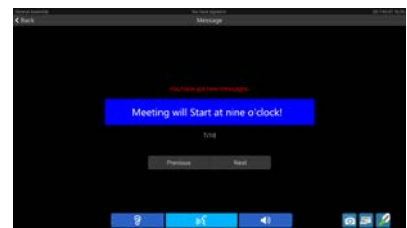
Figure 1.1.5 HCS-8668 Series Paperless Multimedia Congress System connection diagram (POE)



Primary interface



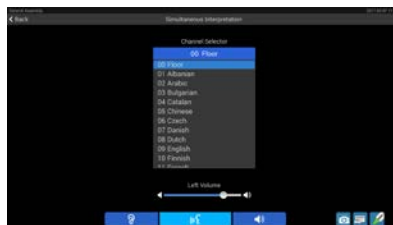
Microphone Management



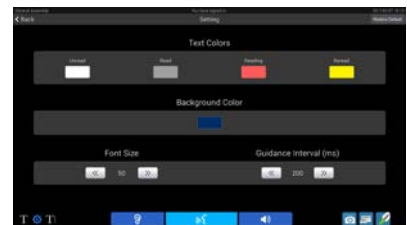
Short Message



Vote result display



Simultaneous interpretation



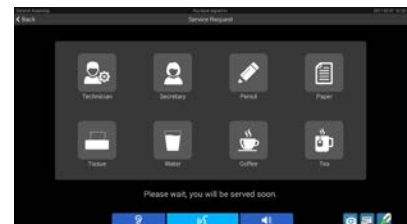
Speech text guidance - setting



Media



Documents reader



Call service

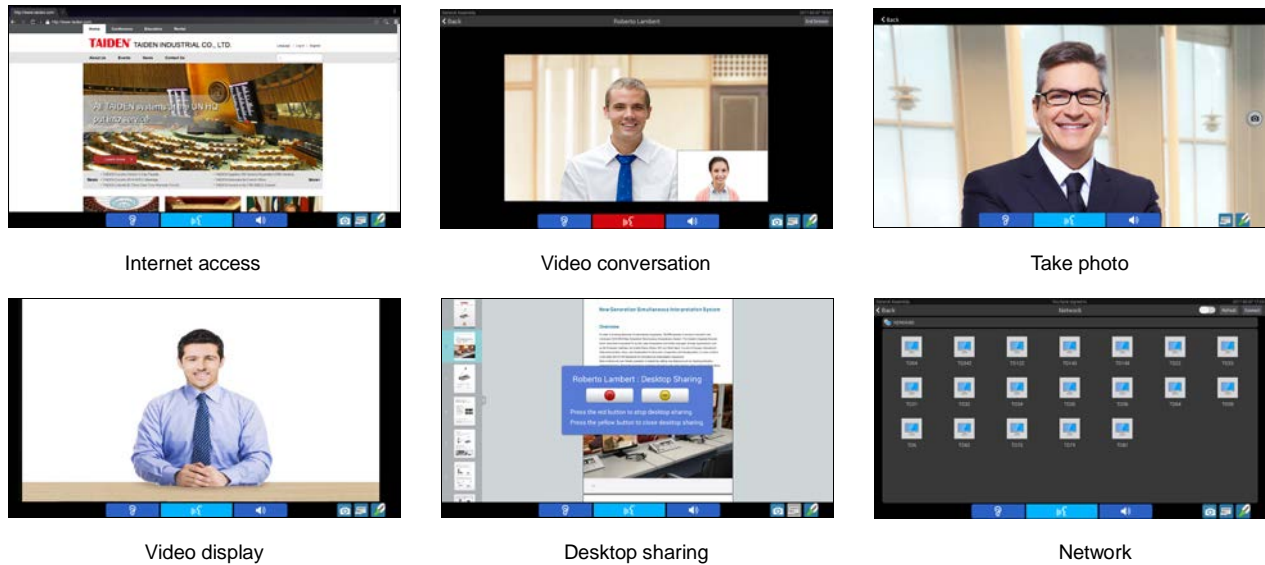


Figure 1.1.6 User Interfaces of Paperless Multimedia Congress System

Features of HCS-8600 series Paperless Multimedia Congress Terminal:

■ Full functionality and high integration

Various types of systems that may be involved in various types of meetings (discussion system, simultaneous interpretation system, voting system, sign-in system, video display system, files and data services system, etc.) are integrated into a single desktop device. Any kind of information display, interactive operations, audio/video and network access requirements are centralized on and controlled via a high-resolution LCD touch panel. Interactive conference control & management (speech, voting, simultaneous interpretation), paperless meetings, video conversation, various video services and conference services, etc. can be realized.

■ Safe and reliable

- ◆ Based on the TAIDEN independent intellectual property mMediaCongress™ platform, never subject to viral infection, hacker-proof
- ◆ Based on embedded system, the power consumption per unit is less than 15 W; its power is 5% ~ 10% of an x86 system – in the spirit of environmental protection. Significantly protected against the impact of heat
- ◆ Based on TAIDEN originated GMC-STREAM Gigabit Multimedia Congress Stream technology, all audio and video signals are transmitted via a

Cat.5e/Cat.6 cable. GMC-STREAM fully guarantees the real-time performance and stability of the important data stream of the meeting, such as audio, voting information, and control information

- ◆ Using daisy-chain connection topology, transmitting signals through single-cable technology. Reliable system components, easy cabling and installation. “Closed Loop - Daisy Chain” topology for enhanced system connection stability
- ◆ No need to install software, simply reset after a system halt
- ◆ System easy to manage, file and data will not be lost

■ Operation experience

- ◆ Combining the versatile facilities of high-level conference system applications and design experiences, TAIDEN now provides even more convenient, efficient and professional conference equipment to the participants
- ◆ Capacitive touch panel supporting multi-touch, convenient and efficient for operation
- ◆ Power supply via Congress Main Unit or power supply unit - convenient to switch on/off

2. CongressMatrix technology

In an ordinary conference system, the audio signals of the microphones converge into one audio (floor) channel which is transmitted to a PA system with only one channel. For this reason, all system loudspeakers get the same floor channel sound level. Differing voice levels of orators cannot be leveled out by simply adjusting the microphone volume. Due to feedback from a loudspeaker influencing delegates' nearby microphone, a positive feedback loop is formed and produces howl.

But due to the amassment and their close spacing arrangement, long stem microphones greatly affect the visual overall picture within the venue.

Therefore, in many high-level meeting rooms (e.g. Parliament Hall), media matrices and boundary condenser microphones are implemented to solve this problem.

In a media matrix, the audio signal from any microphone can be transmitted at any ratio to any loudspeaker, thus system transmission gain can be increased by an appropriate configuration. All microphones are star connected. But installation, debugging and operation are highly complex. Such a solution should usefully only be applicable if the microphones are within a fixed installation, controlled by professional technical staff. Furthermore, only discussion function is available. A media matrix solution does not feature conference sign-in, voting, simultaneous interpretation, video tracking and intercom function.

To solve above-mentioned shortcomings, TAIDEN successfully developed the proprietary CongressMatrix™ technology (utility patent: 200620054419.6). HCS-8600 Series Paperless Multimedia Congress System is the first Paperless Multimedia Congress System in the world to integrate an (n+8)×26 audio matrix processor (n is the number of microphones connected in the system) in the Congress Main Unit.

■ 26 discrete audio outputs, including:

- ◆ Line 1~2 output: 31 band graphical EQ (preset three bandwidth for fast selection: narrow band, normal and wide band) + DRC (dynamic range compressor) + time delay (maximum delay time is 1 s)
- ◆ AES 1~2 output: 31 band graphical EQ (preset

three bandwidth for fast selection: narrow band, normal and wide band) + DRC (dynamic range compressor)

- ◆ Group output 1~6: 15 band graphical EQ (preset three bandwidth for fast selection: narrow band, normal and wide band) + DRC (dynamic range compressor) + time delay (maximum delay time is 1 s)
- ◆ USB 1~2 output: 8 band parameterized EQ + DRC (dynamic range compressor)
- ◆ Dante 1~16 output: 8 band parameterized EQ + DRC (dynamic range compressor)
- Connectable to a multi-channel independent PA system. Each channel is supplied with its proper audio signal. The audio signal of each microphone can be routed to any speaker at any ratio, thus "N-1" function can be realized easily: when the microphone in one area is turned on, its audio signal is only routed to all areas except to its own, avoiding acoustic feedback (howl) when audio transmission gain is increased
- 26 channels audio output function
- Recording by group function
- Gain and EQ (5 band) of each microphone adjustable separately, fitting the individual orator's voice to achieve perfect speech pickup any time
- Integrated high-pass filter (low-cut switch) to cut low frequency elements from the audio when needed
- Integrated voice enhance and howling suppression function for each microphone to improve sound effects
- 2 audio line in (Line/Dante) + 2 AES in (AES/Dante) + 2 USB in (USB/Dante) +2 Dante in, or 1 audio line in (Line/Dante) + 1 microphone input + 2 AES in (AES/Dante) + 2 USB in (USB/ Dante) +2 Dante in, gain and EQ for each input adjustable separately. +48 V phantom power supply at microphone input, condenser microphone can be connected directly, maximum supports 8 Dante input.
- Real –time display of input and output level
- Three audio modes for selection: normal mode, teleconferencing mode and external processor mode
- Supports for configuration scene saving, calling and switching
- Connectable to multi-channel audio input or output devices for versatile expansion of the system

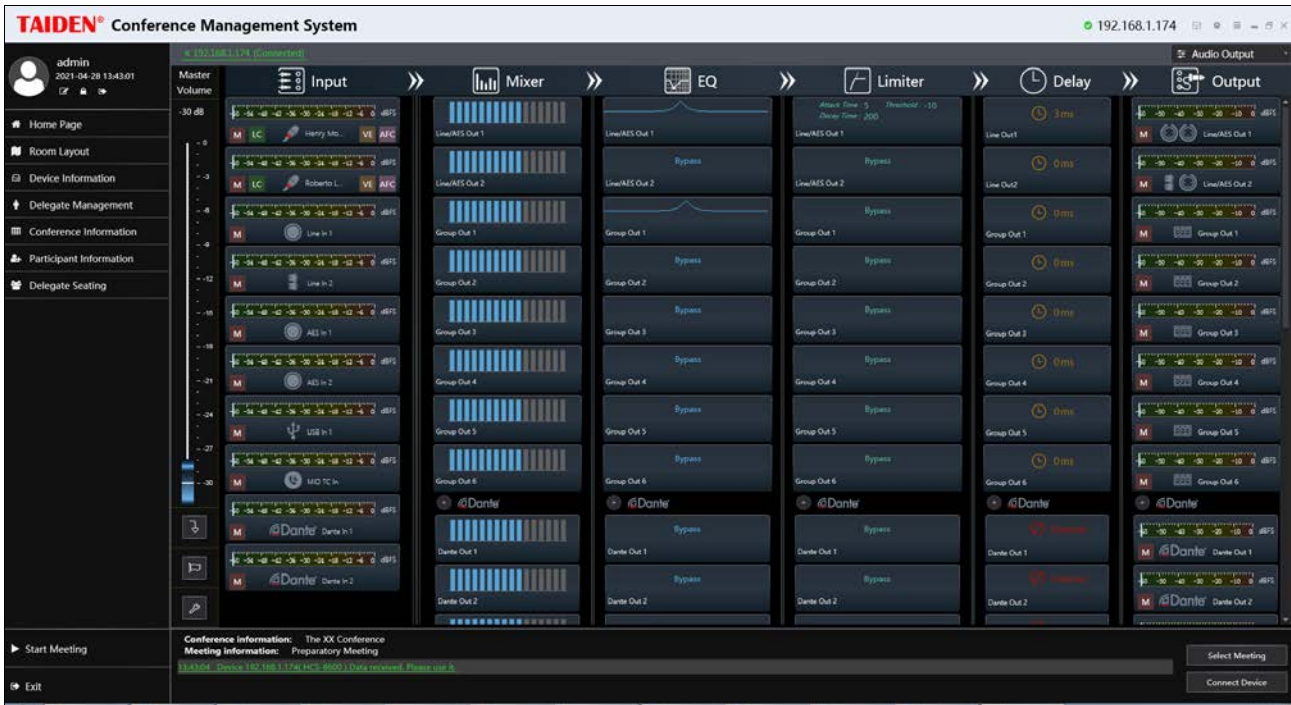


Figure 1.1.7 CongressMatrix™ Software Interface

HCS-8600 Series Paperless Multimedia Congress System can be connected to a multi channel audio amplifier and several groups of loudspeakers. There will be no acoustic feedback (howl) when audio transmission gain is increased. As shown in figure 1.1.8: the venue is divided into several areas according to the actual seating arrangement (maximum 8 areas), each area corresponds to a group of loudspeakers. The microphones in area n are arranged in group n and correspond to group n audio output.

The loudspeakers in area n correspond to group n audio output (as shown in figure 8). As an example: the microphones in area 1 are close to the loudspeakers belonging to group 1. This condition generates feedback easily. To avoid howling, audio gain of group 1 microphones for group 1 loudspeakers should be decreased. Audio gain of group 1 microphones for

group 2 to 8 loudspeakers can be kept higher than for group 1 loudspeakers.

A better performance is achieved in above example when group 1 of loudspeakers is switched off.

Generally spoken: when the microphone in one area is turned on, its audio signal is routed only to the group of loudspeakers of the other areas but not to the group of loudspeakers of its own area. This “N-1” function avoids howling caused by audio feedback.

For HCS-8600 Series Paperless Multimedia Congress System, integrating CongressMatrix technology, the audio signal of each microphone can be routed to any loudspeaker at any ratio to increase audio transmission gain.

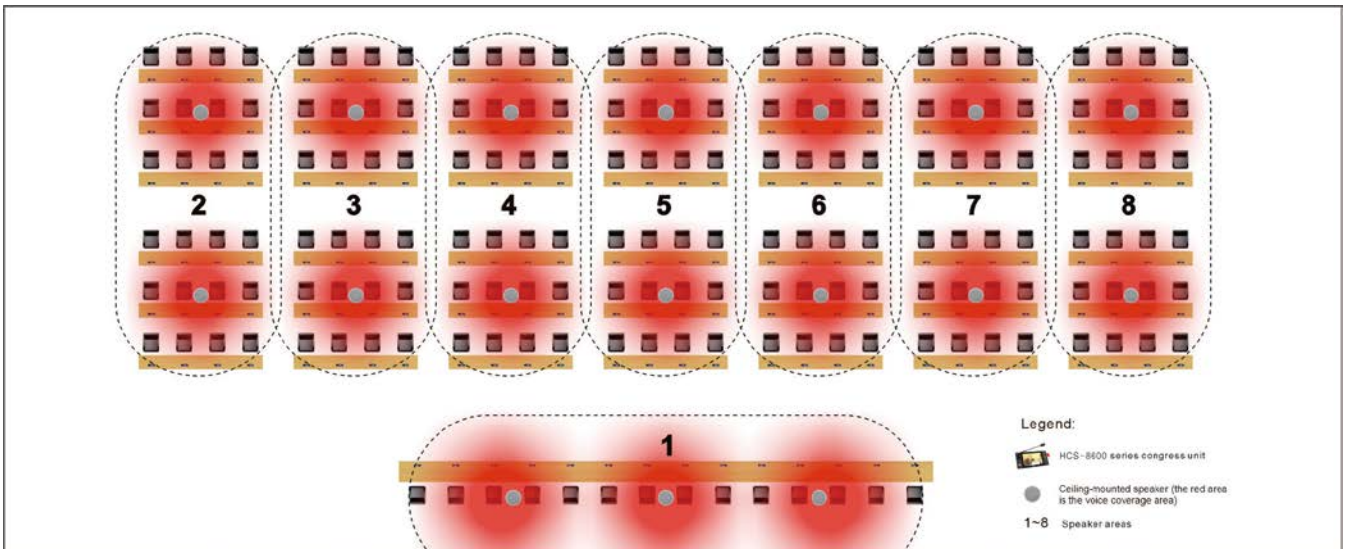


Figure 1.1.7 Area groups of the venue

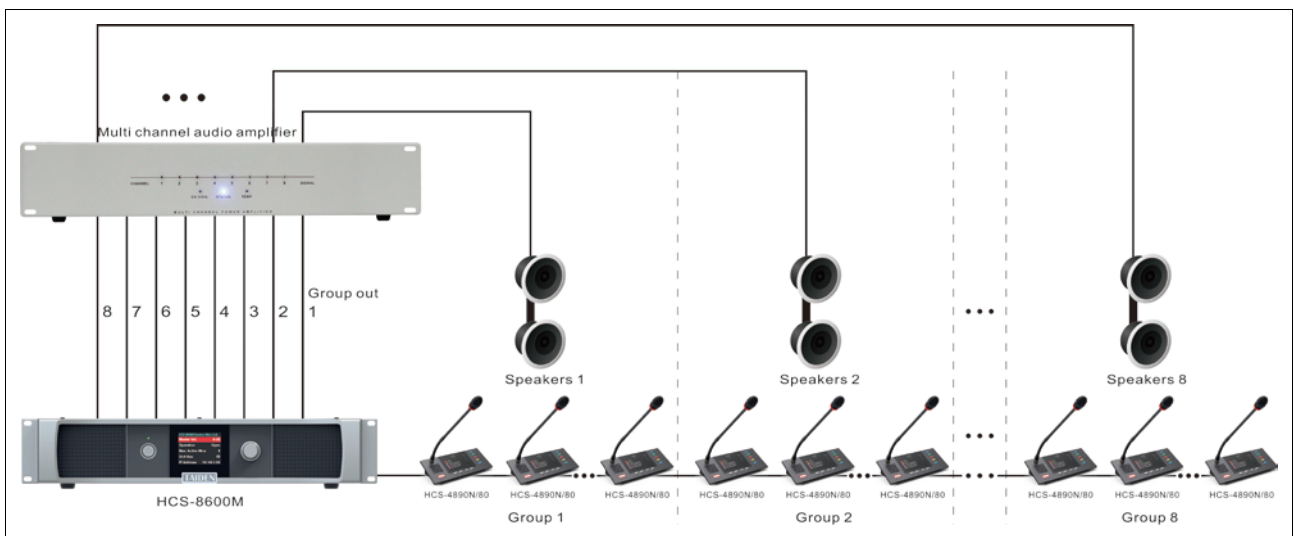


Figure 1.1.9 HCS-8600 Series Paperless Multimedia Congress System connected to a multi-channel audio amplifier with "N-1" function to cancel howl

3. Duplicate and backup connection via "Closed Loop - Daisy Chain" connection topology

For important meetings, especially those which consider connection reliability as their leading point, HCS-8600 Series Paperless Multimedia Congress System equipped with HCS-8600MCLS adopts advanced "Closed Loop - Daisy Chain" connection topology, connecting the last unit in the loop back to the Congress Main Unit. Therefore, any Congress Unit in the loop has two connection paths to the Congress Main Unit. As a result, breakdown or replacement of a Congress Unit and connection failure of a cable will not influence other Congress Units. As such the system features the advantages of a daisy chain connection system with its simplicity of cabling as well as the

improvement of the system reliability by means of duplicate and backup connection functions.

4. Perfect sound quality on all 64 simultaneous interpretation channels

All channels (1 floor channel and 63 interpretation channels) support 48 kHz audio sampling rate featuring perfect CD sound quality with a frequency of 30 Hz to 20 kHz at 48 kHz sampling rate.

5. Low power consumption design for congress units

Low power consumption design is adopted in HCS-8600 and HCS-4800 series Congress Units, convenient for wiring and installation.

All Congress Units of HCS-8600 and HCS-4800 series (except paperless multimedia terminal) are supplied by the Congress Main Unit's 8P-DIN interface. Since the power capacity of the 8P-DIN interface is limited, it must be ensured during installation that the added up values of a) the total power consumption of all Congress Units connected in each path and b) the power loss in connection cables do in no case exceed the maximum possible value delivered by each 6P-DIN interface. Otherwise the system will not work properly or automatic protection will be triggered. (refer to section [5.1.1](#) connection principle).

6. Supports Dante protocol

Supports Dante protocol, an uncompressed, multi-channel digital media networking technology. Audio signal is available for transmission from HCS-8600MA to other Dante compatible devices (such as PA, audio recorder, etc.). The audio signals of two venues are available for networking purposes via Dante with near-zero latency and synchronization, and without losing any sound quality.

7. Supports AES/EBU standard digital audio transmission protocol

HCS-8600MA have one set of AES IN and AES OUT interface, and can connect to AES/EBU compatible digital audio devices via XLR 3-cord shielded cable.

8. Full system backup

In HCS-8600 series, dual connection backup is implemented between the Congress Main Unit and the Congress Extension Main Unit via optical fiber or Cat.5 cable. Combining a) dual Congress Main Unit hot spare function, b) dual PC server hot spare function and c) "Closed Loop - Daisy Chain" connection topology between Congress Units, full system backup is realized to improve system reliability.

9. System power management by central control system

The power management protocol of HCS-8600 series Congress Main Unit is open, enabling remote switch on/off of power supply via RS-232 by a Central Control System.

10. Connection facility for additional condenser or dynamic microphones

In combination with HCS-8600MIO series audio input & output device, additional condenser microphones or dynamic microphones can be connected to the system (phantom power supply provided), expanding user's application spectrum.

11. USB interfaces integrated in the congress main unit

USB interfaces are integrated in the Congress Main Unit a) for upgrading the system and saving system parameters. Convenient for system maintenance; b) for accessing to computer or Cloud Video Conference System.

12. Fully compatible with TAIDEN HCS-4800 Fully Digital Congress System

HCS-8600 Series Paperless Multimedia Congress System is completely downward compatible to the TAIDEN HCS-4800 Fully Digital Congress System and features all its functions, e.g. conference sign-in, voting, simultaneous interpretation, video tracking, intercom, etc. Congress Units of the HCS-4800 series Congress System can be looped into a HCS-8600 Congress System. But some exclusive functions are only available on HCS-8600 contribution units. Likewise, Congress Units of the HCS-8600 Series Congress System can also be inserted into a HCS-4800 Fully Digital Congress System.

1.2 System equipment

1.2.1 Congress main unit (CMU)

The congress main unit forms the core of the entire congress system. It provides power supply to contribution units and serves as key component to link system hardware to application software. In stand-alone mode without a PC, the CMU carries out basic management facilities. By operating TAIDEN conference management software in PC-controlled mode, more comprehensive management facilities can be implemented.

1.2.2 Contribution units

Contribution units are units used by participants to contribute to a congress and include: discussion unit (chairman/delegate), voting unit, channel selector, etc. A discussion unit - chairman or delegate unit with discussion facility - is the important component of the HCS-8600 system. The basic contribution unit offers basic facilities (discussion/voting/channel select, etc), The upgraded units consist of a combination of discussion, voting and channel select facility, furthermore: built-in loudspeaker, IC-card reader, fingerprint identification and graphic LCD or OLED with back-lighting - forming a wide variety of product series. The unit with the graphic LCD is able to receive short messages and to display conference related information. Chairman unit has microphone priority and some unique facilities concerning conference management. In addition, **TAIDEN** developed the multimedia congress terminal, which offers a variety of video, file and data service features.

1.2.3 Interpreter unit

The Interpreter unit is equipped with a bright graphic LCD with backlighting, a channel selector, a built-in loudspeaker, a pluggable microphone, headphone sockets, etc. It supports direct and relay interpretation (with auto-relay facility) operation mode and optional voice input/output modes, simplifying interpreter's work remarkably.

1.3 Application software

TAIDEN conference management software is comprehensive, reliable and user-friendly. It is also an easy-care software system which helps the operator to manage the congress efficiently from the very beginning of a meeting until the post-meeting work. Once the PC installed and the TAIDEN conference management software integrated into the DCS, the operator manages centrally all aspects of the congress centrally. The operation turns out to be easy and efficient.

TAIDEN conference management software is a modular software with various functional modules:

- Basic System Setup Management Software Module
Including venue designer, conference management, conference main unit configuration, contribution unit configuration, information display, system detection, system report, and user management, etc
- Professional Venue Design Software Module
- Microphone Management Software Module
- Voting Management Software Module
- Video Control Software Module
- Simultaneous Interpretation Software Module
- Intercom Software Module
- Synchronous Audio Recording Management Software Module
- Multi-User Conference Control Software Module
- Dual PC Server Hot Spare Software Module
- Dual System Main Unit Hot Spare Software Module
- Touched/Contactless IC-Card Sign-in Management Software Module
- Fingerprint Identification Management Software Module
- CongressMatrix Software Module
- Congress Service Management Software Module
- Video Service Software Module
- File Management Software Module
- Digital HD Video Recording Management Software Module
- Electronic Nameplate Management Software

1.4 Functions and features

- Especially designed for high-level meetings, such as Summits, congresses, conventions, parliaments and city councils
- The first Paperless Multimedia Congress System in the world
- Based on TAIDEN independent intellectual property mMediaCongress™ platform, never subject to viral infection, hacker-proof, safe and reliable
- Paperless Multimedia Congress Terminal - equipped with a 14" (1920X1080) or 10" (1920X1200) HD TFT LCD touch panel, realizes paperless meetings, various HD video services, interactive conference control functions (speech, voting, 64 CHs) and conference services, etc.
- Capacitive touch panel supporting multi-touch, convenient and efficient for operation
- Built-in 8-megapixel camera with flashlight, ingenious video conversation function
- Based on TAIDEN originated GMC-STREAM Gigabit Multimedia Congress Stream technology, all audio and video signals are transmitted via a Cat.5e/Cat.6 cable. GMC-STREAM fully guarantees the real-time performance and stability of the important data stream of the meeting, such as audio, voting information, and control information
- Based on ingenious CongressMatrix™ technology, integrated (n+8)×26 audio matrix processor to realize 26 channels group output function
- HCS-1082 series E-ink nameplate can be connected directly (HCS-8668/8638/8665)
- Increased reliability with "Closed Loop - Daisy Chain" connection topology
- 48 kHz audio sampling, 64 audio channels, each with a 30 Hz to 20 kHz frequency response for perfect sound quality
- Low power consumption design
- Supports Dante protocol to connect to peripheral digital devices with near-zero latency and synchronization, and without losing any sound quality
- Equipped with optical fiber interface to combine two widely separated conference rooms to form one unique coherent system
- Dual connection backup via optical fiber or Cat.5 cable between Congress Main Unit and Congress Extension Main Unit
- System power controllable by central control system
- Connectable to multi channel audio input & output devices for versatile expansion of the system
- Connection facility for additional condenser or dynamic microphones, expanding user's application spectrum
- Integrated USB interfaces in the Congress Main Unit for system upgrading and saving system parameters. Convenient for system maintenance
- Downward compatible with TAIDEN HCS-4800 Fully Digital Congress System

Chapter 2 Congress main unit (CMU)

The congress main unit (CMU) forms the core of the HCS-8600 Series Paperless Multimedia Congress System. It provides power supply to contribution units and serves as the key component for linking up hardware with application software. In stand-alone mode without a PC, the CMU carries out basic management facilities; Comprehensive management facilities can be implemented in PC-controlled mode.

The following devices can be controlled by the CMU: discussion unit (chairman unit/delegate unit), voting unit, interpreter unit, video switch for automatic video tracking, etc. By cascade connecting EMUs, the HCS-8600 system can reach its maximum capacity: 378 simultaneous Interpreter units, 4096 discussion/voting units and an infinite number of channel selectors.

The maximum system capacity is 378 Interpreter units, 4096 discussion/voting units and any number of channel selectors.

Product types:

HCS-8600MA

Fully Digital Congress System Main Unit (discussion, voting, 64 CHs, single-mode optical fiber interface, AES/EBU digital input/output, Dante interface, Mic. group output)

HCS-8600MBU

Fully Digital Congress System Main Unit (discussion, voting, 64 CHs, single-mode optical fiber interface, Mic. group output, HDMI input and loop output, USB recording)

HCS-8600MB

Fully Digital Congress System Main Unit (discussion, voting, 64 CHs, single-mode optical fiber interface, Mic. group output)

HCS-8600MEA2

Fully Digital Congress System Extension Main Unit (dual backup power inputs, with 2 single-mode optical fiber interfaces, 5 congress unit outlets)

HCS-8600MEA

Fully Digital Congress System Extension Main Unit (with 2 single-mode optical fiber interfaces, 5 congress unit outlets)

HCS-8600MES

Fully Digital Congress System Extension Unit (3 congress unit outlets)

2.1 Fully Digital Congress System Main Unit

2.1.1 Functions and instructions

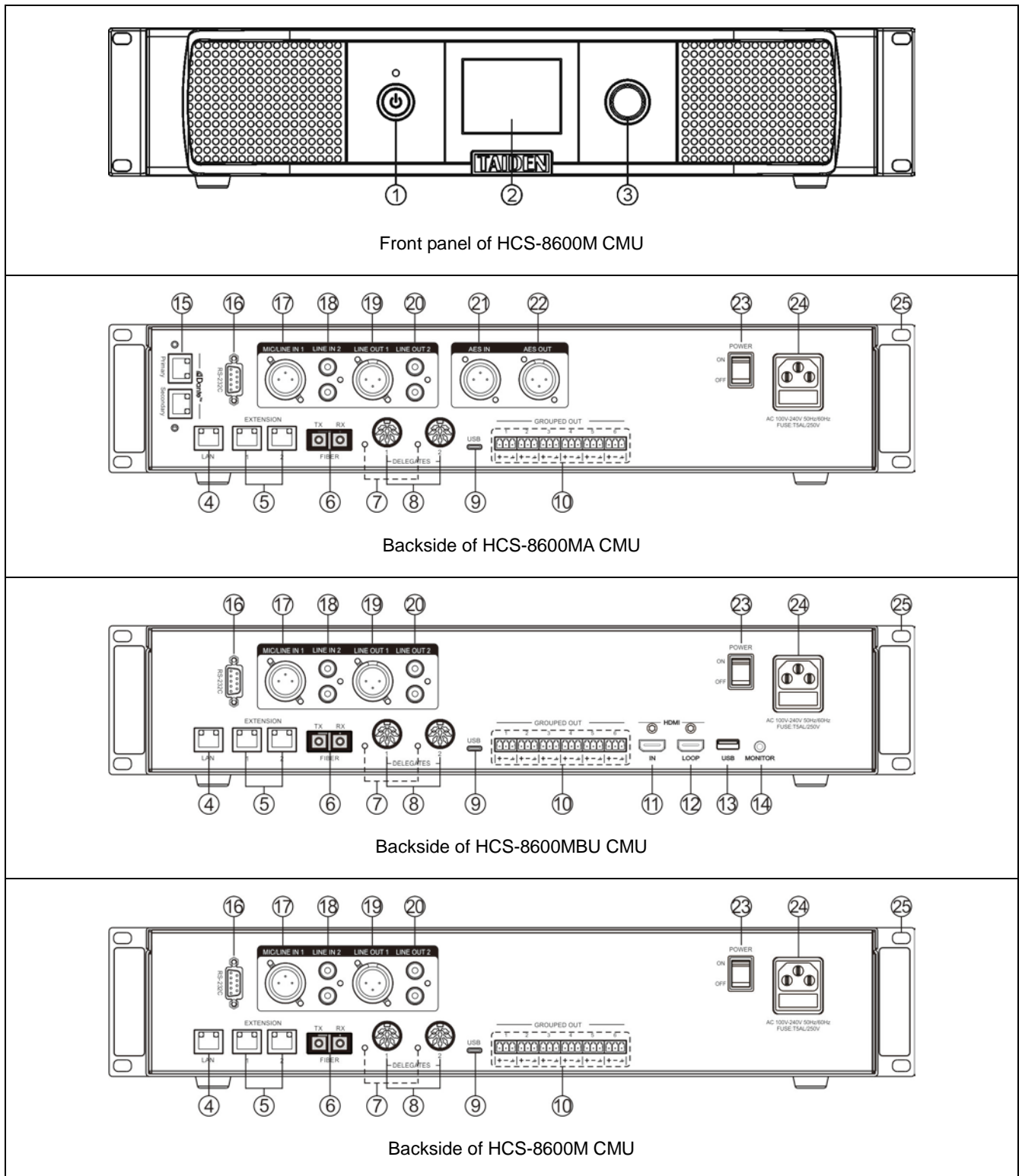


Figure 2.1.1 HCS-8600M series congress main unit

Figure 2.1.1

1. “STANDBY” button with indicator

- a. Switches to red in standby mode;
- b. Switches to blue when operating.

2. Menu display

- 2.8” 320x240 LCD displays main unit status and configuration menu.

3. Function knob

- a. The LCD displays the initial user interface: rotate this knob to adjust master volume;
- b. The LCD displays the initial user interface: press this knob to enter the menu;
- c. The LCD displays the set-up user interface: rotate this knob to select the menu item, the selected menu item red highlighted;
- d. The LCD displays the set-up user interface: press this knob (equivalent to entering or confirming button) to select the red highlighted item or enter the next menu;
- e. The LCD displays the network configuration: press this knob to select / uncheck the value, rotate this knob to adjust the value size.

4. Ethernet interface (LAN)

- For communication between the conference main unit and the PC under TCP/IP protocol to realize remote controlling; furthermore, it enables remote controlling by wireless touch panel through central control system.

5. Extension interface

- To interconnect CMU, EMUs, audio input interfaces and audio output devices – units already prepared for cascade connecting.

6. Fiber interface

- Single-mode optical fiber, SC connector;
- Connecting the conference main units of several distant conference rooms to combine as one conference room (bridging distance can reach tens of kilometers).

7. Contribution units (CU) connection LED

- When output works properly (≥ 1 CU connected), LED will flash; when no CU is connected, LED is off.

8. Contribution units output interface (1-2, two routes)

9. Mini USB interface

- For connecting to PC, to HCS-9000M series main unit, conveniently connect local conference to TAILINK cloud video conference system.

10. Group output interface (1-6, six groups)

11. HDMI input

12. HDMI loop output

13. Type-A USB recording interface

- Insert U-disk for storing recording files

14. Headphone monitoring jack

- Earphone jack (\varnothing 3.5 mm);
- For monitoring USB audio.

15. Dante interface

- Connecting the conference main unit to the Dante network to transmit input and output audio signals.

16. RS-232C port

- “COM” port is used for connecting to a central control system for central controlling, as well as for system diagnosis.

17. LINE IN 1 / MIC IN (3 cord XLR balanced input)

18. “LINE IN 2” (RCAx2 unbalanced input)

19. “LINE OUT 1” (3 cord XLR balanced output)

20. “LINE OUT 2” (RCAx2 unbalanced output)

21. AES IN

22. AES OUT

23. Mains switch

24. Power supply

- 100 - 240 V, 50/60 Hz.

25. Fixed hole of the cabinet installation

2.1.2 Connection

2.1.2.1 To contribution units

HCS-8600 series CMU has 2 outlet (8P-DIN) trunk-line cable sockets for connecting to contribution units. TAIDEN full digital congress unit has two types of connection interface, a) equipped with two cables with standard 8P-DIN connectors; or b) equipped with two RJ45 sockets for daisy chain connection (recommended use of cat5e cable with a drain wire & RJ45 plug with metal shield).

The contribution units (except paperless multimedia congress terminals) are equipped with a cable with a standard 8P-DIN male connector. When connecting the CMU to the contribution units, just connect the male connector of the first unit to the socket of the CMU.

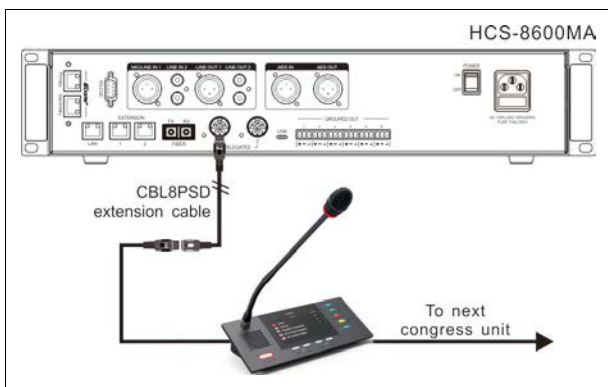


Figure 2.1.2 CMU connecting to contribution units (8P-DIN)

For a longer distance between the contribution unit and the CMU/EMU, a CBL8PSD extension cable can be used. One end of this cable is equipped with a 8P-DIN male connector, the opposite end is equipped with a female connector. Just connect the female connector of the cable to the contribution unit, and connect the male connector to the output of the main unit. The Cat5e cable can also be used as an extension cable, one end of the Cat5e cable is connected to output of the main unit via the CBL8P2RJ45S converter cable; the other end of the Cat5e cable is connected to the 8P-DIN male connector of the contribution unit via the CBL8S2RJ45S converter cable.

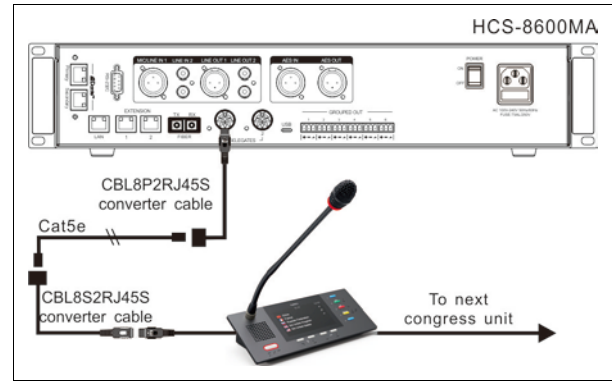


Figure 2.1.3 CMU connecting to contribution units (8P-DIN)

For "Closed Loop - Daisy Chain" ring connection, HCS-8600MCLS Loop switcher is needed. The "TO MU" port of HCS-8600MCLS is connected to the output of the main unit via CBL8P2RJ45 converter cable; the other port of HCS-8600MCLS is connected to the contribution unit via CBL8P2RJ45 converter cable; at last, connect the last contribution unit back to the CMU via a CBL8PSD extension cable.

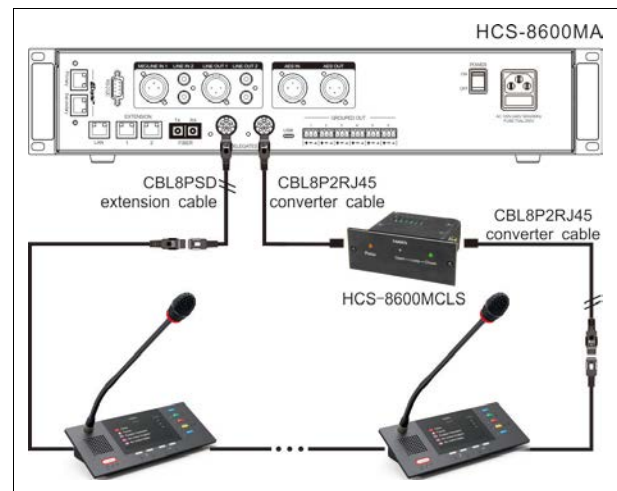


Figure 2.1.4 "Closed Loop - Daisy Chain" connection topology (8P-DIN)

Contribution unit equipped with two RJ45 sockets supports daisy chain connection via cat5e cable. When connecting the CMU to the contribution units, the CBL8P2RJ45 converter cable is needed to connect the first unit to the socket of the CMU.

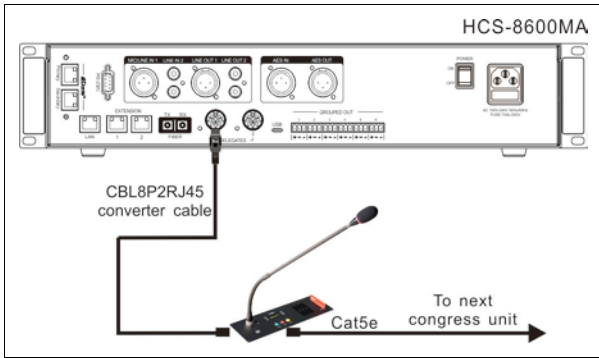


Figure 2.1.5 CMU connecting to contribution units (RJ45)

For a longer distance between the contribution unit and the CMU/EMU, a Cat5e cable can be used. One end of the Cat5e cable is connected to output of the main unit via the CBL8P2RJ45S converter cable; the other end of the Cat5e cable is connected to the contribution unit.

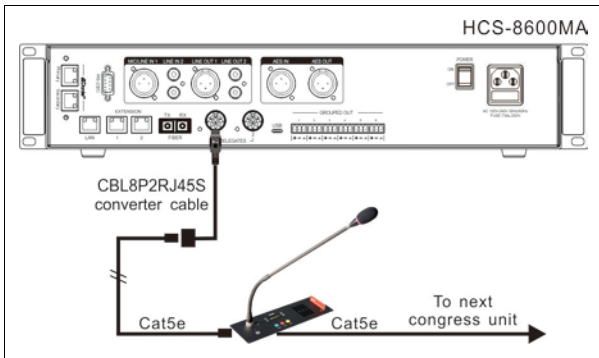


Figure 2.1.6 CMU connecting to contribution units (RJ45)

For "Closed Loop - Daisy Chain" ring connection, HCS-8600MCLS Loop switcher is needed. The "TO MU" port of HCS-8600MCLS is connected to the output of the main unit via CBL8P2RJ45 converter cable; the other port of HCS-8600MCLS is connected to the contribution unit; at last, connect the last contribution unit back to the CMU via a CBL8P2RJ45S converter cable.

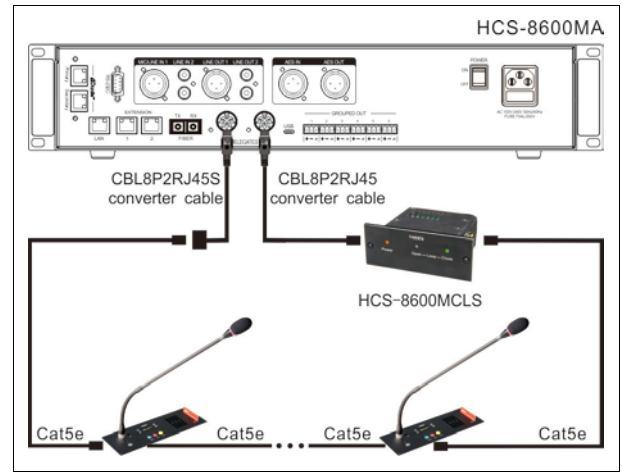


Figure 2.1.7 "Closed Loop - Daisy Chain" connection topology (RJ45)

In HCS-8600 series fully digital congress system, power is provided by HCS-8600M CMU (or EMU) for all congress units (except paperless multimedia congress terminals). Since the power capacity of a 8P-DIN interface is limited, it must be ensured that, during the installation, the sum of the total power consumption of all the congress units connected to every single 8P-DIN interface plus the power loss in the extension cables does not surpass the power limit of each 6P-DIN interface. Otherwise the system will not work properly or automatic protection will occur. (refer to section 5.1.1 connection principles).

2.1.2.2 To PA

The HCS-8600M series congress main unit has an 8 audio groups output and can be directly connected to Multi Channel Audio Amplifier to amplify the speaker's voice. With "N-1" function, it is unlikely to produce howling.

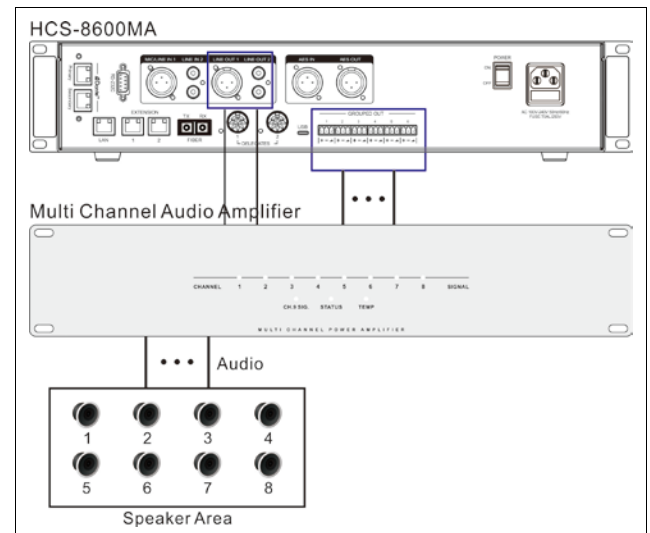
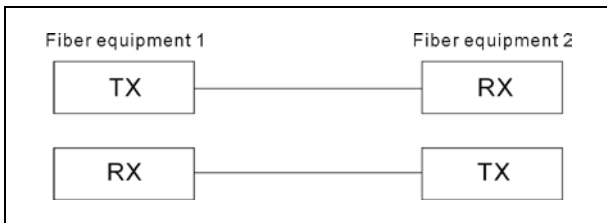


Figure 2.1.8 CMU connecting to PA

2.1.2.3 To fiber device

The HCS-8600M series congress main unit has a pair of fiber interfaces, and can be connected to the HCS-8600M series CMU/EMU, HCS-4800M series CMU, HCS-8600MIO series audio input & output device; and two distant meeting rooms (distance can reach tens of kilometers) can be combined as one meeting room. The connection between the fiber interfaces is shown in the following figure:



2.1.3.4 To Dante device

The Dante protocol is a real-time transmission standard for transmitting digital audio and control data. HCS-8600MA has a pair of Dante interfaces, and can be connected to Dante devices through Cat.5e cable.

2.1.3.5 Connecting to AES/EBU standard digital audio devices

The full name of AES/EBU is Audio Engineering Society/European Broadcast Union, and has now become a popular standard of professional digital audio. AES/EBU is a serial bit transmission protocol to transmit digital audio data based on single twist pair. HCS-8600MA have one set of AES IN and AES OUT interface, and can connect to AES/EBU compatible digital audio devices via XLR 3-cord shielded cable.

2.1.3 Configuration and operation

After installation and connection and prior to the meeting, the CMU should be configured through the dialog menu and button. The term “interface” used

hereinafter means the information displayed on the LCD as the “user” interface.

The menu structure is shown in the following figure:

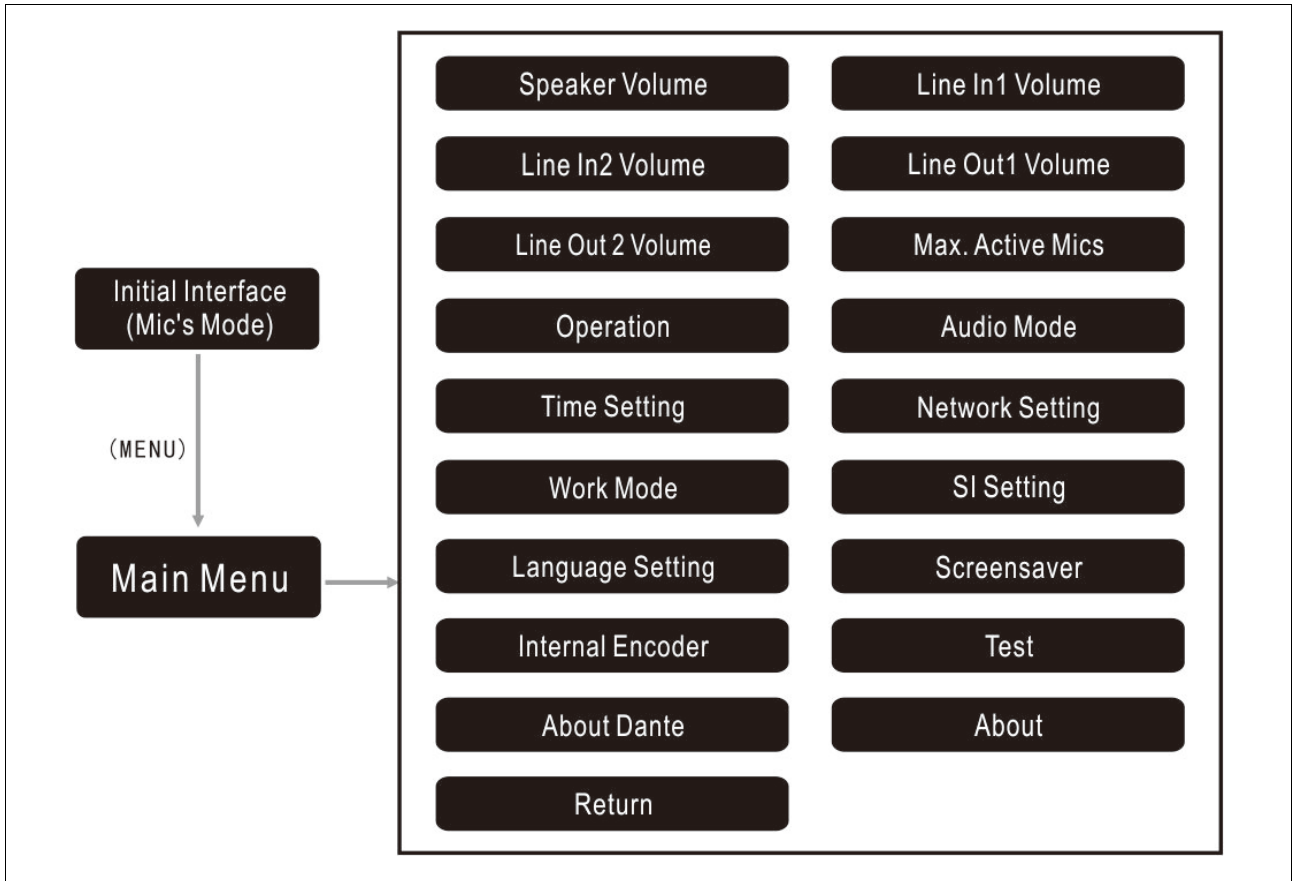
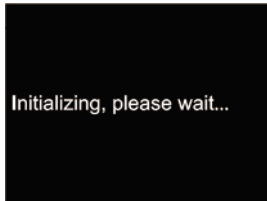


Figure 2.1.2 LCD menu structure of the CMU

A) Starting initialization

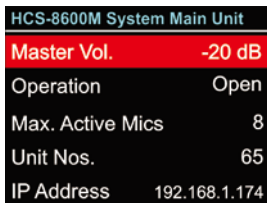
Switch on and press the “STANDBY” button, HCS-8600 CMU will start initialization:



B) Initial interface on LCD

When the initialization is finished, the initial interface will be displayed on the LCD:

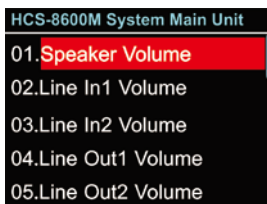
- “Master Vol.”
- “Operation”
- “Max. Active Mics”
- “Unit Nos”
- “IP Address”



Rotate function knob to adjust master volume, range: -30 dB - 0 dB

C) Access main menu

Pressing the function knob under initial user interface will go to the main menu, which includes the following menu items:



Menu of HCS-8600MA:

1. Speaker Volume	2. Line In1 Volume
3. Line In2 Volume	4. Line Out1 Volume
5. Line Out2 Volume	6. Max. Active Mics
7. Operation	8. Audio Mode
9. Time Setting	10. Network Setting
11. Work Mode	12 SI Setting
13. Language Setting	14. Screensaver
15. Test	16. About Dante
17. About	18. Return

Menu of HCS-8600MBU:

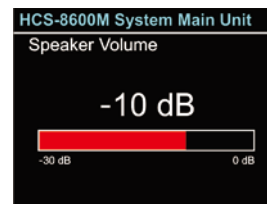
1. Speaker Volume	2. Line In1 Volume
3. Line In2 Volume	4. Line Out1 Volume
5. Line Out2 Volume	6. Max. Active Mics
7. Operation	8. Audio Mode
9. Time Setting	10. Network Setting
11. Work Mode	12 SI Setting
13. Language Setting	14. Screensaver
15. Internal Encoder	16. Test
17. About	18. Return

Menu of HCS-8600MB:

1. Speaker Volume	2. Line In1 Volume
3. Line In2 Volume	4. Line Out1 Volume
5. Line Out2 Volume	6. Max. Active Mics
7. Operation	8. Audio Mode
9. Time Setting	10. Network Setting
11. Work Mode	12 SI Setting
13. Language Setting	14. Screensaver
15. Test	16. About
17. Return	

1. Speaker Volume

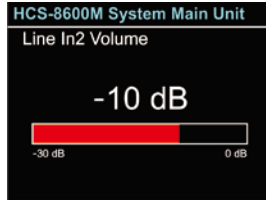
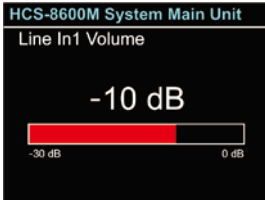
Built-in loudspeaker volume of contribution units (except Interpreter units) can be adjusted by LCD menu -> Speaker Volume on the main unit, range: -30 dB - 0 dB.



- a). Rotate the function knob to select the sub menu;
- b). Press the function knob to enter the volume adjustment interface;
- c). Rotate function knob to adjust speaker volume;
- d). Press the function knob to save and return to upper level menu.

2. Line In1/2 Volume

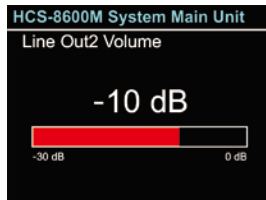
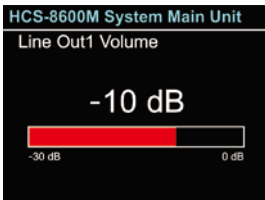
Adjust Line In1/2 input volume, range: mute, -30 dB - 0 dB.



- Rotate the function knob to select the sub menu;
- Press the function knob to enter the volume adjustment interface;
- Rotate function knob to adjust Line In1/2 volume;
- Press the function knob to save and return to upper level menu.

3. Line Out1/2 Volume

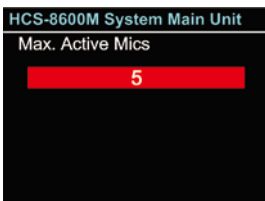
Adjust Line Out1/2 input volume, range: mute, -30 dB - 0 dB.



- Rotate the function knob to select the sub menu;
- Press the function knob to enter the volume adjustment interface;
- Rotate function knob to adjust Line Out1/2 volume;
- Press the function knob to save and return to upper level menu.

4. Max. Active Mics

Set the maximal number of microphones that can be turned on at the same time: 1~8.



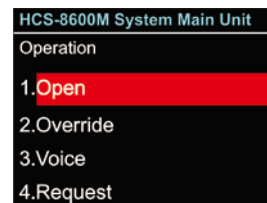
- Rotate the function knob to select the sub menu;
- Press the function knob to enter number section interface;
- Rotate function knob to set the maximal number of microphones;
- Press the function knob to save and return to upper level menu.

Note:

- ☞ Number (1~8) setting is only valid for the delegate unit, if the active microphone number limitation reached, the microphones of the delegate unit cannot be turned on, but the microphones of the chairman unit and the VIP unit can be turned on normally;
- ☞ At most 8 microphones can be activated at the same time in a system including chairman & delegate & VIP units.

5. Operation Mode

Set the microphone mode "OPEN", "OVERRIDE", "VOICE", "Request" or "PTT".



- Rotate the function knob to select the sub menu;
- Press the function knob to enter operation setting interface;
- Rotate function knob to select operation mode;
- Press the function knob to save and return to upper level menu.

"Open":

If the maximal number of active microphones, previously fixed, has been reached, delegates requesting to speak join a request-to-speak list. The first unit joining the list will become active when the first active unit gets off.

"Override":

If the maximal number (1~8) of active delegate microphones has been reached and if another delegate unit is activated, the delegate unit switched on first will be switched off first automatically (first in / first out). The microphone limit set remains unchanged. If the number of active microphone (including chairman and VIP unit) reaches 8, turning on another microphone will switch off the delegate microphone which turned on first.

"Voice":

The delegate's microphone is activated when spoken into. After 300 ms /600 ms /1 s - 15 s (adjustable)

without speaking, the microphone switches off automatically.

“Request”:

When the delegate presses his/her microphone ON/OFF button to request to speak, the chairman unit can approve or reject his/her request.

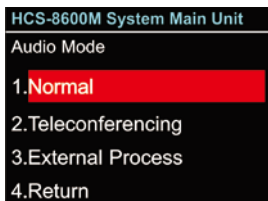
“PTT” (push-to-talk):

When the delegate presses and holds the microphone ON/OFF button, the microphone will be activated; when the ON/OFF button is released, the microphone will be deactivated.

6. Audio Mode

set audio mode for main unit, normal mode, teleconferencing mode or external process mode optional.

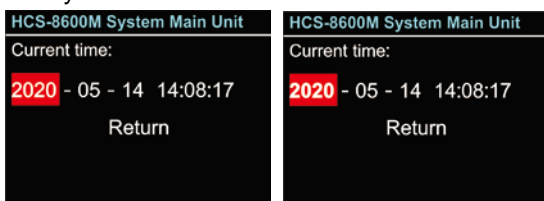
- Normal mode: all input sources can be output through all the output channels;
- Teleconferencing mode: the input source Line In 1 cannot be output through Line/AES Out1 and can be output normally through other output channels;
- External process mode: Line In 1 input source can be output through down-stream audio channel, other input sources can be output normally through 26 output channels;



- a). Rotate the function knob to select the sub menu;
- b). Press the function knob to enter audio mode setting interface;
- c). Rotate function knob to select audio mode;
- d). Press the function knob to save and return to upper level menu.

7. Time Setting

Set system clock.



- a). Rotate the function knob to select the sub menu;
- b). Press the function knob to enter current time setting

interface;

- c). Rotate function knob to go to “Year”, “Month”, “Day”, “Hour”, “Minute” “Second” in turn;
- d). Press the function knob to set time (at this time, the time item number bold display);
- e). Rotate the function knob to adjust the value;
- f). Press the function knob to save the value;
- g). Repeat steps c)~f) and set the other time items in turn;
- h). Rotate the function knob to "Return" and press the function knob to return to upper level menu.

8. Network Setting

“Network” includes submenus:

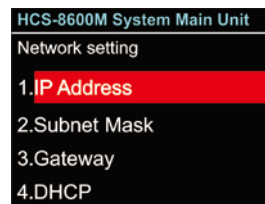
“IP Address”

“Subnet Mask”

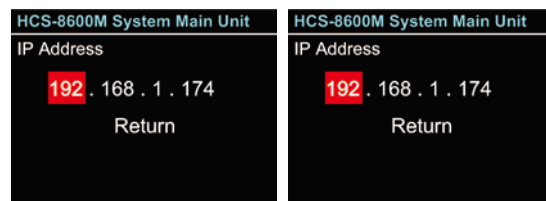
“Gateway”

“DHCP”

“Return”



a). Setting up unique “IP Address” for the transmitter:



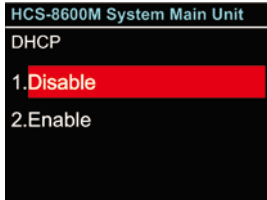
- a). Select “IP Address” and press the function knob to go to setup IP address interface;
- b). Rotate function knob to switch between the four numbers;
- c). Press the function knob to set number (at this time, the number bold display);
- d). Rotate the function knob to adjust the value;
- e). Press the function knob to save the value;
- f). Repeat steps b)~e) and set the other numbers;
- g). Rotate the function knob to "Return" and press the function knob to return to upper level menu.

b). Setup “Subnet Mask” and “Gateway”

Same chronological order as for “IP Address” set up.

C). DHCP

Same chronological order as for “IP Address” set up.



- a). Select “DHCP” and press the function knob to go to setup DHCP interface;
- b). Rotate function knob to select "Disable" or "Enable";
 - Disable: disable DHCP, set network address and subnet mask manually;
 - Enable: main unit gets IP address and subnet mask automatically;
- c). Press the function knob to save and return to upper level menu.

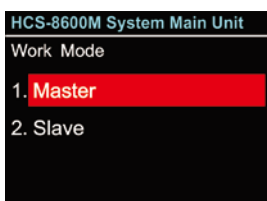
When the network settings finished, rotate the function knob to "5.Return " and press the function knob to return to upper level menu.

Note:

☞ When controlled by PC software, “Subnet Mask” and “Gateway” should be setup according to the PC configuration, otherwise it may cause a connection problem.

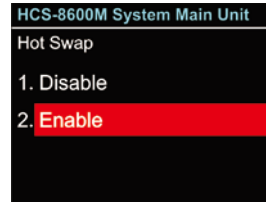
9. Work Mode

If two CMU are installed in one system, they are set as “Master Mode” and “Slave Mode” separately.



- a). Rotate the function knob to select the sub menu;
- b). Press the function knob to enter work mode setting interface;
- c). Rotate function knob to select work mode;
 - If “Master” is selected, press the function knob to confirm and return to upper level menu;

- If “Slave” is selected, press the function knob to confirm and go to step d);



- d). Rotate function knob to select "Disable" or "Enable";
 - If “Disable” is selected, slave CMU will backup master CMU automatically in the meeting process. If master CMU stops, slave CMU will NOT switch to master mode;
 - If “Enable” is selected, slave CMU will backup master CMU automatically during the meeting process. If master CMU stops, slave CMU will switch automatically to master mode and act as master CMU;
- e). Press the function knob to save and return to upper level menu.

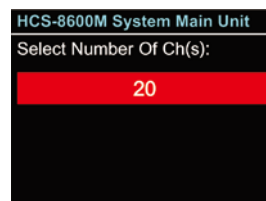
10. SI Setting

In “SI Setting” submenu, the following parameters need to be setup:

- ◆ “Select Number Of Ch(s):”
- ◆ “Select Language For Ch:”
- ◆ “Select Number Of Booth(s):”
- ◆ “Interlock Mode Between Booths:”
- ◆ “Interlock Mode In a Booth:”
- ◆ “Select Output CH Language for Booth:”
- ◆ “Auto-Relay Booth Setting”

Operation steps:

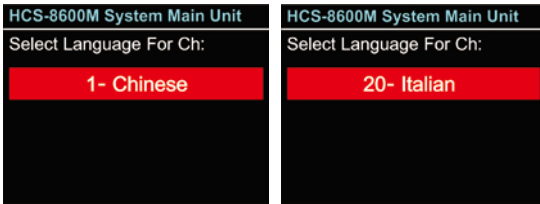
a). Setup the number of interpretation channels



Rotate function knob to switch between 0-63;

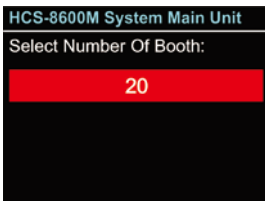
- If “0” is selected, it stands for no SI function, press function knob to save and return to main menu;
- If other values are selected, it stands for the number of interpretation channels, use the “MENU” button to go to step b).

b). Setup interpretation language



- 1). Setup channel 1 first, rotate function knob to switch between languages;
- 2). Press function knob to confirm selected language and go to next channel;
- 3). Repeat 1) - 2) to setup language for all channels, and go to step c).

c). Select number of booths



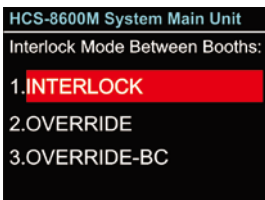
Rotate function knob to switch between 0-63. Usually, one language will take one booth.

- If “0” is selected, it stands for no SI function, press function knob to save and return to main menu;
- If other values are selected, it stands for the number of interpretation booths, press function knob to go to step d).

d). Select interlock mode between booths

Select interlock mode between booths, includes:

“OVERRIDE”
“OVERRIDE BC”
“INTERLOCK”



- 1). Rotate function knob to switch among three interlock modes;
 - “INTERLOCK” mode prevents that two booths engage the same channel.
 - “OVERRIDE” mode enables an interpreter in another booth to override an occupied channel in another booth, but supplying the same

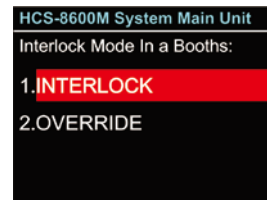
channel.

- “OVERRIDE BC” mode enables A channel of an interpreter in another booth to override an occupied B/C channel in another booth, but supplying the same channel; when an interpreter in another booth to override an occupied A channel in another booth, the “Microphone ON” indicators the occupied A channel will flash on the control panel for about 5 seconds.
- 2). Press function knob to confirm selected interlock mode and go to step e).

e). Select interlock mode in a booth

Select interlock mode in a booth, includes:

“OVERRIDE” “INTERLOCK”



- 1). Rotate function knob to switch between the interlock modes;
 - “OVERRIDE” mode enables an interpreter unit in a booth to override an opened interpreter unit;
 - “INTERLOCK” mode prevents that two interpreter units engage in the same booth;
- 2). Press function knob to confirm selected interlock mode and go to step f).

f). Select language for booth

To distribute interpretation languages separately, A/B/C channels are provided in each Interpreter unit. The language setting of A/B/C channels for all Interpreter units in one booth is uniform. After setup of booth numbers, the user interface to setup output channel A/B/C language will show for each booth.

General procedure:

1st step: select a language for channel A

2nd step: select ALL or NONE for channel C

If ALL is selected for C then

3rd step: select a language for B. Three channels are now available: A and B output a selected language and C outputs any available language.

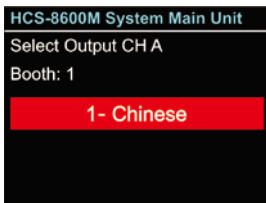
If NONE is selected for C then

4th step: select B: NONE or ALL

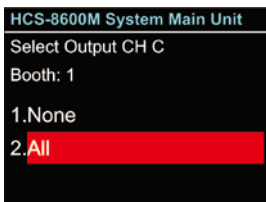
If NONE is selected for B only A outputs the selected language of step 1. B and C do not output languages

If ALL is selected for B then 2 output channels are available : A outputs the selected language of step 1 and B outputs any available language. No language output at C

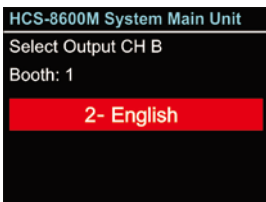
- 1). Setup channel A language for booth 1: rotate function knob to select language from those languages that have been selected in step b) and press function knob to confirm;



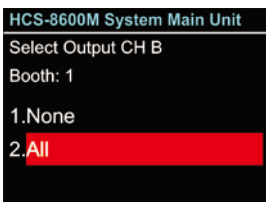
- 2). Select channel C language for booth 1: "NONE" or "ALL";



- 3). If ALL is selected for C then rotate function knob to select language for B from those languages that have been selected in step b) and press function knob to confirm;



- 4). If NONE is selected for C then select channel B language from "NONE" or "ALL";



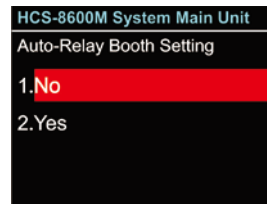
- "NONE" stands for no language output from channel B;
- "ALL" stands for the language of channel B which can be any of the selected languages.

Press function knob to confirm and go to configuration for next booth;

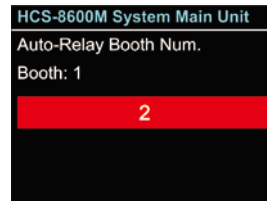
- 5). Repeat 1) - 2) to setup output channel A/B/C language for all booths and go to step g).

g). Auto-Relay booth Setting

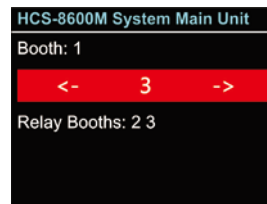
Setup Auto-Relay booth.



- 1). Rotate function knob to select yes or no
 - If select "No", press function knob to confirm;
 - If select "Yes", press function knob to confirm and go to next step;



- 2). Rotate function knob to select auto-relay booth quantity and press function knob to go to the next step;



- 3). Rotate function knob to select auto-relay booth and press function knob to confirm, then the corresponding booth number will be highlighted and set as auto-relay booth. Rotate function knob to select next auto-relay booth until all auto-relay booths have been set;

- 4). Repeat step 2) and 3) to setup auto-relay for all other booths.

Note:

☞ If channel B and C of a booth have no output, this booth can not be set as auto-relay booth.

11. Language Setting

Select LCD display language from simplified Chinese, English. Additional languages can be translated and added by the user after accessing the web interface of the device.

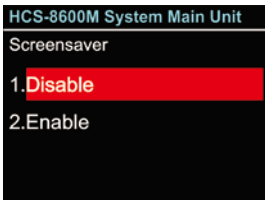
Select language:



- Rotate function knob to select the sub menu;
- Press function knob to enter language setting interface;
- Rotate function knob to select LCD display language;
- Press function knob to save and return to upper level menu.

12. Screensaver

Set LCD screen saver for main unit.

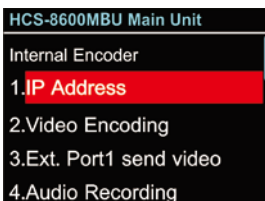


- Rotate the function knob to select the sub menu;
- Press the function knob to enter screensaver setting interface;
- Rotate function knob to select "Disable" or "Enable";
 - Disable: LCD screen is always on;
 - Enable: LCD screen will be dark into the protection state if do not operate the menu for a period of time;
- Press the function knob to save and return to upper level menu.

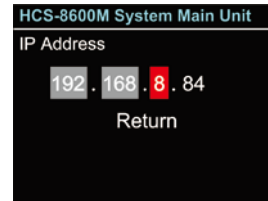
13. Internal Encoder

In "Internal Encoder" submenu, the following parameters need to be setup:

- "IP Address"
- "Video Encoding"
- "Ext. Port1 send video"
- "Audio Recording"
- "About"
- "Return"

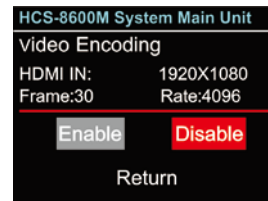


a) IP Address



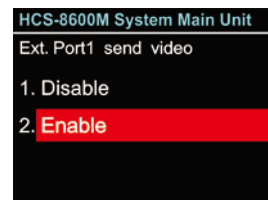
- Select "IP Address" and press the function knob to go to setup IP address interface;
- Rotate function knob to switch between the four numbers;
- Press the function knob to set number (at this time, the number bold display);
- Rotate the function knob to adjust the value;
- Press the function knob to save the value;
- Repeat steps b)~e) and set the other numbers;
- Rotate the function knob to "Return" and press the function knob to return to upper level menu.

b) Video Encoding



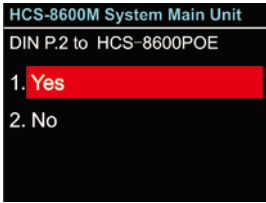
- Select "Video Encoding" and press the function knob to go to setup video control interface, view video information: resolution, frame rate and code rate;
- Rotate the function knob to Enable / Disable video encoder;
- Rotate the function knob to "Return" and press the function knob to return to upper level menu.

c) Extension Port1 send video



- Select "Ext. Port1 send video" and press the function knob to go to extension port 1 control interface;
- Rotate the function knob to enable / disable extension port 1 for video;
 - If select "Disable", extension 1 cannot send video;

- If select "Enable", extension 1 send video, and set DIN port 2;



- c). Rotate the function knob to set DIN port 2;
- If select "Yes", DIN port 2 should connect to HCS-8600POE;
 - If select "No", DIN port 2 cannot connect to HCS-8600POE;
 - Press the function knob to return to upper level menu.

Note:

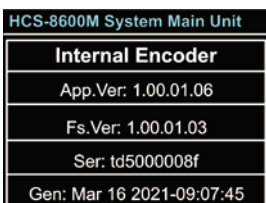
- ☞ When transmit video from internal encoder to HCS-8668SC/SD, please enable "Ext. Port send video" and "DIN P.2 to HCS-8600POE" at the same time;
- ☞ Extension port 1 of CMU should connect to ETHERNET port of HCS-8600POE; DIN Port 2 of CMU should connect to MAIN UNIT port of HCS-8600POE;
- ☞ HCS-8600POE works on NORMAL mode.

d) Audio Recording



- Select "Audio Recording" and press the function knob to go to audio recording control interface,; Display U-disk space in real-time (remaining / total capacity);
- Rotate the function knob to start / end recording;
- Rotate the function knob to "Return" and press the function knob to return to upper level menu.

e) About



Internal encoder information includes: App version, Fs

version and series number, shown as in the following figure - press function knob to return to upper level menu.

f) Return

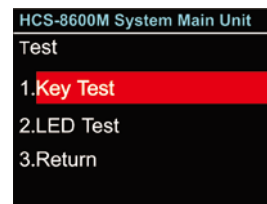
Select this item and press the function knob to return to the upper level menu.

14. Test

Its submenu includes:

"Key Test"

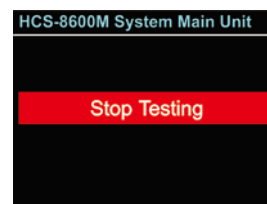
"LED Test"



Key Test:

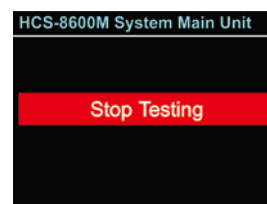
Testing buttons before meeting, especially when voting function is present.

- Rotate function knob to select "Key Test" and press function knob to enter key test interface. All connected contribution units will go to key test status;
- The button LEDs of all contribution units will blink and all the contribution units with LCD will prompt a hint, press all buttons in turn and test them;
- When all keys are tested, press function knob to return to upper menu.



LED Test:

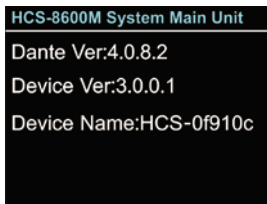
Rotate function knob to select "LED Test" and press function knob to enter LED (indicating light) test interface. The LEDs (indicating light) on all connected contribution units will blink immediately.



Press function knob to exit LED test interface.

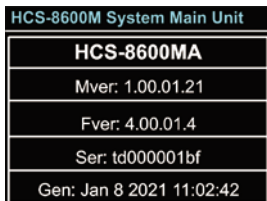
15. About Dante

The display of Dante module information, includes: dante version, device version and device name. Press function knob to return to the upper level menu.



16. About

CMU information includes: firmware version, corporation information and series number, shown as in the following figure - press function knob to return to upper level menu.

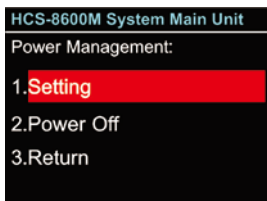


17. Return

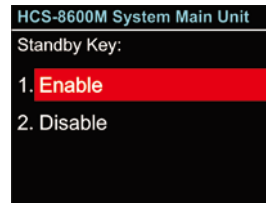
Select this item and press the function knob to return to the LCD initial interface. The screen also returned to LCD initial interface automatically if no operation on menu in 2 minutes.

D) Power Management

Press and hold the “STANDBY” button to enter power management interface, as shown as the following figure:



- Rotate function knob to select “Setting”, “Power Off” or “Return”;
 - If “**Power Off**” is selected, the main unit switches to standby mode;
 - If “**Return**” is selected, the main unit exit power management interface;
 - If “**Setting**” is selected, then select enable the “STANDBY” button or not;



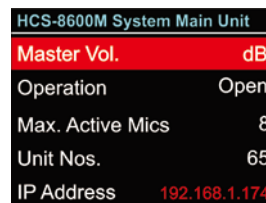
- Rotate function knob to select “Enable” or “Disable”;
 - If “**Enable**” is selected, power on through the “POWER” switch and the “STANDBY” button;
 - If “**Disable**” is selected, power on directly through the “POWER” switch;
- Press function knob to save and return to the upper level menu.

Note:

- When power down the main unit, please press and hold the “STANDBY” button to enter power management interface, then select “**Power Off**” and press function knob to confirm. Please do not use the switch button on the back of the main unit to shutdown directly; otherwise, it may lead to startup error.

E) Connecting to PC

When connecting CMU to the Conference management system software or webserver, the IP address changes to red, as shown as the following figure:



Note:

- Conference management system software and webserver can not be connected to the same main unit at the same time.

2.1.4 Configuration and operation - slave mode

When dual main unit hot spare or conference room combination occurs, the spare main unit or the main unit in the slave conference room works in slave mode. The LCD display shows as in the following figure in

salve mode, press function knob to enter the menu settings.

HCS-8600M System Main Unit	
Work Mode	Slave
Hot Swap	Enable
Audio Output	Enable
Room ID	5
IP Address	192.168.1.174

The menu includes:

1. **Work Mode:** same as this menu operation in the main mode;
2. **Hot Swap:** same as this menu operation in the main mode;

HCS-8600M System Main Unit	
Audio Output	
1.Disable	
2.Enable	

3. **Audio Output:** enable/disable audio output on the rear panel of the CMU. In the conference room combination, must enable the audio output, if not, the delegates in the slave conference rooms cannot hear the voice in the master conference room;
4. **Network Setting:** same as this menu operation in the main mode;
5. **Language Setting:** same as this menu operation in the main mode;
6. **Screensaver:** same as this menu operation in the main mode;
7. **About Dante:** same as this menu operation in the main mode;
8. **About:** same as this menu operation in the main mode;
9. **Return:** return to the LCD initial interface.

2.1.5 Web Control

HCS-8600M series of congress main unit build in web control functions, can be viewed and controlled by any computer via input IP address in the browser. Including MU State, Parameters, Audio Output, Unit Setup, Video Matrix, Predefine Position, Microphone Control, Assets Management, System Test, Main Unit Translation and Unit Upgrade.

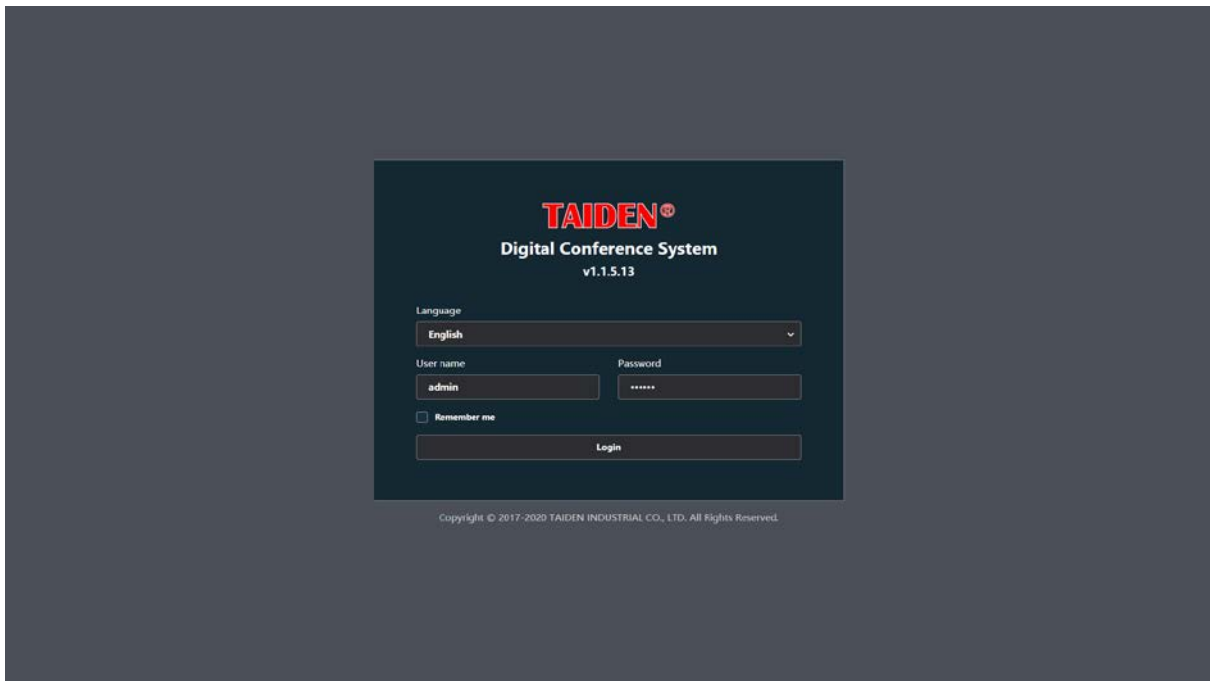


Figure: Login

- Language: select the language of application;
- User Name and Password: the default account is "admin", and the password is null;
- Remember me: check this item, no need to re-enter the user name next time.

MU State

Control and monitor the control panel of conference main unit, including Active Microphones, Operation Mode, Master Volume and Speaker volume control, etc.

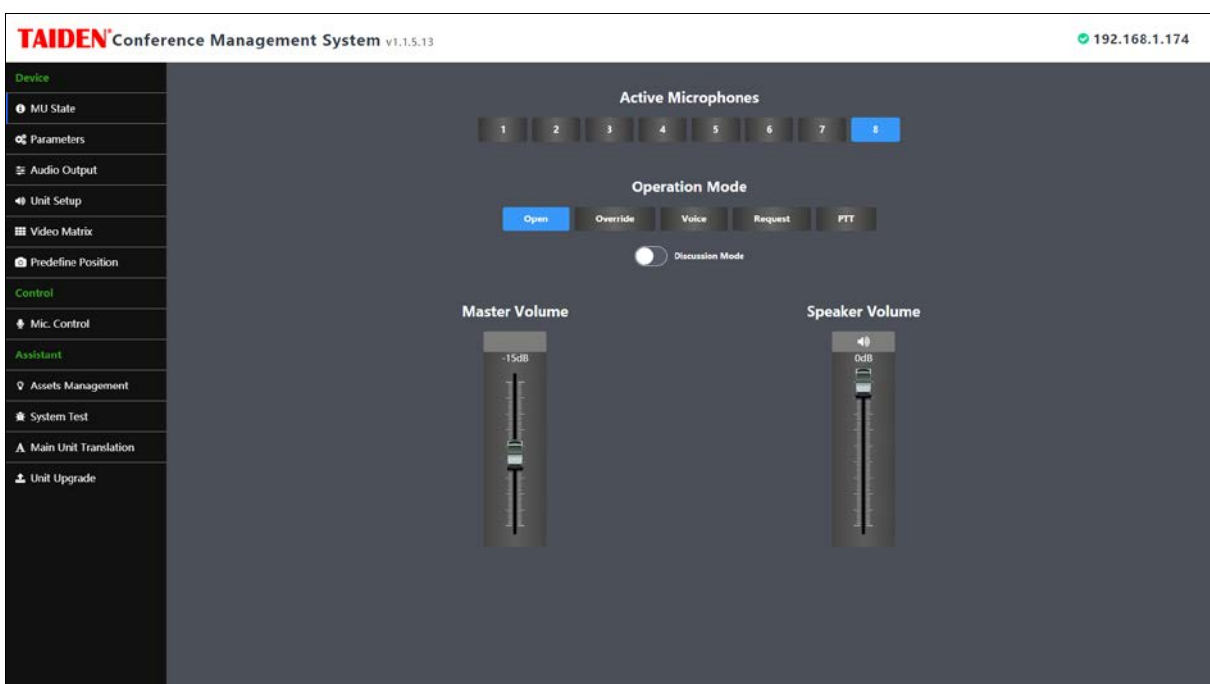


Figure: MU State

- **Active Microphones:** set the maximum number of active microphones: 1~8 optional. If the active number reaches the limit, other delegate microphones cannot be activated, while the chairman and VIP unit(s) can be activated at any time (the setup only affects the delegate units). Whatever may be the operation mode, the maximum number of active microphones cannot exceed eight.
- **Operation Mode:** six modes are available: Open, Discussion, Override, Voice, Request and PTT.
 - ◇ **Open:** if the number of active microphones reaches the limit, the rest of the delegate microphones enter the request-to-speak state;
 - ◇ **Discussion:** discussion mode, check “Discussion” option from “Open Mode”, “Discussion” mode stands for that: a delegate (using the congress unit with discussion function) can request to speak to put his/her name in the request list and can press microphone On/Off button to turn on microphone after chairman’s approving;
 - ◇ **Override:** override mode, if the number of active delegate microphone reaches the limit (1~8), turning on another delegate microphone will switch off the delegate microphone turned on first: delegates speak in FIFO mode; if the number of active microphone (including chairman and VIP unit) reaches 8, turning on another microphone will switch off the delegate microphone turned on first;
 - ◇ **Voice:** voice mode, the microphone ON/OFF is controlled by voice: participator speaks towards the microphone and turns it on. In case of a speech pause (300 ms, 600 ms, 1 s~15 s), the microphone will turn off automatically;
 - ◇ **Request:** request mode, the delegate requests to speak by pressing the request key. The delegate can only speak when the operator (connected with PC) or the chairman (not connected with PC) approved his application;
 - ◇ **PTT (Push To Talk):** when the delegate presses and holds the microphone ON/OFF button, the microphone will be activated; when the ON/OFF button is released, the microphone will be deactivated;
- **Master Volume and Speaker Volume:** master volume and speaker volume control.

Parameters

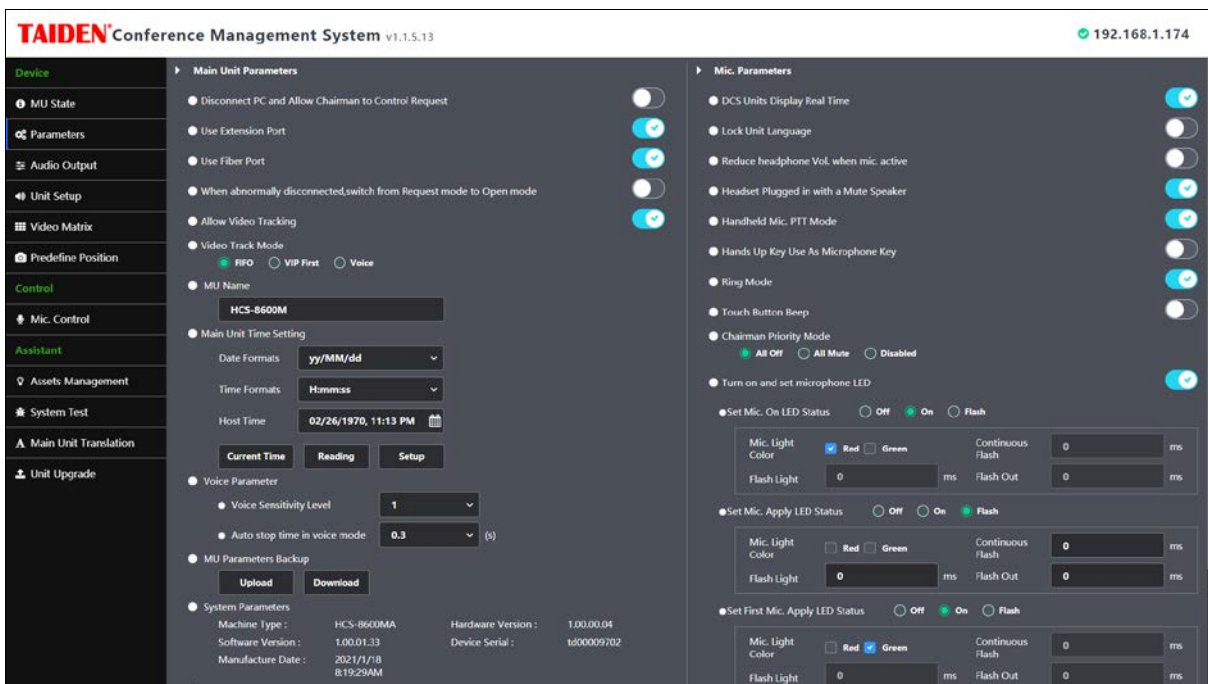


Figure: Parameters

Main Unit Parameters:

- Disconnect PC and allow chairman to control Request: when PC disconnected, chairman unit can approve/overrule delegates request;
- Use Extension Port: select whether use extension port or not;
- Use Fiber Port: select whether use fiber port or not;
- When abnormally disconnected, switch from Request mode to Open mode;
- Allow Video Tracking: allow video tracking automatically when the microphone is on;
- Video Track Mode: set video track mode as FIFO, VIP First or Voice when video tracking;
- MU Name: set up main unit's name;
- Main Unit Time Setting: setup the time displayed on the LCD of the main unit's front panel;
 - ◆ Current Time: display the time of the DCS server;
 - ◆ Reading: read the time of the main unit;
 - ◆ Setup: set the time of the main unit according to the time of the DCS server;
- Voice Parameter:
 - ◆ Voice Sensitivity Level: set the sensitivity "Level" to open microphone in Voice mode;
 - ◆ Auto stop time in voice mode: set the sensitivity "Off Time" to close microphone in Voice mode;
- MU Parameters Backup: upload and download main unit's parameters, used for parameters backup and restore;
- System Parameters: display system parameters, including device model, version, etc.
- Dante Parameters: display dante information.

Microphone Parameters:

- DCS Units Display Real Time: select whether the contribution units display real time or not;
- Lock unit Language: if locked, delegate cannot change unit's operation language;
- Reduce headphone Vol. when mic. active: select whether reduce headphone volume or not when Mic. active;
- Headset Plugged in with a Mute Speaker
- Handheld Mic. PTT Mode: force handheld microphone to PTT mode;
- Hands Up Key Use As Microphone Key: hands-up key is used as microphone On/Off key except discussion mode;
- Ring Mode: turn on/off all ring tones of the conference units when requesting to speak, on receipt of a short message or on IC card insertion;
- Touch Button Beep: enable beep function for touch button, if enabled, when press touch button, the unit's speaker/headset gives a prompt beep sound;
- Chairman Priority Mode: set the operation when the chairman unit presses the priority button;
 - ◆ All Off: turn off all microphones of delegates (except VIP units and other chairman units);
 - ◆ All Mute: mute all microphones of delegates (except VIP units and other chairman units) temporarily; once the button released, the former state is restored;
 - ◆ Disabled: disable chairman unit's priority function. If disabled, the function of the priority key is the same as the Mic. On/Off key.
- Turn on and set microphone LED:
 - ◆ Status: Off, On and Flash for selection;
 - ◆ Mic. Light: Red, Green and Yellow (check both red and yellow) for selection;
- Max. Request Count: set up the maximum number (≤ 100) of request microphones;
- Set DDS Unit as Single ID Mode or Double ID Mode.

Audio Output

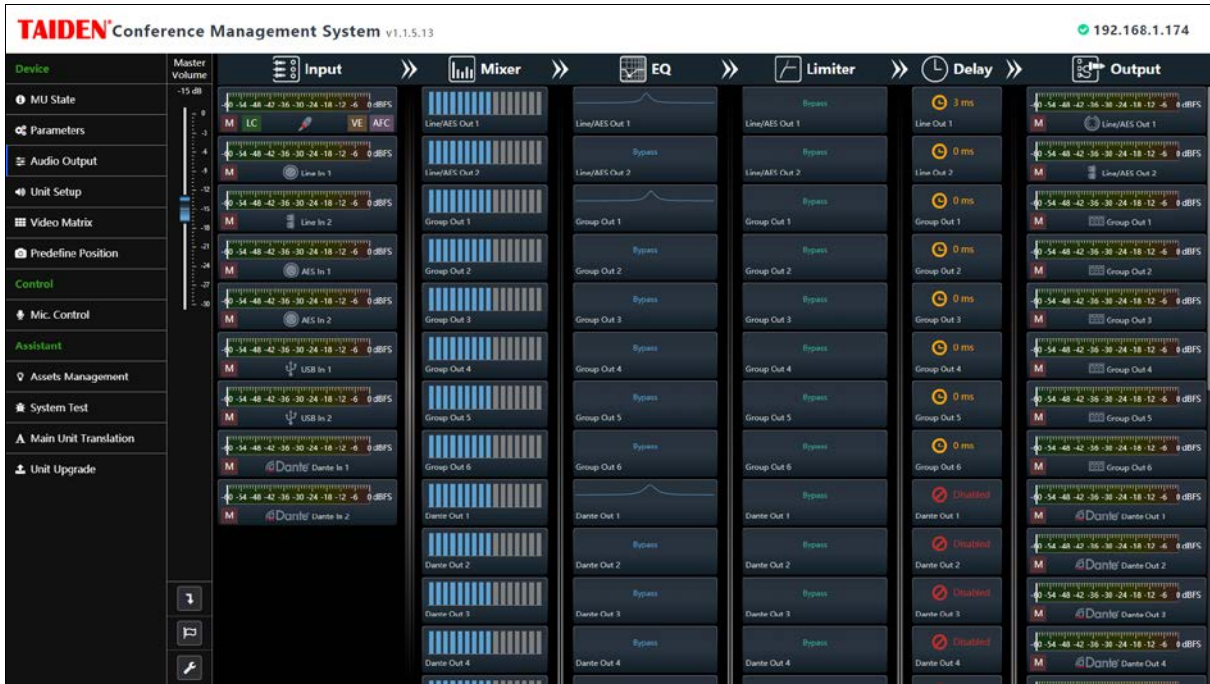


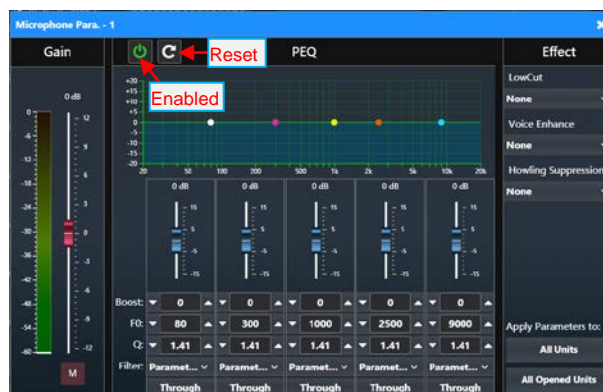
Figure: Audio Output Setup

- **Master Volume:** adjust the master volume of the audio output, Range: -30 dB~0 dB; it is a synchronous adjustment with the function knob on the CMU front panel.

- **Audio Input**

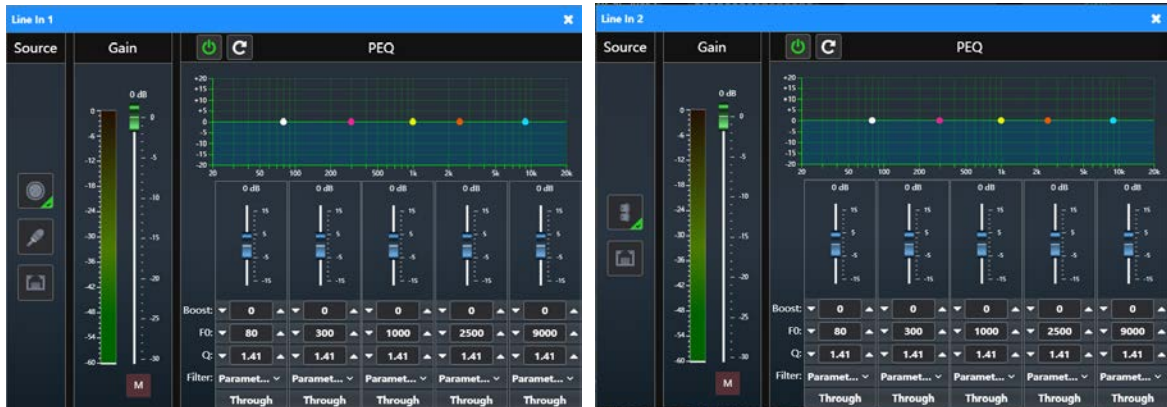
Based on TAIDEN originated CongressMatrix™ technology, supports 2 audio line in (Line/Dante) + 2 AES in (AES/Dante) + 2 USB in (USB/Dante) +2 Dante in, or 1 audio line in (Line/Dante) + 1 microphone input + 2 AES in (AES/Dante) + 2 USB in (USB/ Dante) +2 Dante in, gain and EQ for each input adjustable separately. +48 V phantom power supply at microphone input, condenser microphone can be connected directly, maximum supports 8 Dante input.

- ◆ **Active Mic.:** congress unit microphone input. When a congress unit microphone is activated, the unit ID will be displayed prior to sign-in and delegate's name will be displayed after signed-in. Double click it to adjust Gain and EQ (5 band) or select Mute or set sound Effect (Low Cut, Voice Enhance and Howling Suppression) in the pop-up dialogue box. Gain and EQ (5 band) of each microphone can be adjusted separately, fitting individual orator's voice to achieve perfect speech pickup at any time. Click "All Units" or "All Opened Units" in the lower right to apply microphone parameter settings to other units.

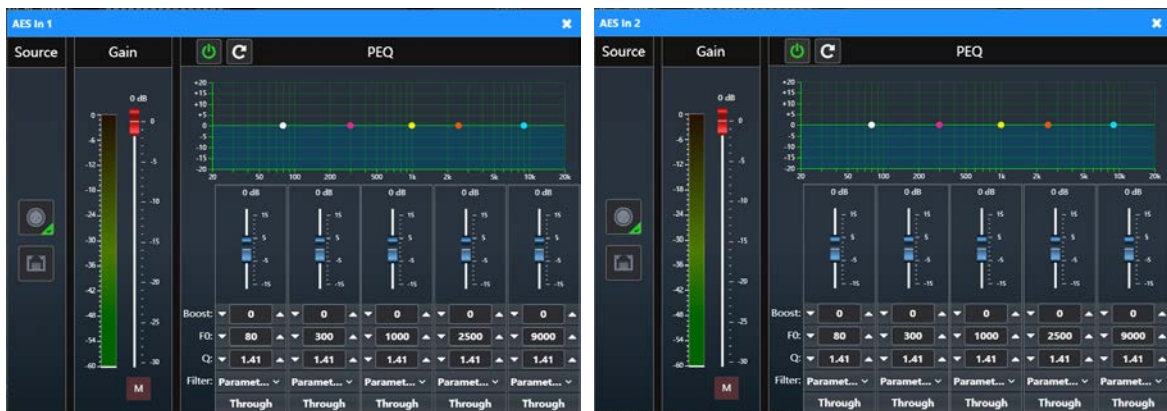


- ◆ **Line 1:** three input sources can be selected (Line In 1, Dante In 3, MIC In), the default option is Line In 1, set Gain (range: -30 dB ~0 dB) and EQ (5 band, range: -15 dB ~15 dB), display real-time level, if select MIC In, please choose whether to turn on the phantom power according to the need;

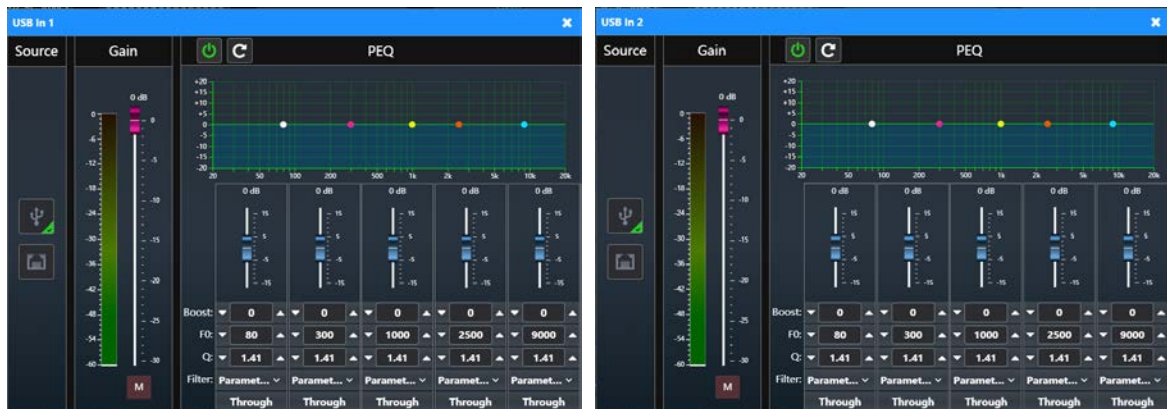
- ◆ **Line 2:** two input sources can be selected (Line In 2, Dante In 4), the default option is Line In 2, set Gain (range: -30 dB ~0 dB) and EQ (5 band, range: -15 dB ~15 dB), display real-time level;



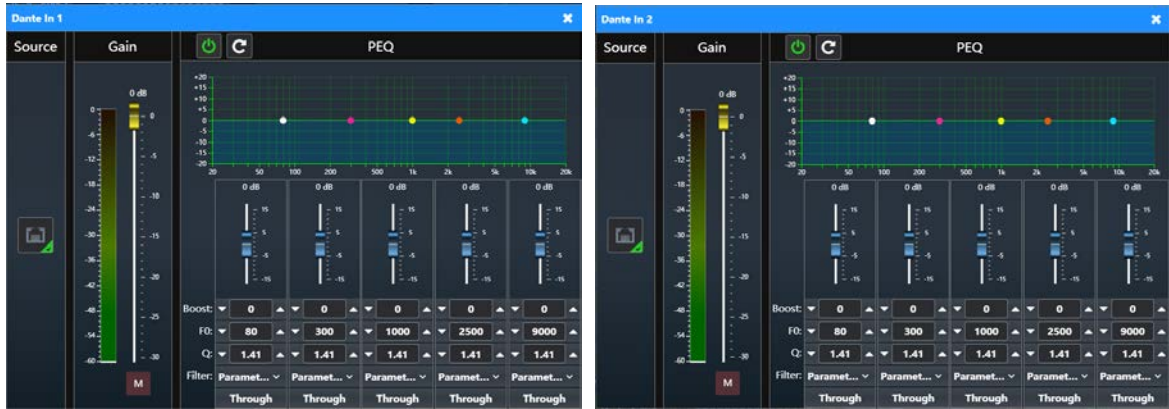
- ◆ **AES In 1~2:** two input sources can be selected (AES In 1~2, Dante In 7~8), the default option is AES In 1~2, set Gain (range: -30 dB ~0 dB) and EQ (5 band, range: -15 dB ~15 dB), display real-time level;



- ◆ **USB In 1~2:** two input sources can be selected (USB In 1~2, Dante In 5~6), the default option is USB In 1~2, set Gain (range: -30 dB ~0 dB) and EQ (5 band, range: -15 dB ~15 dB), display real-time level;



- ◆ **Dante In 1~2:** Dante inputs (Dante In 1~2), set Gain (range: -30 dB ~0 dB) and EQ (5 band, range: -15 dB ~15 dB), display real-time level;



● **Audio Output**

Based on TAIDEN *CongressMatrix™* technology, supports 26 audio outputs.

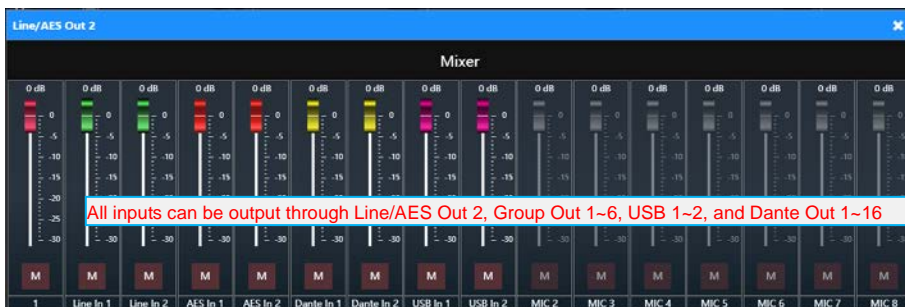
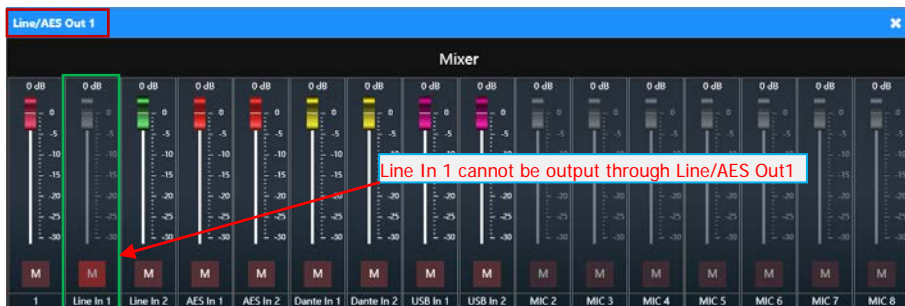
- a) Line/AES Out 1~2: 31 band graphical EQ + Limiter +Delay, the maximum delay time is 1000 ms;
- b) GroupOut 1~6: 15 band graphical EQ + Limiter +Delay, the maximum delay time is 1000 ms;
- c) USB 1~2: 8 band parametric EQ + Limiter +Delay, the maximum delay time is 1000 ms;
- d) Dante 1~16: 8 band parametric EQ + Limiter +Delay, the maximum delay time is 1000 ms;

- ◆ **Mixer n:** double click it to open setting interface, adjust each audio input gain independently, or mute a certain input;

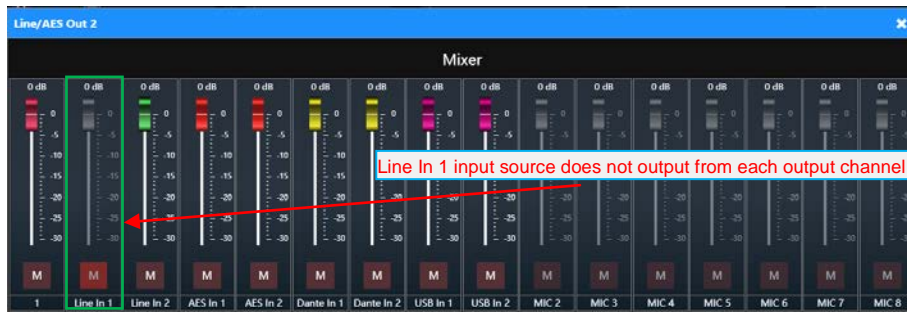
Audio mode - Normal Mode: all input sources can be output through 26 output channels, as shown below:



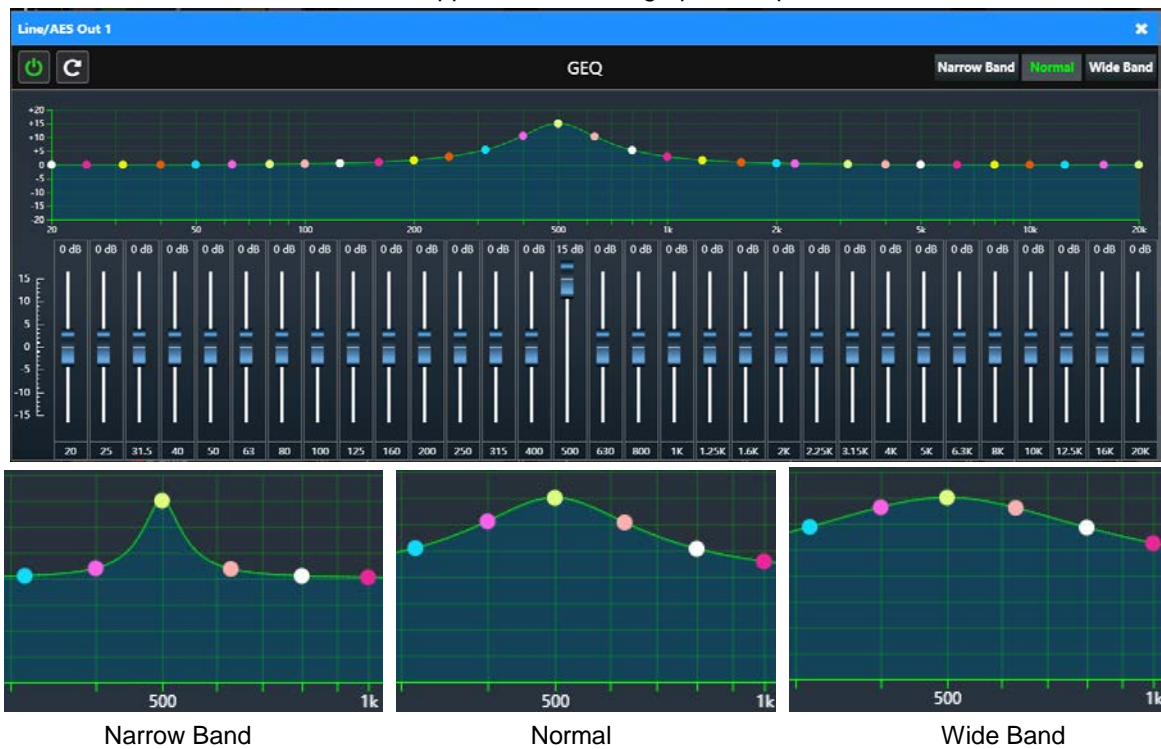
Audio mode - Teleconference Mode: the input source Line In 1 cannot be output through Line/AES Out1 and can be output normally through other output channels, as shown in the following figure:



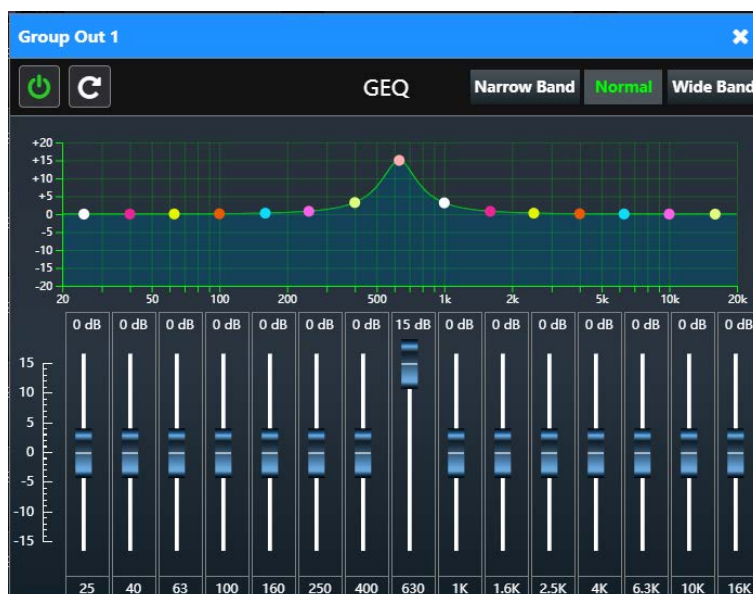
Audio mode - External Processor Mode: Line In 1 input source can be output through down-stream audio channel, other input sources can be output normally through 26 output channels, as shown in the following figure:



- ◆ **31 band GEQ:** Line/AES Out 1~2 support the 31 band graphical equalizer;



- ◆ **15 band GEQ:** Group Out 1~6 support the 15 band graphical equalizer;



- ◆ **8 band PEQ:** USB Out 1~2 and Dante Out 1~16 support the 8 band parametric equalizer;

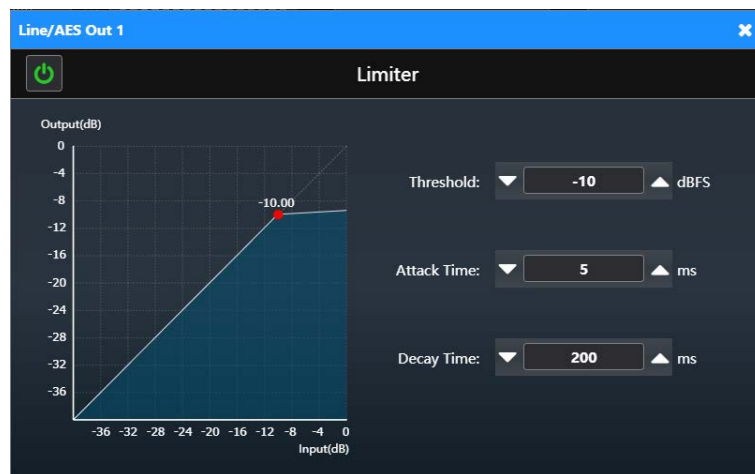


- ◆ **Limiter:** double click it to open setting interface;

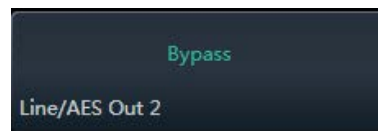
Bypass: disabled limiter;

If enabled limiter:

- **Threshold:** when the volume of the microphone is higher than the threshold value, the volume will be compressed according to the compression ratio;
- **Attack time:** when the volume of the microphone is higher than the threshold for a certain period of time, the audio compression will start;
- **Decay time:** when the volume of the microphone is below the threshold for a certain period of time, the audio compression will stop;



Enable limiter



Disable limiter

- ◆ **Delay :** double click it to set delay time, the maximum is 1000 ms;
- ◆ **Line Out 1~2/AES Out1~2, Group Out 1~6, USB Out 1~6, Dante Out 1~16:** double click it to set output gain;

Note: the HCS-4800 system cannot choose the audio matrix software module; the HCS-8600 system can choose the audio matrix software module according to the need.

- **Down Stream:** adjust downlink audio, including loudspeaker volume, downlink bass setting, downlink treble setting, and downlink threshold level setting:
 - ◆ Mixer: select audio input source, the microphone audio of the conference unit is output from the downstream audio by default; Line In 1~2, AES In 1~2, Dante In 1~2 and USB In 1~2 can select whether to output from the downstream audio, and the output volume ratio can be set by adjusting the gain;
 - ◆ PEQ: 8 band PEQ setting;
 - ◆ Limiter: downstream limiter setting, bypass or enabled;
 - ◆ Downstream volume control and level indicator.

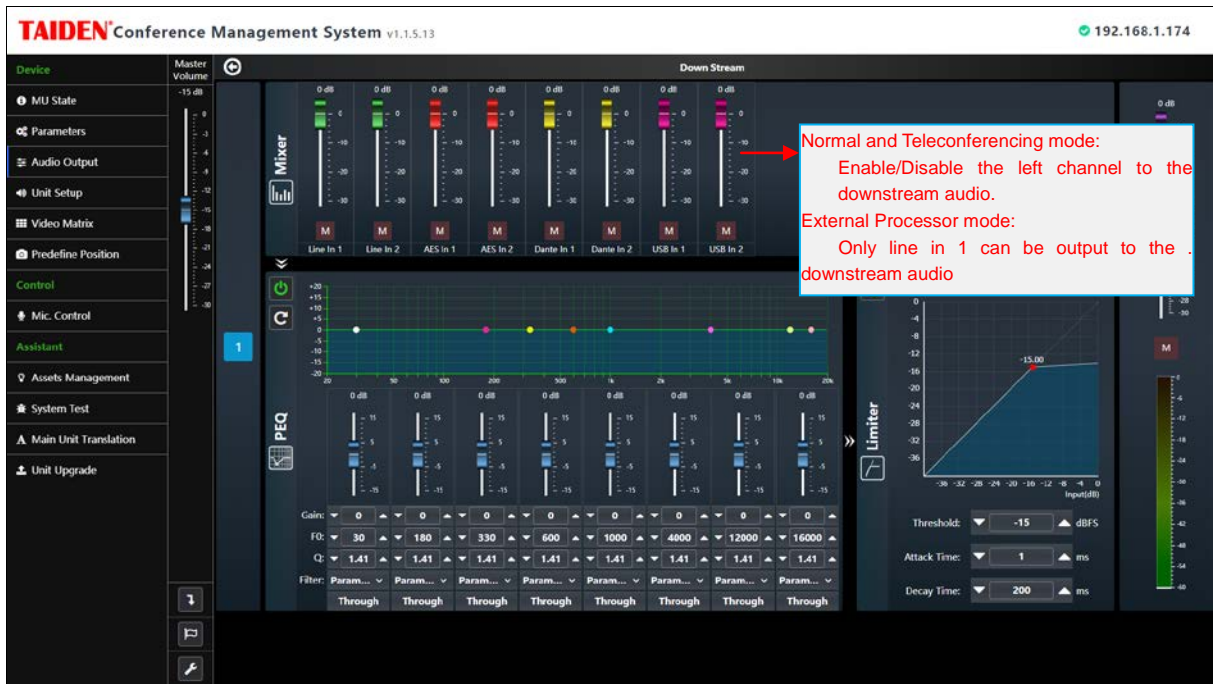
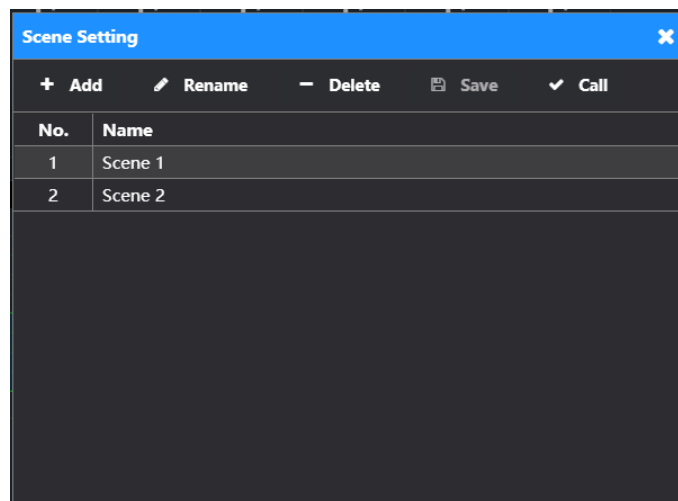



Figure: Down Stream Setup

- **Scene Setting:** Input, Mixer, EQ, Limiter, Delay, Output parameters and downstream audio parameters can be saved as a scene, and then can be called next time.



- **Setting:** includes Audio Mode Setting, Main Interface Setting Button, Enable Wide Dynamic Mode and Mic. Gain Boost (Dante and USB);
 - ◆ Audio Mode Setting:
 - Normal Mode: all input sources output through all output channels;
 - Teleconferencing Mode: Line In 1 does not output through Line Out 1 channel;
 - External Processor Mode: Line In 1 does not output through all output channels.

- ◆ Main Interface Setting Button: visible or invisible setting button  in the main interface;
- ◆ Enable Wide Dynamic Mode: allows the microphone to pick up more dynamic sound;
- ◆ Mic. Gain Boost (Dante and USB): boost congress unit's microphone gain when transmitted audio through the Dante network and USB.

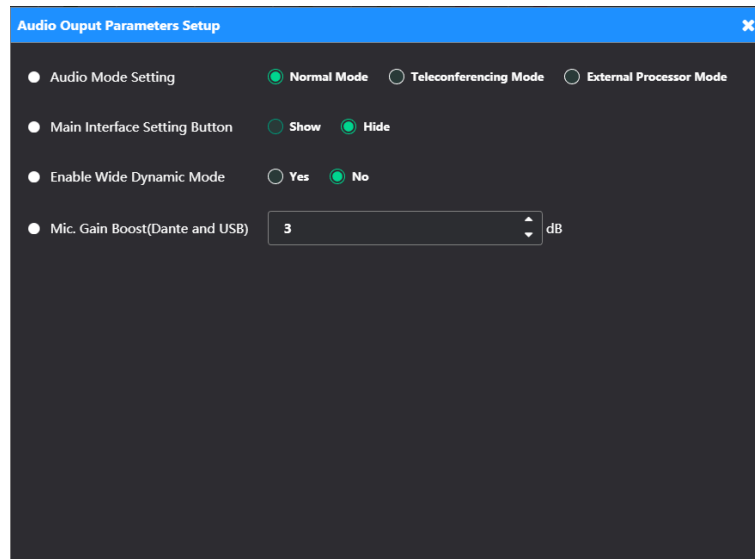


Figure: Audio Output Parameters Setup

Unit Setup

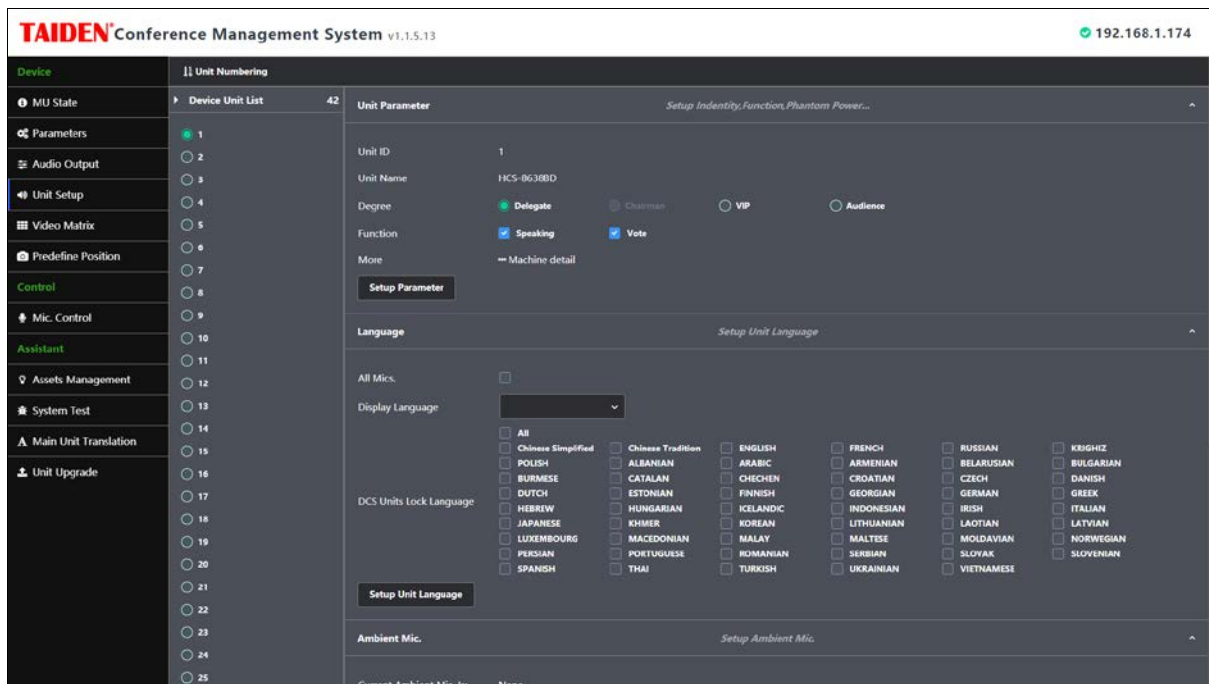




Figure: Unit Setup

- **Unit Parameters:** this module is to set up facilities for each conference contribution unit. The facilities include different Degrees (Delegate, VIP, and Audience), Functions (Speaking, Vote, and IC Card), and Phantom Power (On/Off) for multi-function connector HCS-4340A/50P;

The conference system can connect up to 100 chairman units. The user can choose any chairman unit(s) to be the executive chairman unit(s). If chairman unit is set as  **Delegate** or  **VIP**, the chairman unit is used as delegate units.

- Language:** select unit in the left list, locked language range, select language in the drop-down list, and then click the “Setup Unit Language” button to setup the operation language for congress unit except paperless multimedia terminal. If “All Mics.” option is checked, the language setup will be applied to all the units. If select the item of “DCS units lock language”, the operation language cannot be changed freely (include interpreter units).
- Ambient Mic.:** set up one contribution unit as ambient microphone (used to pick up ambient sound in the congress room), if any other contribution unit microphone turns on, the ambient microphone will turn off automatically; otherwise, the ambient microphone keeps activated. Check " **Enable Ambient Mic.** " and then click "Save Settings" to set the selected microphone as ambient microphone. Please set up ambient microphone properly before the meeting, because ambient microphone cannot be changed when meeting started.

Video Matrix

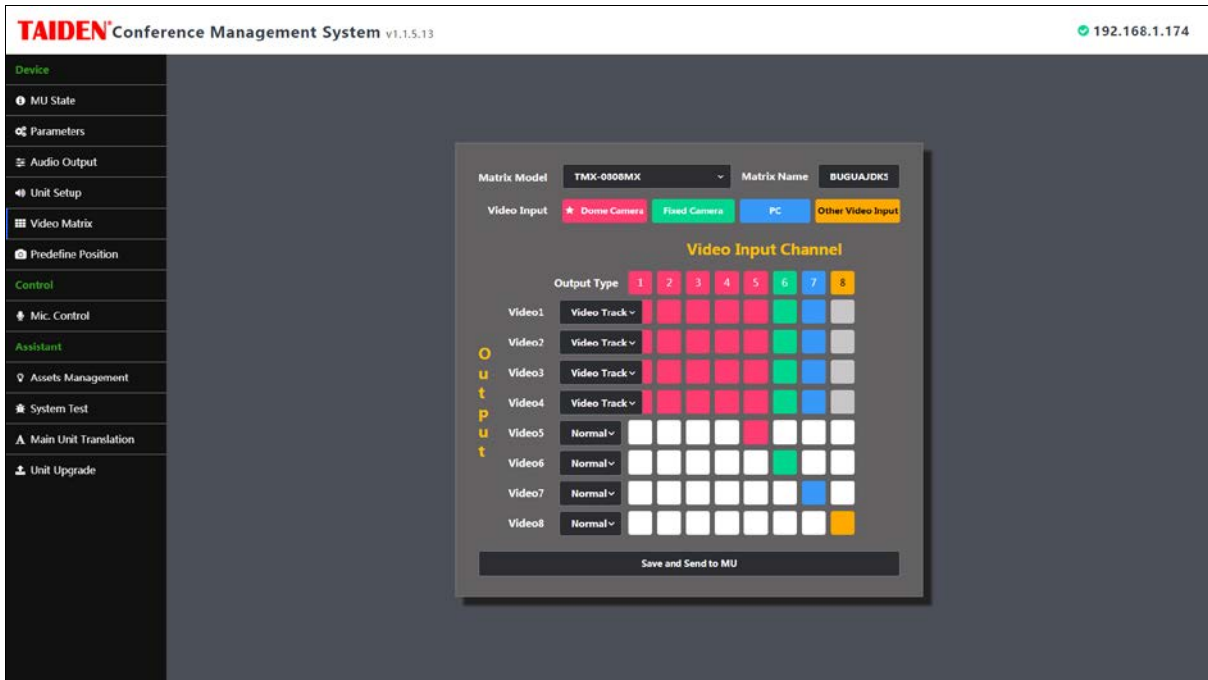


Figure: Video Matrix

Setup video matrix, supports TMX-0804, TMX-1608SDI2, TMX-1604SDI2, TMX-0808SDI2, TMX-0804SDI2, TMX-0404SDI2, TMX-1616MX and TMX-0808MX. Setting interface generated according to the connected matrix.

Matrix name: set up matrix name (no more than 15 characters) to facilitate the identification of matrixes.

The video input equipment includes dome camera, fixed camera, computer and another video input device.

- Dome camera: for automatic video tracking, and is controlled by system software;
- Fixed camera: fixed for image output of panorama or chairman; is controlled manually and switched by system software;
- PC: display vote result, proposal information or delegate’s information from PC output;
- Other video input: other video equipment for switching, such as DVD, VCD, and so on.

Two kinds of video output pattern: Video track and Normal.

- Video track: switch output channels among dome camera and fixed camera;
- Normal: in this mode, the input and output channel are preset.

Matrix setup:

1. Assign video input type according to the actual situation;
2. Assign video output type;
3. Assign output channel for “normal” video output by clicking on the crosspoint of input and output;
4. Click “Save and Send to MU” button to save current video matrix.

Predefine Position

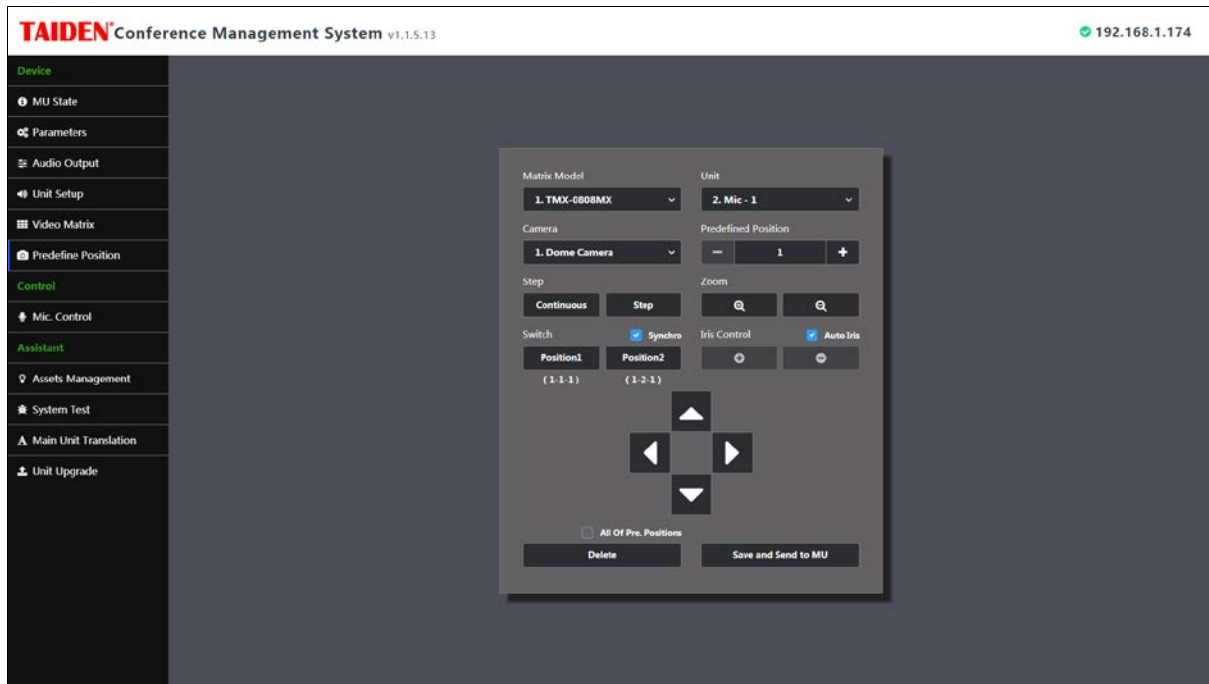


Figure: Predefined Position

Panorama setup: select proper matrix, camera and predefine position number, then adjust the camera angle by the four direction buttons, and click zoom in/out button to adjust the size of the video image, at last, click “Save and Send to MU” button to save the panorama if the adjustment is done.

You can set two panorama positions, the two predefine positions must be saved in two cameras but the two cameras must be connected to the same matrix.

Predefined position setup procedure is as follow:

1. Enter Predefine Position interface;
2. Select one unit;
3. Select the proper matrix in the Matrix Type combo box;
4. Select the proper camera in the Camera combo box (since each conference can be equipped with multiple cameras, the operator shall select the proper camera to give the best image of each participator);
5. Select the predefined position1 number (each camera can accommodate 64 positions);
6. Adjust the camera angle by the four direction buttons, and click zoom in/out button to adjust the size of the video image;
7. Click “Save and Send to MU” button to save the current predefined position if the adjustment is done;
8. If you need to modify position, please click “Delete” and then set the new position again; click “Predefine Position Management” to delete part or all positions;
9. If needed, please set position2 number, methods refer to position1 number;
10. Repeat steps 2~9 to set the predefined position for other seats/microphones.

Each unit can be set with two predefine positions, the two predefine positions must be saved in two cameras but the two cameras must be connected to the same matrix. If “Synchro” selected, when you switch positions between position1 and position2, the picture switches synchronously.

During the conference, if all microphones are configured with predefined positions, the camera will aim at the speaking participator automatically, i.e. automatic video tracking.

Note:

- If “Auto Iris” option is checked, predefined positions use auto iris; if not checked, the predefined positions can be adjusted manually (RS-232).

Microphone Control

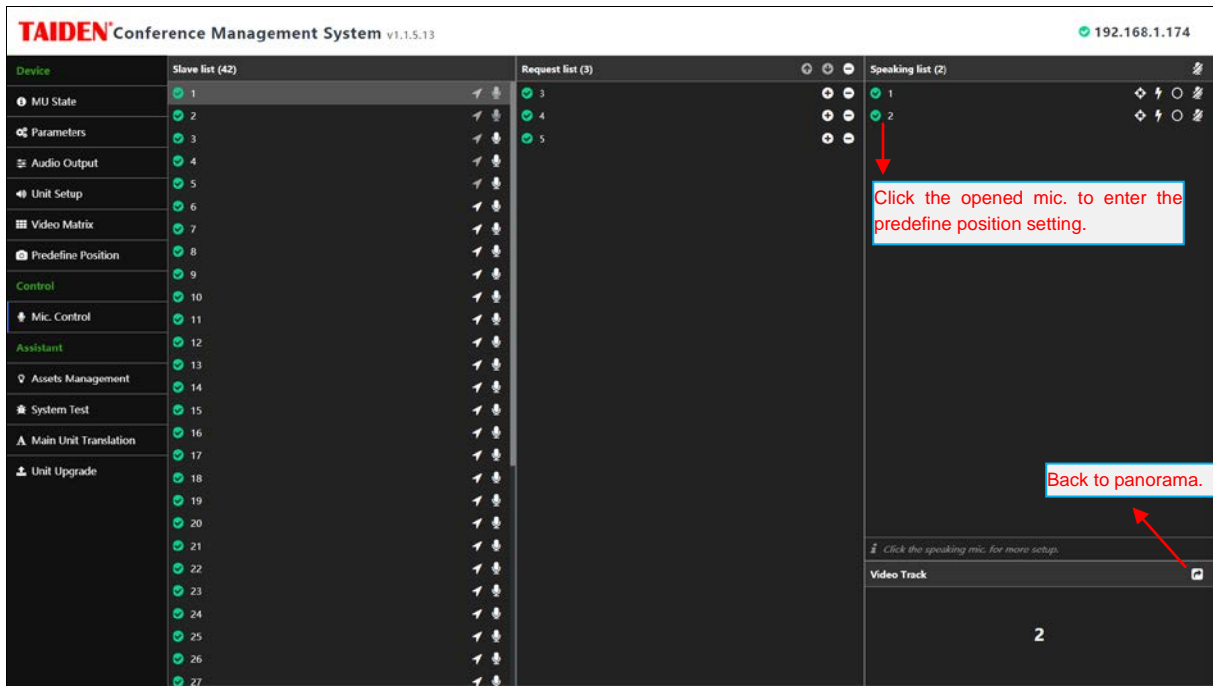
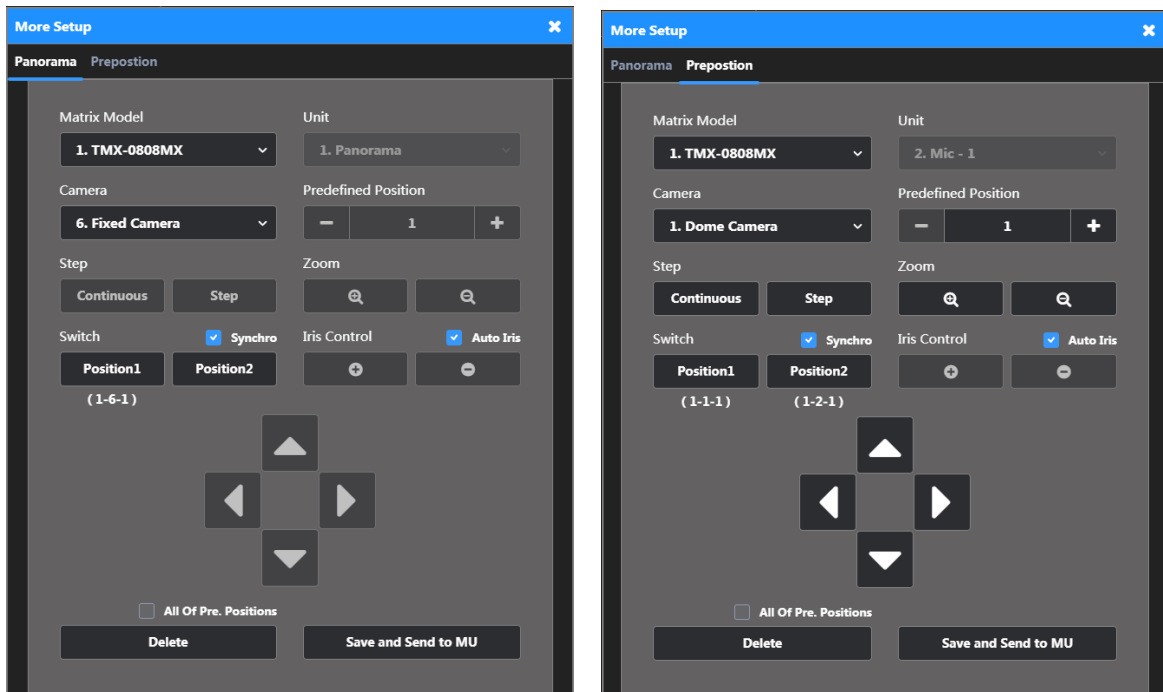


Figure: Microphone control

Click the “Mic. Control” to enter the interface. The function icons are:

	turn on/turn off		flash/close flash		track this unit
	add to request list		approve/reject request		move up/down

Click an open microphone to adjust position, as in the following figure:



Assets Management

Machine Type	Software Version	Software Date	Hardware Version	Serial	Production Date	Machine Name	Ip Address
HCS-8600MA	1.00.01.33	2021/02/25 11:52:17	1.00.00.04	td00009702	2021/01/18 08:19:29	HCS-8600M	192.168.1.174
HCS-109fzc	4.0.8.2	-	3.0.0.1	-	-	-	-

Figure: Assets Management interface

Assets management is used for querying assets information, include main unit, congress unit, interpreter unit, channel selector, multimedia terminal, video switchers, video monitor, electronic nameplate, HCS-8600MIO series and operator unit.

- 1) Query All: click the “Query All” button to update all the assets information;
- 2) Query Selected: click this button to update the select asset information.

Note:

☞ When querying the assets information, please do not operate the devices, or else, will cost more time.

System Test

TAIDEN conference system provides the facility for system testing to find out the problems of units accurately. This facility aims to find out and solve the problems prior to a conference to ensure the reliability of the entire conference system.

The System Test consists of Key Test, Microphone Test, SI Channel Test and LED Test.

● Key Test

The procedure of key test:

1. Click the “Start Test” button to begin;
2. All contribution units enter the key test state. To perform the key test, the operator shall press the keys on each contribution unit following the indicator prompt;
3. When all keys are pressed, click the “Stop Test” button to stop;
4. The result of the test is shown in the left textbox.

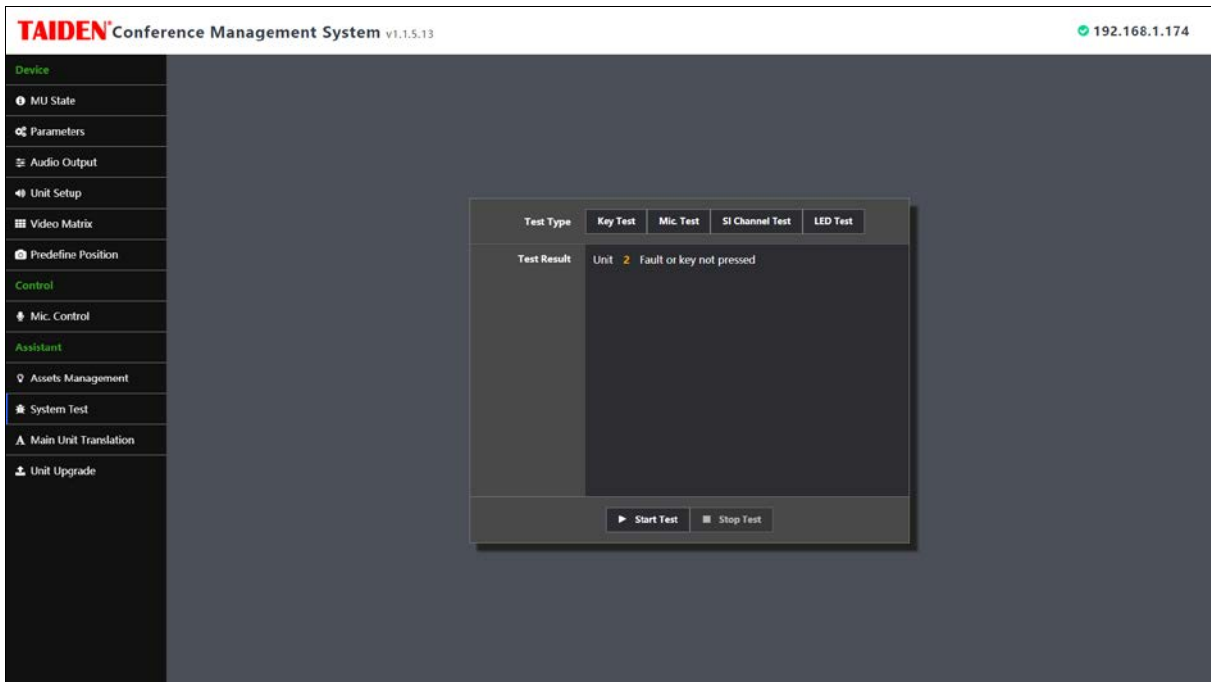


Figure: Key Test interface

- **Mic. Test**

Test the microphone of the units connected to the conference main unit, and the interface of the following figure is displayed:

To begin the test, the user shall first set the test time for each microphone in “Mic. Test Time (00:00:00, HH:MM:SS)”, select “Play Sound” or not (play white noise to assist testing), then click the “Start Test” button to begin. If the current microphone is in good condition, it will be activated, and its number is shown in the “Current Microphone ID” textbox. The remaining test time will also be shown under the textbox. The system is testing the microphones according to the microphone IDs, in ascending order.

Note: cannot start microphone test when priority key pressed, and microphone test will be paused when priority key pressed.

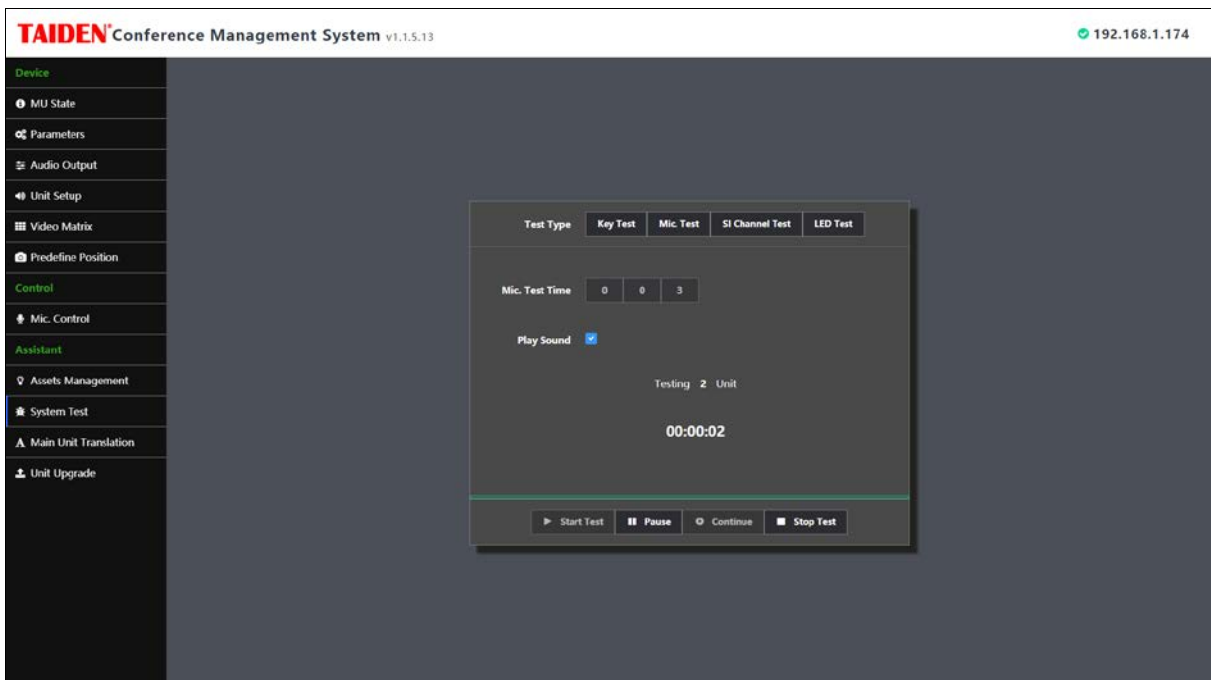


Figure: Microphone Test interface

- **SI Channel Test**

When SI channel test started, HCS-8685 will play the monitor channel name, and if the channel is not defined in the system, the sound “Floor” will be played.

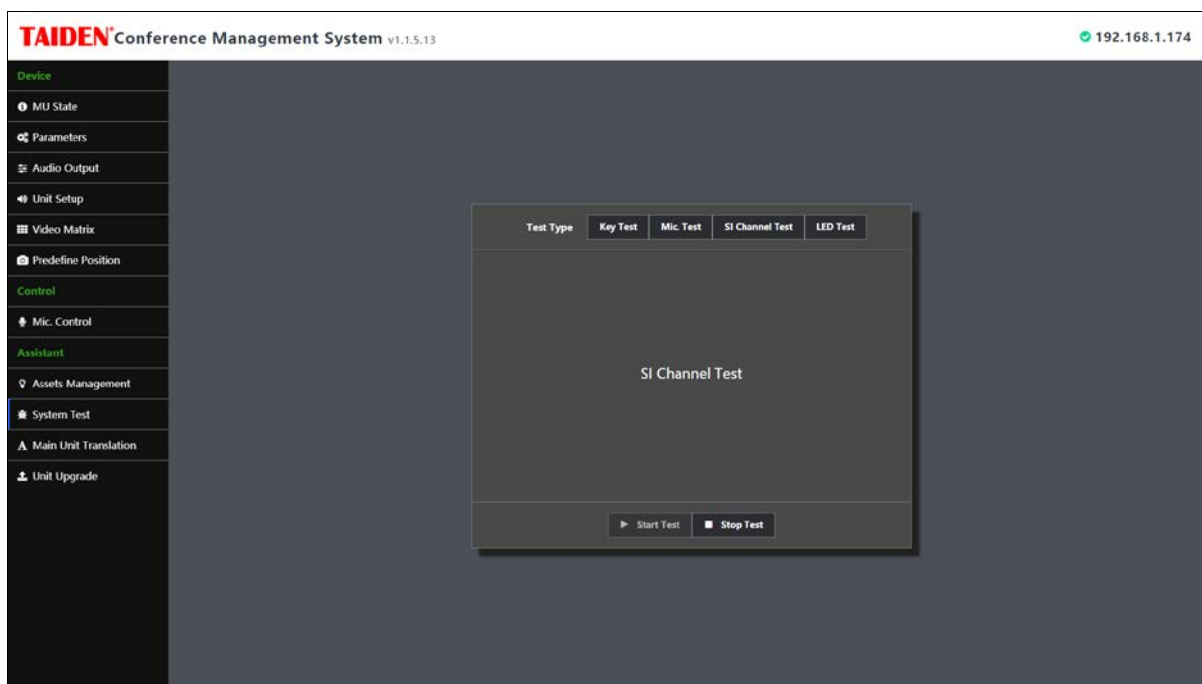


Figure: SI Channel Test interface

- **LED Test**

Press the “Start Test” button to enter LED (indicating light) test, shown as the following figure. The LEDs (indicating light) on all connected contribution units will blink immediately. Press the “Stop Test” button to exit LED test.

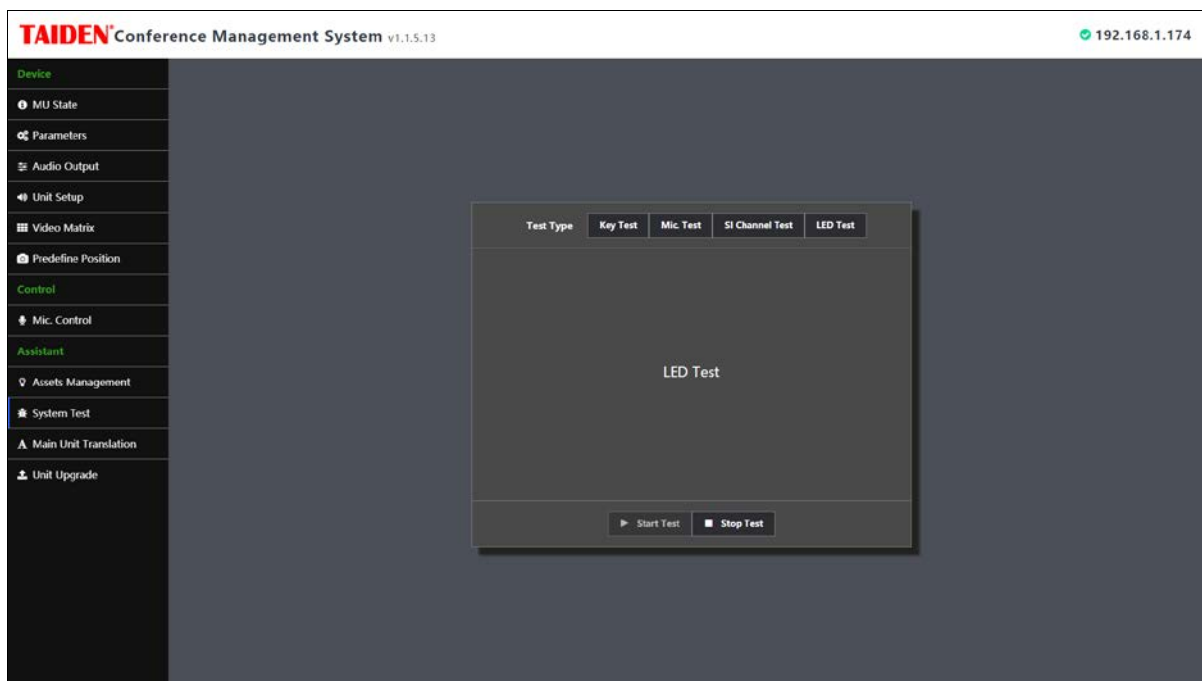


Figure: LED Test interface

Main Unit Translation

Chinese and English are default language for main unit, if other language needed, language item can be translated here one by one, save the language, at last, compile and upload the new language items to the main unit.

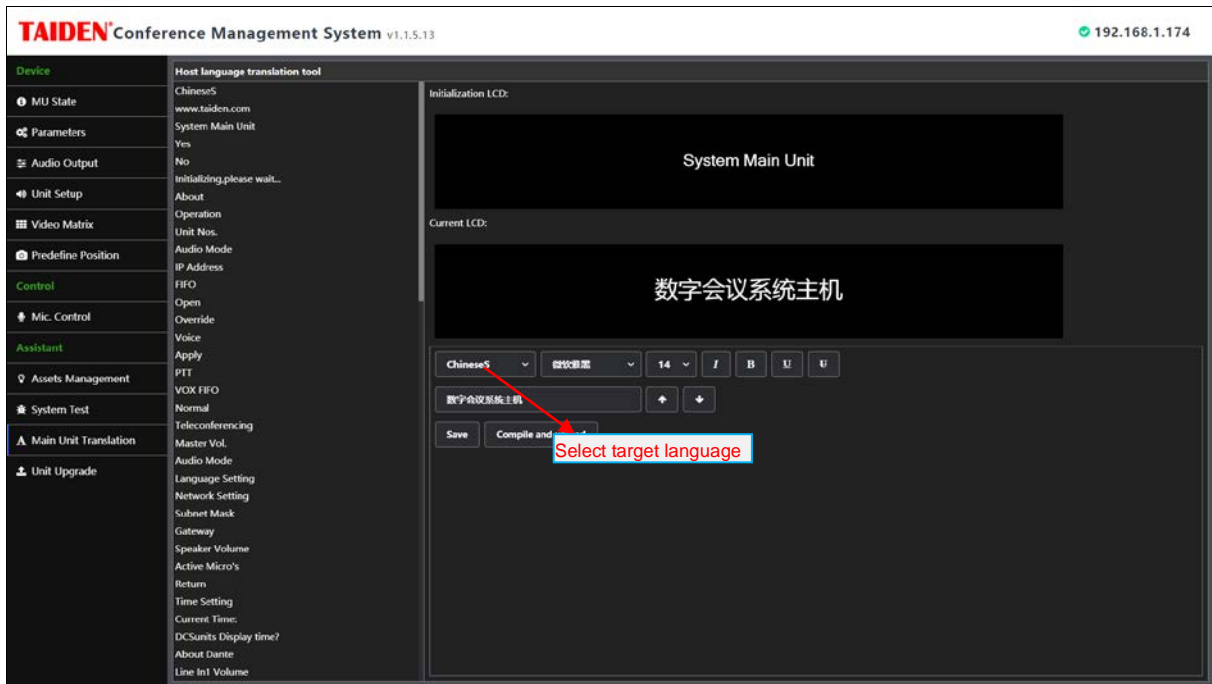


Figure: Main Unit Translation

Unit Upgrade

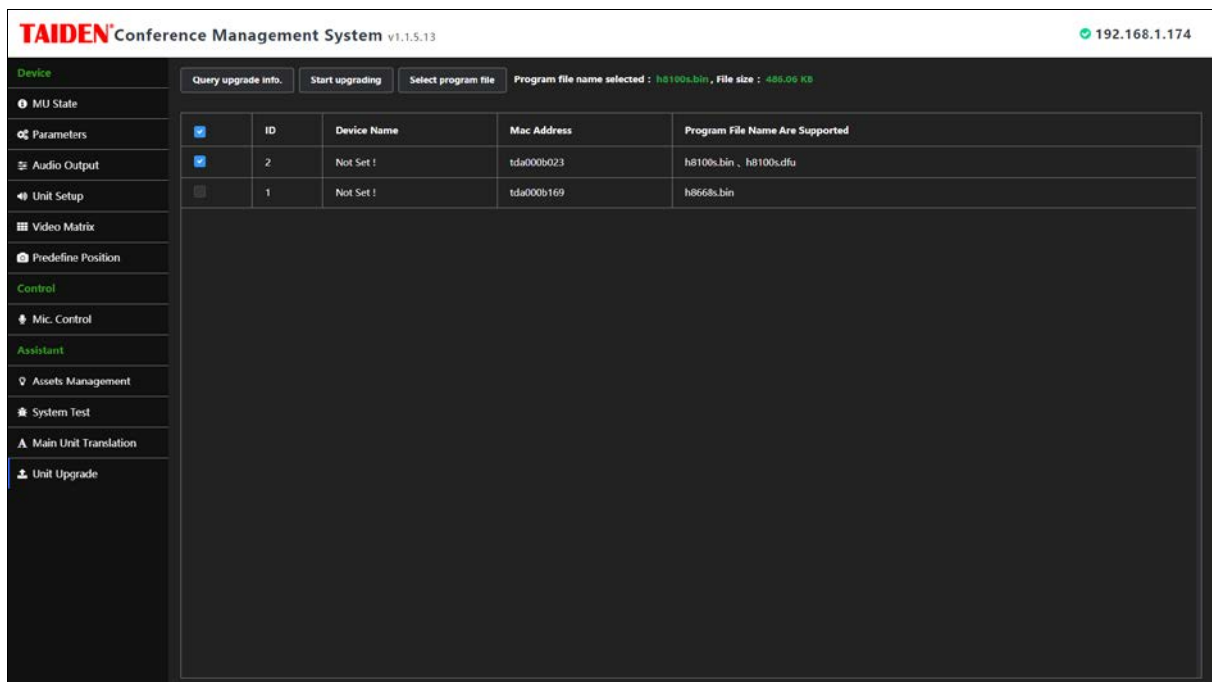
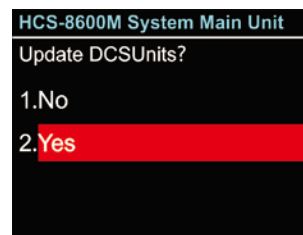
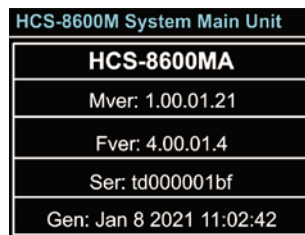
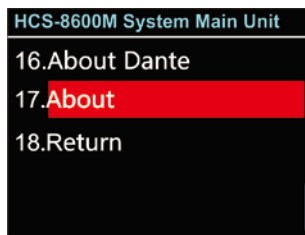


Figure: Unit Upgrade

Upgrade step:

- 1) Query congress unit upgrade information;
- 2) Select and load program file;
- 3) Select units in the list (all or part units);

- 4) Menu operation Congress Main Unit:
- Select "About" menu;
 - Turn function knob left to enter Update DCS Units interface;
 - Turn function knob to select Yes;



- 5) Click "Start Upgrading";
- 6) Reboot main unit after upgrading.

2.2 Extension Main Unit

2.2.1 Functions and instructions

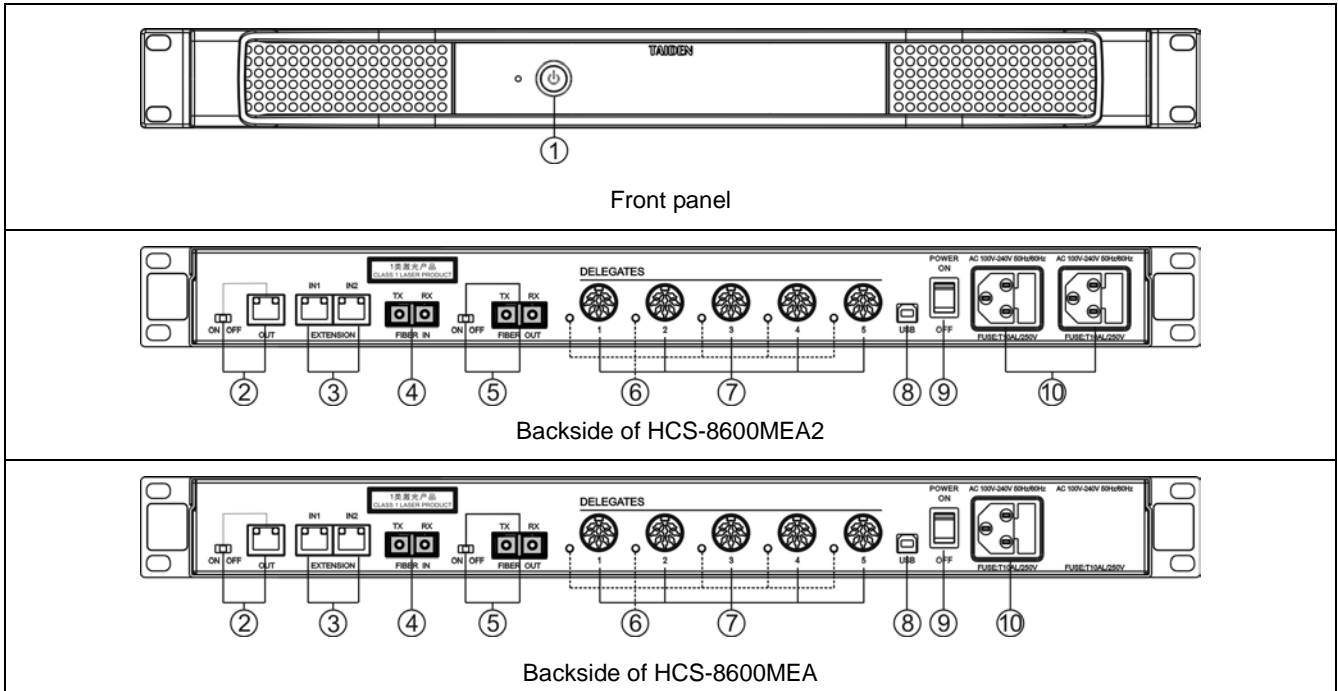


Figure 2.2.1 HCS-8600MEA series extension main unit

Figure 2.2.1:

1. Overload indicator and restart button

- Normal: turn off;
- Overload:red;
- Press button to restart extension main unit.

Note:

- ☞ Do not use the restart button to restart the machine frequently before troubleshooting.

2. Extension outlet (with switch)

- Connecting to next extension main unit, audio input unit or audio output unit.

3. Extension input

- Connecting to CMU, audio input unit, audio output unit or last extension main unit.

4. Fiber input

- Single-mode optical fiber, SC connector.

5. Fiber output (with switch)

- Single-mode optical fiber, SC connector.

6. Contribution unit (CU) connection LED

- When output works properly (≥ 1 CU connected), LED will flash; when no CU is connected, LED is off.

7. Contribution unit outlet 6P-DIN (1-5)

8. USB

- Reserved

9. Power switch

10. Power input

- Two power input for main power net and backup power net.

2.2.2 Connection

HCS-8600 series CMU has two 8P-DIN output interfaces; the power capacity of each 8P-DIN interface is limited. If the actually needed power of the system (that is, considering the actual total needed power consumption of the connected congress units and extension cables) is larger than the output capacity, HCS-8600MEA series extension main units are needed.

Each extension main unit has an extension input port for connecting to extension interface of the congress main unit, another extension output interface connecting to the next extension main unit. Each extension main unit has five 8P-DIN output interfaces for connecting congress units, and dedicated 8 cord cables are used for connection.

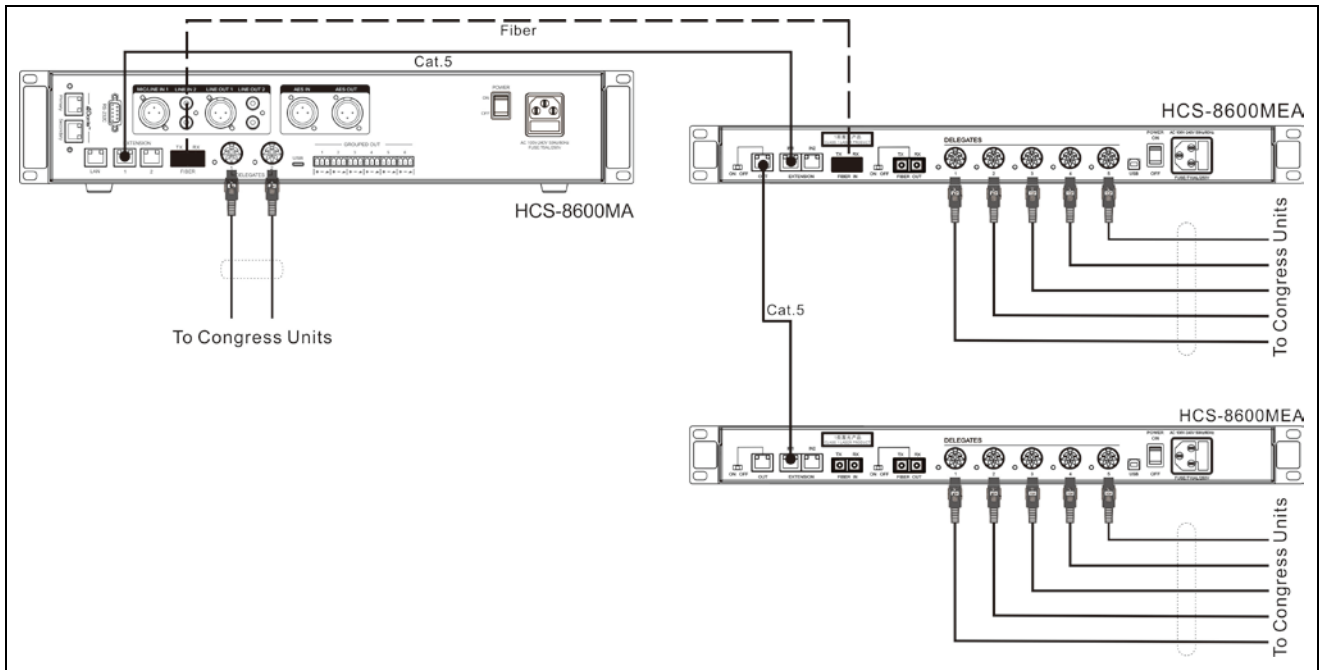


Figure 2.2.4 Connection between the CMU and EMU

2.3 Extension Unit

2.3.1 Functions and instructions

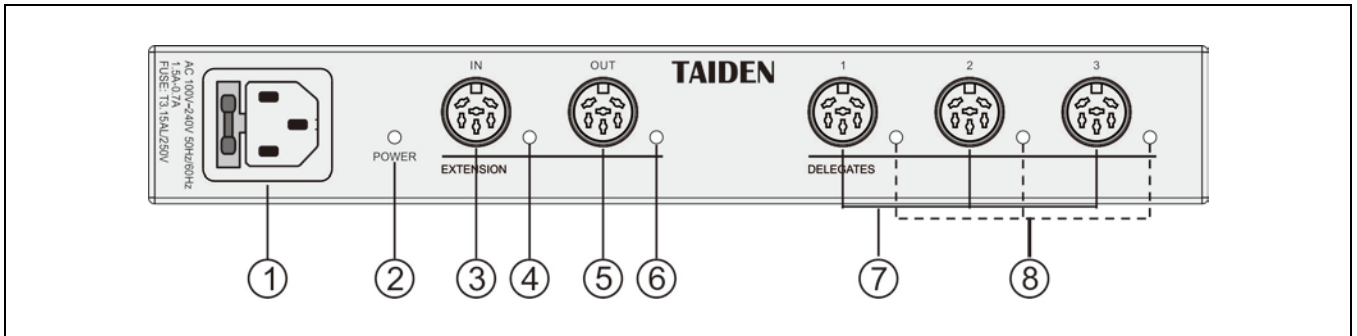


Figure 2.3.1 HCS-8600 series extension unit

Figure 2.3.1:

1. Power input
2. Power light (Red)
3. Extension input
 - Connecting to CMU or last HCS-8600MES.
4. Extension input indicator
5. Extension output
 - Connecting to next HCS-8600MES.
6. Extension output indicator
7. Contribution unit outlet 8P-DIN (1-3)
8. Contribution unit (CU) connection LED
 - When output works properly (≥ 1 CU connected), LED will flash; when no CU is connected, LED is off.

2.3.2 Installation

The extension unit can be fixed on flat surface (table, wall, ground, etc). Make holes on flat surface according to the following figure, then fixed HCS-8600MES with M3 screws.

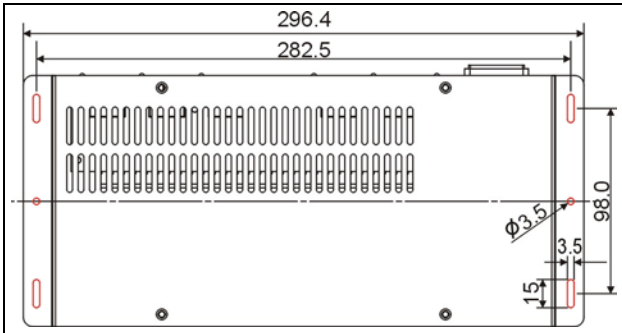


Figure 2.3.2 Installation of the HCS-8600MES

The HCS-8600MES extension unit can also be installed on a standard 19-inch cabinet with a HCS-MES-RCF cabinet mounting bracket.

- ①. First lock the HCS-8600MES on the HCS-MES-RCF with the packaged M3 screw;
- ②. Place the HCS-MES-RCF into 19-inch cabinet and secure the 4 holes with the screws.

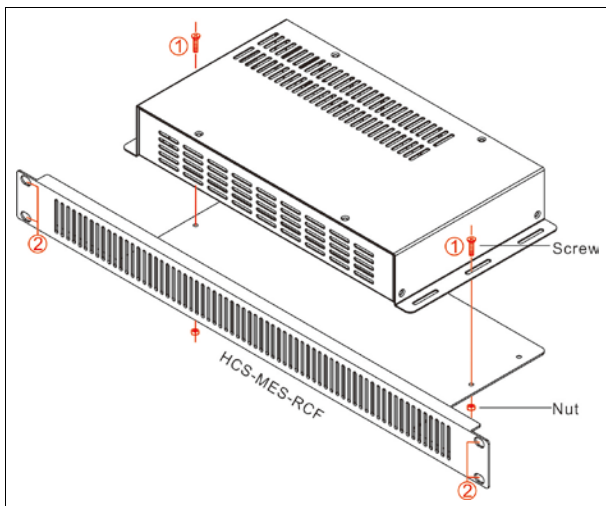


Figure 2.3.2 Cabinet installation of HCS-8600MES

Chapter 3 Congress unit

3.1 Overview

Congress unit is the common name to describe the units used by the attendees to contribute to a congress. The term includes discussion unit (chairman/delegate), voting unit, channel selector etc. Various features are available for the attendee, depending on the type of congress unit operated: listen, speak, request to speak, information display, IC-card sign-in, key-press sign-in, Pincode sign-in, Fingerprint sign-in, voting, simultaneous interpretation etc.

A discussion unit includes chairman unit, delegate unit and VIP unit from the authority.

HCS-8668 Series:

HCS-8668ACE chairman unit

HCS-8668ADE delegate unit

Paperless Multimedia Congress Terminal (14" 1920x1080 LCD, capacitive touch panel, camera with 8 megapixel, speech, voting, 64 CHs, paperless conference functions, video conversation, video display, multiple channel VOD and broadcasting, conference service, built-in contactless IC-Card reader, fingerprint identification, internet access, video source selection, HCS-1082 series E-ink nameplate can be connected, support PoE, black)

HCS-8668BCE chairman unit

HCS-8668BDE delegate unit

Paperless Multimedia Congress Terminal (14" 1920x1080 LCD, capacitive touch panel, camera with 8 megapixel, speech, voting, 64 CHs, paperless conference functions, video conversation, video display, multiple channel VOD and broadcasting, conference service, built-in contactless IC-Card reader, internet access, video source selection, HCS-1082 series E-ink nameplate can be connected, support PoE, black)

HCS-8668BDD delegate unit

Paperless Multimedia Congress Terminal (14" 1920x1080 LCD, capacitive touch panel, camera with 8 megapixel, dual stem microphones, speech, voting, 64 CHs, paperless conference functions, video conversation, video display, multiple channel VOD and broadcasting, conference service, internet access, video source selection, HCS-1082 series E-ink nameplate can be connected, support PoE, black)

HCS-8638/50 Series:

HCS-8638ACE/50 chairman unit

HCS-8638ADE/50 delegate unit

Paperless Multimedia Congress Terminal (10" 1920x1200 LCD, capacitive touch panel, camera with 8 megapixel, speech, voting, 64 CHs, paperless conference functions, video conversation, video display, multiple channel VOD and broadcasting, conference service, fingerprint identification, internet access, HCS-1082 series E-ink nameplate can be connected, support PoE, black)

HCS-8638BCE/50 chairman unit

HCS-8638BDE/50 delegate unit

Paperless Multimedia Congress Terminal (10" 1920x1200 LCD, capacitive touch panel, camera with 8 megapixel, speech, voting, 64 CHs, paperless conference functions, video conversation, video display, multiple channel VOD and broadcasting, conference service, built-in contactless IC-Card reader, internet access, HCS-1082 series E-ink nameplate can be connected, support PoE, black)

HCS-8665 Series:

HCS-8665CE chairman unit

HCS-8665DE delegate unit

Compact Multimedia Congress Terminal (14" 1920x1080 LCD, 128x36 OLED, speech, voting, 64 CHs, HD video display, HDMI input, video source selection, HCS-1082 series E-ink nameplate can be connected, support PoE, black)

HCS-8635 Series:

HCS-8635CE chairman unit

HCS-8635DE delegate unit

Compact Multimedia Congress Terminal (10" 1280x800 LCD, speech, voting, 64 CHs, HD video display, SDI input and loop output, built-in contactless IC-Card reader, black)

■ Multi-channel Video Monitor

HCS-8665MON

Multi-channel Video Monitor (14" 1920x1080 LCD, HD video display, HDMI input, support PoE, black)

3.2 HCS-8668/8638 series paperless multimedia congress terminal

3.2.1 Functions and instructions

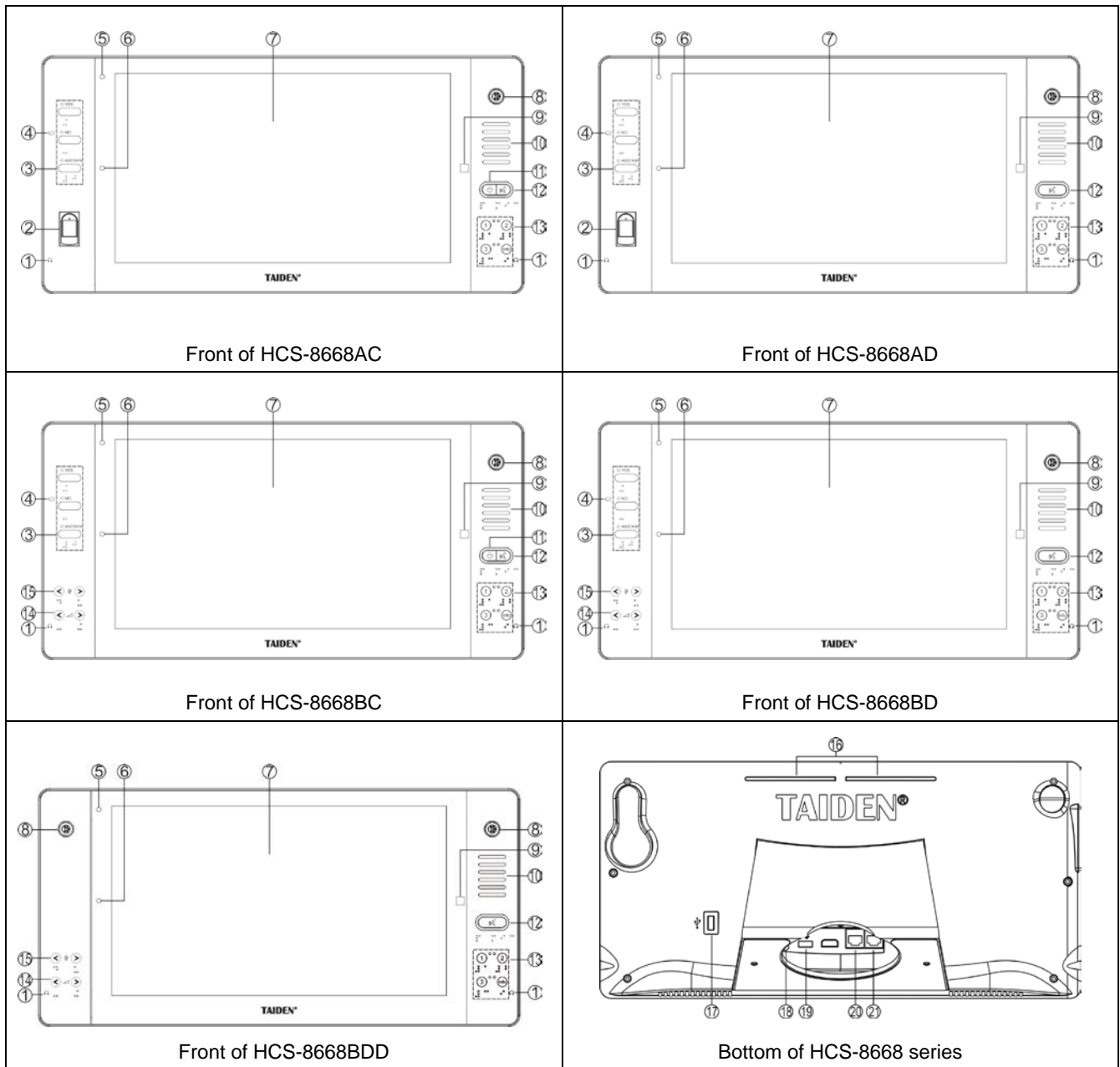


Figure 3.2.1 HCS-8668 series Paperless Multimedia Congress Terminal

Figure 3.2.1:

1. Earphone jack (Ø 3.5 mm)

2. Fingerprint identification module

3. Voting keys with indicating light (3 keys):

◆ YES

In voting mode, the voting indicating light will blink, press this key to vote for “Yes”;

◆ NO

In voting mode, the voting indicating light will blink, press this key to vote for “No”;

◆ ABSTAIN

In voting mode, the voting indicating light will blink, press this key to vote for “Abstain”;

4. Contactless IC Card slot

◆ Built-in contactless IC-Card slot to place the IC card, while automatically logout once the card is taken out from the slot.

5. Flashlight

6. Camera

7. High resolution LCD touch screen

- ◆ 14", 16:9, 1920 × 1080

8. Removable microphone stem spiral active interface

9. Home key

10. Built-in Hi-Fi loudspeaker

- ◆ Mutes automatically to suppress howling when the microphone of this unit is active;
- ◆ Loudspeaker sends out floor channel audio only. The volume is controlled via CMU or application software.

11. Priority key with indicating light (for chairman unit only):

- ◆ According to priority mode configuration on main unit:
 - ◇ If configured as “All mute”, all active delegate microphones (except VIP units) will be temporarily muted when this key is pressed and they will resume when the key is released;
 - ◇ If configured as “All off”, all active delegate microphones (except VIP units) will be turned off when this key is pressed. Under “OPEN” and “Request” mode, pressing this key will clear request list (deny all delegates request to speak);
- ◆ If chairman microphone is not active, pressing this key will activate it;
- ◆ If ring mode is configured as “ON”, a ring tone will be produced when this key is pressed, and the indicating light of priority key will be turned on.

12. Microphone On/Off key with indicating light (for chairman unit)

Microphone/request key with indicating light (for delegate unit):

- ◆ Chairman unit: press this key to activate microphone and indicating light;
- ◆ Delegate unit:

Work state	Indicating light
Microphone On	Red (on)
Request to speak	Green (on)
Speaking time limit	Red (flash)
VIP indication	Yellow (on)

13. Video source selection

14. Earphone volume control

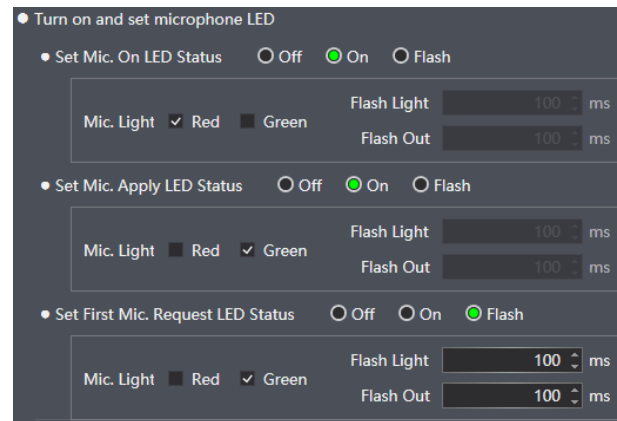
15. Simultaneous interpretation channel selector

16. Microphone On/Off/Request state indicator

- ◆ The indicator state is the same as that of the microphone lamp ring, and can be set by conference management software or main unit webpage.

Default state:

Work state	Indicating light
Microphone On	Red (on)
First in request list	Green (flash)
Not first in request list	Green (on)
Speaking time limit	Red (flash)
VIP indication	Yellow (on)



17. USB port

- ◆ For external mouse and keyboard or other USB devices.

18. Power input

- ◆ 48 V DC power supply.

19. USB port

- ◆ For connection to HCS-1082 series E-ink nameplate.

20&21. Ethernet interface (support PoE)

- ◆ PoE mode: connecting to HCS-8600KMX or HCS-8368T(/50) via Cat.5e/Cat.6 cable, for power supply and transmission of conference data and multimedia data;
- ◆ NOT PoE mode: connecting to HCS-8600KMX via Cat.5/Cat.6 cable, supporting “Daisy-chain” connection.

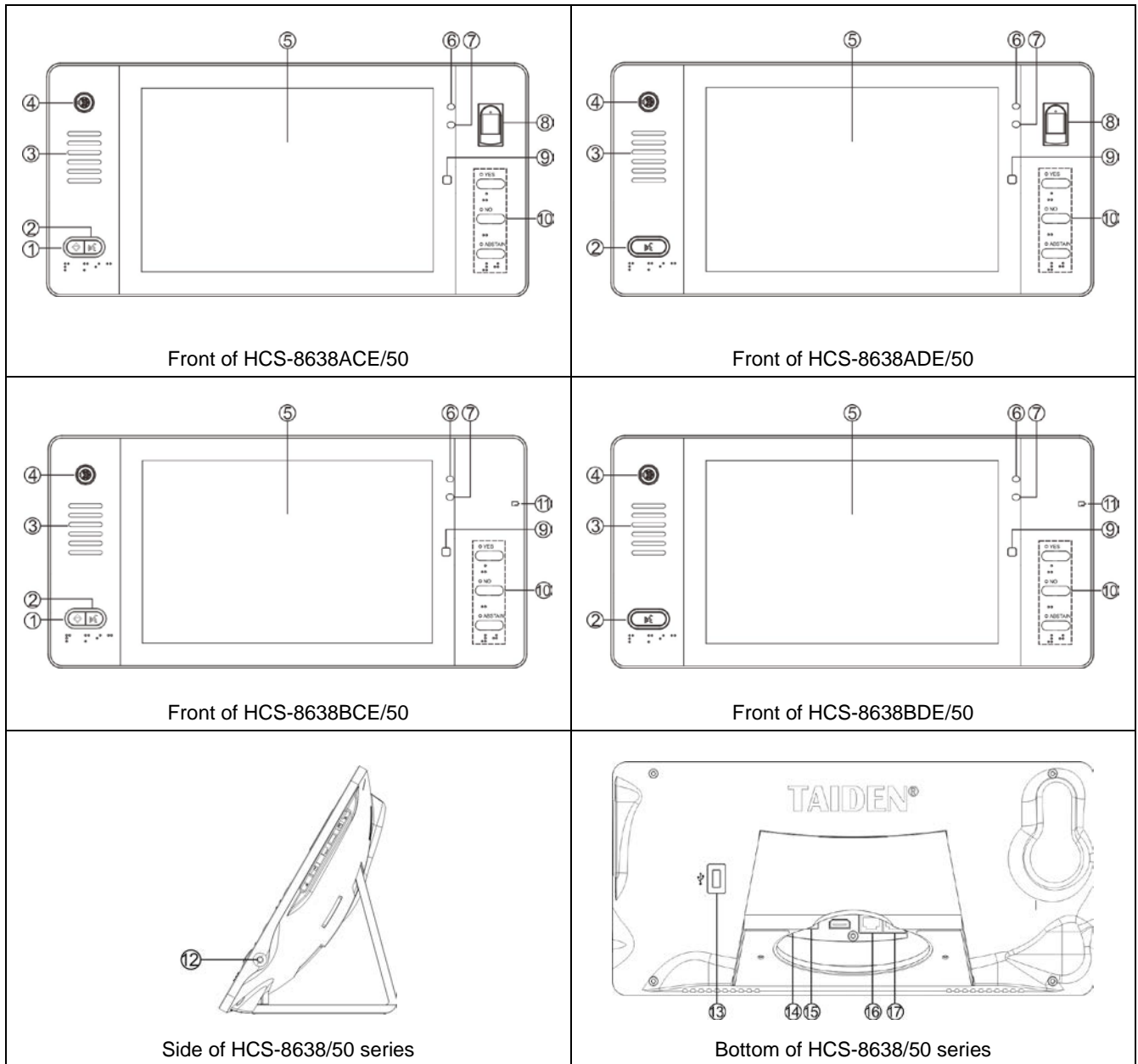


Figure 3.2.2 HCS-8638/50 series Paperless Multimedia Congress Terminal

Figure 3.2.2:

1. Priority key with indicating light (for chairman unit only):

- ◆ According to priority mode configuration on main unit:
 - ◇ If configured as “All mute”, all active delegate microphones (except VIP units) will be temporarily muted when this key is pressed and they will resume when the key is released;
 - ◇ If configured as “All off”, all active delegate microphones (except VIP units) will be turned off when this key is pressed. Under “OPEN” and “Request” mode, pressing this key will

clear request list (deny all delegates request to speak);

- ◆ If chairman microphone is not active, pressing this key will activate it;
- ◆ If ring mode is configured as “ON”, a ring tone will be produced when this key is pressed, and the indicating light of priority key will be turned on.

2. Microphone On/Off key with indicating light (for chairman unit)

Microphone/request key with indicating light (for delegate unit):

- ◆ Chairman unit: press this key to activate microphone and indicating light;

- ◆ Delegate unit:

Work state	Indicating light
Microphone On	Red (on)
Request to speak	Green (on)
Speaking time limit	Red (flash)
VIP indication	Yellow (on)

3. Built-in Hi-Fi loudspeaker

- ◆ Mutes automatically to suppress howling when the microphone of this unit is active;
- ◆ Loudspeaker sends out floor channel audio only. The volume is controlled via CMU or application software.

4. Removable microphone stem spiral active interface

5. High resolution LCD touch screen

- ◆ 10", 16:10, 1920 × 1200

6. Flashlight

7. Camera

8. Fingerprint identification module

9. Home key

10. Voting keys with indicating light (3 keys):

- ◆ YES

In voting mode, the voting indicating light will blink, press this key to vote for "Yes";

- ◆ NO

In voting mode, the voting indicating light will blink, press this key to vote for "No";

- ◆ ABSTAIN

In voting mode, the voting indicating light will blink, press this key to vote for "Abstain";

11. Contactless IC Card slot

- ◆ The slot is configured on the side of the terminal;

- ◆ Built-in contactless IC-Card slot to place the IC card, while automatically logout once the card is taken out from the slot.

12. Earphone jack (Ø 3.5 mm)

13. USB port

- ◆ For external mouse and keyboard or other USB devices.

14. Power input

- ◆ 48 V DC power supply.

15. USB port

- ◆ For connection to HCS-1082 series E-ink nameplate.

16&17. Ethernet interface (support PoE)

- ◆ PoE mode: connecting to HCS-8600KMX or HCS-8368T(/50) via Cat.5e/Cat.6 cable, for power supply and transmission of conference data and multimedia data;
- ◆ NOT PoE mode: connecting to HCS-8600KMX via Cat.5/Cat.6 cable, supporting "Daisy-chain" connection.

3.2.2 Fixed Installation

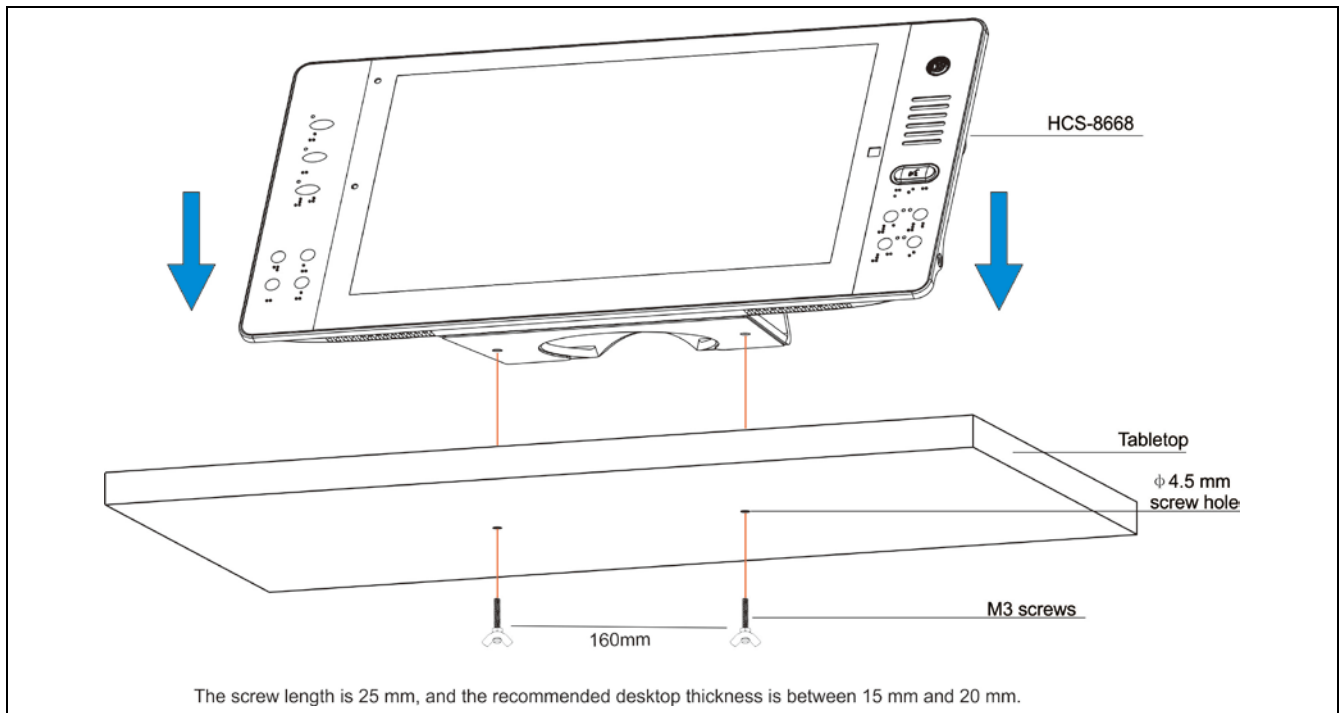


Figure 3.2.3 Fixed installation of HCS-8668 series congress unit

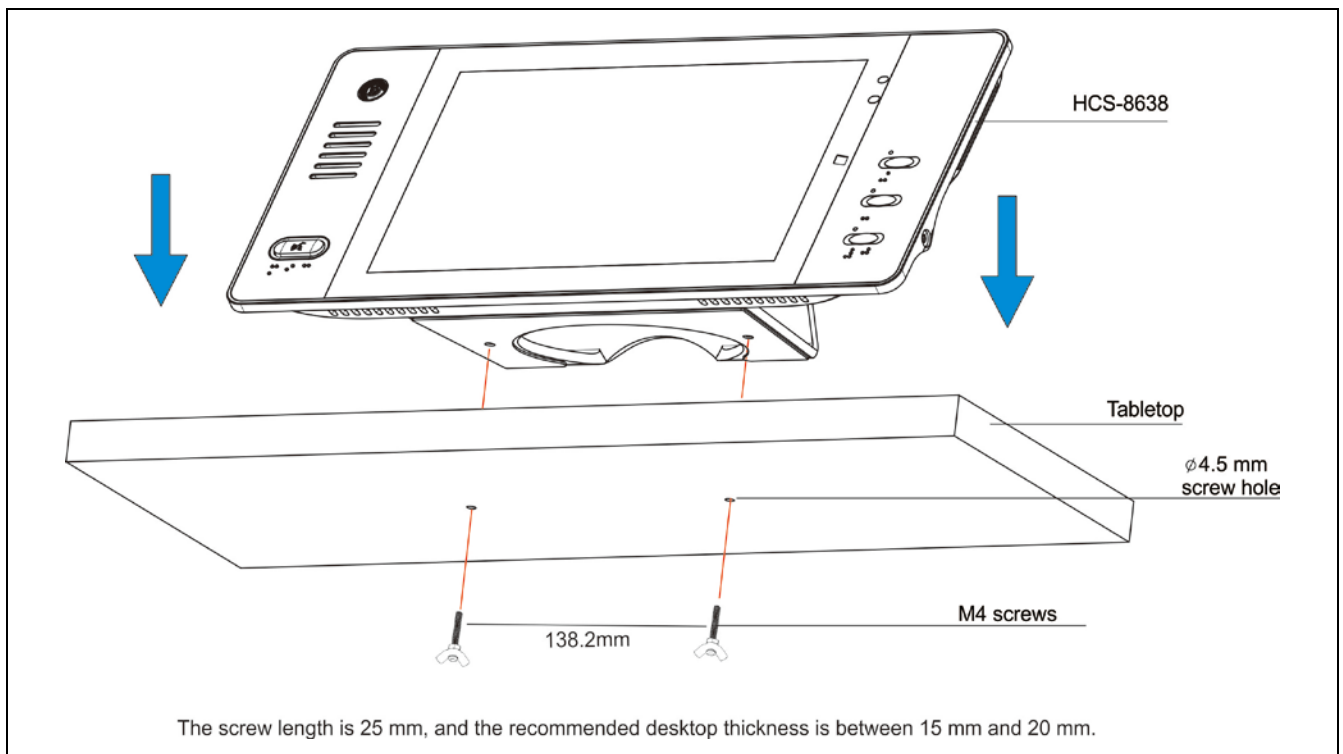


Figure 3.2.4 Fixed installation of HCS-8638/50 series congress unit

3.2.3 Connection

3.2.3.1 Connecting to HCS-8600KMX

HCS-8668/8638 series Paperless Multimedia Congress Terminal is based on the **TAIDEN** originated GMC-STREAM Gigabit Multimedia Congress Stream technology. All audio and video signals are transmitted via a Cat.5e/Cat.6 cable. GMC-STREAM fully guarantees the real-time performance and stability of the important data stream of the meeting, such as audio, voting information, and control information.

Under PoE mode: connecting PoE RJ45 port to HCS-8600KMX or HCS-8368T(/50) via Cat.5e/Cat.6 cable (one port for one terminal), for power supply and transmission of conference data and multimedia data.

NOT PoE mode: connecting to HCS-8600KMX via Cat.5e/Cat.6 cable, supporting “Daisy-chain” connection and “Closed Loop” connection. Power supplies from 3 2P aviation of HCS-8600KMX.

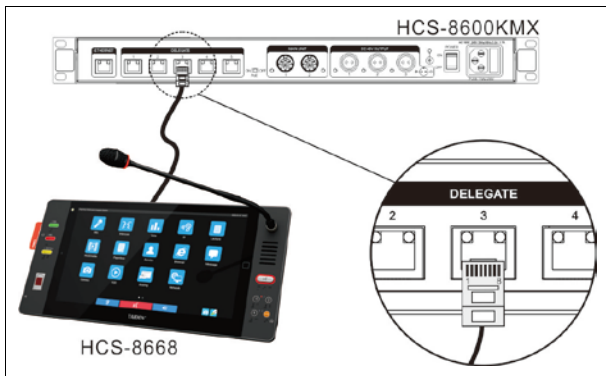


Figure 3.2.5 HCS-8668/8638 series paperless multimedia congress terminal connecting to HCS-8600KMX Ethernet switcher (PoE)

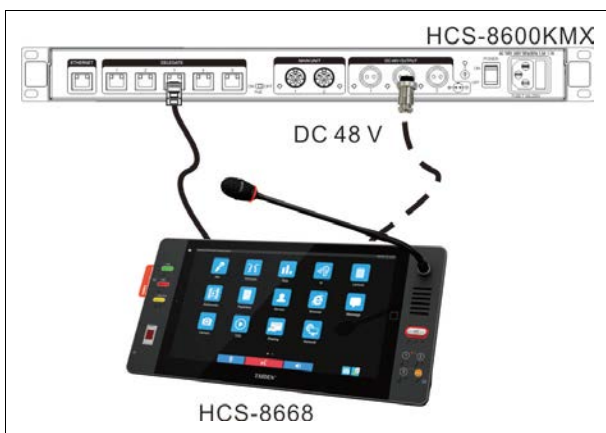


Figure 3.2.6 HCS-8668/8638 series paperless multimedia congress terminal connecting to HCS-8600KMX Ethernet switcher (not PoE)

3.2.3.2 Connection between Paperless Multimedia Congress Terminals (not PoE)

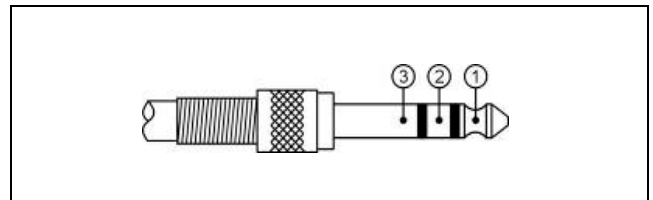
HCS-8668/8638 series paperless multimedia congress terminals are “daisy-chained” with Cat.5e/Cat.6 cable. When connecting to the next terminal, just connect the port (1000M Ethernet) of the terminal to the port (1000M Ethernet) of the next terminal by means of a Cat.5e/Cat.6 cable.

3.2.3.1 Connecting to HCS-8600POE

HCS-8668/8638 series paperless multimedia congress terminals can be connected to HCS-8600POE. HCS-8600POE works in POE mode, it connects in the same way as the HCS-8600KMX that works in the POE mode.

3.2.3.3 To external earphone

An external earphone can be connected to the external earphone jack at the lateral sides of the multimedia terminal. Its volume is adjustable by the earphone volume control key. The external earphone shall have a Ø 3.5 mm plug, as in the following figure:



Functions and indications:

- 1 Left stereo channel signal
- 2 Right stereo channel signal
- 3 Power ground/Shield



Figure 3.2.7 Daisy-chain connection between HCS-8668/8638 series Paperless Multimedia Congress Terminals

3.2.3 Operation

Before a meeting starts, the multimedia terminals need to be configured by the operator, including: numbering and testing. During the meeting, the participants use the multimedia terminals to: sign-in, activate microphone, request to speak, vote, read message, for: paperless conference functions, video conversation, video display, multiple channel VOD and broadcasting, conference service, internet access, etc.

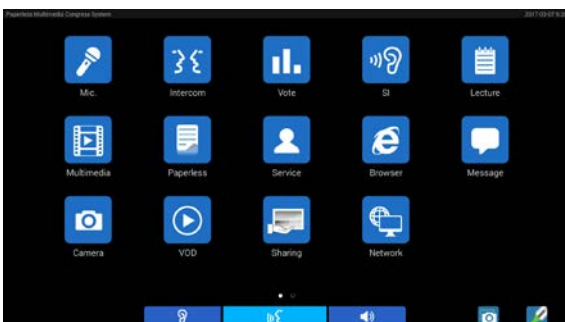
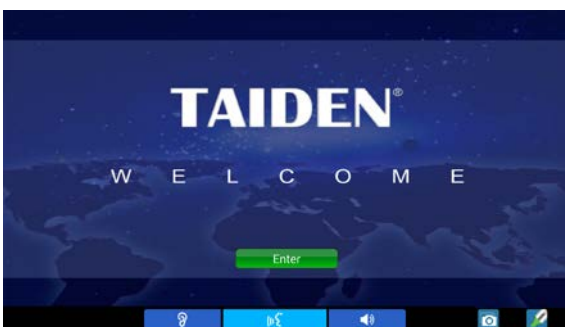
3.2.3.1 Delegate unit

We introduce all the operation of HCS-8668 series paperless multimedia congress terminal. The multimedia congress terminals of this series feature one or more of these functions.

First of all, make sure that the paperless multimedia congress terminals are connected properly to the CMU. After powering on, initialization (user) interface appears.

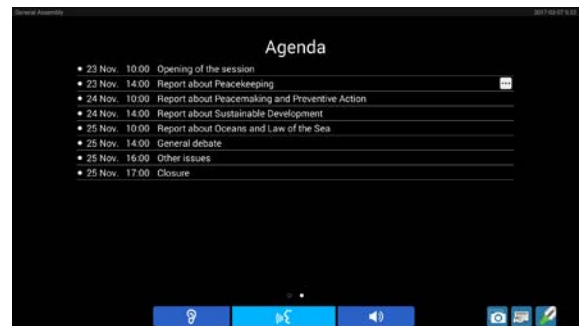


After initialization, click “Enter” to go to primary (user) interface.



Icons and fonts on primary interface can be defined by user through “Taiden Update Manager” tool, details refer to the user manual of “Taiden Update Manager” tool.

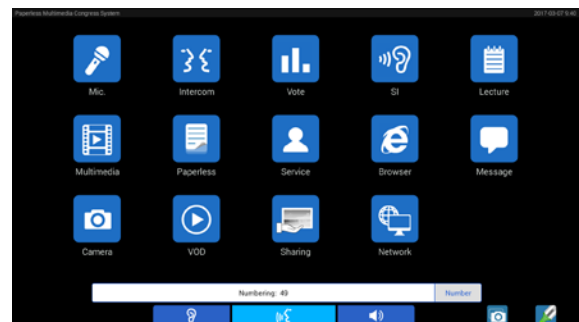
Sliding left on the primary interface to enter “Agenda” interface. The agenda information comes from File Server. Agenda parameters are setup by the File Server too. The following figure was displayed as default agenda parameters setting. Click the “...” icon after agenda item to open linked file, in order to open file correctly, you must download the linked file to terminal first.



A) Number

All multimedia terminals must be numbered when the system is used for the first time or when adding or replacing multimedia terminals. Number function can be activated by menu operation on the CMU front panel or by application software.

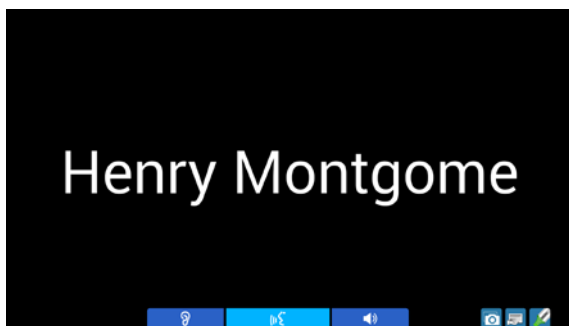
Select “Number - DCSUnits” by menu operation on the CMU, “Press ‘1’ key of all congress units one by one and re-power” will be displayed on the CMU LCD. The system will now go to numbering status. All multimedia terminals in the system will display “Numbering: xx” on LCD. Press “Number” button of every terminal one by one, the loudspeaker will produce a sound (if ring tone mode is “On”). Once all terminals numbered, restart the CMU to update the number information.



Note:

☞ When numbering, please number the multimedia terminals one by one and do NOT press “number” key of several terminals at the same time.

After numbering and seat arrangement, file server can send commands to Multimedia Congress Terminals to show delegate's name on the LCD, so delegates can find their seats conveniently. The interface of the following figure is shown.

**B) Speaking** (without software)

Speaking mode is configured on the CMU (refer to section [2.1.3](#)).

A. “Open” mode

- **Active microphone number limitation (1/2/3/4)**

- **NOT reached:**

- a. When the microphone On/Off icon is pressed, the speaker can give his/her speech;
 - b. The microphone will be deactivated when the microphone On/Off icon is pressed again.

- **Active microphone number limitation (1/2/3/4)**

- **Reached:**

- a. When the microphone On/Off icon is pressed, the speaker can request to speak;
 - b. Press this icon again to cancel request to speak;
 - c. When an active microphone is turned off, the first request microphone will be activated.

B. “Override” mode

- **Active microphone number limitation (1/2/3/4)**

- **NOT reached:**

- a. When the microphone On/Off icon is pressed, the speaker can give his/her speech;
 - b. The microphone will be deactivated when the microphone On/Off icon is pressed again.

- **Active microphone number limitation (1/2/3/4)**

- **Reached:**

If the delegate microphone On/Off icon is pressed, its microphone will be activated and the first activated delegate microphone will be deactivated at the same time to maintain the active microphone number limitation. If the number of active microphone (including chairman and VIP unit) reaches 6, turning on another microphone will switch off the delegate microphone turned on first.

C. “Voice” mode

- **Active microphone number limitation (1/2/3/4)**

- **Not reached:**

- a. When the delegate speaks into the microphone at a short distance, the microphone will be activated;
 - b. If the delegate does not speak for several seconds, the microphone will be deactivated automatically. The interval time can be adjusted from the main unit (refer to section [2.1.3](#));

- **Active microphone number limitation (1/2/3/4)**

- **Reached:**

All other microphones cannot be activated unless one of the active microphones is turned off.

D. “Request” mode

- a. Request to speak when the microphone On/Off icon is pressed (default 6 microphones at most). The chairman unit can approve or reject his/her speak;
 - b. When his/her request is approved, he/she can speak and the last activated microphone will be turn off at the same time.

E. “PTT” mode

■ **Active microphone number limitation (1/2/3/4)**

Not reached:

- a. Pressed and hold the microphone On/Off icon to activate the microphone. The speaker can give his/her speech;
- b. Microphone will be deactivated when microphone On/Off icon is released.

■ **Active microphone number limitation (1/2/3/4)**

Reached:

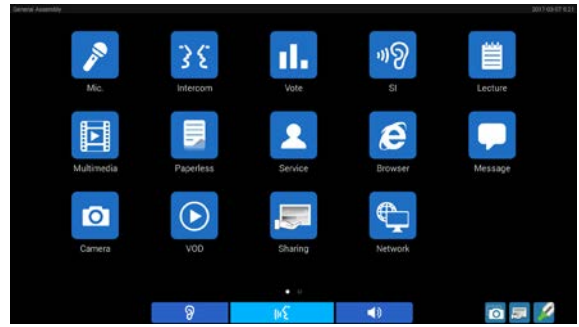
All other microphones cannot be activated unless one of the active microphones is turned off.

Note:

The active microphone number limitation is 1~8, it is valid for the delegate units; including the chairman and VIP units, the maximum number of active microphones available for the system is 8.

When a microphone is activated, a camera can focus it automatically (the position can be preset by application software). Speaker’s video can be exported to and displayed on large screen(s).

C) Main menu



Menu includes:

Microphone*	Intercom*
Vote*	SI
Lecture	Multimedia
Paperless*	Service*
Browser*	Message
Camera	VOD*
Sharing*	Network*
Memo	Calculator

Note: function marked with * are available when meeting started.

- Click on the icon to go to the corresponding interface;
- Click **Back** to return to the previous interface (except Browser interface);
- Click the “Home” button to return to the main interface;

Icon explanation:

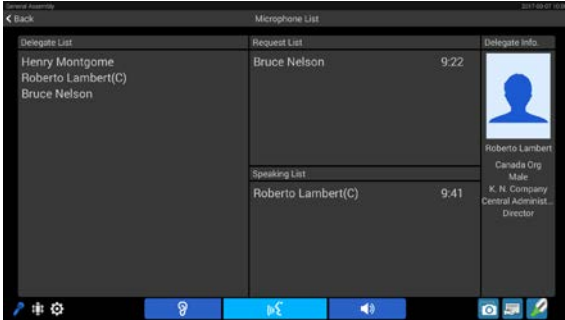
	Headphone volume control
	SI channel selector
	Microphone button (normal)
	Microphone button (active)
	Microphone button Request or in Voice mode
	VIP unit
	Priority button
	Priority button is pressed
	Screen shot
	Annotation tool
	Desktop sharing (normal)
	Desktop sharing (request)
	Desktop sharing (sharing by this unit)
	Desktop sharing (sharing by other unit)

1. Microphone

Including "Microphone List", "Layout" and "Setting".

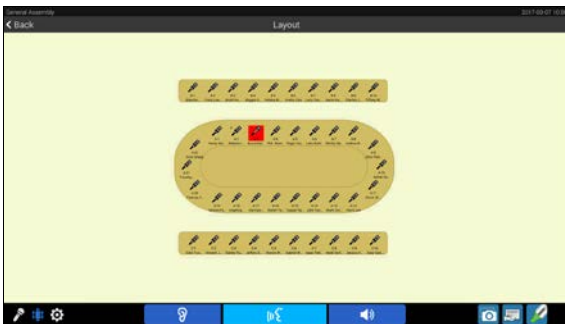
A. Microphone List

Delegates (including chairman unit, delegate unit, VIP unit and ambient microphone) are listed as in the following figure. Click the icons on the lower-left corner to switch sub-interface.



B. Venue

Congress units are shown as they are laid out in the venue, according to the following figure:

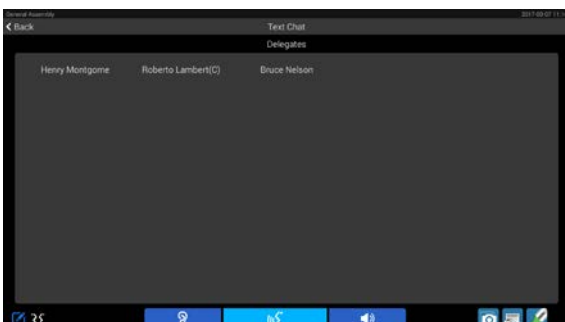


C. Setting

Congress terminals without microphone control option have no permission to check setting interface.

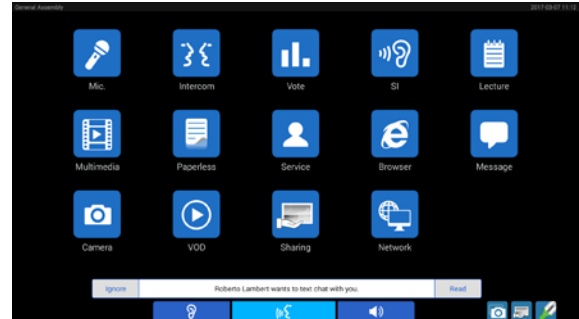
2. Intercom

Click the "Intercom" icon to go to the intercom interface, including "Text Chat" and "Video Chat". Click the icons on the lower-left corner to switch sub-interface.

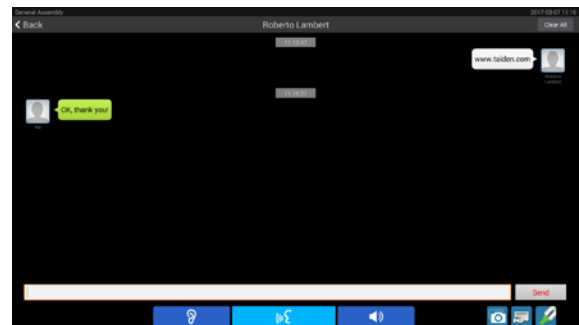


A. Text Chat

Double click on the delegate to exchange text information. When the text information has been received, prompting information will be displayed on the LCD. Click the "Read" button to read the text or click the "Ignore" button to ignore it.



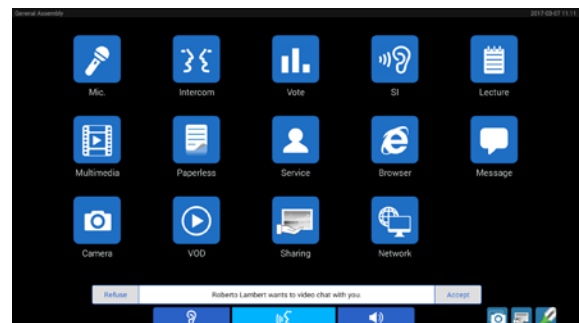
If read, the text will be displayed as in the following figure. The delegate can reply to the sender's text message. The left side is the sent message and the right is the received message. Click "Clear All" to delete all text chat content.



B. Video Chat

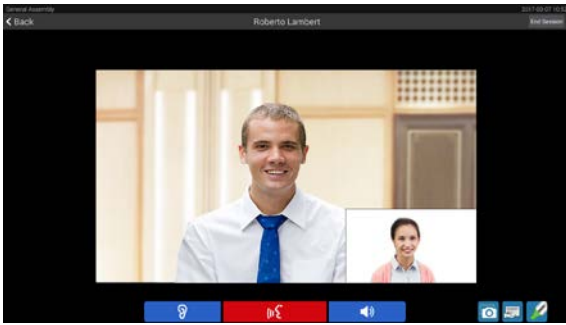
Double click on the delegate whom you want to contact and request for a video dialog (The earphone must have been inserted; otherwise it will prompt "Please insert headphone first").

When someone asks you for a video conversation, video request information will be displayed on your LCD. Click "Accept" button to start video conversation or click "Refuse" to refuse his/her request.



When the request for video conversation has been accepted, the video user interface of the following figure is displayed. The microphone will be activated; the microphone indicator and the microphone On/Off icon will turn red. The videos of both speakers will be displayed on the LCDs.

The earphone is needed to listen to the video dialog. When the intercom is finished, click the “End Session” button and confirm to end the video dialog and to exit the video interface.



3. Vote

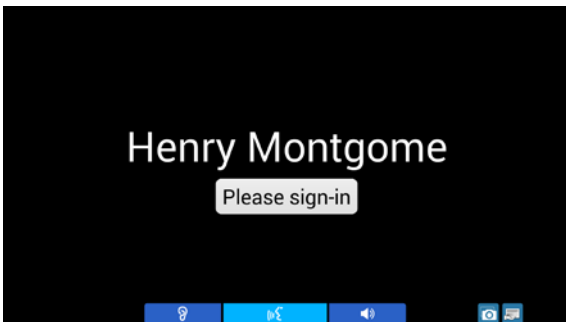
Including “Sign-in”, “Vote” and “Proposal”.

A. Sign-in

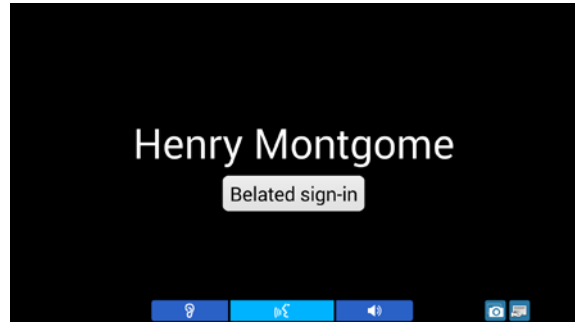
Delegates must sign-in before voting.

■ Key press sign-in

In sign-in status, “Please sign-in” will be displayed on the LCD, click “Please sign-in” button to sign-in, as in the following figure:

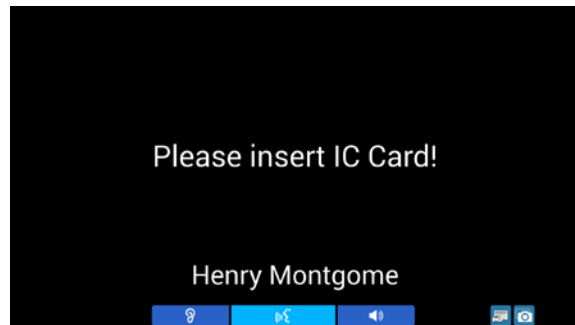


If "Allow belated sign-in after stop" is enabled, After stop of sign-in, “Belated sign-in” will be displayed on the LCD. The "Belated sign-in" button can now be clicked for belated sign-in. Or else, after stop of sign-in, “Not present.” will be displayed on the LCD.

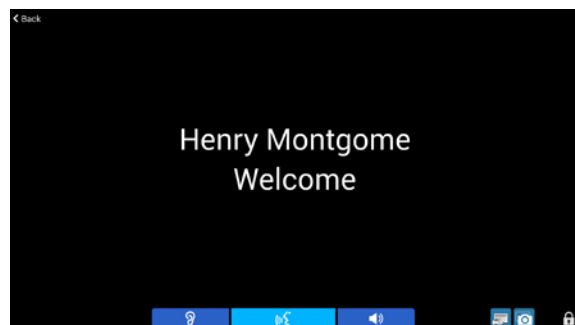


■ IC-card sign-in

The HCS-8668 and HCS-8638B/50 series multimedia congress terminals are equipped with a built-in contactless IC-card reader. In IC-card sign-in mode, “Please read IC Card!” will be displayed on the LCD. For “Only One Seat” mode, the delegate’s name displayed on the bottom of the LCD screen.



Push the IC-card into the slot on the side of the terminal, if sign-in is successful, "Welcom" is displayed on screen. If not, “Invalid IC-card” will be displayed on the screen. Please push IC-card again or contact technical support. While automatically logout once the card is taken out from the slot.

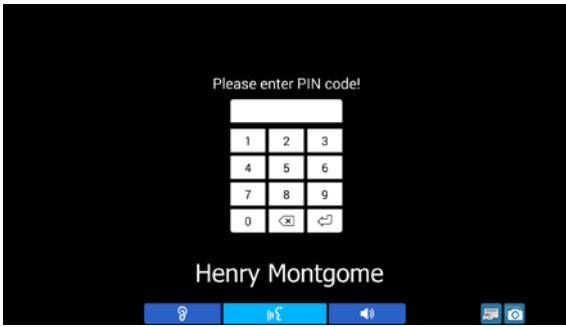


■ Automatic Sign-in

In automatic sign-in mode, when operator click the “Start Sign-in” button or select “Start sign-in automatically after start conference” on DCS software, the multimedia signed in automatically.

■ **PIN code sign-in**

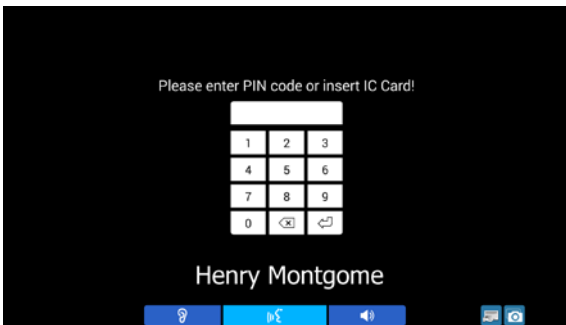
In PIN code sign-in status, the LCD will display as the following figure:



Input PIN code through virtual keyboard to sign in. If the PIN code is wrong, "Invalid PIN code" will be displayed on the LCD.

■ **Seat IC-card and PIN code sign-in**

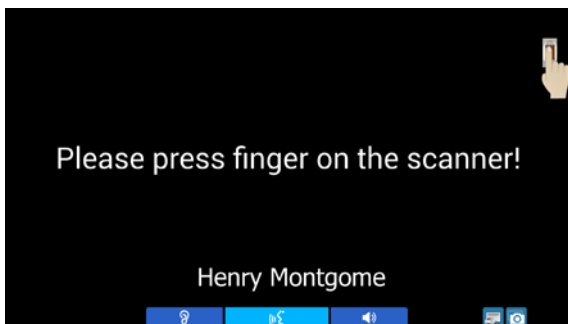
In seat IC card and PIN code sign-in status, the LCD will display as in the following figure:



Either IC card sign-in or PIN code sign-in will work.

■ **Finger Print Sign-in**

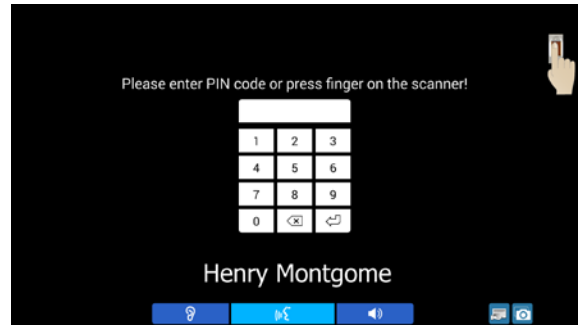
HCS-8668A and 8638A/50 series multimedia congress terminal built in fingerprint identification module, in finger print sign-in status, the LCD will display "Please press finger on the scanner!"



Please press finger on the scanner according the prompting information. Collecting finger print for every delegate should be finished before meeting started. Delegate without finger print data in the database will not sign in successfully.

■ **Finger Print and PIN Code Sign-in**

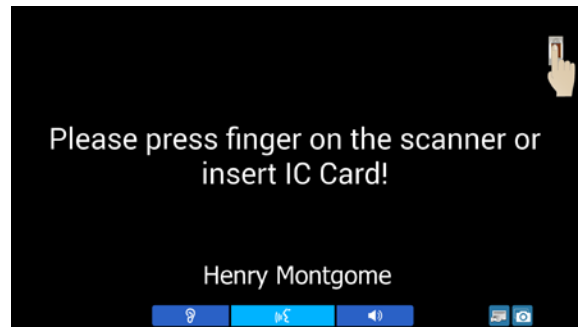
In finger print and PIN code sign-in status, the LCD will display as in the following figure:



Either finger print sign-in or PIN code sign-in will work.

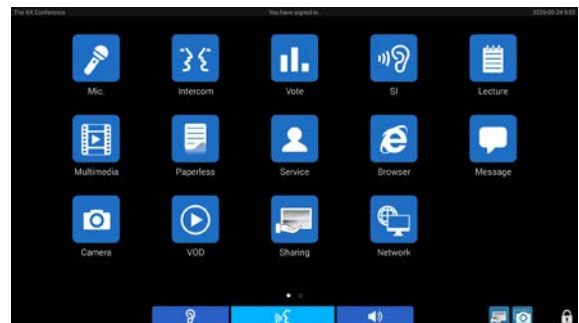
■ **Finger Print and Seat IC Card Sign-in**

In finger print and seat IC card sign-in status, the LCD will display as in the following figure:

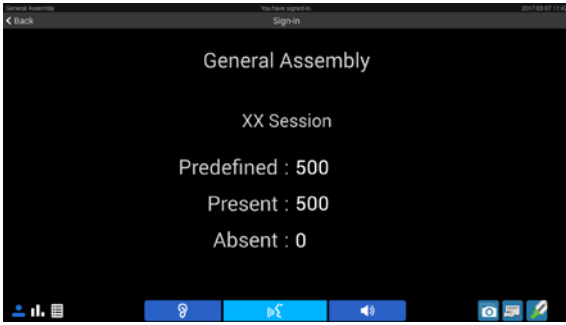


Either finger print sign-in or IC card sign-in will work.

In finger print sign-in mode and PIN code sign-in mode, after sign-in, the main interface displayed as the following figure. The icon "🔒" is used for locking LCD screen to protect the meeting information in case the delegates leave for a short time. Paperless multimedia terminals will work on after delegates sign in again (The DCS server cannot stop sign-in).



After sign-in, the main interface of the multimedia terminal displayed "You have signed-in". Sign-in result will be displayed as in the following figure:

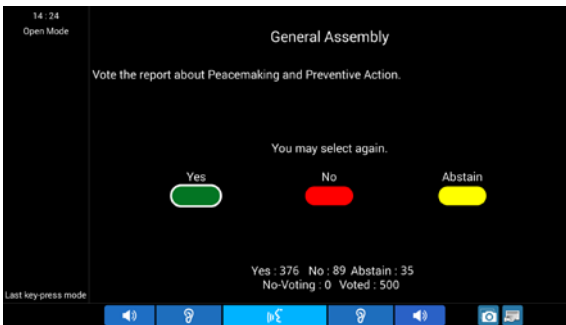


B. Voting

Terminals can initiate voting (Yes/No/Abstain) via chairman unit without PC and dedicate software module for more forms of voting (2/3/4/5 key and multi-proposal).

■ Voting

Connect to PC, proposal and voting option will be displayed on LCD, click on the option button to voting.



- For “First key-press mode” proposal, delegate can click voting buttons only once;
- For “Last key-press mode” proposal, delegate can change his/her voting, and the last clicked voting button will be counted;
- Without PC, the voting originated by the chairman unit only supports “Last key-press mode”.

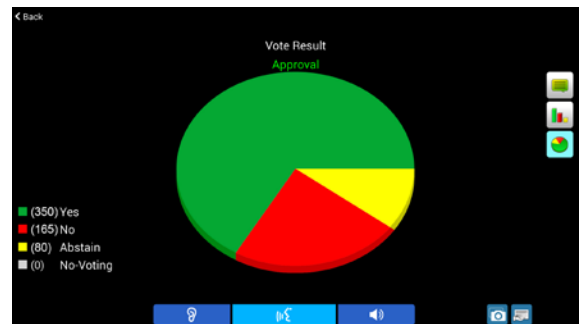
■ Voting result

After voting, voting result will be displayed in three modes (numeric, bar, pie) on the multimedia terminals with voting option.



■ Display voting result

When click “Display Result” on application software or multimedia terminal with voting control option, voting result will be displayed on all multimedia terminals in three modes: numeric, bar, pie.



■ Display name list

For open mode proposal, when click “Name List” on multimedia terminal with voting control option or click “Name List” – “Display” on application software, name list will be displayed on LCD.

Vote the report about Peacemaking and Preventive Action.

Name	Yes	No	Abstain	No-Voting
Bruce Nelson				✓
Henry Montgome	✓			
Roberto Lambert	✓			

Present: 3 Totals: 2 0 0 1

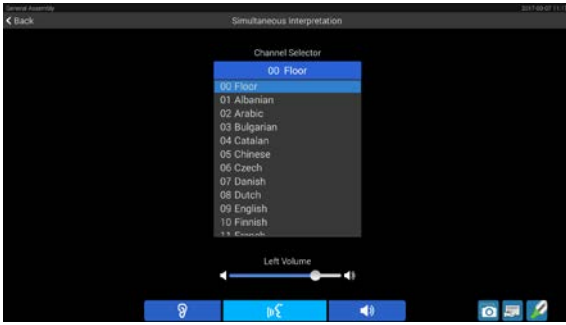
C. Proposal

Congress terminals without voting control option have no permission to browse proposal list.

4. Simultaneous interpretation

Click the “SI” icon and go to the simultaneous interpretation interface. The needed language is selected by clicking on the corresponding language item.

HCS-8668 Series Paperless Multimedia Congress Terminal supports 64 CHs interpretation with volume control.



- If interpreter units are connected to the CMU, simultaneous interpretation function is available and the channel selector is activated. The earphone should be inserted before selecting the language;
- If the earphone is unplugged, the unit will return to floor language automatically;
- Earphone volumes are adjustable by the “Volume” scroll bar.

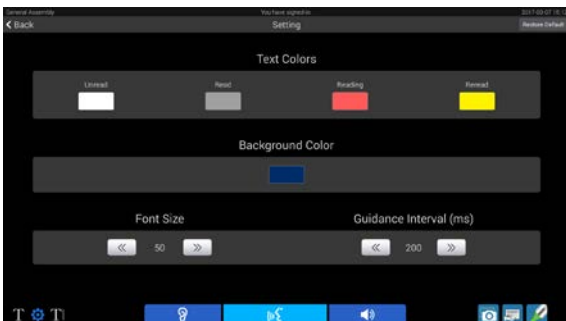
If the earphone is plugged, you can press icons to adjust volume and select language at any interface. Left icons for left earphone and right icons for right earphone.

5. Lecture

Including “Content”, “Setting” and “List”:

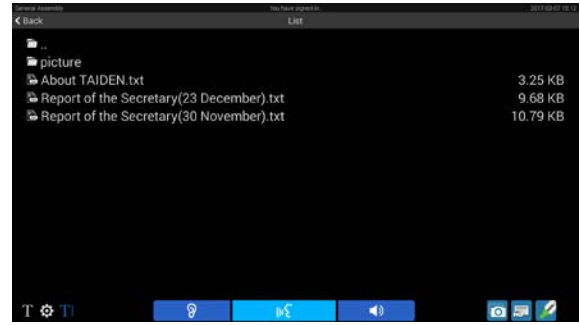
A. Setting

Set up display for colors, font size, and guidance interval. Font size can be adjusted between 20 - 80, and guidance interval can be adjusted between 50 ms - 500 ms with steps of 50 ms. Hold press the “<<”, “>>” button to adjust quickly. Click “Restore Default” to reset settings.



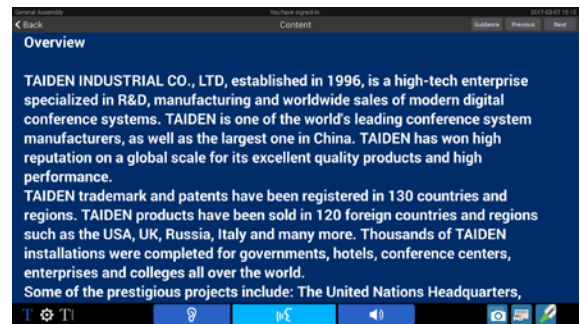
B. List

In the lecture list, double click on the lecture to open and read the lecture. Supports Internal Storage and Storage Card.



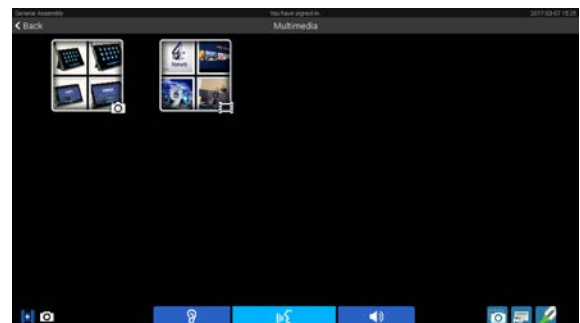
C. Content

Display the content of the lecture. Click “Guidance” or “Cancel” button on the LCD to switch guidance or not. In guidance mode, click “Slow Down” or “Speed Up” button to adjust guidance interval, and click the content anywhere to exit guidance mode. Click “Preview” or “Next” button to browse the content. Press and slide on the screen can browse the lecture quickly.



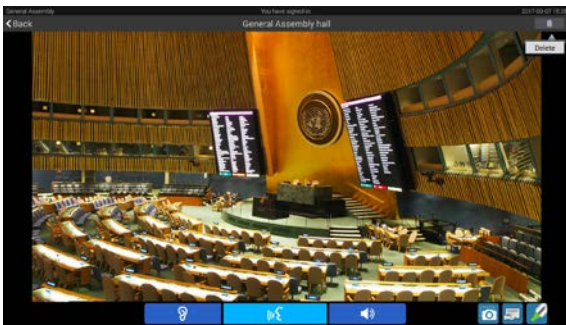
6. Multimedia

Including “Multimedia” (Photos/Videos) and “Camera”:



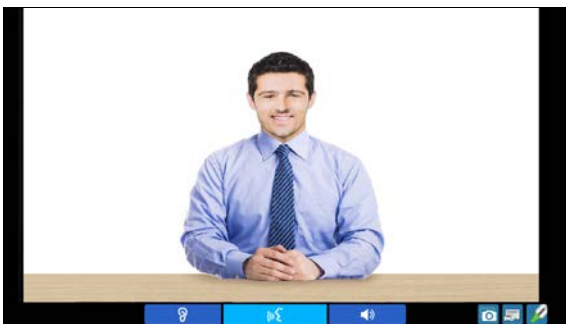
A. Multimedia - Photos

You can click "Photos" folder icon to browse pictures, supports jpg, bmp and png formats now. Click "▶" button to play pictures as a slideshow. When browsing picture manually, you can swipe your finger across the screen to switch pictures; and you can scale the picture by two fingers. Click the "🗑️" icon to delete current picture.



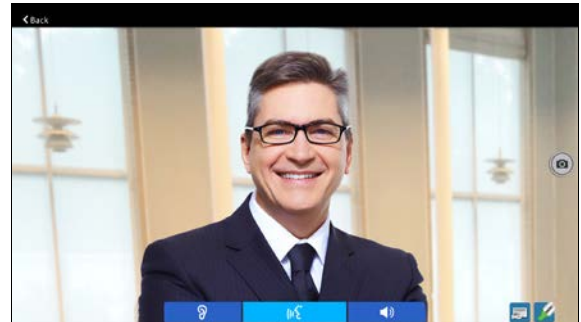
B. Multimedia - Videos

Click the "Videos" file to browse all the videos in multimedia terminal, only supports MP4 format now. When playing videos, you need to insert earphone to listen to the audio. At the same time, playing process, full screen and earphone volume can be controlled. After the video has been played for more than 2 minutes, if "Home" button is pressed to exit, and when you go to "Multimedia - Video" to play this video once again, you can select "Resume playing" or "Start over".



C. Multimedia - Camera

Click the "📷" icon to go to the camera control interface. The delegate can take photo via the built-in camera (auto flash).

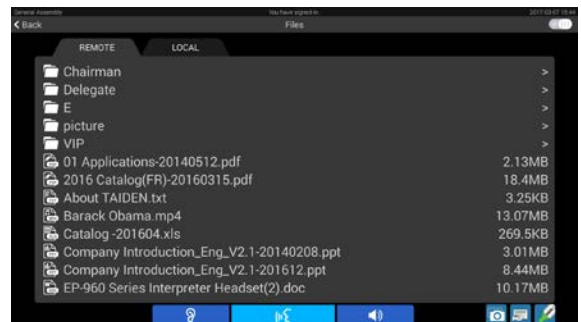


Click the "📷" icon to take a photo. The photo will be saved on the congress terminal and can be browsed from "Multimedia"; click "< Back" to return to the upper level interface.

7. Paperless

Click the "Paperless" icon to go to the paperless interface.

REMOTE




Different access authorizations can be set in the file server. Delegate, chairman and VIP have differing rights to browse files. For example: a delegate can browse public files and the files in the delegate document, cannot browse the files in chairman and VIP documents.

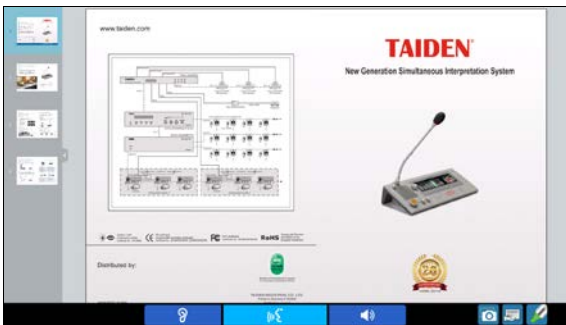
LOCAL



Supports Internal Storage and Storage Card.

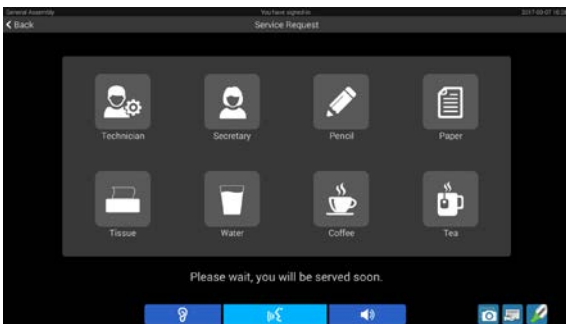
Operation:

- Click icon  on the top-right corner to switch file display method: list or icons;
- Press and hold the file in remote list can select Download/View in pop-up menu;
- Press and hold the file in local list can select Upload/Delete/View/Share in pop-up menu;
- Click file in the list to open the file directly;
- File reader: Mp4, image file (jpg, bmp, png) and pdf file;
- File reader and editor: text file and office documents.



8. Service

Click “Service” icon to go to the service calling interface:



Click on a service icon to request for the corresponding service. If the icon turns blue, the service information will be send to the server and the information will be displayed on the application software. Click the selected service icon again to cancel the requested service. If the requested service is acknowledged, the blue icon will fade and “Please wait, you will be served soon.” will be displayed on the LCD.

9. Browser

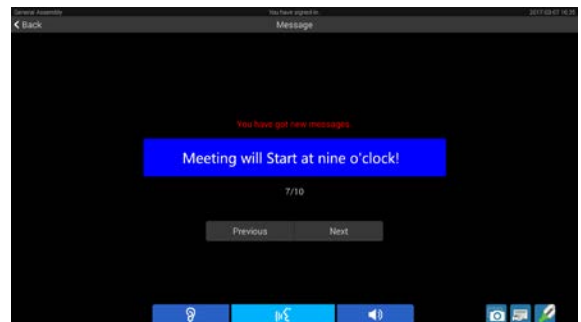


HCS-8668 series paperless multimedia congress terminals have internet access; related information is available through the Internet or the LAN during the meeting.

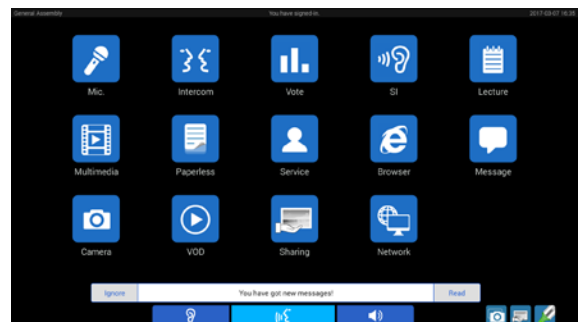
- ★: add bookmark for current page;
- 🔍: search or type URL;
- ★: manage bookmarks, press one bookmark for 2 seconds to activate the pop-up menu.

10. Messages

Click the “Message” icon to go to the message interface:



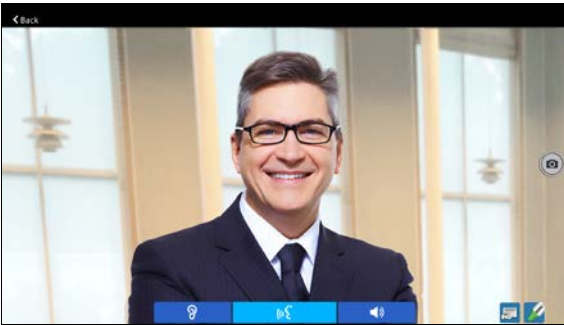
- When controlled by PC, the operator can send a message to any congress unit;
- Click “Preview” and “Next” to read all messages;
- When receiving a message, “You have a got a new message!” will be displayed on the LCD. Click “Read” to read the message or click “Ignore” to ignore it;





- At most 10 messages can be saved. If more messages are received, the previous message will lost.

11. Camera

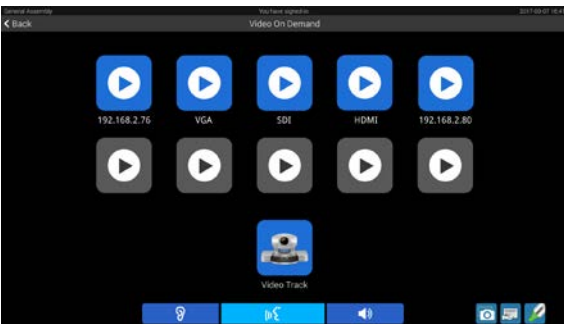
Click the “Camera” icon to go to the camera control interface. The delegate can take photo via the built-in camera (auto flash).



Click the “” icon to take a photo. The photo will be saved on the congress terminal and can be browsed from “Multimedia”; click the “ Back” button to return to the upper level interface.

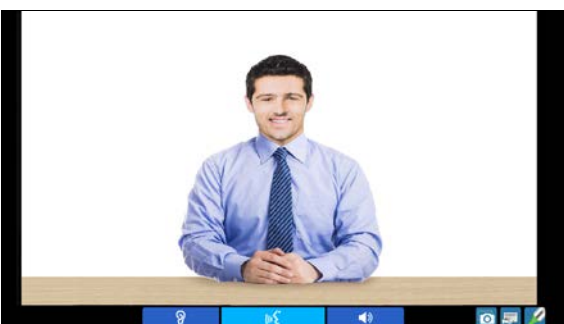
12. VOD



Click “VOD” icon to go to VOD service interface. Support up to 10 channels. Click one channel to play video.

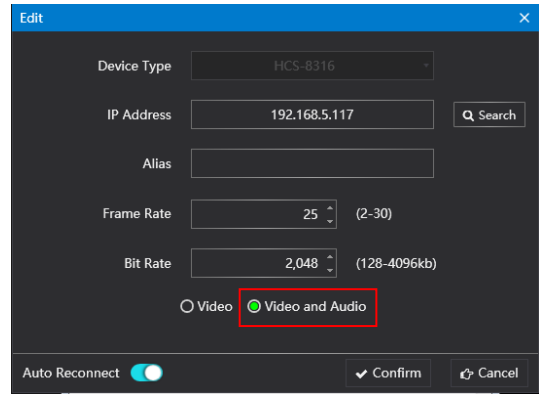


When media management platform select one terminal and display its camera, the “Video Track” function on the multimedia was activated. Click the “Video Track” on terminal, and then the terminal screen and video server will display the same camera video.


When playing, click the screen fist, and then click the icon on the top-right corner of the LCD screen to switch video display on full screen or equal proportion; click “back” to return to VOD list interface.







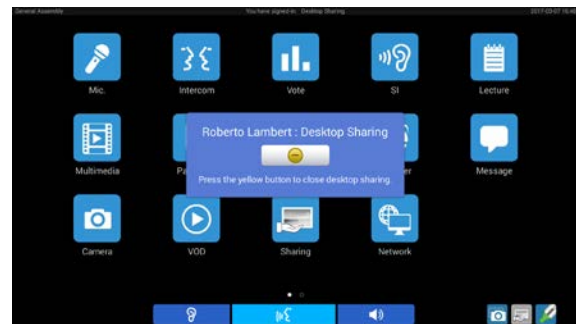
There is no audio default for VOD channel. If operator set encoder as “Video and Audio” through video server software, you can change the “” state to “” to monitor audio through earphone.



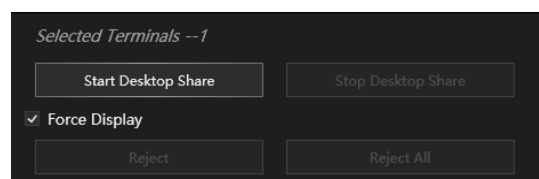
13. Sharing

Click the “Sharing” button on main interface to enter sharing interface or click the  icon on the lower-right corner of any interface to request desktop sharing. If the request is approved, the desktop of the delegate will be shared with all other delegates and with the large display screen.

	Desktop sharing (normal)
	Desktop sharing (request)
	Desktop sharing (sharing by this unit)
	Desktop sharing (sharing by other unit)

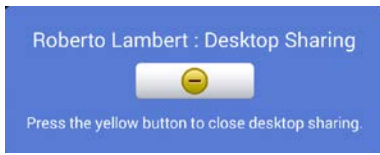


The desktop sharing control interface of the conference management system is as follows:



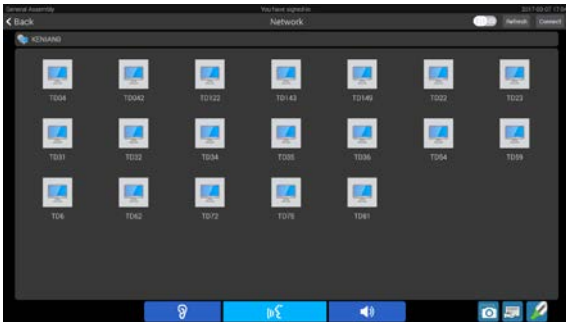
- If select “**Forcible Display**”, other delegates cannot exit desktop status freely, unless initiator or delegate with control option or the operator stops desktop sharing.


- If **not** select “**Forcible Display**”, delegates can exit desktop sharing temporarily by pressing the yellow button on the pop-up dialog; and can enter desktop sharing again by press **Sharing --> Enter desktop sharing**.



14. Network

Click the “Network” icon to go to the network interface; all the resources which can be accessed were listed.



Click icon  on the top-right corner to switch file display method: list or icons.

Click the “Connect” button to pop up “Enter computer IP” dialog box, input computer’s IP address, user name and password to access the appointed computer.

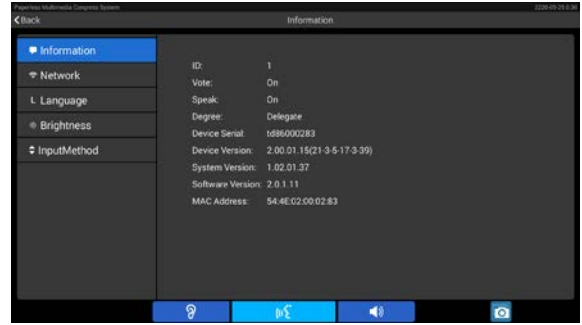


15. Setup

To prompt the setup interface, please connect the multimedia terminals to TAIDEN conference management software, and then select “Setup” – “Multimedia Terminal” – “Switch Interface”.

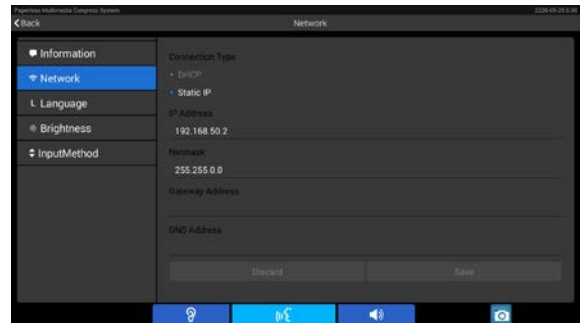
A. Information

Display the information of the congress terminal, including: ID, permission, degree, device series, version, MAC address, etc.



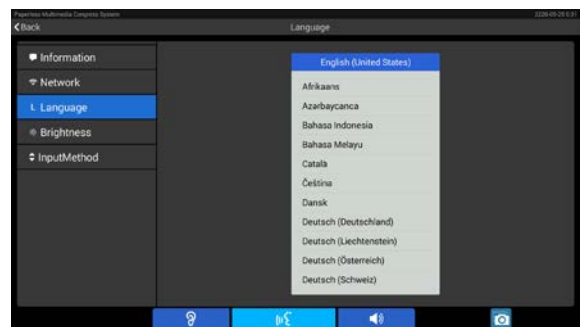
B. Network

Set up network configuration. Please set up the same network segment for multimedia terminals in the same congress system.



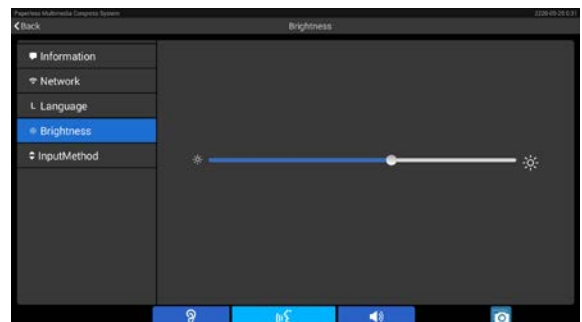
C. Language

Select the operation language. Supports Chinese, English, French, Russian, Spanish and Arabic. If you selected a language, please return to the main interface, terminal will refresh operation language automatically.



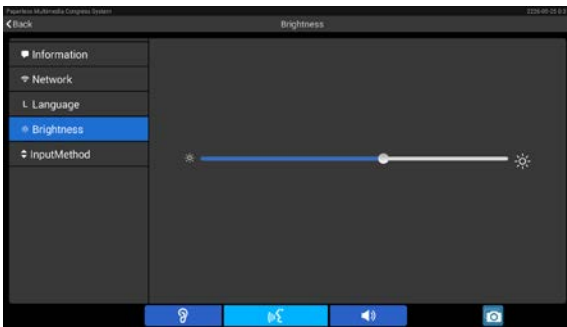
D. Brightness

Setup the brightness of the LCD screen.



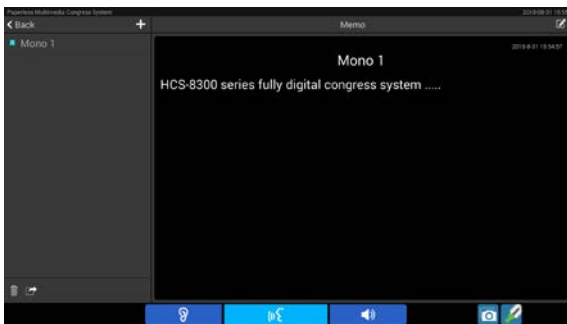
E. InputMethod

Select and set the input method according to the area and personal habits.

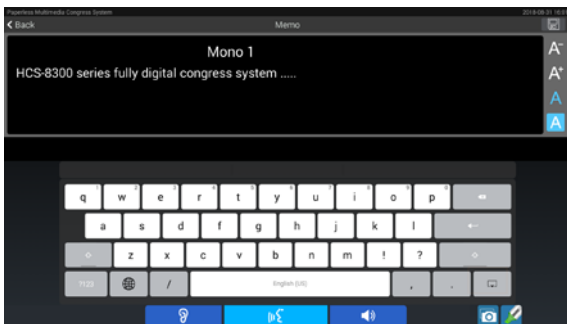


16. Other functions

1) Memo



- : creat a new memo;
- : delete memo;
- : export memo to USB device;
- : edit memo.



- : save memo;
- : decrease font size;
- : increase font size;
- : select font color;
- : select background.

2) Calculator

Build-in calculator.



3) Screenshot

Press "" key at the lower right corner of the screen to shot the current screen, the picture (*.png file) was saved in the path: "Multimedia>>Photo"; and the file name began with "Screenshot", for example "Screenshot_2018-03-02-14-27-09.png".

D) VIP unit

- Any delegate unit can be assigned as a VIP unit by application software;
- As long as the active microphone capacity is not full, the microphone of the VIP unit can be activated freely;
- If the active microphone capacity is full, the microphone of the VIP unit cannot be turned on unless one of the active microphones is deactivated.

3.2.3.2 Chairman unit

The chairman features all functions a delegate has, additionally:

1. Priority

- If the priority mode on the main unit is configured as “All mute”, all active microphones (except VIP units and other chairman units) will be muted temporarily when this key is pressed and they will restore when this key is released;
- If configured as “All off”, all active microphones (except VIP units and other chairman units) will be turned off and the request-to-speak list will be purged (under “Open” and “Request” mode) when this key is pressed.

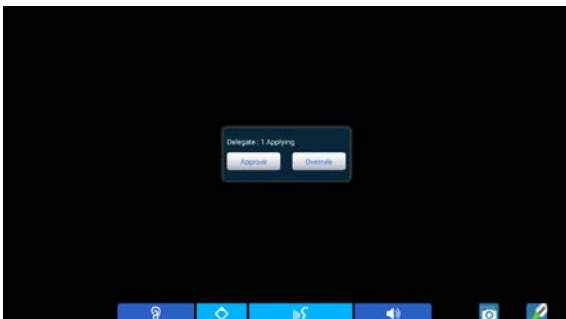
2. Speaking

- If the active microphone capacity is not full, the chairman can activate his/her microphone normally, the operation is the same as for the delegate unit;
- If the active microphone capacity is full, the chairman cannot activate his/her microphone. But he/she can use the priority key to “All mute” or “All off” other delegate microphones and give his/her speech.

3. Controlling delegate unit

A. Approve delegate unit's request to speak

Without PC and under “Request” mode, when a delegate requests to speak, a ring tone will be emitted by the built-in loudspeaker in the chairman's unit and the interface of the following figure is shown:



The chairman can now approve delegate's request and activate delegate's microphone by pressing “Approve” icon or reject delegate's request by pressing “Overrule” icon.

When his/her request is approved, he/she can speak and the last activated microphone will be turned off at the same time.

B. Turn off or mute delegate microphone

Chairman can use the “Priority” key to execute “All mute” or “All off” operation.

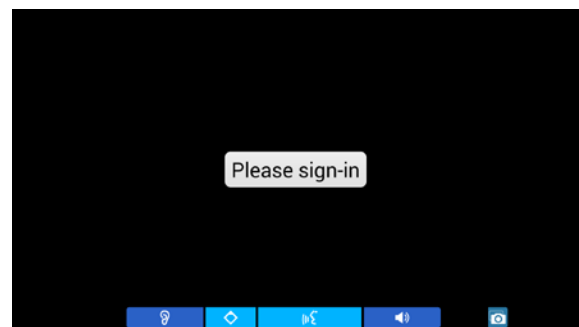
4. Voting without PC

The chairman unit can start voting procedure (no PC connection).

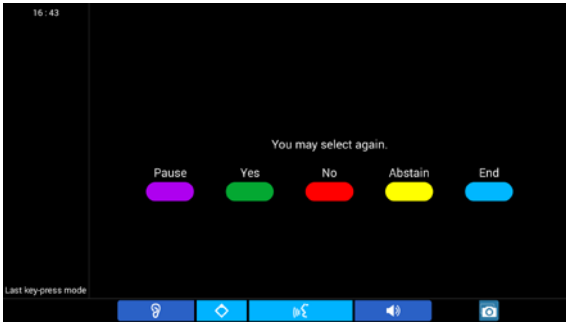
- Click the “Vote” icon from primary user interface, the following interface appears. “Publish voting result” is optional (if checked, voting result will be displayed on LCD of all congress terminals after voting; if not checked, voting result will not be displayed);



- Click the “Start Vote” button to start voting, all congress terminals will go to sign-in mode;



- Click the “Please sign-in” button to sign-in and then go to the voting interface; only parliamentary voting can be initialized by the chairman unit. Three options (“Yes”/ “No”/ “Abstain”) and only “Last key-press mode” mode are available. The pause and the end of voting are controlled by the chairman unit as shown in the following figure:



d. Click the “End” button to finish voting. Voting result will be displayed on LCD (for open voting only) in list, bar, or pie.



3.2.3.3 Second Chairman Unit

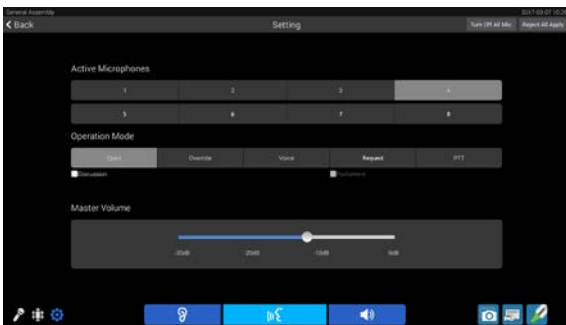
The second chairman options (microphone control, voting control, and desktop sharing control) can be assigned by file server software, it can be a chairman unit or a delegate unit or different units to carry out different functions.

1. Microphone control

Click “Mic.” icon to go to microphone control interface.

A. Setting

Configuration of maximum active microphone number, microphone operation mode and master volume.



- **Master Volume:** adjust built-in loudspeaker volume of all congress units, line output volume and group output volume, range: -30 dB - 0 dB;
- **Active Microphones:** active microphone number 1/2/3/4;
- **Operation Mode:** Open/Override/Voice/Apply/PTT.

“Open”:

If the maximal number of active microphones, previously fixed, has been reached, delegates requesting to speak join a request-to-speak list. The first unit joining the list will become active when the first active unit gets off (*DCS: Setup - System Parameters Setting - Microphone - Automatically activate the first request microphone (Open Mode)*).

Note:

Discussion mode has two request levels: Request and Two Hands. Press “Request” to add delegate’s name to request list; and press “Two Hands” to add delegate’s name to the first in request list.

“Override”:

If the maximal number (1/2/3/4) of active delegate microphones has been reached and if another delegate unit is activated, the delegate unit switched on first will be switched off first automatically (first in / first out). The microphone limit set remains unchanged. If the number of active microphone (including chairman and VIP unit) reaches 6, turning on another microphone will switch off the delegate microphone turned on first.

“Voice”:




When the delegate speaks into the microphone at a short distance, the microphone will be activated. If the delegate does not speak for several seconds, the microphone will be deactivated automatically. The interval time can be adjusted: 300 ms /600 ms /1 s - 15 s.

“Request”:

When the delegate presses microphone ON/OFF button to request to speak, the chairman unit can approve or reject his/her request.

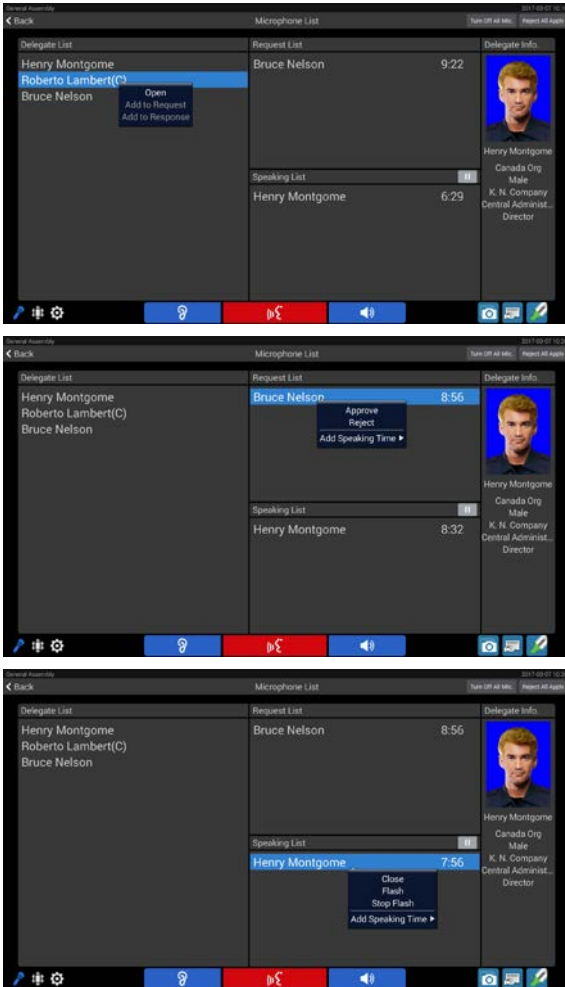
“PTT”:

When the delegate presses and holds the microphone ON/OFF button, the microphone will be activated; when the microphone ON/OFF button is released, the microphone will be deactivated.

Under Discussion mode, a dialog window was popped up, shown as in the following figure. Press and hold to drag it to any position, press the “” icon to embed it in the interface (only display the “” icon on the top-middle of the interface), press the “” icon again to resume the dialog window.



B. Microphone control



Click on a delegate name in the list, a menu will prompt, including:

- **Open:** turn on the selected microphone;
- **Add to request:** add selected microphone into request list;
- **Approve:** approve the request/response of a selected microphone and turn on the microphone;
- **Reject:** reject the request/response of a selected microphone and turn off the microphone;
- **Close:** turn off a selected microphone;
- **Flash/Stop Flash:** start/stop blink of a selected microphone;
- **Add Speaking Time:** add speaking time for delegates (± 1, ± 2, ± 3, ± 5, ± 10 Min for selection);
- **Turn Off All Mic.:** turn off all active delegate microphones (not effective for chairman and VIP unit);
- **Reject All Apply:** rejecting all requests.

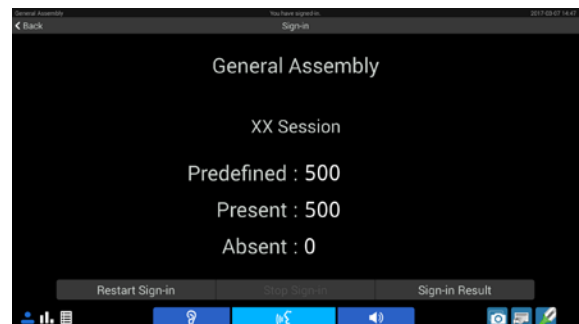
2. Voting (controlled by PC)

a. Click the “Vote” icon to go to voting interface on voting control unit, including “Sign-in”, “Vote” and “Proposal”:



b. Click “Start Sign-in” to start sign-in and all congress units will go to sign-in status;

c. Please sign-in according to the prompting information and the sign-in result will be displayed in real time on the LCD of every congress terminal. The sign-in agenda can be controlled by the voting control unit. When sign-in finished the following figure is shown:



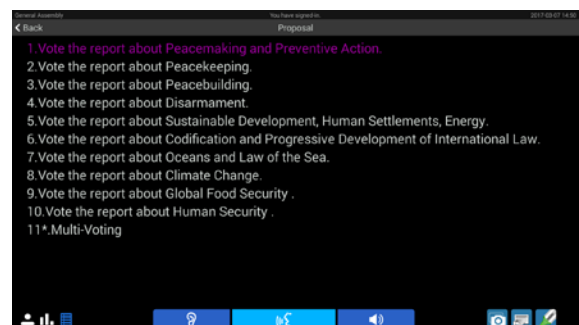
• **Restart Sign-in:** clear current sign-in result and restart sign-in;

• **Stop Sign-in:** stop sign-in;

• **Sign-in Result:** display sign-in result;

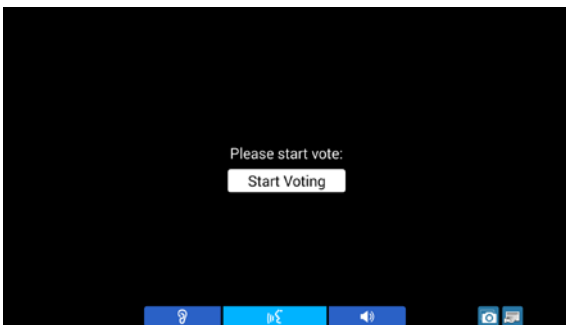
d. Select proposal:

• Click “Proposal” to browse all proposals in the current meeting (red color stands that the proposal has signed in), and click to select a proposal from a proposal list;

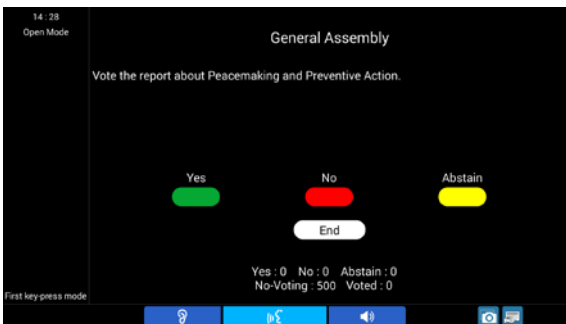




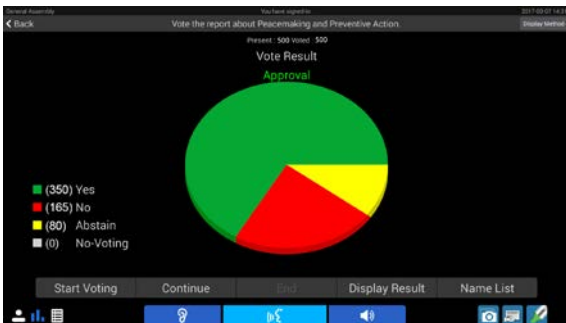
- Proposal controlled by the chairman: click the “Start Voting” button, the chairman unit LCD shows the following figure; proposal controlled by the operator, click the “Start Voting” button to go to step e.



- e. When voting started, voting control unit displays the following figure;



- f. Click the “End” button to end voting, and voting result will be displayed on LCD of all congress terminals in three different ways (numeric, bar, pie).



- **Start Vote:** start voting, when DCS server is modifying meeting data, cannot start voting;
- **Continue:** if some delegates did not vote when voting finished, click the “Continue” button to resume voting. “You have voted.” will be displayed to those delegates who have already voted. In case

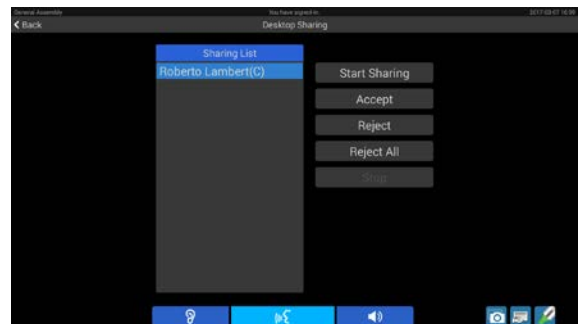
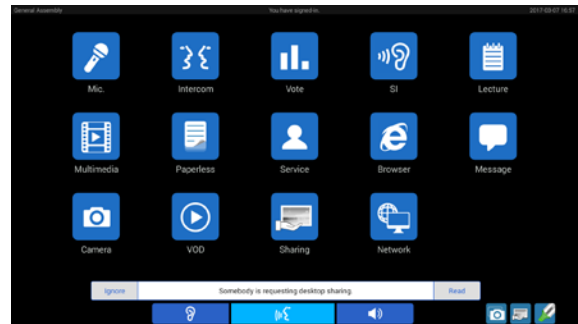
of “Last key-press mode” voting, delegates who did already vote can vote again;

- **Display Result:** display voting result on the LCD of every congress terminal and on large screen(s) in the meeting room (with dual-head VGA adaptor equipped);
- **Name List:** display name list on the LCD of every congress terminal and on large screen(s) in the meeting room for open mode proposal (with dual-head VGA adaptor equipped).

3. Sharing

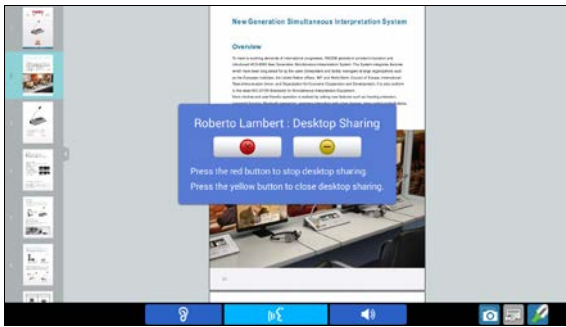
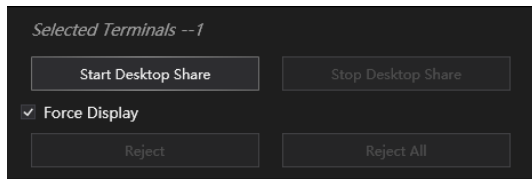
Click the “Sharing” icon to go to desktop sharing interface on control unit.

When a multimedia terminal is requesting desktop sharing, prompting information will be displayed at the bottom of the control unit LCD. Click the "Read" button to check or click the "Ignore" button to ignore it.



- **Start Sharing:** if the sharing control unit clicks this button, the content on the unit will be displayed on all multimedia units immediately;
- **Accept:** accept the selected request of desktop sharing;
- **Reject:** reject the selected request of desktop sharing;
- **Reject All:** reject all requests of desktop sharing;
- **Stop:** stop desktop sharing. In the course of a desktop sharing process, click the LCD screen of the control unit to pop up the red button, press the red button to stop desktop sharing;

- If not select "**Forcible Display**", delegates can exit desktop sharing temporarily by pressing the yellow button on the pop-up dialog; and can enter desktop sharing again by press **Sharing --> Enter desktop sharing**.



3.3 HCS-8665 series compact multimedia congress terminal

3.3.1 Functions and instructions

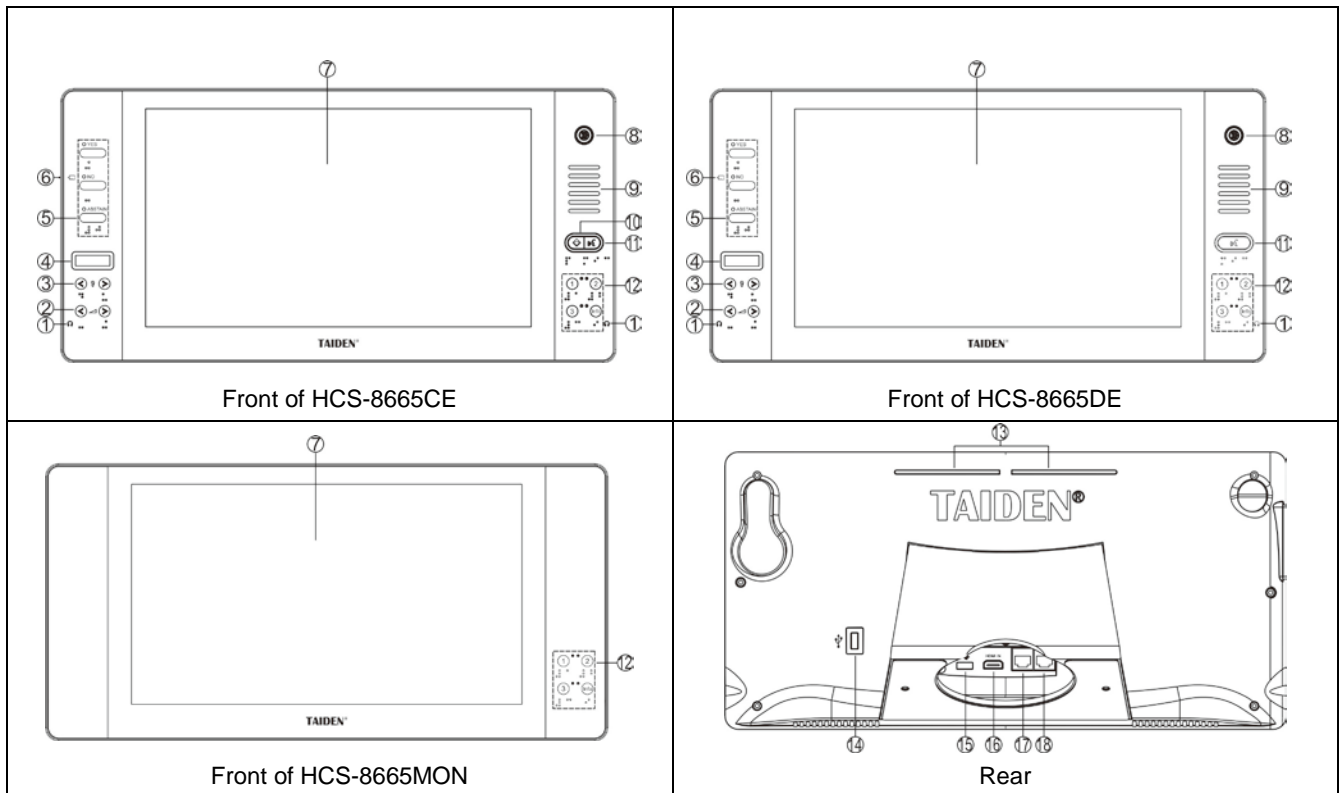


Figure 3.3.1 HCS-8665 series Compact Multimedia Congress Terminal

Figure 3.3.1

1. Earphone jack (Ø 3.5 mm)

- ◆ For tabletop terminals.

2. Earphone volume control

3. Simultaneous interpretation channel selector

- ◆ Available when earphone is plugged.

4. OLED display

- ◆ Display the SI channel number and headphone volume

5. Multi-function keys with indicating light (3 keys):

- ◆ In different modes, the corresponding indicating lights blink; press the corresponding key to execute operation (refer to table 3.3.1 for details).

6. Contactless IC Card slot

- ◆ Built-in contactless IC-Card slot to place the IC card, while automatically logout once the card is taken out from the slot.

7. High resolution LCD screen

- ◆ For video display;
- ◆ 14", 1920 × 1080.

8. Removable microphone stem spiral active interface

9. Built-in Hi-Fi loudspeaker

- ◆ Mutes automatically to suppress howling when the microphone of this unit is active;
- ◆ Loudspeaker sends out floor channel audio only. The volume is controlled via CMU or application software.

10. Priority key with indicating light (for chairman unit only):

- ◆ According to priority mode configuration on main unit:
 - ◇ If configured as "All mute", all active delegate microphones will be temporarily muted when this key is pressed and they will resume when the key is released;
 - ◇ If configured as "All off", all active delegate microphones (except VIP units) will be turned off when this key is pressed. Under "OPEN" and "Request" mode, pressing this key will clear request list (deny all delegates request to speak);
- ◆ If chairman microphone is not active, pressing this key will activate it;

11. Microphone On/Off key with indicating light (for chairman unit)

Microphone/request key with indicating light (for delegate unit):

- ◆ Chairman unit: press this key to activate microphone and indicating light;
- ◆ Delegate unit:

Work state	Indicating light
Microphone On	Red (on)
Request to speak	Green (on)
Speaking time limit	Red (flash)
VIP indication	Yellow (on)

12. Video source selection button

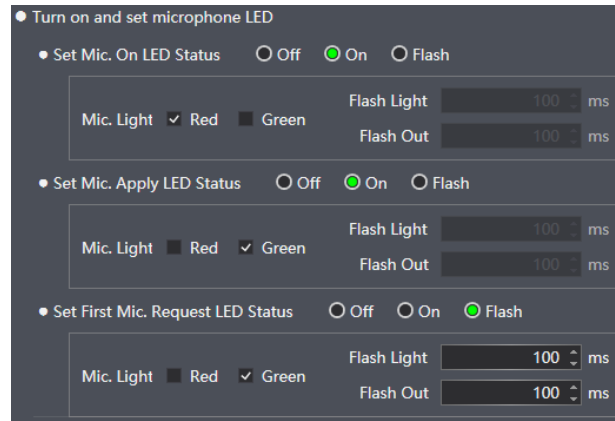
- ◆ Video source selection;
- ◆ Numbering for HCS-8665MON.

13. Microphone On/Off/Request state indicator

- ◆ The indicator state is the same as that of the microphone lamp ring, and can be set by conference management software or main unit webpage.

Default state:

Work state	Indicating light
Microphone On	Red (on)
First in request list	Green (flash)
Not first in request list	Green (on)
Speaking time limit	Red (flash)
VIP indication	Yellow (on)



14. USB connector

- ◆ For external mouse and keyboard or other USB devices.

15. USB connector

- ◆ For connection HCS-1082 series E-ink nameplate.

16. HDMI IN

- ◆ For HDMI video input.

17&18. Ethernet interface (support PoE)

- ◆ Power supply and transmission of conference data;
- ◆ Two network ports can be connected at the same time to realize the backup function.

Table 3.3.1 List of multi-functional keys

Function \ Keys		YES	NO	ABSTAIN	
Numbering		Number			
		Press video source selection button "① or ② or ③ or Info" on HCS-8665MON			
Sign-in		Sign-in			
Voting	Parliamentary	YES	NO	ABSTAIN	
	For/Against	For	Against		
	Appraisal	Satisfied	Satisfied (three/two keys voting)	Basically satisfied (three keys voting)	Unsatisfied (three/two keys voting)
		Qualified	Qualified (three/two keys voting)	Basically qualified (three keys voting)	Unqualified (three/two keys voting)
		Competent	Competent (three/two keys voting)	Basically competent (three keys voting)	Incompetent (three/two keys voting)
Questionnaire		Candidate 1	Candidate 2	Candidate 3	

3.3.2 Fixed installation

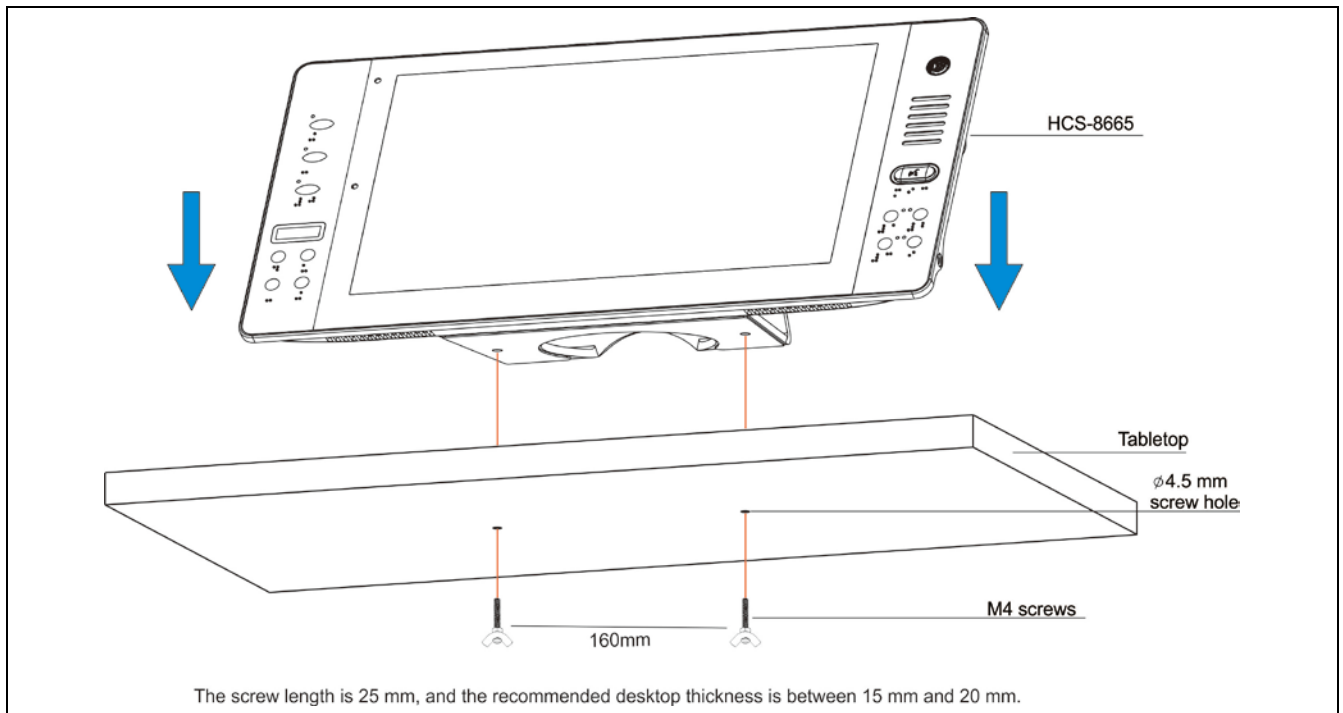


Figure 3.3.2 Fixed installation of HCS-8665 series congress unit

3.3.3 Connection

3.3.3.1 Connecting to HCS-8600POE

The PoE network port of HCS-8665 series congress terminal is connected to the DELEGATE interface of HCS-8600POE through the Cat.5e/Cat.6 network cable to obtain power while transmitting control data and multimedia data; each terminal is connected to a port of HCS-8600POE, The number of terminals can be expanded through the HCS-8368T(/50) distributor.

Functions and indications:

- 1 Left stereo channel signal
- 2 Right stereo channel signal
- 3 Power ground/Shield

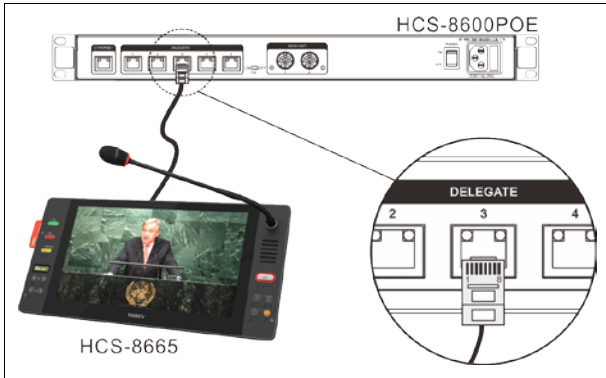


Figure 3.3.3 HCS-8665 series congress terminal connecting to HCS-8600POE

Note:

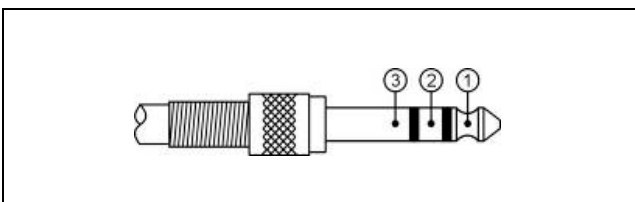
☞ The DIP switch of HCS-8600POE must be set to "Normal" mode.

3.3.3.2 Video display

The HCS-8665 series compact multimedia terminal is equipped with a 14" TFT LCD with 1920x1280 high-resolution. It supports high definition digital video (HDMI) display.

3.3.3.3 To external earphone

An external earphone can be connected to the external earphone jack at the lateral sides of the multimedia terminal. Its volume is adjustable by the earphone volume control key. The external earphone shall have a Ø 3.5 mm plug, as in the following figure:



3.3.4 Operation

Before a meeting starts, the congress terminals need to be configured by the operator, including: numbering and testing. During the meeting, the participants use the congress terminals to: sign-in, activate microphone, request to speak, vote, etc.

3.3.4.1 Delegate unit

1. Number

First of all, make sure that all the congress terminals are connected properly to the CMU. All congress terminals must be numbered when the system is used for the first time or when adding or replacing congress terminals. The numbering function can be activated by application software.

Press "Unit Numbering" on application software. The system now goes to numbering status. The number indicating light of all connected congress terminals will blink and the OLED screen will display "Numbering: × ×" (× × stands for ID). Press the "YES" key on HCS-8665C and HCS-8665D, press "Video source selection" button on HCS-8665MON of every congress terminal one by one. The number indicating light will be deactivated. Once all congress terminals numbered, restart the CMU to update the number information.

Note:

☞ When numbering, please number the congress terminals one by one and do NOT press the "YES" key or the video source selection button of several congress terminals at the same time.

2. Sign-in (application software needed)

To carry out voting, congress terminals with voting and IC-Card reader should be registered via key press or IC-Card. With application software, registration is available by choosing "Seat Sign-in".

■ Key-press sign-in

In key-press sign-in status, the indicating light on key "YES" will blink, press key "YES" to sign-in and the indicating light will be turned off.

■ IC-Card sign-in

In IC-Card sign-in status, "Insert IC Card" will be displayed on the OLED screen. Put the contactless IC-Card into the slot. If read the IC-Card correctly, checked in Successfully. If the IC-Card is invalid, "Invalid IC card!" will be displayed on the OLED screen. Please read the IC-Card again or contact the technical support.

3. Speaking (without software)

Speaking mode is configured on the CMU (refer to section [2.1.3](#)).

A. "Open" mode

■ Active microphone number limitation (1~8) **NOT reached:**

- The microphone will be activated when the microphone On/Off key is pressed, the speaker can give his/her speech;
- The microphone will be deactivated when the microphone On/Off key is pressed again.

■ Active microphone number limitation (1~8) **reached:**

- Press the microphone On/Off key to request to speak;
- Press the microphone On/Off key again to cancel the request to speak;
- When an active microphone is turned off, the first request microphone will be activated.

B. "Override" mode

■ Active microphone number limitation (1~8) **NOT reached:**

- The microphone will be activated when the microphone On/Off key is pressed, the speaker can give his/her speech;
- The microphone will be deactivated when the microphone On/Off key is pressed again.

■ Active microphone number limitation (1~8) **reached:**

If the delegate microphone On/Off key is pressed, its microphone will be activated and the first activated delegate microphone will be deactivated at the same time to maintain the active

microphone number limitation. If the number of active microphone (including chairman and VIP unit) reaches 8, turning on another microphone will switch off the delegate microphone turned on first.

C. “Voice” mode

■ Active microphone number limitation (1~8) **NOT reached:**

- a. The microphone On/Off key indicating light remains on. When the delegate speaks into the microphone at a short distance, the microphone will be activated;
- b. If the delegate does not speak for several seconds, the microphone will be deactivated automatically. The interval time can be adjusted at the main unit (refer to section [2.1.3](#));
- c. When the microphone is activated, it can be turned off by pressing the microphone On/Off key.

■ Active microphone number limitation (1~8) **reached:**

All other microphones cannot be activated unless one of the active microphones is turned off.

D. “Request” mode

- a. Request to speak when the microphone On/Off key is pressed (default 8 microphones at most). The chairman unit can approve or reject his/her speak;
- b. When his/her request is approved, he/she can speak and the last activated microphone will be turn off at the same time.

E. “PTT” mode

■ Active microphone number limitation (1~8) **NOT reached:**

- a. The microphone will be activated when the microphone On/Off key is pressed and held, the speaker can give his/her speech;
- b. The microphone will be deactivated when the microphone On/Off key is released.

■ Active microphone number limitation (1~8)

reached:

Pressing the microphone On/Off key cannot activate the microphone until one of the activated microphones is switched off.

Note:

☞ The active microphone number limitation is 1~8, it is valid for the delegate units; including the chairman and VIP units, the maximum number of active microphones available for the system is 8.

A camera can focus an activated microphone automatically (camera position preset by application software). Speaker’s video can be exported to and displayed on large screen(s).

4. Voting

Voting can be originated by TAIDEN conference management system software.

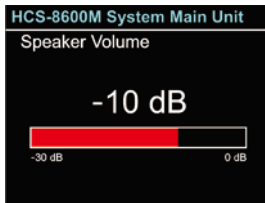
- The voting button indicating lights of the congress unit start to blink; the delegate can press the voting button to vote;
- For “First key-press valid” voting, the delegate can vote only once;
- For “Last key-press valid” voting, the delegate can change his/her vote, and the last voted key will be valid.

5. Channel selection

- When the CMU is connected to interpreter unit(s), simultaneous interpretation function will work and the channel selector will be activated. To use the channel selector, an earphone must be plugged in. When the earphone is plugged, the delegate can select a suitable language to listen to by means of the channel selector.

6. Volume control

- The volume of the built-in loudspeaker can be adjusted by LCD menu -> Speaker Volumn on the main unit;



- When the earphone is plugged, its volume can be adjusted by the earphone volume control of the unit.

7. Video display

Congress terminal equipped with a HDMI video connector, supports multiple channel HD video display.

Video format:

720P60 720P50 720P30 720P25
1080I60 1080I50
1080P60 1080P50 1080P30 1080P25

8. VIP unit

- Any delegate unit can be assigned as a VIP unit by the TAIDEN conference management system software;
- As long as the active microphone capacity is not full, the microphone of the VIP unit can be activated freely;
- If the active microphone capacity is full, the microphone of the VIP unit cannot be turned on unless one of the active microphones is deactivated.

3.3.4.2 Chairman unit

The chairman unit features all the functions of a delegate unit, and the following additional functions:

1. Priority

- If the priority mode on the main unit is configured as “All mute”, all active microphones (except VIP units and other chairman units) will be muted temporarily when this key is pressed and they will restore when this key is released;
- If configured as “All off”, all active microphones (except VIP units and other chairman units) will be turned off and the request-to-speak list will be purged (under “Open” and “Request” mode) when this key is pressed.

2. Speaking

- If the active microphone capacity is not full, the chairman can activate his/her microphone normally, the operation is the same as for the delegate unit;
- If the active microphone capacity is full, the chairman cannot activate his/her microphone. But he/she can use the priority key to “All mute” or “All off” other delegate microphones and give his/her speech.

3. Controlling delegate unit

A. Approve delegate unit's request to speak

Without PC and under “Request” mode, when a delegate requests to speak, the chairman can approve delegate's request and activate delegate's microphone by pressing key “YES” or reject delegate's request by pressing key “ABSTAIN”.

At most 6 microphones (default) can request at the same time. When a request is approved, the last activated microphone will be turn off at the same time.

B. Turn off or mute delegate microphone

The chairman can use the priority key to execute “All mute” or “All off” operation.

4. Voting

Chairman unit cannot originate voting without a PC:

- Nominative or ballot voting are available;
- “First key-press valid” or “Last key-press valid” are available.

3.4 HCS-8635 series compact multimedia congress terminal

3.4.1 Functions and indications

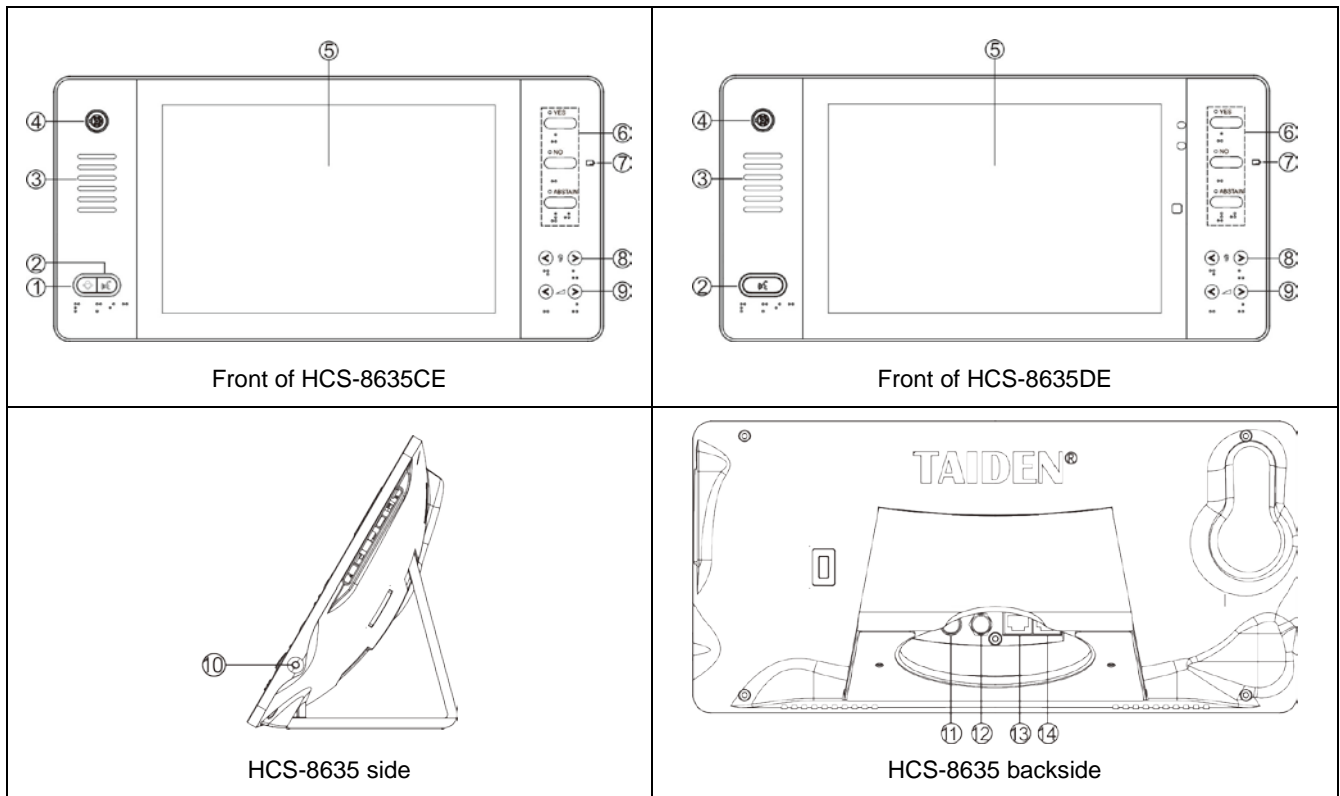


Figure 3.4.1 HCS-8635 series compact multimedia terminal

Figure 3.4.1:

1. Priority key with indicating light (for chairman unit only):

- ◆ According to priority mode configuration on main unit:
 - ◇ If configured as “All mute”, all active delegate microphones (except VIP units) will be temporarily muted when this key is pressed and they will resume when the key is released;
 - ◇ If configured as “All off”, all active delegate microphones (except VIP units) will be turned off when this key is pressed. Under “OPEN” and “Request” mode, pressing this key will clear request list (deny all delegates request to speak);
- ◆ If chairman microphone is not active, pressing this key will activate it;
- ◆ If ring mode is configured as “ON”, a ring tone will be produced when this key is pressed, and the indicating light of priority key will be turned on.

2. Microphone On/Off key with indicating light (for chairman unit)

Microphone/request key with indicating light (for delegate unit):

- ◆ Chairman unit: press this key to activate microphone and indicating light;
- ◆ Delegate unit:

Work state	Indicating light
Microphone On	Red (on)
Request to speak	Green (on)
Speaking time limit	Red (flash)
VIP indication	Yellow (on)

3. Built-in Hi-Fi loudspeaker

- ◆ Mutes automatically to suppress howling when the microphone of this unit is active.
- ◆ Loudspeaker sends out floor channel audio only. The volume is controlled via CMU or application software.

4. Removable microphone stem spiral active interface

5. 16:10 high resolution color wide-screen

6. Multi-function keys with indicating light (5 keys):

- ◆ In different modes, the corresponding indicating lights blink; press the corresponding key to execute operation (refer to table 3.4.1 for details);
- ◆ The above keys can also be used as LCD menu function keys to perform corresponding function operations.

7. Contactless IC Card slot

- ◆ Built-in contactless IC-Card slot to place the IC card, while automatically logout once the card is taken out from the slot.

8. Simultaneous interpretation channel selector

- ◆ Available when earphone is plugged.

9. Earphone volume control

10. Earphone jack (Ø 3.5 mm)

11. SDI input

12. SDI output

13&14. 2 × RJ45 socket

- ◆ For daisy chain connection;
- ◆ Recommended to use of cat5e cable with a drain wire & RJ45 plug with metal shield, and connect to main unit via CBL8P2RJ45S converter cable.

Table 3.4.1 List of multi-functional keys

Function \ Keys		Yes	No	Abstain
Menu		Confirm	Move up	Move down
Numbering		Number		
Key-press sign-in		Sign-in		
Voting	Parliamentary	YES	NO	ABSTAIN
	For/Against	For	Against	
	Appraisal	Satisfied (four/three/two keys voting)	Basically satisfied (four/three keys voting)	Unsatisfied (four/three/two keys voting)
		Qualified (three/two keys voting)	Basically qualified (three keys voting)	Unqualified (three/two keys voting)
		Competent (three/two keys voting)	Basically competent (three keys voting)	Incompetent (three/two keys voting)

Note: touch any key on the right of the front panel to active the OSD menu.

3.4.2 Installation

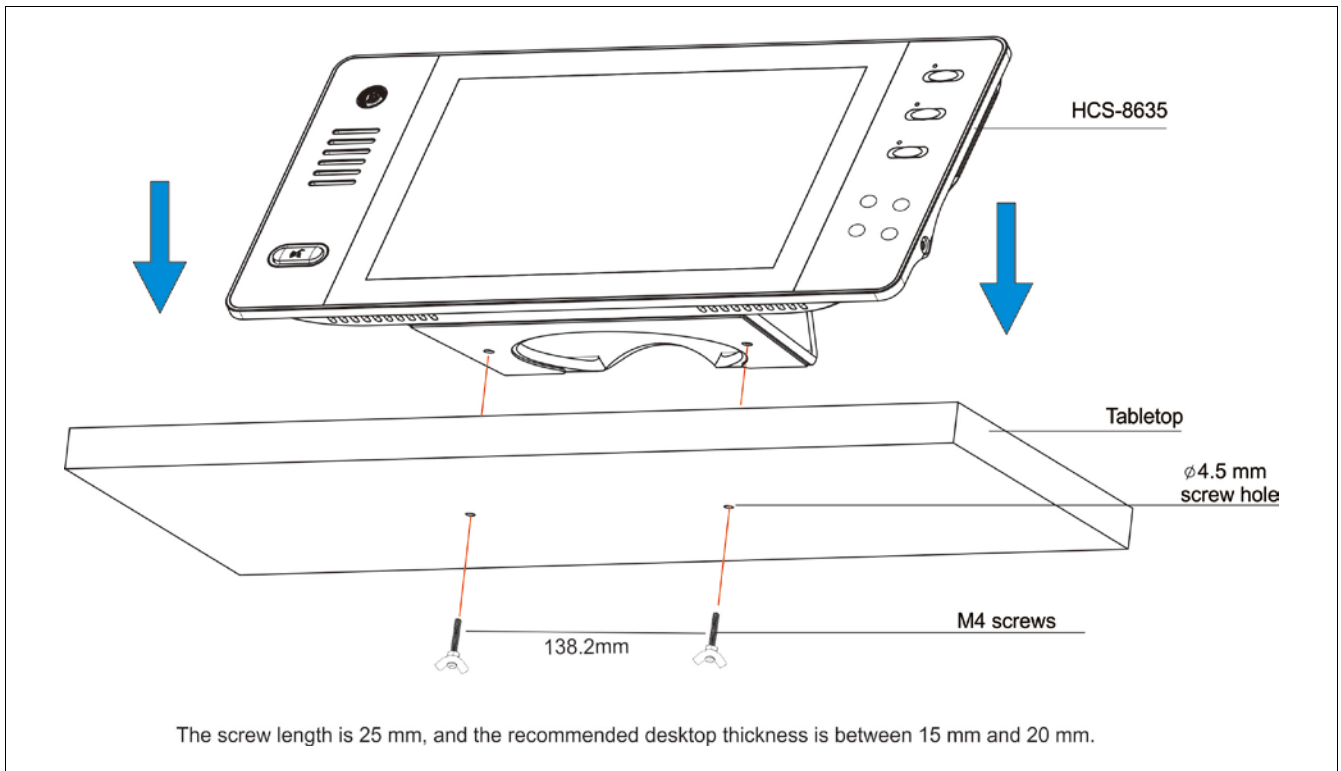


Figure 3.4.2 Fixing of HCS-8635 series compact multimedia congress terminal

3.4.3 Connection

3.4.3.1 Connecting to the CMU or the EMU

HCS-8635 series congress terminal equipped with two RJ45 sockets supports daisy chain connection via cat5e cable. When connecting the CMU to the contribution units, the CBL8P2RJ45 converter cable is needed to connect the the first unit to the socket of the CMU.

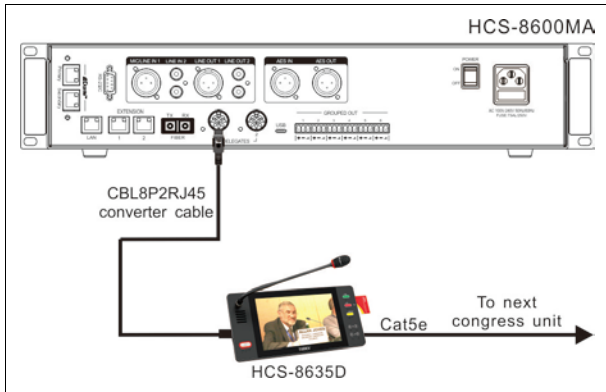


Figure 3.4.3 HCS-8635 series compact multimedia terminal connected to the CMU/EMU

For a longer distance between the contribution unit and the CMU/EMU, a Cat5e cable can be used. One end of the Cat5e cable is connected to output of the main unit via the CBL8P2RJ45S converter cable; the other end of the Cat5e cable is connected to the contribution unit.

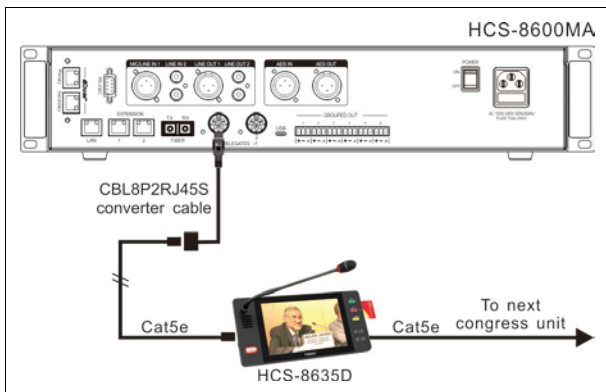


Figure 3.4.4 HCS-8635 series compact multimedia terminal connected to the CMU/EMU

For "Closed Loop - Daisy Chain" ring connection, HCS-8600MCLS Loop switcher is needed. The "TO MU" port of HCS-8600MCLS is connected to the output of the main unit via CBL8P2RJ45 converter cable; the other port of HCS-8600MCLS is connected to the contribution unit; at last, connect the last contribution unit back to the CMU via a CBL8P2RJ45S converter cable.

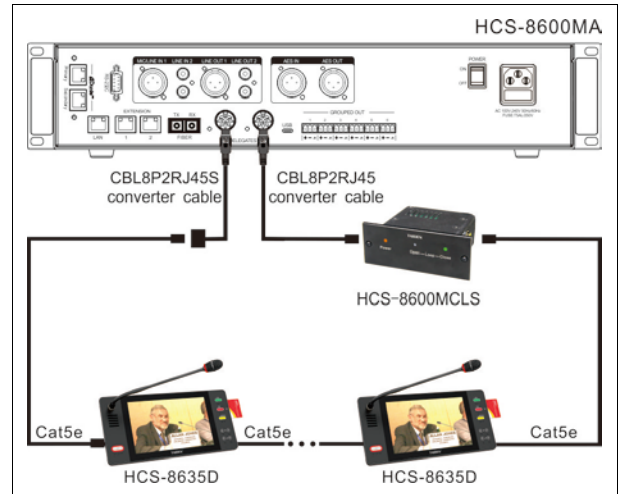


Figure 3.4.5 "Closed Loop - Daisy Chain" connection between the CMU and HCS-8635 series compact multimedia terminals

3.4.3.2 Connection between congress units

The HCS-8635 series economical multimedia terminals are daisy-chained easily and conveniently by cat5e cables.

When connecting with another multimedia terminal, just use a Cat5e cable to connect one RJ45 socket of the terminal to the RJ45 socket of the next terminal.

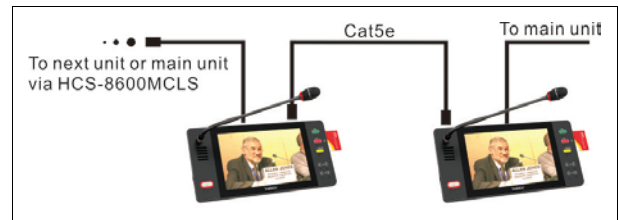


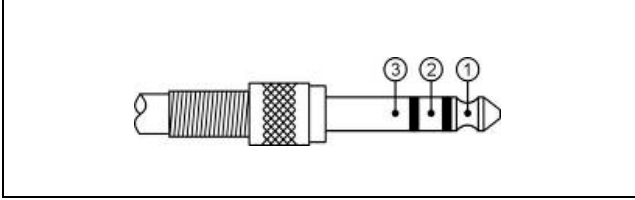
Figure 3.4.5 "Daisy-chain" connection between HCS-8635 series compact multimedia terminals

3.4.3.3 Video display

The HCS-8635 series compact multimedia terminal is equipped with a 10" TFT LCD with 1280 × 800 high-resolution. It supports high definition digital video (SDI) display corresponding with the standard CEA-861. Video signal transmitted on a high quality coaxial-cable, such as RG-6 or SYV-75 and the length of each cable is no more than 50 m.

3.4.3.4 External earphone

An external earphone can be connected to the external earphone jack of the congress terminal. Its volume can be adjusted by the earphone volume control button. The external earphone shall have a \varnothing 3.5 mm plug, as in the following figure:



Functions and indications:

- 1.....Left stereo channel signal
- 2.....Right stereo channel signal
- 3.....Power ground/Shield

3.4.4 Operation

Before a meeting starts, the economical multimedia terminals need to be configured by the operator, including: numbering and testing. During the meeting, the participants use the multimedia terminal to sign-in, activate microphone, request to speak, vote, read message, etc.

3.4.4.1 Delegate unit

1. Number

First of all, make sure that all the congress terminals are connected properly to the CMU. All congress terminals must be numbered when the system is used for the first time or when adding or replacing congress terminals. The numbering function can be activated by application software.

Press "Unit Numbering" on application software. The system now goes to numbering status. The number indicating light of all connected congress terminals will blink. All multimedia terminals will display "Numbering". Press the "YES" key on HCS-8635C and HCS-8635D congress terminal one by one. The number indicating light will be deactivated. Once all congress terminals numbered, restart the CMU to update the number information.

Note:

☞ When numbering, please number the congress terminals one by one and do NOT press the "Yes" key of several congress terminals at the same time.

2. Sign-in (application software needed)

To carry out voting, multimedia terminals should be registered via key press or IC-Card. With application software, registration is available by choosing "Seat Sign-in".

■ Key-press sign-in

In key-press sign-in status, the indicating light on key "5" will blink, press the "5" key to sign-in and the indicating light will be turned off.

■ IC-Card sign-in

In IC-Card sign-in status, "Please Use IC Card" will be displayed on the LCD. Push the contactless IC card into the IC card slot, a welcome interface will be displayed. Press any key to go to the initial interface. If the IC-Card is invalid, "Invalid IC card" will be displayed on the LCD. Please read the IC-Card again or contact the technical support. If pull the IC card, logout automatically.

3. Speaking (without software)

Speaking mode is configured on the CMU (refer to section [2.1.3](#)).

A. "Open" mode

■ Active microphone number limitation (1~8) **NOT reached:**

- a. The microphone will be activated when the microphone On/Off key is pressed, the speaker can give his/her speech;
- b. The microphone will be deactivated when the microphone On/Off key is pressed again.

■ Active microphone number limitation (1~8) **reached:**

- a. Press the microphone On/Off key to request to speak;
- b. Press the microphone On/Off key again to cancel the request to speak;
- c. When an active microphone is turned off, the first request microphone will be activated.

B. "Override" mode

■ Active microphone number limitation (1~8) **NOT reached:**

- a. The microphone will be activated when the microphone On/Off key is pressed, the speaker can give his/her speech;
- b. The microphone will be deactivated when the microphone On/Off key is pressed again.

■ Active microphone number limitation (1~8)

reached:

If the delegate microphone On/Off key is pressed, its microphone will be activated and the first activated delegate microphone will be deactivated at the same time to maintain the active microphone number limitation. If the number of active microphone (including chairman and VIP unit) reaches 6, turning on another microphone will switch off the delegate microphone which turned on first.

C. “Voice” mode

■ Active microphone number limitation (1~8) **NOT reached:**

- a. The microphone On/Off key indicating light remains on. When the delegate speaks into the microphone at a short distance, the microphone will be activated;
- b. If the delegate does not speak for several seconds, the microphone will be deactivated automatically. The interval time can be adjusted at the main unit (refer to section [2.1.3](#));
- c. When the microphone is activated, it can be turned off by pressing the microphone On/Off key.

■ Active microphone number limitation (1~8) **reached:**

All other microphones cannot be activated unless one of the active microphones is turned off.

D. “Request” mode

- a. Request to speak when the microphone On/Off key is pressed (default 6 microphones at most). The chairman unit can approve or reject his/her speak;
- b. When his/her request is approved, he/she can speak and the last activated microphone will be turn off at the same time.

E. “PTT” mode

■ Active microphone number limitation (1~8) **NOT reached:**

- a. The microphone will be activated when the microphone On/Off key is pressed and held, the speaker can give his/her speech;
- b. The microphone will be deactivated when the microphone On/Off key is released.

■ Active microphone number limitation (1~8) **reached:**

Pressing the microphone On/Off key cannot activate the microphone until one of the activated microphones is switched off.

Note:

☞ The active microphone number limitation is 1~8, it is valid for the delegate units; including the chairman and VIP units, the maximum number of active microphones available for the system is 8.

A camera can focus an activated microphone automatically (camera position preset by application software). Speaker’s video can be exported to and displayed on large screen(s).

4. Voting

Voting can be originated by TAIDEN conference management system software.

- The voting button indicating lights of the multimedia terminal start to blink, the delegate can press the voting button to vote;
- For “First key-press valid” voting, the delegate can vote only once;
- For “Last key-press valid” voting, the delegate can change his/her vote, and the last voted key will be valid.

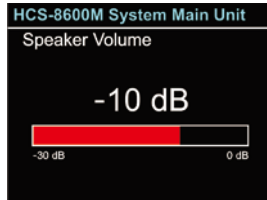
5. Channel selection

- When the CMU is connected to interpreter unit(s), simultaneous interpretation function will work. To use the channel selector, an earphone must be plugged in. When the earphone is plugged, the LCD will display the simultaneous interpretation channel number and language name. The delegate can select a suitable language to listen to by means of the channel selector.

- When the earphone is pulled out, the LCD will not display the simultaneous interpretation information anymore.

6. Volume control

- The volume of the built-in loudspeaker can be adjusted by LCD menu -> Speaker Volume on the main unit;



- When the earphone is plugged, its volume can be adjusted by the earphone volume control of the terminal.

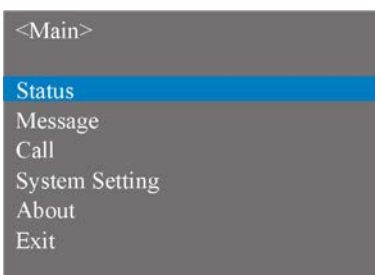
7. OSD menu

After initialization, touch any key on the right of the front panel to active the OSD menu. The OSD menu will be hidden automatically if no operation for 5 seconds. If start sign-in, voting or intercom, the HCS-8635 will exit the OSD menu automatically and enter corresponding status.

Yes key: confirm (←↓)

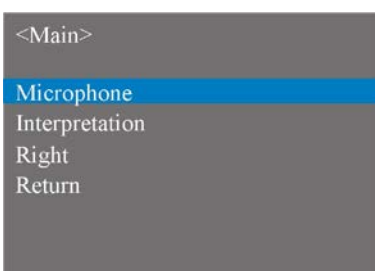
No key: move up (↑)

Abstain key: move down (↓)



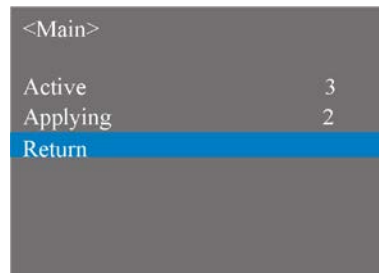
A. "Status"

Status includes 3 sub-menus: Microphone, Interpretation and Right.



■ Microphone

Check microphone information, including: active microphone number (including chairman, delegate and VIP), request amount.



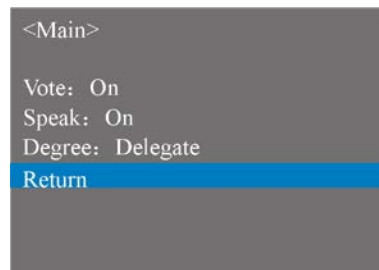
■ Interpretation

Check information about all interpretation languages.



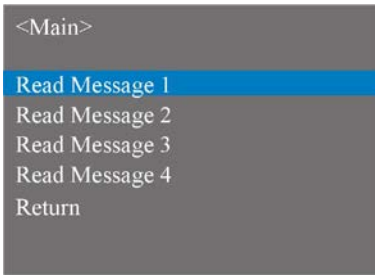
■ Right

Check the rights of this multimedia terminal.



B. "Message"

- Used to read messages. When a PC is connected, the operator can edit and send a message to congress unit(s);
- On receipt of a message, a ring tone will be emitted by the built-in loudspeaker and "You have got a new message" will be displayed on its LCD and the indicating light of **Yes** key and **No** key will blink. Press **Yes** key to read the corresponding message or press **No** key to ignore the message;
- At most 4 messages can be stored in the congress unit. In case of more incoming messages, the first received message will be overlapped.



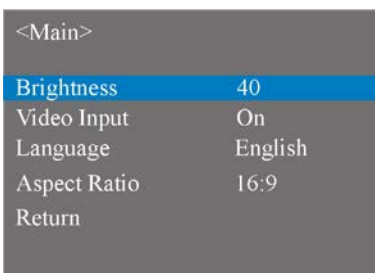
C. "Call"

The earphone shall be plugged to use the intercom function. If not, it will remind you to plug the earphone. Select "Call" and press the **Yes** key to enter the sub-menu, then the following interface is shown. Select "Call Operator" and press the **Yes** key to use the intercom function. When the operator approved your request, "Talking with operator..., please use headphone." will be displayed on the bottom of the LCD. If the current unit is using the intercom function, it will remind you that the line is busy.



D. "System Setting"

System setting includes Brightness, Video Input, Language and Aspect Ratio. Select a sub-menu, the item will be highlight with blue; when pressing the **Yes** key, the item will be highlight with red. It means that the content of this item can be modified by pressing the **No** key or the **Abstain** key and then press the **Yes** key again to confirm.



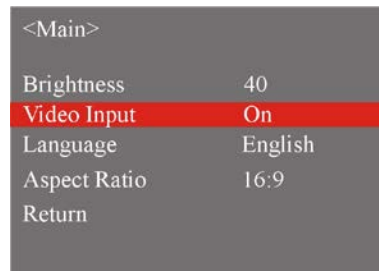
■ Brightness

Set brightness of LCD screen.



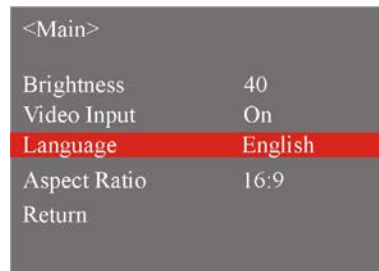
■ Video Input

Enable/disable video input.



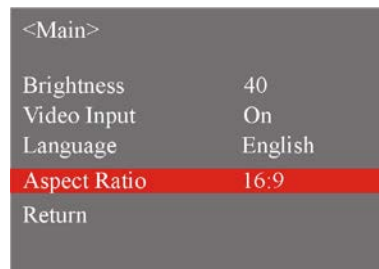
■ Language

Set the OSD menu language.



■ Aspect Ratio

Set aspect ratio for HCS-8635 series multimedia terminal. Three items for choice: Full, 16:9, and 4:3.



E. "About"

Display the product information including unit ID, serial and version.

<Main>

TAIDEN DCS

ID: 21

Ser: tda0000623

Ver: 2.00.00.01

www.taiden.com

Return

8. VIP unit

- Any delegate unit can be assigned as a VIP unit by the TAIDEN conference management system software;
- As long as the active microphone capacity is not full, the microphone of the VIP unit can be activated freely;
- If the active microphone capacity is full, the microphone of the VIP unit cannot be turned on unless one of the active microphones is deactivated.

3.4.4.2 Chairman unit

The HCS-8635C chairman unit features all the functions of a delegate unit, and the following additional functions:

1. Priority

- If the priority mode on the main unit is configured as “All mute”, all active microphones (except VIP units and other chairman units) will be muted temporarily when this key is pressed and they will restore when this key is released;
- If configured as “All off”, all active microphones (except VIP units and other chairman units) will be turned off and the request-to-speak list will be purged (under “Open” and “Request” mode) when this key is pressed.

2. Speaking

- If the active microphone capacity is not full, the chairman can activate his/her microphone normally, the operation is the same as for the delegate unit.
- If the active microphone capacity is full, the chairman cannot activate his/her microphone. But he/she can use the priority key to “All mute” or “All off” other delegate microphones and give his/her speech.

3. Controlling delegate unit

A. Approve delegate unit’s request to speak

Without PC and under “Request” mode, when a delegate requests to speak, a ring tone will be emitted by the built-in loudspeaker in the chairman’s unit. “Delegate: × × (unit ID) Requesting” will be displayed on the LCD. The chairman can now approve delegate’s request and activate delegate’s microphone by pressing **Yes** key or reject delegate’s request by pressing **No** key.

When his/her request is approved, he/she can speak and the last activated microphone will be turn off at the same time.

B. Turn off or mute delegate microphone

Chairman can use the “Priority” key to execute “All mute” or “All off” operation.

4. Voting

HCS-8635C chairman unit cannot originate voting without a PC:

- When controlled by application software, nominative or ballot voting are available;
- “First key-press valid” or “Last key-press valid” are available.

Chapter 4 Interpreter unit

Simultaneous interpretation function of HCS-8600 series congress unit is designed for the requirements of large scale multilingual international congresses: it can provide up to 64 language channels (64 CHs).

HCS-8685 interpreter unit is equipped with a 6.8" TFT LCD, a 64-channel selector, a built-in loudspeaker, a pluggable microphone, headset sockets, etc. LCD can display channel number, language name, input language, quality indication and short message, etc. It can display a) the audience status of the output channel, including how many people are listening to the output channel from wired language distribution system, b) if the output channel is monitored by the infrared language distribution system (HCS-5100 system), and c) if the output channel is recording. In addition, the signal level of the input channel can be displayed in real time. Multi input/output language channels, which can be preset with corresponding shortcut key, make it convenient for the interpreter to operate. The Interpreter unit can be connected directly to the trunk-link and be added easily to an existing system.

The Interpreter unit supports direct and relay interpretation function. In direct interpretation mode, the interpreter translates from the floor language to a preset language directly. In case the interpreter does not understand the floor language he/she uses relay interpretation mode (with auto-relay facility) listening to another interpreter's language as source language to execute interpretation into his/her target language.

Product type:

HCS-8685

Fully Digital Congress System Interpreter Unit (64 CHs, 6.8" TFT LCD, microphone, loudspeaker)

4.1 Functions and indications

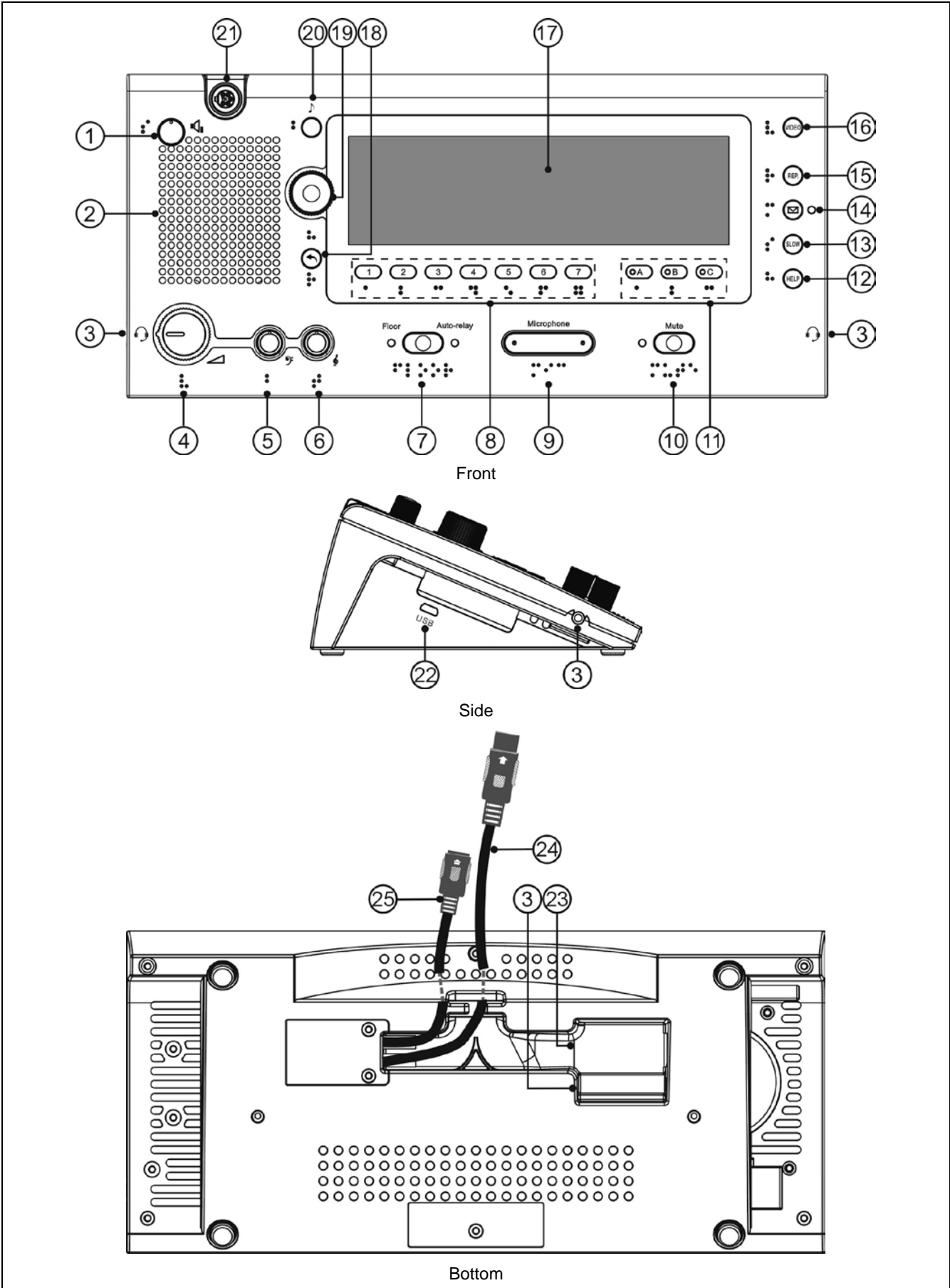


Figure 4.1 HCS-8685 Interpreter unit

◇ **Listening area:**

Loudspeaker/earphone control:

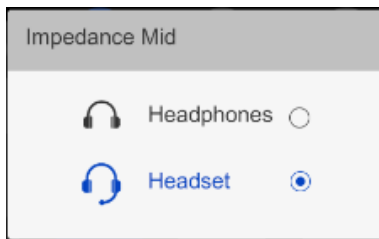
1. Loudspeaker volume control knob

2. Built-in Hi-Fi loudspeaker

- ◆ When the microphones of all interpreter units in the booth are disabled, you can listen to the loudspeaker of the interpreter unit. Push the function knob to go to the floor channel. Turn the function knob to select a different channel.

4. Earphone volume control knob

- ◆ When headphones are plugged in, impedance is automatically recognized and audio level is adjusted accordingly;
- ◆ When headset connected, you can select headset function or headphone function through pop-up dialog;



- ◆ When headphones level exceeds a preset value, a floating window will be triggered to alert.

5. Earphone bass control knob

6. Earphone treble control knob

Input channel control:

7. Floor channel ON/OFF switch

- ◆ Press this button to access the floor language and the Floor indicating light will be activated.
- ◆ Switch between floor channel and auto-relay channel.

8. Monitor channel switch button

(1/2/3/4/5/6/7)

- ◆ Switch to preset the input channel

18. Back (↶) button

- ◆ Press the button to activate LCD menu, if no operation in 5 s, menu exits; and if press any other buttons, menu exits too;
- ◆ Press the button again to return to the upper level menu.

19. Function knob

- ◆ Push the function knob to go to the floor channel for loudspeaker, turn the function knob to select a different channel;

- ◆ When the monitor channel shortcut switch button (1/2/3/4/5/6/7) was pressed, push the function knob to go to channel 1, turn the function knob to select the interpretation channel;
- ◆ When the Output channel B/C switch button (B C) was pressed, push the function knob to go to channel 1, turn the function knob to select the output channel;
- ◆ When operate the LCD menu, press the function knob to confirm.

◇ **Speaking area:**

9. Microphone ON/OFF switch

- ◆ Press this button to turn on the microphone and the red indicating light will be activated, press this button again to turn off the microphone.
- ◆ When microphone is active, booth number of the microphone will be displayed on LCD of all the interpreter units which set the language channel as output;
- ◆ If the interpreter booth is off, the green indicating light will be activated.
- ◆ If one interpreter unit is activated, the green indicating lights for others in the same booth will be off, when the interlock mode in a booth is set to Interlock.

10. Microphone mute key (MUTE)

- ◆ Push and hold the Mute button to temporarily disable the microphone and the Mute indicating light will be activated. The speech timer does not stop. Release this button on voice recovery.

11. Output channel A/B/C switch with indicating lights

- ◆ Switch to preset the output channel;
- ◆ Indicating light will be on when the channel is engaged;
- ◆ Indicating light of its own will be on when the microphone is active;
- ◆ "Allow switching output channel when microphone is active" can be set by application software (Control – Booth Manage. – Param. Setup).

12. HELP

- ◆ If selected "Allow Help" by application software (Control – Booth Manage. – Param. Setup), press this key to ask the operator for help and help information will be displayed on the status bar of the application software; at the same time, "Booth:

** asks for help” will be displayed on the LCD of operator unit.

13. Slow key (SLOW)

- ◆ If selected “Allow Slow” and set the requisite number by application software (Control – Booth Manage. – Param. Setup), when the delegate is speaking too fast, interpreter on speaking press this button to remind him/her to slow down. If the discussion unit is equipped with an LCD, the message “Please speak slower!” will be displayed (activated when reached requisite number in given time).

14. Message key (✉)

- ◆ If selected “Allow Send Message” by application software (Control – Booth Manage. – Param. Setup), when unread message exist, this indicating light will be activated, press this button to check message;
- ◆ You can check the message again by pressing the same button within 1 minute;
- ◆ A new incoming message arriving within the 1 minute interval shall replace the previous one.

15. Input channel audio playback (REP.)

- ◆ If selected “Allow Repeat” and set the repeat time by application software (Control – Booth Manage. – Param. Setup), push the REP. button to playback input channel audio;
- ◆ Push the REP. button again to cancel playback.

16. Video button

- ◆ Reserved

20. Beep button (🔔)

- ◆ You can disable and enable the beeps of the interpreter unit with the Beep button. When beeps are enabled, the display shows a musical note. The interpreter unit can generate beeps for notification of special events to support blind interpreters on the headphones.

◇ Display:

17. 7.2” TFT LCD

- ◆ Displays the unit configuration information, Incoming/outgoing channel number and language name, Channel number and language name of loudspeaker output, Incoming language quality indication, The audio stream status (IR receive, Record, Network Live) of the output channel, How many people are listening to the output channel, short message, etc.

Special configuration:

Braille

- ◆ Ergonomic design with features for visually impaired.

◇ Interface:

3. TRRS jack (Ø 3.5 mm)

21. Stem microphone socket

22. USB socket

23. Reserved

24. 1.5-meter 8P-DIN cable with standard plug (male x 1)

25. 0.6-meter 8P-DIN cable with standard plug (female x 1)

4.2 Connection

4.2.1 Connecting to the CMU or the EMU

HCS-8685 interpreter unit is equipped with a cable with a standard 8P-DIN male connector. When connecting the CMU to the contribution units, just connect the male connector of the first unit to the socket of the CMU.

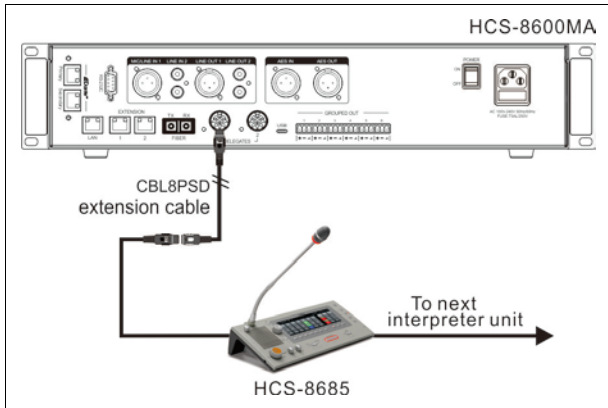


Figure 4.3 HCS-8685 Interpreter unit connected to the CMU or the EMU

For a longer distance between the interpreter unit and the CMU/EMU, a CBL8PSD extension cable can be used. One end of this cable is equipped with a 8P-DIN male connector, the opposite end is equipped with a female connector. Just connect the female connector of the cable to the interpreter unit, and connect the male connector to the output of the main unit. The Cat5e cable can also be used as an extension cable, one end of the Cat5e cable is connected to output of the main unit via the CBL8P2RJ45S converter cable; the other end of the Cat5e cable is connected to the 8P-DIN male connector of the interpreter unit via the CBL8S2RJ45S converter cable.

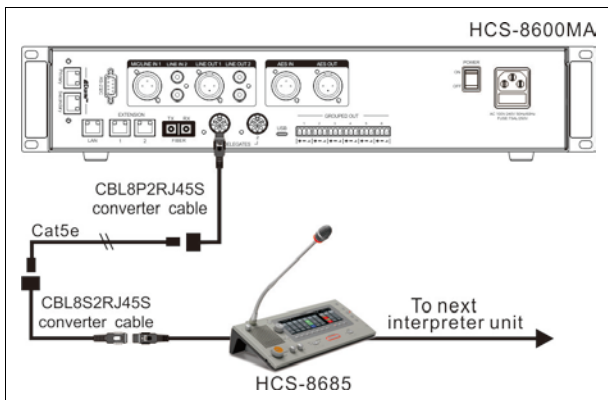


Figure 4.4 HCS-8685 Interpreter unit connected to the CMU or the EMU

For “Closed Loop - Daisy Chain” ring connection, HCS-8600MCLS Loop switcher is needed. The "TO MU" port of HCS-8600MCLS is connected to the output of the main unit via CBL8P2RJ45 converter cable; the other port of HCS-8600MCLS is connected to the interpreter unit via CBL8P2RJ45 converter cable; at last, connect the last interpreter unit back to the CMU via a CBL8PSD extension cable.

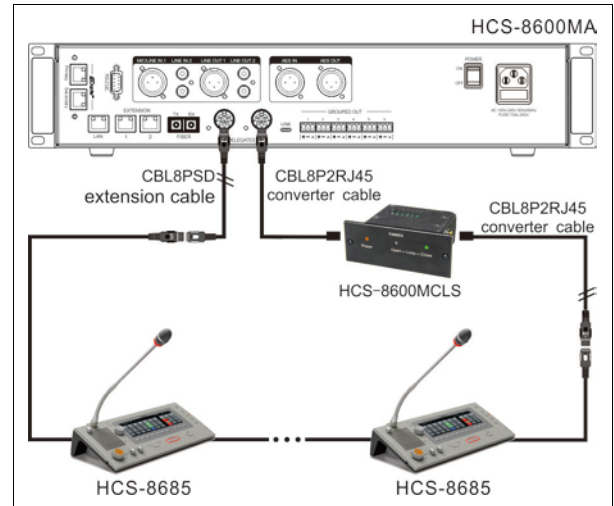


Figure 4.5 “Closed Loop - Daisy Chain” connection topology

4.2.2 Connection between Interpreter units

All HCS-8685 units are daisy-chained easily and conveniently by dedicated 6-pin cables.

When connecting to another unit, just connect the 8P-DIN standard female connector on the cable of the unit to the 8P-DIN standard male connector on the cable of the next unit.

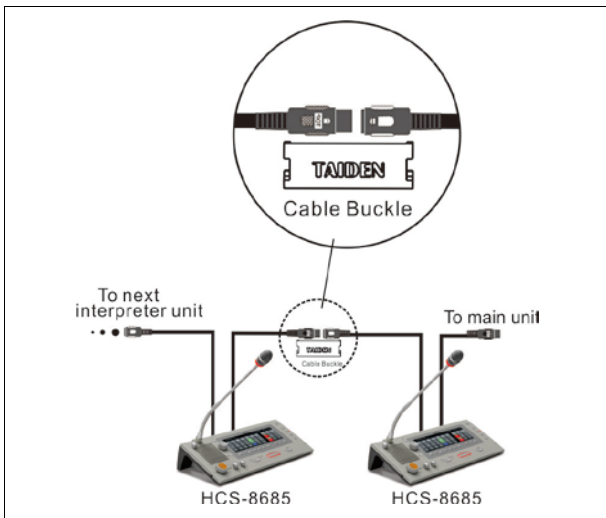
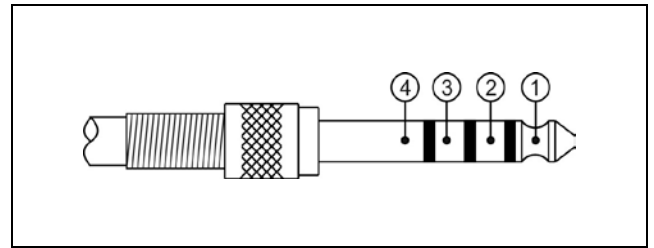


Figure 4.6 “Daisy-chain” connection between HCS-8685 Interpreter units

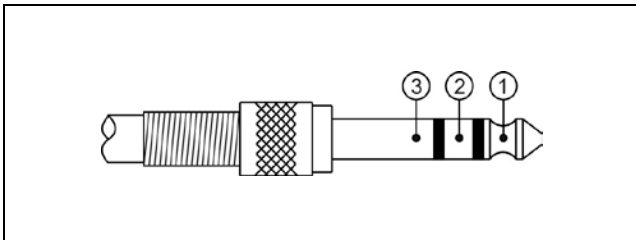


Functions and indications:

- 1.....Left stereo channel signal
- 2.....Right stereo channel signal
- 3.....Power ground/Shield
- 4.....External microphone signal

4.2.3 External earphone

An external headphone can be connected to the TRRS jack at the lateral side of the Interpreter unit. Its volume can be adjusted by the earphone volume control knob. The external headphone shall have a Ø 3.5 mm plug according to the following figure:



Functions and indications:

- 1.....Left stereo channel signal
- 2.....Right stereo channel signal
- 3.....Power ground/Shield

4.2.4 External microphone

An external headset can be connected to the TRRS jack at the lateral side of the Interpreter unit. The external headset shall have a Ø 3.5 mm plug, as in the following figure:

4.3 Setup

To realize the simultaneous interpretation function, the interpreter unit should be incorporated in the congress system and they should be setup before the meeting. Any operating status of the interpreter unit will be displayed on the LCD. Setup can be done via dialog menu and the buttons on its panel. We will introduce the configuration and operation of the HCS-8685 interpreter unit in detail.

4.3.1 Direct interpretation, relay interpretation and auto relay interpretation

Before the setup of the interpreter unit, you should arrange booths according to the actual requirements of the meeting. Assure yourself on the correct allocation of all the interpretation channels.

■ Direct interpretation

Usually, if all interpreters can understand the speaker's language, they just listen to the floor language and are doing simultaneous interpretation. The interpretation languages are distributed to different channels, as shown in figure 4.7. This is called direct interpretation.

■ Relay interpretation

In the second case, if an interpreter is not familiar with the floor language, he/she cannot proceed to direct interpretation. He/she needs to listen to the translation of another interpreter and has to do "secondhand" translation, as shown in figure 4.8. This is called relay interpretation.

■ Auto relay interpretation

When relay interpretation is needed, the interpreter can select a language by the monitor channel shortcut switch button (1/2/3/4/5/6/7) and the Primary knob. Due to the fact that the output language of each booth is arranged beforehand, the relay booth must be setup before the meeting. If the interpreter cannot understand the speaker's language, he/she does not need to select the input language manually. His/her interpreter unit can switch to his/her familiar language automatically. This is called auto relay interpretation.

Example:

Booth 1 is for translation between English/Chinese. Output channel A is English, output channel B is Chinese, and output channel C is "None". Booth 2 is for translation between French/Chinese. Output channel A is French, output channel B is Chinese, and output channel C is "None". We configure now booth 1 as relay booth for booth 2.

When the speaker is speaking Chinese and if all the interpreters of booth 1 and booth 2 are familiar with Chinese, they can do direct interpretation. As shown in figure 4.7.

When the speaker is speaking English, the interpreters in booth 1 setup output channel B (Chinese) as interpretation language. The interpreter units in booth 2 will take Chinese as their input channel. When the microphone ON/OFF switch in booth 1 is pressed, the floor channel indicating light in booth 2 will be turned off and its Auto-relay indicating light will be activated. It indicates that auto relay interpretation function is working. The interpreters in booth 2 can do relay interpretation. As shown in figure 4.8.

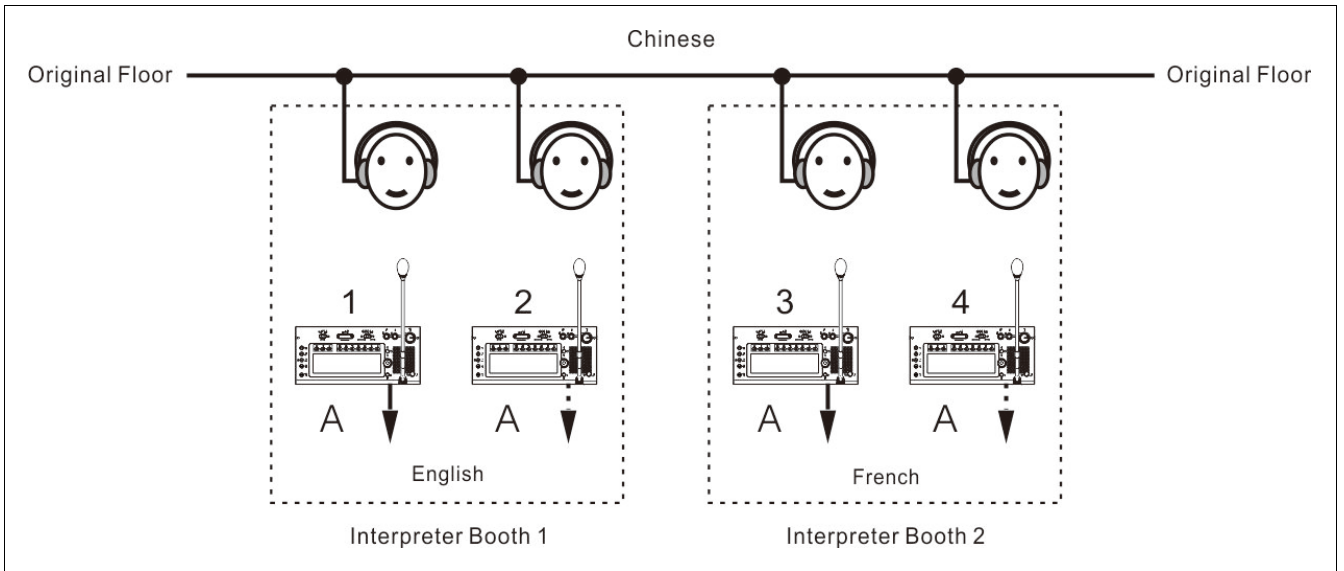


Figure 4.7 Direct interpretation

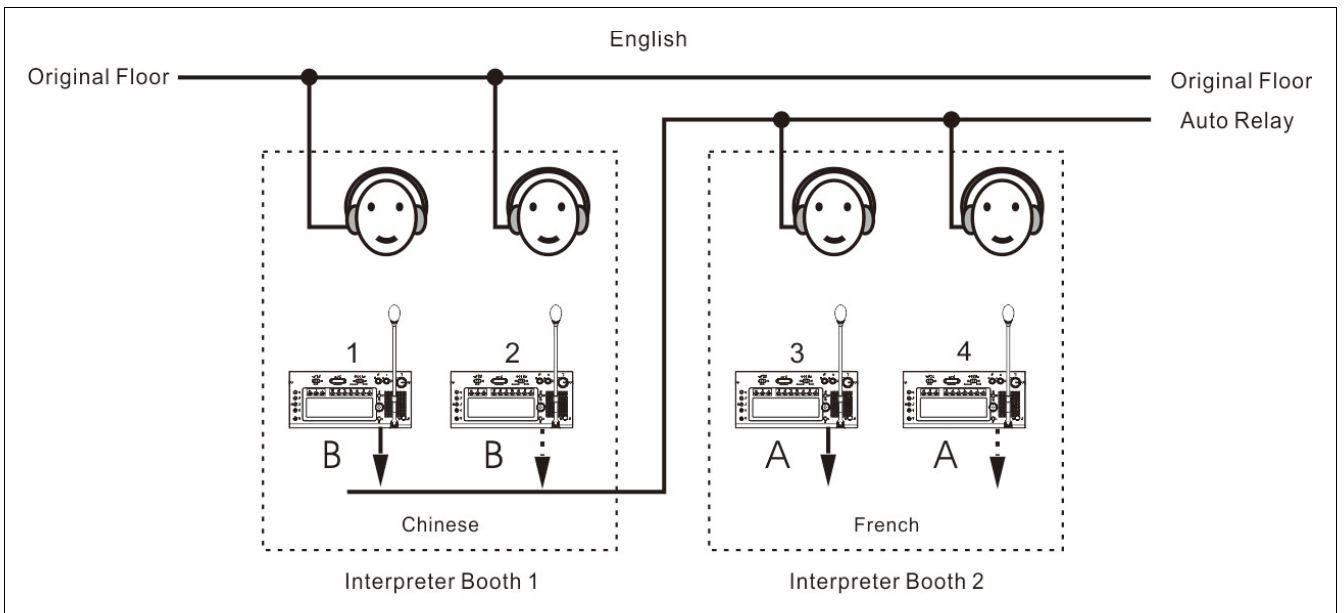


Figure 4.8 Relay interpretation

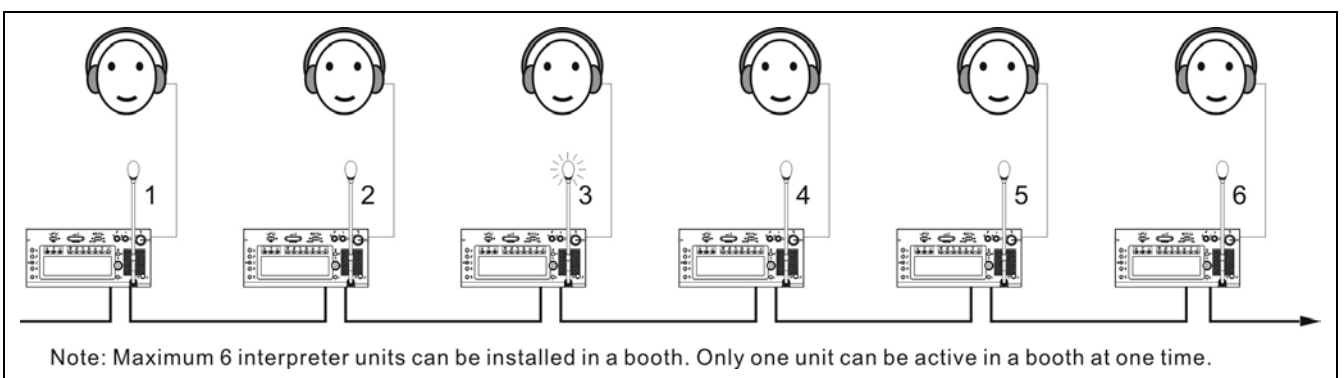
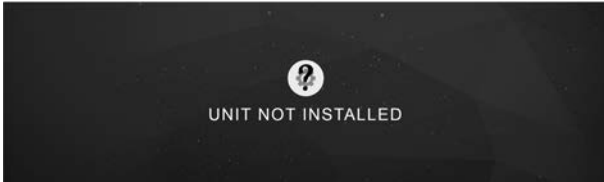


Figure 4.9 Schematic diagram of the connection of interpreter units

4.3.2 LCD configuration menu

When the “Interpretation setup” has been configured in the CMU, and then the interpreter unit must be configured:

- If the interpreter unit has not been configured, the LCD will display “UNIT NOT INSTALLED”;



- If the interpreter unit has been configured, the LCD will display the standby interface.



Icon on LCD:

Icon	Indicating
	Headset inserted
	Headphone inserted
Booth:05	Bluetooth: On
Booth:05	Bluetooth: Connected
	Message received
	Audio feedback: On
REP:8s	Repeat function and repeat time
00:00:05	Speech time
05:ENG	Loudspeaker channel
2016-01-21 09:00	System current time
06	Output channel is interpreting
	Call operator
99+	Quantity of listeners
	Audio stream is in use
	Monitor channel is muted
	Output channel is muted

A) Accessing menu

In the menu operation of the interpreter unit:

- If unit not installed, press the function knob to enter the setting menu;
- Press the return (↩) button to activate the LCD menu, if no operation in 5 s, menu exits; and if press any other buttons, menu exits too.



In the following operation:

- Turn the function knob to select LCD menu or adjust parameters value;
- Press the function knob to confirm/go to submenu;
- Press the “↩” button to return/exit.
- Press any other buttons, menu exits to standby interfaces

B) Menu configuration

The LCD menu includes:

- Brightness
- Setting
- Bluetooth
- About
- Skin

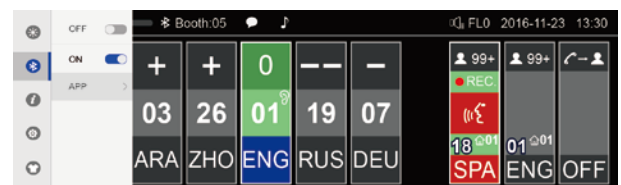
Brightness

Turn the Function knob to adjust screen brightness, then press the Function knob to confirm or press the “↩” button to return.



Bluetooth

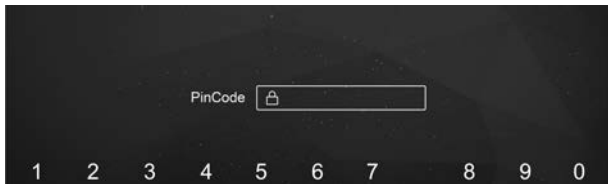
Turn the Function knob to select among On, Off or App, the selected item becomes highlighted, then press the Function knob to confirm or press the “↩” button to return. The default Bluetooth status is **Off**, If Bluetooth is **On** but cannot connect after 3 minutes, it will be off automatically.



If you select **App**, press the Function button to open QR code interface, scan the QR code according to you phone or pad to download Taiden SI tool App. After installation, you can send message to all or part booths via Bluetooth.

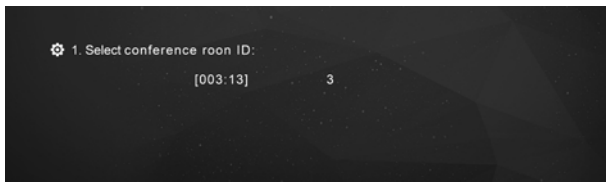
⚙️ Setting

Input Pincode first before enter setting interface, system manager set the password for authorization of changing interpreter unit setting, so as to avoid random alteration. The password is **838550** or **6666**, press the button under the number to input.



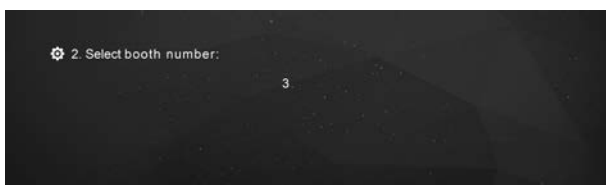
◆ Select conference room ID

- 1). Select the conference room ID by rotating the Function knob, the interpreter unit and the main unit must set the same ID;
- 2). Press the Function knob to confirm and go to the next step or press “←” button to return.



◆ Select booth number

Setup the interpreter unit with the number of the booth within which the interpreter unit is located, according to the configuration in the CMU.



- 1). Select the booth number by rotating the Function knob, the range is limited by the configuration in the CMU (refer to section [2.1.3](#));
- 2). Press the Function knob to confirm and go to the next step or press the “←” button to return.

◆ Compressor

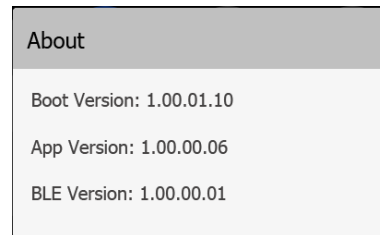
On or Off compressor.



- 1). Select On/Off by rotating the Function knob, default is On, when strong signal inputs, the distortion will be controlled well;
- 2). Press the Function knob to confirm or press the “←” button to return.

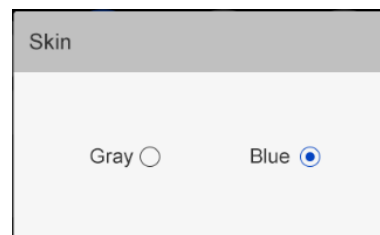
ℹ️ About

Press the Function knob to view HCS-8685 version, include Boot version, App version and Bluetooth version.

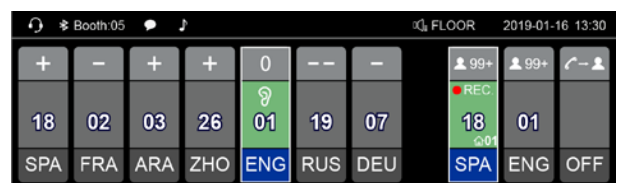


👕 Skin

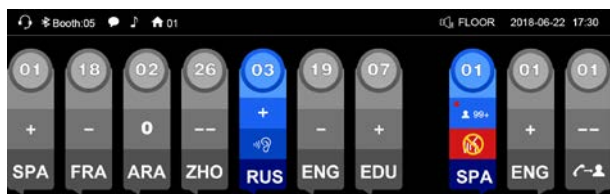
The HCS-8685 interpreter unit has two built-in skin styles for choice (Gray/Blue). After switching the skin style, restart the machine to take effect.



Gray:



Blue:



4.3.3 Other configuration

4.2.4.3.1 Input channel configuration

The HCS-8685 equipped with 7 pre-select buttons (1/2/3/4/5/6/7) for relay languages with activation indication on the LCD. When the monitor channel switch button (1/2/3/4/5/6/7) was pressed, push the Function knob to go to channel 1, turn the Function knob to select the interpretation channel.

4.2.4.3.2 Output channel configuration

To distribute the interpretation languages separately, A/B/C channels are provided in the interpreter unit. When the interpreter unit menu configuration is finished, the output channel of every interpreter unit must be setup before the meeting and according to the actual requirements.

- Output channel A is setup at the CMU, and its output language is a fixed language as the output of the booth;
- Output channel C is used to output a non-conventional language. Output channel C can be setup as "None" or "All" from the CMU menu configuration (refer to section [2.1.3](#)).
- ◆ If output channel C is set as "All", the interpreter can select the output language by pressing the output channel C switch and by rotating the Function knob at the same time. If the output channel C is activated, the output of this interpreter unit will be distributed to all booths which set this booth as their auto relay booth, and other interpreters can do relay interpretation. Now, the output language of the output channel B is a fixed language as the output of the booth at the CMU menu configuration (refer to section [2.1.3](#));
- ◆ If the output channel C is set as "None", the output channel B is used to output a non-conventional language. Output channel B can be setup as "None" or "All" from the CMU menu configuration. If the output channel B is set as "All", the interpreter can select the output language by pressing the output channel B switch and by rotating the Function knob at the same time. If the output channel B is activated, the output of this interpreter unit will be distributed to all booths which set this booth as their auto relay booth, and other interpreters can do relay interpretation.

4.2.4.3.3 Interlock mode

Interpretation mode can be setup by menu operation on the main unit (refer to section [2.1.3](#)):

Interlock mode between booths:

- ◆ Override: allows an interpreter to override another interpreter in another interpreter booth supplying the same interpretation channel.
- ◆ OVERRIDE-BC: enables A channel of an interpreter in another booth to override an occupied B/C channel in another booth, but supplying the same channel; when an interpreter in another booth to override an occupied A channel in another booth, the "Microphone ON" indicators the occupied A channel will flash on the control panel for about 5 seconds.
- ◆ Interlock: blocks another interpreter from using the same channel in another interpreter booth. As a warning that another microphone is active on a given channel, when a second one is activated on the same channel, the "Microphone ON" indicators will flash on the control panel for about 5 seconds.

Interlock mode in a booth:

- ◆ OVERRIDE: enables an interpreter in a booth to override an occupied channel in the same booth, but supplying the same channel;
- ◆ INTERLOCK: prevents that two interpreters engage the same channel in the same booth.

4.4 Operation

4.4.1 Operation of listening area

The listening area, on the left side of the unit, is the area used to monitor the floor or the interpretation channels. It includes a built-in loudspeaker, a headset socket and the corresponding control buttons and knobs. This intuitive layout is helpful for the interpreters to familiarize with the interpreter unit quickly.

1. Channel language is the language arranged for a channel in the CMU configuration. For example, 10 languages are configured and we setup channel 1 as Chinese, channel 2 as English, etc. This setting is to simplify the work of the interpreters and to make labels for all selectable languages for all participators.
2. If the microphone of every interpreter unit in this booth is turned off, he/she can monitor any language from the built-in loudspeaker ② and adjust the volume with the "Loudspeaker volume control knob" ①. When a microphone in this booth is activated, the loudspeaker of every interpreter unit in this booth will mute automatically. Now the interpreter can listen with the earphone and adjust the volume, treble and bass with the "Earphone volume control knob" ④, "Earphone bass control knob" ⑤ and "Earphone treble control knob" ⑥ which are located on the left lower side.
3. If the interpreter wants to listen to another channel language, he/she can select the preset channel language with the "Monitor channel switch button (1/2/3/4/5/6/7)". If the channel language is not preset, he/she can select the channel language by pressing the button (1/2/3/4/5/6/7) and turning the Function knob ⑱.
4. If the speaker speaks too fast and if the interpreter cannot follow him/her, the interpreter can press the "SLOW" button to remind the speaker to slow down. If the discussion unit is equipped with an LCD, the message "Please speak slower!" will be displayed (activated when reached requisite number in given time).
5. If the interpreter missed the speaker's speech, he/she can press the input channel audio playback key (REP) to playback missed words and "REP:6S" will be displayed on the LCD. The playback time ranges between 2 s - 8 s.

6. Quality indication: The second line of the display shows the qualities of the interpretations on the channels that are assigned to the pre-select buttons of the interpreter unit. This logo is used to remind the interpreter to avoid using the relay translation if direct translation is available.

Quality	Description
0	The channel contains the floor language.
+	The channel contains a direct interpretation of the floor language.
-	The channel contains an indirect interpretation of the floor language.
--	The channel contains an indirect interpretation of an interpretation language.
X	The channel contains the output interpretation of current interpreter unit.

When beeps are enabled, the interpreter unit plays a beep when the channel that you selected contains an indirect interpretation of the floor language.

4.4.2 Operation of speaking area

The speaking area, on the right side of the unit, is the area which is used to distribute the interpretation languages to the corresponding channels. It includes functional buttons and channel selectors, etc.


1. Press the microphone ON/OFF button, and distribute the interpretation language to the output channel.

At most 6 interpreter units can be set in one booth for 6 interpreters. Only one microphone can be activated in one booth. When one microphone in the booth is activated, the loudspeaker of every interpreter unit in the booth will mute.

2. Output channel select:

- ◆ Use the “A”, “B” or “C” button to switch the output channel quickly. If the auto relay interpretation is activated and the output channel B/C activated, the output will be automatically distributed to all booths which set this booth as their auto relay booth and other interpreters can now do relay interpretation.
- ◆ If selected “Allow switching output channel when microphone is active” by application software (Control – Booth Manage. – Param. Setup), interpreter can switch output channel freely, or else, he/she can only switch output channel when microphone is turn off;
- ◆ Both the “A”, “B” and “C” buttons have an ENGAGED indicating light each. If the selected output channel is already engaged by another interpreter unit, this indicating light will be activated;
- ◆ ENGAGE indicating light of its own will be on when the microphone is active.

3. Press and hold the “MUTE” button to close the microphone temporarily and the Mute indicating light will be turned on. Releasing the button will activate the microphone automatically.

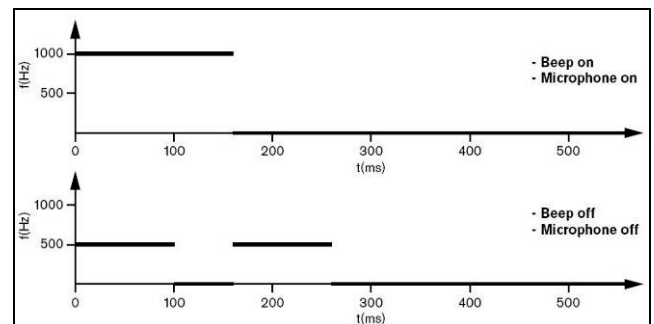
4. The “MESSAGE” () button is used to check short message.

5. Intercom button: if output channel C is “No Output”, and If selected “Allow Call” by application software (Control – Booth Manage. – Param. Setup), press and hold C button to call the operator (PTT mode).

6. “HELP” button: If selected “Allow Help” by application software (Control – Booth Manage. – Param. Setup), used by the interpreter requesting for help. Help information will be displayed on the status bar of the application software; at the same time, “Booth: xx asks for help” will be displayed on the LCD of operator unit.

7. Beeps

The audio beeps can be toggled on and off with the Beep button. If this function is enabled, the display shows a musical note, the audio beeps can also be toggled on and off with the Mic. ON/OFF button. When beeps are enabled, the interpreter unit plays a beep when the channel that you selected contains an indirect interpretation of the floor language.



Chapter 5 System connection and basic setup procedure

5.1 System connection

HCS-8600 series fully digital congress system has a simple and reasonable structure with high extendibility in hardware. The system installation is simple and quick and does not need special training. Daisy-chain connection is adopted between congress units as well as to CMU via dedicated 8-pin cable or converter cable.

TCP/IP protocol is adopted for Ethernet connection between CMU and PC. As a result remote control, remote diagnosis and remote update can be achieved. Application software for client and server can run on one computer or on different computers in the same LAN. The operator is able to control the progress of the meeting flexibly.

In this chapter, the connections of HCS-8600 series fully digital congress system are introduced by diagrams and examples.

5.1.1 Connection principles

In HCS-8600 series fully digital congress system, power is provided by HCS-8600M CMU (EMU) or HCS-8600EMS for all congress units (except HCS-8668/8638/8665 series congress terminals). Thus, the total number of system units in any installation is limited by the maximum power handling capacity and control capacity of the HCS-8600M CMU (EMU) or HCS-8600EMS. It must be ensured that, during the installation, the sum of the total power consumption of all the congress units connected to every single 8P-DIN interface plus the power loss in the extension cables does not surpass the power limit of each 8P-DIN interface. Otherwise the system will not work properly or automatic protection will occur. Refer to table 5.1.1 for maximum load capability.

HCS-8668/8638/8665 series congress terminals are provided power by HCS-8600KMX or HCS-8600POE. When power is supplied on PoE mode, the number of terminals can be expanded through HCS-8368 (T/50). Refer to table 5.1.2 and table 5.1.3 for maximum load capability.

By cascade connecting extension main units (HCS-8600MEA series) or extension units (HCS-8600MES), the HCS-8600 system can accommodate 4096 discussion/voting units (by using system application software up to 100 chairman units can be connected but only 1 chairman unit has control facilities), 378 interpreter units (63 interpreter booths, 6 in each), an unlimited quantity of channel selectors, and provide 64 language channels (including floor language) simultaneous interpretation.

Note:

- ☞ The added up cable lengths between a main unit and the most remote congress unit must not exceed 250 m;
- ☞ The length of an individual extension cable must not exceed 80 meters. Otherwise it will affect the signal quality. In case the length exceeds 80 m, HCS-4852T(N) is needed; The length of an individual extension cable following HCS-4852T(N) must not exceed 80 meters;
- ☞ When the extension cable is longer than 60 meters, please be sure to replace the cat5e cable with braided shield;
- ☞ The extension cable between the main unit/extension unit and the first congress unit is carrying the maximum possible current. However, the cable length between the two last congress units is nearly insignificant because this cable only carries the current for one unit.

Table 5.1.1 Quick lookup table of HCS-8600M CMU/EMU load capability (each outlet)

Type	Type No.	The extension cable length between the CMU(EMU) and the first Congress Unit connected to the socket			
		20 m	40 m	60 m	80 m
Equipped with 6.8" LCD, speaker and microphone	HCS-8685	9	8	7	7
Equipped with 4.3" LCD, speaker and microphone	HCS-4890N/80	9	9	9	8
	HCS-4890N/FM/80	9	9	9	8
Equipped with OLED, speaker and microphone	HCS-4838/80	14	14	13	13
	HCS-48U6/80	14	13	12	12
Equipped with 256*64 LCD, speaker and microphone	HCS-48U7/U8/U9/	13	12	12	11
Equipped with OLED, speaker and microphone	HCS-48U10/80	14	13	12	12
Equipped with 10" LCD, speaker and microphone	HCS-8635	7	7	7	7
Voting unit	HCS-4868/4869	52	50	48	46

***Note:**

- ☞ Cable Splitter HCS-4852T(N) is needed when the length of an extension cable exceeds 80 m. (Cable splitter is used as repeater only and cannot improve load capability.);
- ☞ For "Closed Loop - Daisy Chain" connection, load capability of each outlet is reduced by half.

Table 5.1.4 Quick lookup table of HCS-8600KMX load capability (each outlet)

Multimedia Terminal	The extension cable length between the HCS-8600KMX and the first Multimedia Terminal connected to the socket			
	20m	40m	60m	80m
HCS-8668	8	7	7	7
HCS-8638/50	8	7	7	7
HCS-8668+HCS-1082	7	6	6	6
HCS-8668+HCS-1082	7	6	6	6

Table 5.1.5 Quick lookup table of HCS-8368T(/50) load capability

Multimedia Terminal	HCS-8368T(/50)	
	PoE without external DC 48 V power input	PoE with external DC 48 V power input
HCS-8668	4	7
HCS-8638/50	5	7
HCS-8665	5	7
HCS-8668+HCS-1082	3	7
HCS-8638/50+HCS-1082	4	7
HCS-8665+HCS-1082	4	7
HCS-1082N	7	7

5.1.2 Connection between the CMU/EMU and the contribution units

HCS-8600 series congress units (except HCS-8668/ 8638/ 8665 series congress terminals) feature a 1.5 m 8P-DIN standard male plug cable and a 0.6 m 8P-DIN female plug cable, or feature 2 RJ45 sockets. Contribution units adopt dedicated 8-Pin cable or cat5e cable and are daisy-chained, which makes the installation handy and effortless. Connect the 1st unit to the outlet connector of the CMU, and following connect the 2nd unit to the 1st unit. Proceed one by one in a series configuration. The backbone of HCS-8600 system is formed (as shown in figure 5.1.1).

Paperless Multimedia Congress Terminal is designed based on the Gigabit Multimedia Congress Stream technology, all audio and video signals are transmitted via a Cat.5e/Cat.6 cable. The CMU can be connected to

the Gigabit network switcher via a Cat.5e/Cat.6 cable. For connecting the congress terminals to the Gigabit network switcher, just connect the “1000M Ethernet” interface of a congress terminal to the “Delegate” interface of the Gigabit network switcher with a Cat.5e/Cat.6 cable. For the connection between congress terminals, just connect the free “1000M Ethernet” interfaces of the adjoining congress terminals. When the PoE power supply mode is selected, the terminal is in star connection, and one PoE port for one terminal.

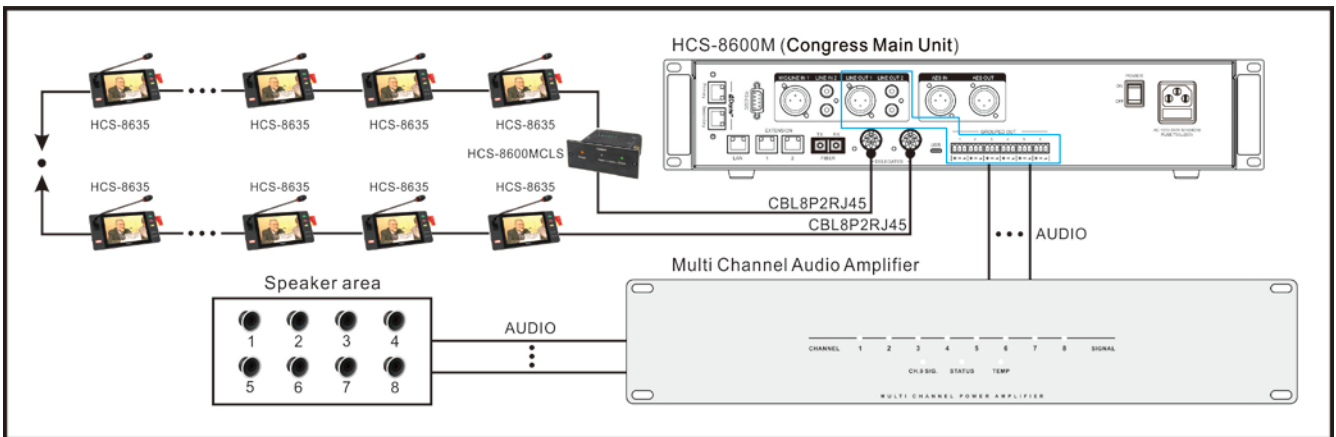


Figure 5.1.1 Congress main unit connecting to HCS-8635 contribution units

5.1.3 Connection between HCS-8600 series congress system and automatic video tracking system

HCS-8600 series fully digital congress system can be connected to an automatic video tracking system. For video tracking purposes, the application software is used to make camera presets for every congress unit. If the congress unit is switched on, video tracking system will automatically find the appropriate preset and focus on the speaker. The view of the speaker will be displayed on large screen or other display devices. The automatic video tracking system is compatible with several kinds of video signals and operates automatic video switching.

The video tracking system is composed of video switcher, button board and high-speed dome camera.

The HCS-8600M series congress main unit and the video switcher are connected to the same network. Set the **Host IP** of the video switcher to the IP address of the congress main unit to establish communication between the video switcher and the main unit. The connection method of the camera automatic tracking system is shown in Figure 5.1.2.

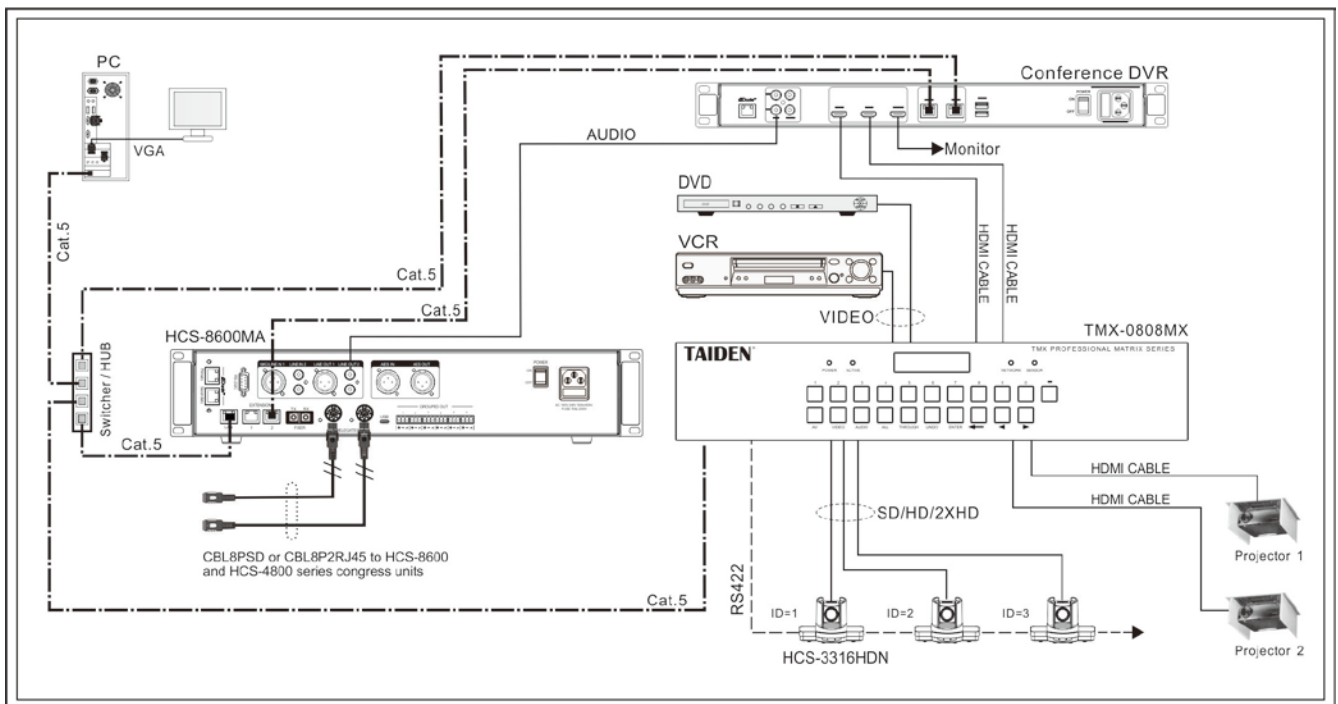


Figure 5.1.2 HCS-8600M congress main unit connecting to automatic video tracking system

5.1.4 Connection between HCS-8600 series Congress System and Conference Sign-in System

Conference Sign-in System (CSS, untouched) aims at providing the reliable, effective and convenient congress sign-in solution for various large congress. CSS makes the organizers get the updated statistic data of the participants, including the number of participants due to attend, already signed in, and the seat for participant, etc; and publish these to all participants synchronously. Further, the moderator can also benefit from this timely report system by being easily aware of the processing of the congress. Congress topic, agenda, procedure and related information all can be displayed on the large screen.

Intelligent Conference Sign-in System (ICSS) uses both remote RF card and close RF card sign-in technologies

(user can choose as needed), meanwhile, personalized portrait and design can be printed onto the surface of the RF card, which integrates the delegate's certification with ID card. The delegates carry out sign-in simply by walking through the RF card reader: a significant simplification of sign-in procedure and shortening of sign-in time.

Client/server mode with anti-virus and security mechanism is also imported in the ICSS, moreover, the system is easy to update, to extend and to choose the application software.

Figure 5.1.3 shows the connection between CSS and HCS-8600 series congress system:

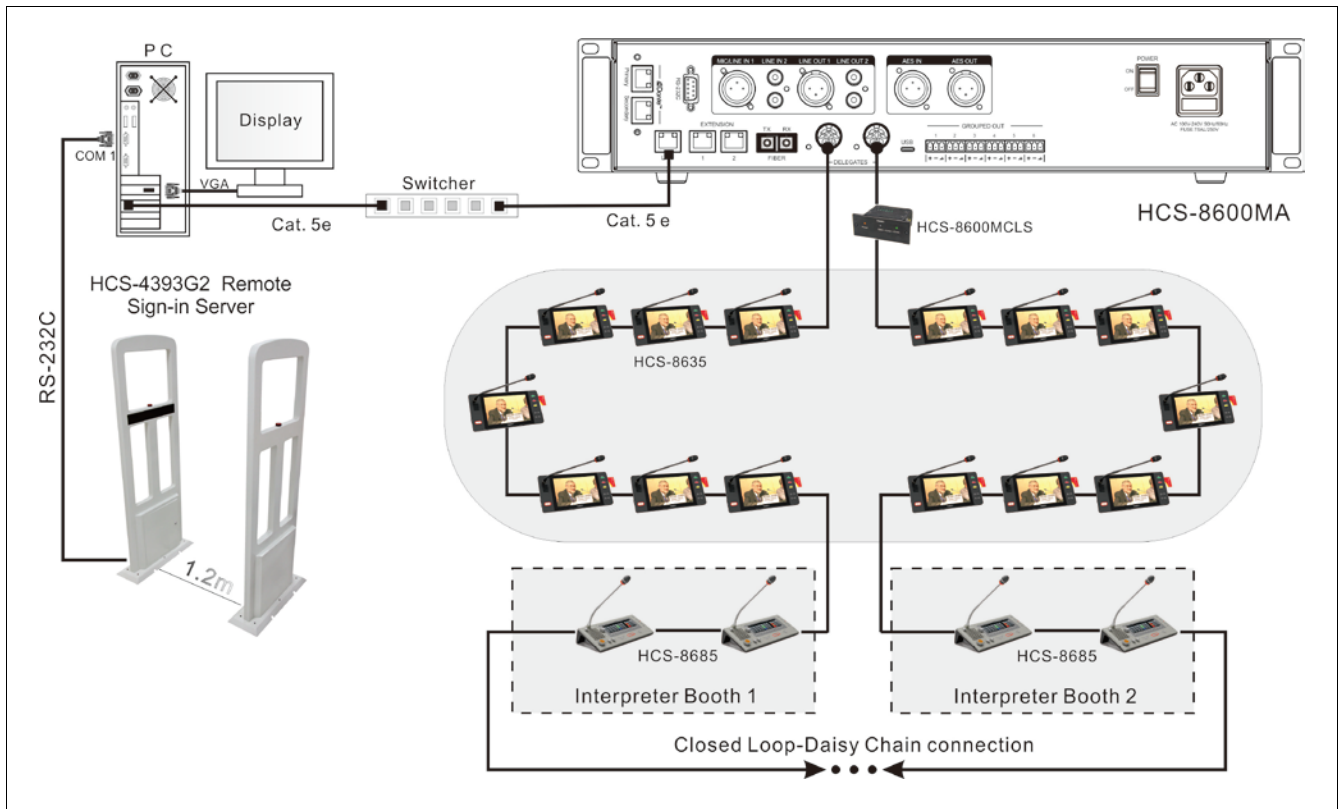


Figure 5.1.3 Connection between sign-in system and HCS-8600 system

According to the requirements of the specific case in this section, the configuration is as the following:

1. Configuration CMU

- a) **Active microphone number limitation:** active microphone number limitation limited to 2 implies that at most two microphones can be turned on. Chairman unit and VIP are not restricted and do not count in this limitation.
- b) **Speech mode:** speech mode is set to “Open”, none other delegate can turn on his/her microphone if the current speaker does not turn off his/her microphone.
- c) **Simultaneous interpretation - language channel configuration:** Assuming that three languages are used by the delegates, including Chinese, English and French, meaning that three kinds of language channels are needed, respectively, set channel 1–Chinese, channel 2-English and channel 3-French.
- d) **Simultaneous interpretation – booth number configuration:** The booth number is set as 2. Translation between English-Chinese and French-Chinese respectively.
- e) **Simultaneous interpretation - output channel configuration:** The output channel A of booth 1 is English, output channel C is “No output” and output channel B is “All channels”, and two Interpreter units are equipped. The output channel A of booth 2 is French, output channel B and C is “No output”, and two Interpreter units are equipped.
- f) **Simultaneous interpretation – auto-relay booth configuration:**
 - booth #1: no auto-relay booth
 - booth #2: set auto relay booth number as 1, meaning that booth #1 is the auto-relay booth for booth #2. When booth #1 uses output channel B, booth #2 will go to auto-relay status automatically and auto-relay interpretation will be achieved.
- g) Chairman priority mode is set as “All mute”.

2. Configure Interpreter units in booth 1 (the configuration of both Interpreter units is the same)

- a) Channel B output: pressing output channel B switch and rotating Primary knob at the same time, and set Chinese as channel B output language.
- b) Booth number is set to 1.
- c) Preset monitoring channel. Channel a, b, c are set as 1-Chinese, 2-English and 3-French respectively.

3. Configure Interpreter units in booth 2 (the configuration of both Interpreter units is the same)

- a) Channel B output does not need to be setup (because output channel B of booth 2 is set as “No output” in CMU configuration).
- b) Booth number is set to 2.
- c) Preset monitoring channel. Channel a, b, c are set as 1-Chinese, 2-English and 3-French respectively.

4. Volume control

Turn on delegate/chairman unit and adjust the volume of the built-in loudspeaker on the congress units to suitable volume.

5. Finish configuration, and the system can work now.

Chapter 6 Peripherals and accessories

6.1 HCS-8600MIO Audio Input & Output Device

HCS-8600MIO series audio input & output device:

- The whole machine can work in input or output mode, and can also work in input and output mode at the same time;
- Transmits multi digital/analog audio channels to the interpretation channels of the Congress System, for example for remote interpretation purposes or for transmission to floor channel
- Converts the digital audio signals of the Congress System to multi channel digital/analog audio signals, for further processing in infrared simultaneous interpretation systems or recording devices
- Can adjust the level of any channel
- When the EXTENSION1 interface is set in PC mode, it can be used for network audio transmission, connecting to ASR system, etc.
- Configurable as Sync/Not sync power on/off with Congress Main Unit

6.1.1 Functions and instructions

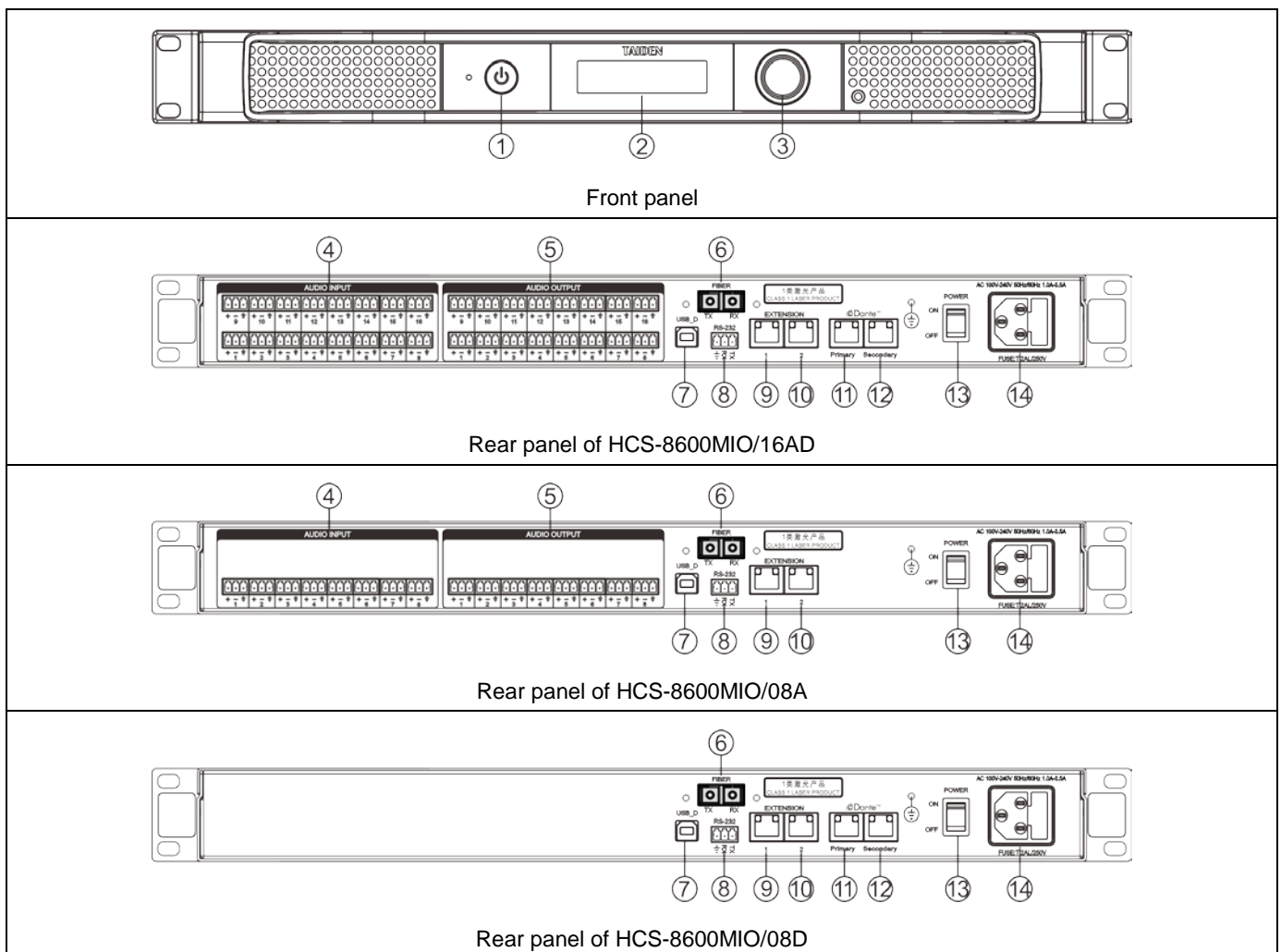


Figure 6.1.1 HCS-8600MIO series Audio Input & Output Device

Figure 6.1.1:

1. “STANDBY” button with indicator

- a. Switches to red in standby mode;
- b. Switches to blue when operating.

2. Menu display LCD

- 132x32 LCD, displaying audio input & output device status and menu operation.

3. Function knob

- a. The LCD displays the initial user interface: press this knob to enter the menu;
- b. The LCD displays the set-up user interface: rotate this knob to select the menu item;
- c. The LCD displays the set-up user interface: press this knob (equivalent to entering or confirming button) to select the item or enter the next menu;
- d. The LCD displays the network configuration: press this knob to select / uncheck the value, rotate this knob to adjust the value size.

4. 3-pin phoenix analog audio input connector

- Balanced analog audio inputs;
- HCS-8600MIO/16AD: 16 channels;
- HCS-8600MIO/08A: 8 channels.

5. 3-pin phoenix analog audio output connector

- Balanced analog audio outputs;
- HCS-8600MIO/16AD: 16 channels;
- HCS-8600MIO/08A: 8 channels.

6. Fiber extension interface

- Single-mode optical fiber, SC connector;
- Connecting to CMU, EMU or Audio Input & Output Device for long distance (over tens of kilometers) transmission.

7. USB_D port

- Reserved.

8. RS-232 port

- The “COM” port is used for connecting to a central control system for central controlling, as well as for system diagnosis.

9. Extension port 1

- PC mode: connecting to the network, can be used for web-page settings and audio transmission;
- DCS mode: connecting to CMU, EMU or Audio Input & Output Device.

10. Extension port 2

- Connecting to CMU, EMU or Audio Input & Output Device.

Note:

- ☞ When HCS-8600MIO is connected to the CMU/EMU, only one of the EXTENSION port (RJ45) and the optical fiber port can be connected to the CMU/EMU.

11&12. Dante interface

- Can be connected to other Dante compatible devices
- Primary: primary port;
- Secondary: secondary port.

13. Mains switch

14. Power supply

- 100 - 240 V, 50/60 Hz.

6.1.2 Connection

HCS-8600MIO converts the digital audio signals of the congress system to multi channel audio signals, for further processing in infrared simultaneous interpretation systems or recording devices. The audio signal from the HCS-8600M CMU can be provided to the HCS-5100 digital infrared language distribution system, converted into an infrared signal and radiated. With digital infrared receivers, the participants can hear the voice clearly.

1. HCS-8600MIO can be connected to HCS-8600M CMU in two ways (only one of them can be used at one time):

- ◆ Connect the "EXTENSION" interface of the HCS-8600 CMU to the "EXTENSION" interface of the HCS-8600MIO with a Cat. 5 cable.
- ◆ Connect the fiber port of the HCS-8600M to the fiber port of the HCS-8600MIO with optical cable.

2. Audio cables are required to connect the "AUDIO OUTPUT" analog audio output interfaces of HCS-8600MIO to the "AUDIO INPUT" audio input interfaces of the HCS-5100M series main unit one by one. HCS-8600MIO can be cascaded if more channels are needed.

3. The digital infrared transmitter is connected to the first radiator by a 75 Ohm coaxial cable. Connect one BNC plug of the coaxial cable to the "HF OUT" port of the HCS-5100MC/F and the other BNC plug to the "MODULATION IN" port of the 1st radiator. When connecting to the 2nd radiator, connect the "MODULATION OUT" port of the 1st radiator to the "MODULATION IN" port of the 2nd radiator with a coaxial cable. Up to 30 daisy-chained radiators can be operated from each socket (6 sockets per transmitter) .

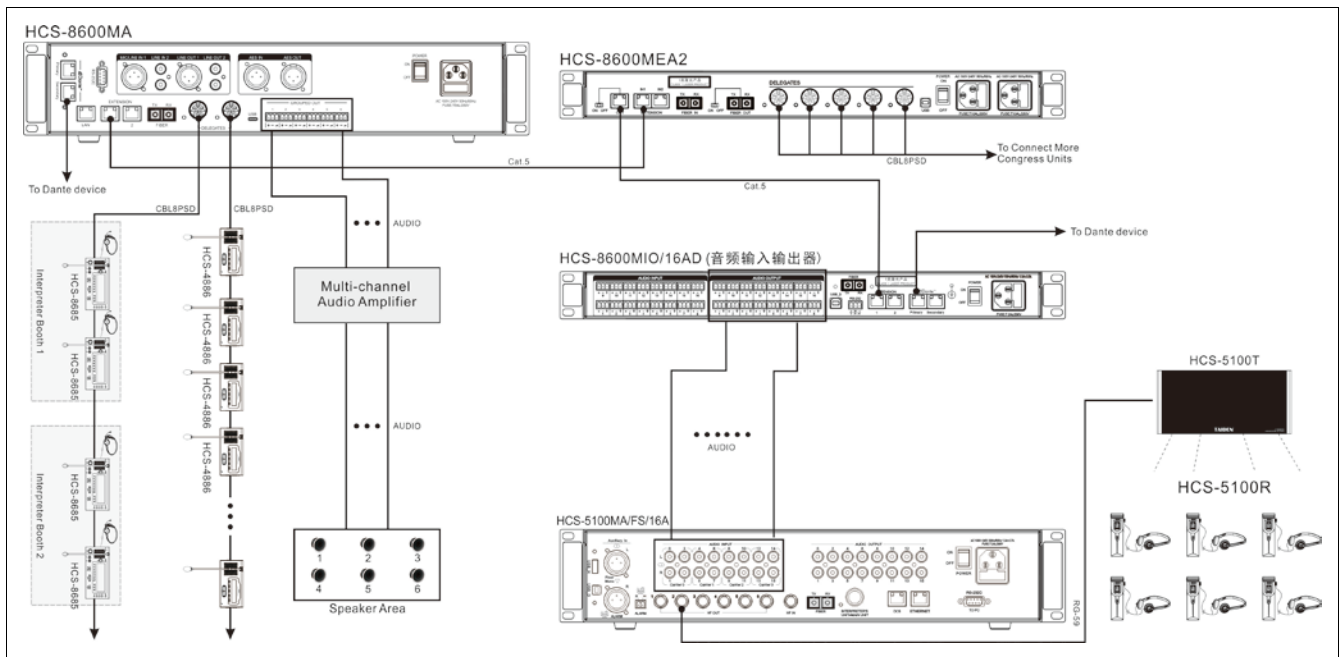


Figure 6.1.3 CMU connecting to infrared language distribution system via HCS-8600MIO

6.1.3 Configuration and operation

When installation and connection are finished and prior to the meeting, HCS-8600MIO Audio Input & Output Device should be configured by front panel menu operation.

In this section, we take the HCS-8600MIO/16AD as an example to introduce its menu operation.

A) Initialization

Initializing . . .

B) LCD initial interface operation

The initial LCD interface is determined by the working mode of the audio input & output device and the working mode of Extension 1 interface.

a. SI Mode:

1) Extension 1 - PC Mode

Type SI Mode (IN, OUT, I/O)

HCS-8600MIO/16AD [I/O]
IP:192.168.8.224

IP address Web or DCS connected

HCS-8600MIO/16AD [OUT]
IP:192.168.8.224

HCS-8600MIO/16AD [IN]
IP:192.168.8.224

2) Extension 1 - DCS Mode

Type SI Mode (IN, OUT, I/O)

HCS-8600MIO/16AD [I/O]
HCS-8600MIO/16AD

Name Web or DCS connected

HCS-8600MIO/16AD [OUT]
HCS-8600MIO/16AD

HCS-8600MIO/16AD [IN]
HCS-8600MIO/16AD

Note: the device name can be changed through the web page or Audio MU setting on DCS.

b. Booth Comb. Mode:

Type Booth Comb. Mode

HCS-8600MIO/16AD [BM]
IP:192.168.8.224
sIP:192.168.1.169

IP: IP address of HCS-8600MIO;

sIP: IP address of booth management software

C) Main menu

Press the function knob to go to the main menu, includes the following submenu items:

“Net Work” (Extension 1 port - PC mode)

“System Mode”

“Work Mode”

“Extension 1 Port”

“About Dante”

“Screensaver”

“Power Mode”

“About”

“Return”

HCS-8600MIO/16AD [I/O]
IP:192.168.8.224

Under the initial LCD interface

- ◆ Press the function knob to enter the menu setting interface;
- ◆ Rotate the function knob to traverse the menu items.

6.1.3.1 Network Setting

“Network” includes submenus:

“IP Address”

“Subnet Mask”

“Gateway”

“DHCP”

“Return”

Network
<- IP Address ->

a). Setup IP Address:

1) Select “IP Address” and press the function knob to go to setup IP address interface;

IP Address
192.168.8.224 ↵

IP Address
192.168.8.224 ↵

2) Rotate function knob to switch between the four numbers;

- 3) Press the function knob to set number (at this time, the number bold display);
- 4) Rotate the function knob to adjust the value;
- 5) Press the function knob to save the value;
- 6) Repeat steps b)~e) and set the other numbers;
- 7) Rotate the function knob to "←" and press the function knob to return to upper level menu.

b). Setup "Subnet Mask" and "Gateway"

Same chronological order as for "IP Address" set up.

Note:

- ☞ When accessing the device through the web page, enter the IP address in the browser to access the device setting interface.

C). DHCP

- 1) Select "DHCP" and press the function knob to go to setup DHCP interface;

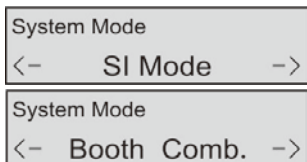


- 2) Rotate function knob to select "Disable" or "Enable";
 - Disable: disable DHCP, set network address and subnet mask manually;
 - Enable: main unit gets IP address and subnet mask automatically;
- 3) Press the function knob to save and return to upper level menu.

When the network settings finished, rotate the function knob to "Return " and press the function knob to return to upper level menu.

6.1.3.2 System Mode

Set the system mode of the HCS-8600MIO series audio input & output device.



- 1) Select "System Mode" and press the function knob to go to system mode setup interface;
- 2) Rotate function knob to select "SI Mode" or "Booth Comb.";
 - If you select **SI Mode**, press the function knob to restart the device, then the settings will take effect, and you need to further set "**Work Mode**" and

"Extension 1 Port";

- If you select **Booth Comb.**, press the function knob to restart the device and the settings will take effect.

6.1.3.3 Work Mode

Set the work mode of the HCS-8600MIO series audio input & output device.



- 1) Select "Work Mode" and press the function knob to go to work mode setup interface;
- 2) Rotate function knob to select work mode (OUT, IN, IN/OUT);
 - OUT: HCS-8600MIO work as audio output device;
 - IN: HCS-8600MIO work as audio input device;
 - IN/OUT: HCS-8600MIO work as audio input and output device at the same time;
- 3) Press the function knob to save and return to the upper level menu.

Note:

- ☞ When the working mode is changed, it will take effect after restarting the device.

6.1.3.4 Extension 1 Port

Set the working mode of the Extension1 port on the back panel of the HCS-8600MIO series audio input & output device.



- 1) Select "Extension 1 Port" and press the function knob to go to extension 1 port setup interface;
- 2) Rotate function knob to select extension 1 port work mode (PC/DCS);
 - PC: extension 1 port is used to connect to the network, can access the device through the web page, can transmit digital audio, and access to ASR system;
 - DCS: extension 1 port is used to connect the CMU/EMU or cascade the next audio input & output device;
- 3) Press the function knob to save and return to the upper level menu.

Note:

- ☞ When the working mode of expansion 1 port is changed, it will take effect after restarting the device.

6.1.3.5 About Dante

Display Dante information, including device name, Dante version and device version. Press the function button to return to the upper level menu.

```
Device Name:HCS-109fd2
Dante Ver:4.0.8.2
Device Ver:3.0.0.1
```

6.1.3.6 Screensaver

Enable or disable screensaver for HCS-8600MIO.

```
Screensaver
Enable      Disable
```

- 1) Select "Screensaver" and press the function knob to go to screensaver setup interface;
- 2) Rotate function knob to Enable/Disable screensaver, if enable screensaver, the menu is not operated for a period of time, the LCD screen will dim and enter the protection state;
- 3) Press the function knob to save and return to the upper level menu.

6.1.3.7 Power Mode

It is used to set the power mode of the HCS-8600MIO audio input & output device. The setting will take effect after restarting the machine, including:

"**Sync**": power on/off synchronously with the CMU;

"**Async**": power on/off independently.

```
Power Mode
Async      Sync
```

- 1) Select "Power Mode" and press the function knob to go to power mode setup interface;
- 2) Rotate function knob to select power mode;
 - "**Sync**": power on/off synchronously with the CMU;
 - "**Async**": power on/off independently;
- 3) Press the function knob to save and return to the upper level menu.

Note:

☞ When the power mode is changed, it will take effect after restarting the device.

6.1.3.8 About

Display the information of the HCS-8600MIO audio input & output device, including software version, serial number. Press the function knob to return to the upper level menu.

```
Mver: 1.00.00.06
Gen : Jan 15 2021
Ser : td00000083
```

6.1.3.9 Return

Select this item and press the function knob to return to the LCD initial interface.

6.1.4 Web page - SI Mode

The HCS-8600MIO series audio input & output device has a built-in web control function. You can access the device IP address to view and set parameters through any computer, mobile phone or tablet.

HCS-8600MIO series audio input & output devices have three working modes: All output, All input and Input/Output. The parameter settings of each working mode can be saved as a scene, and when used again, the scene settings are called directly. We take HCS-8600MIO/16AD as an example to introduce the device settings.

6.1.4.1 SI Mode

All output: in this mode, the HCS-8600MIO/16AD is used as an audio output device to convert the digital audio signal of the conference system to multi-channel digital / analog audio signal for infrared simultaneous interpretation system or recording.

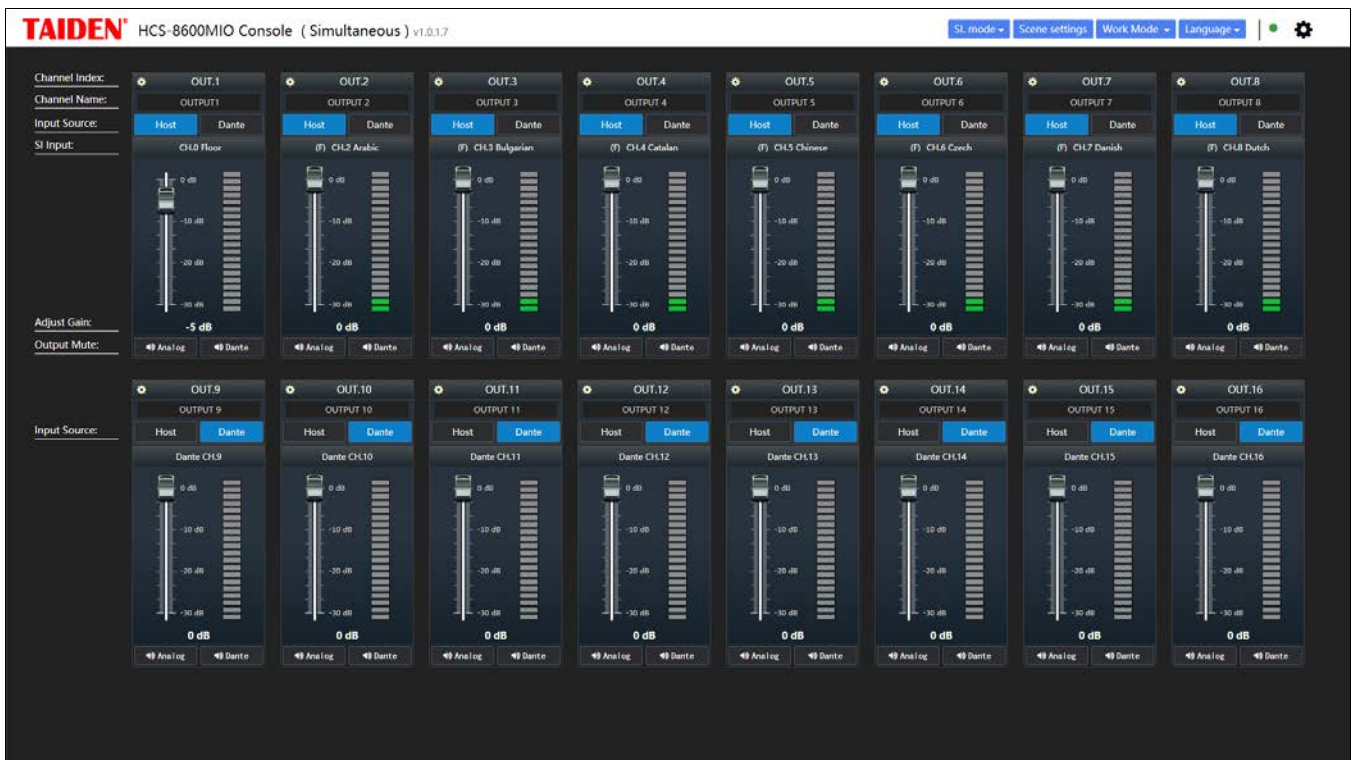
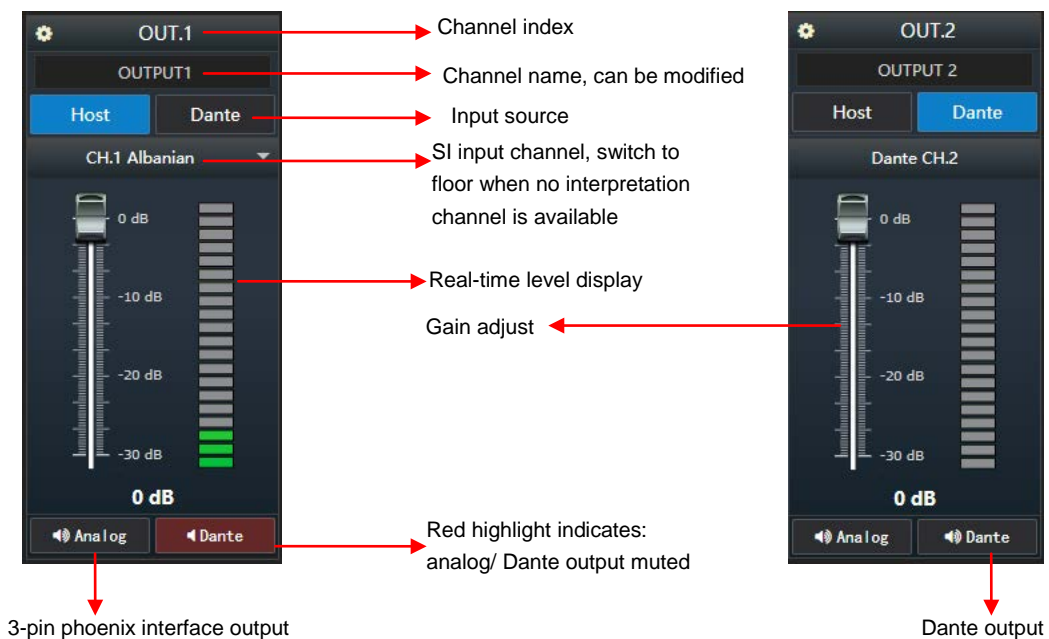


Figure: SI mode - All output




Click on the  icon in the upper-left corner of the channel to adjust channel parameter settings, including PEQ and DRC.



Figure: Audio parameter setting - PEQ

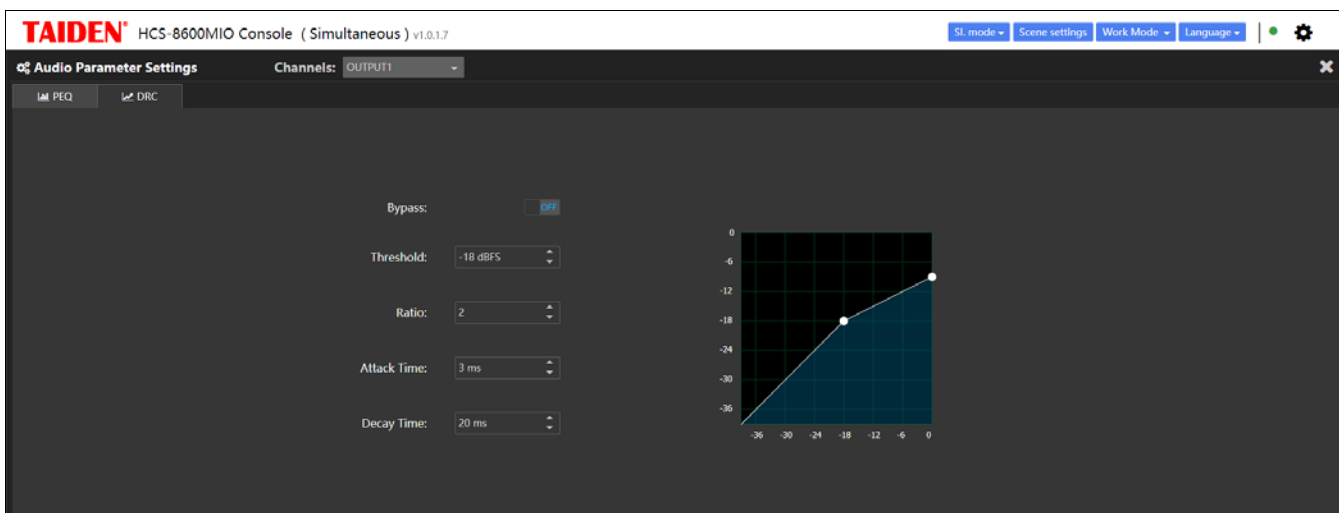


Figure: Audio parameter setting - DRC

All input: input multiple digital / analog audio signals to the SI channel or floor channel of the conference system, realize remote simultaneous interpretation.

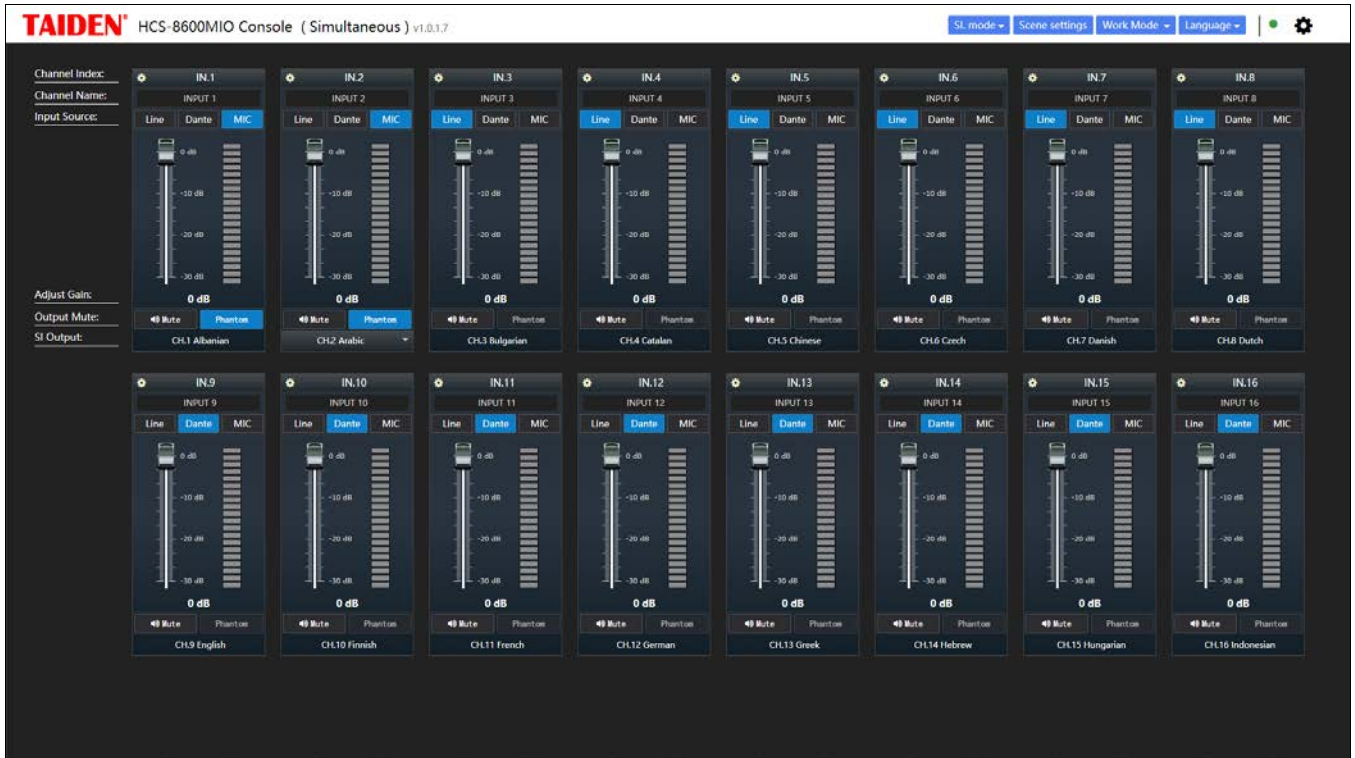
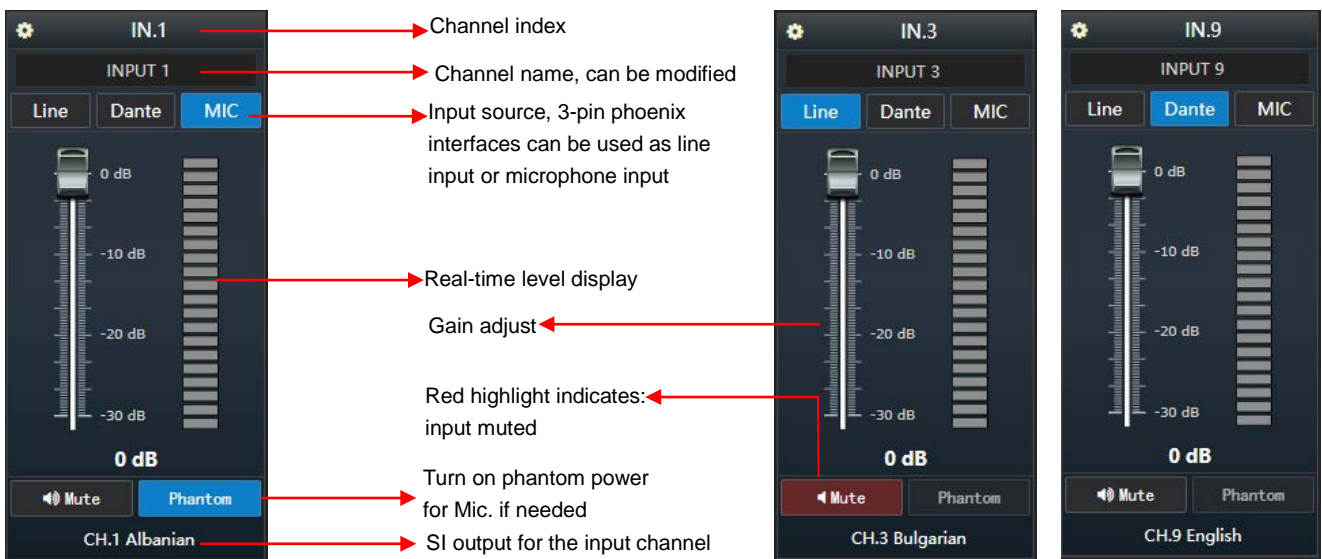



Figure: SI mode - MI mode



Click on the  icon in the upper-left corner of the channel to adjust channel parameter settings, including Normal, PEQ and DRC.

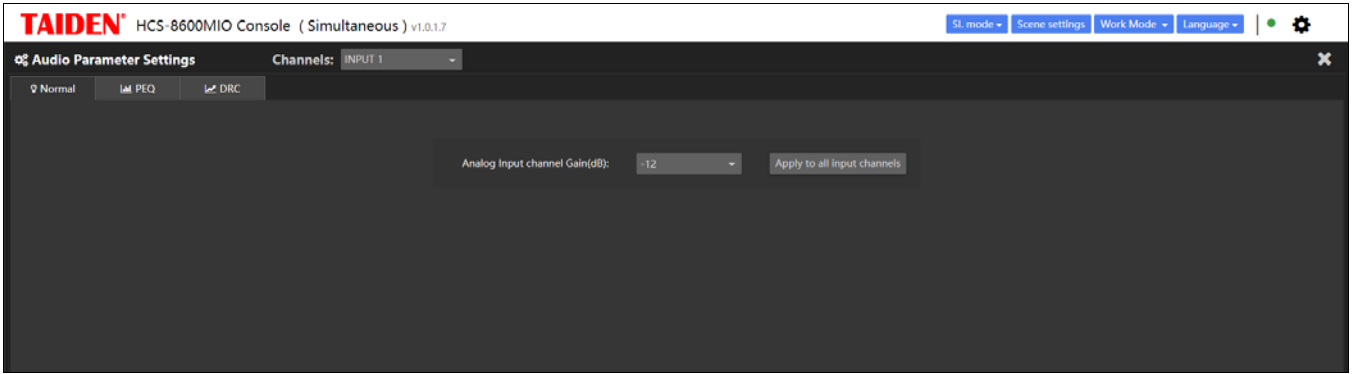


Figure: Audio parameter setting - Normal



Figure: Audio parameter setting - PEQ

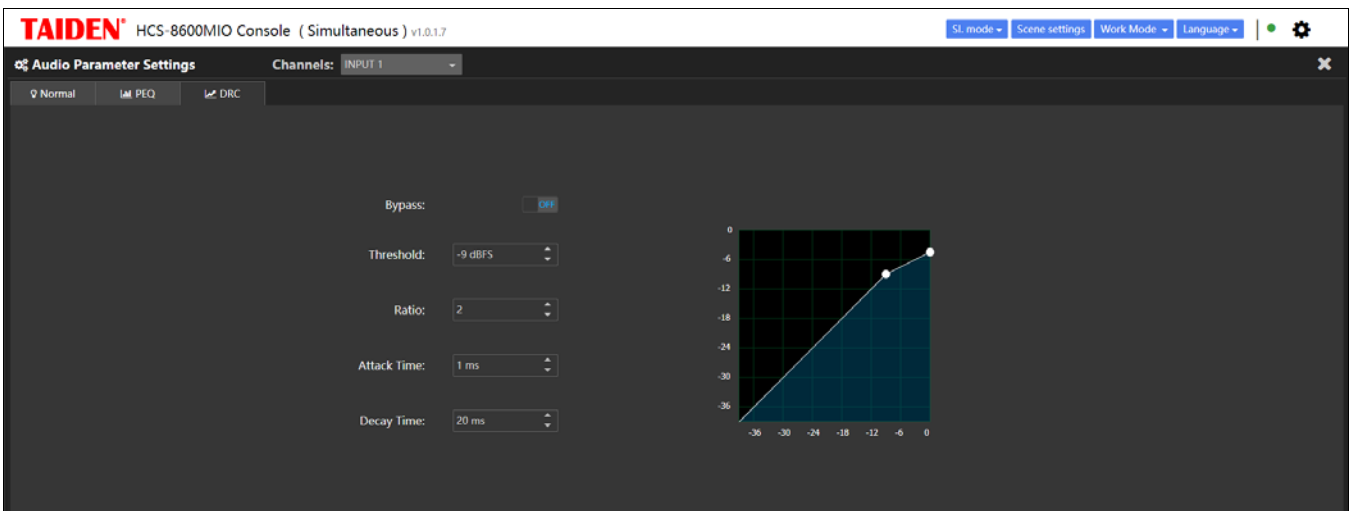


Figure: Audio parameter setting - DRC

Input/Output: it is used as audio input and audio output. The input channel setting is the same as the All input mode above, and the output channel setting is the same as the All output mode above.

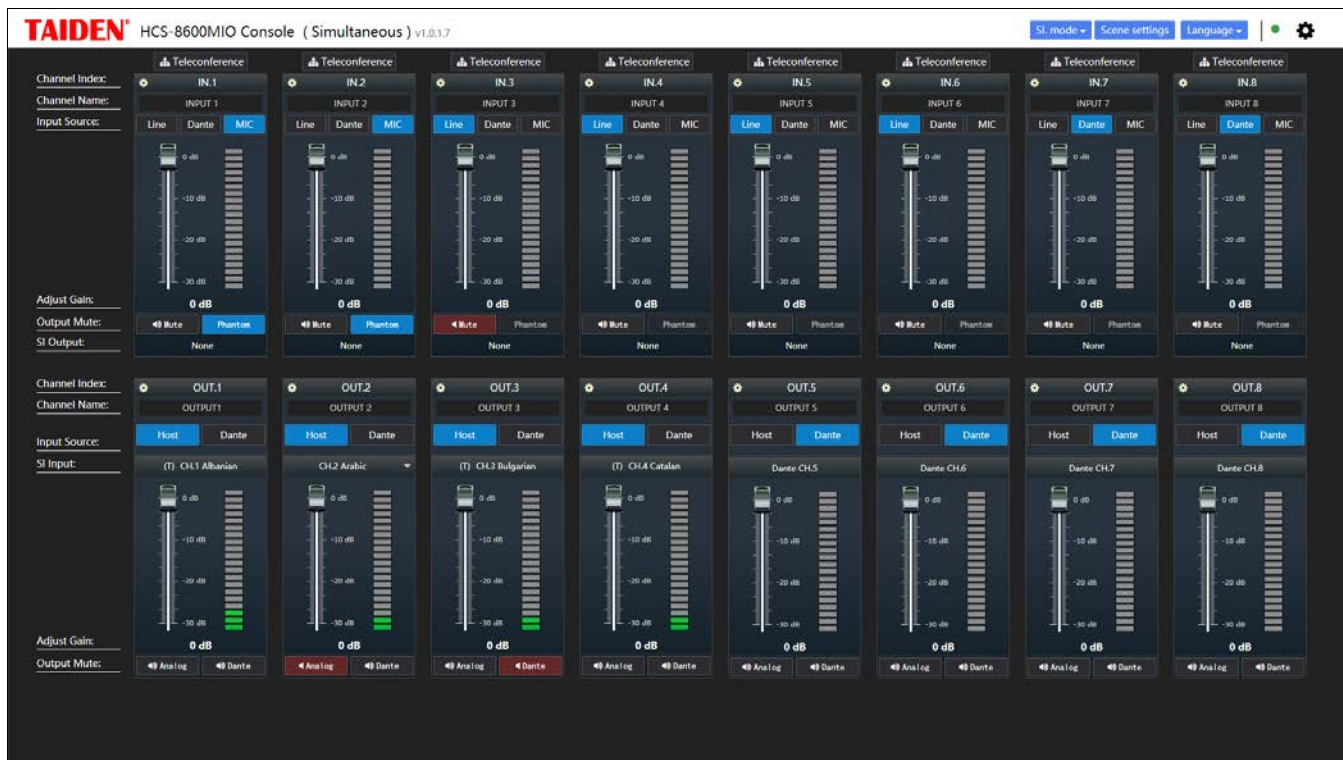


Figure: SI mode - Input/Output mode

MI & MO mode - Teleconference: enable SI Remote mode on audio output parameter settings of conference main unit **Enable SI Remote Mode** **Yes** **No** and enable teleconference **Teleconference** at the same time.

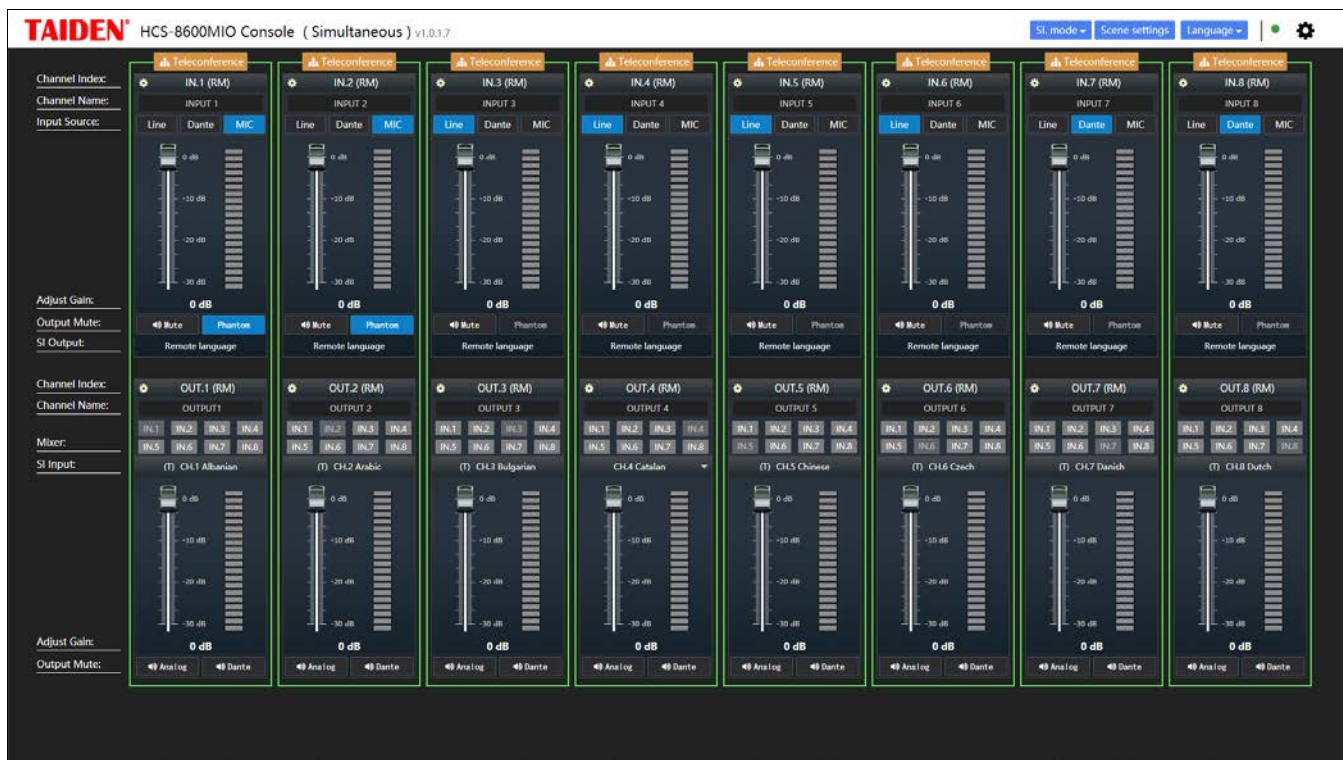


Figure: SI mode - MI & MO mode - Teleconference

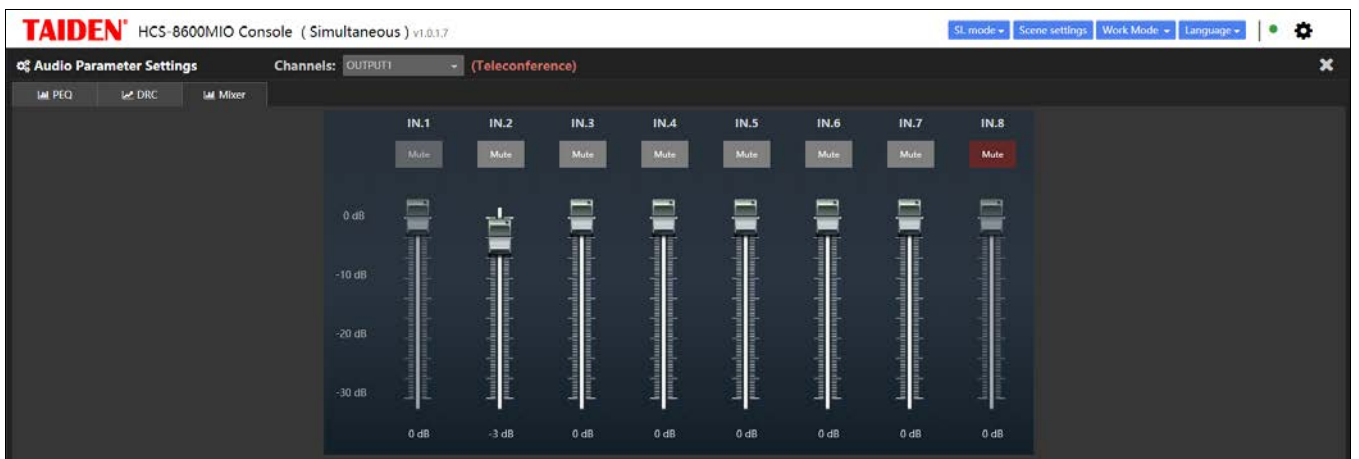
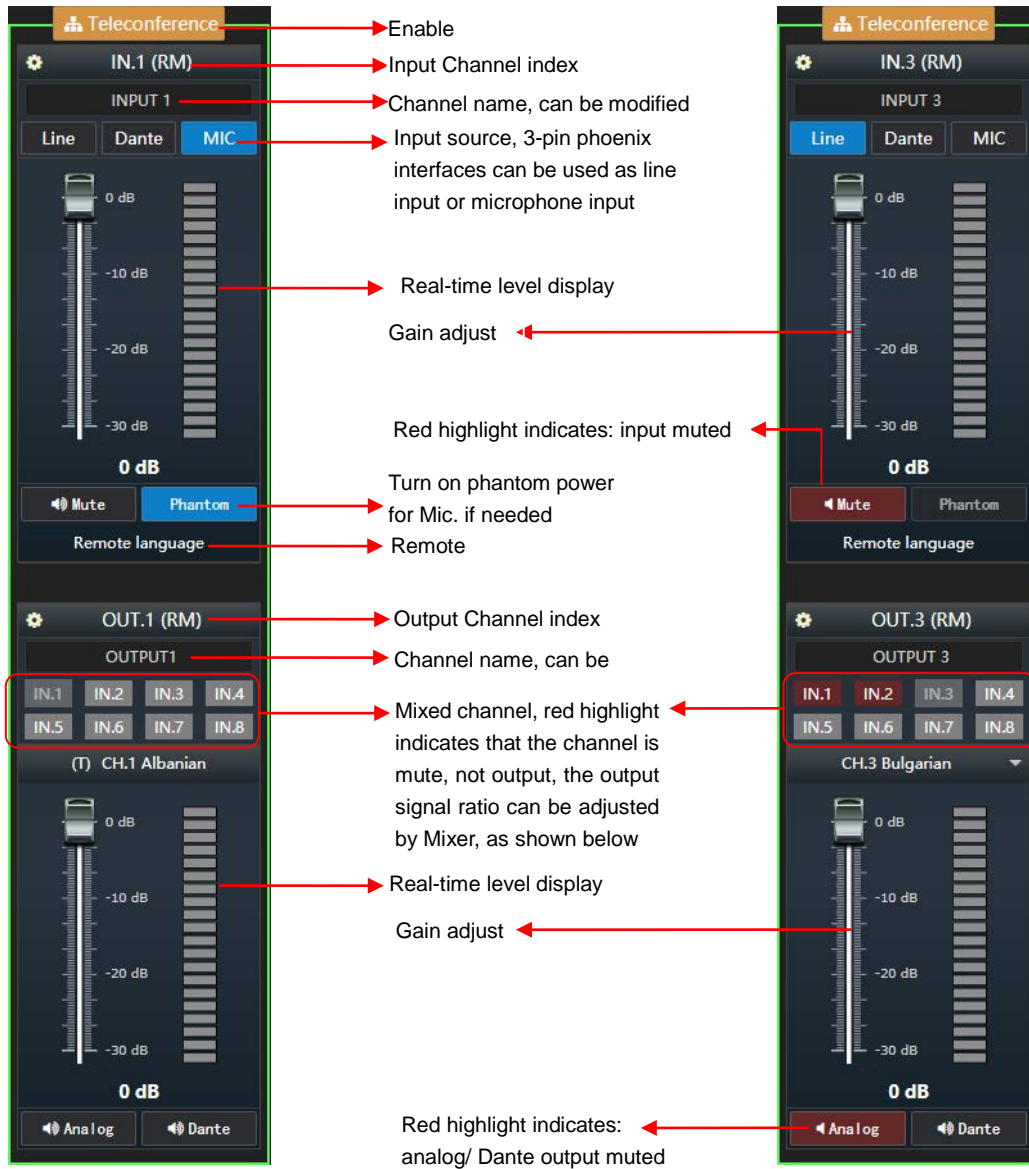


Figure: Audio parameter setting - Mixer

Note:

HCS-8600MIO/16AD audio output contains "Input Source" and "SI Input";



- ☞ Only one device can work in teleconference mode if more than one HCS-8600MIO series audio input & output devices cascade;
- ☞ If HCS-8600MIO enabled teleconference, the HCS-8600MIO audio (MIO TC In) as an audio input channel (occupied USB In2) of congress main unit;(TC: abbreviation for teleconference);
- ☞ If HCS-8600MIO enabled teleconference, the congress main unit adds an audio output channel (MIO TC OUT), which outputs a signal without MIO TC In. The signal can be output via HCS-8600MIO when "CH.0 MIC TC Floor" is set as input source.

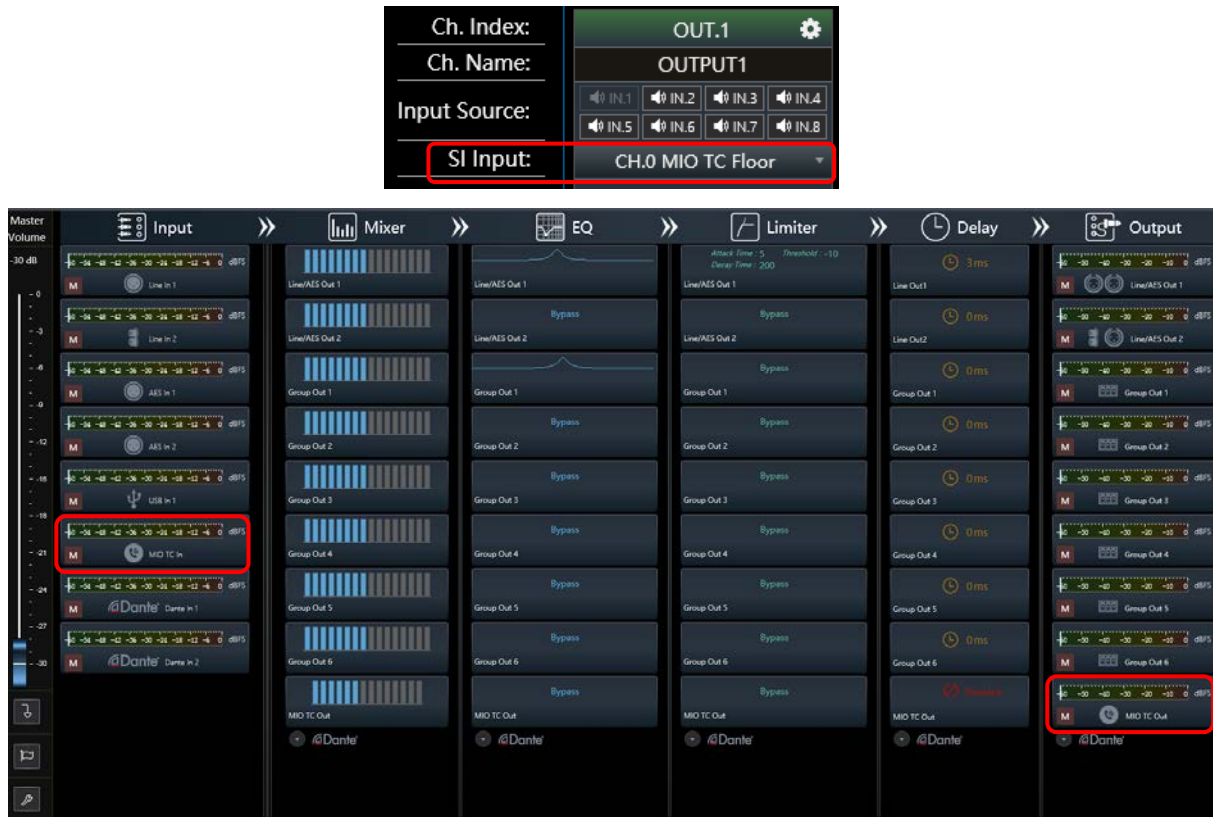


Figure: Audio matrix of congress main unit

Scene Setting: the above settings for HCS-8600MIO can be saved as a scene, and the saved scene can be called next time.

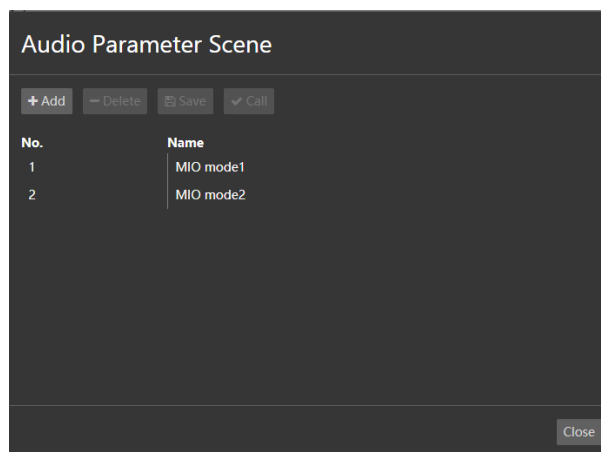


Figure: Scene Setting

Device parameter and Dante parameter settings: set machine name, IP address, subnet mask, gateway, and DHCP; view device version, production date, serial number and maximum channel; view device Dante module parameter.

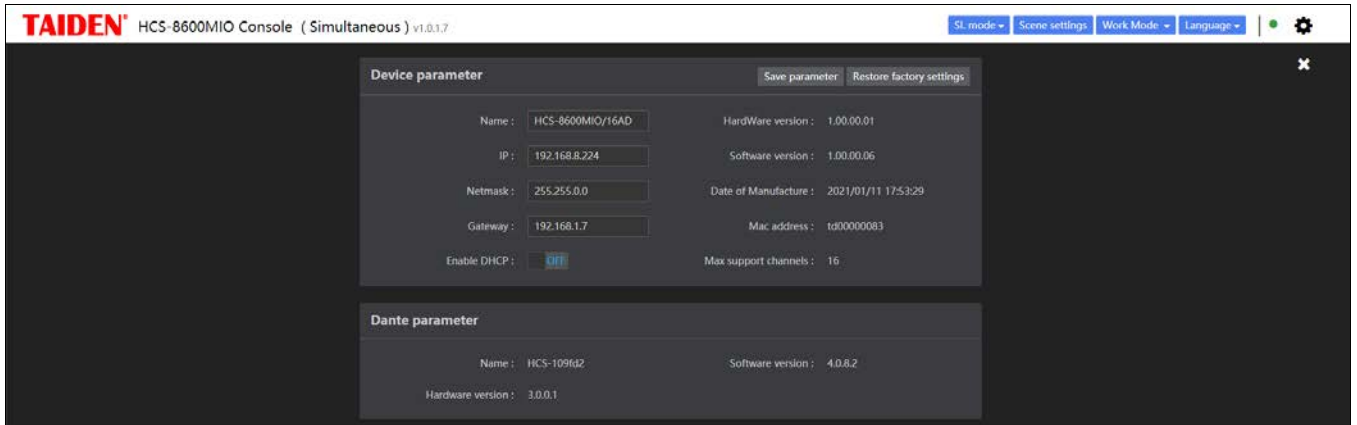


Figure: SI Mode - Parameters setting

6.1.4.2 Booth Combine mode

The HCS-8600MIO series audio input & output device cooperates with the HCS-8685BM booth management, which can realize the online interpreter booth management. Here you can view and configure the device parameter and server parameter.

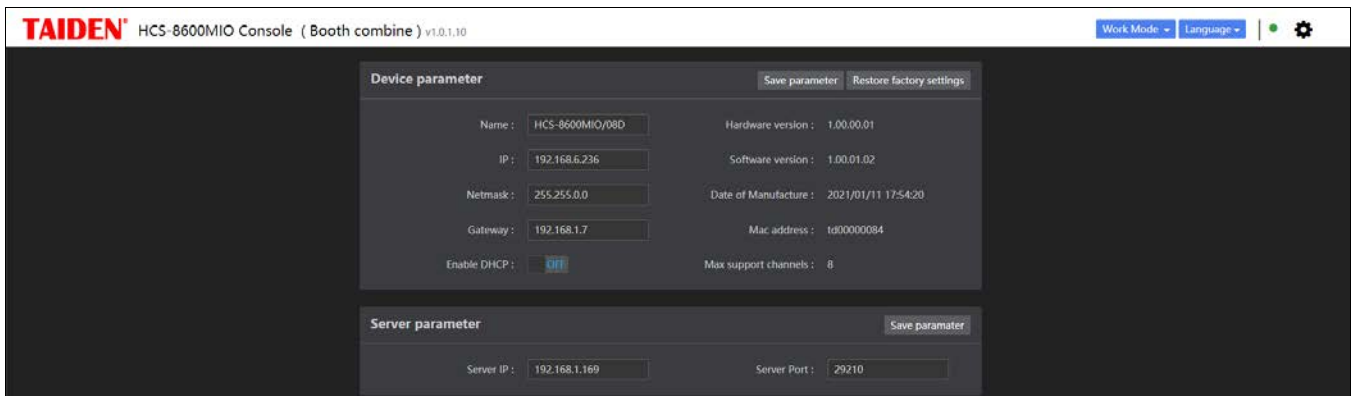


Figure: Booth combine mode - Parameters setting

6.2 HCS-8600KMX

HCS-8600KMX is designed based on the Gigabit Multimedia Congress Stream technology, and is used to connect the congress main unit, the HCS-8668/8638 series Paperless Multimedia Congress Terminals, external Ethernet switches, etc. The build-in PoE switch is used to select power supply method.

6.2.1 Functions and instructions

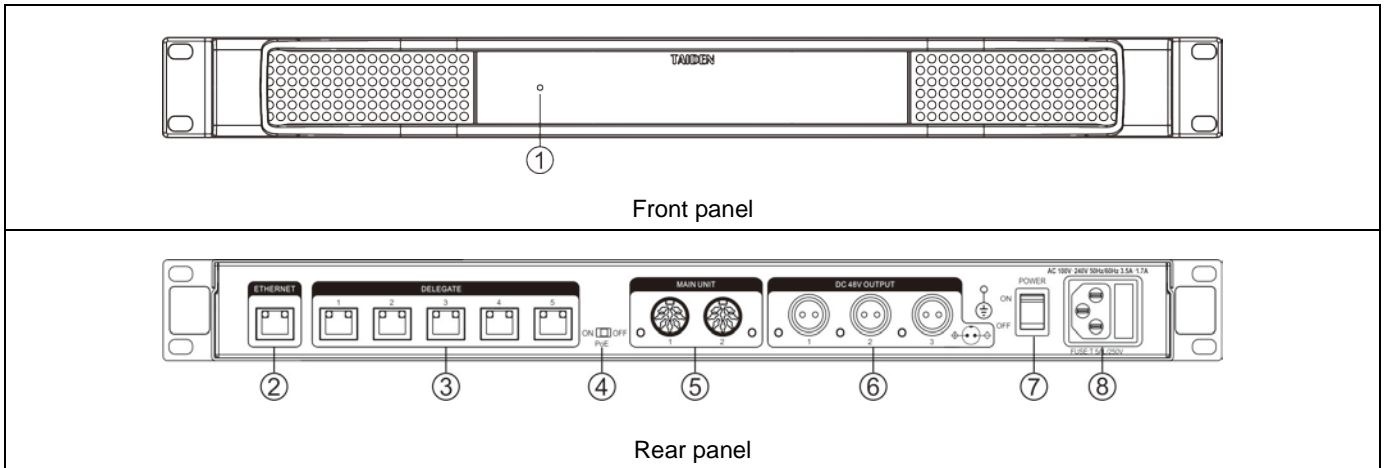


Figure 6.2.1 HCS-8600KMX Congress Gigabit Network Switcher

Figure 6.2.1:

1. Power indicating light

- Switches to red in standby mode;
- Switches to blue when operating.

2. RJ45 interface (ETHERNET)

- Connecting to the ethernet.

3. RJ45 interface (DELEGATE)

- PoE OFF: connecting to HCS-8668/8638 series Paperless Multimedia Congress Terminals, supporting daisy-chain connection;
- PoE ON: connecting to HCS-8668/8638 series Paperless Multimedia Congress Terminals or the distributor HCS-8368T(/50) for power supply and transmission of conference data and multimedia data. One port for one terminal / distributor.

4. PoE switch (power on Ethernet)

- ON: power on Ethernet via Cat.5e/Cat.6 cable;
- OFF: power supply via 3 2P aviation plugs.

5. 8P-DIN interface (TO MAIN UNIT)

- Synchronous On/Off status with main unit after connecting to a main unit or cascading to another HCS-8600KMX.

6. 2P aviation plug base (DC 48 V)

- Supplying power to HCS-8668/8638 series Paperless Multimedia Congress Terminals (PoE: OFF).

7. Power switch

8. Power input

- 100 - 240 V, 50/60 Hz.

6.2.2 Connection

One RJ45 standard port for connection with external Ethernet switches, communication with the conference management system, media management platform, etc. 5xRJ45 standard ports for connection with the HCS-8668/8638 series Paperless Multimedia Congress Terminals. 2x8P-DIN for connection with a main unit or cascading to another HCS-8600KMX. The build-in PoE switcher is used to select power supply method, PoE or

3x2P aviation plugs. If power supply from 3x2P aviation plugs, 5xRJ45 standard ports support “Daisy-chain” connection and “Closed Loop” connection, and the quantity of congress terminals connected to each port is unlimited. If power on Ethernet, 5xRJ45 standard ports support connection to congress terminal or HCS-8368T(/50), and one port for one terminal.

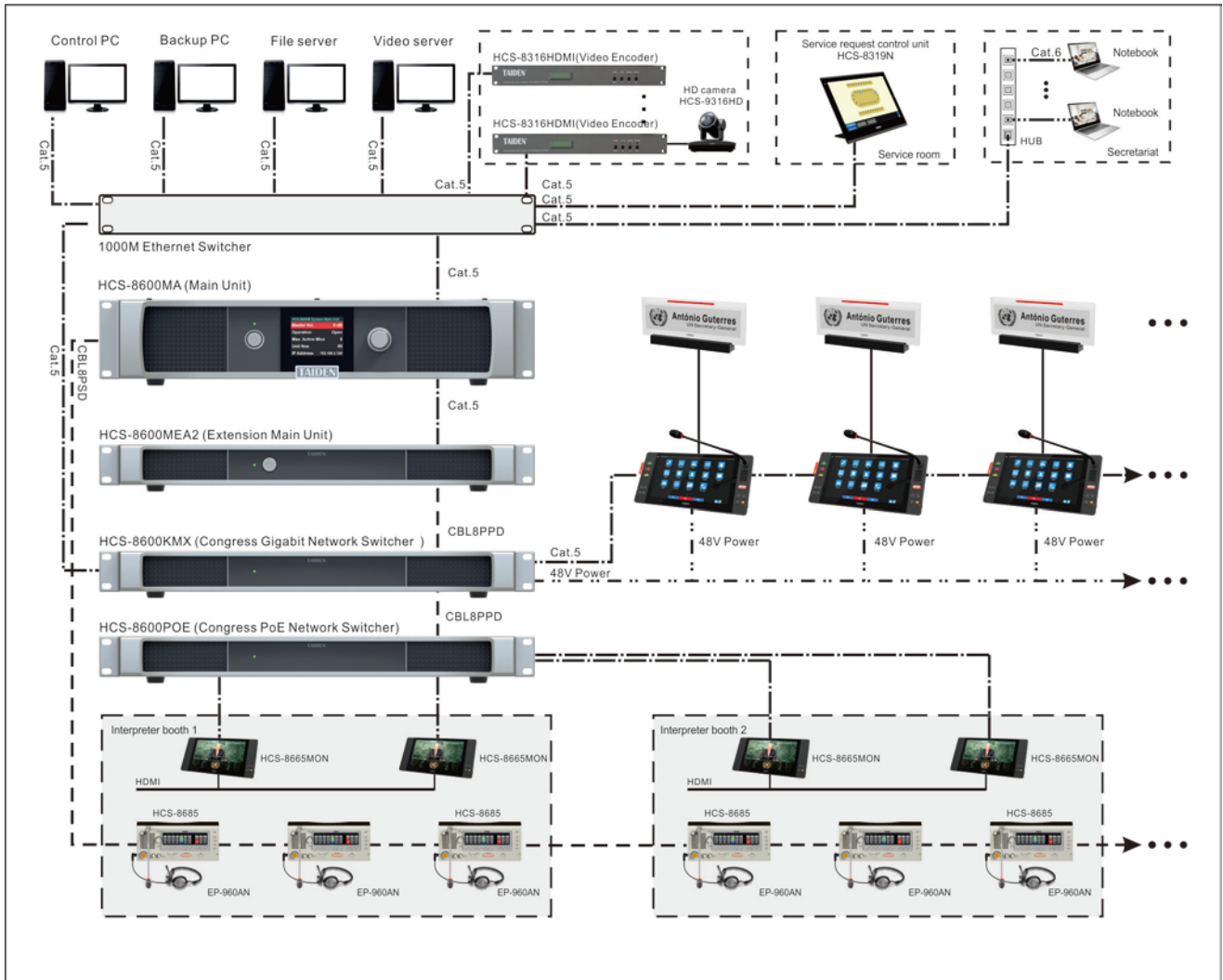


Figure 6.2.2 HCS-8668 Series Paperless Multimedia Congress System connection diagram

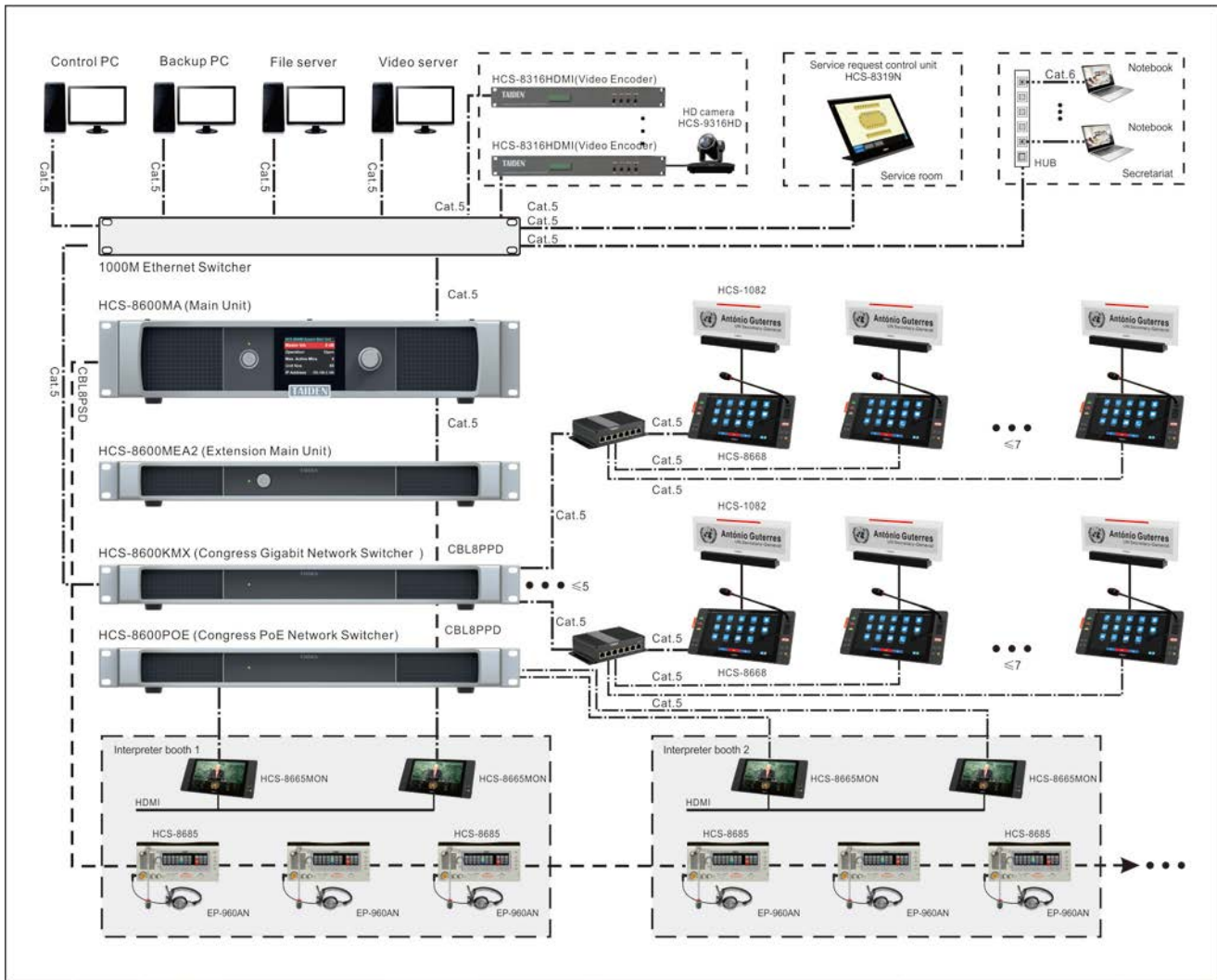


Figure 6.2.3 HCS-8668 Series Paperless Multimedia Congress System connection diagram (POE)

6.3 HCS-8600POE

HCS-8600POE is designed based on the Gigabit Multimedia Congress Stream technology, and is used to connect the congress main unit, the HCS-8668/ HCS-8638/ 8665 series congress terminals, HCS-1082N

series E-ink electronic nameplate, external Ethernet switches, etc. At the same time, it supports power for units. HCS-8368T(/50) can be connected to expand the number of units.

6.3.1 Functions and instructions

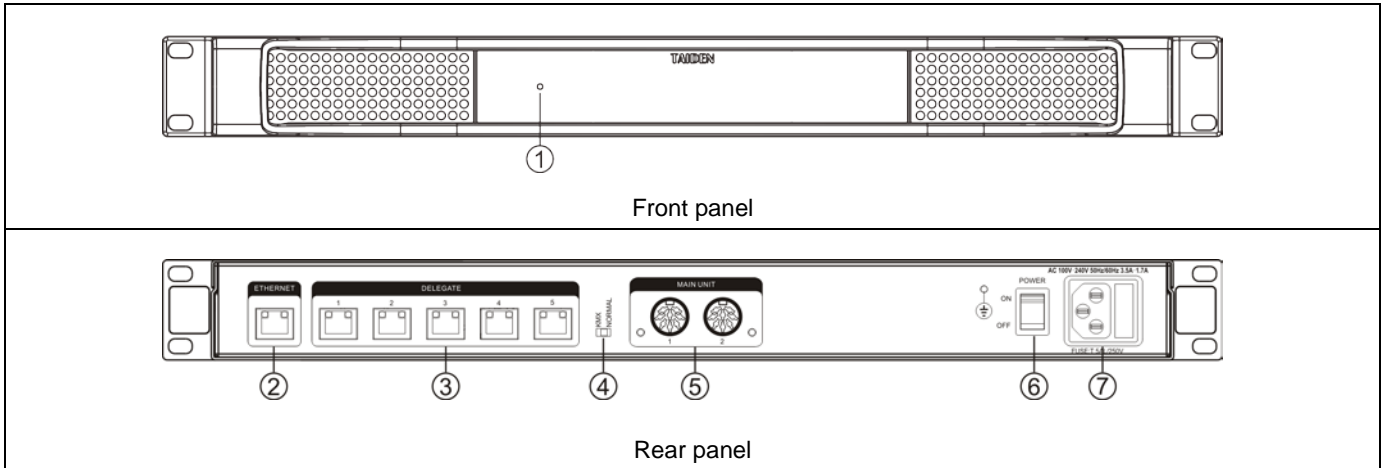


Figure 6.3.1 HCS-8600POE Congress PoE Network Switcher

Figure 6.3.1:

1. Power indicating light

- Switches to red in standby mode;
- Switches to blue when operating.

2. RJ45 interface (ETHERNET)

- When used for the connection of HCS-8668/8638 series terminals, this port needs to be connected to Ethernet;
- When used for the connection of HCS-8665 series terminals or HCS-1082N series electronic nameplates, this port should be left vacant.

3. RJ45 interface (DELEGATE)

- Connecting to HCS-8668/8638/8665 Series Multimedia Terminals, HCS-1082N series E-ink Electronic Nameplates (via Cat.5e/Cat.6 cable);
- Connecting to the Distributor HCS-8368T(/50) to expand the number of units.

4. Mode Switch (KMX or NORMAL)

- When used for the connection of HCS-8668/8638 series terminals, the switch must be set to KMX mode;

- When used for the connection of HCS-8665 series terminals or HCS-1082N series electronic nameplates, the switch can be placed in any mode.

5. 8P-DIN interface (TO MAIN UNIT)

- Synchronous On/Off status with main unit after connecting to a main unit or cascading to another HCS-8600POE.

6. Power switch

7. Power input

- 100 - 240 V, 50/60 Hz.

6.3.2 Connection

Connection diagram of HCS-8600POE is shown in the figure below, one HCS-8600POE works on KMX mode for connection to HCS-8668 series Paperless Multimedia Congress Terminals, and the other HCS-8600POE for

connection to HCS-8665MON Multi-channel Video Monitors.

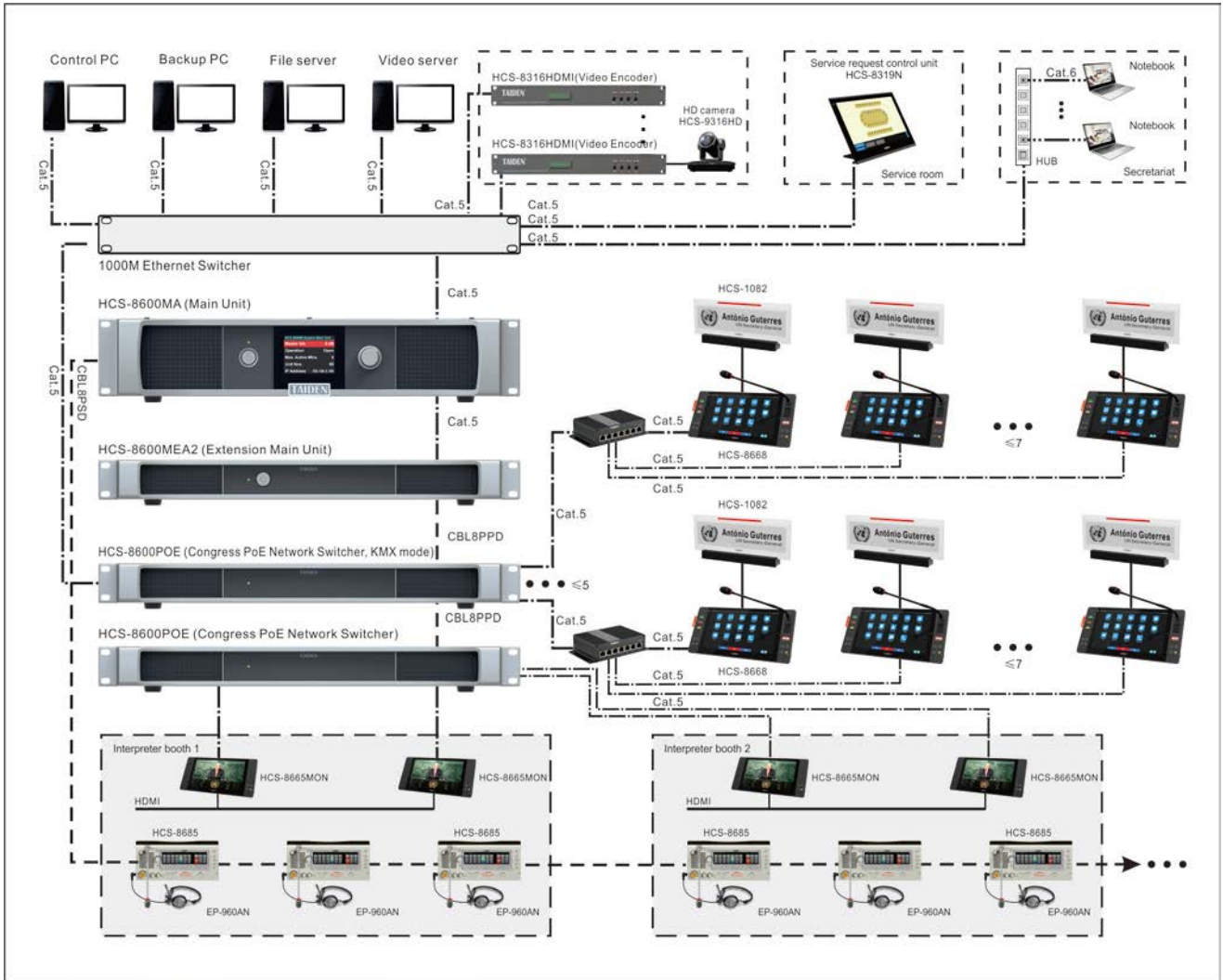


Figure 6.3.2 HCS-8600 Series Congress System connection diagram

6.4 HCS-8368T(/50)

When the system is connected with HCS-8600POE or HCS-8600KMX working in PoE mode, HCS-8368T(/50) is used to expand the number of unit connections, and each interface can only connect to one unit.

6.4.1 Functions and instructions

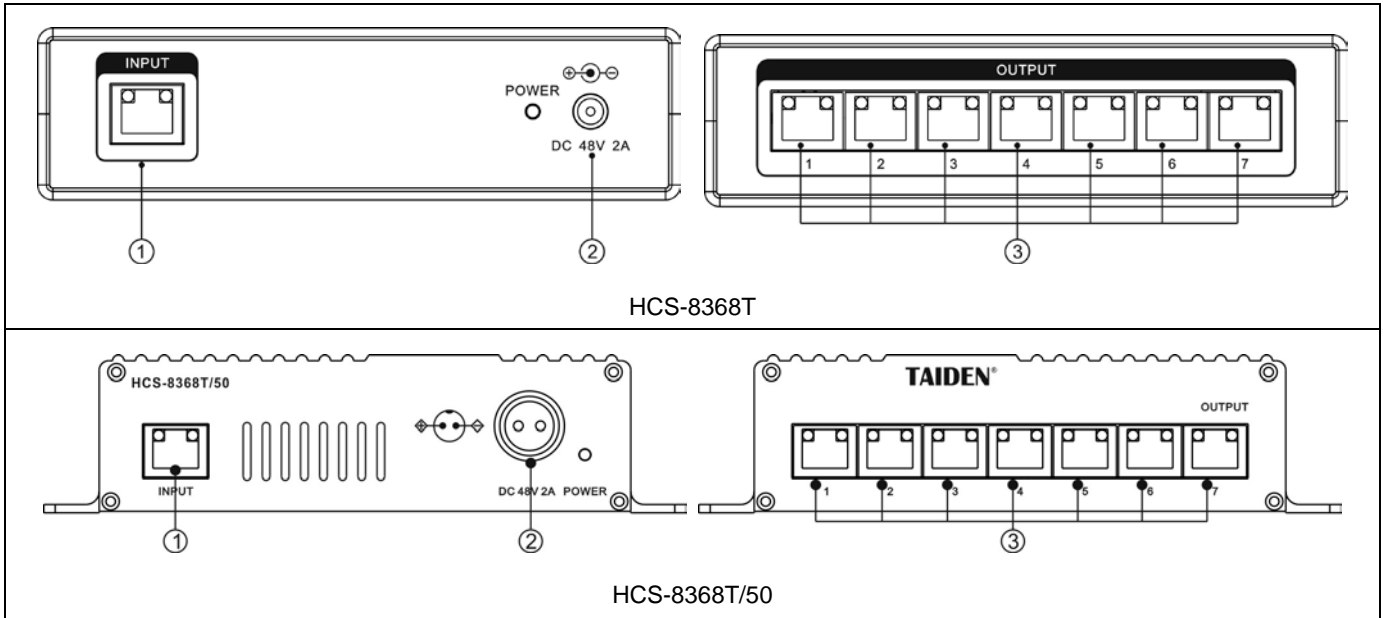


Figure 6.4.1 HCS-8368T Distributor

Figure 6.4.1:

1. INPUT (RJ45)

- Connecting to HCS-8600KMX or HCS-8600POE.

2. Power input and power indicator

- DC 48V;
- If the number of connected terminals exceeds 5, please connect the external power supply to ensure the stability of signal transmission.

3. OUTPUT (RJ45)

- Connecting to 8668/8638/8665 series Congress Terminals or HCS-1082N series E-ink electronic nameplates, one port for one unit only.

6.4.2 Connection

Connection refers to figure 6.2.2, figure 6.2.3 or figure 6.3.2.

6.5 HCS-8685BM booth manager

HCS-8685BM booth manager is used to connect the HCS-8685 interpreter unit, and each booth manager can connect up to 6 interpreter units. The HCS-8685BM booth manager can cooperate with the HCS-8600MIO

series audio input & output device to flexibly allocate booths to the desired conference room through network (using the TAIDEN booth management system).

6.5.1 Functions and instructions

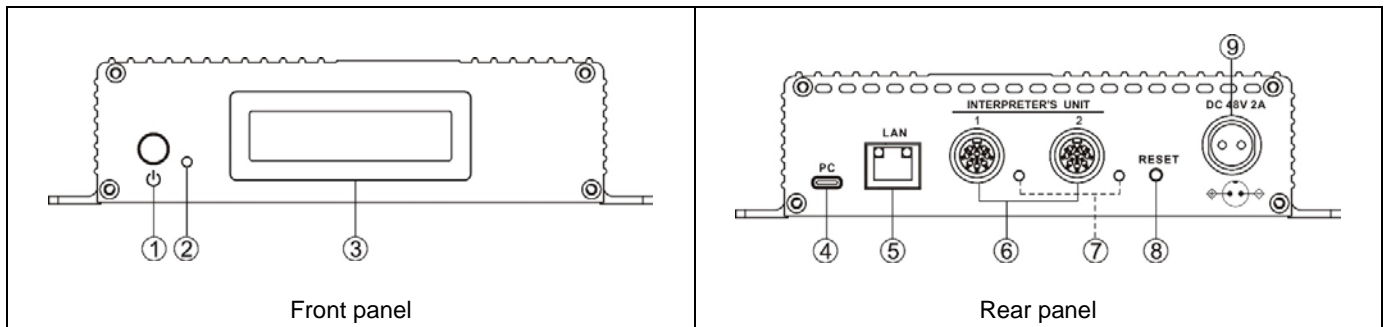


图 6.5.1 HCS-8685BM

图 6.5.1:

1. **Power switch**
2. **Reserved**
3. **LCD screen**
 - 132x32, for displaying version No., HCS-8600MIO IP address (empty if the booth is not be borrowed), and local IP address.
4. **Reserved**
5. **RJ45 interface (LAN)**
 - For connection of Ethernet.
6. **HCS-8685 interpreter unit interface (INTERPRETER'S UNIT)**
 - For connecting to HCS-8685 interpreter units (6 units at the maximum).
7. **Interpreter unit indicator**
 - When the number of working HCS-8685 interpreter units ≥ 1 , LED flashes; when no interpreter unit connected, LED is off.
8. **RESET button**
 - For restoring to factory defaults by long pressing 10 seconds;
 - For entering the Bootloader upgrade interface (for details, see the related upgrade guide).
9. **Power input**
 - 48 V DC power supply

6.5.2 Connection

One LAN interface for connecting to an external Ethernet switch for communication with the conference system main unit; 2X8P-DIN interpreter unit interfaces, using 8-core dedicated cable, for connecting to up to 6 HCS-8685 translation units.

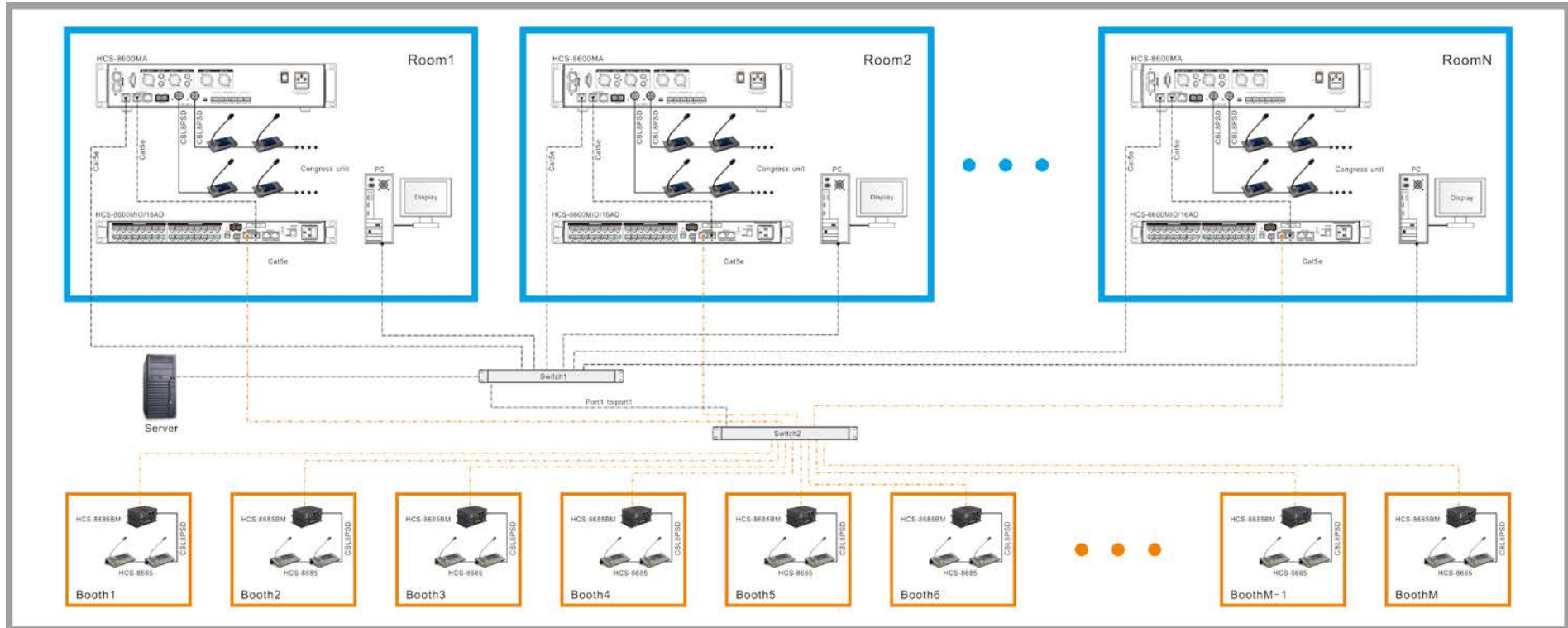


Figure 6.5.2-1: Connection diagram of booth management system

Precautions for system connection (above figure as an example to explanation)

- ☞ HCS-8600MIO **Extension port 1** and HCS-8685BM are connected to switch 2, other devices are connected to switch 1, and then port 1 of the two switches are connected. The device network cannot be mixed;
- ☞ HCS-8600MIO **Extension port 2** connected to the CMU Extension port;
- ☞ **HCS-8600MIO works in BM mode** to realize booth management, and cannot be used as an audio input and output device at the same time;
- ☞ One HCS-8600MIO can manage up to 16 HCS-8685BMs. Please configure HCS-8600MIO for each meeting room according to the number of HCS-8685BMs that need to be managed in each meeting room;
- ☞ Enter the IP address of HCS-8600MIO and HCS-8685BM in the browser to view device information, perform network settings and server configuration, etc.

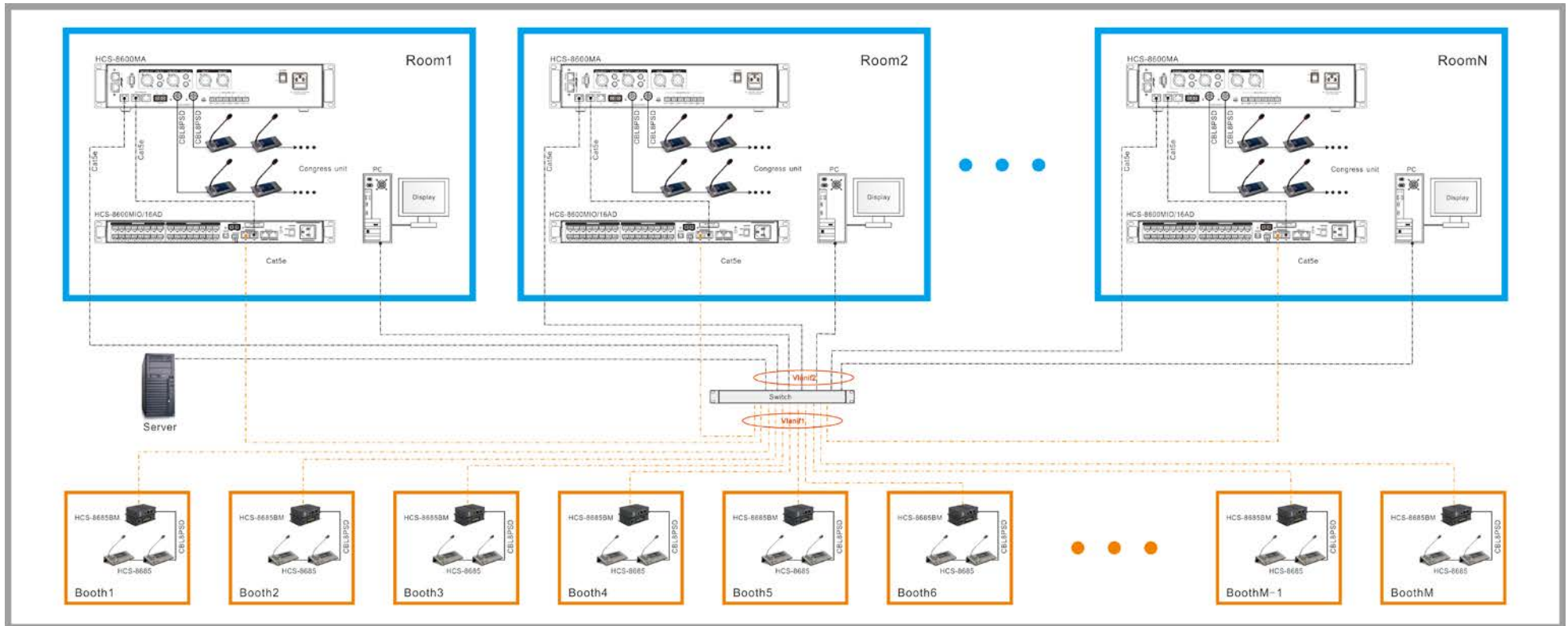


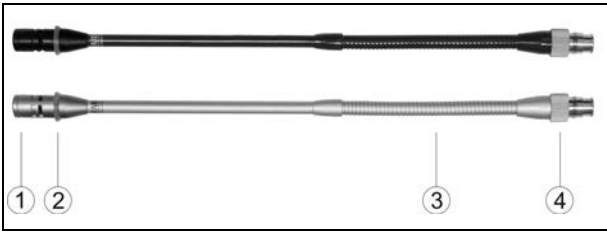
Figure 6.5.2-2: Connection diagram of booth management system

Switch configuration instructions: the above two connection methods can be used for the connection of the booth management system

- Shown as in figure 1, HCS-8600MIO and HCS-8685BM are connected to one switch (dedicated switch), and other devices are connected to another switch. Port 1 of the two switches are connected. In this connection mode, port 1 of the dedicated switch must prohibit port 8085 of the UDP protocol to prevent voice data from being multicast to the entire network through this port;
- Shown as in figure 2, all devices connect to one switch. At this time, the switch needs to be divided into two VLAN, HCS-8600MIO and HCS-8685BM are connected to VLAN1, and other devices are connected to VLAN2, and different VALNif IP subnet need to be configured. For example, VLAN1 is configured with a VALNif IP address of 192.68.1.1, and the subnet mask is: 255.255.255.0; VLAN2 is configured with a VALNif IP subnet of 192.68.2.1, and the subnet mask is: 255.255.255.0.

6.6 Microphone

- Removable stem microphone

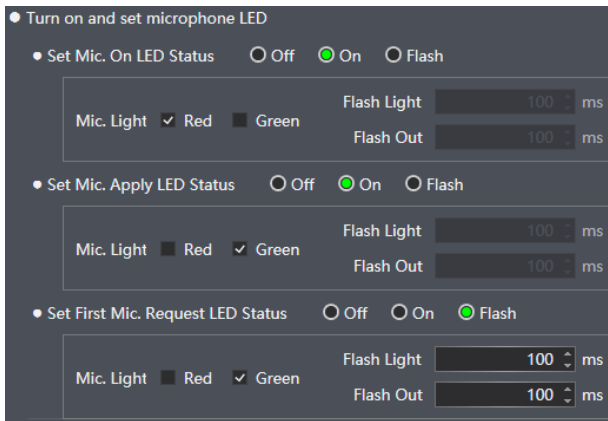


Functions and instructions:

1. Electret condenser cardioid microphone
2. Two-color microphone on/off LED ring (default)

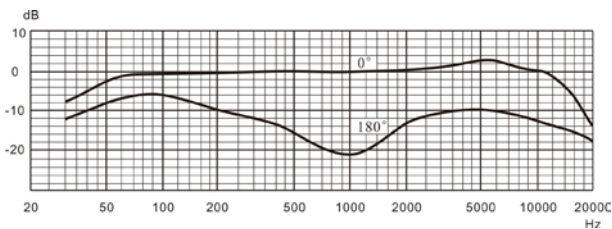
Work state	Indicating light of LED ring
Microphone On	Red (on)
Speaking time limit	Red (flash)
First in request list	Green (flash)
Not first in request list	Green (on)

Note: The LED ring state can be set by conference management software or main unit webpage.

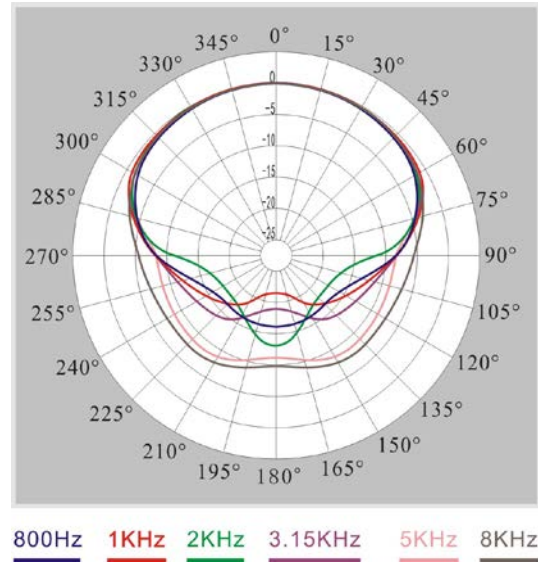


3. Metal stem with goose-neck to adjust angle and direction freely
4. Socket with screw thread. The stem microphone can be removed and collected during the adjournment

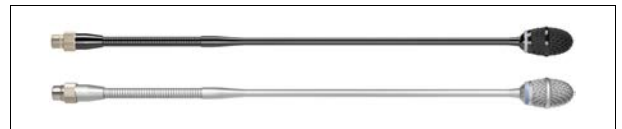
Frequency:



Direction:



- MSXXEGB series pluggable stem microphone



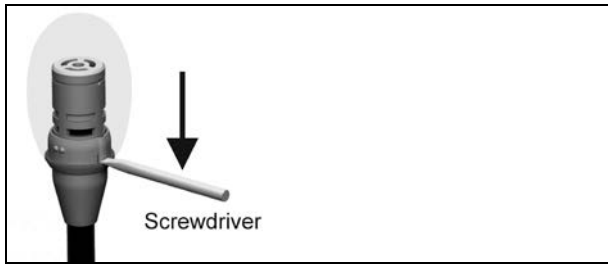
- MSXXEGF series pluggable stem microphone



- M-style Foam Windshield (MSXXEGF series)



Detaching of the M-model windshield



- a. Prepare a straight screwdriver;
- b. Insert the straight screwdriver into the gap of the microphone and press the straight screwdriver. The M-model windshield will be separated from the stem microphone.

● HCS-1020 clip microphone



6.7 Earphone

The jack plug of the stereo headphone can be inserted into a Ø 3.5 mm stereo headphone jack socket. Applicable types include:

- EP-830 Single earphone



- EP-820AS Single earphone



- EP-822 Single earphone



- EP-960AN Interpreter headset



- EP-960BH Interpreter headphone



- EP-960HD Detachable Earshells



- HCS-5100PA Headphone



- Sponge Ear Pads



- Other compatible types please refer to chapter 8.

6.8 Accessories

Some dedicated accessories are involved in the connection of conference system devices. Herein, these accessories are introduced, including:

- ◆ CBL8PS dedicated 8-pin Extension Cable
- ◆ CBL8PP-02 dedicated 8-pin Extension Cable
- ◆ CBL4PK-01CMP power adapter cable
- ◆ CBL4PT-02ACMP power branch cable
- ◆ CBL4PS-CMP dedicated 4-pin extension cable
- ◆ Detachable 4DIN Standard Plug (male)
- ◆ Detachable 4DIN Standard Plug (female)
- ◆ Solderable 4DIN Standard Socket (insulating)
- ◆ Solderable 8DIN Standard Socket (insulating)
- ◆ HVS-620P Video display card
- ◆ CBL8P2RJ45S-01 8-pin to RJ45 converter cable
- ◆ CBL8S2RJ45S-01 8-pin to RJ45 converter cable
- ◆ CBL8P2RJ45-01 8-pin to RJ45 converter cable
- ◆ CBLRJ45 Ethernet Extension Cable
- ◆ Cat.5e Extension Cable
- ◆ Shielded RJ45 plug
- ◆ HCS-4852T 8-pin Cable Splitter
- ◆ HCS-4852TN RJ45 Cable Splitter
- ◆ HCS-8600MCLS Loop Switcher
- ◆ HCS-8600MCLS/F Loop Switcher
- ◆ HCS-4345NF/50 Fingerprint Scanner
- ◆ HCS-4345NTK/80 Contactless IC-Card Encoder

1. CBL8PS dedicated 8-pin Extension Cable

- Both ends are 8P-DIN male plug and 8P-DIN female plug
- Cable: S-UTP CABLE or FTP CABLE
- Cable conductor: 4x2x(7x0.2)+96x0.12
- Length: 1 m, 3 m, 5 m, 10 m, 20 m, 30 m, 40 m and 50 m



2. CBL8PP-02 dedicated 8-pin Extension Cable

- Male connector at both ends
- Cable: S-UTP CABLE or FTP CABLE
- Cable conductor: 4x2x(7x0.2)+96x0.12
- Length: 2 m



3. CBL4PK-01CMP power adapter cable

- ①. 2P aviation socket (female)
- ②. 4P-DIN plug (female)
- Length: 1 m



4. CBL4PT-02ACMP power branch cable

- ①. 4P-DIN plug (male)
- ②. 4P-DIN plug (female)
- ③. DC plug
- Length: 2 m



5. CBL4PS-CMP dedicated 4-pin extension cable

- ①. Female connector
- ②. Male connector
- Length: 5 m, 10 m, 20 m, 30 m, 40 m and 50 m



6. Detachable 4P-DIN Standard Plug (male)

- For soldering to 4P-DIN cable
- Removable DIN standard male connector (4PIN)



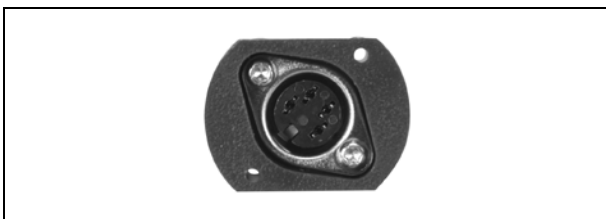
7. Detachable 4P-DIN Standard Plug (female)

- For soldering to 4P-DIN cable
- Removable DIN standard female connector (4PIN)



8. Solderable 4P-DIN Standard Socket

- For soldering to 4P-DIN cable
- Solderable 4P-DIN female socket with insulated isolation
- The circuit ground pin of the socket is isolated from the protective earth



9. Solderable 8P-DIN Standard Socket

- For soldering to 8P-DIN cable
- Solderable 8P-DIN female socket with insulated isolation
- The circuit ground pin of the socket is isolated from the protective earth



10. HVS-620P Graphic adaptor

- Display type: GDDR5
- Memory capacity: 2GB
- Bit: 128 bit
- Maximum resolution: 5120x3200
- CUDA core: 512
- Heat dissipation: fan
- Maximum power consumption: 40 W
- I/O interface: 4xmini DisplayPort
- Transfer line :4xmini DP to HDMI
- Interface type: PCI Express 3.0 16 x
- Dimensions: 165x69 mm



11. CBL8P2RJ45S-01 8-pin to RJ45 converter cable

- Suitable for HCS-4800 series and HCS-8600 series conference systems
- Standard connectors (8P-DIN male plug at one end and a RJ45 socket at the opposite end)
- Cable: FTP CABLE with drain wire
- Length: 1 m



12. CBL8S2RJ45S-01 8-pin to RJ45 converter cable

- Suitable for HCS-4800 series and HCS-8600 series conference systems
- Standard connectors (8P-DIN female plug at one end and a RJ45 socket at the opposite end)

- Cable: FTP CABLE with drain wire
- Length: 1 m



13. CBL8P2RJ45-01 8-pin to RJ45 converter cable

- Suitable for HCS-4800 series and HCS-8600 series conference systems
- Standard connectors (8P-DIN male plug at one end and a RJ45 plug at the opposite end)
- Cable: FTP CABLE with drain wire
- Length: 1 m



14. CBLRJ45 Ethernet Extension Cable

- Used for HCS-4800 series, HCS-8600 series and education equipment
- Cable: FTP CABLE with drain wire
- Standard connectors (shielded RJ45 plug at each end)
- Metal shield connected with drain wire
- Optional: 3 m, 5 m, 10 m, 20 m, 30 m, 40 m and 50 m available



15. Cat.5e Extension Cable

- For embedding system cables
- Cable: FTP CABLE with drain wire
- Cable conductor: $4 \times 2 \times (7 \times 0.2) + 7 \times 0.2$
- Length of per roll: 305 meter



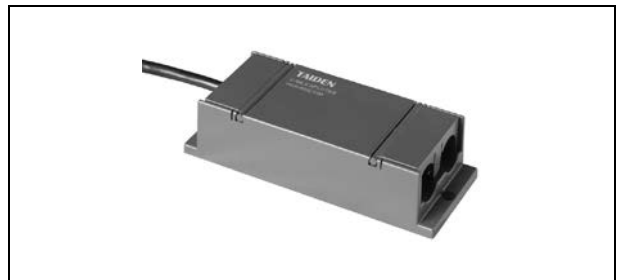
16. RJ45 plug

- For Ethernet cable making
- With metal shield
- Used in conjunction with FTP CABLE with drain wire
- Metal shield connected with drain wire



17. HCS-4852T 8-cord cable divider

- Relay facility, amplification of the communication signals
- 8P-DIN interfaces, "1 in / 3 out " structure for connection
- 2m-cable with a 8P-DIN connector at the input end
- Each 8PIN output interface can drive 60-meter long extension cable
- h x w x d: 35 x 149 x 90 mm



18. HCS-4852TN RJ45 cable divider

- Relay facility, amplification of the communication signals
- RJ45 interfaces, "1 in / 4 out " structure for connection
- One RJ45 socket for input
- Each RJ45 output socket can drive 60-meter long extension cable
- h x w x d: 24 x 103 x 66 mm



19. HCS-8600MCLS Loop Switcher

HCS-8600MCLS/F Loop Switcher

- For "Closed Loop - Daisy Chain" connection
- Automatic judgment of the opening or closing of a loop
- Loop switcher open: open indicator on (Red)
- Loop switcher closed: close indicator on (Green)
- When the loop switcher is used, the number of conference units that can be connected to the CMU/EMU is reduced by half
- 2 × RJ45 socket for daisy chain connection (recommended use of cat5e cable with a drain wire & RJ45 plug with metal shield)
- **HCS-8600MCLS Loop Switcher** is for connection between the primary CMU and the congress unit.
 - ♦ "TO MU" socket for connection to the CMU or EMU
 - ♦ The other socket for connection to the congress unit
- **HCS-8600MCLS/F Loop Switcher** is for connection between the primary and secondary CMU.
 - ♦ "TO MU" socket for connection to the primary CMU
 - ♦ The other socket for connection to the secondary CMU
- HCS-MCLS-RCF and HCS-MCLS-FC can be chosen
- h × w × d: 40 × 100 × 68 mm



21. HCS-4345NTK/80 Contactless IC-Card Encoder

- Encoding unit to produce the contactless IC-Card. The IC-Card may be used to grant access to a sign-in system
- PC connection via type A USB interface
- Smart design
- h × w × d: 24 × 91 × 91 mm



20. HCS-4345NF/50 Fingerprint Scanner

- Cooperates with PC to take the delegate's fingerprint to realize biometric authentication with high reliability
- PC connection via type A USB interface
- Smart design
- h × w × d: 22 × 48 × 75 mm

Chapter 7 Working environment and maintenance

Suitable working environment and proper maintenance methods can effectively extend service life of the equipment. For maintenance please read the contents of this section carefully.

7.1 Public areas

In public areas ensure that the cables attached to the system units, including extension cables, are run and laid out in a neat and tidy manner where they do not interfere and hinder public walk ways.

It is recommended that the chairman unit and the interpreter units are connected at the beginning of a trunk line and not at the end. In public areas where connectors and cables could be trampled on, it is strongly suggested to use protective covers according to the existing protection specifications.

Due to the directivity of the microphone used in the discussion units, every speaker should face the microphone at a convenient distance when speaking, to achieve both best audibility and intelligibility.

The texture of optical fiber cable is crisp, with low mechanical strength. A little carelessness may cause broken. Therefore, when cabling, please pay particular attention to:

- Terminating and maintenance of optical fiber should be carried out by strictly trained technical staff;
- There must be a complete design and construction drawings, for the convenient and reliability for future construction and inspection;
- During construction, always pay attention not to press the optical fiber cable by weight or prick by hard objects; In addition, traction force shall not exceed the maximal laying tension;
- When turning, the turning radius should be 20 times greater than the diameter of the cable itself;
- When pulling through the wall or the floor, protective plastic tube with protective seal should be used, and fill the tube with flame retardant filler; A certain amount of plastic pipelines can also be laid inside the building;

- The length of cabling shall not be too long in one time (normally 2 KM), and start from the middle to both sides in traction.

7.2 Technical rooms

It is recommended to meet the following conditions for technical rooms where HCS-8600 central control equipment is housed:

- Ensure that the area is a dust-free environment.
- Ensure adequate ventilation.
- Ensure adequate lighting. But be sure that the lighting does not impede the operator in the control room and normal system operation.
- Do not place objects on the top of units. They could fall into vents or could cover them and thus prevent proper cooling of electronic components inside the units. By falling into a unit, objects could cause trouble such as fire and electric shock.
- To avoid the risk of shock or permanent damage to the system units, do not expose units to rain or moisture.
- Do not attempt to remove the top cover of the system main units as you will be exposed to a shock hazard. The covers should only be removed by qualified service personnel. If any repair or maintenance is required, contact the **TAIDEN** service center in your region.
- Equipment is only for indoor use. Do not expose it to sunlight.

WARNING: Damage to the power cable may cause fire or a shock hazard!

7.3 Interpreter booths

Pressure and speed of work at most international congresses imply that interpreters have to take turns and to turn about to keep pace and to ensure a steady flow of smooth interpretation. Therefore every interpreter booth has to have an adequate size to accommodate at least two or three interpreters, depending on the present needs. Following a brief summary, according to the specifications for interpreter booths as drawn up in the ISO standards:

- ◆ In the hall, booths should be set up at the back or sideways.
- ◆ Booths should be elevated to provide an overall, unobstructed direct view of the chairman, the speakers and any other relevant visual aids.
- ◆ A window should be installed at the forefront of the booth across the overall length.
- ◆ An adequate size of the interpreter booth is recommended in order to accommodate the normal activities of the interpreter.
- ◆ Adequate air conditioning, temperature and lighting are required.
- ◆ ISO-4043 Mobile booths for simultaneous translation
- ◆ ISO-2603 Fixed booths for simultaneous translation

7.4 System operator room

In a PC based system, the operator needs a dedicated room to operate the PC and to manage the congress procedure. Generally, the demands on the operator room are the same as on the interpreter booth. By means of a microphone system, the operator should also be connected to a public - address system to remind the participants of operations, such as voting, signing-in, etc.

7.5 Ventilation

Maintain good ventilation: ventilation holes are provided on top of the main units. Place the units on a hard and level surface to ensure proper ventilation.

7.6 Cleaning

Do not use alcohol, ammonia or petroleum based liquids or abrasive cleaners to clean the equipment. Unplug first and clean with a soft cloth slightly dampened with mild soap and water solution. Assure yourself that the relevant unit is dry before operating it.

7.7 Storage

If the units are not to be used for a long period of time, disconnect the mains supply from all mains supplied units. Store them in a dust-free dry area with adequate ventilation.

Chapter 8 Technical specifications

8.1 System specifications

System performance

Conforms to ISO 22259, the international standard for congress systems

System environmental conditions

Working conditions fixed/stationary/transportable

Temperature range:

- Transport: -40 °C to +70 °C
- Operating: 0 °C to +45 °C

Max. relative humidity: < 95% (not condensing)

Safety: Compliant to EN 60065

EMC emission: Compliant to EN 55032

EMC immunity: Compliant to EN 55035

EMC approvals: CE, FCC

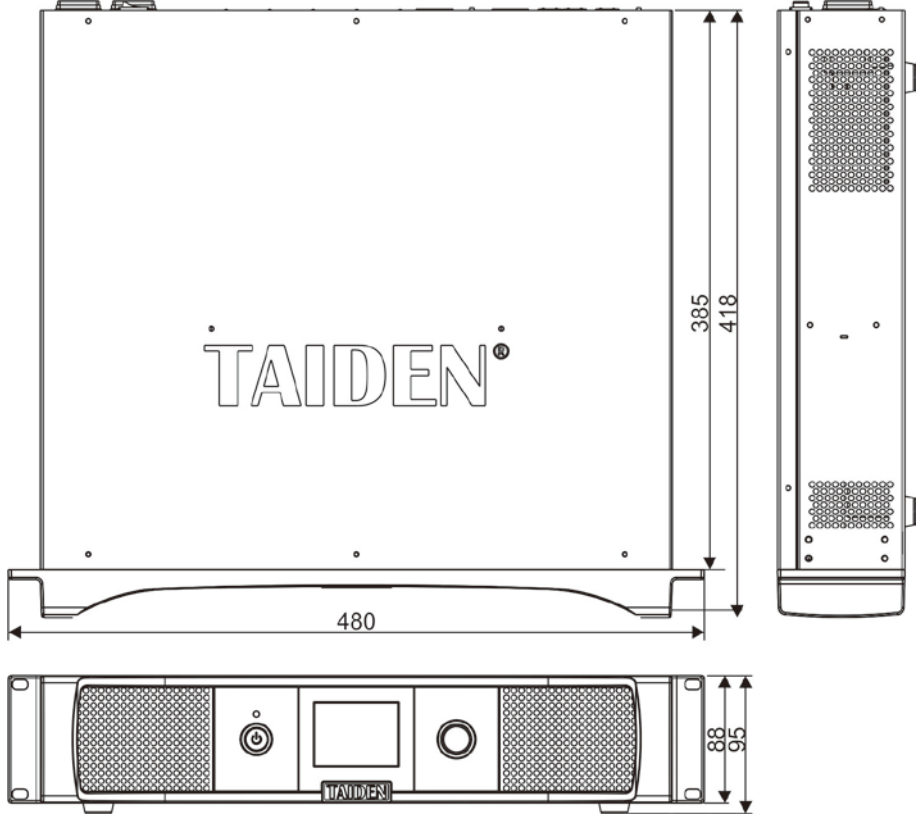
Power harmonic: Compliant to EN 61000-3-2

Voltage fluctuations & flicker: Compliant to EN 61000-3-3

8.2 Congress system main unit

8.2.1 Congress main unit

8.2.1.1 Physical characteristics

Types	HCS-8600M series
Installation	Tabletop / standard 19-inch rackmount
Dimensions (mm)	 <p>The technical drawing illustrates the physical characteristics of the HCS-8600M series Congress main unit. It includes three views: a top view, a side view, and a front view. The top view shows a rectangular unit with a width of 480 mm and a height of 385 mm. The side view shows a height of 418 mm. The front view shows a width of 480 mm and a height of 88 mm. The front view also shows two speaker grilles, a central display area, and a power button. The brand name 'TAIDEN' is visible on the front panel.</p>
Color	Black (PANTONE 419 C)
Weight	7.9 kg

8.2.1.2 Electrical characteristics

Types	HCS-8600M series
Microphone capacity	≤4096
Channels	64 CHs
Frequency response	30 - 20000 Hz
SNR	≥100 dBA
Dynamic range	≥94 dB
Crosstalk	≥90 dB
Total harmonic distortion	≤0.05%
Mains power supply	AC 100 V - 240 V 50/60 Hz
Maximum Audio input	LINE IN 1: +10 dBu balanced Input impedance: >10 kΩ LINE IN 2: +10 dBu unbalanced Input impedance: >5 kΩ AES IN: XLR 1FFS
Audio output	LINE OUT 1: +20 dBu balanced Output impedance: <100 Ω LINE OUT 2: +20 dBu unbalanced Output impedance: <100 Ω AES OUT: XLR 1FFS GROUP OUT 1-6: +20 dBu balanced
Output load	>1 kΩ
Control interface	9 PIN, D-type female head, connecting the central control system main unit
	RJ45 Ethernet, connecting to PC
Maximum power consumption	500 W
Connection	Dedicated cable (8-PIN)
Connector	DIN8P with buckle

8.2.2 Extension main unit

8.2.2.1 Physical characteristics

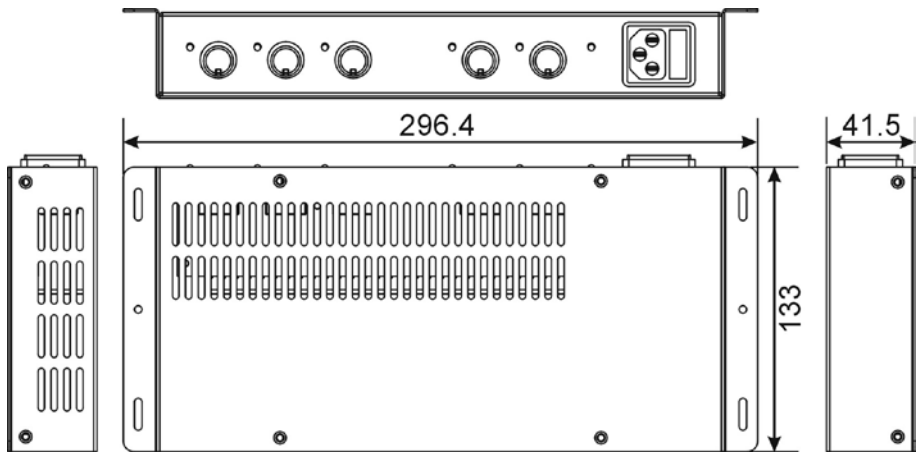
Types	HCS-8600MEA series
Installation	Tabletop / standard 19-inch rackmount
Dimensions (mm)	<p>The technical drawing shows three views of the HCS-8600MEA series extension main unit. The front view shows a rectangular unit with a width of 436 mm and a height of 255 mm. The side view shows a height of 288 mm. The top view shows a width of 480 mm and a height of 45 mm. The unit is black and features the TAIDEN logo on the front panel. The front panel includes a power input connector, several status LEDs, and a power button. The side panel has a ventilation grille.</p>
Color	Black (PANTONE 419 C)
Weight	3.6 kg

8.2.2.2 Electrical characteristics

Types	HCS-8600MEA series
Mains power supply	AC 100 V - 240 V 50/60 Hz
Output load	>1 kΩ
Maximum power consumption	500 W
Connection	Dedicated cable (8-PIN)
Connector	DIN8P with buckle

8.2.3 Extension unit

8.2.3.1 Physical characteristics

Types	HCS-8600MES
Installation	Tabletop
Dimensions (mm)	 <p>The drawing shows a perspective view of the extension unit. The main body has a length of 296.4 mm and a height of 133 mm. A side component has a width of 41.5 mm. The top view shows a control panel with several buttons and a connector. The front view shows a large cooling fan area.</p>
Color	Black (PANTONE 419 C)
Weight	1.5kg

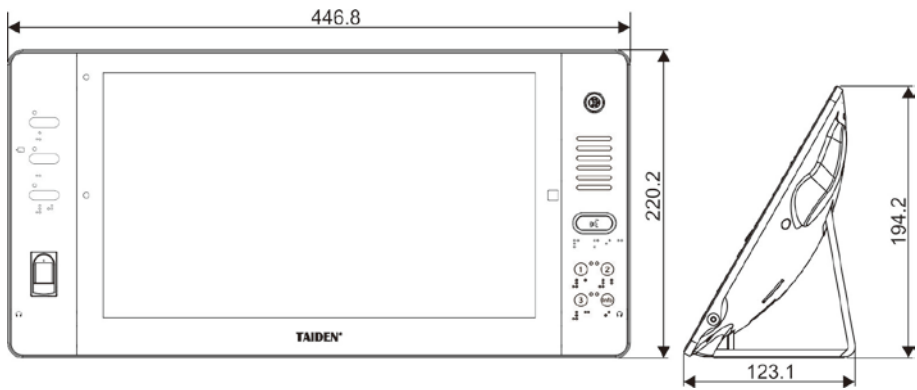
8.2.3.2 Electrical characteristics

Types	HCS-8600MES
Mains power supply	AC 100 V - 240 V, 50 Hz / 60 Hz
Output load	>1 kΩ
Maximum power consumption	200 W
Connection	Dedicated cable (8-PIN)
Connector	DIN8P with buckle

8.3 Congress unit

8.3.1 HCS-8668 series congress terminal

8.3.1.1 Physical characteristics

Types	HCS-8668 series
Installation	Tabletop
Dimensions (mm)	
Color	Black (PANTONE 419 C)
Weight	2.5 kg

8.3.1.2 Electrical characteristics

Types	HCS-8668 series	
Output frequency response	30 - 20000 Hz	
Earphone load	>16 Ω	
Earphone volume	13 mW	
Earphone output	Ø 3.5 mm stereo jack	
Max. power consumption	14 W	
Connection	Cat.5e/Cat.6 cable	
LCD	Screen size	14" 16: 9
	Resolution	1920x1080
	Color	18 bit
	Contrast	800: 1
Microphone	Type	Uni-directional electret condenser microphone
	Sensitivity	-46 dBV/Pa
	Frequency response	50 - 20000 Hz
	Input impedance	2 kΩ
	Directivity 0°/180°	> 20 dB (1 kHz)
	Equivalent noise	20 dBA (SPL)
	Maximum sound pressure level	125 dB (THD<3%)
	Standard microphone stem	MS33EGB1B

8.3.2 HCS-8638/50 series congress terminal

8.3.2.1 Physical characteristics

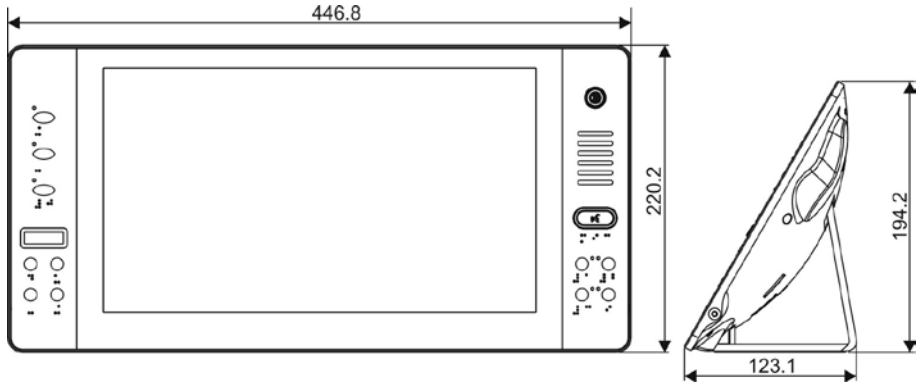
Types	HCS-8638/50 series
Installation	Tabletop
Dimensions (mm)	
Color	Black (PANTONE 419 C)
Weight	1.7 kg

8.3.2.2 Electrical characteristics

Types	HCS-8638/50 series	
Output frequency response	30 - 20000 Hz	
Earphone load	>16 Ω	
Earphone volume	13 mW	
Earphone output	Ø 3.5 mm stereo jack	
Max. power consumption	10 W	
Connection	Cat.5e/Cat.6 cable	
LCD	Screen size	10" 16: 10
	Resolution	1920×1200
	Color	24 bit
	Contrast	1000: 1
Microphone	Type	Uni-directional electret condenser microphone
	Sensitivity	-46 dBV/Pa
	Frequency response	50 - 20000 Hz
	Input impedance	2 kΩ
	Directivity 0°/180°	> 20 dB (1 kHz)
	Equivalent noise	20 dBA (SPL)
	Maximum sound pressure level	125 dB (THD<3%)
Standard microphone stem	MS33EGB1B	

8.3.3 HCS-8665 series congress terminal

8.3.3.1 Physical characteristics

Types	HCS-8665 series
Installation	Tabletop
Dimensions (mm)	
Color	Black (PANTONE 419 C)
Weight	2.5 kg

8.3.3.2 Electrical characteristics

Types	HCS-8665 series	
Output frequency response	30 - 20000 Hz	
Earphone load	>16 Ω	
Earphone volume	10 mW	
Earphone output	Ø 3.5 mm stereo jack	
Max. power consumption	14 W	
Connection	Cat.5e/Cat.6 cable	
Video input	HDMI	
LCD	Screen size	14", 16:9
	Resolution	1920×1080
	Color	18 bit
	Contrast	800:1
Microphone	Type	Uni-directional electret condenser microphone
	Sensitivity	-46 dBV/Pa
	Frequency response	50 - 20000 Hz
	Input impedance	2 kΩ
	Directivity 0°/180°	> 20 dB (1 kHz)
	Equivalent noise	20 dBA (SPL)
	Maximum sound pressure level	125 dB (THD<3%)
Standard microphone stem	MS33EGB1B	

8.3.4 HCS-8665MON series congress terminal

8.3.4.1 Physical characteristics

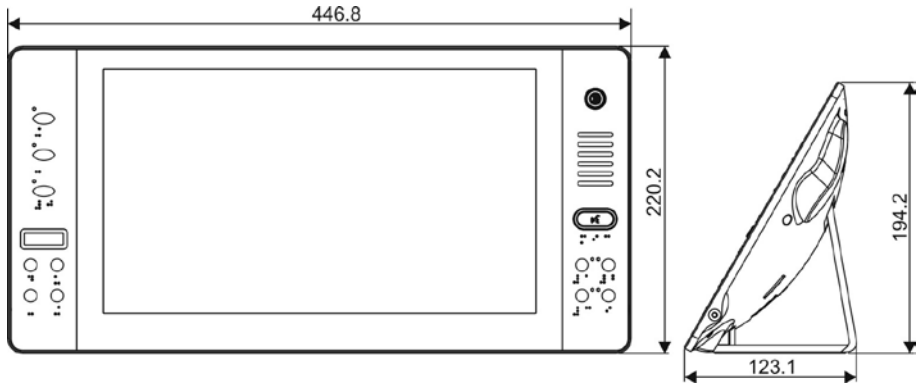
Types	HCS-8665MON
Installation	Tabletop
Dimensions (mm)	
Color	Black (PANTONE 419 C)
Weight	2.5 kg

8.3.4.2 Electrical characteristics

Types	HCS-8665MON	
Max. power consumption	14 W	
Connection	Cat.5e/Cat.6 cable	
Video input	HDMI	
LCD	Screen size	14", 16:9
	Resolution	1920x1080
	Color	18 bit
	Contrast	800:1

8.3.5 HCS-8635 series congress terminal

8.3.5.1 Physical characteristics

Types	HCS-8635 series
Installation	Tabletop
Dimensions (mm)	
Color	Black (PANTONE 419 C)
Weight	1.7 kg

8.3.5.2 Electrical characteristics

Types	HCS-8635 series	
Output frequency response	30 - 20000 Hz	
Earphone load	>16 Ω	
Earphone volume	10 mW	
Earphone output	\varnothing 3.5 mm stereo jack	
Max. power consumption	8 W	
Connection	2 x RJ45 socket for daisy chain connection (recommended use of cat5e cable with a drain wire & RJ45 plug with metal shield)	
Video input	BNC \times 1 (75 Ω)	
Video output	BNC \times 1 (75 Ω)	
Video format	HD 720p: 25, 30, 50, 60; HD 1080i: 50, 60; HD 1080p: 24, 25, 30, 3G: 1080p 50, 60	
LCD	Screen size	10", 16:10
	Resolution	1280x800
	Color	18 bit
	Contrast	500:1
Microphone	Type	Uni-directional electret condenser microphone
	Sensitivity	-46 dBV/Pa
	Frequency response	50 - 20000 Hz
	Input impedance	2 k Ω
	Directivity 0°/180°	> 20 dB (1 kHz)
	Equivalent noise	20 dBA (SPL)
	Maximum sound pressure level	125 dB (THD<3%)
	Standard microphone stem	MS33EGB1B

8.4 Interpreter unit

8.4.1 Physical characteristics

Type	HCS-8685
Installation	Tabletop
Dimensions (mm)	<p>Technical drawing of the HCS-8685 interpreter unit. The drawing shows three views: a top view, a front view, and a side view. The front view shows a rectangular device with a central display screen, a microphone grille on the left, and various control buttons and indicators on the right and bottom. Dimensions are indicated: a height of 147.5 mm, a width of 320.1 mm, and a depth of 83.4 mm.</p>
Color	Champagne (PANTONE 401 C)
Weight	1.1 kg

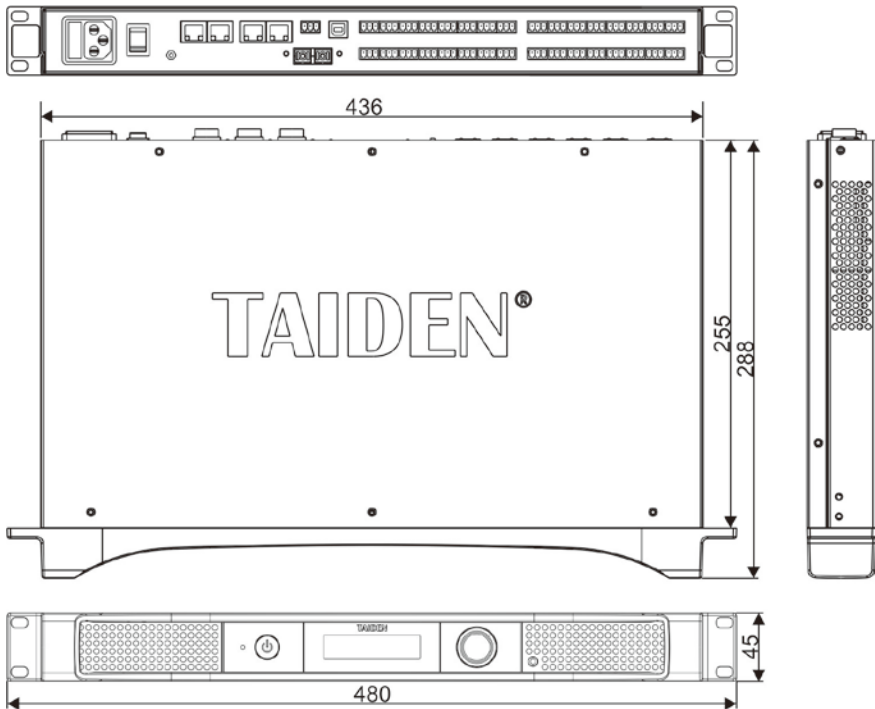
8.4.2 Electrical characteristics

Output frequency response		HCS-8685
Earphone load		30 - 20000 Hz
Earphone volume		>16 Ω
Earphone output		Audio level is adjusted automatically according to impedance
Headset connection		Ø 3.5 mm TRRS jack
Max. power consumption		5 W
Connection		8P- DIN dedicated cable with buckle
Microphone	Type	Uni-directional electret condenser microphone
	Sensitivity	-46 dBA/Pa
	Frequency response	50 - 20000 Hz
	Input impedance	2 kΩ
	Directivity 0°/180°	> 20 dB (1 kHz)
	Equivalent noise	20 dBA (SPL)
	Maximum sound pressure level	125 dB (THD<3%)
	Standard microphone stem	MS33EGB1S

8.5 Peripheral equipment and accessories

8.5.1 HCS-8600MIO series

8.5.1.1 Physical characteristics

Type	HCS-8600MIO/16AD	HCS-8600MIO/08A	HCS-8600MIO/08D
Installation	Tabletop / standard 19-inch rackmount		
Dimensions (mm)			
Color	Black (PANTONE 419 C)		
Weight	3.6 kg		

8.5.1.2 Electrical characteristics

Type	HCS-8600MIO/16AD	HCS-8600MIO/08A	HCS-8600MIO/08D
Channels	16 CHs	8 CHs	8 CHs
Frequency response	30 - 20000 Hz		
SNR	≥100 dBA		
Dynamic range	≥94 dB		
Crosstalk	≥90 dB		
Total harmonic distortion	≤0.05%		
Power supply	100 V - 240 V AC, 50/60 Hz		
Audio input	Analog	3-pin Phoenix connector: Line In: +8 dBu Mic. In: -12 dBu	
	Digital	16-channel Dante	8-channel Dante
Audio output	Analog	3-pin Phoenix connector: +18 dBu	
	Digital	16-channel Dante	8-channel Dante
Output load	>1 kΩ		
Maximum power consumption	30 W		
Connection	Cat.5, Fiber		

8.5.2 HCS-8600KMX

8.5.2.1 Physical characteristics

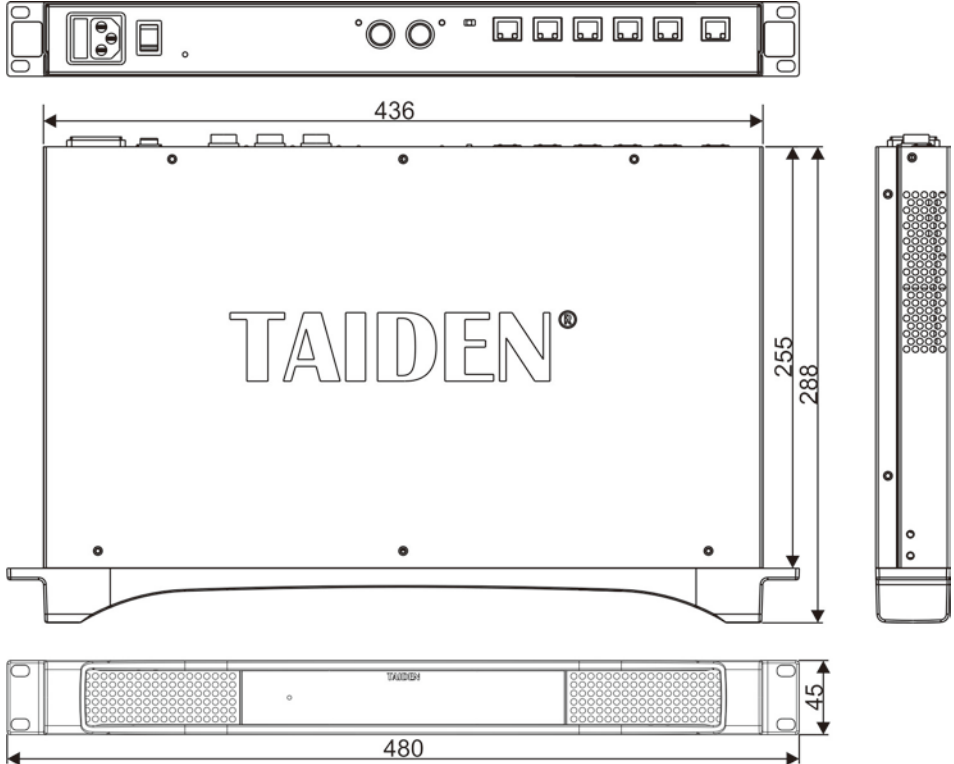
Type	HCS-8600KMX
Installation	Tabletop / standard 19-inch rackmount
Dimensions (mm)	
Color	Black (PANTONE 419 C)
Weight	3.6 kg

8.5.2.2 Electrical characteristics

Type	HCS-8600KMX
Mains power supply	100 - 240 V, 50/60 Hz
Power output	3 × 2P aviation plugs, supply power to HCS-8668/8638 series Paperless Multimedia Congress Terminals
	RJ45 ports, support PoE
Maximum power consumption	400 W
Output connection	Cat.5e /Cat.6
Output connector	RJ45

8.5.3 HCS-8600POE

8.5.3.1 Physical characteristics

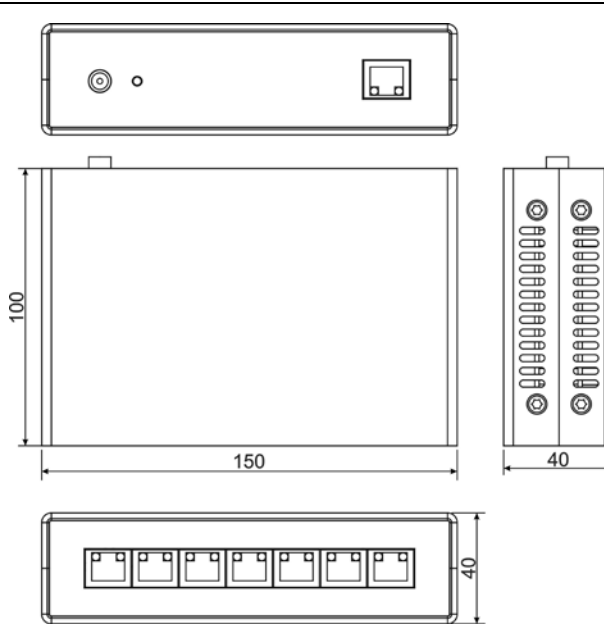
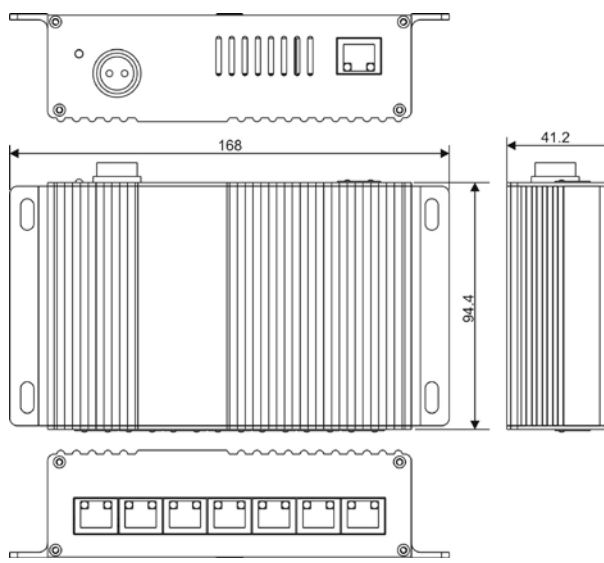
Type	HCS-8600POE
Installation	Tabletop / standard 19-inch rackmount
Dimensions (mm)	
Color	Black (PANTONE 419 C)
Weight	3.6 kg

8.5.3.2 Electrical characteristics

Type	HCS-8600POE
Mains power supply	100 - 240 V, 50/60 Hz
Power output	RJ45 ports, support PoE
Maximum power consumption	350 W
Output connection	Cat.5e /Cat.6
Output connector	RJ45

8.5.4 HCS-8368T(/50)

8.5.4.1 Physical characteristics

Type	HCS-8368T(/50)
Installation	Tabletop
HCS-8368T Dimensions (mm)	
HCS-8368T/50 Dimensions (mm)	
Color	HCS-8368T: gray (PANTONE 425 C) HCS-8368T/50: black (PANTONE 419 C)
Weight	0.4 kg

8.5.4.2 Electrical characteristics

Type	HCS-8368T(/50)
Mains power supply	48 V DC 1.875 A
Maximum power consumption	90 W
Output connection	Cat.5e /Cat.6
Output connector	RJ45

8.5.5 HCS-8685BM booth manager

8.5.5.1. Physical Characteristics

Type	HCS-8685BM
Installation	Tabletop
HCS-8685BM Dimensions (mm)	<p>The drawing shows three views of the HCS-8685BM booth manager. The top view shows a rectangular unit with a width of 190.3 mm and a depth of 45.8 mm. The front view shows a height of 120 mm and a width of 161.5 mm. The side view shows a depth of 45.8 mm. Other dimensions include a top thickness of 4.5 mm, a hole diameter of $\varnothing 8.5$, and a hole diameter of $\varnothing 3.5$.</p>
Color	Black (PANTONE 419 C)
Weight	0.6 kg

8.5.5.2 Electrical Characteristics

Type	HCS-8685BM
Mains power supply	48 V DC 1.875 A
Maximum power consumption	90 W
Output connection	RJ45 interface (LAN): Cat.5/Cat.6 HCS-8685 interperter unit interface (INTERPRETER'S UNIT): Dedicated cable (8-PIN)
Output connector	RJ45 inerface (LAN): RJ45 HCS-8685 HCS-8685 interperter unit interface (INTERPRETER'S UNIT): DIN8P with buckle

8.5.6 Microphone

8.5.5.1. Physical Characteristics

Types	MS33EGB1S/B	MS41EGB1S/B	MS47EGB1S/B
Installation	Insert microphone and tighten		
Length	330 mm	410 mm	470 mm
Color	Silver (PANTONE 428 C) / Black (PANTONE 419 C)		
Weight	91 g	98 g	105 g

Types	MS33EGF1S/B	MS41EGF1S/B	MS47EGF1S/B
Installation	Insert microphone and tighten		
Length	330 mm	410 mm	470 mm
Color	Silver (PANTONE 428 C) / Black (PANTONE 419 C)		
Weight	81 g	86 g	94 g

8.5.5.2 Electrical Characteristics

Types	MS33/41/47EGB1S/B MS33/41/47EGF1S/B
Microphone type	Uni-directional electret condenser microphone
Sensitivity	-46 dBA/Pa
Frequency response	50 - 20000 Hz
Input impedance	2 k Ω
Directivity 0°/180°	> 20 dB (1 kHz)
Equivalent noise	20 dBA (SPL)
Maximum sound pressure level	125 dB (THD<3%)

8.5.7 Earphone

■ EP-830 single earphone

- Used with interpretation receiver or on a conference unit
- Hi-Fi sound quality
- Assembled with detachable shell, cable and earphone
- The shell can be removed and cleaned separately
- The cable can be replaced separately by customer if breaks
- \varnothing 3.5 mm stereo plug (TRS)
- 32 Ohm (Tip and Sleeve, Ring: NC)
- Frequency response: 20 Hz to 20 kHz
- Sensitivity: ≥ 108 dBA/1 mW
- Weight: ≤ 25 g

■ EP-820AS single earphone

- Cooperates with the infrared receiver or the congress unit
- Hi-Fi sound quality
- 32 Ω , \varnothing 3.5 mm stereo jack
- Frequency response: 50 Hz - 20 kHz
- Sensitivity: ≥ 102 dBA/1 mW
- Weight: 22 g

■ EP-822 single inner earphone

- Used with the receiver or a conference unit
- Excellent sound quality
- \varnothing 3.5 mm stereo plug (TRS)
- 16 Ohm (Tip and Sleeve, Ring: NC)
- Frequency response: 20 Hz to 20 kHz
- Sensitivity: ≥ 90 dBA/1 mW
- Weight: 7 g

■ EP-960AN interpreter headset

- Incorporated with interpreter unit HCS-8385/80 for monitoring and speaking
- Hi-Fi sound quality
- Interpreters can wear the headset according to their habits
- One sided wire, provide better user experience
- Greater headband adjustability, suitable for all the users
- 150 Ohm \times 2, \varnothing 3.5 mm TRRS plug

- Frequency response of headphone: 20 Hz to 20 kHz
- Sensitivity of headphone: ≥ 108 dBA/1 mW
- Polar pattern of microphone: Omnidirectional
- Frequency response of microphone: 50 Hz to 20 kHz
- Sensitivity of microphone: -48 dBV/Pa
- Impedance of microphone: < 680 Ohm
- Weight: 95 g

■ EP-960BH interpreter headphone

- Incorporated with interpreter unit for monitoring
- Excellent sound quality
- Interpreters can wear the headset according to their habits
- One sided wire, provide better user experience
- Greater headband adjustability, suitable for all the users
- 150 Ohm \times 2, \varnothing 3.5 mm stereo plug (TRS) for headphone
- Frequency response of headphone: 20 Hz to 20 kHz
- Sensitivity of headphone: ≥ 108 dBA/1 mW
- Weight: 89 g

■ EP-960HD Detachable Earshells

- Used for EP-960AN, EP-960AH and EP-960BH
- Earshell is detachable and washable, convenient for cleaning
- Color: black

■ HCS-5100PA headphone

- Cooperates with the infrared receiver or the congress unit
- Hi-Fi sound quality
- 32 $\Omega \times 2$, \varnothing 3.5 mm stereo jack
- Frequency response: 20 Hz - 20 kHz
- Sensitivity: ≥ 108 dBA/1 mW
- Weight: 69 g

■ Sponge Ear Pads

- Used for headphone
- 50 pairs per package
- Color: black

8.5.8 Accessories

- **CBL8PSD dedicated 8-pin Extension Cable**
 - Both ends are 8P-DIN male plug and 8P-DIN female plug
 - **FTP CABLE with drain wire**
 - Length: 1 m, 3 m, 5 m, 10 m, 20 m, 30 m, 40 m and 50 m

- **CBL8PPD-02 dedicated 8-pin Extension Cable**
 - Male connector at both ends
 - Length: 2 m

- **CBL4PK-01CMP power adapter cable**
 - ①. 2P aviation socket (female)
 - ②. 4P-DIN plug (female)
 - Length: 1 m

- **CBL4PT-02ACMP power branch cable**
 - ①. 4P-DIN plug (male)
 - ②. 4P-DIN plug (female)
 - ③. DC plug
 - Length: 2 m

- **CBL4PS-CMP dedicated 4-pin extension cable**
 - ①. Female connector
 - ②. Male connector
 - Length: 5 m, 10 m, 20 m, 30 m, 40 m and 50 m

- **Detachable 4P-DIN Standard Plug (male)**
 - For soldering to 4P-DIN cable
 - Removable DIN standard male connector (4PIN)

- **Detachable 4P-DIN Standard Plug (female)**
 - For soldering to 4P-DIN cable
 - Removable DIN standard female connector (4PIN)

- **Solderable 4P-DIN Standard Socket**
 - For soldering to 4P-DIN cable
 - Solderable 4P-DIN female socket with insulated isolation
 - The circuit ground pin of the socket is isolated from the protective earth

- **HVS-620P Graphic adaptor**
 - Display type: GDDR5
 - Memory capacity: 2GB
 - Bit: 128 bit
 - Maximum resolution: 5120×3200
 - CUDA core: 512
 - Heat dissipation: fan
 - Maximum power consumption: 40 W
 - I/O interface: 4×mini DisplayPort
 - Transfer line :4×mini DP to HDMI
 - Interface type: PCI Express 3.0 16 x
 - Dimensions: 165x69 mm

- **CBL8P2RJ45S-01 8-pin to RJ45 converter cable**
 - Suitable for HCS-4800 series and HCS-8600 series conference systems
 - Standard connectors (8P-DIN male plug at one end and a RJ45 socket at the opposite end)
 - Cable: FTP CABLE with drain wire
 - Length: 1 m

- **CBL8S2RJ45S-01 8-pin to RJ45 converter cable**
 - Suitable for HCS-4800 series and HCS-8600 series conference systems
 - Standard connectors (8P-DIN female plug at one end and a RJ45 socket at the opposite end)
 - Cable: FTP CABLE with drain wire
 - Length: 1 m

- **CBL8P2RJ45-01 8-pin to RJ45 converter cable**
 - Suitable for HCS-4800 series and HCS-8600 series conference systems
 - Standard connectors (8P-DIN male plug at one end and a RJ45 plug at the opposite end)
 - Cable: FTP CABLE with drain wire
 - Length: 1 m

- **CBLRJ45 Ethernet Extension Cable**
 - Used for HCS-4800 series, HCS-8600 series and education equipment
 - Cable: FTP CABLE with drain wire
 - Standard connectors (shielded RJ45 plug at each end)
 - Metal shield connected with drain wire
 - Optional: 3 m, 5 m, 10 m, 20 m, 30 m, 40 m and 50 m available

■ **Cat.5e Extension Cable**

- For embedding system cables
- Cable: FTP CABLE with drain wire
- Cable conductor: 4x2x(7x0.2)+7x0.2
- Length of per roll: 305 meter

■ **RJ45 plug**

- For Ethernet cable making
- With metal shield
- Used in conjunction with FTP CABLE with drain wire
- Metal shield connected with drain wire

■ **HCS-4852T 8-cord cable divider**

- Relay facility, amplification of the communication signals
- 8P-DIN interfaces, "1 in / 3 out " structure for connection
- 2m-cable with a 8P-DIN connector at the input end
- Each 8PIN output interface can drive 60-meter long extension cable
- h x w x d: 35 x 149 x 90 mm

■ **HCS-4852TN RJ45 cable divider**

- Relay facility, amplification of the communication signals
- RJ45 interfaces, "1 in / 4 out " structure for connection
- One RJ45 socket for input
- Each RJ45 output socket can drive 60-meter long extension cable
- h x w x d: 24 x 103 x 66 mm

■ **HCS-8600MCLS Loop Switcher**

- For "Closed Loop - Daisy Chain" connection
- Automatic judgment of the opening or closing of a loop
- Loop switcher open: open indicator on (Red)
- Loop switcher closed: close indicator on (Green)
- When the loop switcher is used, the number of conference units that can be connected to the CMU/EMU is reduced by half
- 2 x RJ45 socket for daisy chain connection (recommended use of cat5e cable with a drain wire & RJ45 plug with metal shield)

- **HCS-8600MCLS Loop Switcher** is for connection between the primary CMU and the congress unit.

- ♦ "TO MU" socket for connection to the CMU or EMU

- ♦ The other socket for connection to the congress unit

- **HCS-8600MCLS/F Loop Switcher** is for connection between the primary and secondary CMU.

- ♦ "TO MU" socket for connection to the primary CMU

- ♦ The other socket for connection to the secondary CMU

- HCS-MCLS-RCF HCS-MCLS-FC and can be chosen

- h x w x d: 40 x 100 x 68 mm

■ **HCS-4345NF/50 Fingerprint Scanner**

- Cooperates with PC to take the delegate's fingerprint to realize biometric authentication with high reliability
- PC connection via type A USB interface
- Smart design
- h x w x d: 22 x 48 x 75 mm

■ **HCS-4345NTK/80 Contactless IC-Card Encoder**

- Encoding unit to produce the contactless IC-Card. The IC-Card may be used to grant access to a sign-in system
- PC connection via type A USB interface
- Smart design
- h x w x d: 24x 91 x 91 mm

8.6 System connection

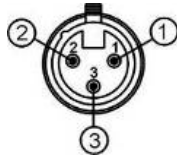
8.6.1 Mains cables

Blue	Neutral
Brown	Hot (Phase)
Green/Yellow	Earth/Ground

8.6.2 Audio cables

3-pole XLR connector (female)

- Pin 1 Earth
- Pin 2 Signal +
- Pin 3 Signal -



Chinch connector (male)

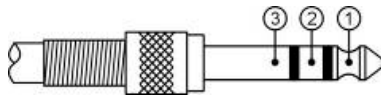
- Pin 1 Signal +
- Pin 2 GND



8.6.3 Earphone

3.5 mm Jack plug

- Tip (1) Signal left
- Ring (2) Signal Right
- Sleeve (3) Electrical earth/screen



8.7 Display language list

Chinese	English	639-3	639-2/5	639-1	Chinese	English	639-3	639-2/5	639-1
原声	Floor	FLO	FLO	-	爱尔兰语	Irish	GLE	GLE	GA
阿尔巴尼亚	Albanian	SQI	ALB	SQ	哈萨克语	Kazakh	KAZ	KAZ	KK
阿拉伯语	Arabic	ARA	ARA	AR	吉尔吉斯语	Kirghiz	KIR	KIR	KY
保加利亚语	Bulgarian	BUL	BUL	BG	老挝语	Lao	LAO	LAO	LO
加泰罗尼亚	Catalan	CAT	CAT	CA	蒙古语	Mongolian	MON	MON	MN
汉语	Chinese	ZHO	CHI	ZH	尼泊尔语	Nepali	NEP	NEP	NE
捷克语	Czech	CES	CZE	CS	塔吉克语	Tajik	TGK	TGK	TG
丹麦语	Danish	DAN	DAN	DA	泰语	Thai	THA	THA	TH
荷兰语	Dutch	NLD	DUT	NL	藏语	Tibetan	BOD	TIB	BO
英语	English	ENG	ENG	EN	土库曼斯坦	Turkmen	TUK	TUK	TK
芬兰语	Finnish	FIN	FIN	FI	乌克兰语	Ukrainian	UKR	UKR	UK
法语	French	FRA	FRE	FR	越南语	Vietnamese	VIE	VIE	VI
德语	German	DEU	GER	DE	粤语	Yue Chinese / Cantonese	YUE	YUE	-
希腊语	Greek	ELL	GRE	EL	克罗地亚语	Croatian	HRV	HRV	HR
希伯来语	Hebrew	HEB	HEB	HE	斯洛伐克语	Slovak	SLK	SLO	SK
匈牙利语	Hungarian	HUN	HUN	HU	斯洛文尼亚	Slovenian	SLV	SLV	SL
印度尼西亚	Indonesian	IND	IND	ID	爱沙尼亚语	Estonian	EST	EST	ET
意大利语	Italian	ITA	ITA	IT	拉脱维亚语	Latvian	LAV	LAV	LV
日语	Japanese	JPN	JPN	JA	立陶宛语	Lithuanian	LIT	LIT	LT
韩语	Korean	KOR	KOR	KO	乔治亚语	Georgian	KAT	GEO	KA
马来语	Malay	MSA	MAY	MS	冰岛语	Icelandic	ISL	ICE	IS
挪威语	Norwegian	NOR	NOR	NO	音乐	Music	MUSIC	MUS	-
波斯语	Persian	FAS	PER	FA	未知语种	Unknown	---	---	-
波兰语	Polish	POL	POL	PL	阿萨姆语	Assamese	ASM	ASM	AS
葡萄牙语	Portuguese	POR	POR	PT	巴斯克语	Basque	EUS	BAQ	EU
罗马尼亚语	Romanian	RON	RUM	RO	达里语	Dari	PRS	PRS	-
俄语	Russian	RUS	RUS	RU	宗卡语	Dzongkha	DZO	DZO	DZ
塞尔维亚语	Serbian	SRP	SRP	SR	菲律宾语	Filipino	FIL	FIL	-
西班牙语	Spanish	SPA	SPA	ES	加利西亚语	Galician	GLG	GLG	GL
瑞典语	Swedish	SWE	SWE	SV	古吉特语	Gujarati	GUJ	GUJ	GU
土耳其语	Turkish	TUR	TUR	TR	夏威夷语	Hawaiian	HAW	HAW	-
亚美利亚语	Armenian	HYE	ARM	HY	坎那达语	Kannada	KAN	KAN	KN
阿塞拜疆语	Azerbaijani	AZE	AZE	AZ	克什米尔语	Kashmiri	KAS	KAS	KS
巴厘语	Balinese	BAN	BAN	-	柬埔寨语	Central Khmer / Cambodian	KHM	KHM	-
孟加拉国语	Bengali	BEN	BEN	BN	库尔德语	Kurdish	KUR	KUR	KU
缅甸语	Burmese / Myanmar	MYA	MYA	MY	马拉雅拉姆	Malayalam	MAL	MAL	ML
白俄罗斯语	Belarusian	BEL	BEL	BE	马拉地语	Marathi	MAR	MAR	MR
科西嘉语	Corsican	COS	COS	CO	恩德贝勒语	North Ndebele / Ndebele	NDE	NDE	-

Chinese	English	639-3	639-2/5	639-1	Chinese	English	639-3	639-2/5	639-1
奥里亚语	Oriya	ORI	ORI	OR	茨瓦纳语	Tswana	TSN	TSN	TN
旁遮普语	Panjabi	PAN	PAN	PA	乌尔都语	Urdu	URD	URD	UR
罗曼什语	Romansh	ROH	ROH	-	威尔士语	Welsh	CYM	WEL	CY
梵文	Sanskrit	SAN	SAN	SA	祖鲁语	Zulu	ZUL	ZUL	ZU
信德语	Sindhi	SND	SND	SD	壮族语	Zhuang	ZHA	ZHA	ZA
僧加罗语	Sinhala / Sinhalese	SIN	SIN	SI	傣族语	Dai	DIJ	DIJ	-
梭托语	Southern Sotho / Sotho	SOT	SOT	ST	维吾尔语	Uighur	UIG	UIG	UG
斯瓦西里语	Swahili	SWA	SWA	SW	文莱语	Brunei	KXD	BRN	-
泰米尔语	Tamil	TAM	TAM	TA	北印度语	Hindi	HIN	HND (SIL14)	HI
泰卢固语	Telugu	TEL	TEL	TE					

Appendices: Custom-made cables

Appendix I : Ethernet Cable

How to Select and Wire Ethernet Cable for TAIDEN New Generation System

CAT5e Ethernet cable with a drain wire connected to shielded RJ45 crimp connectors is required for setting up TAIDEN New Generation System. Audio and control signal, and other data are all transmitted over CAT5e cables. No attenuation in signal quality and amplitude, can avoid ground noise and possible interferences from other devices, providing improved system reliability. Users can also lay cables beforehand, enjoying greater convenience and flexibility.

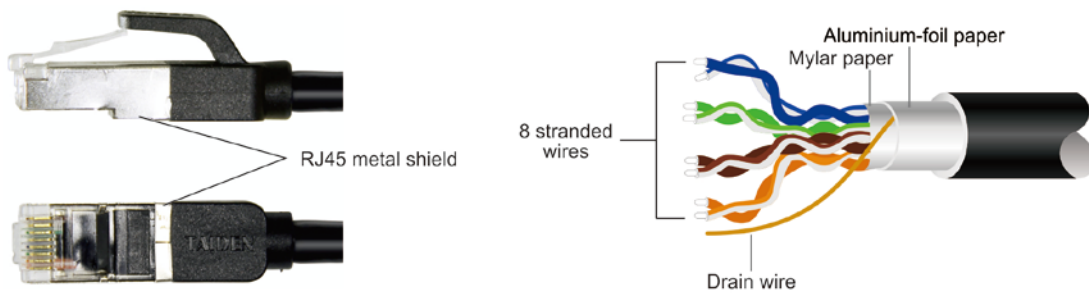
1. CAT5e Ethernet cable is applicable for:

HCS-8358 series multimedia terminal	HCS-8369 series multimedia terminal	HCS-8368 series multimedia terminal
HCS-8668 series multimedia terminal	HCS-8665 series multimedia terminal	HCS-8638 series multimedia terminal
HCS-8635 series multimedia terminal	HCS-4800 series flush-mounting unit	HCS-1082N series electronic nameplate

Education products with RJ45 connector

The standard cable for HCS-4800 series tabletop conference units is composed of CAT5e Ethernet cable with a drain wire connected to 8PIN DIN connectors. In case Ethernet cables are already laid, 8PIN DIN to RJ45 cables can be used as converters.

2. Materials needed for wiring CAT5e Ethernet cable:



Shielded RJ45 crimp connector

CAT5e cables as shown above, with a drain wire between aluminium-foil paper and mylar paper

3. How to wire CAT5e Ethernet cable:

Arrange the colored wires according to T568A and T568B standards.

RJ45 pinout wiring order: Clip is pointed away from you. The order from left to right is shown below:



Wiring order (1-8) according to T568A standard:
white-green, green, white-orange, blue,
white-blue, orange, white-brown, brown

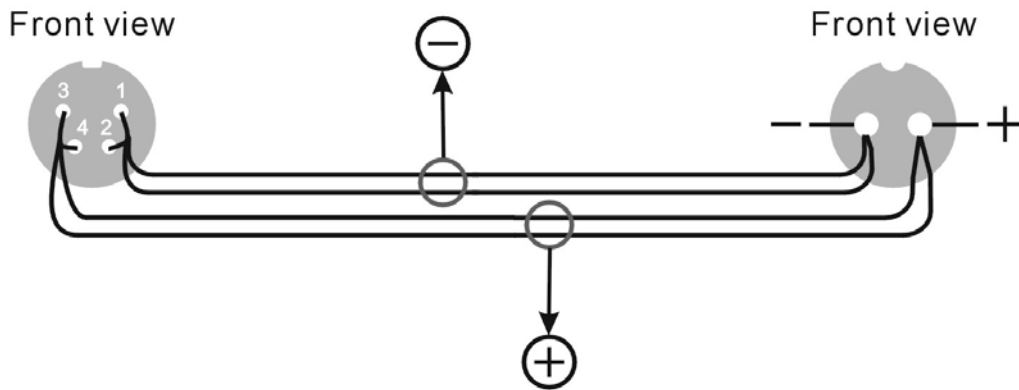
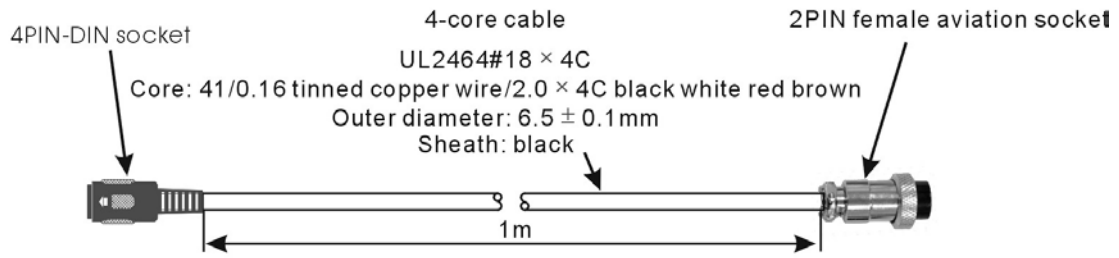


Wiring order (1-8) according to T568B standard:
white-orange, orange, white-green, blue,
white-blue, green, white-brown, brown

Ethernet Cable used for TAIDEN New Generation System should be straight through, with both ends using the same wiring standard (T568B is commonly used).

Please connect the drain wire to the metal shield of the RJ45 connector.

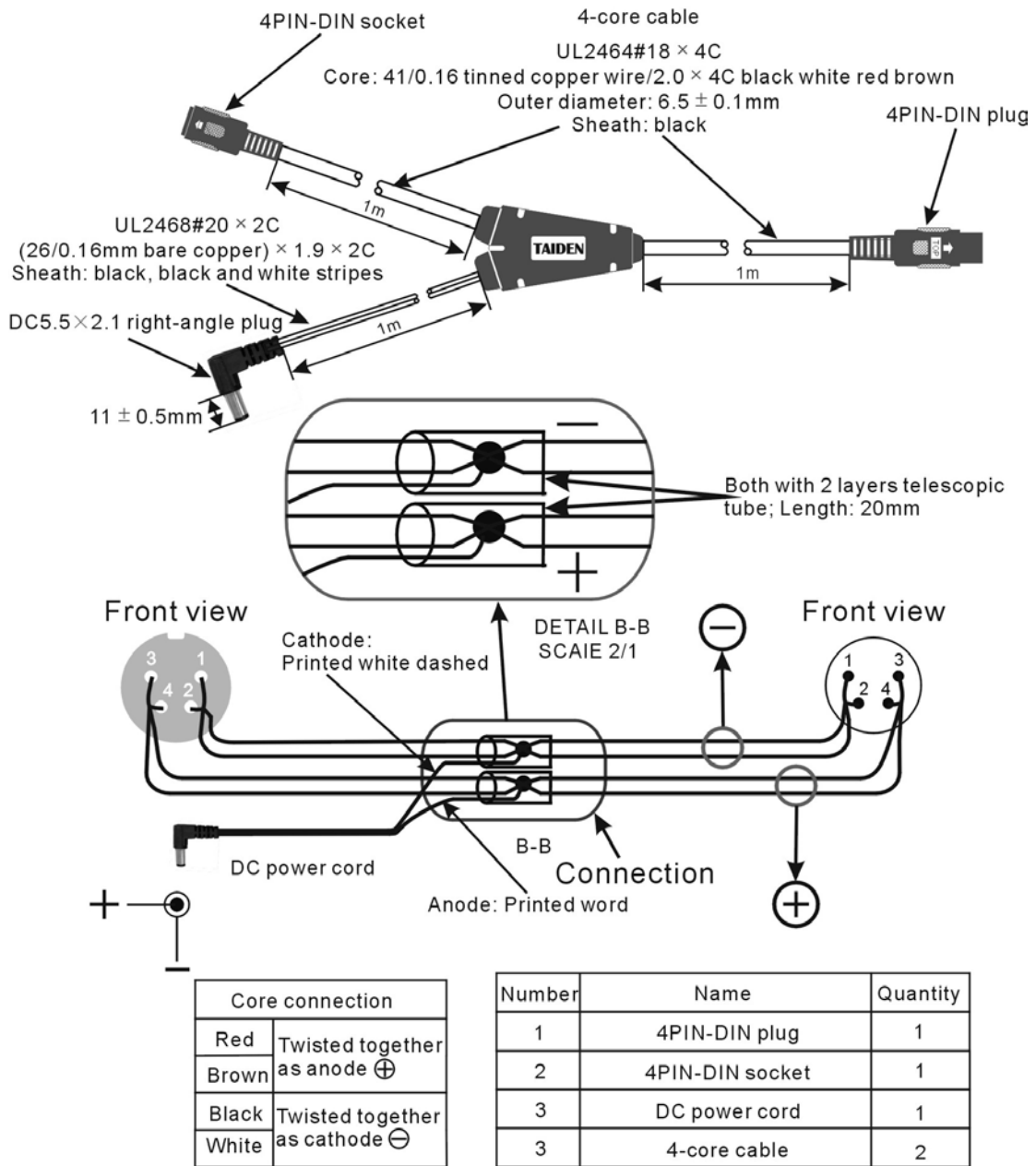
Manufacturing Instruction for CBL4PK-01 Power Adapter Cable



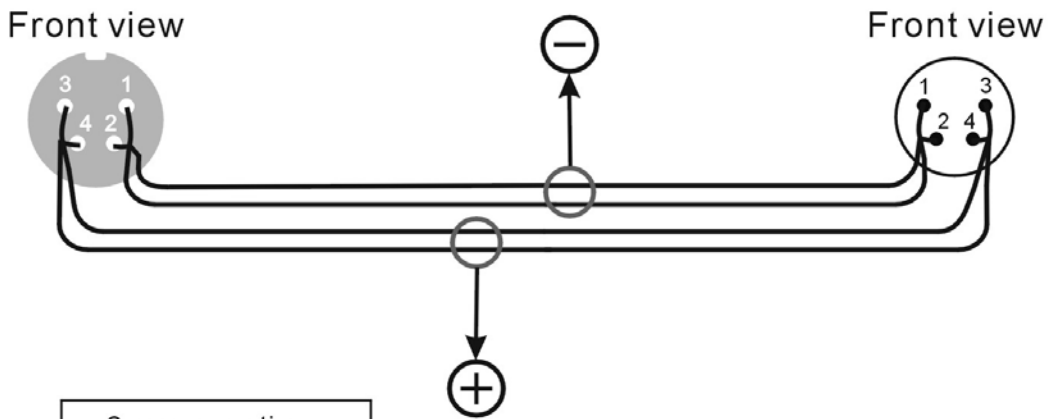
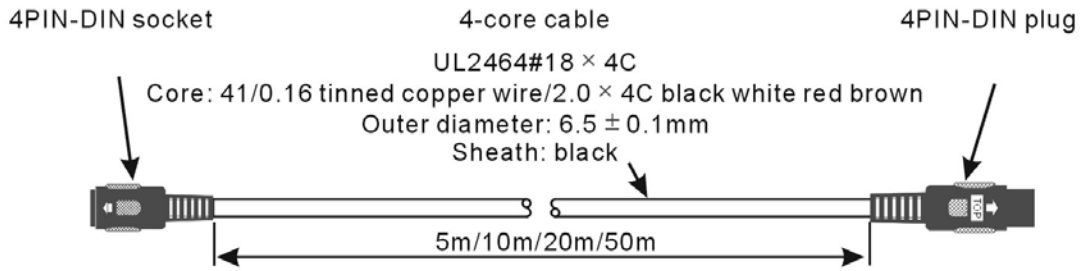
Core connection	
Red	Twisted together as anode ⊕
Brown	
Black	Twisted together as cathode ⊖
White	

Number	Name	Quantity
1	4PIN-DIN socket	1
2	2PIN female aviation socket	1
3	4-core cable	1

Manufacturing Instruction for CBL4PT-02 Power Branch Cable



Manufacturing Instruction for CBL4PS 4-pin Extension Cable



Core connection	
Red	Twisted together as anode ⊕
Brown	
Black	Twisted together as cathode ⊖
White	

Number	Name	Quantity
1	4PIN-DIN plug	1
2	4PIN-DIN socket	1
3	4-core cable	1

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