TAIDEN

New Premium Digital Congress System

Excellent conferencing solutions

New Premium Digital Congress System

Installation and Operating Manual

V 1.6

Remarks:

- 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 2004/108/EC.
- 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** is the registered trademark of TAIDEN Co. Industrial, 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. 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.

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 user 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.

Contents

About this manual

This manual is a comprehensive guide to the installation and operation of the **TAIDEN** HCS-4800 Fully Digital Congress System. It includes the detailed description of the functions and interfaces of the HCS-4800 system components, system connection and installation, system set-up and operation.

The manual is divided into the following chapters:

Chapter 1：Introduction

An introduction to the HCS-4800 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-4800 congress main unit (CMU) and extension main unit (EMU).

Chapter 3：Congress unit

Detailed descriptions of the functions and indications, installation and connection, configuration and operation of the HCS-4800 series discussion units and the voting units.

Chapter 4：Interpreter unit

Detailed descriptions of the functions and indications, installation and connection, configuration and operation of the HCS-8685 interpreter unit.

Chapter5 ： 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-4800 peripheral equipment and the accessories, e.g. stem microphones, earphones, etc.

Chapter 7：Environment and maintenance

An introduction to the work environment and the maintenance of HCS-4800 system.

Chapter 8：Specifications

Main technical parameters of HCS-4800 system.

This manual is applicable to:

■ Congress main units

HCS-4800MA/20

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

HCS-4800MB/20

Fully Digital Congress System Main Unit (discussion, voting, built-in PA)

HCS-4800MC/20

Fully Digital Congress System Main Unit (discussion, voting)

HCS-4800MC

Fully Digital Congress System Main Unit (discussion, voting)

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 units

HCS-4890N/80 series congress units

HCS-4890NCVSE_B/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, 5 voting keys, built-in contactless IC-Card slot, 64 CHs, 4.3" touch screen, black)

HCS-4890NDVSE_B/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, 5 voting keys, built-in contactless IC-Card slot, 64 CHs, 4.3" touch screen, black)

HCS-4890NCS_B/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, 4.3" touch screen, Braille, black)

HCS-4890NDS_B/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, 4.3" touch screen, Braille, black)

HCS-4891/80 series congress units

HCS-4891CVS_B/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, voting, 64 CHs×2, 4.3" touch screen, black)

HCS-4891DVS_B/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, voting, 64 CHs×2, 4.3" touch screen, black)

HCS-4891C_B/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, 4.3" touch screen, black)

HCS-4891D_B/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, 4.3" touch screen, black)

HCS-4891RCVS_S/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, voting, 64 CHs×2, 4.3" touch screen, rectangular columnar metal microphone, silver microphone + black base)

HCS-4891RDVS_S/80

(tabletop, discussion, voting, 64 CHs×2, 4.3" touch screen, rectangular columnar metal microphone, silver microphone + black base)

HCS-4891RC_S/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, voting, 64 CHs×2, 4.3" touch screen, rectangular columnar metal microphone, silver microphone + black base)

HCS-4891RD_S/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, 4.3" touch screen, rectangular columnar metal microphone, silver microphone + black base)

HCS-4891RCVS_S/80/2M

Fully Digital Congress System Chairman Unit (tabletop, discussion, voting, 64 CHs×2, 4.3" touch screen, rectangular columnar metal microphone, main microphone + backup microphone, silver microphone + black base)

HCS-4891RDVS_S/80/2M

Fully Digital Congress System Delegate Unit (tabletop, discussion, voting, 64 CHs×2, 4.3" touch screen, rectangular columnar metal microphone, main microphone + backup microphone, silver microphone + black base)

HCS-4891RC_S/80/2M

Fully Digital Congress System Chairman Unit (tabletop, discussion, 4.3" touch screen, rectangular columnar metal microphone, main microphone + backup microphone, silver microphone + black base)

HCS-4891RD_S/80/2M

Fully Digital Congress System Delegate Unit (tabletop, discussion, 4.3" touch screen, rectangular columnar metal microphone, main microphone + backup microphone, silver microphone + black base)

HCS-4838 series congress units

HCS-4838RCS/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, 16mm electret condenser microphone, 64 CHs, OLED,rectangular columnar metal microphone, Braille, black microphone +charcoal gray base)

HCS-4838RDS/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, 16mm electret condenser microphone, 64 CHs, OLED,rectangular columnar metal microphone,Braille, black microphone +charcoal gray base)

HCS-4838RCS/82

Fully Digital Congress System Chairman Unit (tabletop, discussion, 64 CHs, OLED,rectangular columnar metal microphone,Braille, black microphone +charcoal gray base)

HCS-4838RDS/82

Fully Digital Congress System Delegate Unit(tabletop, discussion, 64 CHs, OLED,rectangular columnar metal microphone,Braille, black microphone +charcoal gray base)

HCS-4838RC

Fully Digital Congress System Chairman Unit (tabletop, discussion, rectangular columnar metal microphone, Braille, black microphone +charcoal gray base)

HCS-4838RD

Fully Digital Congress System Delegate Unit (tabletop, discussion, rectangular columnar metal microphone, Braille, black microphone +charcoal gray base)

HCS-4838RC/2M

Fully Digital Congress System Delegate Chairman Unit(tabletop, discussion, rectangular columnar metal microphone, Braille, black microphone +charcoal gray base)

HCS-4838RD/2M

Fully Digital Congress System Delegate Unit(tabletop, discussion, rectangular columnar metal microphone, Braille, black microphone +charcoal gray base)

HCS-4838CS/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, 64 CHs, OLED, Braille, charcoal gray)

HCS-4838DS/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, 64 CHs, OLED, Braille, charcoal gray)

HCS-4838C

Fully Digital Congress System Chairman Unit(tabletop, discussion, Braille, charcoal gray)

HCS-4838D

Fully Digital Congress System Delegate Unit (tabletop, discussion, Braille, charcoal gray)

HCS-48U6/80 series congress units

HCS-48U6CMICM/80

Fully Digital Congress System Chairman Unit (flush-mounting, discussion, HCS-48U6VOT and HCS-48U6SPK can be connected, black)

HCS-48U6DMICM/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, HCS-48U6VOT and HCS-48U6SPK can be connected, black)

HCS-48U6CMICS

Fully Digital Congress System Chairman Unit (flush-mounting, discussion, HCS-48U6SELM/80 needed , black)

HCS-48U6DMICS

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, HCS-48U6SELM/80 needed , black)

HCS-48U6SELM/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, HCS-48U6SELM/80 needed, black)

HCS-48U6DVOTTW

Fully Digital Voting Unit (flush-mounting, 3 voting keys, built-in contactless IC-Card slot, HCS-48U6SELM/80 or HCS-48U6MICM/80 needed, black)

HCS-48U6DVOTFW

Fully Digital Voting Unit (flush-mounting, 5 voting keys, built-in contactless IC-Card slot, HCS-48U6SELM/80 or HCS-48U6MICM/80 needed, black)

HCS-48U6SPK

Fully Digital Congress System Chairman Unit (flush-mounting, discussion, HCS-48U6VOT and HCS-48U6SPK can be connected, black)

HCS-48U7/80 series congress unit

HCS-48U7CM/80

Fully Digital Congress System Chairman Unit (flush-mounting, discussion, built-in loudspeaker and 3.5mm TRS headphones jack, black)

HCS-48U7DM/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, built-in loudspeaker and 3.5mm TRS headphones jack, black)

HCS-48U9/80 series congress units:

HCS-48U9CVSW/80

Fully Digital Congress System Chairman Unit (flush-mounting, discussion, 5 voting keys, contactless IC-Card reader, 64 CHs, 256x32 LCD, black)

HCS-48U9DVSW/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, 5 voting keys, contactless IC-Card reader, 64 CHs, 256x32 LCD, black)

HCS-48U10/80 series congress units:

HCS-48U10CVSE/80

Fully Digital Congress System Chairman Unit (flush-mounting, discussion, 3 voting keys, built-in contactless IC-Card slot, 64 CHs, OLED, black)

HCS-48U10DVSE/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, 3 voting keys, built-in contactless IC-Card slot, 64 CHs, OLED, black)

HCS-48U10DS/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, 64 CHs, OLED, black)

HCS-48U10DDS/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, 64 CHs, 2 channel selectors, OLED, dual predefined position, black)

HCS-4860/80 series congress units:

HCS-4860CS_B/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, rectangular columnar metal microphone, 64 CHs, OLED, black)

HCS-4860DS_B /80

Fully Digital Congress System Delegate Unit (tabletop, discussion, rectangular columnar metal microphone, 64 CHs, OLED, black)

HCS-4860C_B /80

Fully Digital Congress System Chairman Unit (tabletop, discussion, rectangular columnar metal microphone, black)

HCS-4860D_B /80

Fully Digital Congress System Delegate Unit (tabletop, discussion, rectangular columnar metal microphone, black)

HCS-4860/80/2M series dual backup microphone congress units

HCS-4860C_B/80/2M

Fully Digital Congress System Chairman Unit (tabletop, discussion, rectangular columnar metal microphone, main microphone + backup microphone, black)

HCS-4860D_B/80/2M

Fully Digital Congress System Delegate Unit (tabletop, discussion, rectangular columnar metal microphone, main microphone + backup microphone, black)

HCS-4860X/80 series congress unit

HCS-4860CX_B/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, XLR connector for condenser microphone with +36 V phantom power, black)

HCS-4860DX_B/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, XLR connector for condenser microphone with +36 V phantom power, black)

HCS-4860CXD/80

Fully Digital Congress System Chairman Unit(tabletop, discussion, XLR connector for condenser microphone with +46 V phantom power, digital audio + analog audio dual backup output, black)

HCS-4860DXD/80

Fully Digital Congress System Delegate Unit(tabletop, discussion, XLR connector for condenser microphone with +46 V phantom power, digital audio + analog audio dual backup output, black)

HCS-484* series congress unit

HCS-4840DHT

Multi-function Connector (for connection to 4 pcs of HCS-4842DHT channel selectors, silver)

HCS-4842DHT

64-Channel Selector (flush-mounting, HCS-4840DHT needed, black)

HCS-4841DMIC

Multi-function Connector (for connection to 2 condenser microphones, +48 V phantom power, with microphone On/Off button, black)

HCS-4813 series congress unit

HCS-4813C

Fully Digital Congress System Chairman Unit (tabletop, invisible microphone, 5 voting keys, 64 CHs, black)

HCS-4813D

Fully Digital Congress System Delegate Unit (tabletop, invisible microphone, 5 voting keys, 64 CHs, black)

HCS-4815 series congress unit

HCS-4815C

Fully Digital Congress System Chairman Unit (tabletop, invisible microphone, black)

HCS-4815D

Fully Digital Congress System Delegate Unit (tabletop, invisible microphone, black)

HCS-4825

Dual 64-Channel Selector (flushing-mounting,black)

HCS-4827 series congress unit

HCS-4827H

HandheldMicrophone

(flush-mounting,HCS-4827SELM/HCS-4825 needed, black)

HCS-4827SELM

Flush-mounting 64-Channel Selector (black)

HCS-4857 series congress unit

HCS-4857C

Fully Digital Congress System Chairman Unit(flush-mounting, discussion, lifting microhone, black)

HCS-4857D

Fully Digital Congress System Delegate Unit(flush-mounting, discussion, lifting microhone, black)

■ Interpreter Unit

HCS-8685

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

■ 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)
	Interpreter headset (for HCS-8685)
EP-960AH	Interpreter headphone(Use for HCS-8685)
EP-960BH	Interpreter headphone
HCS-5100PA	Headphone

Chapter 1: Introduction

1.1 Summary

By using TAIDEN originated MCA-STREAM 2.0(Multi_Channel_ Audio STREAM) digital processing and transmitting technologies, TAIDEN HCS-4800 Series Fully Digital Congress System revolutionizes conference systems technology by incorporating the latest fully digital technologies, audio technologies and network techniques. Furthermore, with perfect integration of TAIDEN Conference Sign-in System and Central Control System, HCS-4800 takes the leadership in providing comprehensive and efficient digital conference system solutions.

"Closed Loop - Daisy Chain" connection technology, to connect all congress units and simplifying installation, as well as dual connection backup have been opted for.

By supporting 48 kHz audio sampling rate, all 64 channels feature a 20 Hz to 20 kHz frequency response.

HCS-4800 Fully Digital Congress System consists of congress main unit, contribution units and application software. Congress main unit includes the congress control main unit (CMU) and the extension main unit (EMU). Contribution units include discussion units, voting units, simultaneous interpreter units, channel selectors, etc. The application software contains a number of software, performing different tasks.

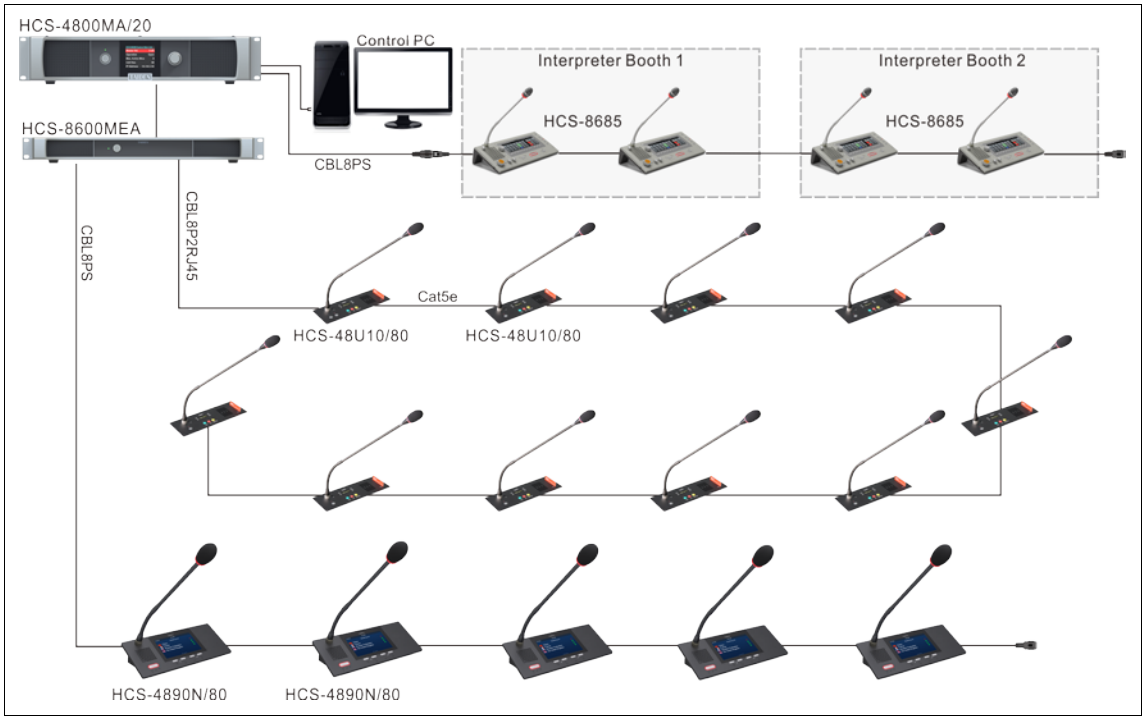

Figure 1.1.1 System overview

1.2 System technology

- **MCA-STREAM 2.0 muti-channel audio digital transmitting technology**

TAIDEN proprietary MCA-STREAM 2.0 technology is the essential data transmission technology in the HCS-4800 system, e.g. transmitting up to 64 CHs high quality digital, control and other information data over a single dedicated 100 Mbps high speed 8-pin cable or cat5e cable with a drain wire. Every unit - congress main unit, congress unit, language distribution unit, interpreter unit - is equipped with a high performance CPU as the kernel of the advanced technology infrastructure.

By virtue of using the MCA-STREAM 2.0 technology, HCS-4800 Series Fully Digital Congress System carries out:

Ease of system cabling and enhancement of system reliability by utilizing a single dedicated 8-pin cable or cat5e cable with a drain wire to transmit up to 64 CHs floor and interpretation language signals, avoiding the necessity to use complicated multi-core cables.

Prevention of noise caused by the ground wire in stereo projects as well of interference brought by other equipment (such as stage lights, recording apparatus, etc.). SNR reaches 100 dB and isolation is better than 85 dB. The frequency response verges on 20 Hz to 20 kHz; making the system sound approaching CD quality.

Provision of Hi-Fi sound quality, even in long range transmission, which makes the system widely suitable for various applications such as mini/medium type meeting rooms, large venues, stadiums, etc.

By virtue of using the MCA-STREAM 2.0 technology, HCS-4800 Series Fully Digital Congress System carries out:

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- Provision of Hi-Fi sound quality, even in long range transmission, which makes the system widely suitable for various applications such as mini/medium type meeting rooms, large venues, stadiums, etc.

- **HCS-4800 system hardware structure**

HCS-4800 system hardware is an embedded structure based on dual high performance CPU. Even in stand-alone mode, HCS-4800 is competent for the management of various meetings via several basic conference management facilities, such as basic microphone management, electronic voting, multilingual simultaneous interpretation, etc.

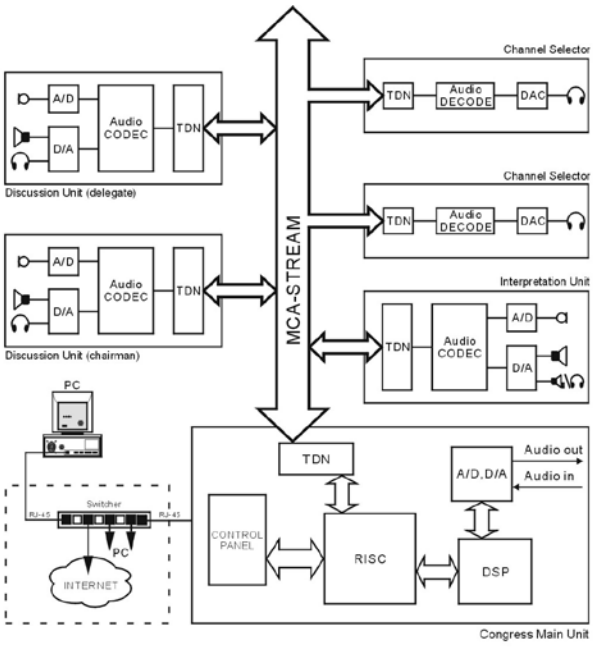


Figure 1.1.2 HCS-4800 system hardware structure

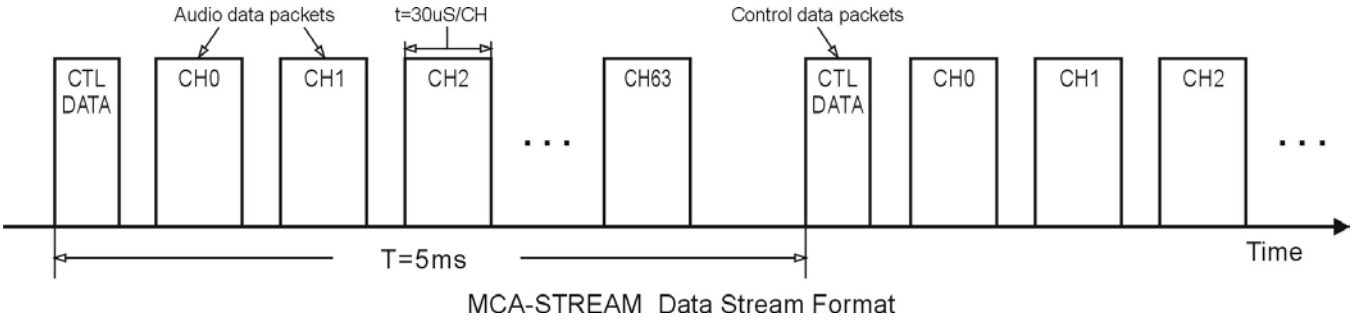


Figure 1.1.3 MCA-STREAM 2.0 data stream format

- **Modular system structure**

Any kind of configuration can be set up just by daisy-chaining HCS-4800 congress units. The modular system structure of HCS-4800 is applicable to any kind of conference and provides an accurate and efficient solution. Additional congress units can be added when needed. More system functions are available in connection with a PC and control software.

- **Dual congress main unit hot spare**

HCS-4800 dual main unit hot spare is a disaster protective structure. Besides the main unit, the user can set another CMU as backup CMU and connect it to the system. If the main unit breaks down during the conference, the backup main unit substitutes the main unit and the system software will connect to backup CMU automatically, ensuring the consistency of the conference.

- **HCS-4800 system software infrastructure**

HCS-4800 system software is designed for the prevalent Client/Server structure. Client and server communicate with each other by using TCP/IP network protocol, ensuring both data security and transmission efficiency. Client and server software can run on the same computer as well as on different computers in the same LAN, enabling the operator to manage the conference more flexibly.

HCS-4800 system software imports the hot-spare dual server structure by using a main server and a back-up server. While the main server is processing, data are stored real time on the back-up server to prevent conference related information from loss in case of a crash of the main server. As a result, security and reliability of the conference system are improved vitally.

- **Duplicate and backup connection via “Closed Loop - Daisy Chain” connection**

For important meetings, especially those which consider connection reliability as their leading point, HCS-4800 Series Fully Digital Congress System 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 through duplicate and backup connection functions.

- **Advanced TCP/IP communication protocol in PC control**

In a PC controlled system, the congress main unit and the PC use the advanced TCP/IP protocol. Theoretically, the communication distance between the PC and the CMU can be infinite. This is decisively different to traditional RS232 connection modes where the distance between the PC and the CMU cannot exceed 15 meters. TCP/IP enables remote control, remote diagnosis and remote update.

By using network techniques, conference systems are tightly linked to the rapidly developing internet technology, computer science and communication technology. Users enjoy the convenience of the contemporary leading techniques, e.g. by using the compatible wireless LAN techniques (802.11) - such as PDAs - which can be used to control a conference system wirelessly. The import of network topology also

makes the conference system merge with intelligent building networks.

- **CMU and EMU**

The congress main unit forms the core of the entire congress system. It provides power supply to all contribution units and serves as key component to link system hardware to application software. One CMU has two (8P-DIN) trunk-line cable outlets. If more congress units are needed, additional extension main units HCS-8600MEA or HCS-8300MEA2 are required, each EMU has five (8P-DIN) trunk-line cable outlets. HCS-4800 system maximum capacity: 378 interpreter units (63 interpreter booths, 6 interpreter units in each), 4096 discussion/voting units and any number of channel selectors.

In stand-alone mode without a PC, the CMU carries out basic management facilities, simultaneous interpretation, electric voting and 64 CHs digital audio transmission. By operating HCS-4800 application software in PC-controlled mode, more comprehensive management facilities can be implemented.

- **Contribution units**

Contribution units are units used by participants to contribute to a conference and include: discussion unit (chairman/delegate), voting unit, interpreter unit, channel selector, etc. The basic contribution unit has discussion, voting or channel select facility. The upgraded units combine discussion, voting and channel select, furthermore built-in loudspeaker, IC-Card reader and graphic 256x32/256x64 LCD with back-lighting, forming a wide variety of product series. The chairman unit has microphone priority facility with a priority button to switch off or to mute speaking units. If required, different functions can be allocated to delegate stations, including listening, discussion, request to speak, voting, IC-Card sign-in, short message, information display, etc.

Depending on the option, congress units can be divided into tabletop, flush-mounted and component. Each style consists of various products, which significantly enriches users' choices.

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 HCS-8368/8668/8638/8665 series) are supplied by the 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 extension cables do in no case exceed the maximum possible value delivered by each 8P-DIN interface. Otherwise the system will not work properly or automatic protection will be triggered.

- **Application software**

HCS-4800 application software is comprehensive, reliable and user-friendly. It is also an easy-care software system which helps the operator to manage the conference efficiently from the very beginning of a meeting until the post-meeting work. Once the PC installed and the HCS-4800 application software integrated into the HCS-4800 system, the operator manages all aspects of the conference centrally. The operation turns out to be easy and efficient.

HCS-4800 application software have various of parts: System Setup Management, Microphone Management, Voting Management, Simultaneous Interpretation, Multi-User Conference Control Management, Dual PC Server Hot Spare, Agenda Control, Dual System Main Unit Hot Spare, etc.

- **Installation and transportation**

Easy installation is another important feature of HCS-4800 system. HCS-4800 digital congress units have a 1.5-meter 8P-DIN cable (with male connector) and a 0.6-meter 8P-DIN cable (with female connector) or have two RJ45 sockets (cat5e cable with a drain wire & RJ45 plug with metal shield for connection). All congress units are connected together in a daisy chain configuration and connected to the main unit by the dedicated extension cable.

1.3 Functions

- **Discussion**
  - "Active microphones" (1/2/3/4), sets the number of delegates permitted to speak at the same time, and sets speaking time limit function
  - Five discussion modes:
    - "Open" mode, microphone On/Off button with request-to-speak registration (AUTO)
    - "Override" mode, microphone On/Off button control with override of the active delegate microphones (FIFO)
    - "Voice" mode, acoustic active sensitivity and automatic switch-off time adjustable continuously, built-in "flash-on" technology, immediate microphone activation on speaking
    - "Apply" mode, delegate applies to speak by pressing microphone On/Off button, delegate only speaks when operator or chairman approved his application
    - "PTT" mode, press microphone On/Off button to talk
  - VIP unit configurable:
    - By using TAIDEN conference management system software
    - VIP unit can be activated in any mode freely, as long as the active microphone capacity is not full
  - 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

  - **64 CHs simultaneous interpretation**
    Supporting 48 kHz audio sampling rate, all 64 channels perfectly reproducing audio frequencies between 20 Hz and 20 kHz
  - HCS-4800 system can accommodate 378 simultaneous interpreter units (63 interpreter booths, 6 interpreter units in each), and provide 64 CHs (including floor language) simultaneous interpretation
  - The interpreter unit is equipped with a uni-directional electret condenser microphone. Gain and EQ (5 band) of each microphone adjustable separately for different acoustic features to get perfect sound performance for different orators. It features also 5 pre-defined input channels and 3 output interpretation channels and their corresponding short keys, high lightness 256×64 graphic LCD with back-lighting, built-in IC-Card reader and audio record and playback function
  - Delegates use channel select to listen to different languages. In cooperation with channel selectors and/or infrared language distribution system, a larger listening audience can join in the meeting

- **Voting**
  - If the system is equipped with a chairman unit with a graphic LCD, parliamentary voting (YES/NO/ABSTAIN) can be implemented even without a PC. The result is displayed on the LCD of every contribution unit
  - Dedicated software for more forms of voting:
    - For/Against
    - Parliamentary: YES/NO/ABSTAIN
    - Questionnaire: 1/2/3/4/5
    - Audience response: --/-/0/+/++
    - Parliamentary (NPPV): YES/NO/ABSTAIN/NPPV
    - Appraisal:

    Satisfied (Four options: perfectly satisfied, satisfied, basically satisfied, unsatisfied)
    (Three options: satisfied, basically satisfied, unsatisfied)
    (Two options: satisfied, unsatisfied)
    Qualified (2/3/4 options)
    Competent (2/3/4 options)

- **Information display**
  - By using the information display of the HCS-4800 application software, conference title, content, conference related information as well as meeting related notice can be displayed on large screen display (or projector).

- Contribution units equipped with graphic 256x32 LCD show:
  - Active microphone amount, request amount, delegates' signed-in and voting results, etc.
  - Messages (messages from system administrator to all or part of participants)
  - Multilingual (simplified/traditional Chinese and English, etc.) menu
- Contribution units equipped with LCD show:
  - English menu
  - Channel number and language name

- **Automatic video tracking system**

Automatic video tracking can be carried out with video switch unit and camera are installed.

- **Remote control and remote diagnosis**

Using advanced TCP/IP network protocol in communication between PC and CMU - to implement remote control, remote diagnosis and remote update for the conference system - for easy central control of a multi-room configuration.

- **Intercom**

If an operator unit is in the system, the built-in intercom facility allows bidirectional vocal communication between congress participants, interpreters and operators. Extra equipment is not required.

- **Multi-room configuration function**

The built-in intercom facility allows bidirectional vocal communication between conference participants, interpreters and operators, if an operator unit is in the system. Extra equipment is not required.

- **Integrated optical fiber interface**

Optical fiber interface is integrated into HCS-4800MA congress main unit, in cooperation with HCS-8600 series extension main unit, audio input & output device. Thus several mutually distant conference rooms can be combined and be operated as one venue.
HCS-4800MA congress main unit and HCS-8600 series extension main unit can be connected by optical fiber or Cat.5e cable.

- **Seamlessly Integrated with Conference Sign-in System and the Central Control System**

The seamless integration of HCS-4800 Series Fully Digital Congress System, TAIDEN conference sign-in system and central control system provides comprehensive conference system solutions. Besides the basic conference management (discussion, voting, simultaneous interpretation, video tracking, etc.), it also provides conference sign-in and access control for the conference participants. Furthermore, it gives complete facilities to manage conference system power supply and peripheral multimedia equipment, surrounding lights, projector display and sound equipment. The easy incorporation of peripheral components upgrades the system into an advanced intelligent conference system with integrated solutions for conferencing, audio, lighting control, etc.

- **Fully compatible with TAIDEN HCS-8600 Series Paperless Multi-media Congress System**

Fully compatible with TAIDEN HCS-8600 Series Paperless Multimedia Congress System: HCS-8600 series congress units can be connected to the HCS-4800 system, and HCS-4800 series congress units can be connected to the HCS-8600 system (exclusive functions only available with HCS-8600 contribution units).

- **Other facilities**
  - With the multi-channel audio input & output device (several units cascadable), multi-channel audio signals are available as output signals for infrared language distribution system or recording
  - Built-in self-detecting functions in each contribution unit for automatic detection of microphone and keys

1.4 Features

- **System reliability**

System reliability, as described below, has always been the guiding principle while designing HCS-4800 series fully digital conference system:

- Dual congress main unit hot spare
- System software imports the hot-spare dual server structure by operating the main server and the back-up server at the same time
- Dual connection backup is implemented between HCS-4800MA/20 congress main unit and HCS-8600MEA extension main unit via optical fiber and Cat.5 cable
- "Closed Loop - Daisy Chain" connection topology, breakdown or replacement of a congress unit and connection failure of a cable will not influence other congress units
- Built-in communication auto termination function to prevent system collapse if the TCP/IP cable is pulled out
- Auto recovery function, supports “PnP”
- If PC malfunction happens, CMU will return to control status automatically and take over control of the meeting, ensuring continuation of the meeting process

- **System technological progress**

HCS-4800 Series Fully Digital Congress System - based on TAIDEN originated independent intellectual property rights digital processing and transmitting technologies MCA-STREAM 2.0 - adopts embedded hardware structure based on high performance dual CPU. HCS-4800 application software is based on Client/Server and hot-spare dual server structure. CMU and PC use advanced TCP/IP protocol for communication, perfectly integrated to benefit from modern technologies.

Furthermore, conference sign-in system and central control system can be integrated into TAIDEN HCS-4800 Series Fully Digital Congress System to provide a complete and efficient solution.

- **System operability**

CMU controls efficiently: basic microphone control, simultaneous interpretation, video tracking, voting - without the intervention of an operator.

With a PC and HCS-4800 application software, more functions can be achieved, including enhanced microphone control, simultaneous interpretation, delegate information management, sign-in control, meeting data management and distribution, voting control and output audio processing. HCS-4800 application software can also be set up according to user requirements.

HCS-4800 application software adopts Client/Server structure - the process of the meeting is controlled by the operator from any PC within the same LAN. If PC malfunction occurs, CMU will return to control status automatically and take over control of the meeting, ensuring continuation of the meeting.

- **Fine extensibility**

The interpreter unit of HCS-4800 has a maximum of 64 channels (including floor channel) and satisfies the requirements of large-scale international meetings: allocating a language for each channel, selecting a channel, interlock facility. To avoid reciprocal interference and crosstalk the language of each channel can be released separately. The system supports a maximum of 4096 congress units and an infinite number of channel selectors.

HCS-4800 system is modular: just daisy-chain HCS-4800 units to set-up a configuration. If extra system capacity is needed, units can be connected easily, starting from any access point.

- **Economical and convenient installation**

In virtue of the fully digital techniques of HCS-4800 system, system installation becomes simple and economical, especially in conjunction with the economical and durable HCS-4800 system dedicated 8-PIN cable or cat5e cable with a drain wire. The cable, suitable for the requirements of any kind of meeting, transmits up to 64 high quality audio signals, control data and information simultaneously.

An ID can be assigned by default or manually to each conference unit bearing a unique serial number for convenient maintenance.

System connection reliability is improved by the

professional 8P-DIN standard plug and clasp which facilitates system installation as well as disassembly. Cat5e Ethernet cable with a drain wire can be used as connection cable and extension cable. As a result of the daisy-chain design of the contribution units, insertion into the system can be done at any desired point, simplifying equipment extension and maintenance significantly.

- **System maintenance**

TAIDEN application software provides testing functions for online testing the operating conditions such as validity of the keys, LCD and microphones.
A detailed test report is issued for quick and simple maintenance of the system device.

Chapter 2 Congress main unit (CMU)

The congress main unit (CMU) forms the core of the HCS-4800 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-4800 system can reach its maximum capacity: 378 simultaneous Interpreter units, 4096 discussion/voting units and an infinite number of channel selectors.

Product types:

HCS-4800MA/20

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

HCS-4800MB/20

Fully Digital Congress System Main Unit (discussion, voting)

HCS-4800MC/20

Fully Digital Congress System Main Unit (discussion, voting)

HCS-4800MC

Fully Digital Congress System Main Unit (discussion, voting)

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

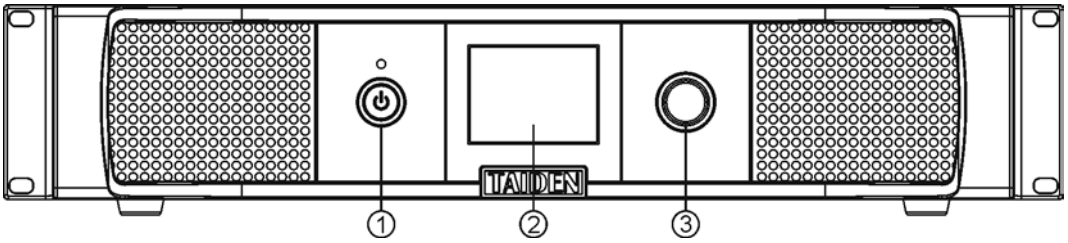
Fully Digital Congress System Extension Main Unit (with 2 single-mode optical fiber interfaces, 5 congress unit outlets)

HCS-8600MES

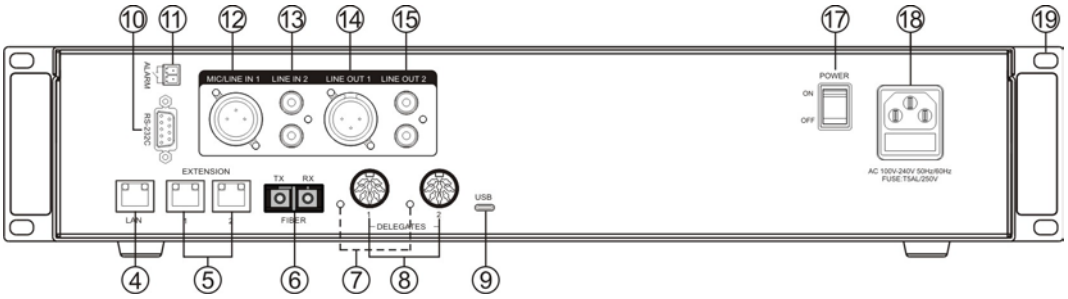
Fully Digital Congress System Extension Unit (3 congress unit outlets)

2.1 Fully Digital Congress System Main Unit

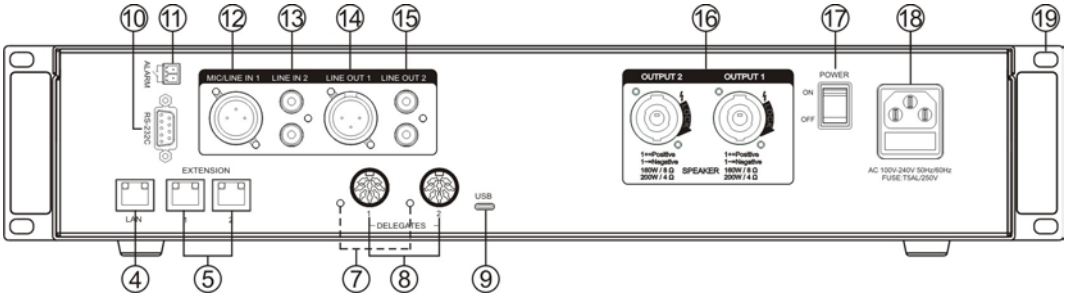
2.1.1 Functions and instructions



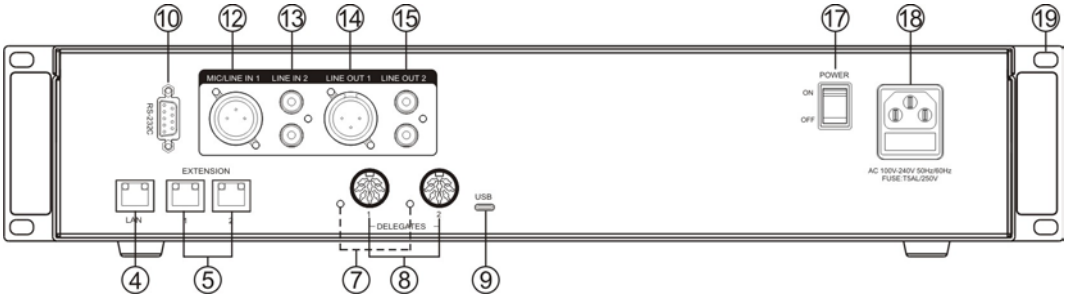
Front panel of HCS-4800M CMU



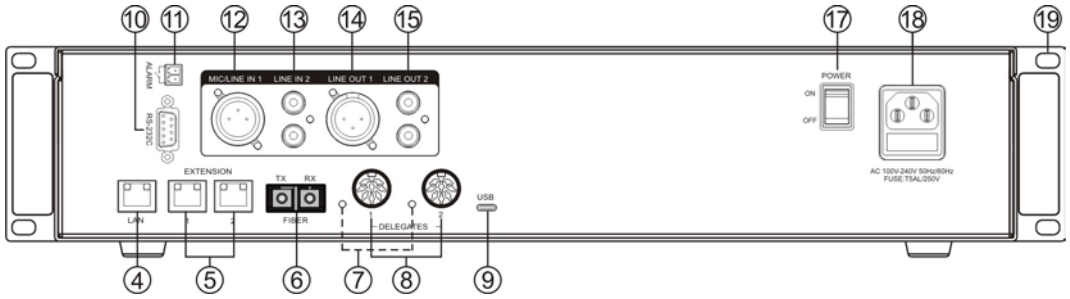
Backside of HCS-4800MA/20 CMU



Backside of HCS-4800MB/20 CMU



Backside of HCS-4800MC CMU



Backside of HCS-4800MC/20 CMU

Figure 2.1.1 HCS-4800M 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" 320×240 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. Type-C USB interface

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

10. RS-232C port

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

11. Fire alarm linked trigger interface

- Emergency signal interface, all congress units will be switched off and display "ALARM";
- **No voltage input or too low voltage:** congress units will return to the status preceding "ALARM".

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

13. "LINE IN 2" (RCAx2 unbalanced input)

14. "LINE OUT 1" (3 cord XLR balanced output)

15. "LINE OUT 2" (RCAx2 unbalanced output)

16. POWER OUTPUT

- Four core SPEAKON speaker sockets;
- Power output: 2×160 W (8 Ω)
  2×200 W (4 Ω)
- 1+=Positive, 1-=Negative.

17. Mains switch

18. Power supply

- 100 - 240 V, 50/60 Hz.

19. Fixed hole of the cabinet installation

2.1.2 Connection

2.1.2.1 To contribution units

HCS-4800 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 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.

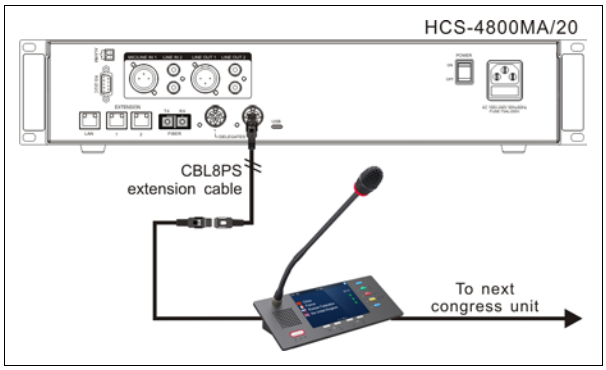


Figure 2.1.2 CMU connecting to contribution units (8P-DIN)

For a longer distance between the contribution unit and the CMU/EMU, a CBL8PS 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.

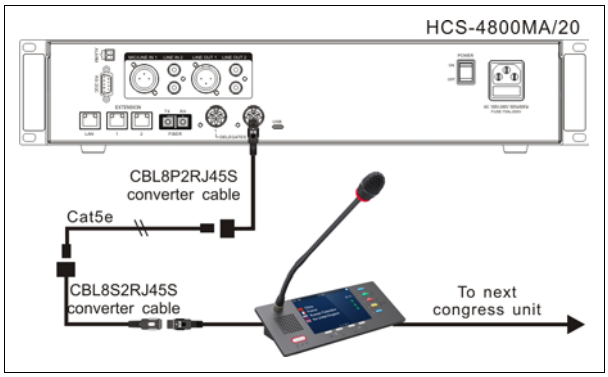


Figure 2.1.3 CMU connecting to contribution units (8P-DIN)

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 CBL8PS extension cable.

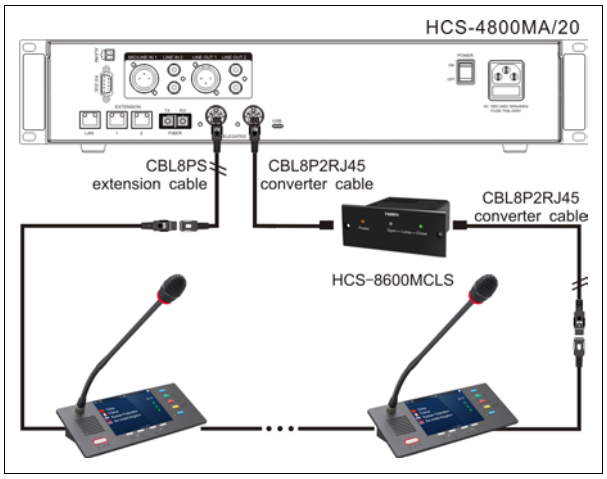


Figure 2.1.4 “Closed Loop - Daisy Chain” connection topology (8P-DIN)

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.

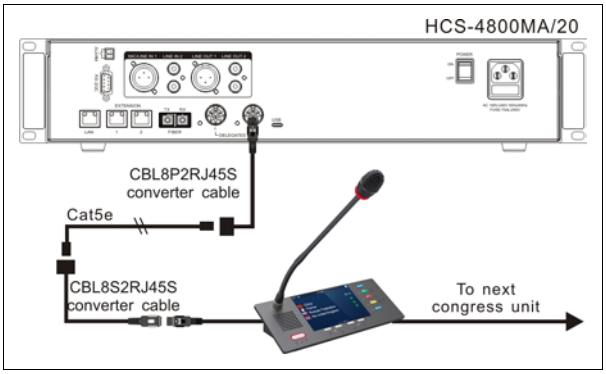


Figure 2.1.5 CMU connecting to contribution units (RJ45)

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.

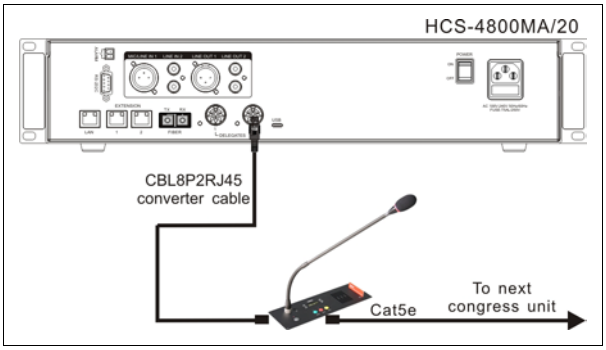


Figure 2.1.6 CMU connecting to contribution units (RJ45)

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.

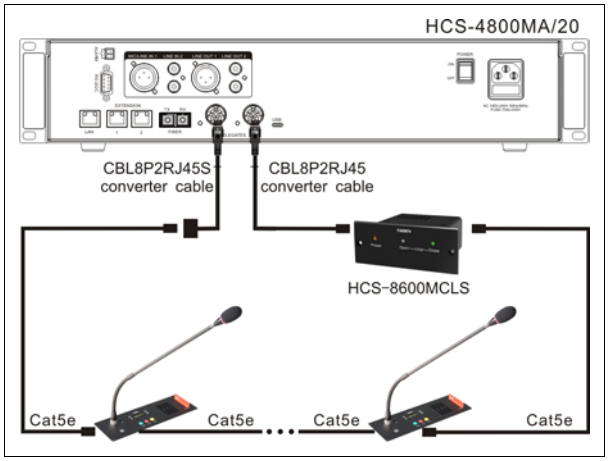


Figure 2.1.7 “Closed Loop - Daisy Chain” connection topology (RJ45)

In HCS-4800 series fully digital congress system, power is provided by HCS-4800M CMU (or HCS-8600 EMU) for all congress units. 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 sound equipment

The CMU of the HCS-4800 system has a pair of RCA symmetrical audio outputs “LINE OUT 2” and a 3-cord XLR balanced output “LINE OUT 1”, to be connected to a PA. Connecting the RCA symmetrical audio outputs or the 3-cord XLR balanced output of the CMU to the input port of the PA via an audio wire.

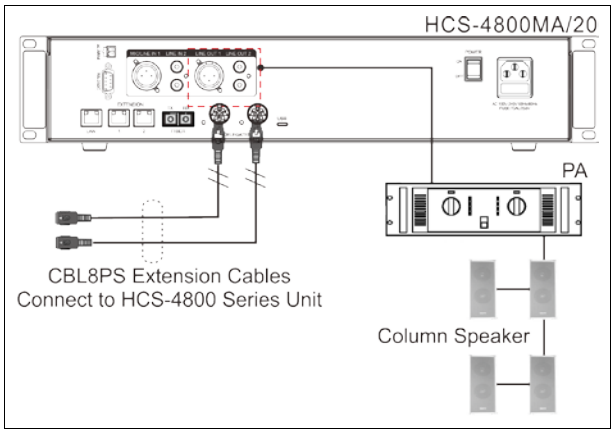


Figure 2.1.8 CMU connecting to PA

The HCS-4800MB fully digital congress system main unit builds in power amplifier and has 2 Speakon audio output interfaces, which can be directly connected to the loudspeaker. It is suitable for small conference rooms and simplifies system configuration. As shown in Figure 2.1.9.

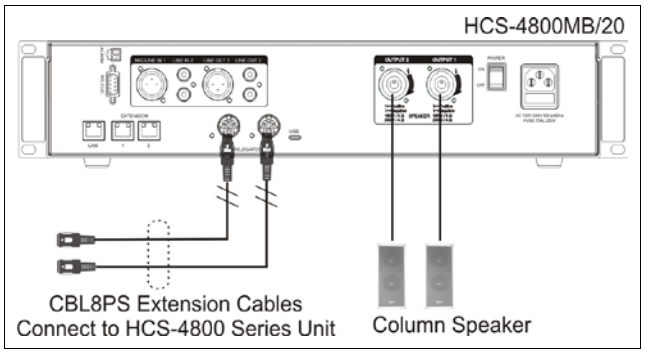


Figure 2.1.9 CMU connecting to loudspeaker

2.1.2.3 To fiber device

The HCS-4800M 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 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:

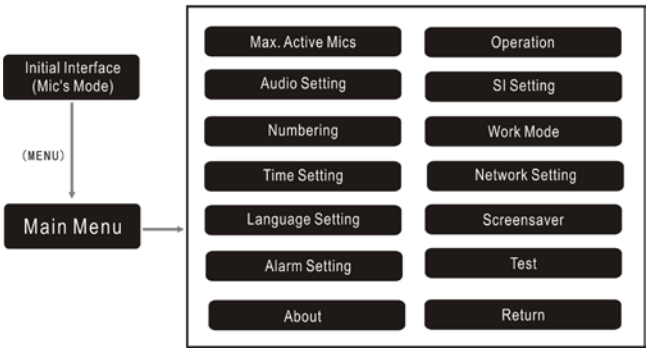
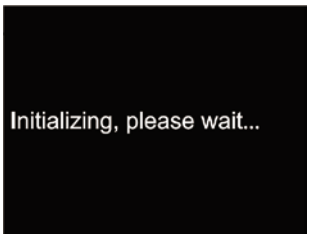


Figure 2.1.10 LCD menu structure of the CMU

A) Starting initialization

Switch on and press the “STANDBY” button, HCS-4800 CMU will start initialization:



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

B) Initial interface on LCD

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

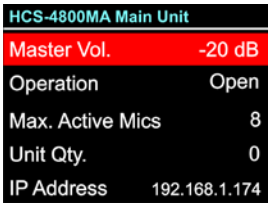
“Master Vol.”

“Operation”

“Max. Active Mics”

“Unit Qty”

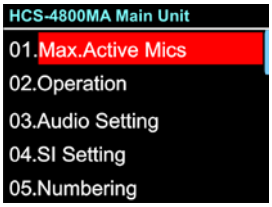
“IP Address”



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:

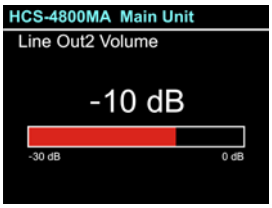


Menu of HCS-4800M:

1. Max. Active Mics	2. Operation
3. Audio Setting	4. SI Setting
5. Numbering	6. Work mode
7. Time Setting	8. Network Setting
9. Language Setting	10. Screensaver
11. Alarm Setting	12. Test
13. About	14. Return

1. Max. Active Mics

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



a). Rotate the function knob to select the sub menu;

b). Press the function knob to enter number section interface;

c). Rotate function knob to set the maximal number of microphones;

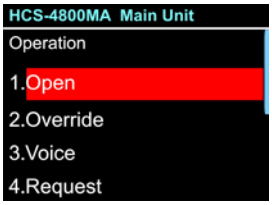
d). Press the function knob to save and return to upper

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;

2. Operation

Set the microphone mode “Open”, “Override”, “Voice”, “Request” or “PTT”.



a). Rotate the function knob to select the sub menu;

b). Press the function knob to enter operation setting interface;

c). Rotate function knob to select operation mode;

d). 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.

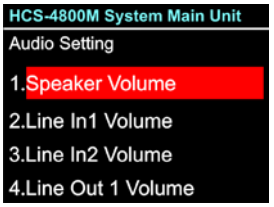
"PTT" (push-to-talk):

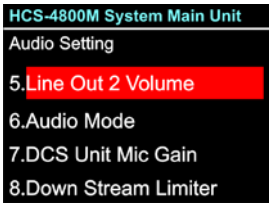
When the delegate presses and holds the microphone ON/OFF button, the microphone will be activated; when the ON/OFF button is released, the microphone will be deactivated.

3. Audio Setting

In "Audio setting" submenu, the following parameters need to be setup:

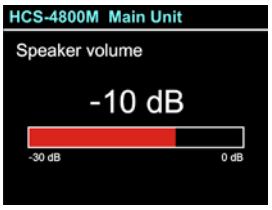
- "Speaker Volume:"
- "Line In1 Volume:"
- "Line In2 Volume"
- "Line Out 1 Volume"
- "Line Out 2 Volume"
- "Audio Mode"
- "DCS Unit Mic Gain"
- "Down Stream Limiter"





1).Speaker Volume

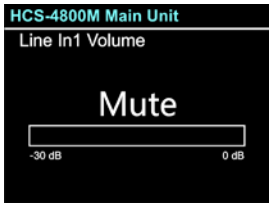
Adjust build-in speaker of congress unit(interpreter unit is not included)volume in the system. Adjust range: Mute, -30 dB~0 dB



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

2).Line In 1 Volume

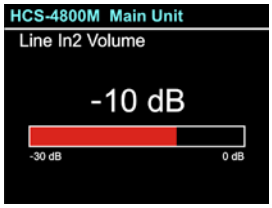
Adjust main unit line in 1 volume, Adjust range: Mute, -30 dB~0 dB



a)Rotate the function knob to select the sub menu;
b)Press the function knob to enter Line In 1 Volume;
c)Rotate function knob to adjust;
d)Press the function knob to save and return to upper level menu.

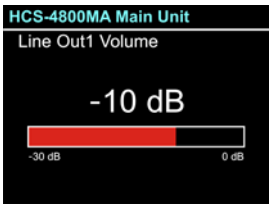
3).Line In 2 Volume

Adjust main unit line in 2 volume, Adjust range: Mute, -30 dB~0 dB



a)Rotate the function knob to select the sub menu;
b)Press the function knob to enter Line In 2 Volume;
c)Rotate function knob to adjust;
d)Press the function knob to save and return to upper level menu.

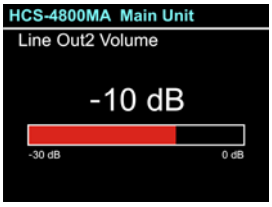
4).Line out 1 Volume



a)Rotate the function knob to select the sub menu;
b)Press the function knob to enter Line Out 1 Volume;
c)Rotate function knob to adjust;
d)Press the function knob to save and return to upper level menu.

5).Line Out 2 Volume

Adjust main unit line out 2 volume, Adjust range: Mute, -30 dB~0 dB



a)Rotate the function knob to select the sub menu;
b)Press the function knob to enter Line Out 2 volume;
c)Rotate function knob to adjust;
d)Press the function knob to save and return to upper level menu.

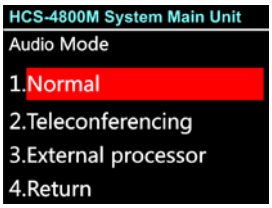
6).Audio mode

Set audio mode for main unit which included normal mode, teleconferencing mode or external processor mode optional.

a)Normal mode: all input sources can be output through all the output channels;

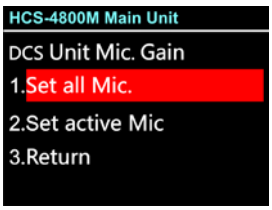
b)Teleconferencing mode: the input source Line In 1 cannot be output through Line/AES Out1 and can be output normally through other output channels;

c)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;



a)Rotate the function knob to select the sub menu;
b)Press the function knob to enter Audio Mode selection;;
c)Rotate and press the function knob to select;
d)Press the function knob to save and return to upper level menu.

7).DCS unit Mic Gain

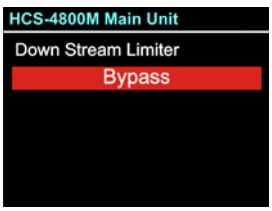


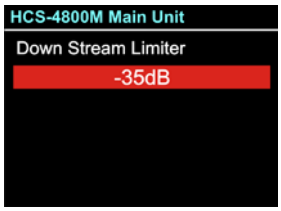
a). Rotate the function knob to select the sub menu;
b). Press the function knob to set all microphone or active microphone;
c). Press the function knob to enter gain setting interface, select “Specified Value”, adjust range: -12db~+12db or “Step Adjustment”, adjust range: +1db or -1db;

d). Rotate the function knob to adjust gain value
e). Select return to upper level menu.

8).Down Stream Limiter

Adjust down stream limiter of build-in speaker(s) and earphone(s) of all congress units.





a)Rotate the function knob to select the sub menu;
b)Press the function knob to select “Bypass” or “-36dB~1dB” ;
c)Select return to save and return to upper level menu.

4. SI setting

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

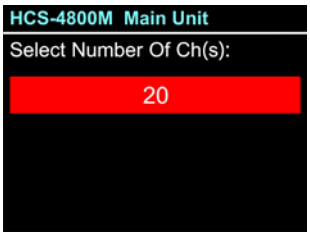
- “SI CH Setting”
- “Interp. Unit Boost Gain”
- ” Out CH. changeable”
- “Floor Distribution”
- “Lock Between Booths ”
- “Interlock Between Booths

Enter “SI CH Setting” submenu, according to the following steps:

Setup number of interpretation channels → Select language for booth →Select number of booths Select Output Channel→ Auto-Relay booth Setting

1)SI CH Setting

a). Setup number of interpretation channels

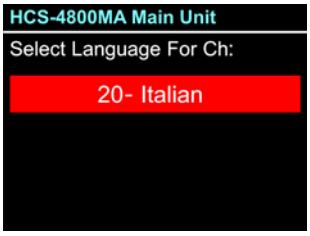


Rotate function knob to switch between 0-63;

- 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). 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.

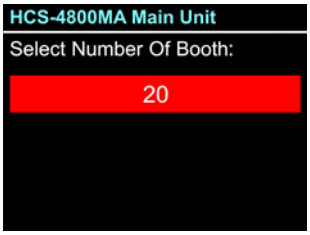


(1)Setup channel 1 first, rotate function knob to switch between languages;

(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. 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 Output Channel

Interpreter unit offers channel A, B and C to output, all interpreter units in one booth share the same language. After select the number of booths, it will enter interface of booth language setting.

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

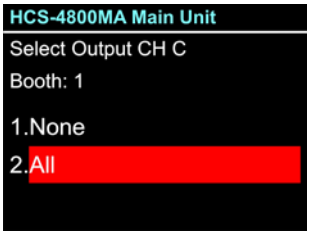
3rd step: select a language for B. Three channels are now available: A and B output a selected language and C outputs any available language.

If None is selected for C then

4th step: select B: None or All

(1)Set language of channel A: Rotate function knob to throughout all channels in step b)setting, press the knob to confirm;

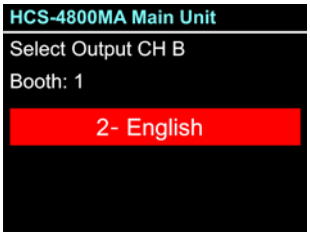
(2)Set the channel C language, select between “None” or “All” ; if select “All” , refers to channel C of booth1;



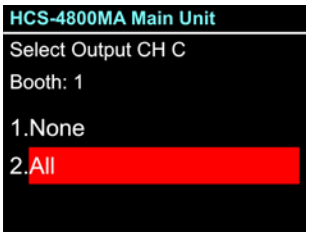
If NONE is selected for B only A outputs the selected language of step 1. B and C do not output languages

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

(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”;



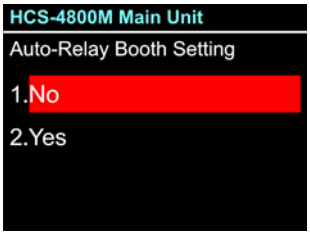
- **“NONE”** stands for no language output from channel B;
- **“ALL”** stands for the language of channel B which can be any of the selected languages.

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 e).

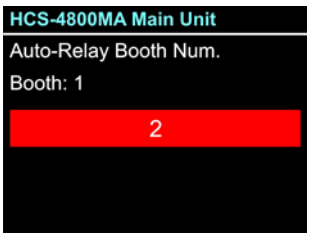
e). Auto-Relay booth Setting

Setup Auto-Relay booth.

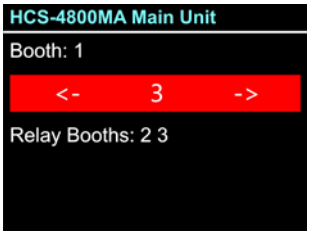


(1)Rotate function knob to select yes or no

- 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:

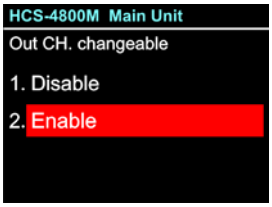
- If channel B and C of a booth have no output, this booth can not be set as auto-relay booth.

2.Interp. Unit Boost Gain

Press and rotate the knob to adjust gain, adjust range: 0~+6dB

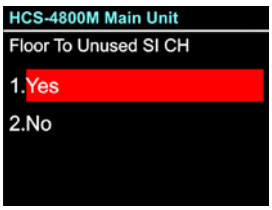
3)Out CH. Changeable

Press and rotate the knob select “Disable” or “Enable”



4)Floor To Unused SI CH

Press and rotate the knob to select if unused SI Channel to be distributed floor language



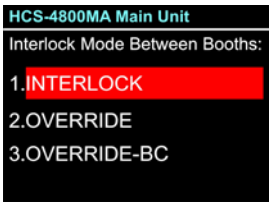
5)Select interlock mode between booths

Select interlock mode between booths, includes:

“OVERRIDE”

“OVERRIDE BC”

“INTERLOCK”



(1) Rotate function knob to switch among three interlock modes;

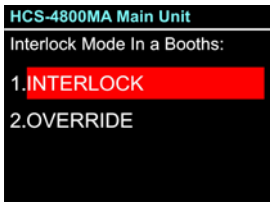
- “INTERLOCK” mode prevents that two booths engage the same channel.
- “OVERRIDE” mode enables an interpreter in another booth to override an occupied channel in another booth, but supplying the same channel.
- “OVERRIDE BC” mode enables A channel of an interpreter in another booth to override an occupied 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).

6). Select interlock mode in a booth

Select interlock mode in a booth, includes:

“OVERRIDE” “INTERLOCK”

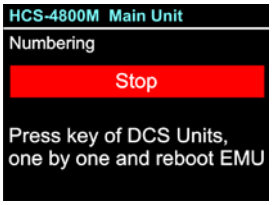


(1) Rotate function knob to switch between the interlock modes;

- “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).

5.Numbering



Numbering congress units manually.

a) Rotate the function knob to select “0.5 Numbering”, then select and press “start” . The LCD screen of the main unit shows “Press key of DCS Units, one by one and reboot EMU”;
Meanwhile, LCD screen of those connected congress units will pop up a number and those congress units without screen, their indicate light will flashing;

b) Press “numbering” key of congress units one by one;

c) Reboot the main unit after all congress units being numbered for updating .

Note:

- ☞ When numbering, please number the congress units one by one and do NOT press the “Number” button of several congress units at the same time, when all the unit numbering is finished, restart the main unit to update the number of all congress units;
- ☞ HCS-4800 series congress unit have automatic numbering function. “Numbering” function means numbering manually, applied to control congress unit according to their number, such

6. Work mode

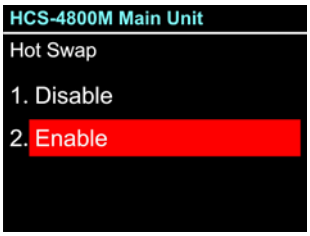
If two CMU are installed in one system, they needs to be set as “Master Mode” and “Slave Mode” separately.

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);



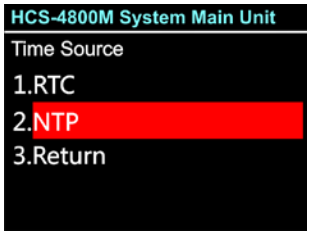
d). Rotate function knob to select "Disable" or "Enable";

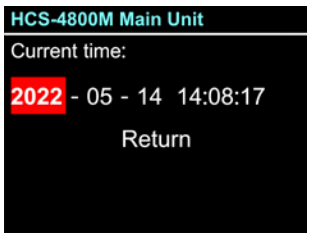
- If “Disable” is selected, slave CMU will backup master CMU automatically in the meeting process. If master CMU stops, slave CMU will NOT switch to master mode;
- If “Enable” is selected, slave CMU will backup master CMU automatically during the meeting process. If master CMU stops, slave CMU will switch automatically to master mode and act as master CMU;

e). Press the function knob to save and return to upper level menu.

7. Time Setting

System time setting.

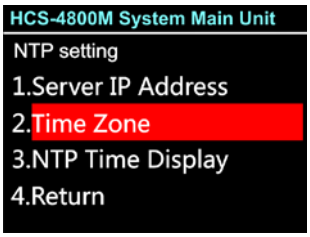




a). Rotate the function knob to select the sub menu;

b). Rotate the function knob to select “Time Source”;

- If select RTC (Real time clock), rotate function knob to go to “Year”, “Month”, “Day”, “Hour”, “Minute” "Second" in turn;
- If select NTP(Network Time Protocol), then set the server address of connected computer first, then rotate the function knob to select time zone(it also can be set on Web interface), time on main unit will update synchronously;



c). Press the function knob to set time (at this time, the time item number bold display);

d). Rotate the function knob to adjust the value;

e). Press the function knob to save the value;

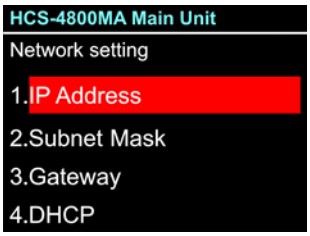
f). Repeat steps c)~f) and set the other time items in turn;

g). Rotate the function knob to "Return" and press the function knob to return to upper level menu.

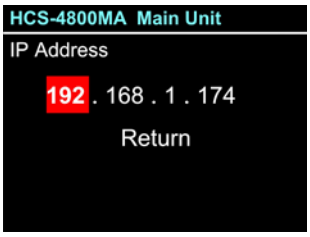
8. Network setting

“Network setting” includes submenus:

“IP Address”
“Subnet Mask”
“Gateway”
“DHCP”
“Return”



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



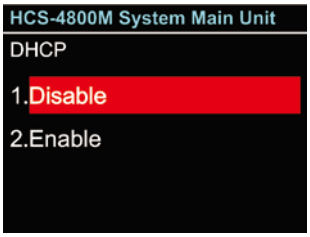
a). Select “IP Address” and press the function knob to go to setup IP address interface;
b). Rotate function knob to switch between the four numbers;
c). Press the function knob to set number (at this time, the number bold display);
d). Rotate the function knob to adjust the value;
e). Press the function 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;

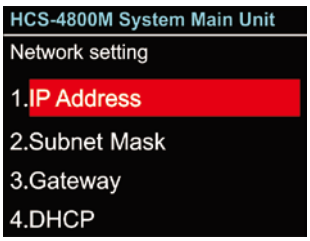
c). Press the function knob to save and return to upper level menu.

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

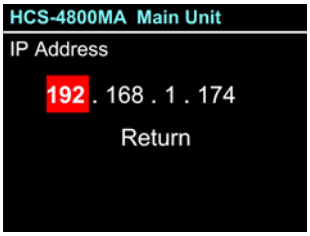
Note:
☞ When controlled by PC software, “Subnet Mask” and “Gateway” should be setup according to the PC configuration, otherwise it may cause a connection problem.

8. Network Setting

“Network” includes submenus:
“IP Address”
“Subnet Mask”
“Gateway”
“DHCP”
“Return”



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.

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. 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:

a). Rotate function knob to select the sub menu;

b). Press function knob to enter language setting interface;

c). Rotate function knob to select LCD display language;

d). Press function knob to save and return to upper level menu

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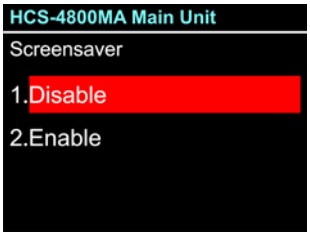
10.Screensaver

Set LCD screensaver for main unit.



a). Rotate the function knob to select the sub menu;

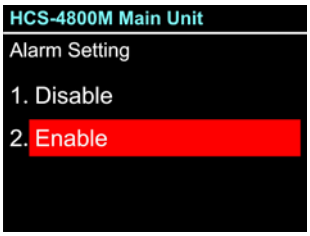
b). Press the function knob to enter screensaver setting interface;

c). 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;

d). Press the function knob to save and return to upper level menu.

11. Alarm Setting



a) Rotate the function knob to select "Disable" or "Enable"

- ➢ Disable: Disable alarm notice;
- ➢ Enable: If it being actived,all congress unit will turn off and those with LCD screen will show "Alarm";

b) Press the function knob to return to previous menu;

Note:

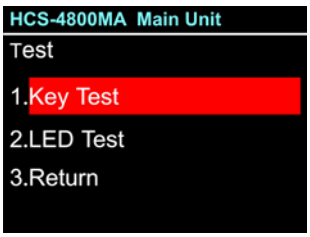
- ☞ Alarming setting only suitable for HCS-4800M/20 series main unit.

12.Test

"Test**"** includes submenus as follows:

"Key Test"

"LED Test"



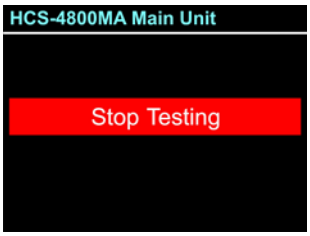
Key Test:

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

a). 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;

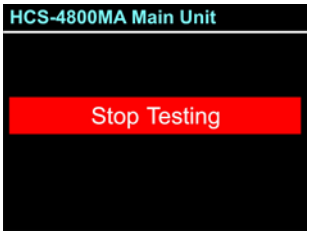
b). The button LEDs of all contribution units will blink and all the contribution units with LCD will prompt a hint, press all buttons in turn and test them;

c). When all keys are tested, press function knob to return to upper menu.



LED Test:

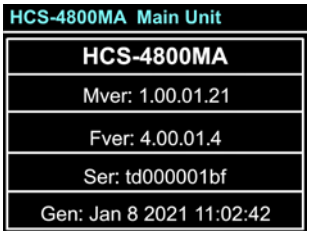
Rotate function knob to select “LED Test” and press function knob to enter LED (indicating light) test interface. The LEDs (indicating light) on all connected contribution units will blink immediately.



Press function knob to exit LED test interface.

13.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.

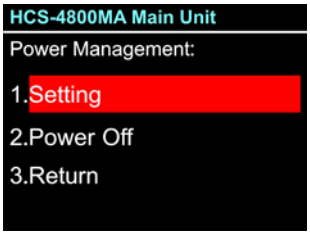


14.Return

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.

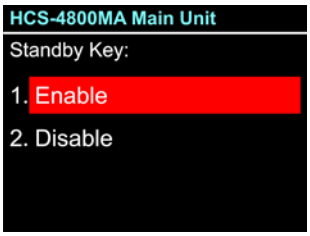
D) Power Management

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



a). 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;



b). 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;

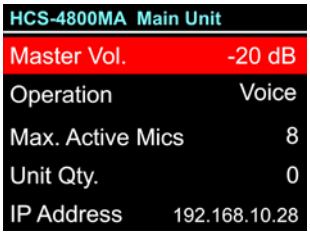
c). Press function knob to save and return to the upper level menu.

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.

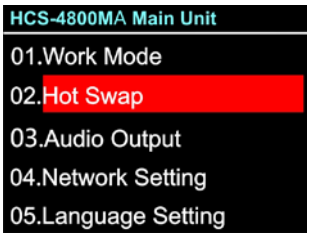
E) Connecting to PC

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



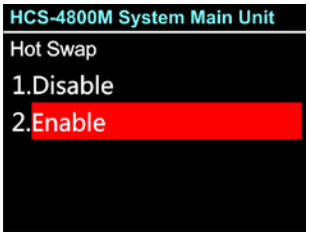
2.1.4 Configuration and operation - slave mode

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.



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;



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:** same as this menu operation in the main mode;
8. **Return:** return to the LCD initial interface main mode;

2.1.5 Web Control

HCS-4800M 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.

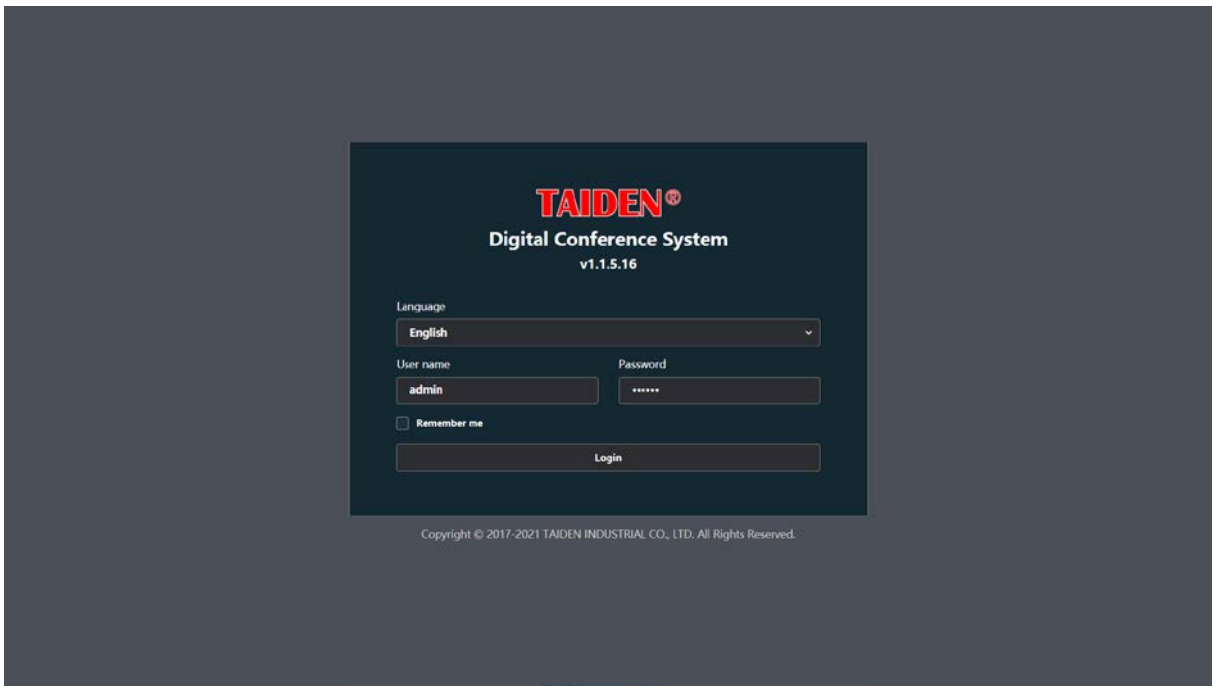


Figure: Login

- 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.

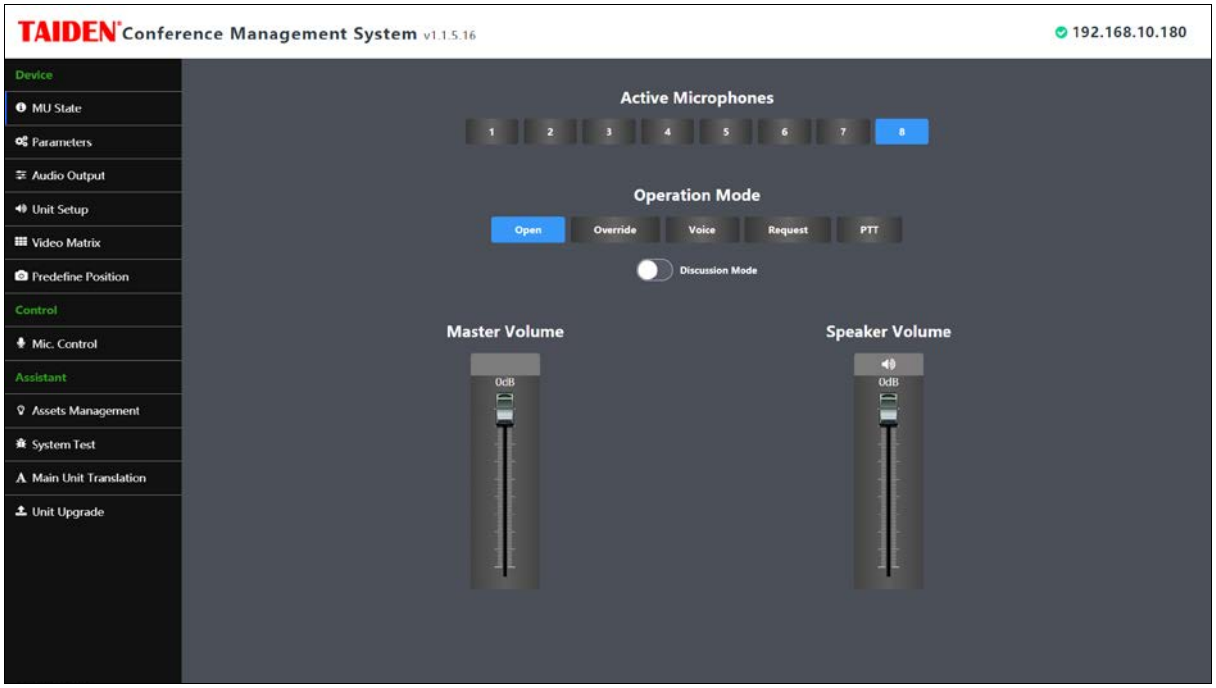


Figure: MU State

- **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

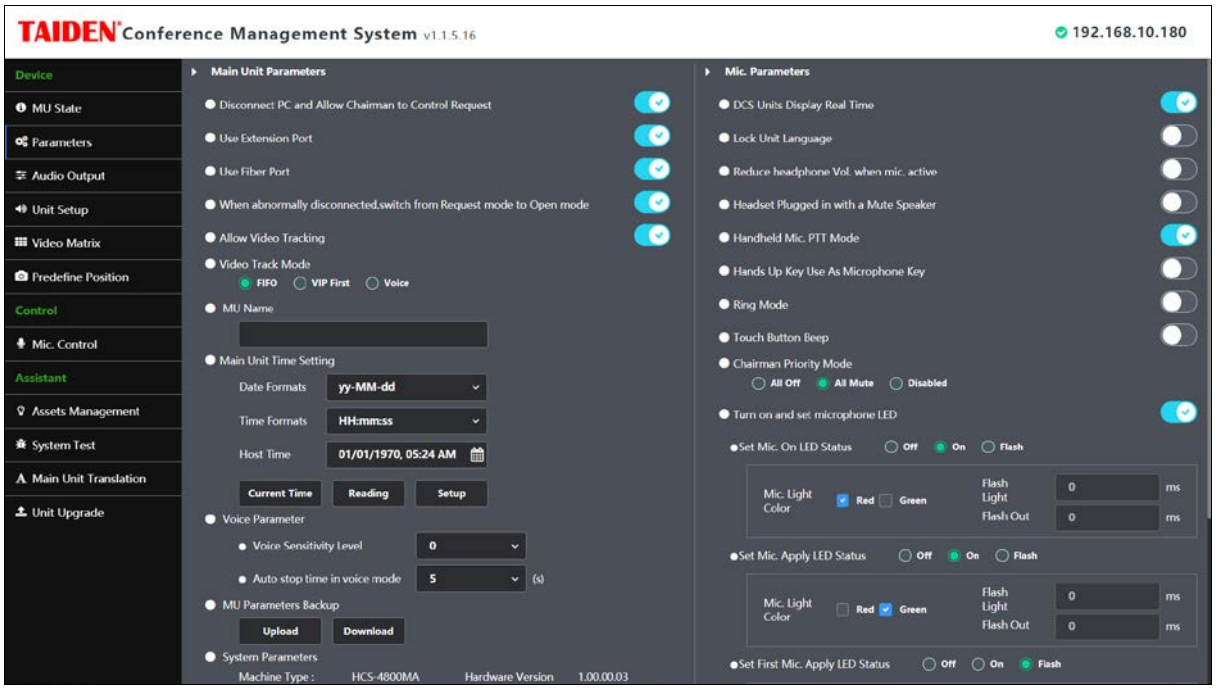


Figure: Parameters

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.

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

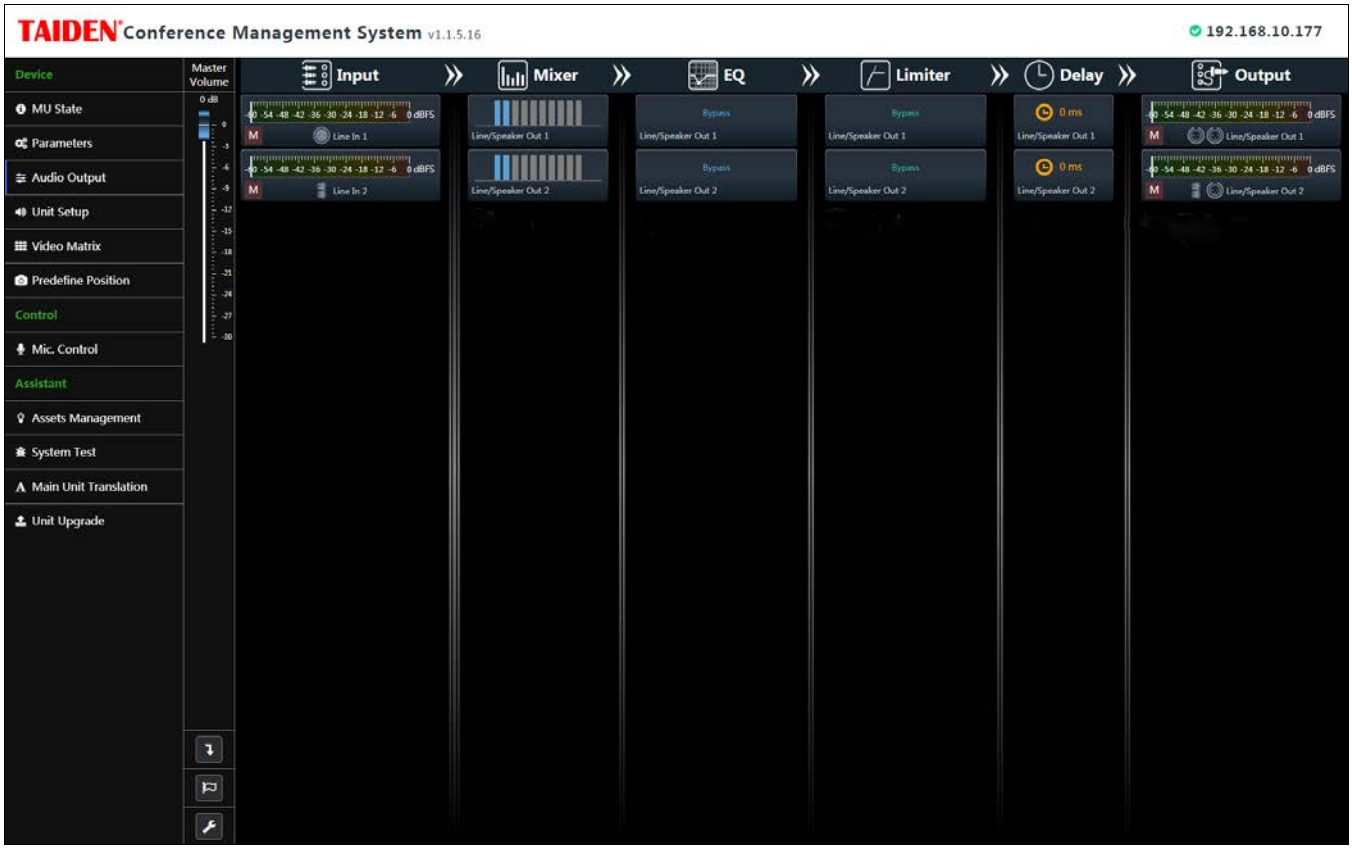


Figure: Audio Output Setup

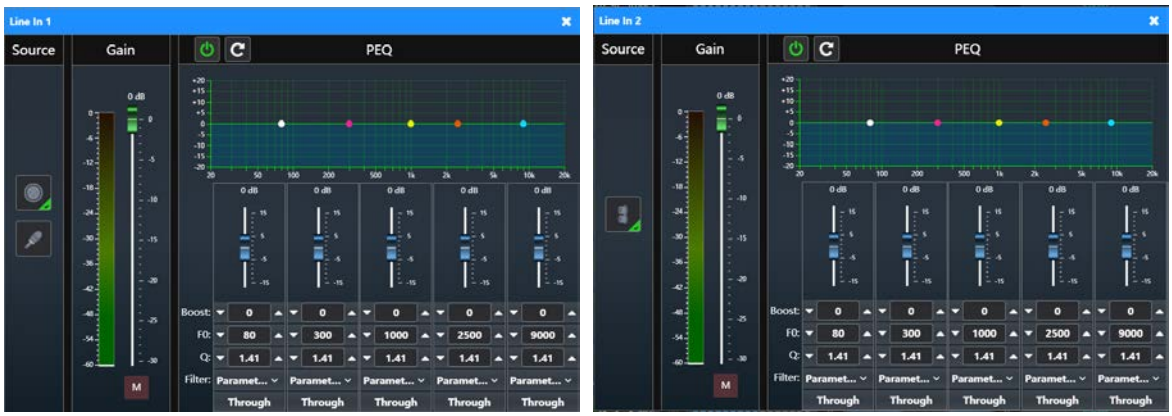
Note: only the HCS-4800MB supports Speaker out.

- **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**

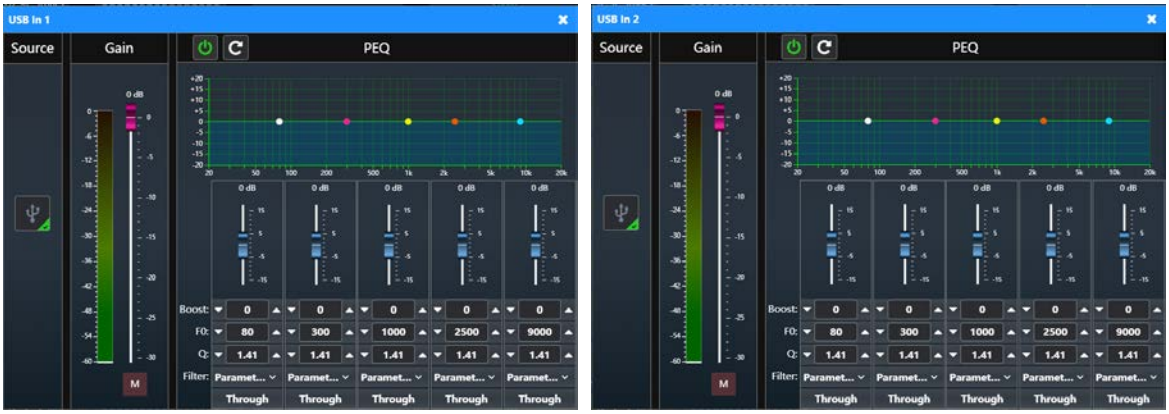
  Based on TAIDEN originated CongressMatrix™ technology, supports 2 audio line in + 2 USB in, or 1 audio line in + 1 microphone input + 2 USB in, gain and EQ for each input adjustable separately. +48 V phantom power supply at microphone input, condenser microphone can be connected directly.

  - **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:** two input sources can be selected (Line In 1, 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:** set Gain (range: -30 dB ~0 dB) and EQ (5 band, range: -15 dB ~15 dB), display real-time level;



- **USB 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*^{TM} technology, supports 26 audio outputs.

a) Line Out 1~2: 31 band graphical EQ + Limiter +Delay, the maximum delay time is 1000 ms;

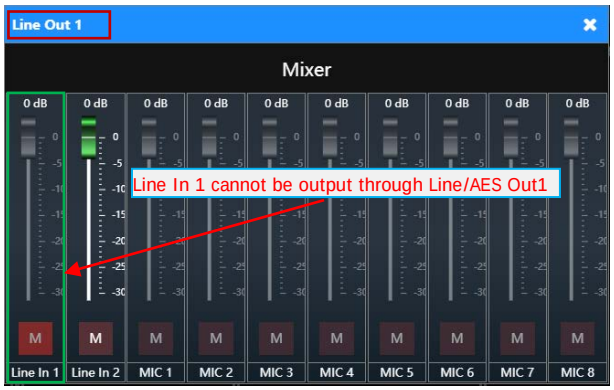
b) USB 1~2: 8 band parametric EQ + Limiter;

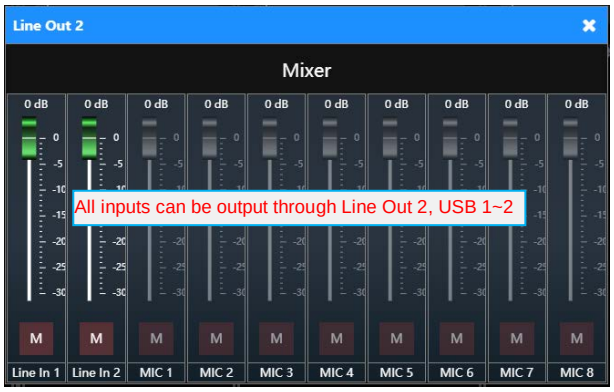
Note: In the following audio modes, the USB In signal is not output from the USB Out channel. If the teleconference mode is enabled, the remote input signal MIO TC In occupies one USB input channel, and the remote output signal MIO TC Out occupies one USB output channel, the signal of MIO TC In is not output from the MIO TC Out channel.

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

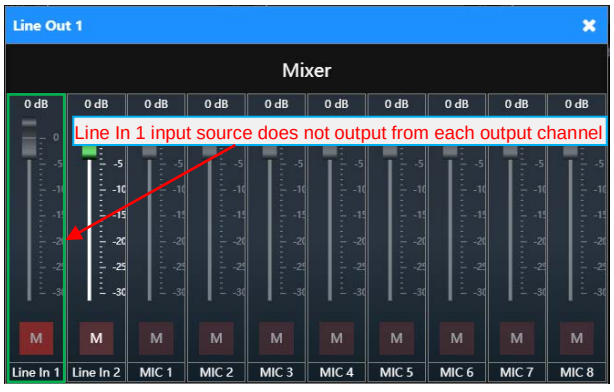
  Audio mode - Normal Mode: all input sources can be output through output channels, as shown below:

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

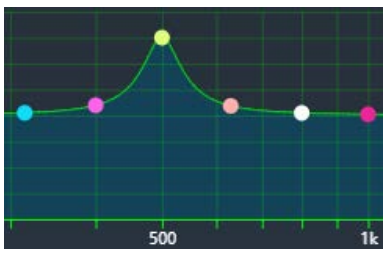




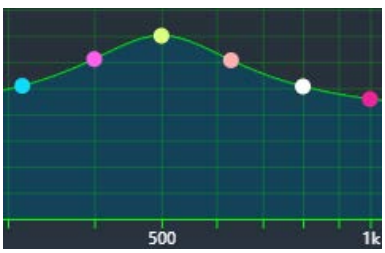
Audio mode - External Processor Mode: Line In 1 input source can be output through down-stream audio channel, other input sources can be output normally through output channels, as shown in the following figure:



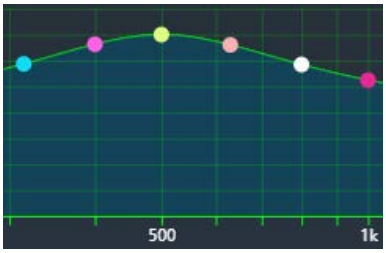
- **31 band GEQ:** Line Out 1~2 support the 31 band graphical equalizer;



Narrow Band



Normal



Wide Band

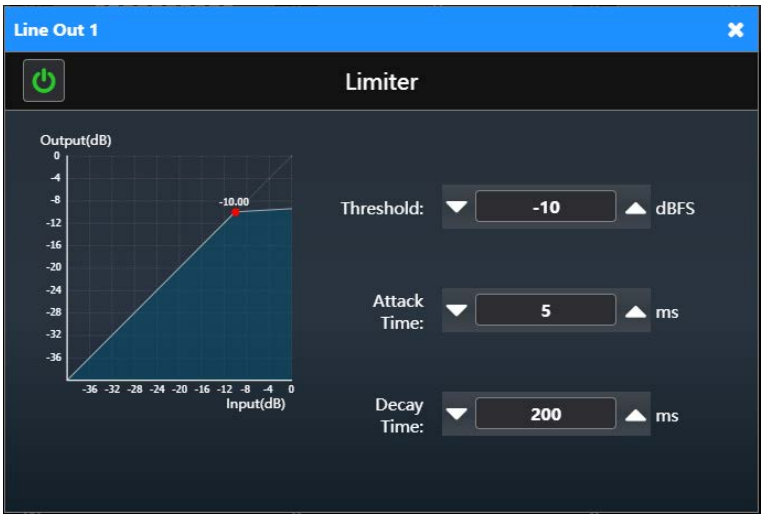
- **8 band PEQ:** USB Out 1~2 support the 8 band parametric equalizer;

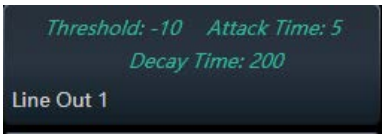
- **Limiter:** double click it to open setting interface;

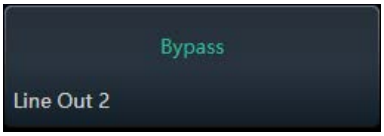
  Bypass: disabled limiter;

  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, USB Out 1~6:** double click it to set output gain;

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

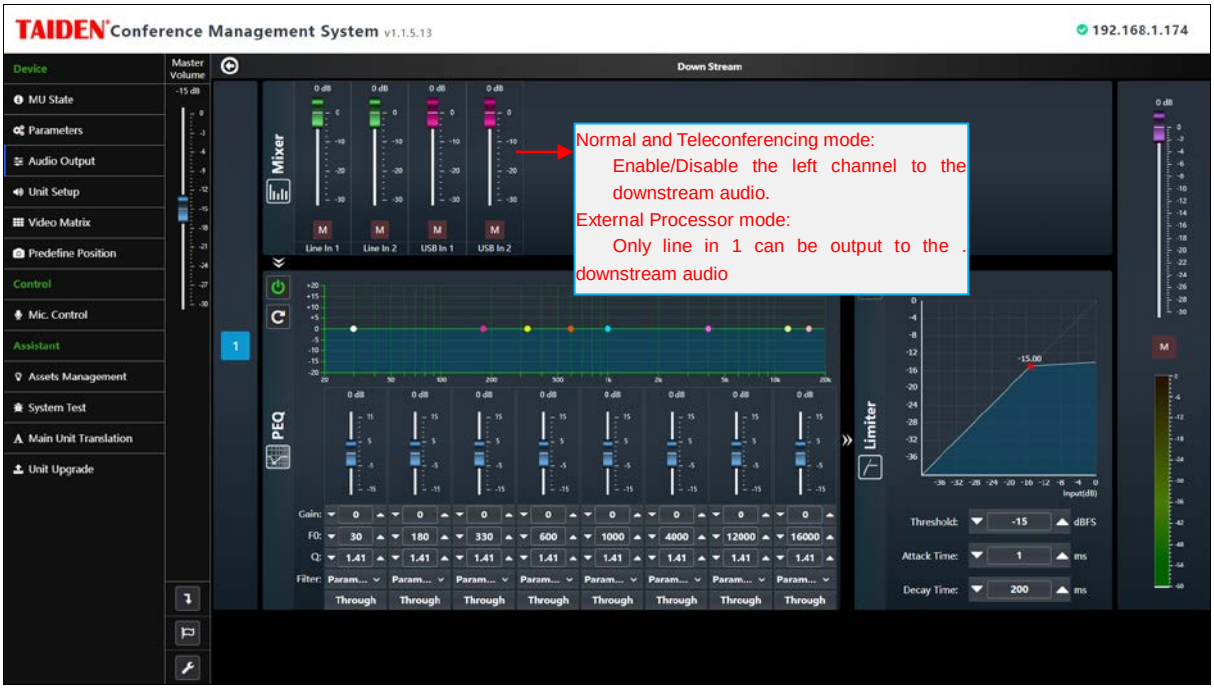


Figure: Down Stream Setup

- **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.
  Note: the microphone parameters, speaker parameters and audio mode, cannot be saved as scenes.

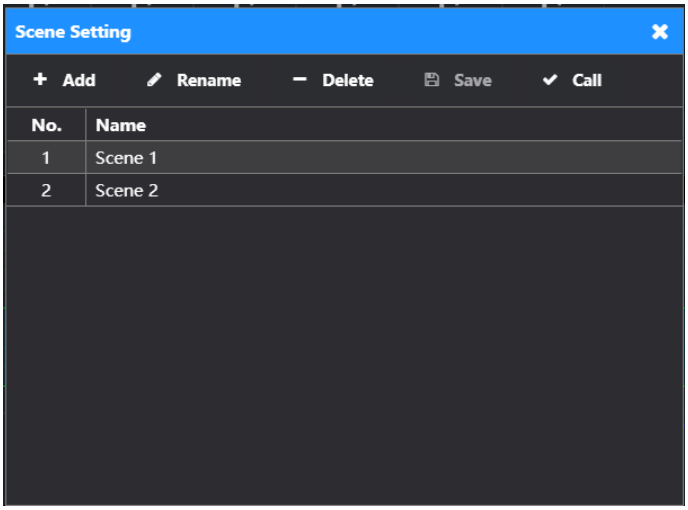


Figure: Scene Setting

- **Setting:** includes Audio Mode Setting, Main Interface Setting Button, Enable Wide Dynamic Mode and Mic. Gain Boost (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 (USB): boost congress unit's microphone gain when transmitted audio through USB channel

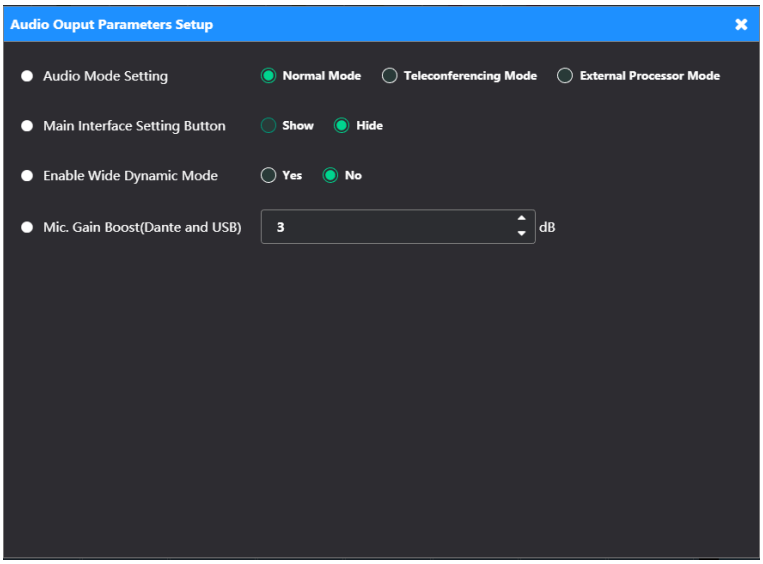


Figure: Audio Output Parameters Setup

Unit Setup

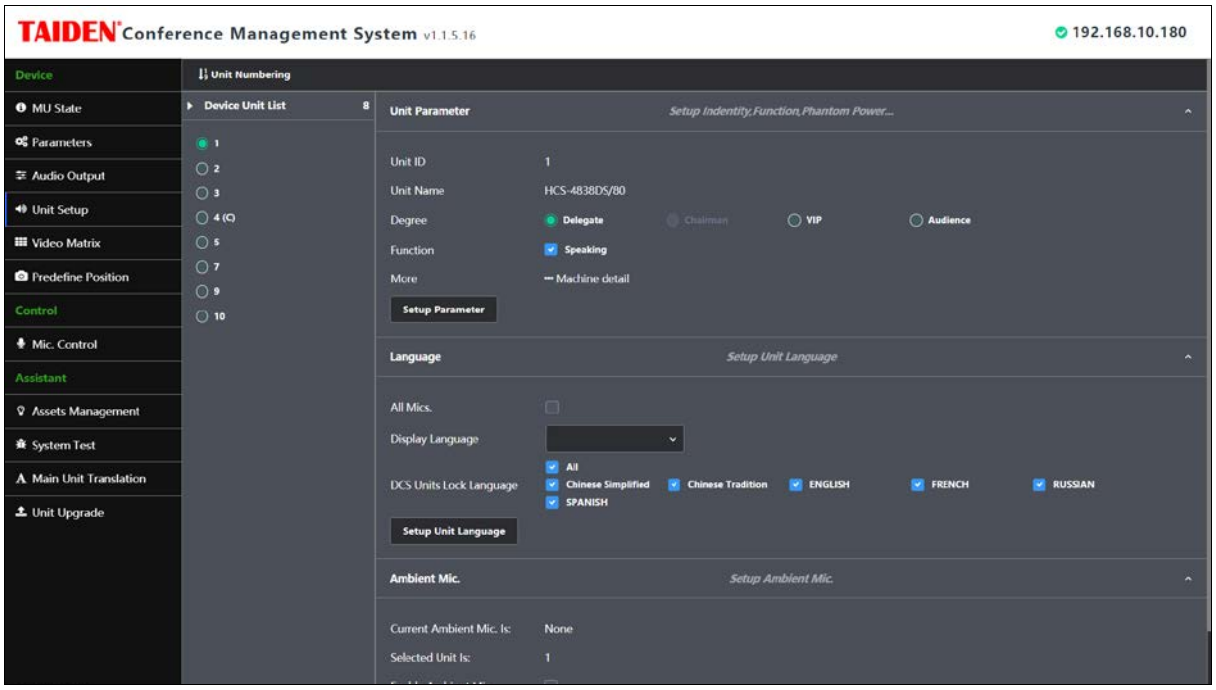


Figure: Unit Setup

- **Unit Parameters:** it 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

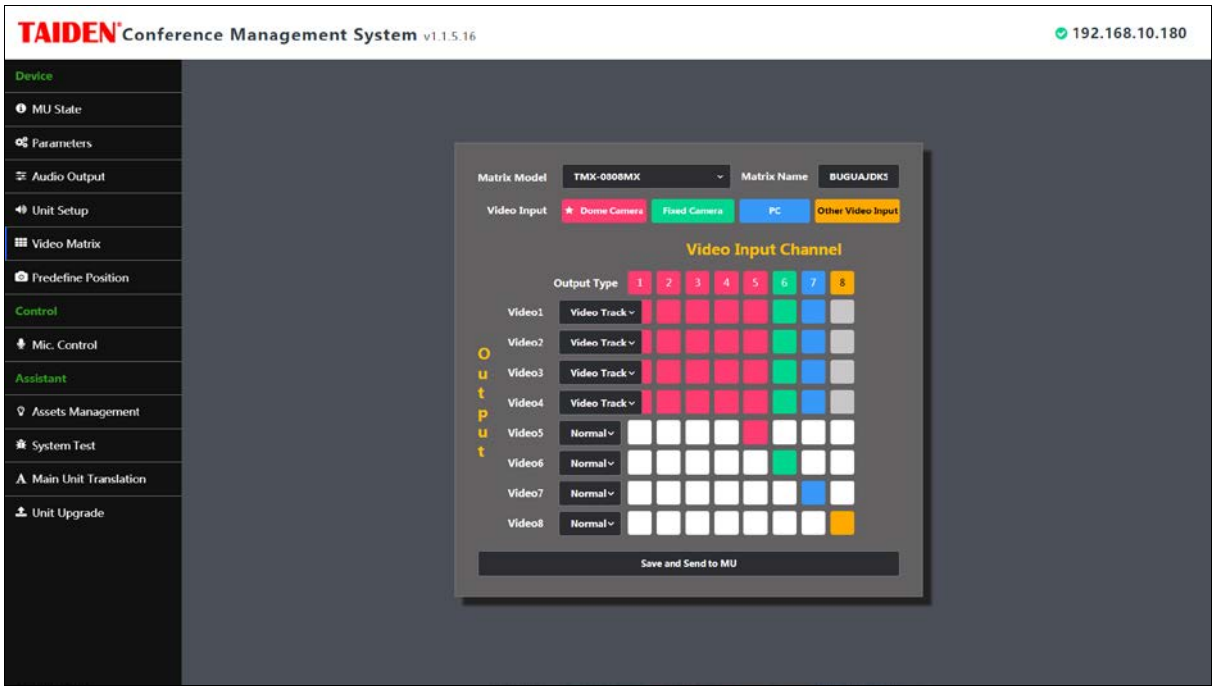


Figure: Video Matrix

Setup video matrix, supports TMX-xxxxSDI2、TMX-MX and TMX-M series Matrix Switchers. 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 cross point of input and output;
4. Click "Save and Send to MU" button to save current video matrix.

Predefine Position

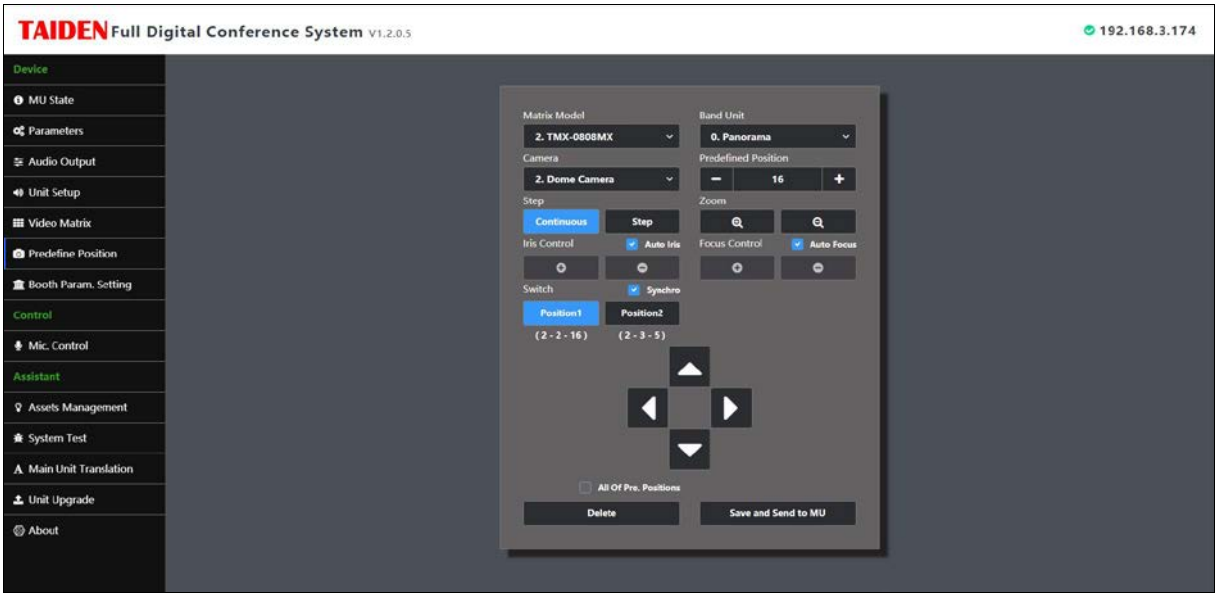


Figure: Panorama

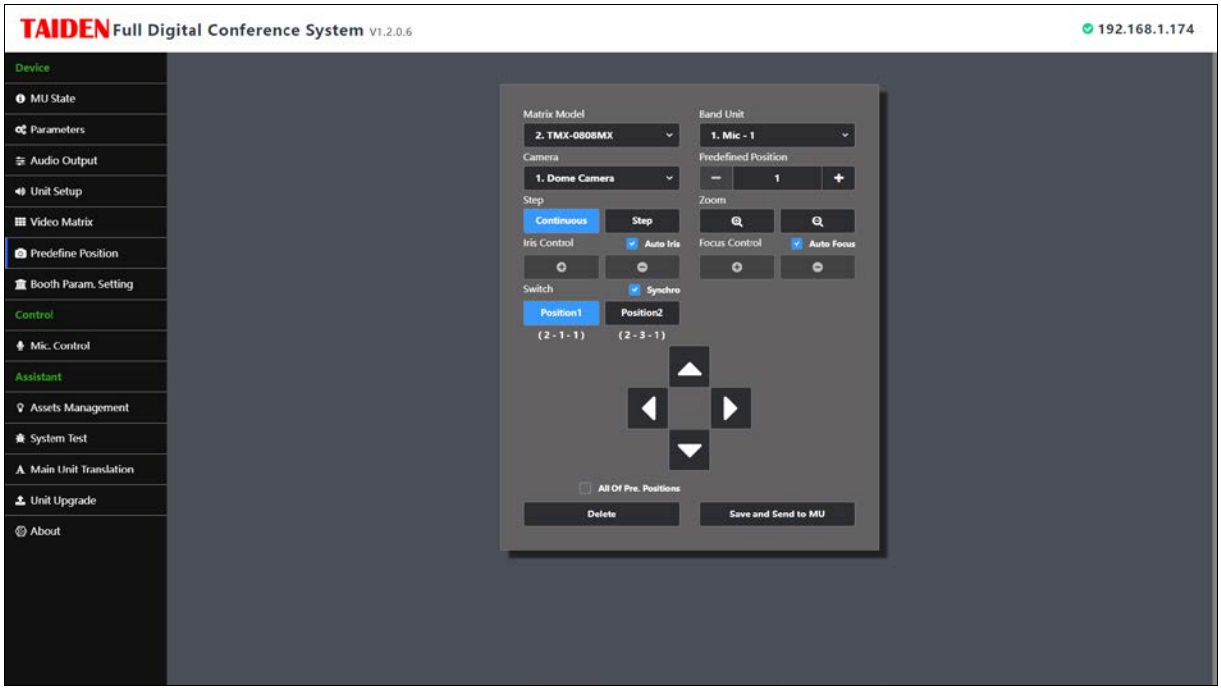


Figure: Predefined Position

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 position 2 number, methods refer to position1 number;
10. Repeat steps 2~9 to set the predefined position for other seats/microphones.

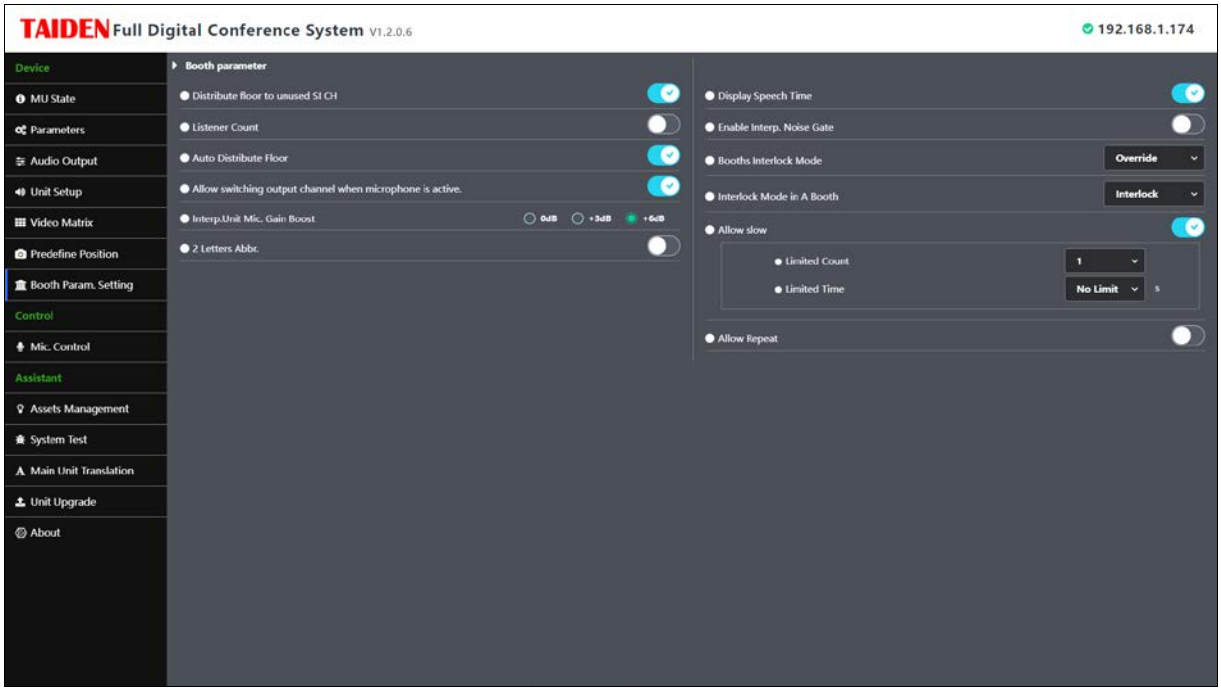
Each unit can be set with two predefine positions, the two predefine positions must be saved in two cameras but the two cameras must be connected to the same matrix. If “Synchro” selected, when you switch positions between position1 and position2, the picture switches synchronously.

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).*

Booth parameter



Set up the booth parameter.

1.Distribute floor to unused SI CH: change the floor for unused SI CH automatic;

2.Listener Count:Display listener number of corresponding output lanaguge;

3.Auto Distrubuter Floor :If the interpreter select an input channel is same to the intepreter station output channel, it will switch to the floor input;

4. Allows switching output channel when microphone is active: when microphone is active, allowing switch output language channel;

5.Interp Unit Mic. Gain Boost: 0dB, +3dB, +6dB;

6. 2 Letters Abbc. Display 2 letters abbreviation of lanaguage on operation interface;

7. Display Speech Time: LCD screen display open time of the microphone, which is convenient for the interpreter hourly wage account;

8. Enable Interp. Noice Gate: Set up whether enable the Interpreter noice gate or not;

9.Booth Interlock mode: Set up the booth interlock mode(interlock between the interpreter pattern: set an interpreter

between channel interlock pattern (interlock/take/grab - BC), under the BC mode, A channel cannot be preempted, but A channel can preempt the BC;

10.Interlock Mode in A booth: Set the internal interlock mode between translators (interlock/preemption);

11.Allow Slow: Turn on the HCS-8685 Interpreter Unit SLOW function, respond after receiving a specified number of slow times within a limited time;

12 Allow Repeat: Turn on the HCS-8685 Interpreter Unit REP function;

Microphone Control

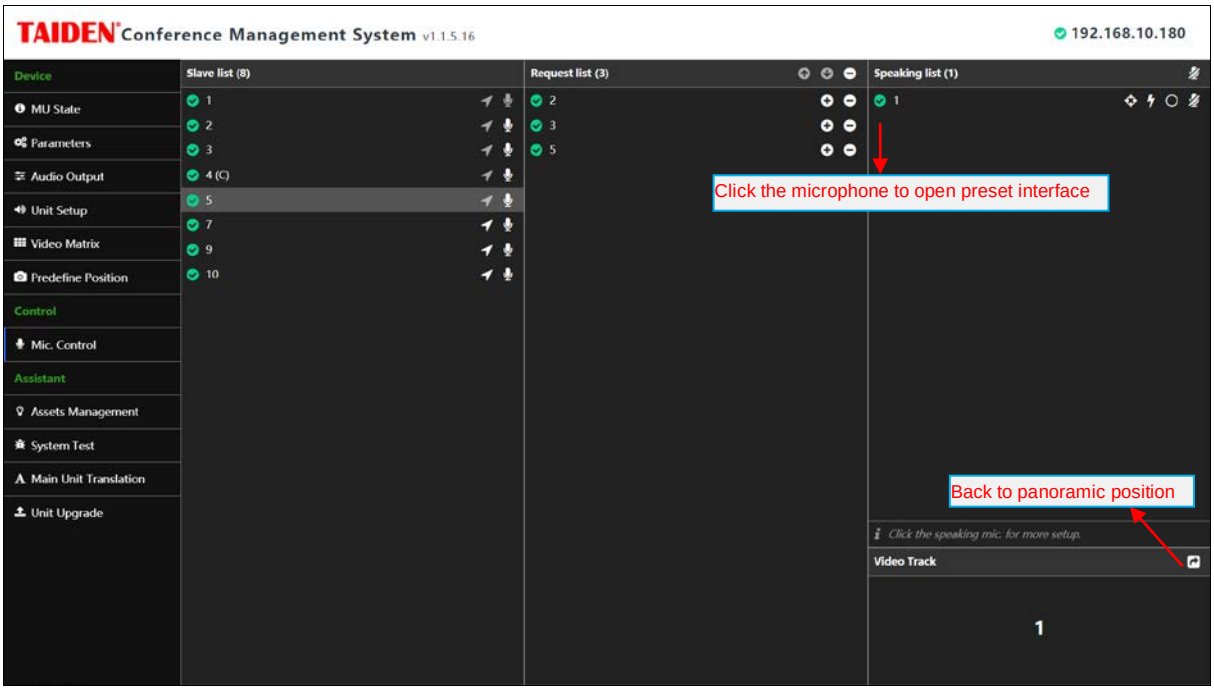
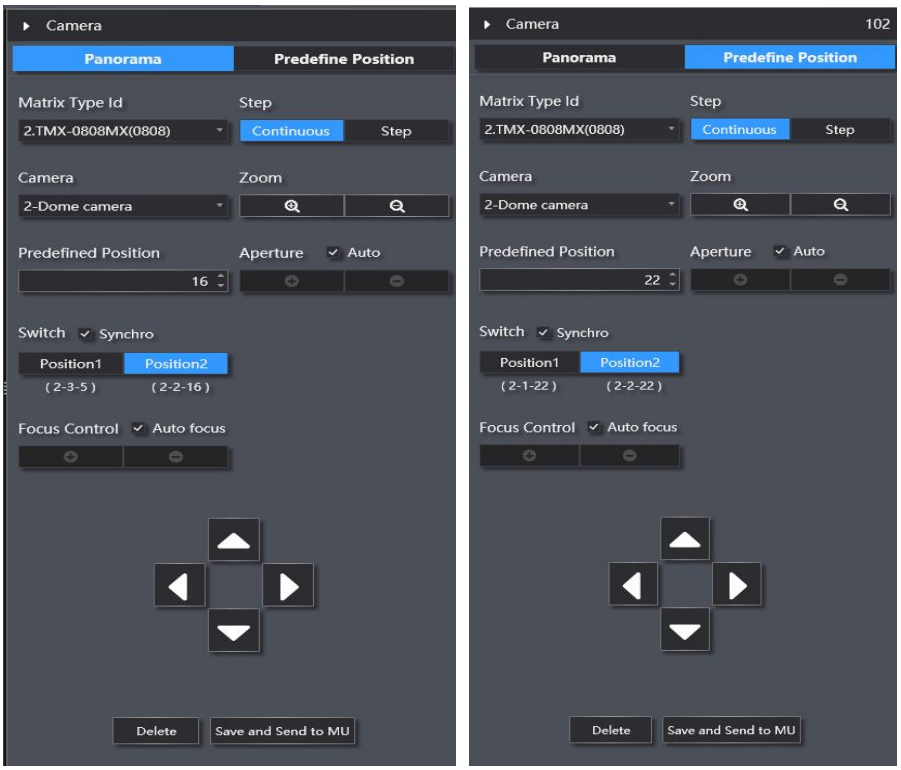


Figure: Microphone control

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 opened microphone to adjust position, as in the following figure:



Assets Management

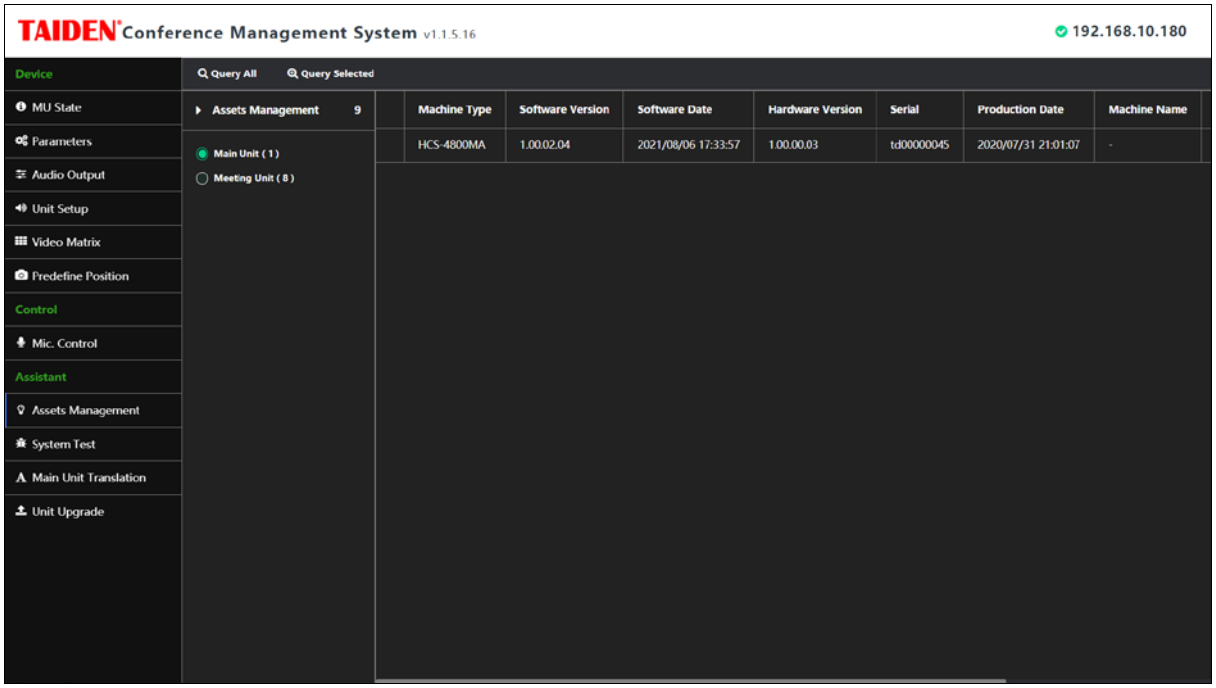


Figure: Assets Management interface

Assets management is used for querying assets information, include main unit, congress unit, interpreter unit, channel selector, video switchers, 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.

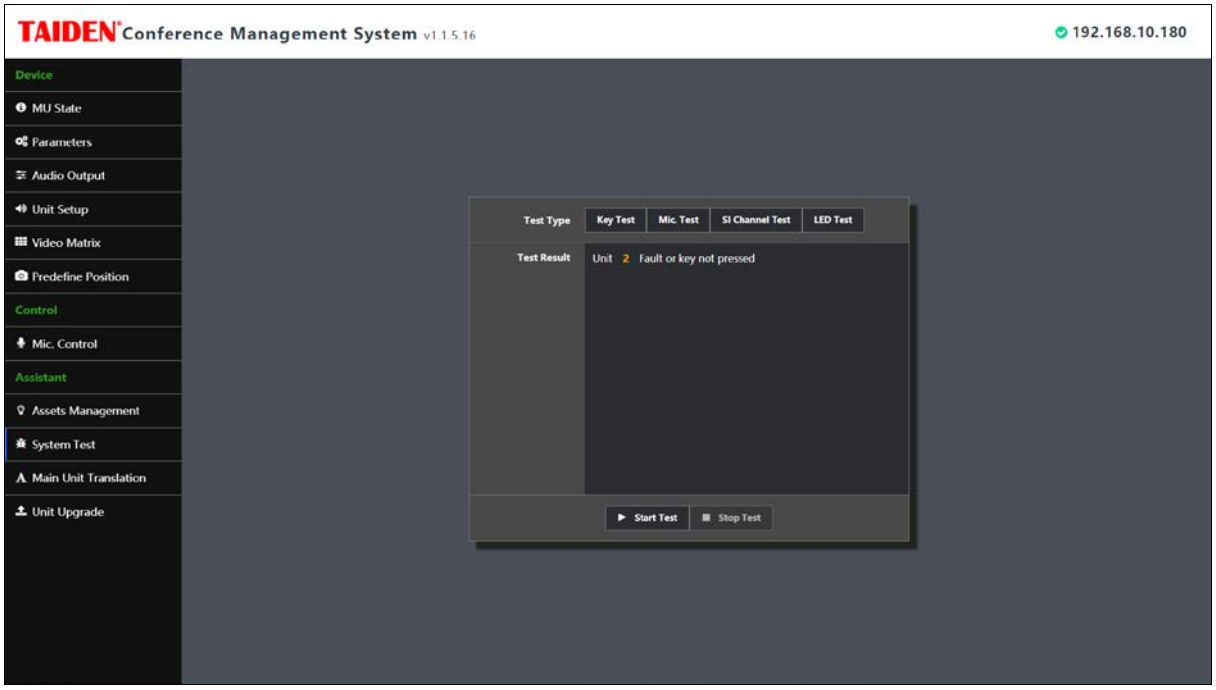


Figure: Key Test interface

- **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: If the priority key is pressed, the microphone is unable to be tested .

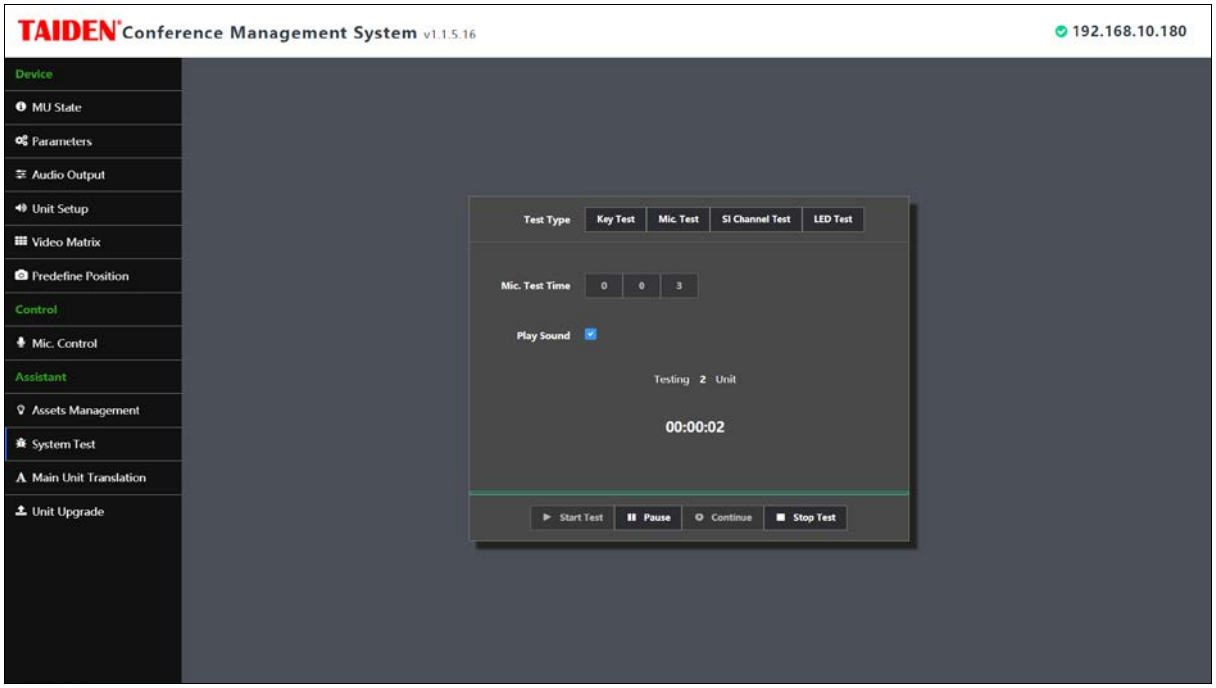


Figure: Microphone Test interface

- **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.

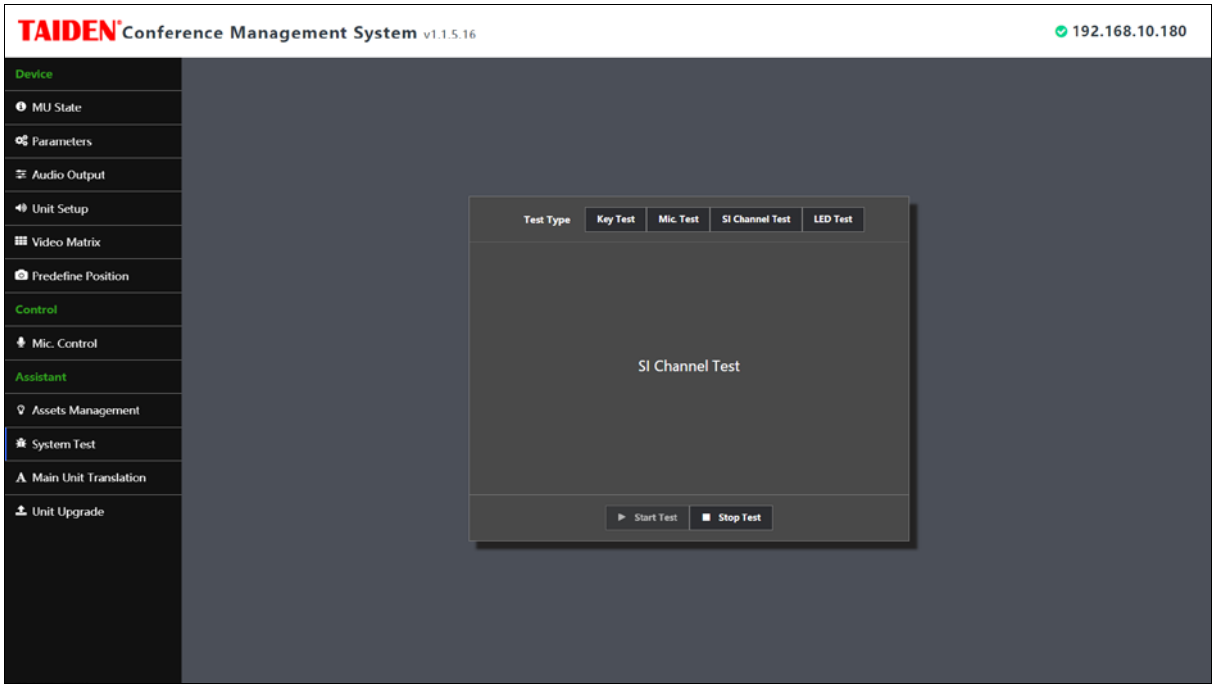


Figure: SI Channel Test interface

- **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.

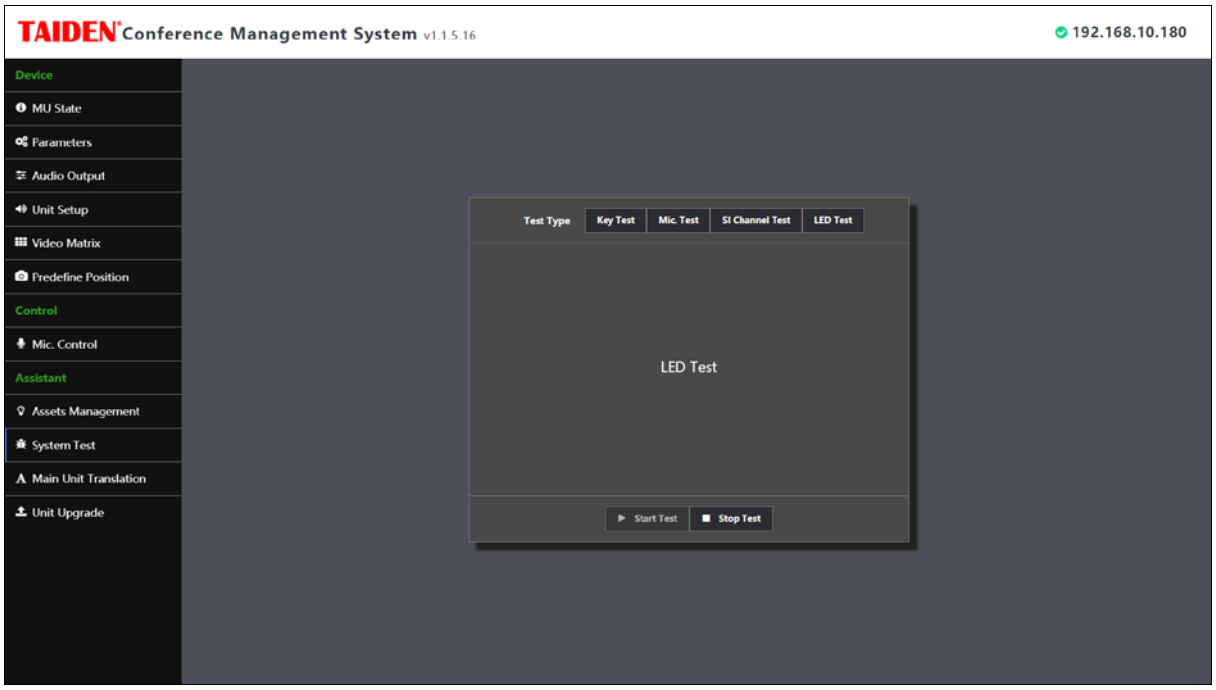


Figure: LED Test interface

Main Unit Translation

Chinese and English are default languages 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.

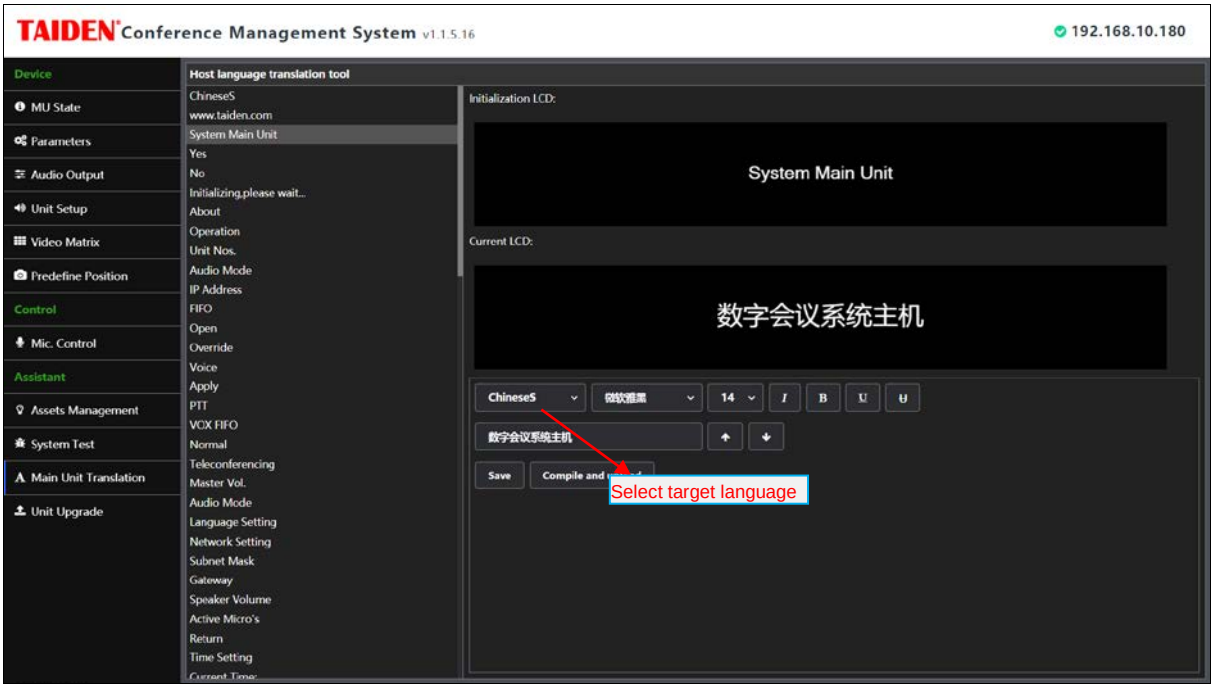


Figure: Main Unit Translation

Unit Upgrade

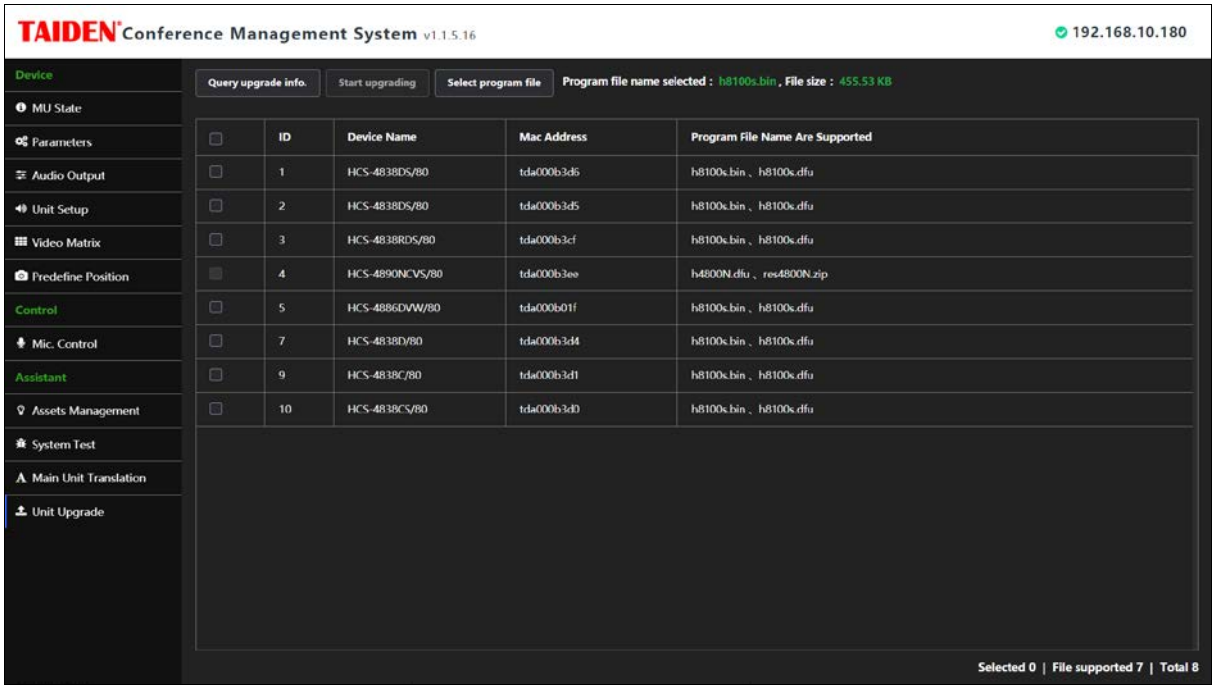


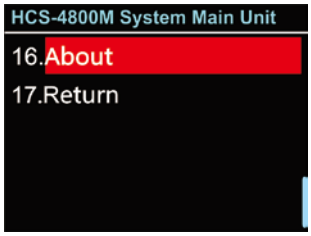
Figure: Unit Upgrade

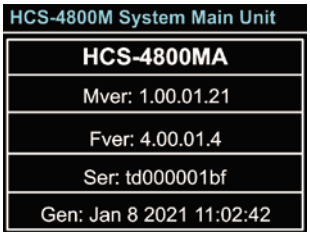
Upgrade step:

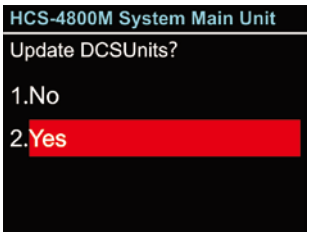
1) Query congress unit upgrade information;
2) Select and load program file;
3) Select units in the list (all or part of units);

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

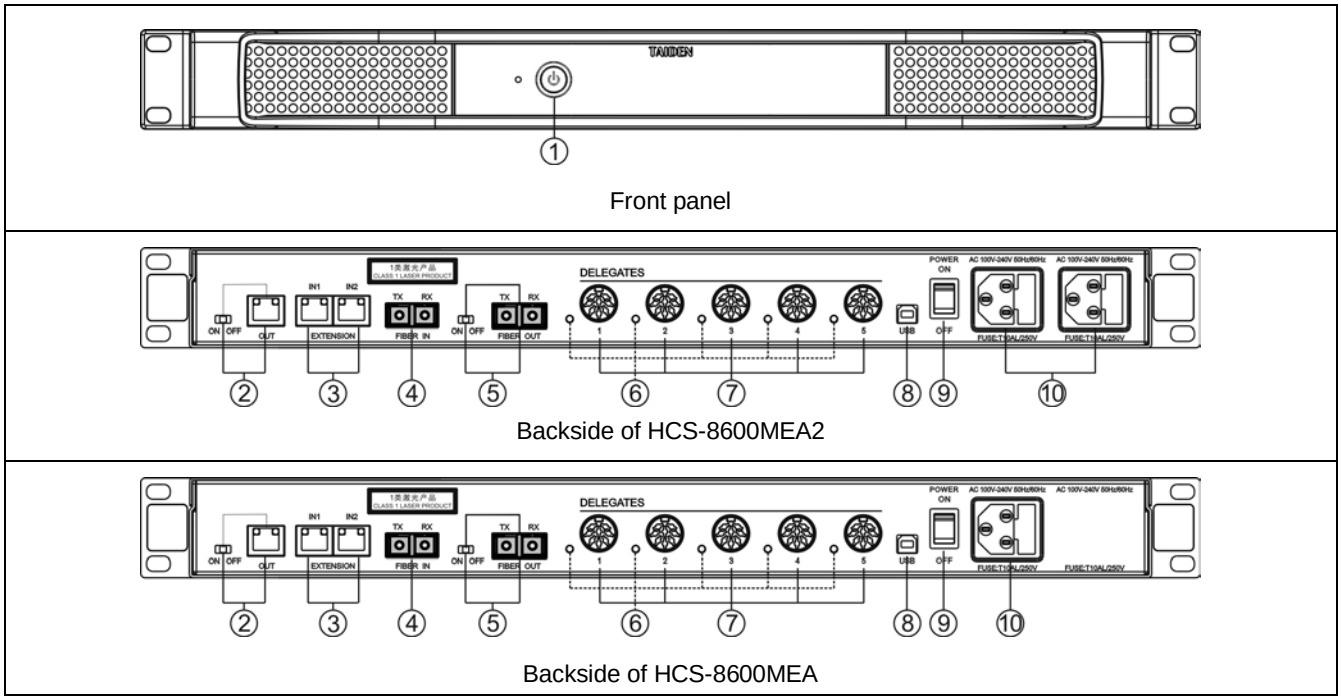


Figure 2.2.1 HCS-8600MEA series extension main unit

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.

Note:

☞ When the main unit of master mode and the main unit of slave mode connect to HCS-8600MEA extension main unit simultaneously, same connect mode should be adopted, which means using optical fiber to connect FIBER IN and FIBER OUT separately, or use RJ45 to connect EXTENSION IN1 and EXTENSION IN 2.

2.2.2 Connection

HCS-4800M 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-4800M 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.

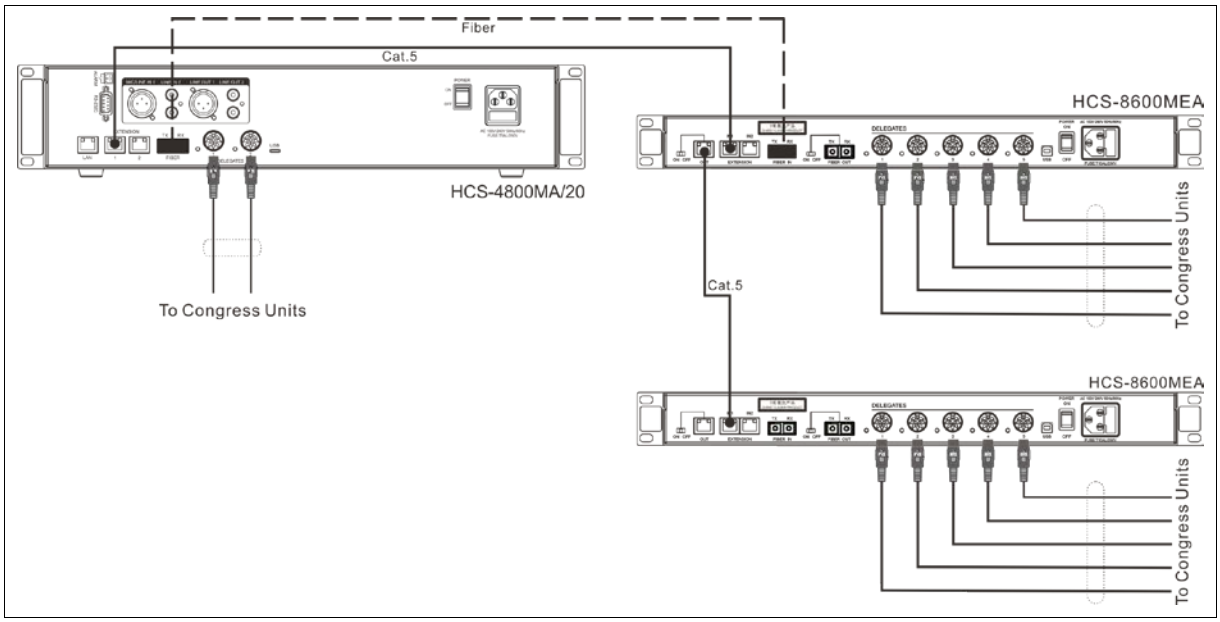


Figure 2.2.2 Connection between the CMU and EMU

2.3 Extension Unit

2.3.1 Functions and instructions

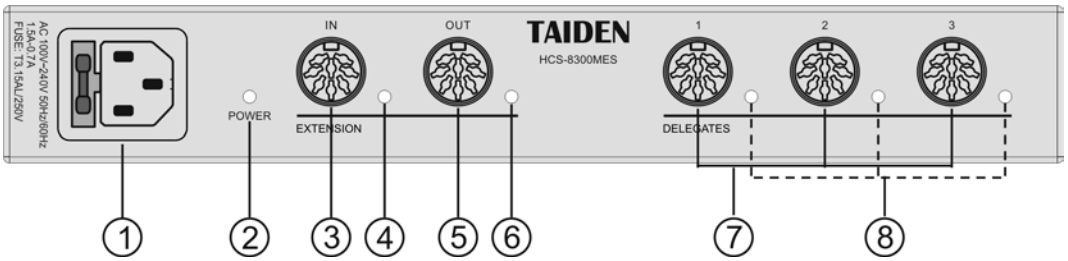


Figure 2.3.1 HCS-8600 series extension unit

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 extension unit with M3 screws.

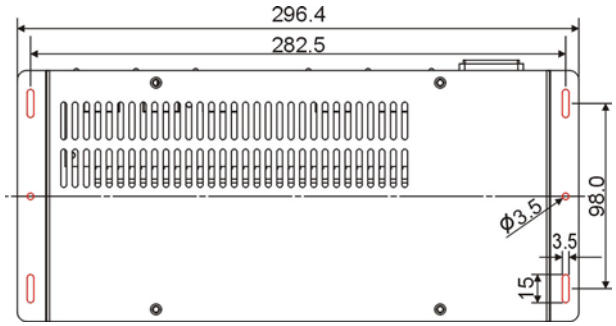


Figure 2.3.2 Installation of the HCS-8600MES

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 M3 screws in the attachment

②. Place the HCS-MES-RCF into 19-inch cabinet and secure the 4 holes with the screws.

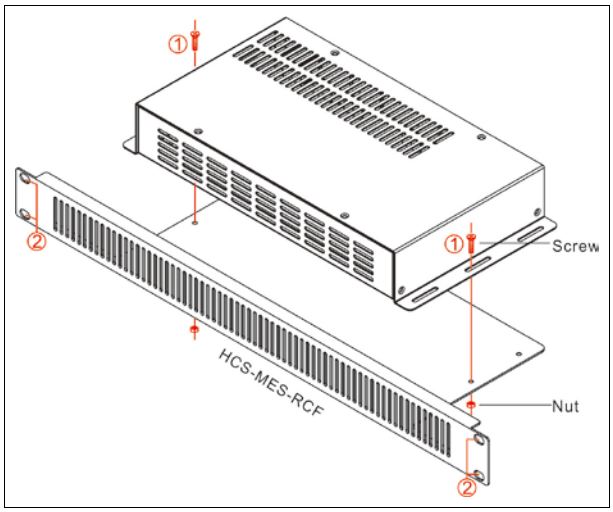


Figure 2.3.3 Cabinet installation of HCS-8600MES

Chapter 3: Congress units

3.1 Overview

By using MCA-STREAM 2.0(Multi_Channel_ Audio STREAM) digital processing and transmitting technologies, TAIDEN HCS-4800 Series Fully Digital Congress System revolutionizes conference systems technology by incorporating the latest fully digital technologies, audio technologies and network techniques. Furthermore, with perfect integration of TAIDEN Conference Sign-in System and Central Control System, HCS-4800 providing comprehensive and efficient digital conference system solutions.

"Closed Loop - Daisy Chain" connection technology, to connect all congress units and simplifying installation, as well as dual connection backup have been opted for.

By supporting 48 kHz audio sampling rate, all 64 channels feature a 20 Hz to 20 kHz frequency response.

HCS-4800 system provides powerful voting management functions. A large choice of wired voting units considerably satisfies the requirements both for various types of voting and different scales.

Product type:

HCS-4890N/80 series congress units

HCS-4890NCVSE_B/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, 5 voting keys, built-in contactless IC-Card slot, 64 CHs, 4.3" touch screen, black)

HCS-4890NDVSE_B/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, 5 voting keys, built-in contactless IC-Card slot, 64 CHs, 4.3" touch screen, black)

HCS-4890NCS_B/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, 4.3" touch screen, Braille, black)

HCS-4890NDS_B/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, 4.3" touch screen, Braille, black)

HCS-4891/80 series congress units

HCS-4891CVS_B/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, voting, 64 CHs×2, 4.3" touch screen, black)

HCS-4891DVS_B/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, voting, 64 CHs×2, 4.3" touch screen, black)

HCS-4891C_B/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, 4.3" touch screen, black)

HCS-4891D_B/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, 4.3" touch screen, black)

HCS-4891RCVS_S/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, voting, 64 CHs×2, 4.3" touch screen, rectangular columnar metal microphone, silver microphone + black base)

HCS-4891RDVS_S/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, voting, 64 CHs×2, 4.3" touch screen, rectangular columnar metal microphone, silver microphone + black base)

HCS-4891RC_S/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, 5-key voting, 64 CHs×2, 4.3" touch screen, rectangular columnar metal microphone, silver microphone + black base)

HCS-4891RD_S/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, 4.3" touch screen, rectangular columnar metal microphone, silver microphone + black base)

HCS-4891RCVS_S/80/2M

Fully Digital Congress System Chairman Unit (tabletop, discussion, voting, 64 CHs×2, 4.3" touch screen, rectangular columnar metal microphone, main microphone + backup microphone, silver microphone + black base)

HCS-4891RDVS_S/80/2M

Fully Digital Congress System Delegate Unit (tabletop, discussion, voting, 64 CHs×2, 4.3" touch screen, rectangular columnar metal microphone, main microphone + backup microphone, silver microphone + black base)

HCS-4891RC_S/80/2M

Fully Digital Congress System Chairman Unit (tabletop, discussion, 4.3" touch screen, rectangular columnar metal microphone, main microphone + backup microphone, silver microphone + black base)

HCS-4891RD_S/80/2M

Fully Digital Congress System Delegate Unit (tabletop, discussion, 4.3" touch screen, rectangular columnar metal microphone, main microphone + backup microphone, silver microphone + black base)

HCS-4838 series congress units

HCS-4838RCS/80

Fully Digital Congress System Chairman Unit(tabletop, discussion, 64 CHs, OLED, rectangular columnar metal microphone, Braille, black microphone +charcoal gray base)

HCS-4838RDS/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, 64 CHs, OLED, rectangular columnar metal microphone, Braille, black microphone +charcoal gray base)

HCS-4838RC

Fully Digital Congress System Chairman Unit (tabletop, discussion, rectangular columnar metal microphone, Braille, black microphone +charcoal gray base)

HCS-4838RD

Fully Digital Congress System Delegate Unit
(tabletop, discussion, rectangular columnar metal microphone, Braille, black microphone +charcoal gray base)

HCS-4838RC/2M

Fully Digital Congress System Delegate Chairman Unit(tabletop, discussion, rectangular columnar metal microphone, Braille, black microphone +charcoal gray base)

HCS-4838RD/2M

Fully Digital Congress System Delegate Unit(tabletop, discussion, rectangular columnar metal microphone, Braille, black microphone +charcoal gray base)

HCS-4838CS/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, 64 CHs, OLED, Braille, charcoal gray)

HCS-4838DS/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, 64 CHs, OLED, Braille, charcoal gray)

HCS-4838C

Fully Digital Congress System Chairman Unit(tabletop, discussion, Braille, charcoal gray)

HCS-4838D

Fully Digital Congress System Delegate Unit (tabletop, discussion, Braille, charcoal gray)

HCS-48U6/80 series congress units

HCS-48U6CMICM/80

Fully Digital Congress System Chairman Unit (flush-mounting, discussion, HCS-48U6VOT and HCS-48U6SPK can be connected, black)

HCS-48U6DMICM/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, HCS-48U6VOT and HCS-48U6SPK can be connected, black)

HCS-48U6CMICS

Fully Digital Congress System Chairman Unit (flush-mounting, discussion, HCS-48U6SELM/80 needed , black)

HCS-48U6DMICS

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, HCS-48U6SELM/80 needed , black)

HCS-48U6SELM/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, HCS-48U6SELM/80 needed, black)

HCS-48U6DVOTTW

Fully Digital Voting Unit (flush-mounting, 3 voting keys, built-in contactless IC-Card slot, HCS-48U6SELM/80 or HCS-48U6MICM/80 needed, black)

HCS-48U6SPK

Fully Digital Congress System Chairman Unit (flush-mounting, discussion, HCS-48U6VOT and HCS-48U6SPK can be connected, black)

HCS-48U9/80 series congress units:

HCS-48U9CVSW/80

Fully Digital Congress System Chairman Unit (flush-mounting, discussion, 5 voting keys, contactless IC-Card reader, 64 CHs, 256x32 LCD, black)

HCS-48U9DVSW/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, 5 voting keys, contactless IC-Card reader, 64 CHs, 256x32 LCD, black)

HCS-48U10/80 series congress units:

HCS-48U10CVSE/80

Fully Digital Congress System Chairman Unit (flush-mounting, discussion, 3 voting keys, built-in contactless IC-Card slot, 64 CHs, OLED, black)

HCS-48U10DVSE/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, 3 voting keys, built-in contactless IC-Card slot, 64 CHs, OLED, black)

HCS-48U10DVE/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, 3 voting keys, built-in contactless IC-Card slot, black)

HCS-48U10DS/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, 64 CHs, OLED, black)

HCS-48U10DDS/80

Fully Digital Congress System Delegate Unit (flush-mounting, discussion, 64 CHs, 2 channel selectors, OLED, dual predefined position, black)

HCS-4860/80 series congress units:

HCS-4860CS_B/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, rectangular columnar metal microphone, 64 CHs, OLED, black)

HCS-4860DS_B /80

Fully Digital Congress System Delegate Unit (tabletop, discussion, rectangular columnar metal microphone, 64 CHs, OLED, black)

HCS-4860C_B /80

Fully Digital Congress System Chairman Unit (tabletop, discussion, rectangular columnar metal microphone, black)

HCS-4860D_B /80

Fully Digital Congress System Delegate Unit (tabletop, discussion, rectangular columnar metal microphone, black)

HCS-4860/80/2M series dual backup microphone congress units

HCS-4860C/80/2M

HCS-4860C_B/80/2M

Fully Digital Congress System Chairman Unit (tabletop, discussion, rectangular columnar metal microphone, main microphone + backup microphone, black)

HCS-4860D_B/80/2M

Fully Digital Congress System Delegate Unit (tabletop, discussion, rectangular columnar metal microphone, main microphone + backup microphone, black)

HCS-4860X/80 series congress unit

HCS-4860CX_B/80

Fully Digital Congress System Chairman Unit (tabletop, discussion, XLR connector for condenser microphone with +36 V phantom power, black)

HCS-4860DX_B/80

Fully Digital Congress System Delegate Unit (tabletop, discussion, XLR connector for condenser microphone with +36 V phantom power, black)

HCS-484* series congress unit

HCS-4840DHT

Multi-function Connector (for connection to 4pcs of HCS-4842DHT channel selectors, silver)

HCS-4842DHT

64-Channel Selector (flush-mounting, HCS-4840DHT needed, black)

HCS-4841DMIC

Multi-function Connector (for connection to 2 condenser microphones, +48 V phantom power, with microphone On/Off button, black)

HCS-4813 series congress unit

HCS-4813C

Fully Digital Congress System Chairman Unit (tabletop, build-in microphone, 5 voting keys, 64 CHs, black)

HCS-4813D

Fully Digital Congress System Delegate Unit (tabletop, build-in microphone, 5 voting keys, 64 CHs, black)

HCS-4815C

Fully Digital Congress System Chairman Unit (tabletop, build-in microphone, black)

HCS-4815D

Fully Digital Congress System Delegate Unit (tabletop, build-in microphone, black)

HCS-4825

Dual 64-Channel Selector (flushing-mounting,black)

HCS-4827 series:

HCS-4827H

HCS-4827H Handheld Microphone (flush-mounting, HCS-4827SELM needed, black)

HCS-4827SELM

HCS-4827SELM Flush-mounting 64-Channel Selector (black)

HCS-4857 series congress unit

HCS-4857C

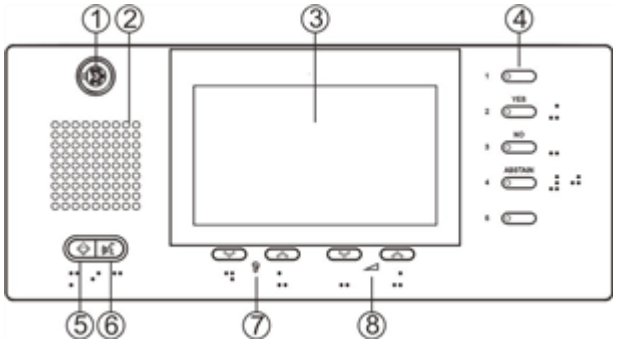
Fully Digital Congress System Chairman Unit (flush-mounting, discussion, retractable microphone,black)

HCS-4857D

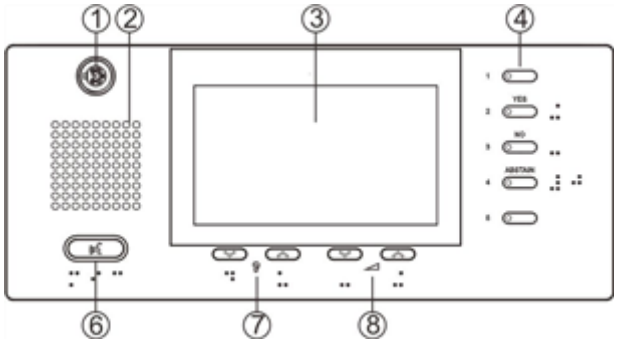
HCS-4857D Fully Digital Congress System Delegate Unit (flush-mounting, discussion, retractable microphone,black)

3.2 HCS-4890N/80 Series Congress Unit

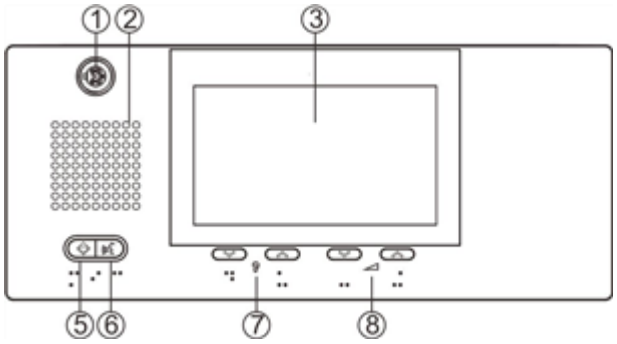
3.2.1 Functions and Indications



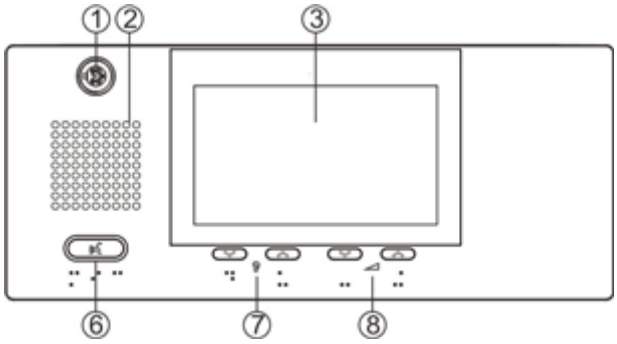
Front of HCS-4890NCVSE/80



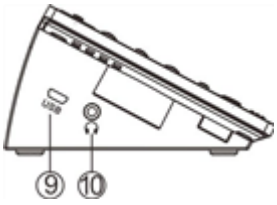
Front of HCS-4890NDVSE/80



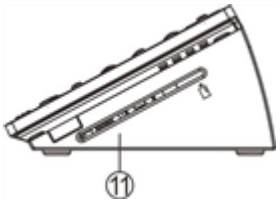
Front of HCS-4890NCS/80



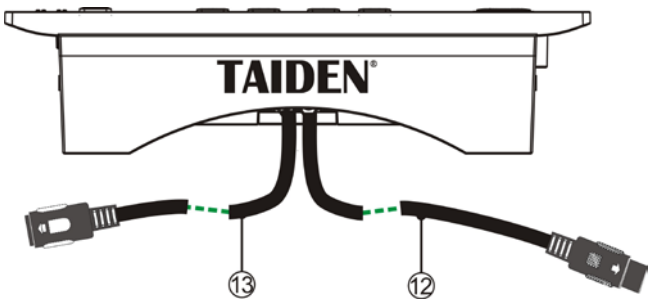
Front of HCS-4890NDS/80



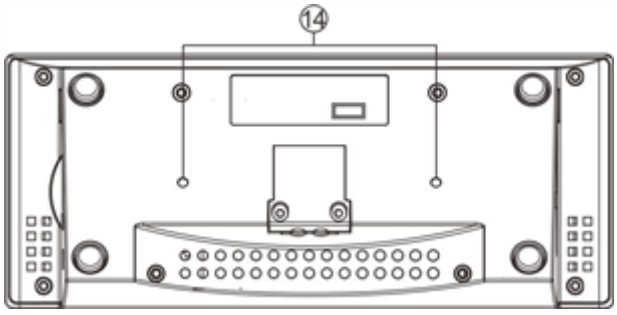
Left of HCS-4890N/80 series



Right of HCS-4890N/80 series

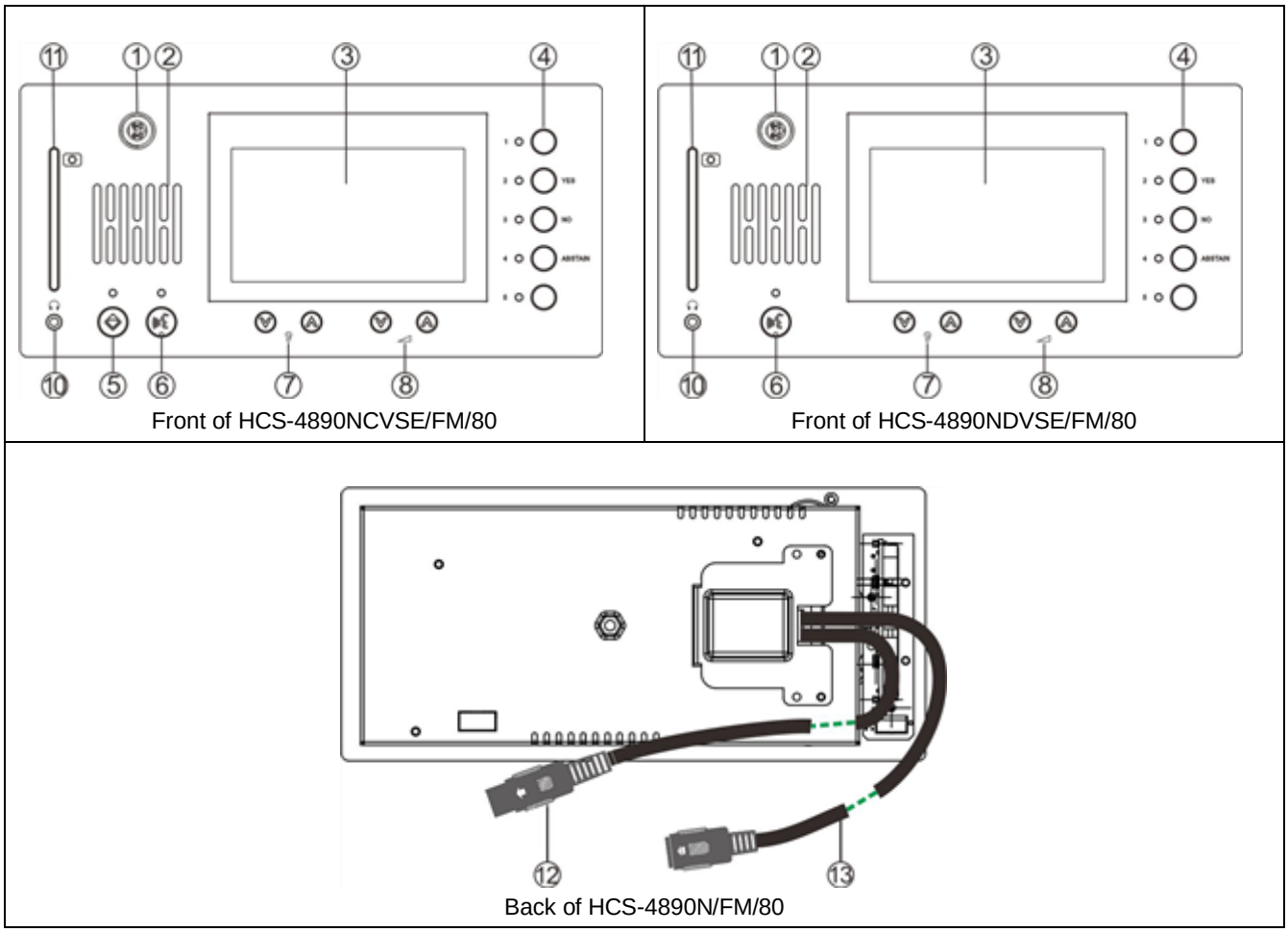


Rear of HCS-4890N/80 series



Back of HCS-4890N/80 series

Figure 3.3.1a HCS-4890N/80 series congress units



Front of HCS-4890NCVSE/FM/80

Front of HCS-4890NDVSE/FM/80

Back of HCS-4890N/FM/80

Figure 3.3.1b HCS-4890N/FM/80 series congress units

Figure 3.2.1:

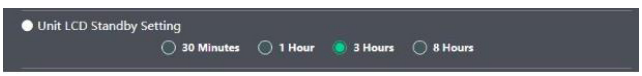
1. Stem microphone socket

2. Built-in Hi-fi loudspeakers

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

3. 4.3" touch screen for information display

- Speaking list, timing speaking information, delegate information
- Sign-in and voting information
- Language channel and earphone volume adjustment
- Conference service
- Screen brightness, system language and unit information
- Screen saver function, set up the screen saver interval time by WEB control interface;



- Functions such as unit number, SI channel selection, headphone volume adjustment, key sign-in, voting, etc. can be operated by using the physical keys on the machine panel or by touching the screen.

4. Multifunction key and indicate light

- When corresponding indicator flashing, push the button for operation (refer to table 3.3.1 for details)

5. Priority key (for the chairman unit only):

- According to the priority mode configuration on the main unit:
  - ◊ If configured as "All mute", all active delegate microphones (except VIP units) will be muted temporarily 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 switched off when this key is pressed. Under "Open" and "Request" mode, pressing this key will clear the request list (deny all delegates' requests to speak);
- If the chairman microphone is not active, pressing this key will activate it;
- If the ring mode is configured as "ON", a ring tone

will be produced when this key is pressed.

- If the host set up chairman priory mode “not working”, then the function will be same as microphone ON/OFF.

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

- Chairman unit: press this key to activate/ deactivate the microphone;
- Delegate unit: press this key to activate/deactivate the microphone or request/cancel request to speak.

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

7.Simultaneous interpretation channel selector

- Available when earphone is plugged.

8. Earphone volume key

9. Micro USB interface

- Reserved.

10.Earphone jack(Ø3.5mm)

11. 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.

12. 1.5-meter 8P-DIN cable with standard plug (male x 1)

13. 0.6-meter 8P-DIN cable with standard plug (female x 1)

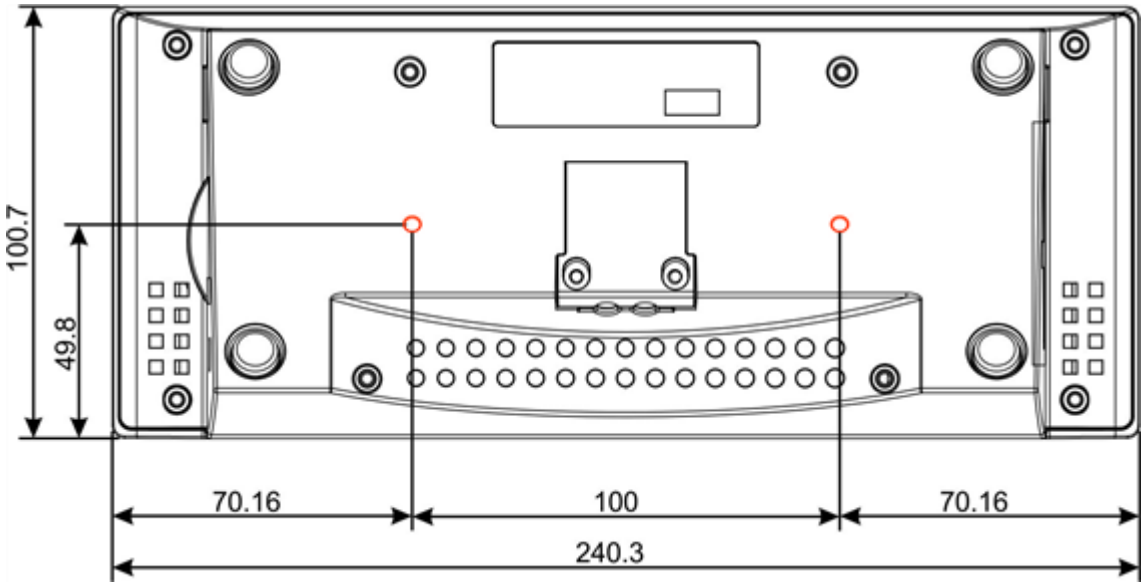
14. Desktop fixed mounting holes

Table 3.2.1 List of multi-function keys

Function / Keys			1	2	3	4	5
Numbering			Number				
Key-press sign-in			Sign-in				
Voting	**Parliamentary**			YES	NO	ABSTAIN	
	Questionnaire		1	2	3	4	5
	Audience response		--/0	-/25	0/50	+/75	++/100
	For/Against			For	Against		
	Parliamentary （NPPV）			YES	NO	ABSTAIN	NPPV
	Appraisal	**Satisfied**	Perfectly satisfied (four keys voting)	Satisfied (four/three/two keys voting)	Basically satisfied (four/three keys voting)	Unsatisfied (four/three/two keys voting)	
		Qualified	Perfectly qualified (four keys voting)	Qualified (four/three/two keys voting)	Basically qualified (four/three keys voting)	Unqualified (four/three/two keys voting)	
		Competent	Perfectly competent (four keys voting)	Competent (four/three/two keys voting)	Basically competent (four/three keys voting)	Incompetent (four/three/two keys voting)	

3.3.2 Installation

3.3.2.1 Fixed installation of HCS-4890N/80 Series Congress Unit



As shown figure above, cut two Ø 4.5 mm holes in the table, spacing 100 mm. Use M4 screw(length 25mm)in accessory to rotate the screw upwards from the bottom of the desktop and insert it into the fixing hole of the congress unit(thickness 20mm of table is required).

Figure 3.3.2 HCS-4890N/80 Bottom holes and size figure (unit:mm)

3.3.2.2 Flush-mounting installation of HCS-4890N/FM/80 Series Congress Unit

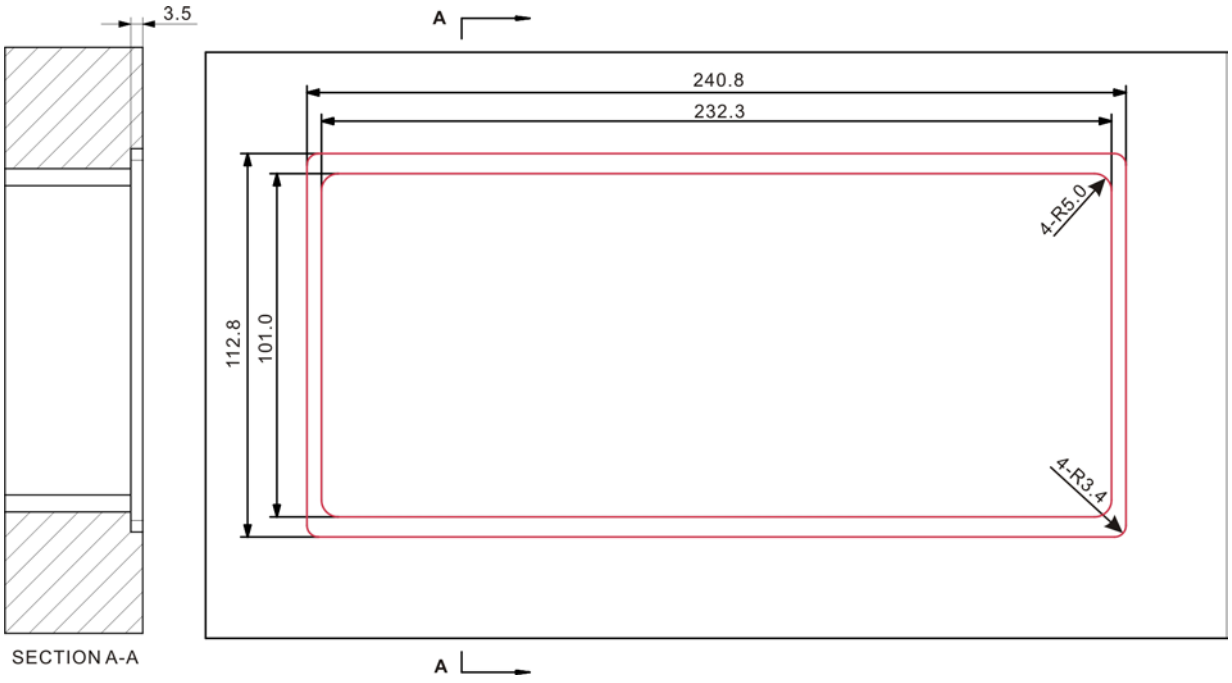
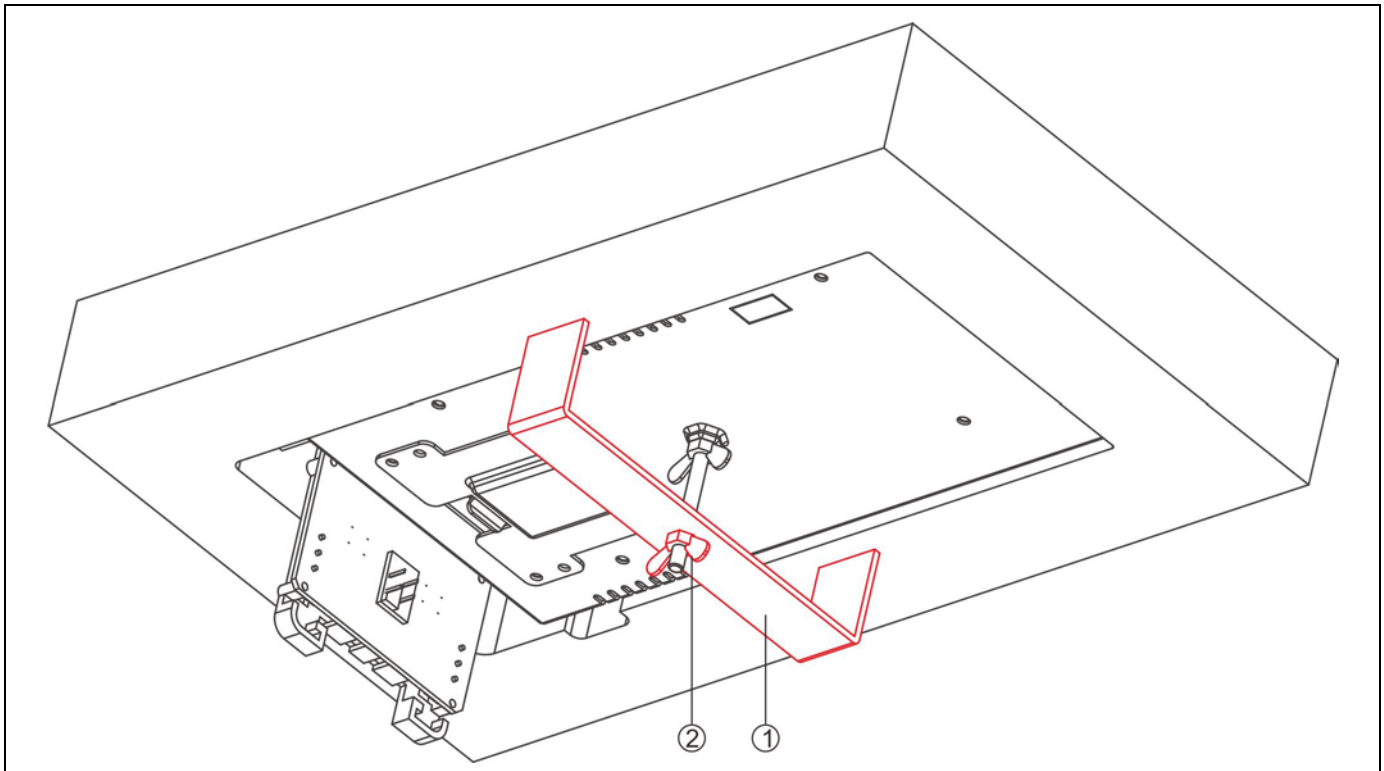


Figure 3.3.3 Positioning diagram of HCS-4890N/FM/80 series congress unit (unit: mm)



As shown in the picture above, place the HCS-4890N/FM/80 conference unit in the opening, first insert the U-shaped patch ① through the screw at the bottom of the desktop, and place the two ends on the side of the mounting hole, and then tighten it with the wing nut ②.

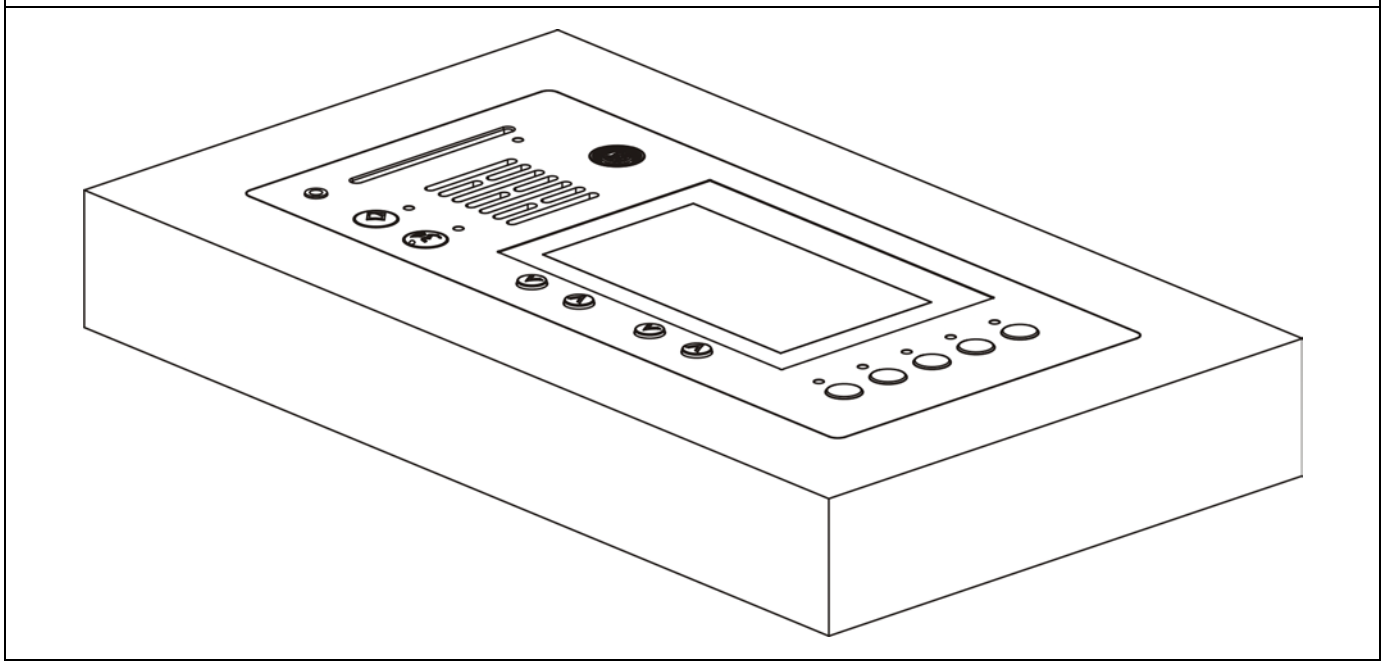


Figure 3.3.4 Installation diagram of HCS-4890N/FM/80 series congress unit

3.3.3 Connection

3.3.3.1 Connecting to the CMU or the EMU

The HCS-4890N series congress unit is equipped with a 1.5-meter 8P-DIN cable with a standard male connector. When connecting the HCS-4800CMU/ HCS-8600EMU to the contribution units, just connect the male connector of the first unit to the socket of the CMU.

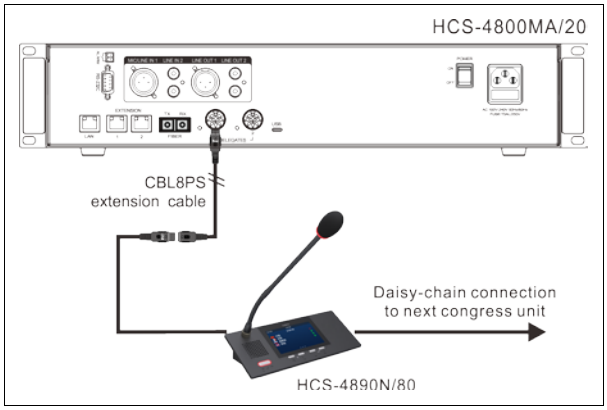


Figure 3.3.5 HCS-4890N series congress unit connected to the CMU/EMU

For a longer distance between the contribution unit and the CMU/EMU, a CBL8PS 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.

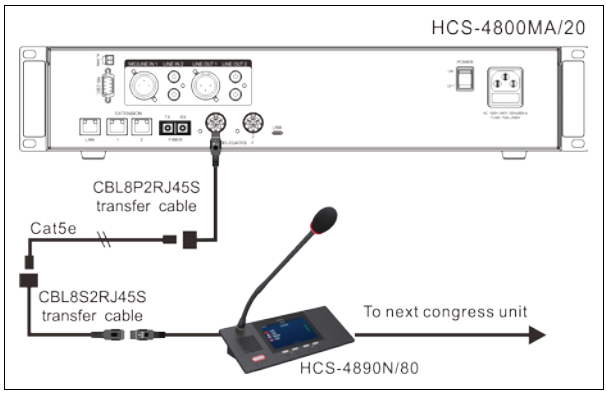


Figure 3.3.6 HCS-4890N series congress unit connected to the CMU/EMU2

Neither the replacement of congress units nor cable faults between congress units will affect the other units if “Closed Loop - Daisy Chain” connection topology is selected. “Closed Loop - Daisy Chain” connection, achieved by closing the loop of the daisy-chained units, increases system reliability. 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 CBL8PS extension cable.

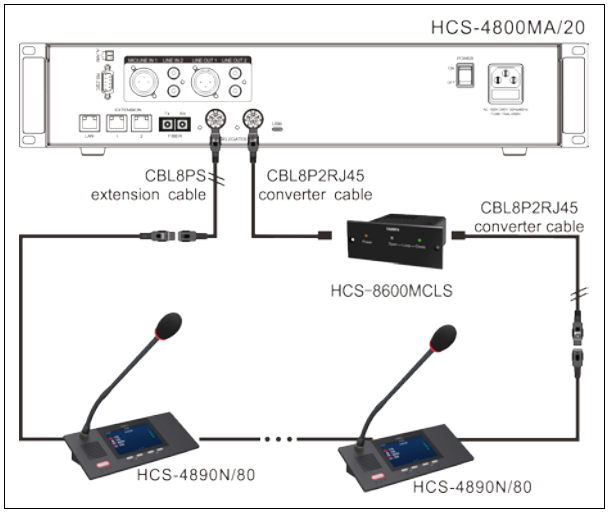


Figure 3.3.7 “Closed Loop - Daisy Chain” connection between the CMU and HCS-4890N series congress units

3.3.3.2 Connection between congress units

All congress units of HCS-4890N series congress units system are daisy-chained easily and conveniently by dedicated 8P-DIN cables.

When connecting to another congress unit, just connect the 0.6m 8P-DIN standard female connector to the 1.5m 8P-DIN standard male connector.

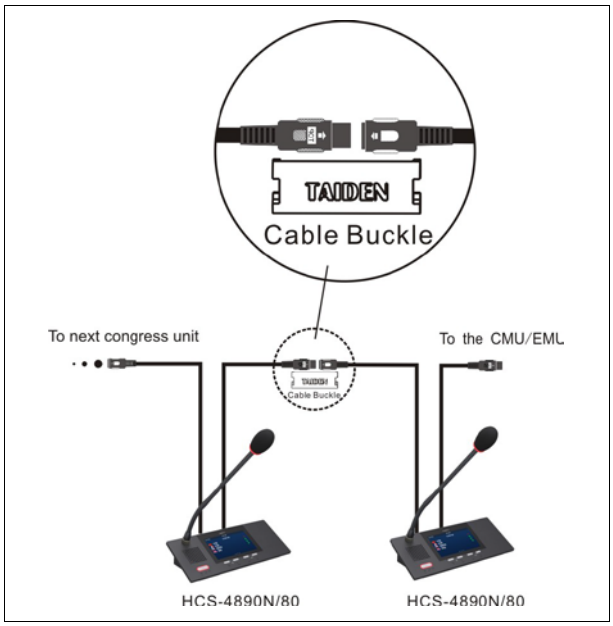
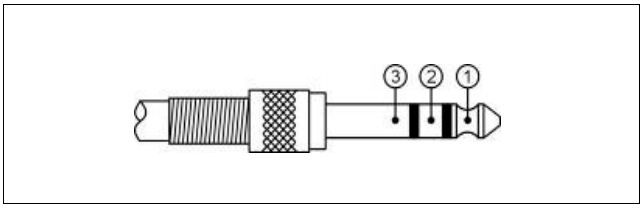


Figure 3.3.8 “Daisy-chain” connection between HCS-4890N series congress units

3.3.3.3 External earphone

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



Functions and indications:

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

3.3.4 Operation

Before a meeting starts, the congress units need to be configured by the operator, including: numbering and testing. Congress unit exquisite and sleek 4.3" touch screen for information display, during the meeting, the participators can use the congress unit to sign-in, activate microphone, request to speak, vote, etc.

3.3.4.1 User interface

<table>
<tr>
<td> 

Welcome</td>
<td> 

Home</td>
<td> 

Information</td>
</tr>
<tr>
<td> 

Speaking</td>
<td> 

Sign-in</td>
<td> 

Pincode sign-in</td>
</tr>
<tr>
<td> 

Service</td>
<td> 

Voting</td>
<td> 

Simultaneous interpretation</td>
</tr>
<tr>
<td> 

Setting – brightness</td>
<td> 

Setting – language</td>
<td> 

Setting – unit information</td>
</tr>
</table>

User interface of HCS-4890N/80 series congress units

Note: The HCS-4890NV series congress unit don't have SI function.

The HCS-4890NS/80 series congree unit is not support IC card sign-in and voting.

3.3.4.2 Delegate unit

We introduce all the operation of HCS-4890N series congress units. The congress units of this series feature one or more of these functions.

1. Number

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

- Press “Unit Numbering” on application software. The system now goes to numbering status. At this time, press "Numbering: XX" on the screen of each congress unit in one by one. Once all congress terminals numbered, restart the CMU to update the number information.
- Rotate the function knob to select “0.5 Numbering”, then select and press “start” .The LCD screen of the main unit shows “Press key of DCS Units, one by one and reboot EMU”; meanwhile, LCD screen of those connected congress units will pop up a number; press “numbering” key of congress units one by one; reboot the main unit after all congress units being numbered for updating .

Note:

☞ When numbering, please number the congress units one by one and do NOT press the “Number” button of several congress units at the same time;

2. 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 8, 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 100 microphones at most, set up the request microphone number limit at DCS or web control).
b. The chairman unit can approve or reject his/her speak;
c. 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:

☞ Active microphone number(1~8) setting is only effective to congress unit. The maximum capacity is 8 units (including chairman unit and VIP unit).
☞ After CMU connect to the DCS and meeting started, swipe the screen to view speaking list.

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).

3. Sign-in (application software needed)

To carry out voting, congress units with voting function should be registered. With application software, registration is available by choosing “Seat Sign-in”.

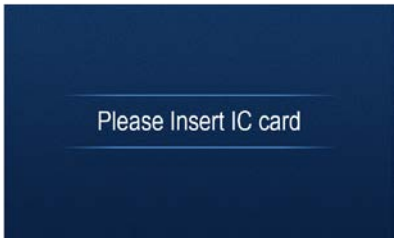
■ **Key press sign-in**

In sign-in status, “Please sign-in” will be displayed on the LCD, click “Please sign-in” button or “1” to sign-in, as in the following figure:

If "Allow belated sign-in after stop" is enabled, when sign-in process is completed, “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** (for units with function)

The HCS-4890NV/80 series congress units are equipped with a built-in contactless IC-card reader. In IC-card sign-in mode, “Please insert 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 right side of the congress unit. If failed, “Invalid IC-card” will be displayed on the LCD. Please push IC-card again or contact technical support. While automatically logout once the card is taken out from the slot.

■ **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.

4. Voting (for units with function)

Voting can be originated by TAIDEN conference management system software.

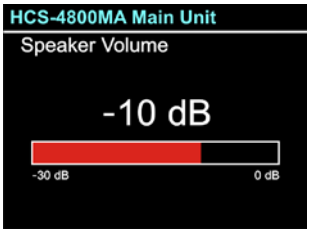
- The voting option will be displayed on LCD, click on the option button to vote;
- For “First key-press valid” voting, the delegate can vote only once;
- For “Last key-press valid” voting, the delegate can change his/her vote, and the last voted key will be valid;

5. Channel selection (for units with function)

- 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, users can quickly select the channel language and adjust the volume of the headphones on the touch screen through the SI interface or physical buttons on the panel.

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. 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.

3.3.4.3 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 delegate microphones (except VIP units) will be muted temporarily when this key is pressed and they will restore when this key is released;
- If the priority mode on the main unit is configured as “All off”, all active delegate 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.
- If the priority mode on the main unit is configured “not working”, then the priority mode valid.

2. Speaking

- If the active microphone capacity have not reach to the maximum amount, the chairman can activate his/her microphone normally, the operation is the same as for the delegate unit;
- If the active microphone capacity reach to the maximum amount, 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” button or reject delegate’s request by pressing “Overrule” button. 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 (for units with voting function)

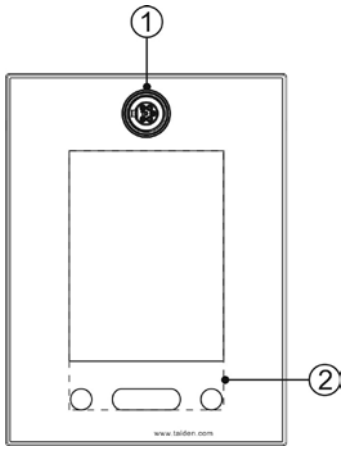
HCS-4890N/80 series chairman unit cannot originate voting without a PC.

When connecting with PC software:

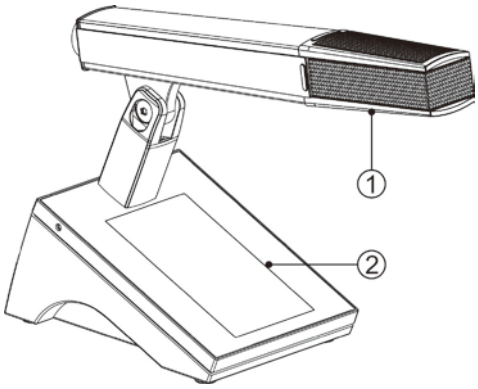
- Nominative or ballot voting are available;
- “First key-press valid” or “Last key-press valid” are available;

3.3 HCS-4891/80 Series Congress Unit

3.3.1 Functions and Indications



HCS-4891/80 series front

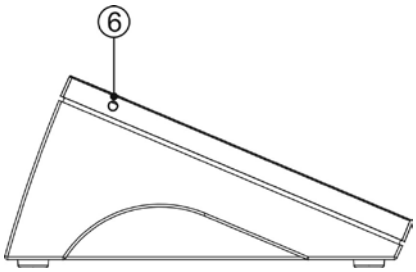


HCS-4891R/80(/2M) series front

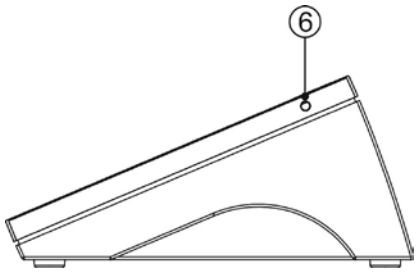
interface

interface

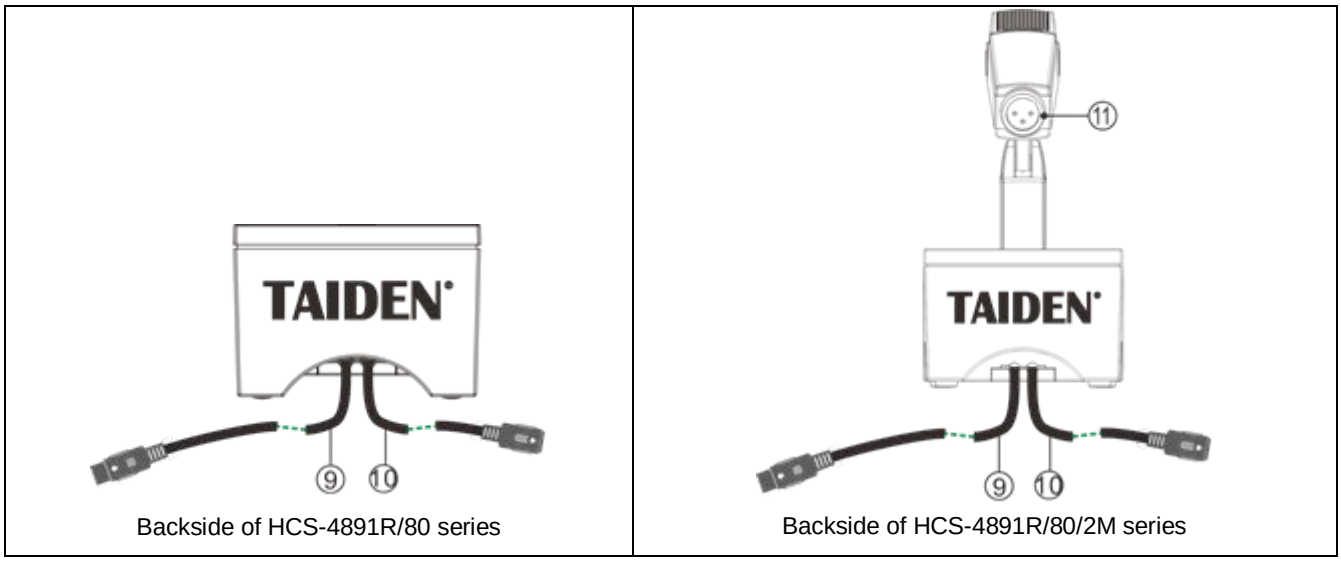
interface



side



side



Backside of HCS-4891R/80 series

Backside of HCS-4891R/80/2M series

Figure 3.3.1 HCS-4891/80 series congress unit

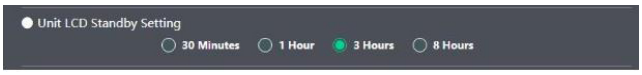
Figure:3.3.1

1. Stem microphone

- HCS-4891/80: Detachable microphone stem port;
- HCS-4891R/80:Metal square column microphone;
- HCS-4891R/80/2M: Metal square column microphone, build-in completely isolated main microphone and backup microphone, backup microphone adopt phantom power.

2. 4.3" touch screen for information display

- Speaking list, timing speaking information, delegate information
- Sign-in and voting information
- Language channel and earphone volume adjustment
- Conference service
- Screen saver function, set up the screen saver interval time by WEB control interface;



- Screen brightness, system language and unit information

3. Priority key (for the chairman unit only):

- According to the priority mode configuration on the main unit:
- If configured as “All mute”, all active delegate microphones (except VIP units) will be muted temporarily 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 switched off when this key is pressed. Under “Open” and “Request” mode, pressing this key will clear the request list (deny all delegates’ requests to speak);
- If the chairman microphone is not active, pressing this key will activate it;
- If the ring mode is configured as “ON”, a ring tone will be produced when this key is pressed.
- If the main unit set up chairman priory mode “not working”, then the function of this button will be same as microphone ON/OFF.

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

- Chairman unit: press this key to activate/ deactivate the microphone;
- Delegate unit: press this key to activate/deactivate the microphone or request/cancel request to speak.

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

5.Earphone jack(Ø 3.5 mm)

- Both side have an earphone jack.

6.Request key

- Under discuss mode, after the meeting is started, if delegate press the request key(turns red), it will be added to the request speaking list.

7. Speaking list

8. Earphone indicate light

9. 1.5-meter 8P-DIN cable with standard plug (male x 1)

10. 0.6-meter 8P-DIN cable with standard plug (female x 1)

11. XLRM connector

- Connect backup microphone to sound mixer through dedicated audio cable.

3.3.2 Connection

3.3.2.1 Connecting to the CMU or the EMU

The HCS-4891 series congress unit is equipped with a 1.5-meter 8P-DIN cable with a standard male connector. When connecting the HCS-4800CMU/ HCS-8600EMU to the contribution units, just connect the male connector of the first unit to the socket of the CMU.

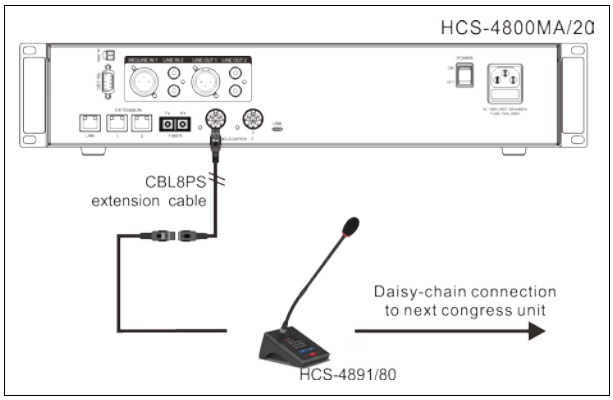


Figure 3.3.5 HCS-4891/80 series congress unit connected to the CMU/EMU

For a longer distance between the contribution unit and the CMU/EMU, a CBL8PS 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.

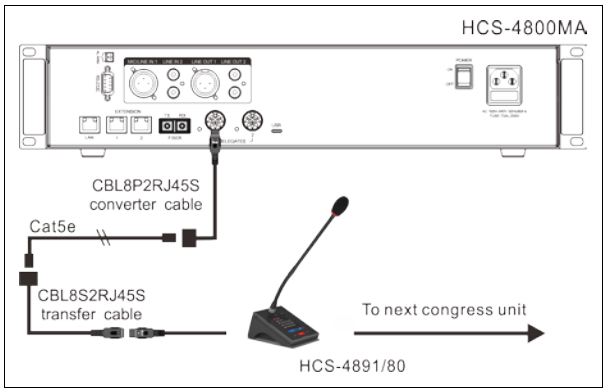


Figure 3.3.6 HCS-4891/80 series congress unit connected to the CMU/EMU2

Neither the replacement of congress units nor cable faults between congress units will affect the other units if “Closed Loop - Daisy Chain” connection topology is selected. “Closed Loop - Daisy Chain” connection, achieved by closing the loop of the daisy-chained units, increases system reliability. 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 CBL8PS extension cable.

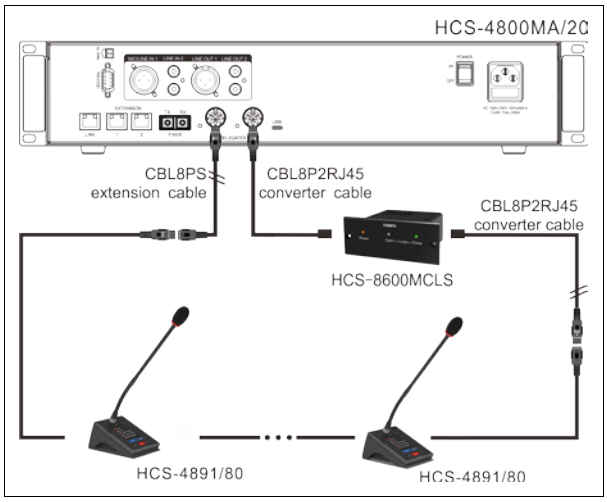


Figure 3.3.7 “Closed Loop - Daisy Chain” connection between the CMU and HCS-4891/80 series congress units

3.3.2.2 Connection between congress units

All congress units of HCS-4890N series congress units system are daisy-chained easily and conveniently by dedicated 8P-DIN cables.

When connecting to another congress unit, just connect the 0.6m 8P-DIN standard female connector to the 1.5m 8P-DIN standard male connector.

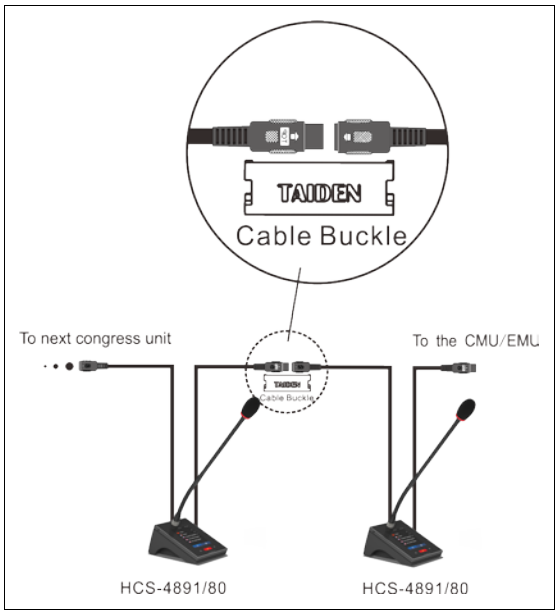
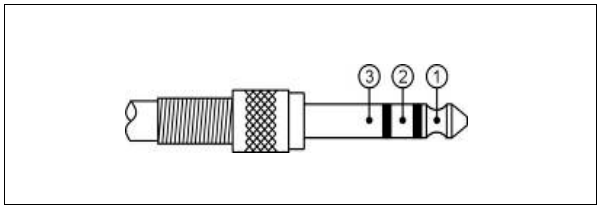


Figure 3.3.8 “Daisy-chain” connection between HCS-4891 series congress units

3.3.2.3 External earphone

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



Functions and indications:

1 ..... Left stereo channel signal

2 ..... Right stereo channel signal

3 ..... Power ground/Shield

3.3.2.4 Dual backup microphone high-end congress system solution

Innovative dual-microphone congress unit, with build-in isolated main microphone and backup microphone. Two audio signals are output simultaneously. When the main microphone fails, backup microphone output is not affected, so that the meeting can carry on smoothly. See figure 3.3.8.

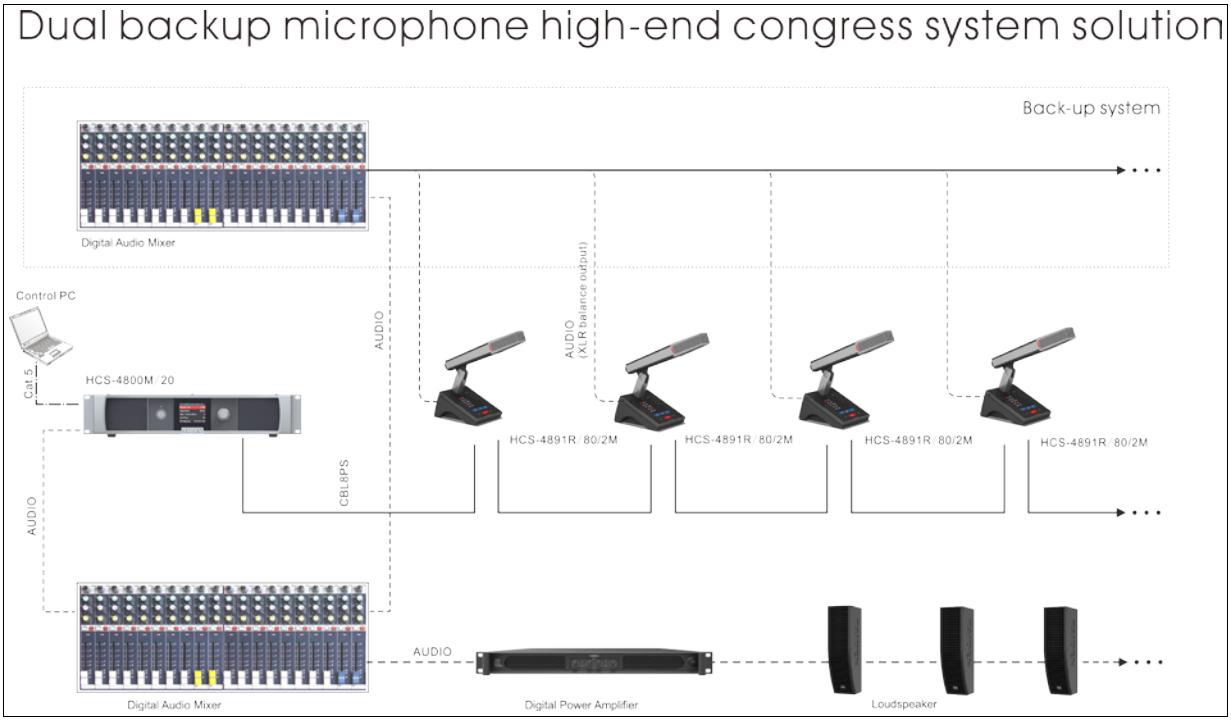
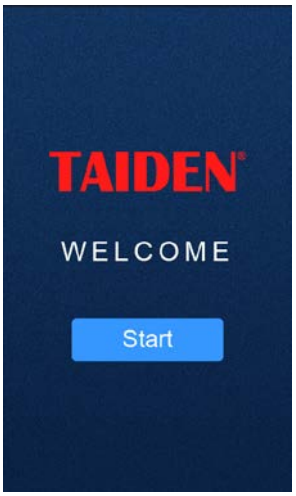


Figure 3.3.8 Dual backup microphone high-end congress system solution

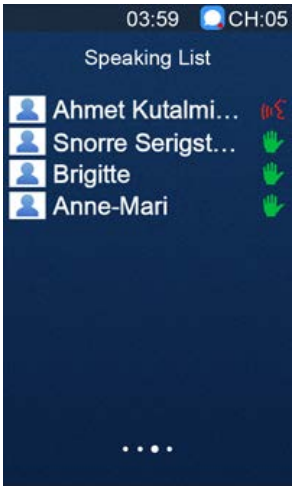
3.3.3 Operation

Before a meeting starts, the congress units need to be configured by the operator, including: numbering and testing. Congress unit exquisite and sleek 4.3" touch screen for information display, during the meeting, the participators can use the congress unit to sign-in, activate microphone, request to speak, vote, etc.

<table>
<tr>
<td> 

Welcome</td>
<td> 

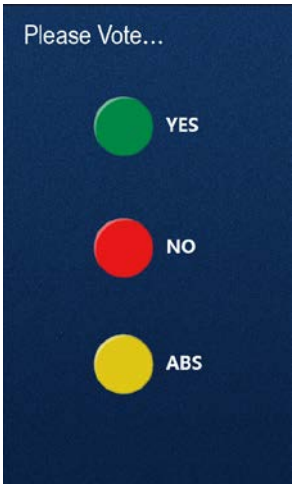
Home</td>
<td> 

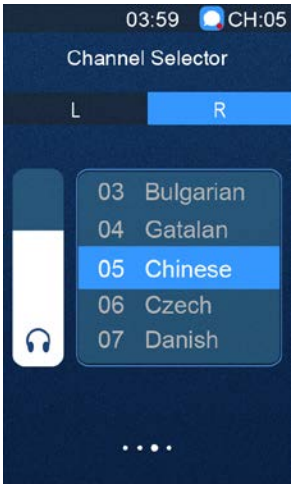
Information</td>
</tr>
<tr>
<td> 

Speaking</td>
<td> 

Sign-in</td>
<td> 

Pincode sign-in</td>
</tr>
<tr>
<td> 

Service</td>
<td> 

Voting</td>
<td> 

Simultaneous interpretation</td>
</tr>
</table>

Setting – brightness

Setting – language

Setting – unit information

3.3.3.1 Delegate unit

We introduce all the operation of HCS-4891/80 series congress units. The congress units of this series feature one or more of these functions.

1. Number

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

- Press “Unit Numbering” on application software. The system now goes to numbering status. At this time, press "Numbering: XX" on the screen of each congress unit in one by one. Once all congress terminals numbered, restart the CMU to update the number information.
- Rotate the function knob to select “0.5 Numbering”, then select and press “start” .The LCD screen of the main unit shows “Press key of DCS Units, one by one and reboot EMU”; meanwhile, LCD screen of those connected congress units will pop up a number; press “numbering” key of congress units one by one; reboot the main unit after all congress units being numbered for updating .

Note:

☞ When numbering, please number the congress units one by one and do NOT press the “Number” button of several congress units at the same time;

2. 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 8, 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

Request to speak when the microphone On/Off key is pressed (default 100 microphones at most, set up the request microphone number limit at DCS or web control).

a. 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:

☞ Active microphone number(1~8) setting is only effective to congress unit. The maximum capacity is 8 units (including chairman unit and VIP unit).
☞ After CMU connect to the DCS and meeting started, swipe the screen to view speaking list.

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).

3. Sign-in (application software needed)

To carry out voting, congress units with voting function should be registered. With application software, registration is available by choosing "Seat Sign-in".

■ **Key press sign-in**

In sign-in status, "Please sign-in" will be displayed on the LCD, click "Please sign-in" button or "1" to sign-in, as in the following figure:

If "Allow belated sign-in after stop" is enabled, when sign-in process is completed, "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.

■ **PIN code sign-in**

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

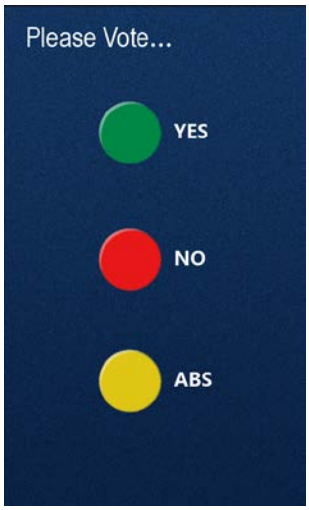
Input PIN code through virtual keyboard to sign in. If the PIN code is wrong, "Invalid PIN code" will be displayed on the LCD.

4. Voting (for units with function)

Voting can be originated by TAIDEN conference management system software, support/approve/ Yes/No/Abstain or Yes/No and other voting method.

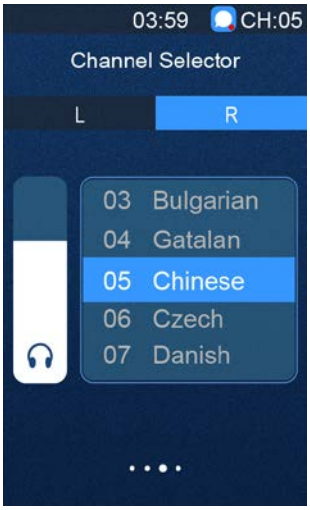
- The voting option will be displayed on LCD, click on the option button to vote;

- 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;



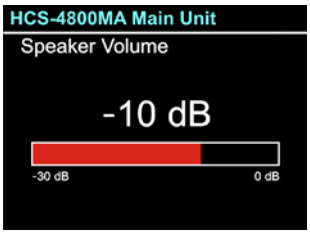
5. Channel selection

- 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, users can quickly select the channel language and adjust the volume of the headphones on the touch screen through the SI interface or physical buttons on the panel.



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. 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.

8. Service

- Click to select service and the terminal will receive information and related personnel will handle.

3.3.3.2 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 delegate microphones (except VIP units) will be muted temporarily when this key is pressed and they will restore when this key is released;
- If the priority mode on the main unit is configured as “All off”, all active delegate 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.
- If the priority mode on the main unit is configured “not working”, then the priority mode will be valid.

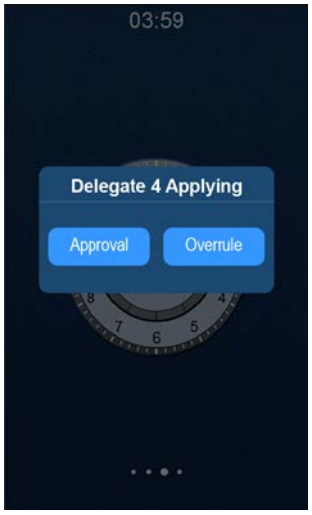
2. Speaking

- If the active microphone capacity have not reach to the maximum amount, the chairman can activate his/her microphone normally, the operation is the same as for the delegate unit;
- If the active microphone capacity reach to the maximum amount, 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” button or reject delegate’s request by pressing “Overrule” button.

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 (for units with voting function)

HCS-4891/80 series chairman unit cannot originate voting without a PC.

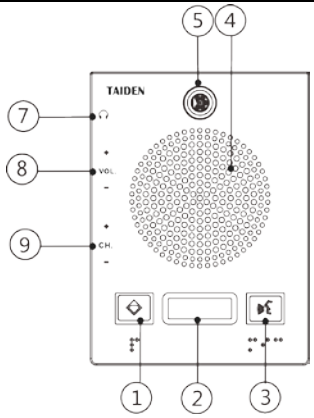
When connecting with PC software:

- Nominative or ballot voting are available;

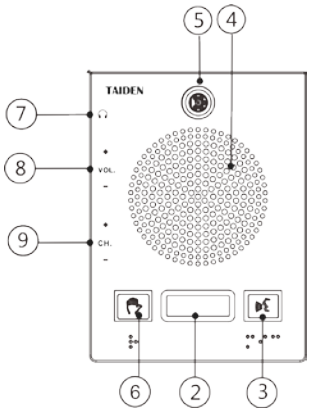
“First key-press valid” or “Last key-press valid” are available;

3.4 HCS-4838 series congress unit

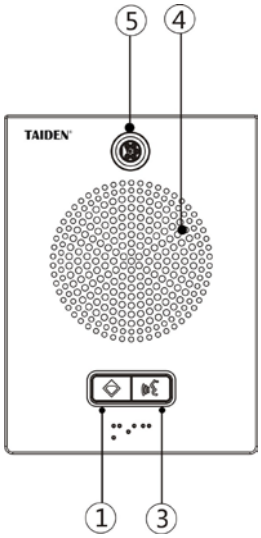
3.4.1 Functions and indications



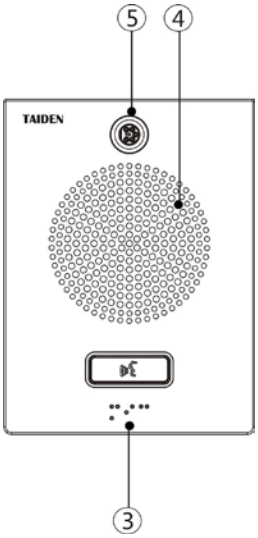
HCS-4838CS/80 chairman unit



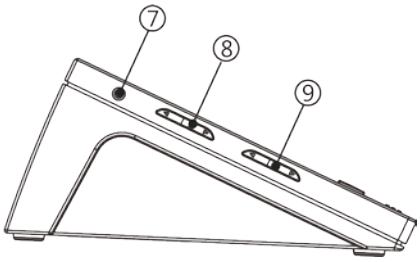
HCS-4838DS/80 delegate unit



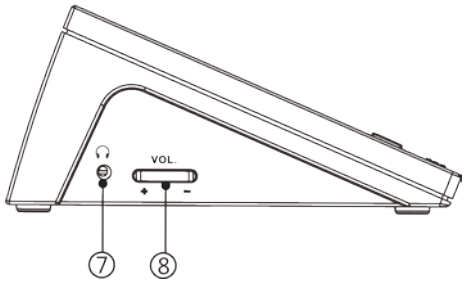
HCS-4838C chairman unit



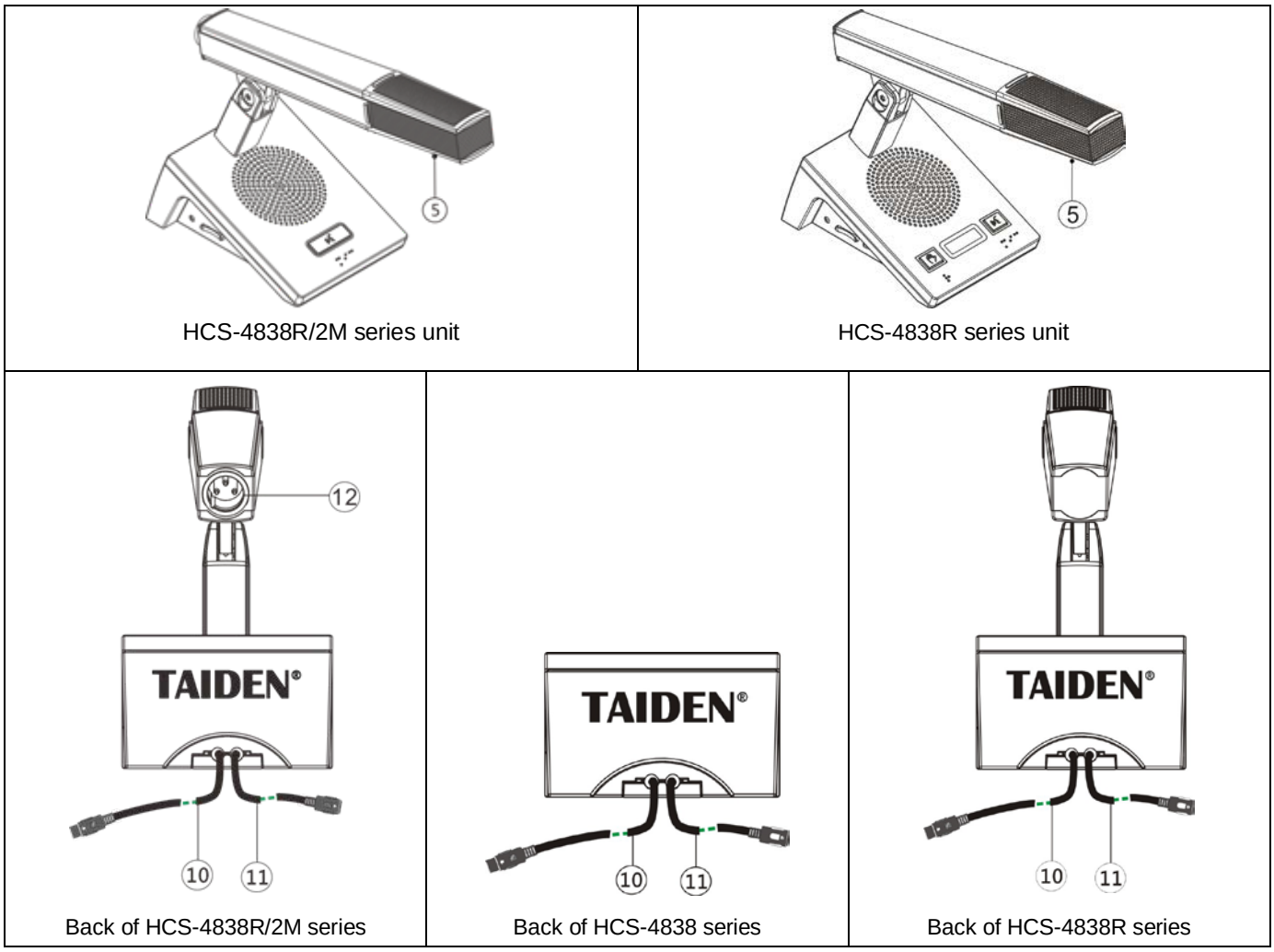
HCS-4838D delegate unit



Side of HCS-4838DS/CS/80



Side of HCS-4838 &HCS-4838R/2M series



HCS-4838R/2M series unit

HCS-4838R series unit

Back of HCS-4838R/2M series

Back of HCS-4838 series

Back of HCS-4838R series

Figure 3.4.1 HCS-4838 series congress units

Figure 3.4.1:

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

- ♦ According to the priority mode configuration on the main unit:
  - ◊ If configured as "All mute", all active delegate microphones (except VIP units) will be muted temporarily 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 switched off when this key is pressed. Under "Open" and "Request" mode, pressing this key will clear the request list (deny all delegates' requests to speak);
- ♦ If the chairman microphone is not active, pressing this key will activate it;
- ♦ If the ring mode is configured as "ON", a ring tone will be produced when this key is pressed.

2.OLED Display

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

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

- ♦ Chairman unit: press this key to activate/deactivate the microphone;
- ♦ Delegate unit: press this key to activate/deactivate the microphone or request/cancel request to speak.

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

4. Built-in Hi-Fi loudspeaker

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

5.Microphone

- HCS-4838 Series: stem microphone socket
- HCS-4838R Series: metal square column microphone
- HCS-4838R/2M Series: dual metal square column microphone

6. Request key with indicating light

- Under discussion mode, when delegate pressed the request key, the indicating light (red) was activated and he/she was added to the request list; when the chairman get the applying information from request list and say: “xx, please give your speech”, the delegate begins to speak by pressing the microphone On/Off key.

7.Earphone jack (Ø 3.5 mm)

8.Earphone volume control

9.Simultaneous interpretation channel selector

- Available when earphone is plugged in.

10. 1.5-meter 8P-DIN cable with standard plug (male x 1)

11. 0.6-meter 8P-DIN cable with standard plug (female x1)

12. XLRM connector

- Connect backup microphone to sound mixer through dedicated audio cable.

3.4.2 Connection

3.4.2.1 Connecting to the CMU or the EMU

The HCS-4838 series congress unit is equipped with a 1.5-meter 8P-DIN cable with a standard male connector. When connecting the HCS-4800CMU/ HCS-8600EMU to the contribution units, just connect the male connector of the first unit to the output of the main unit.

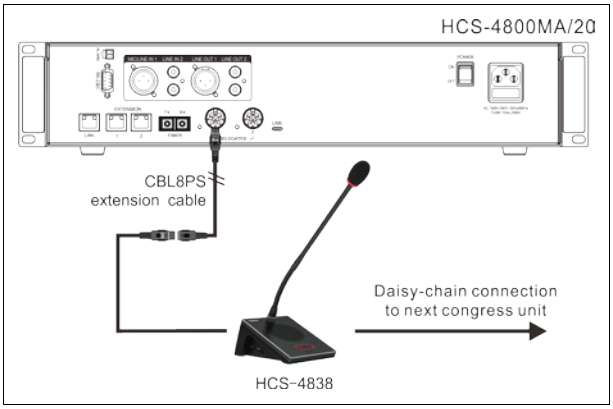


Figure 3.4.2 HCS-4838 series congress unit connected to the CMU/EMU

For a longer distance between the contribution unit and the CMU/EMU, a CBL8PS 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.

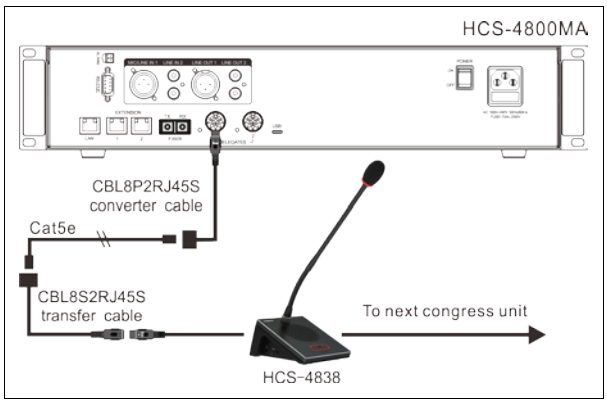


Figure 3.4.3 HCS-4838 series congress unit connected to the CMU/EMU

Neither the replacement of congress units nor cable faults between congress units will affect the other units if “Closed Loop - Daisy Chain” connection topology is selected. “Closed Loop - Daisy Chain” connection, achieved by closing the loop of the daisy-chained units, increases system reliability. 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 CBL8PS extension cable.

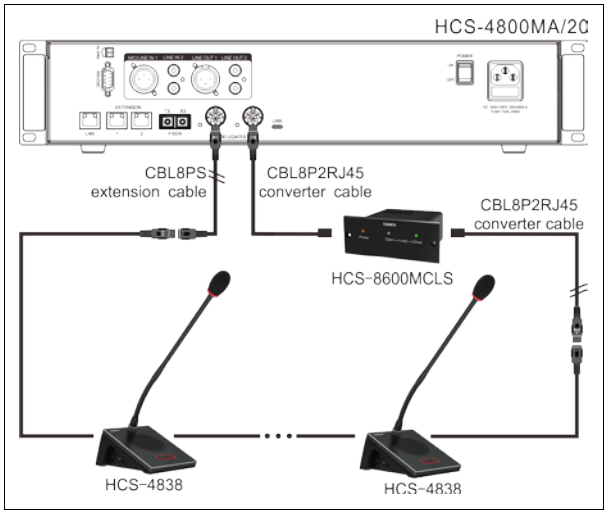


Figure 3.4.4 “Closed Loop - Daisy Chain” connection between the CMU and HCS-4838 series congress units

3.4.2.2 Connection between congress units

All congress units of HCS-4800 system are daisy-chained easily and conveniently by dedicated 8P-DIN cables.

When connecting to another congress unit, just connect the 8P-DIN standard female connector on the 0.6-meter cable of the unit to the 8P-DIN standard male connector on the 1.5-m 8P-DIN standard male connector on the1.5-meter cable of the next unit.

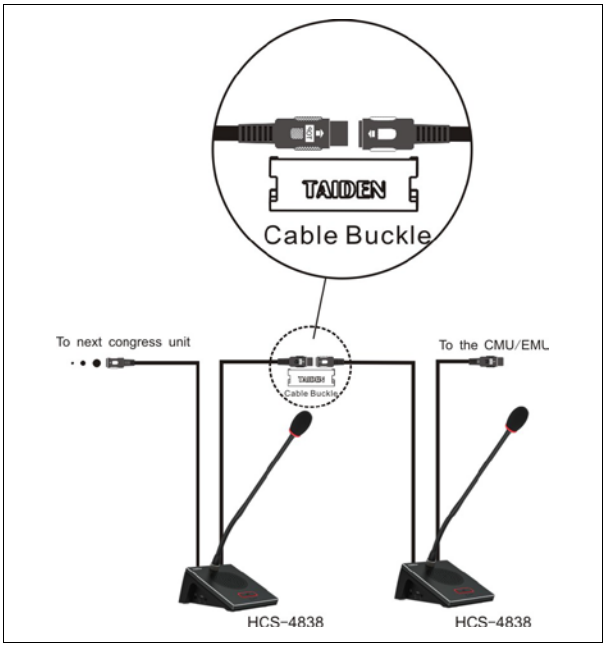
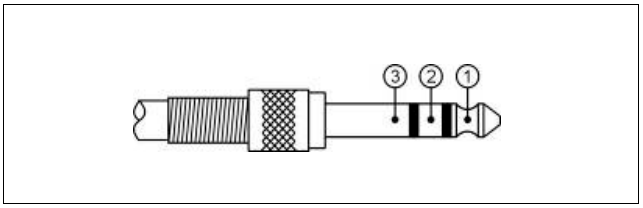


Figure 3.4.5 “Daisy-chain” connection between HCS-4838 series congress units

3.4.2.3 External earphone

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



Functions and indications:

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

3.4.2.4 Dual backup microphone high-end congress system solution

Innovative dual-microphone congress unit, with build-in isolated main microphone and backup microphone. Two audio signals are output simultaneously. When the main microphone fails, backup microphone output is not affected, so that the meeting can carry on smoothly. See figure 3.4.6.

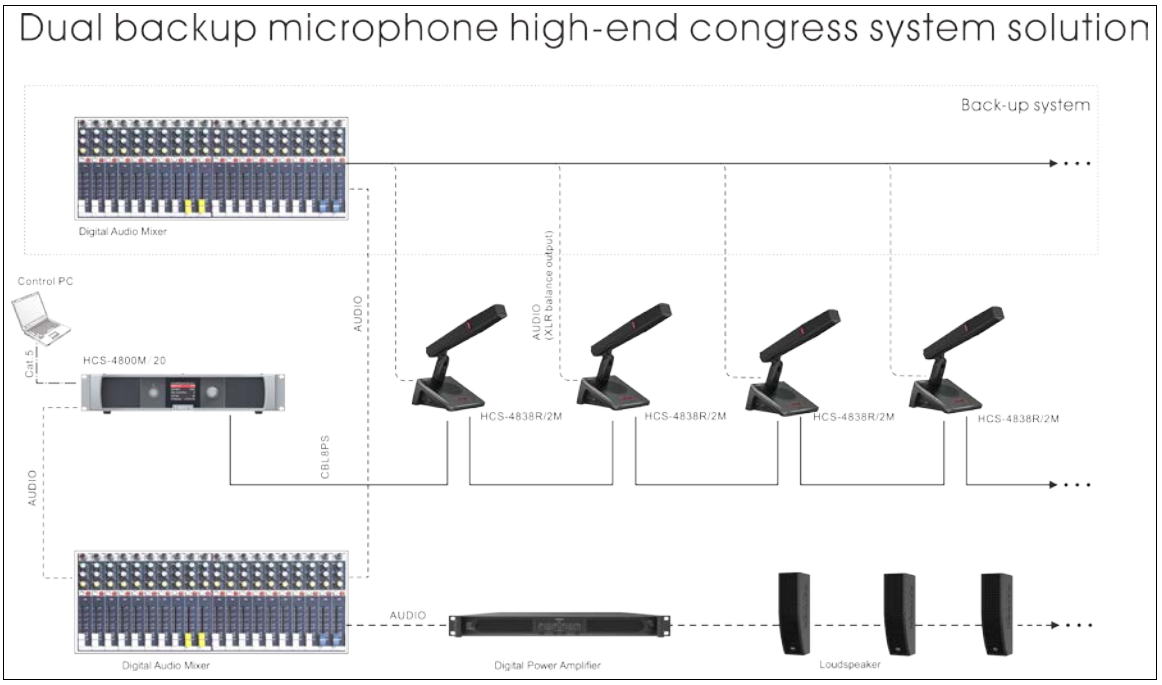


Figure 3.4.6 Dual backup microphone high-end congress system solution

3.4.3 Operation

Before a meeting starts, the congress units need to be configured by the operator, including: numbering and testing. During the meeting, the participators can use the congress unit to activate microphone, request to speak, etc.

3.4.3.1 Delegate unit

We introduce all the operation of HCS-4838 series congress units. The congress units of this series feature one or more of these functions.

1. Number

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

- Press “Unit Numbering” on application software. The system now goes to numbering status. At this time, press the on/off key of each congress unit one by one. Once all congress terminals numbered, restart the CMU to update the number information.
- Rotate the function knob to select “0.5 Numbering”, then select and press “start” .The LCD screen of the main unit shows “Press key of DCS Units, one by one and reboot EMU”; meanwhile, those indicate light of connected congress units will flashing; press on/off key of congress units one by one; then reboot the main unit after all congress units being numbered for updating .

Note:

☞ When numbering, please number the congress units one by one and do NOT press the microphone On/Off button of several congress units at the same time.

2. 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 8, 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 100 microphones at most, set up the request microphone number limit at DCS or web control). 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:

☞ Active microphone number(1~8) setting is only effective to congress unit. The maximum capacity is 8 units (including chairman unit and VIP unit).

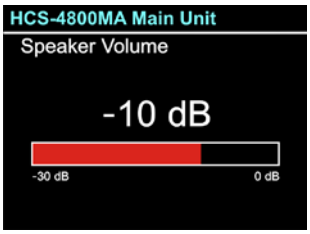
A camera can focus an activated microphone automatically (camera position preset by application software). Speaker's video can be exported to and displayed on large screen(s).

3. Channel selection (for units with SI function)

- 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.

4. 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 unit.

5. 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.

3.4.3.2 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 delegate microphones (except VIP units) will be muted temporarily when this key is pressed and they will restore when this key is released;

If the priority mode on the main unit is configured as “All off”, all active delegate 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 have not reach to the maximum amount, the chairman can activate his/her microphone normally, the operation is the same as for the delegate unit;

If the active microphone capacity reach to the maximum amount, 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. The chairman can now approve delegate’s request and activate delegate’s microphone by pressing “Approve” button or reject delegate’s request by pressing “Overrule” button.

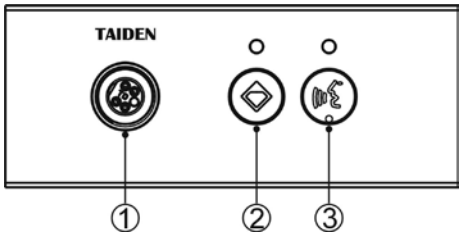
When a request is approved, the last activated microphone will be turn off at the same time.

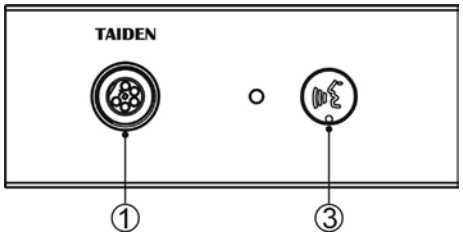
B. Turn off or mute delegate microphone

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

3.5 HCS-48U6 series congress unit

3.5.1 Functions and indications

<table>
<tr>
<td> 

HCS-48U6CMICM/80 flush-mounted chairman unit
HCS-48U6CMICMS flush-mounted chairman unit</td>
<td> 

HCS-48U6DMICM/80 flush-mounted delegate unit
HCS-48U6DMICMS flush-mounted delegate unit</td>
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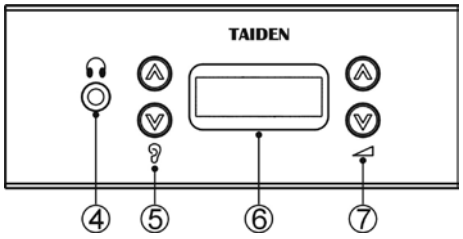
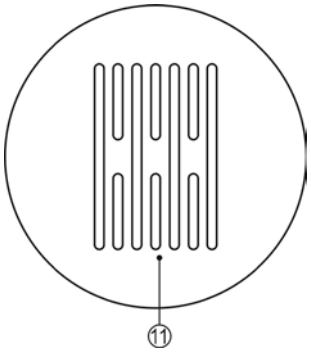
<td> 

HCS-48U6SELM/80 flush-mounted channel selector</td>
<td> 

HCS-48U6SPK</td>
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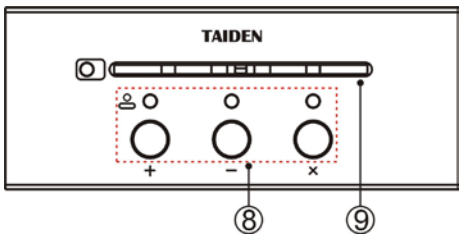
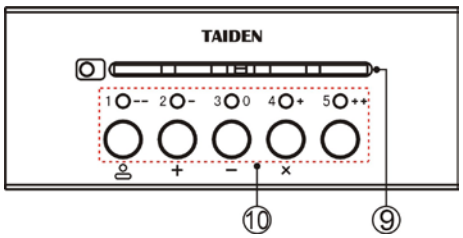
<td> 

HCS-48U6DVOTTW flush-mounted voting unit</td>
<td> 

HCS-48U6DVOTFW flush-mounted voting unit</td>
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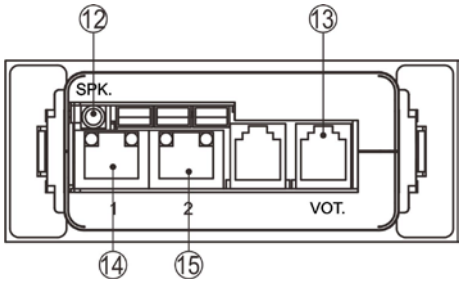
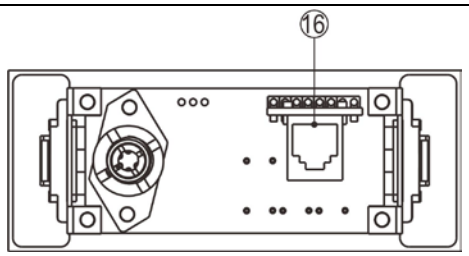
<td> 

Bottom of HCS-48U6MICM/80</td>
<td> 

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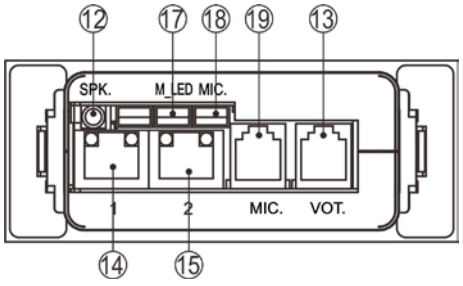
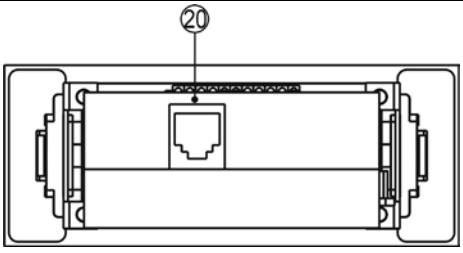
<td> 

Bottom of HCS-48U6SELM/80</td>
<td> 

Bottom of HCS-48U6DVOT</td>
</tr>
</table>

Figure 3.5.1 HCS-48U6 series congress units

Figure 3.5.1:

1. Stem microphone socket

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

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

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

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

- Chairman unit: press this key to activate/deactivate the microphone;
- Delegate unit: press this key to activate/deactivate the microphone or request/cancel request to speak.

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

4. Earphone jack (Ø 3.5 mm)

5. Simultaneous interpretation channel selector

- Available when earphone is plugged.

6. OLED screen

- Display SI channel language and earphone volume.

7. Earphone volume control

8. 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 3.5.1 for details).

9. 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.

10. 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 3.5.2 for details).

11. Loudspeaker

12. Loudspeaker jack (Ø 3.5 mm)

13. Standard RJ11 socket

- Connecting to HCS-48U6DVOT.

14&15. 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.

16. Standard RJ11 socket

- Connecting to HCS-48U6SELM/80.

17. 3P socket

- Connecting to the microphone LED ring signal of HCS-48U6MICS.

18. 2P socket

- Connecting to the microphone signal of HCS-48U6MICS.

19. Standard RJ11 socket

- Connecting to HCS-48U6MICS.

20. Standard RJ11 socket

- Connecting to HCS-48U6MICM/80 or HCS 48U6SELM/80.

Table 3.5.1 List of multi-functional keys - 3 keys

Function / Keys			+	-	×
Numbering			Number		
Sign-in			Sign-in		
Voting	**Parliamentary**		YES	NO	ABSTAIN
	For/Against		For	Against	
	Appraisal	**3 keys voting**	Satisfied/ Qualified/ Competent	Basically satisfied/ Basically qualified/ Basically competent	Unsatisfied/ Unqualified/ Incompetent
		2 keys voting	Satisfied/ Qualified/ Competent	Unsatisfied/ Unqualified/ Incompetent	

Table 3.5.2 List of multi-functional keys - 5 keys

Function / Keys			1/- -	2/-	3/0	4/+	5/++
Numbering			Number				
Key-press sign-in			Sign-in				
Voting	**Parliamentary**			YES	NO	ABSTAIN	
	Questionnaire		1	2	3	4	5
	Audience response		--/0	-/25	0/50	+/75	++/100
	For/Against			For	Against		
	Parliamentary （NPPV）			YES	NO	ABSTAIN	NPPV
	Appraisal	**Satisfied**	Perfectly satisfied (four keys voting)	Satisfied (four/three/two keys voting)	Basically satisfied (four/three keys voting)	Unsatisfied (four/three/two keys voting)	
		Qualified	Perfectly qualified (four keys voting)	Qualified (four/three/two keys voting)	Basically qualified (four/three keys voting)	Unqualified (four/three/two keys voting)	
		Competent	Perfectly competent (four keys voting)	Competent (four/three/two keys voting)	Basically competent (four/three keys voting)	Incompetent (four/three/two keys voting)	

3.5.2 Installation

3.5.2.1 Stand-alone installation

■ Installation

a. Make holes on the table according to the dimensional diagram;

b. Fix the fixed iron plates with self tapping screws (KA3 × 12) according to the holes;

c. Hook up the unit onto the fixed iron plates.

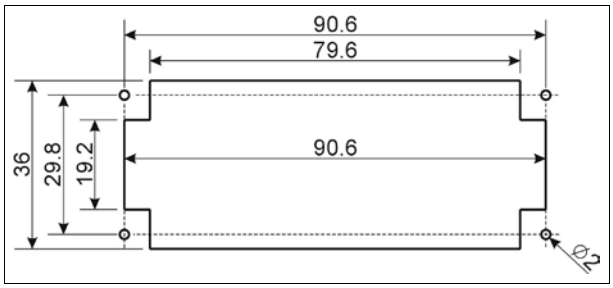


Figure 3.5.2 Positioning diagram of HCS-48U6 series congress unit (unit: mm)

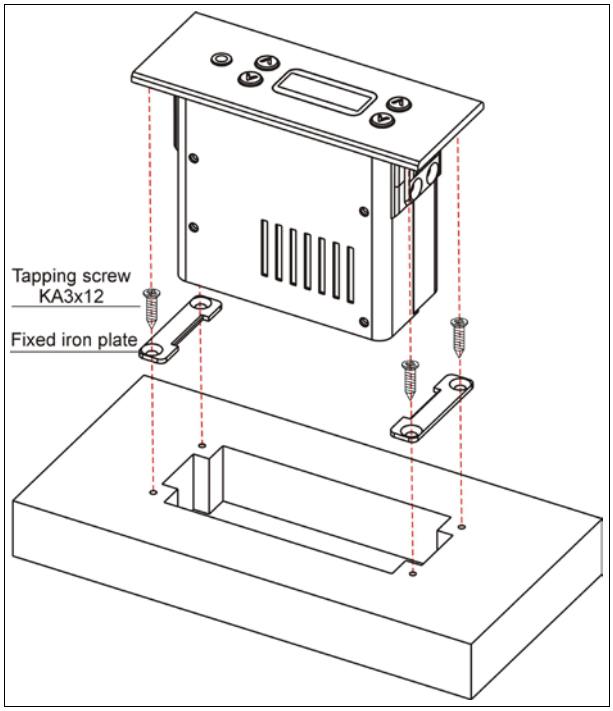


Figure 3.5.3 Installation diagram of HCS-48U6 series congress unit

■ Disassembly

When disassembling, insert a screwdriver from the bottom, release the buckle, raise it from one side, then raise the other side, and lift the unit.

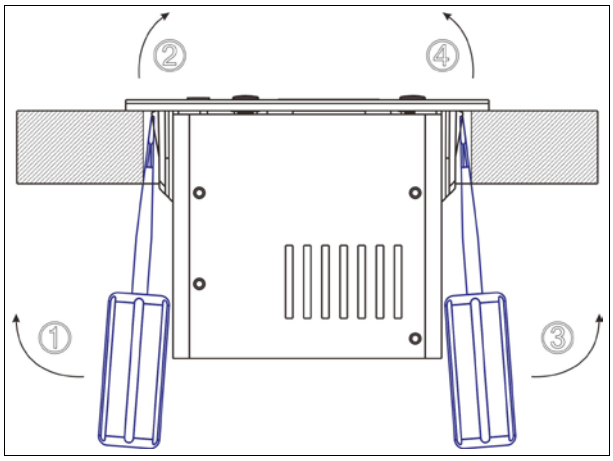


Figure 3.5.4 Disassembly caution of HCS-48U6 series flush-mounted congress unit

■ Installation of loudspeaker

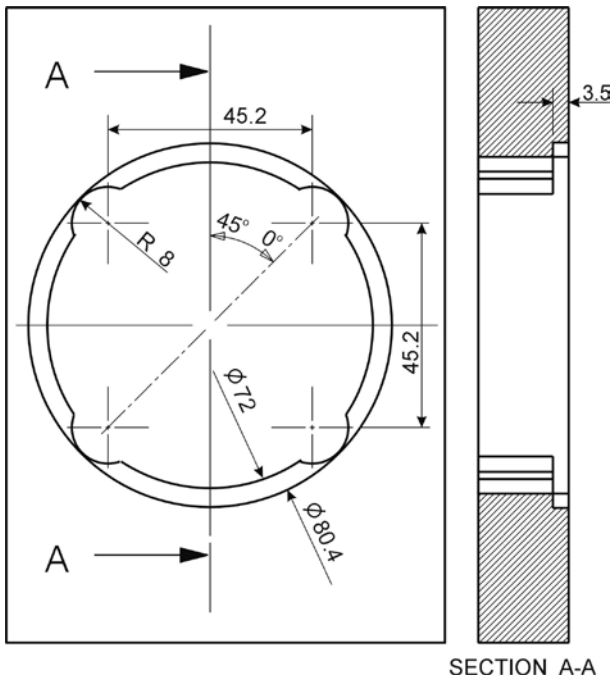


Figure 3.5.5 Positioning diagram of HCS-48U6SPK (unit: mm)

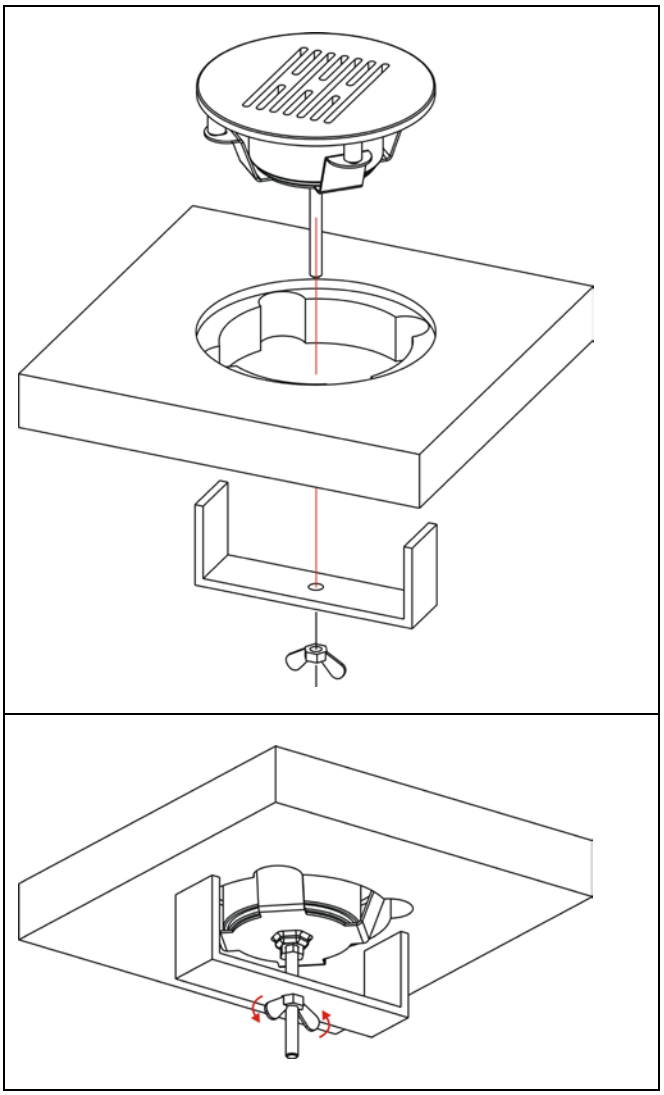


Figure 3.5.6 Installation diagram of HCS-48U6SPK

3.5.2.2 Assembly installation

a. Cut holes in the table for the first unit according to the positioning diagram (figure 3.5.7);

b. Make sure that the distance between the center of the two adjacent holes is more than 100 mm; and the distance of the center between the loudspeaker and the adjacent unit is more than 95 mm; (Figure 3.5.7). Repeat step a to cut holes for the adjacent unit(s);

c. Put the congress units into the holes; install each unit according to stand-alone installation method.

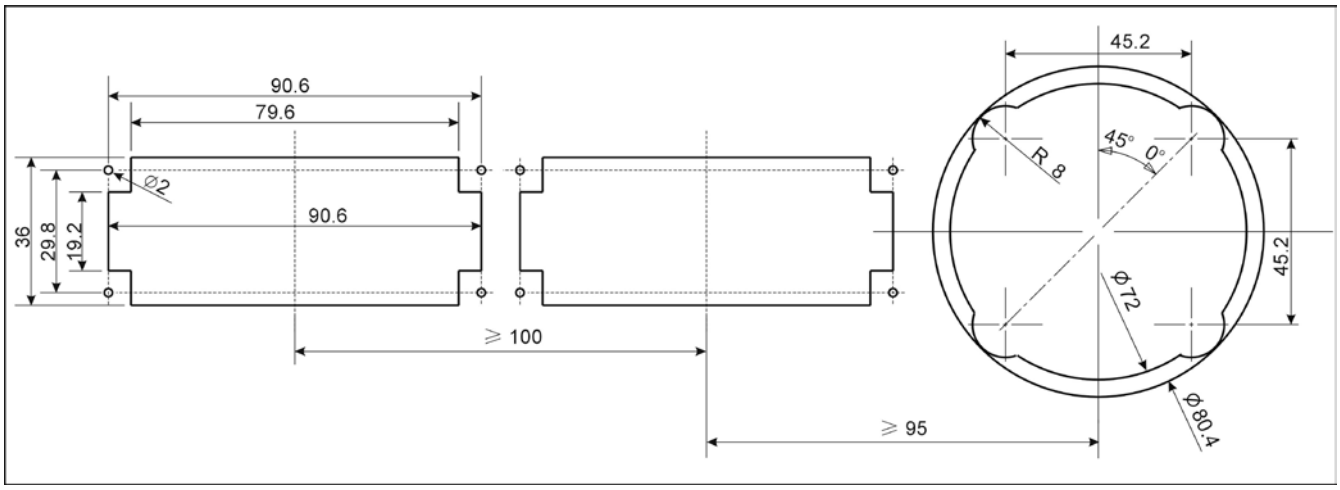


Figure 3.5.7 Positioning and assembly installation diagram of several HCS-48U6 series congress units (unit: mm)

3.5.3 Connection

3.5.3.1 Connecting to the CMU or the EMU

The HCS-48U6 series (HCS-48U6MICM/80 and HCS-48U6SELM/80) congress unit is 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.

- One HCS-48U6MICM/80 discussion unit can be connected to one HCS-48U6DVOT voting unit and one HCS-48U6SPK loudspeaker;
- One HCS-48U6SELM/80 channel selector can be connected to one HCS-48U6MICS discussion unit, one HCS-48U6DVOT voting unit and one HCS-48U6SPK loudspeaker.

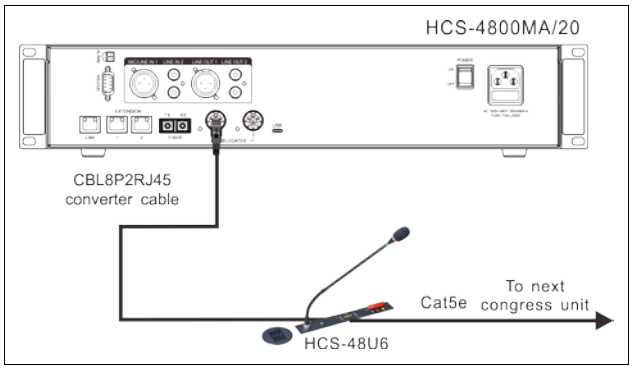


Figure 3.5.8 HCS-48U6 series congress unit connected to the CMU/EMU

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.

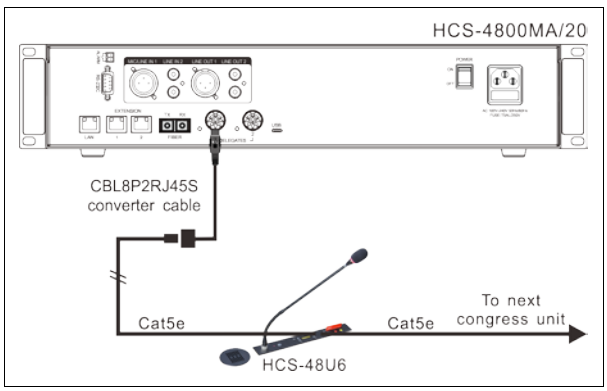


Figure 3.5.9 HCS-48U6 series congress unit connected to the CMU/EMU

Neither the replacement of congress units nor cable faults between congress units will affect the other units if “Closed Loop - Daisy Chain” connection topology is selected. “Closed Loop - Daisy Chain” connection, achieved by closing the loop of the daisy-chained units, increases system reliability. 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.

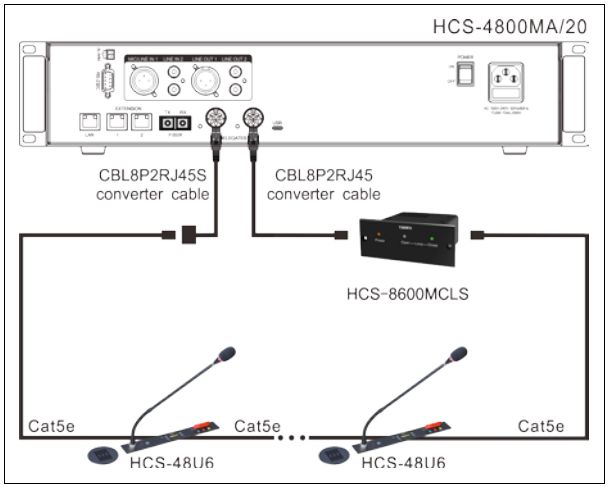


Figure 3.5.10 “Closed Loop - Daisy Chain” connection between the CMU and HCS-48U6 series congress unit

3.5.3.2 Connections between congress units

HCS-48U6MICM/80 and HCS-48U6SELM/80 congress units are daisy-chained easily and conveniently by dedicated Cat5e cables.

When connecting to another congress unit, just use the Cat5e cable of the unit to another RJ45 socket of the next unit.

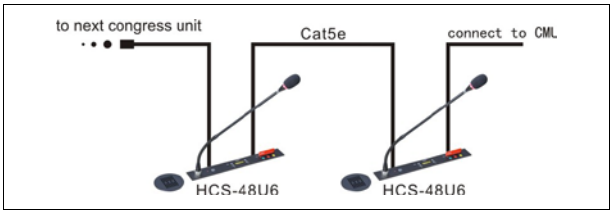
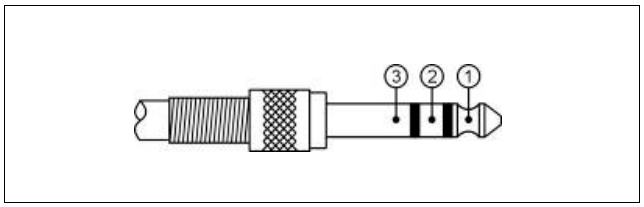


Figure 3.5.11 “Daisy-chain” connection between HCS-48U6/80 series congress units

3.5.3.3 External earphone

An external earphone can be connected to the earphone jack of HCS-48U6SELM channel selector. Its volume can be adjusted by the earphone volume control button. The external earphone shall have Ø 3.5 mm plug, as the following figure:



Functions and indications:

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

3.5.4 Operation

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

3.5.4.1 Delegate unit

1. Number

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

- Press “Unit Numbering” on application software. The system goes to numbering status. The number indicating light of all connected congress units will blink. Press the microphone On/Off key (“” Sign-in/Number key for voting units) of all congress units one by one. The number indicating light will be deactivated. Once all congress units numbered, restart the CMU to update the number information.
- Rotate the function knob to select “0.5 Numbering”, then select and press “start” .The LCD screen of the main unit shows “Press key of DCS Units, one by one and reboot EMU”; meanwhile, those indicate light of connected congress units will flashing; press on/off key of congress units one by one; then reboot the main unit after all congress units being numbered for updating .

Note:

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

2. Sign-in (application software needed, for HCS-48U6DVOT series only)

To carry out voting, congress units 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 “” will blink, press key “” to sign-in and the indicating light will be turned off.

- **IC-Card sign-in**

In IC-Card sign-in status, please put the contactless IC-card into the slot on the voting unit. If read the IC-Card correctly, the indicating light will off after blink. If the indicating light keeps on, stands that the IC-Card is invalid; please read the IC-Card again or contact the technical support.

3. Speaking (without software, only for discussion unit of this series)

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 8, 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 100 microphones at most, set up the request microphone number limit at DCS or web control). 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 (1/2/3/4) **reached**:

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

Note:

☞ Active microphone number(1~8) setting is only effective to congress unit. The maximum capacity is 8 units (including chairman unit and VIP unit).

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 (for HCS-48U6DVOT series only)

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.

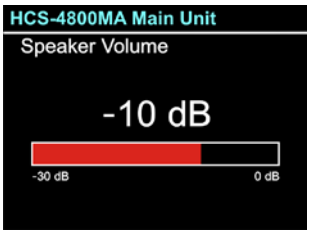
5. Channel selection (for HCS-48U6SELM/80 only)

- 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 HCS-48U6SPK can be adjusted by

LCD menu -> Speaker Volume on the main unit;



- When the earphone is plugged in HCS-486SELM/80, its volume can be adjusted by the earphone volume control of the unit.

7. VIP unit (for delegate discussion unit of this series only)

- 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.

3.5.4.2 Chairman unit

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

1. Priority (for chairman discussion unit of this series only)

- If the priority mode on the main unit is configured as “All mute”, all active delegate microphones (except VIP units) will be muted temporarily when this key is pressed and they will restore when this key is released;
- If the priority mode on the main unit is configured as “All off”, all active delegate microphones (except VIP 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 (for chairman discussion unit of this series only)

- 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 (for chairman discussion unit of this series only)

A. Approve delegate unit’s request to speak

Without PC and under “Apply” mode, when a delegate requests to speak, the chairman can now approve the delegate’s request and activate the delegate’s microphone by pressing the microphone On/Off key or reject the delegate’s request by pressing the priority key.
When a request is approved, the last activated microphone will be turn off at the same time.

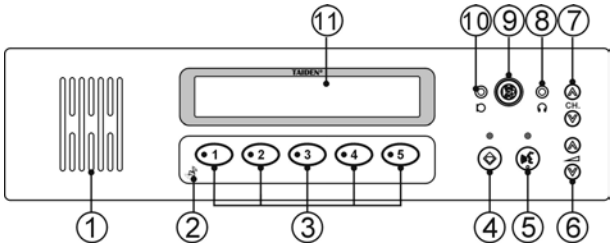
B. Turn off or mute delegate microphone

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

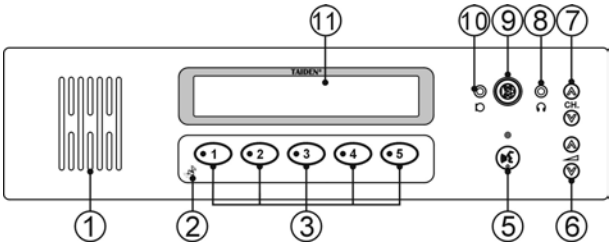
3.6 HCS-48U7/U9/80 series congress unit

3.6.1 Functions and indications

HCS-48U9 series front



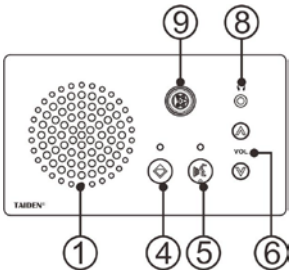
HCS-48U9CVSW/80



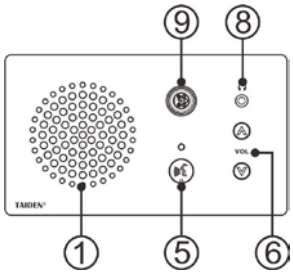
HCS-48U9DFF

HCS-48U9DVSW/80

HCS-48U7 series front

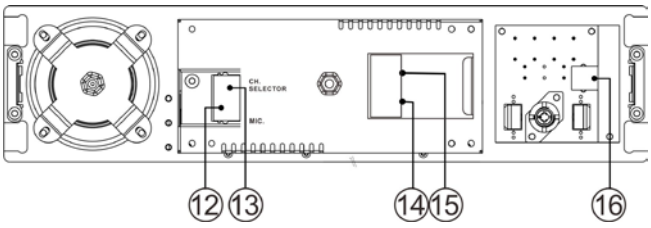


HCS-48U7CM/80

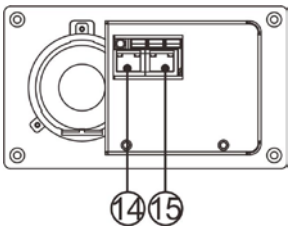


HCS-48U7DM/80

HCS-48U7/U9 back side

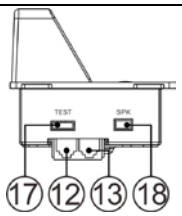


Bottom side of HCS-48U9

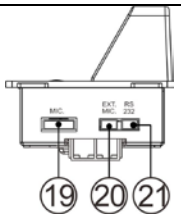


Bottom side of HCS-48U7M/80

HCS-48U7/U9 series side



Left side



Right side

Figure 3.6.1 HCS-48U7/U9 series congress units

Figure 3.6.1:

1. Built-in Hi-Fi loudspeaker

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

2. Contactless IC-Card reader

3. 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 3.6.1 for details);
- For this series congress units with LCD, these five keys act as functional keys for menu operation.

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

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

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

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

- Chairman unit: press this key to activate/deactivate the microphone;
- Delegate unit: press this key to activate/deactivate the microphone or request/cancel request to speak.

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

6. Earphone volume control

7. Simultaneous interpretation channel selector

- Available when earphone is plugged.

8. Earphone jack (Ø 3.5 mm)

9. Stem microphone socket

10. External microphone jack (Ø 3.5 mm)

11. High light 256x32 graphic LCD

- Can display menu and information in several languages (Simplified Chinese, Traditional Chinese, English, etc.);
- If the earphone is plugged, the simultaneous interpretation channel number and the language name will be displayed.

12. Mic. (RJ11 socket)

- Connecting to RJ11 socket of the microphone component.

13. CH SELECTOR (RJ11 socket)

14&15. 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.

16. RJ11 socket of the microphone component

17. TEST socket

18. Internal socket for SPK

19. 6-pin socket for MIC.

20. 3-pin micrphone EXT. MIC.

21. RS-232

Table 3.6.1 List of multi-function keys

Function / Keys			1/- -	2/-	3/0	4/+	5/++
Numbering			Number				
Key-press sign-in			Sign-in				
Start/End (with application software)			Start/End				
Pause/End (without application software)			Pause				End
Voting	**Parliamentary**			YES	NO	ABSTAIN	
	Questionnaire		1	2	3	4	5
	Audience response		--/0	-/25	0/50	+/75	++/100
	For/Against			For	Against		
	Parliamentary			YES	NO	ABSTAIN	NPPV
	Appraisal	**Satisfied**	Perfectly satisfied (four keys voting)	Satisfied (four/three/two keys voting)	Basically satisfied (four/three keys voting)	Unsatisfied (four/three/two keys voting)	
		Qualified	Perfectly qualified (four keys voting)	Qualified (four/three/two keys voting)	Basically qualified (four/three keys voting)	Unqualified (four/three/two keys voting)	
		Competent	Perfectly competent (four keys voting)	Competent (four/three/two keys voting)	Basically competent (four/three keys voting)	Incompetent (four/three/two keys voting)	

3.6.2 Installation

3.6.2.1 Cutout

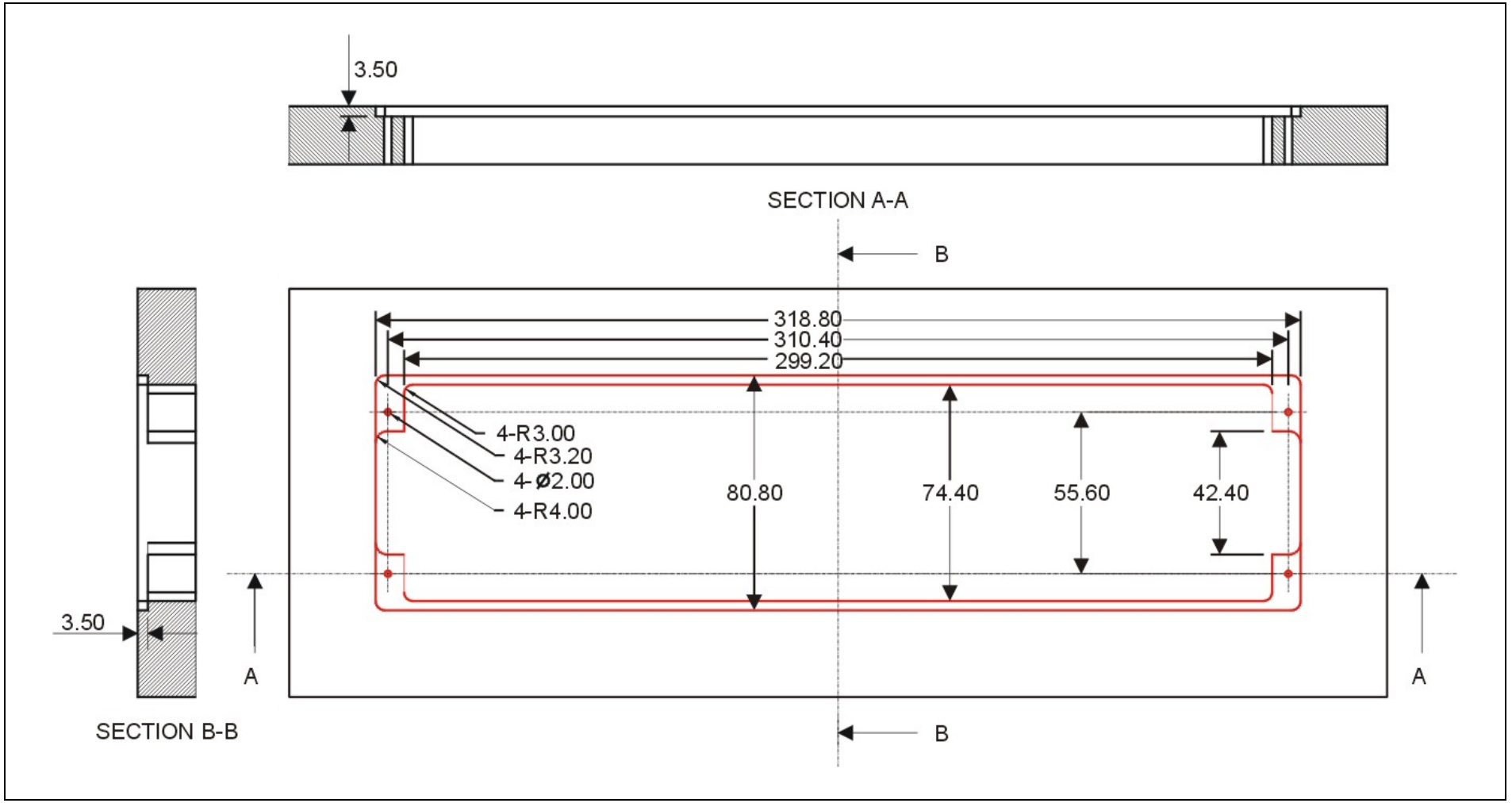


Figure 3.6.2 Cutout of HCS-48U9 series flush-mounted congress unit (unit: mm)

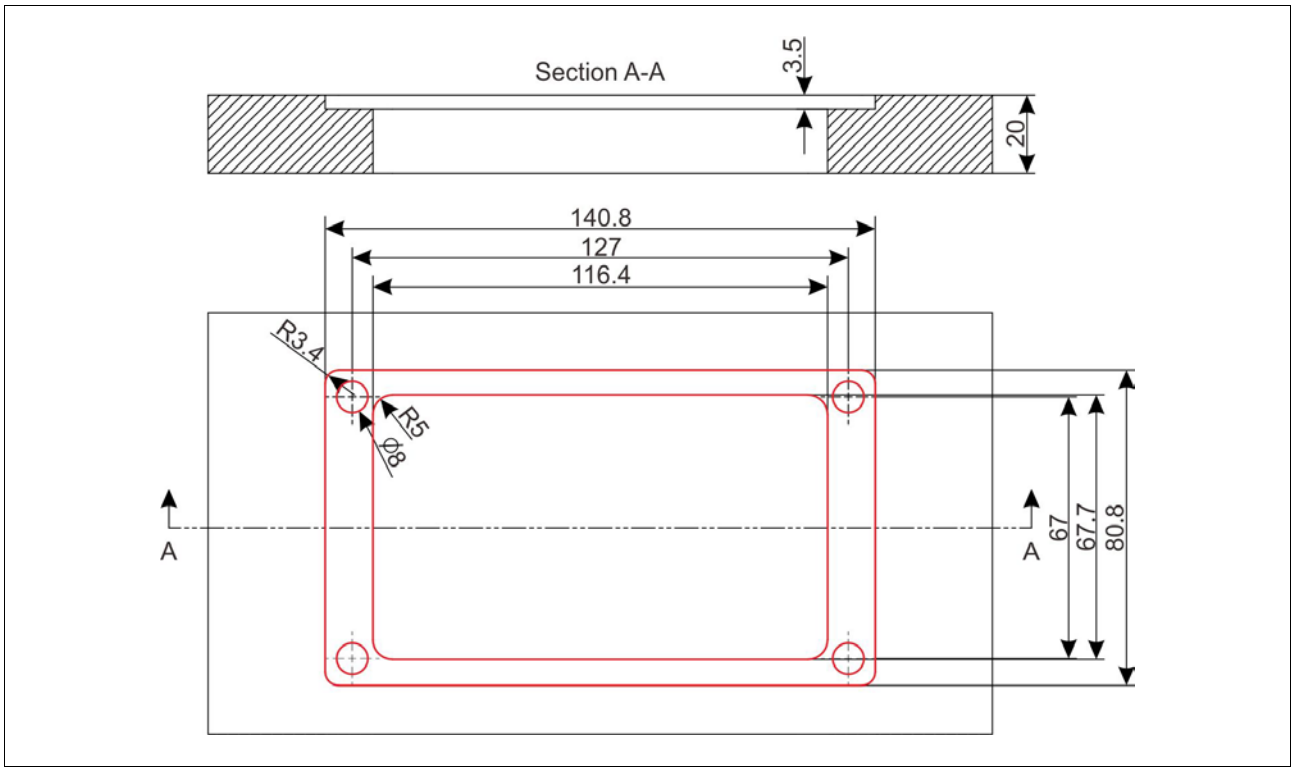


Figure 3.6.3 Cutout of HCS-48U7M/80 flush-mounted congress unit (unit: mm)

3.6.2.2 Installation

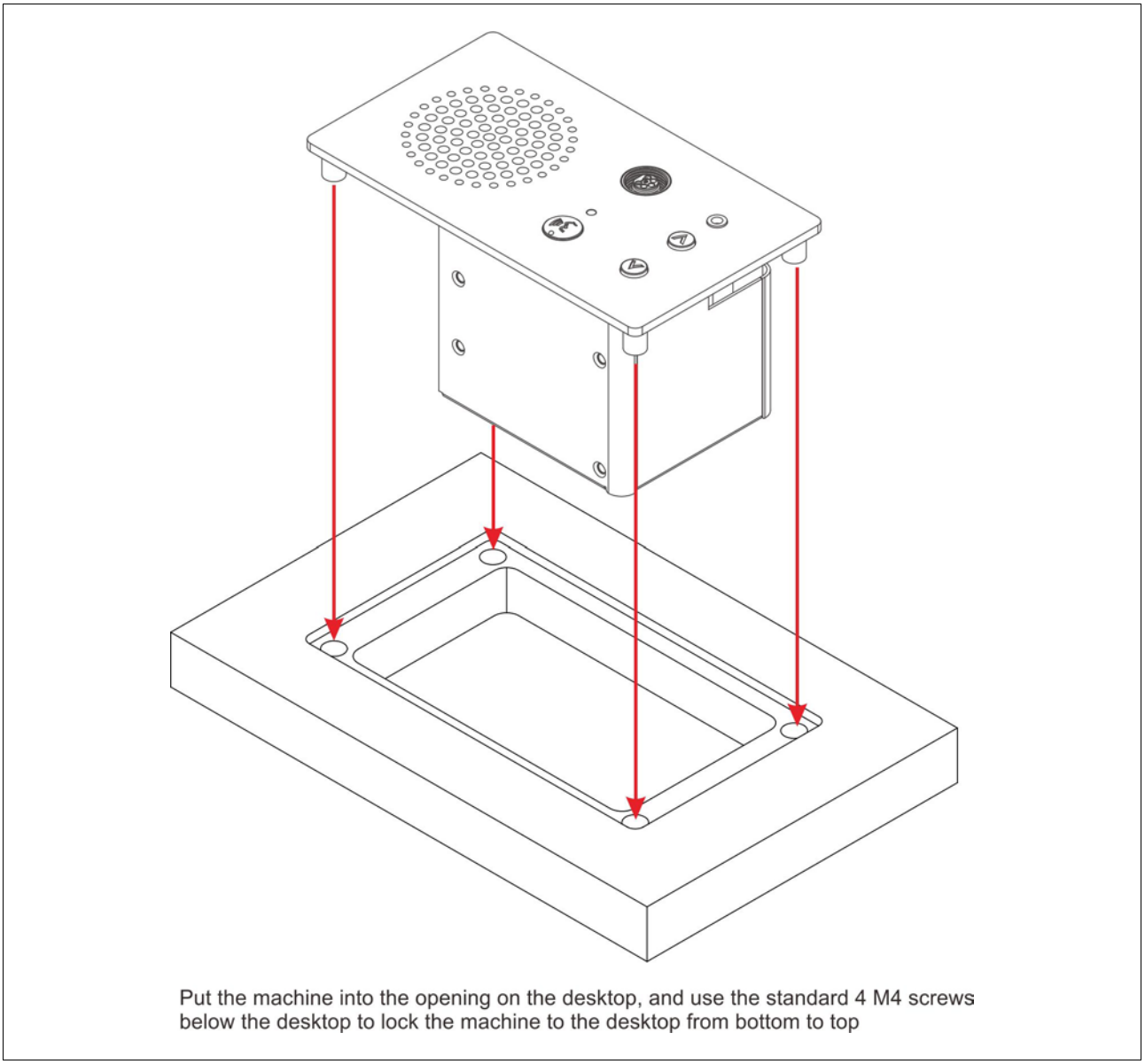


Figure 3.6.4 Installation of HCS-48U7M/80 series flush-mounted congress unit

3.6.2.3 Disassembly

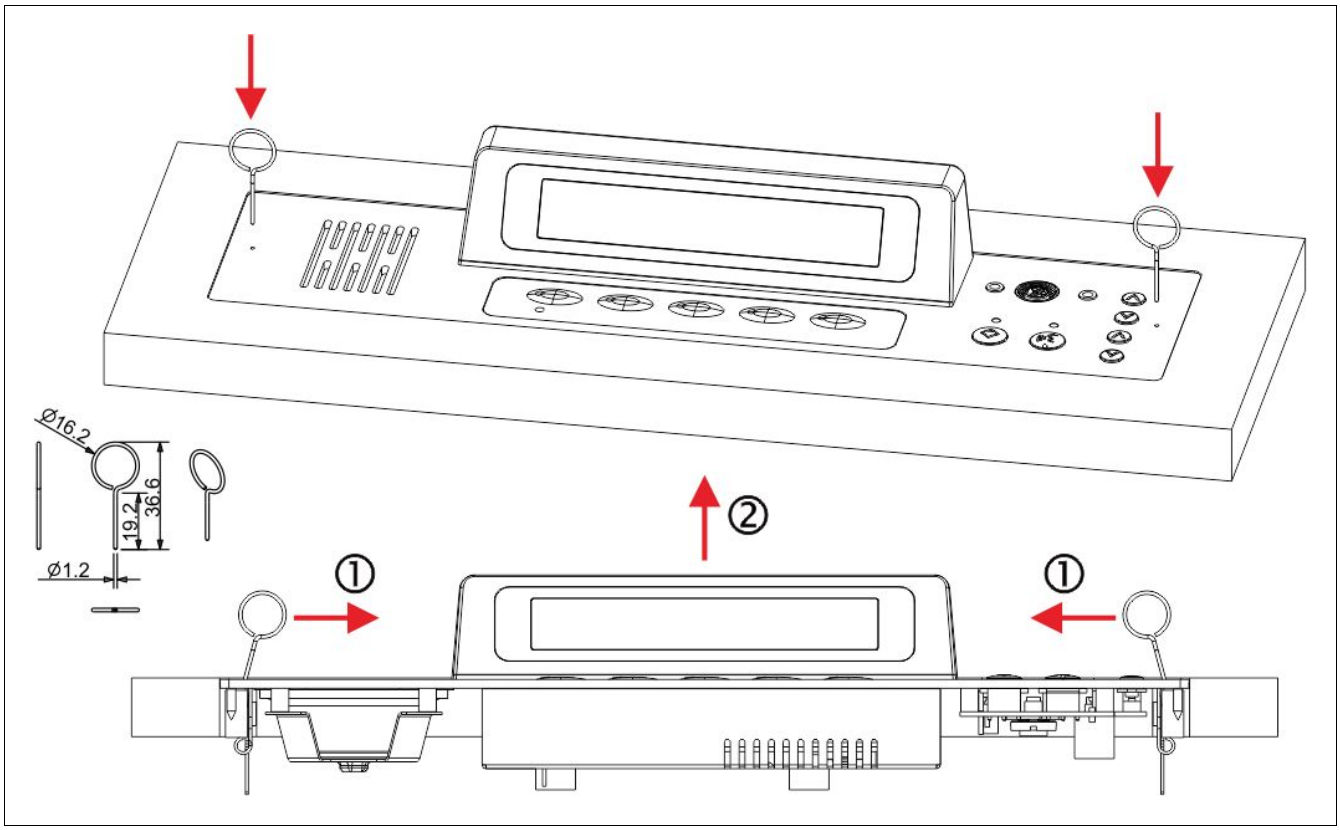


Figure 3.6.5 Disassembly of HCS-48U9 series flush-mounted congress unit (method a)

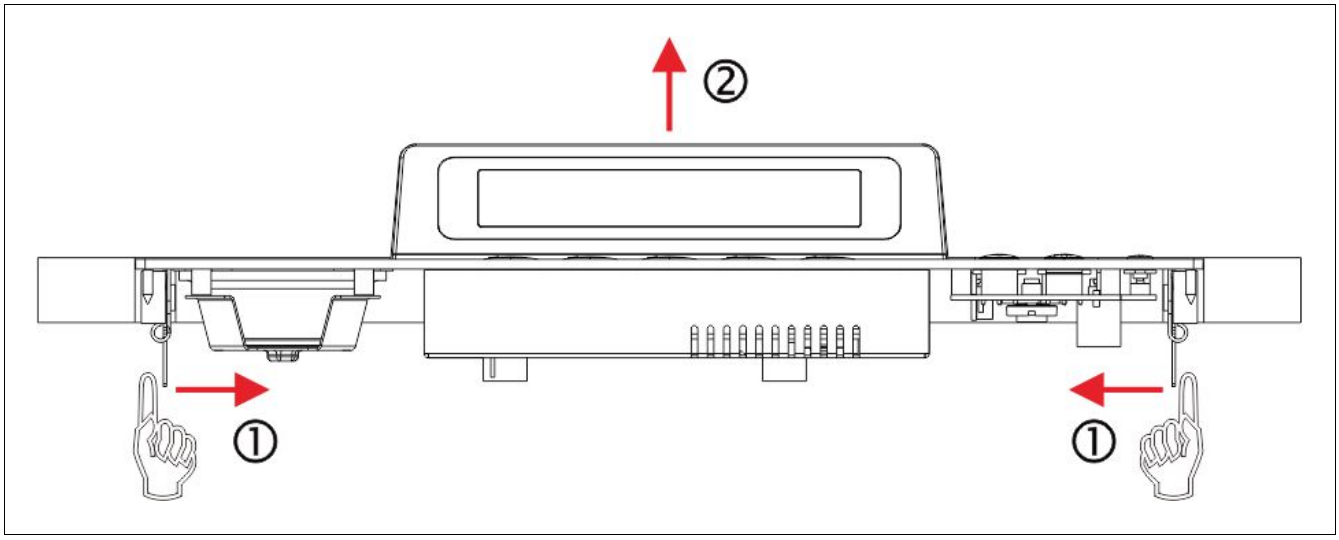


Figure 3.6.6 Disassembly of HCS-48U9 series flush-mounted congress unit (method b)

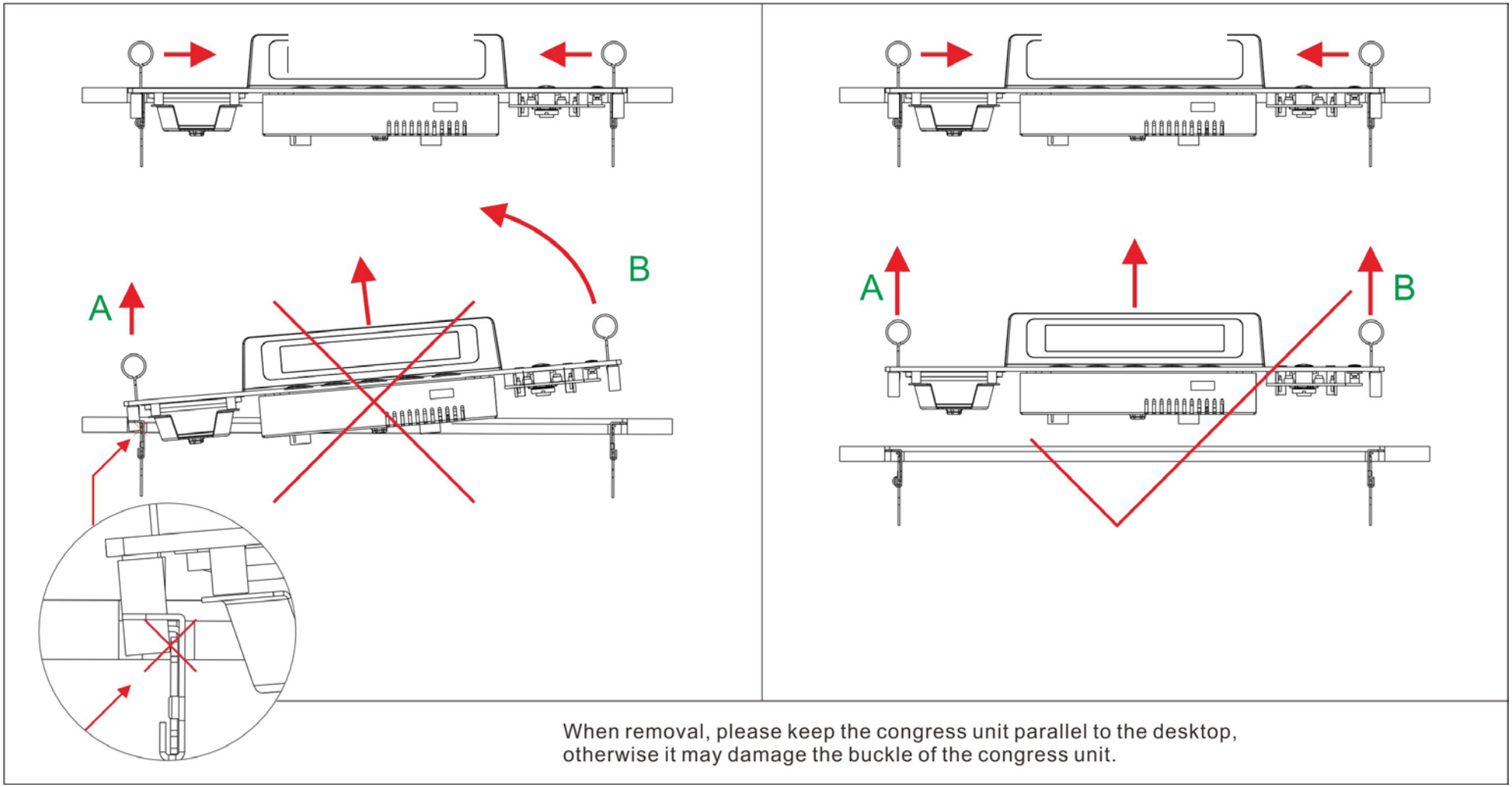


Figure 3.6.7 Disassembly caution of HCS-48U9 series flush-mounted congress unit

3.6.3 Connection

3.6.3.1 Connecting to the CMU or the EMU

The HCS-48U7/U9 series congress unit is equipped with two RJ45 sockets, congress unit connect through Cat5e cable and CBL8P2RJ45 transfer cable is needed when connect to the CMU(EMU). One end is equipped with a 8P-DIN male connector to CMU(EMU)output and the opposite end with RJ45 plug connect to the first congress unit RJ45 socket.

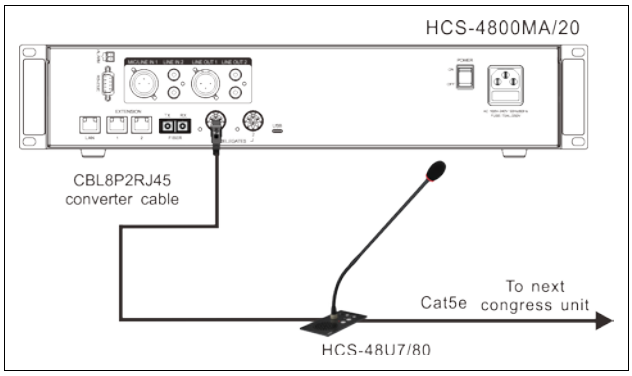


Figure 3.6.10 HCS-48U7/U9 series congress unit connected to the CMU/EMU

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.

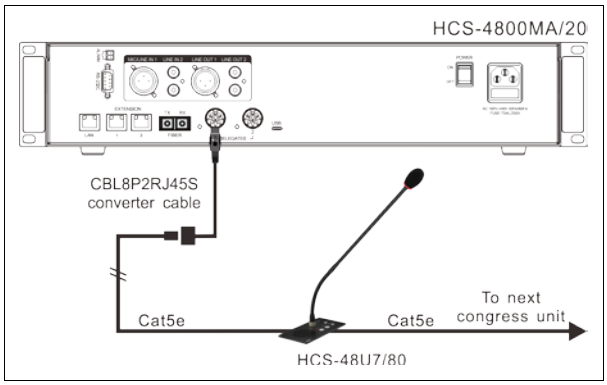


Figure 3.6.11 HCS-48U7/U9 series congress unit connected to the CMU/EMU2

Neither the replacement of congress units nor cable faults between congress units will affect the other units if “Closed Loop - Daisy Chain” connection topology is selected. “Closed Loop - Daisy Chain” connection, achieved by closing the loop of the daisy-chained units, increases system reliability. 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.

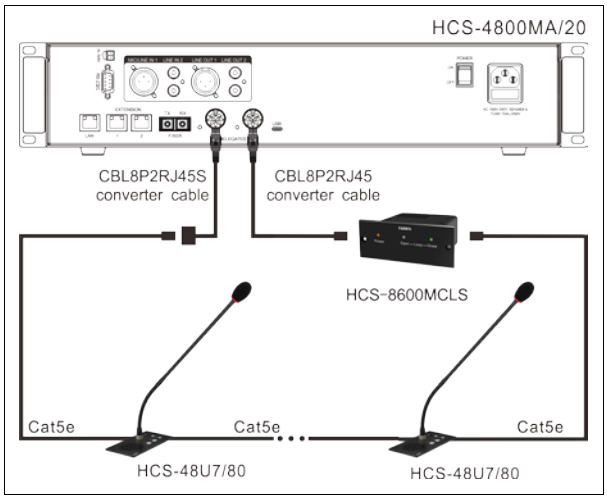


Figure 3.6.12 “Closed Loop - Daisy Chain” connection between the CMU and HCS-48U7/U9 series congress units

3.6.3.3 Connection between congress units

HCS-48U7/U9/80 series congress units are daisy-chained easily and conveniently by dedicated Cat5e cables.

When connecting to another congress unit, just use the Cat5e cable of the unit to another RJ45 socket of the next unit.

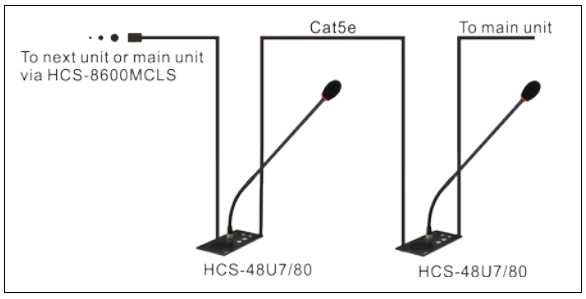
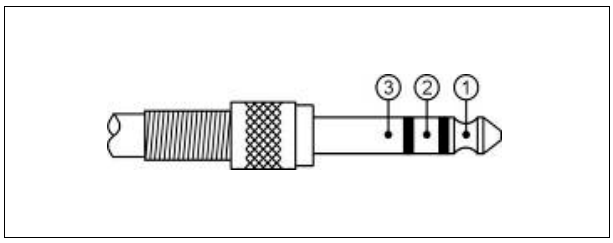


Figure 3.6.13 “Daisy-chain” connection between HCS-48U7/U9 series congress units

3.6.3.4 External microphone

An external microphone can be connected to the external microphone jack of the congress unit. The external microphone shall have a Ø 3.5 mm plug, as in the following figure:

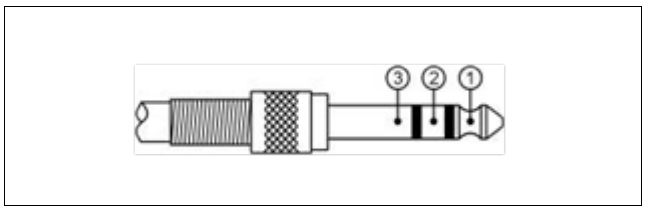


Functions and indications:

1 ..... Signal+
2 ..... Suspend/Ground
3 ..... Ground

3.6.3.5 External earphone

An external earphone can be connected to the external earphone jack of the congress unit. Its volume can be adjusted by the earphone volume control button. 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

3.6.4 Operation

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

3.6.4.1 Delegate unit

We introduce all the operation of HCS-48U7/U9 series congress units. The congress units of this series feature one or more of these functions.

1. Number

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

- Press “Unit Numbering” on application software. The system now goes to numbering status. “Press ‘1’ key of all congress units one by one and repower” will be displayed on the CMU LCD. The number indicating light of all connected congress units will blink. All congress units with an LCD will display “Numbering”. Press key “1” (microphone On/Off key for HCS-48U7M/80) of every congress unit one by one. The number indicating light will be deactivated. Once all congress units numbered, restart the CMU to update the number information.
- Rotate the function knob to select “0.5 Numbering”, then select and press “start” .The LCD screen of the main unit shows “Press key of DCS Units, one by one and reboot EMU”; The number indicating light of all connected congress units will blink. All congress units with an LCD will display “Numbering”. Press key “1” (microphone On/Off key for HCS-48U7M/80) of every congress unit one by one. The number indicating light will be deactivated. Once all congress units numbered, restart the CMU to update the number information.

Note:

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

2. Sign-in (application software needed)

To carry out voting, congress units with voting and IC-Card reader should be registered via key press, IC-Card or input PIN code. With application software, registration is available by choosing “Seat Sign-in”.

- **Key-press sign-in**

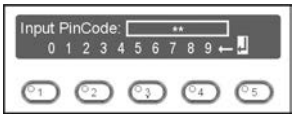
In key-press sign-in status, the indicating light on key “1” will blink, press key “1” to sign-in and the indicating light will be turned off.

- **IC-Card sign-in**

In IC-Card sign-in status, “Please Use IC Card” will be displayed on the LCD. Read the IC-Card correctly, 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.

- **PIN code sign-in**

In PIN code sign-in status, “Input PinCode” will be displayed on the LCD. Input PIN code and select the “↵” button to confirm. If the PIN code is correct, the LCD will display the delegate’s name; if the PIN code is wrong, the PIN code sign-in interface displayed on the LCD again.



Icon:

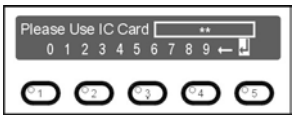
- **0**,**1**,**2**,**3**,**4**,**5**,**6**,**7**,**8**,**9:** PIN code number;
- **←:** backspace;
- **↵:** enter;

Key:

- “1” key: move left;
- “3” key: move right;
- “5” key: confirm button.

- **Seat IC-Card and PIN code sign-in**

In seat IC-Card and PIN code sign-in status, “Please Use IC Card” and PIN code input interface will be displayed on the LCD. Either IC-Card sign-in or PIN code sign-in will work.



In the above sign-in mode (except key press sign-in mode), logout is available. It is used for locking the units in case the delegates leave for a short time. Delegate units will work on after delegates sign-in again (The DCS server cannot stop sign-in).

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 8, 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 (1/2/3/4) **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 key is pressed (default 100 microphones at most, set up the request microphone number limit at DCS or web control). 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 the chairman unit (only for 3 keys voting), or 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;
- The voting originated by the chairman unit only supports "Last key-press valid".

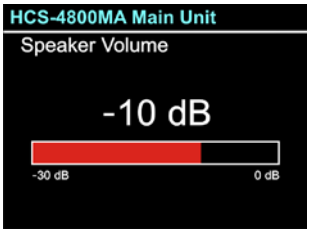
5. Channel selection

- 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

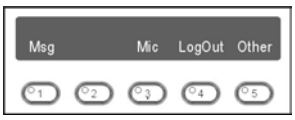
- The volume of the built-in loudspeaker can be adjusted by LCD menu -> Speaker Volume on the main unit;



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

7. LCD display

After sign-in, the following interface will be displayed on the LCD:

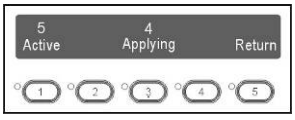


A. "Message" (key "1")

- Use this key to read a message. 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 key "5" will blink. Press key "5" to read the corresponding 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.

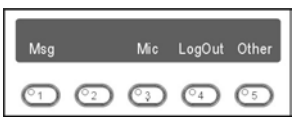
B. "Microphone" (key "3")

Use this key to display microphone information, including: active microphone number (including chairman, delegate and VIP), request amount:



C. "LogOut" (key "4")

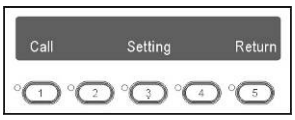
It is used under IC-Card sign-in mode or/and PIN code sign-in mode



It is used for locking the units in case the delegates leave for a short time. Delegate units will work on after delegates sign-in again (The DCS server cannot stop sign-in).

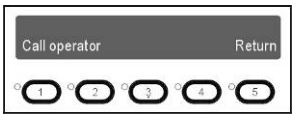
D. "Other" (key "5")

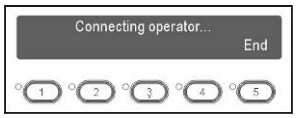
Use this key to request intercom, setup LCD display language and system information:



■ **"Call" (key "1")**

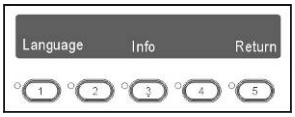
The earphone shall be plugged to use the intercom function. If not, it will remind you to plug the earphone. If the current unit is using the intercom function, it will remind you that the line is busy. Press "Call" (key "1") to use the intercom function, and the following interface at the left side is displayed. When the operator approved your request, then the following interface at the right side is shown:



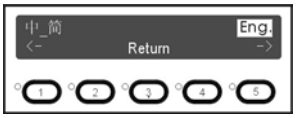


■ "**Setting**" **(key "3")**

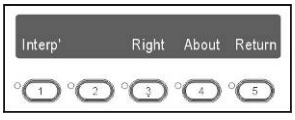
Press "Setting" (key "3"), and the following interface is shown:



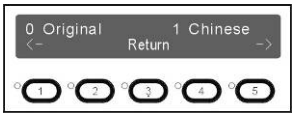
- Press "**Language**" (key "1") to select the LCD display language between several languages. The range is limited by the configuration in the CMU (refer to section 2.1.3);



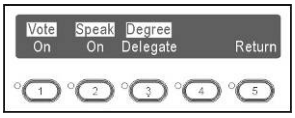
- Press "**Info**" (key "3"), and the following interface is shown:



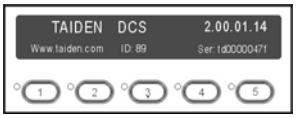
- Press "**Interpretation**" (key "1") to run through information about all interpretation languages:



- Press "**Right**" (key "3") to check the rights of this unit:



- Press "**About**" (key "4") to display the product information:



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.

3.6.4.2 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 delegate microphones (except VIP units) will be muted temporarily when this key is pressed and they will restore when this key is released;
- If the priority mode on the main unit is configured as "All off", all active delegate 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

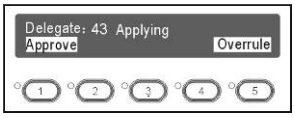
- If the active microphone capacity is not full, the chairman can activate his/her microphone normally, the operation is the same as for the delegate unit;

- 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.

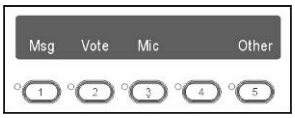


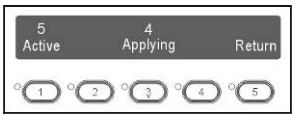
The chairman can now approve delegate’s request and activate delegate’s microphone by pressing key “1” or reject delegate’s request by pressing key “5”. (For HCS-48U7CM, press “priority”button to deny or press microhone on button to approve.)

When a request is approved, the last activated microphone will be turn off at the same time.

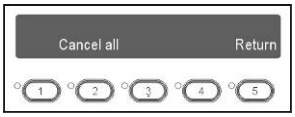
B. Turn off delegate microphone or reject delegate unit’s request to speak

The initial interface of the chairman unit is shown in the following figure at the left side. Press “Microphone” (key “3”) to go to the microphone status interface as in the following figure at the right side:



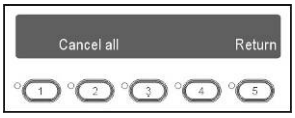


- Press “**Active**” (key “1”) to go to the active microphone control interface:



If any delegate’s microphone is active, “Cancel all” (key “2”) will be available and the chairman can press this key to deactivate all active delegate’s microphone.

- Press “**Applying**” (key “3”) to control the “request to speak” interface:



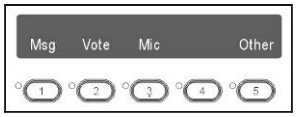
If connected to the PC, “Cancel all” (key “2”) will be available and the chairman can press this key to reject all requests (refer to application software user’s manual).

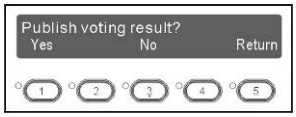
4. Voting

A. Without PC

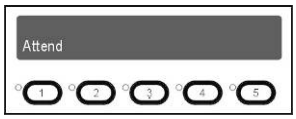
HCS-48U7/U8/U9 series chairman unit can originate voting without a PC:

a. In the initial interface of the chairman unit, press “Vote” (key “2”) to go to the voting control interface as shown in the following figure at the right side:

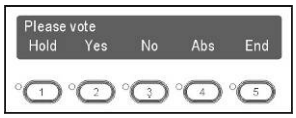




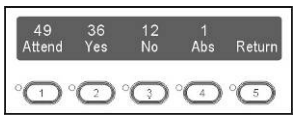
b. If “Yes” (key “1”) is selected, the voting results will be displayed on the LCDs of all congress units; if “No” (key “3”) is selected, the voting results will be displayed only on the LCD of the chairman unit. After selection, the sign-in indicating light of all congress units will blink. The delegates can press key “1” to sign-in. After sign-in, the voting indicating lights will blink, the delegate is now enabled to vote:



c. Only 3 keys voting can be executed in case of a chairman unit originated voting (“Yes/No/Abstain”) and only “Last key-press valid” is available. The chairman can pause/end voting:



d. The chairman presses “End” (key “5”) to finish voting. The voting indicating light of all congress units will be deactivated. The voting results and sign-in statistics will be displayed on the chairman unit:



B. Connected to PC

When controlled by the application software, nominative or ballot voting are available;

“First key-press valid” or “Last key-press valid” are available.

3.7 HCS-48U10/80 series congress unit

3.7.1 Functions and indications

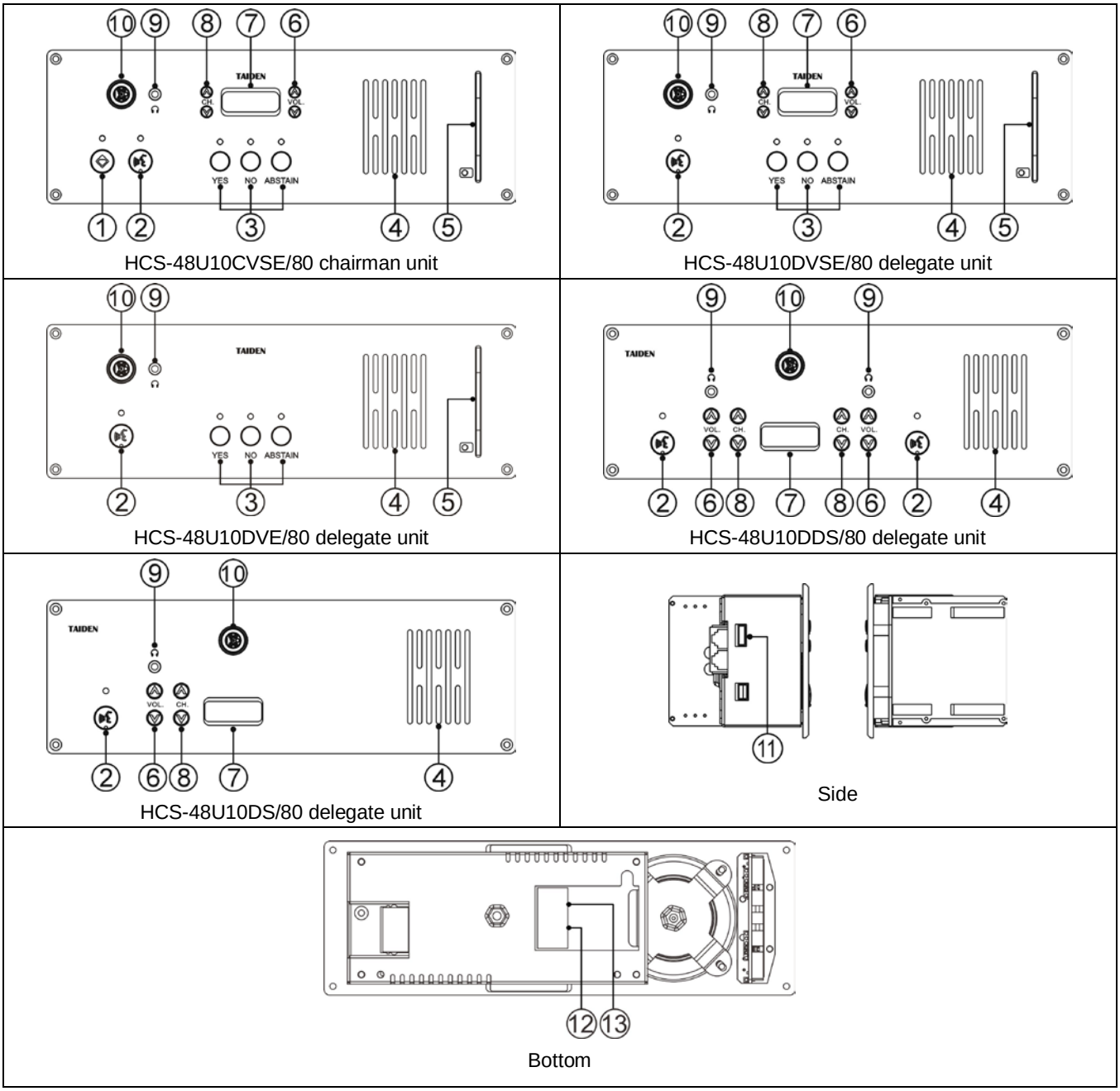


Figure 3.7.1 HCS-48U10/80 series congress units

Figure 3.7.1:

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

- ♦ According to the priority mode configuration on the main unit:
  - ◊ If configured as “All mute”, all active delegate microphones (except VIP units) will be muted temporarily 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 switched off when this key is pressed. Under “Open” and “Request” mode, pressing this key will clear the request list (deny all delegates’ requests to speak);
- ♦ If the chairman microphone is not active, pressing this key will activate it;
- ♦ If the ring mode is configured as “ON”, a ring tone will be produced when this key is pressed.

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

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

- Chairman unit: press this key to activate/deactivate the microphone;
- Delegate unit: press this key to activate/deactivate the microphone or request/cancel request to speak.

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

3. 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 3.7.1 for details).

4. Built-in Hi-Fi loudspeaker

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

5. 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.

6. Earphone volume control

7. OLED display

8. Simultaneous interpretation channel selector

- Available when earphone is plugged.

9. Earphone jack (Ø 3.5 mm)

10. Stem microphone socket

11. TEST

12&13. 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 3.7.1 List of multi-functional keys

Function / Keys		YES	NO	ABSTAIN
Numbering		Number		
Sign-in		Sign-in		
Voting	**Parliamentary**	YES	NO	ABSTAIN
	For/Against	For	Against	

3.7.2 Installation

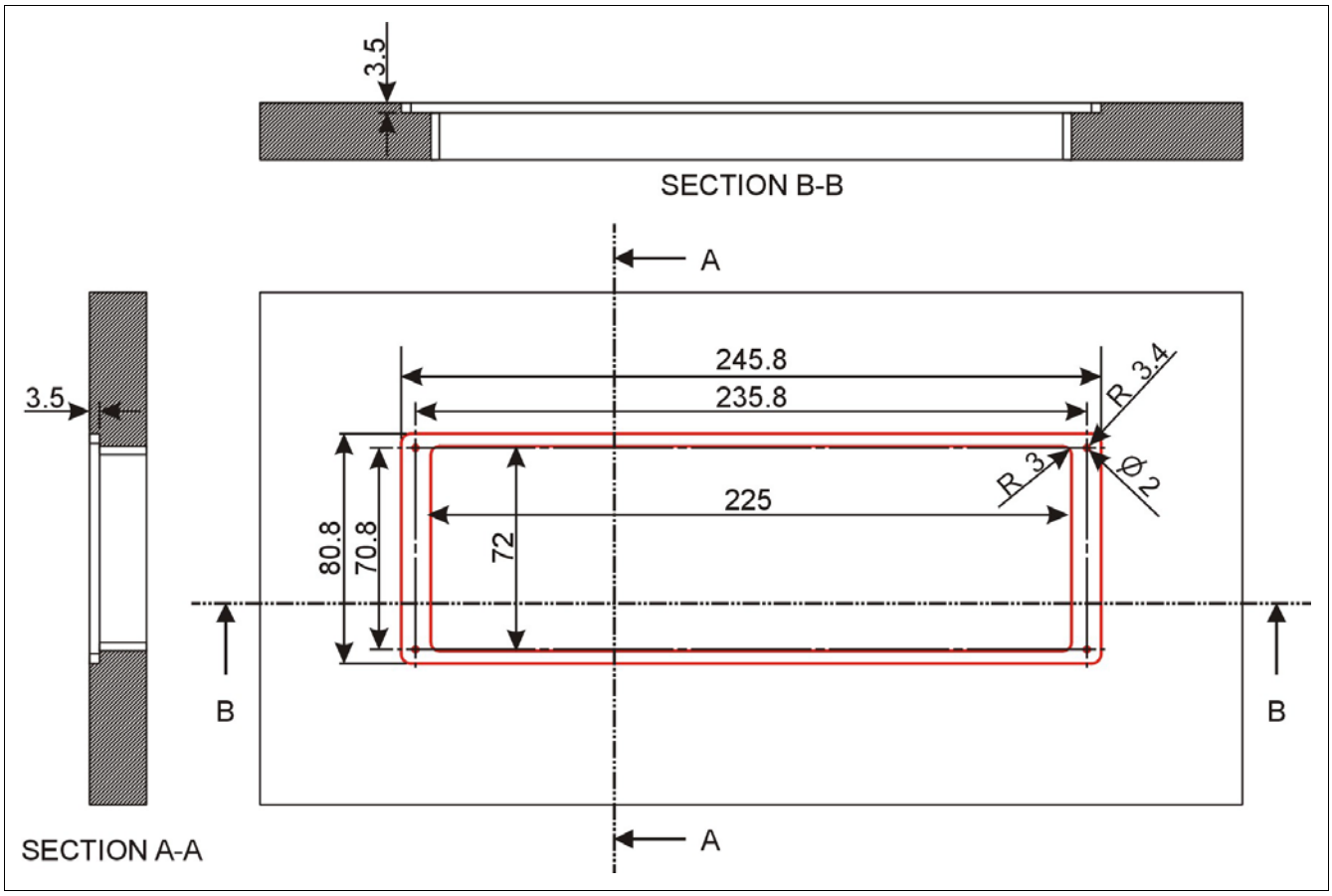


Figure 3.7.2 Cutout of HCS-48U10/80 series congress unit (unit: mm)

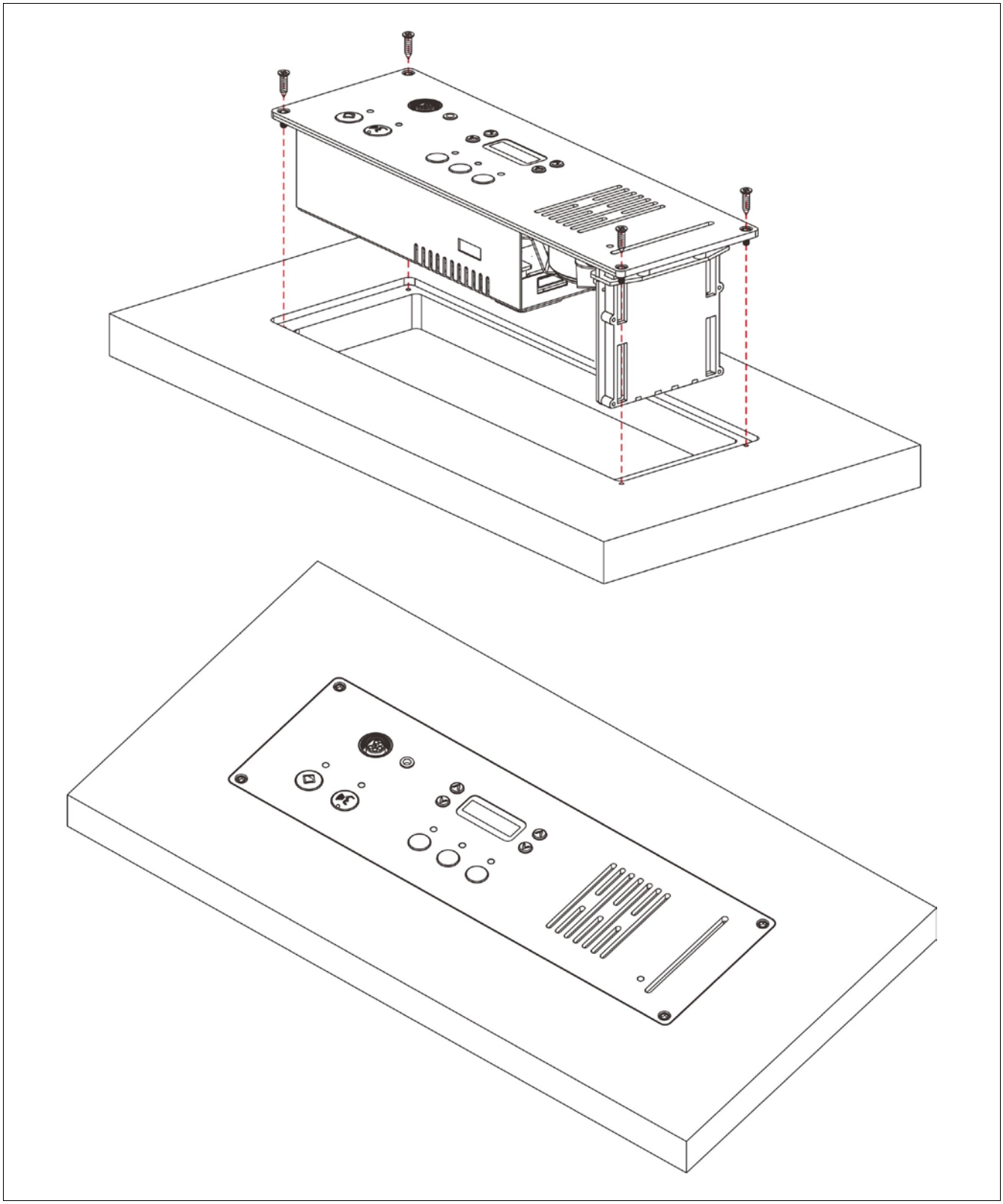


Figure 3.7.3 Installation of HCS-48U10/80 series congress unit

3.7.3 Connection

3.7.3.1 Connecting to the CMU or the EMU

The HCS-48U10 series congress unit is 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.

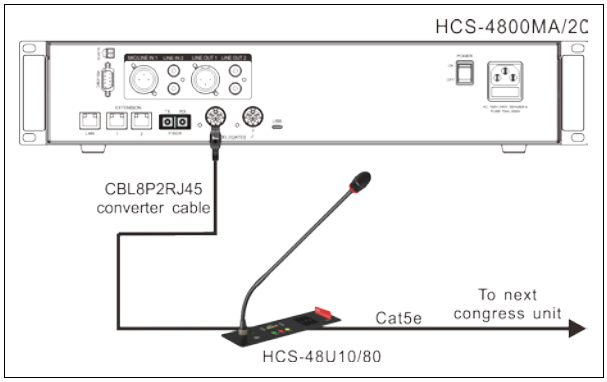


Figure 3.7.4 HCS-48U10/80 series congress unit connected to the CMU/EMU

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.

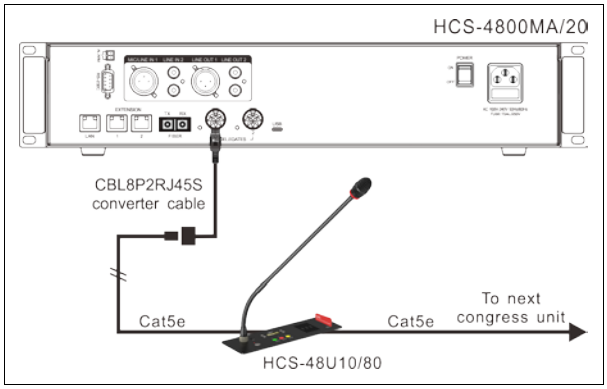


Figure 3.7.5 HCS-48U10/80 series congress unit connected to the CMU/EMU2

Neither the replacement of congress units nor cable faults between congress units will affect the other units if “Closed Loop - Daisy Chain” connection topology is selected. “Closed Loop - Daisy Chain” connection, achieved by closing the loop of the daisy-chained units, increases system reliability. 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.

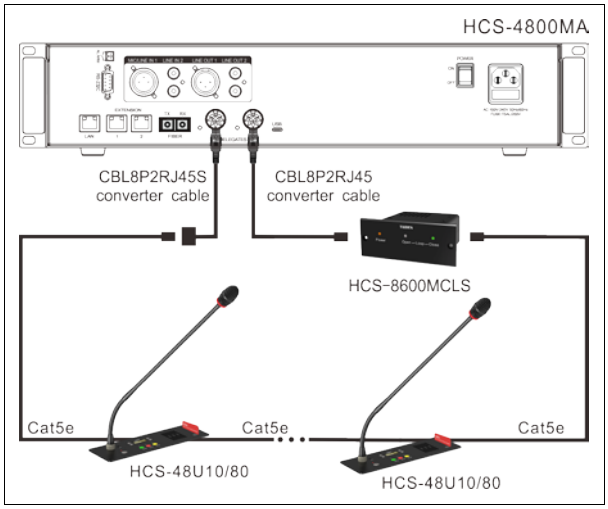


Figure 3.7.6 “Closed Loop - Daisy Chain” connection between the CMU and HCS-48U10/80 series congress units

3.7.3.2 Connection between congress units

All congress units of HCS-48U10 series congress units system are daisy-chained easily and conveniently by dedicated Cat5e cables. When connecting to another congress unit, just connect the RJ45 socket by Cat5e of a congress unit with another.

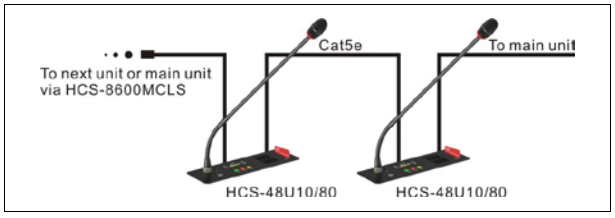
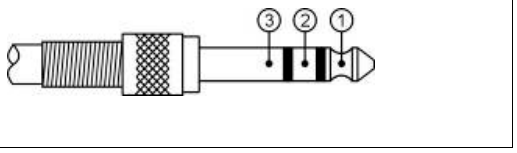


Figure 3.7.7 “Daisy-chain” connection between HCS-48U10/80 series congress units

3.7.3.3 External earphone

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



Functions and indications:

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

3.7.4 Operation

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

3.7.4.1 Delegate unit

We introduce all the operation of HCS-48U10/80 series congress units. The congress units of this series feature one or more of these functions.

1. Number

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

Press “Unit Numbering” on application software. The system goes to numbering status. The number indicating light of all connected congress units will blink and the OLED screen will display “Numbering: ××” (×× stands for ID). Press the “YES” key (microphone On/Off key for HCS-48U10DDS/50 and HCS-48U10DS/80) of every congress unit one by one. The number indicating light will be deactivated. Once all congress units numbered, restart the CMU to update the number information.

Note:

☞ Please number the congress units one by one and do NOT press the “YES” key or the microphone On/Off key of several congress units at the same time;

2. Sign-in (application software needed)

To carry out voting, congress units 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** (for units with voting function)

▪ **Congress unit with OLED screen**

In IC-Card sign-in status, “Insert IC Card” will be displayed on the OLED screen. Put the contactless IC-Card into the slot on the right side of the panel. If read the IC-Card correctly, the indicating light will off after blink. Channel selection interface will be displayed. If the IC-Card is invalid, the indicating light keeps on. “Invalid IC card!” will be displayed on the OLED screen. Please read the IC-Card again or contact the technical support.

▪ **Congress unit without OLED**

In IC-Card sign-in status, please put the contactless IC-card into the slot on the right side of the panel. If read the IC-Card correctly, the indicating light will off after blink. If the indicating light keeps on, stands that the IC-Card is invalid; 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**:

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 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 100 microphones at most, set up the request microphone number limit at DCS or web control). 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:

☞ Active microphone number(1~8) setting is only effective to congress unit. The maximum capacity is 8 units (including chairman unit and VIP unit).

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 (for units with voting function)

Voting can be originated by TAIDEN conference management system software. Only supports parliamentary voting: Yes/No/Abstain, and For/Against voting.

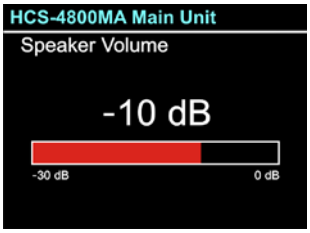
- The voting button indicating lights of the congress unit start to blink; the delegate can press the voting button to vote;
- For "First key-press valid" voting, the delegate can vote only once;
- For "Last key-press valid" voting, the delegate can change his/her vote, and the last voted key will be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

5. Channel selection (for units with SI function)

- 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 Volume on the main unit;



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

7. OLED display

After initialization, the following interface will be displayed on the OLED:

For HCS-48U10CVS(N)E/50 and HCS-48U10DVS(N)E/50 congress units, press the "YES" or the "NO" key to active the operation menu, it includes two sub menus: Call and About.

- "YES" key: page up ↑
- "NO" key: page down ↓
- "ABSTAIN" key: enter ↵

A. "Call"

The earphone shall be plugged to use the intercom function. If not, it will remind you to plug the earphone. If the current unit is using the intercom function, it will remind you that the line is busy. Press the "ABSTAIN" key to use the intercom function, and the following interface at the left side is displayed. When the operator approved your request, then the following interface at the right side is shown:

B. About

Display the product information.

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.

3.7.4.2 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 delegate microphones (except VIP units) will be muted temporarily when this key is pressed and they will restore when this key is released;
- If the priority mode on the main unit is configured as “All off”, all active delegate 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.

The chairman can now approve delegate’s request and activate delegate’s microphone by pressing key “YES” or reject delegate’s request by pressing key “ABSTAIN”.

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 (for units with voting function)

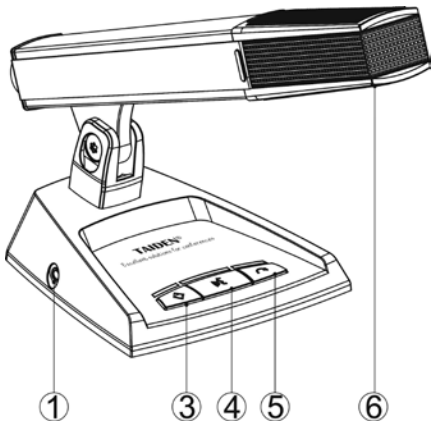
HCS-48U10/80 series chairman unit cannot originate voting without a PC.

When connecting with PC software:

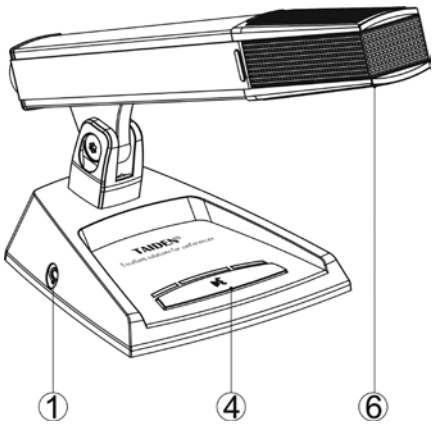
- Nominative or ballot voting are available;
- “First key-press valid” or “Last key-press valid” are available.

3.8 HCS-4860/80 series congress unit

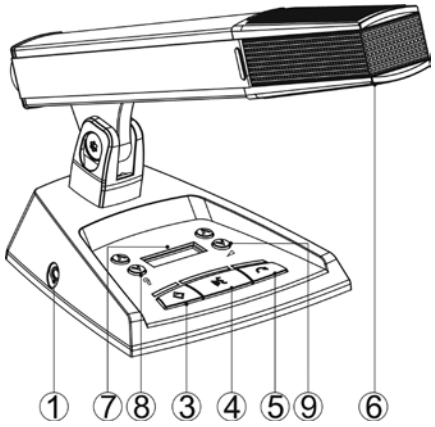
3.8.1 Functions and indications



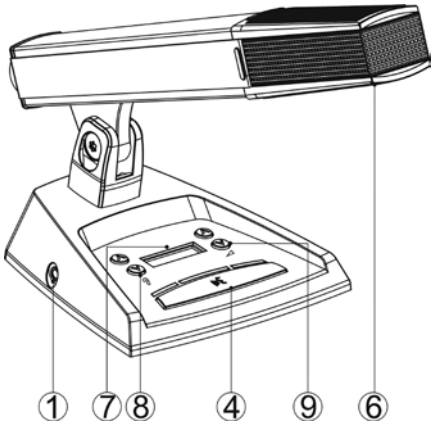
HCS-4860C/80 chairman unit
HCS-4860C/80/2M chairman unit



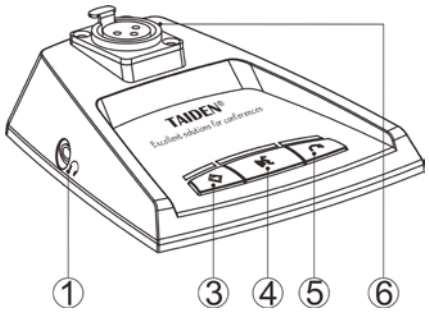
HCS-4860D/80 delegate unit
HCS-4860D/80/2M delegate unit



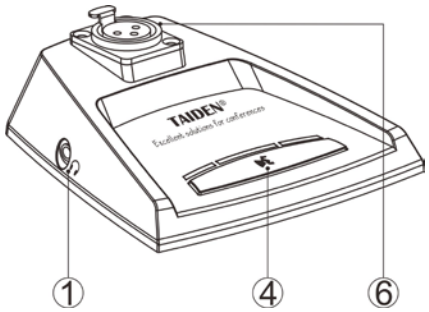
HCS-4860CS/80 chairman unit



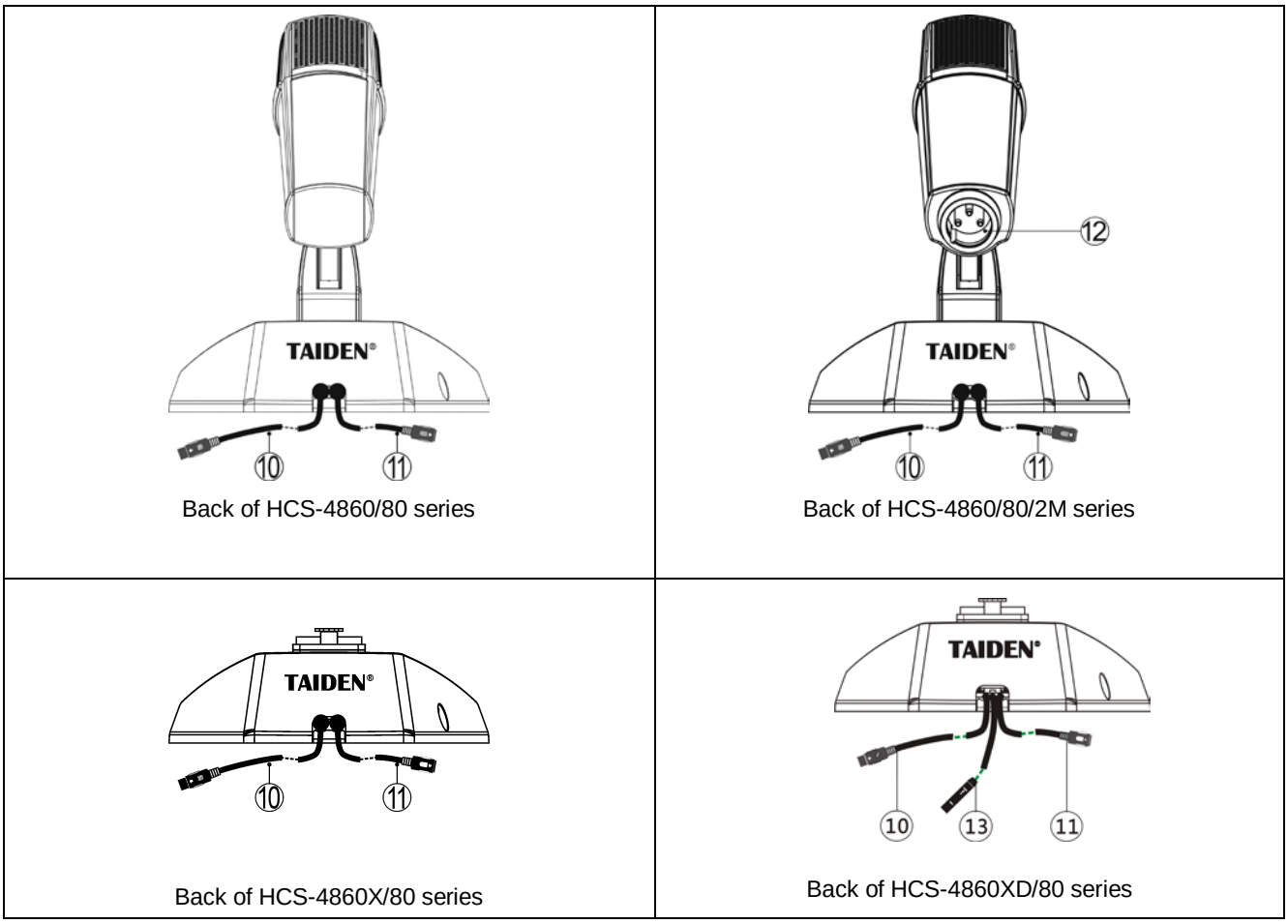
HCS-4860DS/80 delegate unit



HCS-4860CX/80 chairman unit



HCS-4860DX/80 delegate unit



Back of HCS-4860/80 series

Back of HCS-4860/80/2M series

Back of HCS-4860X/80 series

Back of HCS-4860XD/80 series

Figure 3.8.1 HCS-4860/80 series congress units

Figure 3.8.1:

1. Earphone jack (Ø 3.5 mm)

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

- ♦ According to the priority mode configuration on the main unit:
  - c) If configured as "All mute", all active delegate microphones (except VIP units) will be muted temporarily when this key is pressed and they will resume when the key is released;
  - d) If configured as "All off", all active delegate microphones (except VIP units) will be switched off when this key is pressed. Under "Open" and "Request" mode, pressing this key will clear the request list (deny all delegates' requests to speak);
- ♦ If the chairman microphone is not active, pressing this key will activate it;
- ♦ If the ring mode is configured as "ON", a ring tone will be produced when this key is pressed.

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

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

- ♦ Chairman unit: press this key to activate/deactivate the microphone;
- ♦ Delegate unit: press this key to activate/deactivate the microphone or request/cancel request to speak.

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

5. Approve key (for the chairman unit only)

- ♦ According to the order of requests, press this key once to approve one delegate unit's request and turn off the active delegate microphone at the same time.

6. Microphone

- ♦ HCS-4860/80: rectangular columnar microphone
- ♦ HCS-4860/80/2M: metal rectangular columnar

microphone, build-in isolated main microphone and backup microphone, backup microphone needs phantom power supply

- HCS-4860X/80: XLR connector for condenser microphone with +48V phantom power
- XLR connector for condenser microphone with +48V phantom power

7. OLED display

8. Simultaneous interpretation channel selector

- Available when earphone is plugged.

9. Earphone volume control

10. 1.5-meter 8P-DIN cable with standard plug (male x 1)

11. 0.6-meter 8P-DIN cable with standard plug (female x 1)

12. XLRM connector

- Connect backup microphone to sound mixer through dedicated audio cable

13.XLR microphone backup output

- Connect microphone to sound mixer through dedicated audio cable

3.8.2 Connection

3.8.2.1 Connecting to the CMU or the EMU

The HCS-4860/80 series congress unit is equipped with a 1.5-meter 8P-DIN cable with a standard male connector. When connecting the HCS-4800CMU/ HCS-8600EMU to the contribution units, just connect the male connector of the first unit to the socket of the CMU.

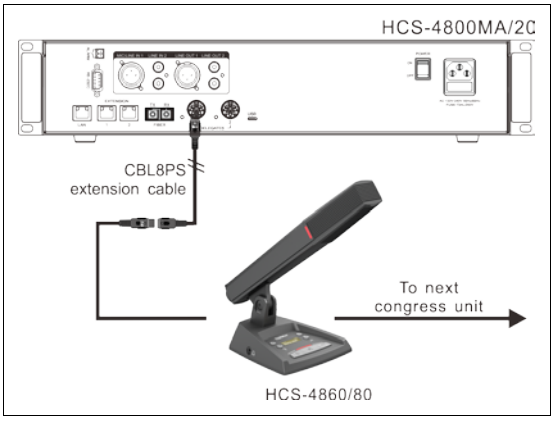


Figure 3.8.2 HCS-4860/80 series congress unit connected to the CMU/EMU

For a longer distance between the contribution unit and the CMU/EMU, a CBL8PS 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.

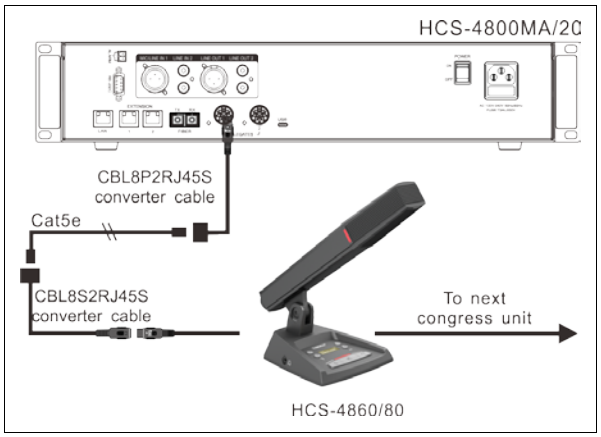


Figure 3.8.3 HCS-4860/80 series congress unit connected to the CMU/EMU

Neither the replacement of congress units nor cable faults between congress units will affect the other units if “Closed Loop - Daisy Chain” connection topology is selected. “Closed Loop - Daisy Chain” connection, achieved by closing the loop of the daisy-chained units, increases system reliability. To obtain “Closed Loop - Daisy Chain” connection, just connect the last congress unit back to the CMU or the EMU with a CBL6PP extension cable (the cable features a DIN-6PM connector at each end). In HCS-4800 series system, the congress main unit can realize a “Closed Loop - Daisy Chain” connection, but only one – extension units do not offer this feature.

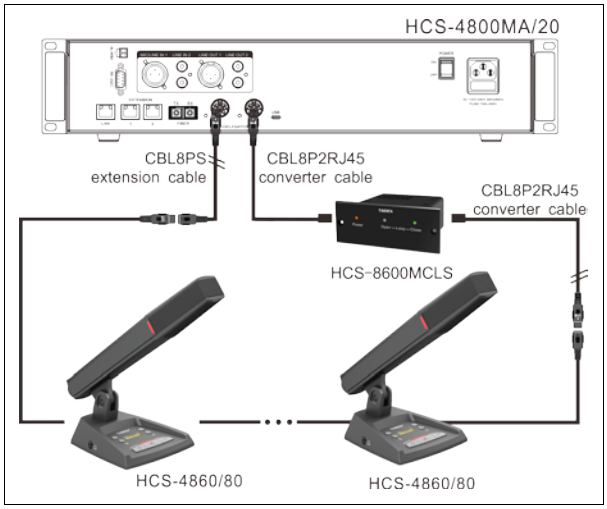


Figure 3.8.4 “Closed Loop - Daisy Chain” connection between the CMU and HCS-4860/80 series congress units

3.8.2.2 Connection between congress units

All congress units of HCS-4800 system are daisy-chained easily and conveniently by dedicated 8P-DIN cables.

When connecting to another congress unit, just connect the 8P-DIN standard female connector on the 0.6-meter cable of the unit to the 8P-DIN standard male connector on the1.5-meter cable of the next unit.

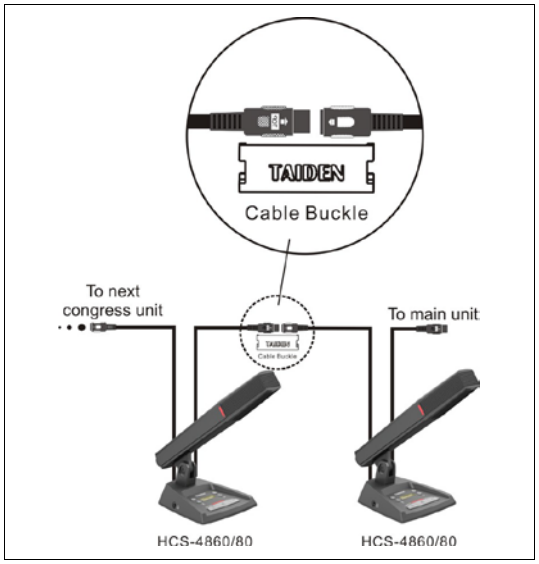
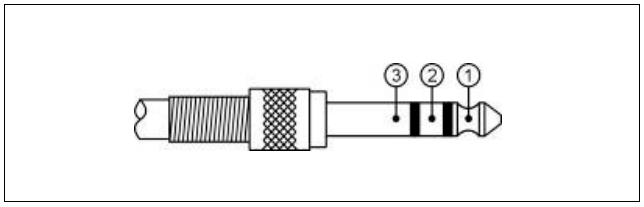


Figure 3.8.5 “Daisy-chain” connection between HCS-4860/80 series congress units

3.8.2.3 External earphone

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



Functions and indications:

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

3.8.2.4 Dual backup microphone high-end congress system solution

Innovative dual-microphone congress unit, with build-in isolated main microphone and backup microphone. Two audio signals are output simultaneously. When the main microphone fails, backup microphone output is not affected, so that the meeting can carry on smoothly. See figure 3.8.6.

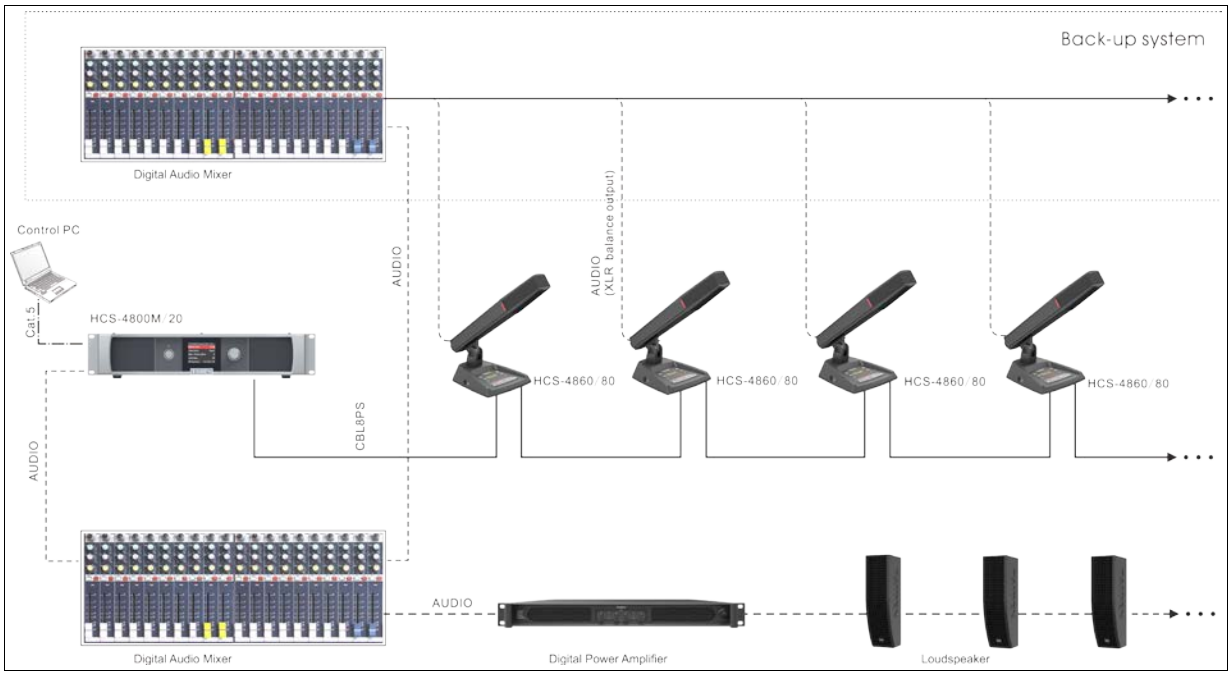


Figure 3.8.6 Dual backup microphone high-end congress system solution

3.8.3 Operation

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

3.8.3.1 Delegate unit

We introduce all the operation of HCS-4860 series congress units. The congress units of this series feature one or more of these functions.

1. Number

First of all, make sure that all the congress units are connected properly to the CMU. All congress units must be numbered when the system is used for the first time or when adding or replacing congress units. 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 units will blink and the OLED screen will display “Numbering: × ×” (× × stands for ID). Press the microphone On/Off key of every congress unit one by one. The number indicating light will be deactivated. Once all congress units numbered, restart the CMU to update the number information.

Note:

☞ When numbering, please number the congress units one by one and do NOT press the microphone On/Off key of several congress units at the same time.

2. 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. 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 (1/2/3/4) **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 (1/2/3/4) **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 (1/2/3/4) **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 which turned on first.

C. “Voice” mode

■ Active microphone number limitation (1/2/3/4) **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 (1/2/3/4) **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 key is pressed (default 100 microphones at most, set up the request microphone number limit at DCS or web control). 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. 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 (1/2/3/4) **reached**:

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

Note:

☞ Active microphone number(1~8) setting is only effective to congress unit. The maximum capacity is 8 units (including chairman unit and VIP unit).

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).

3. Channel selection (only for units with simultaneous interpretation)

- 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.

4. Volume control (only for units with simultaneous interpretation)

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

5. 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.

3.8.3.2 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 delegate microphones (except VIP units) will be muted temporarily when this key is pressed and they will restore when this key is released;
- If the priority mode on the main unit is configured as “All off”, all active delegate 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 Mic indicating light of the chairman unit will blink.

The chairman can approve delegate’s request and activate delegate’s microphone by pressing the approve key ( ) or reject delegate’s request by pressing the priority key ( ).

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

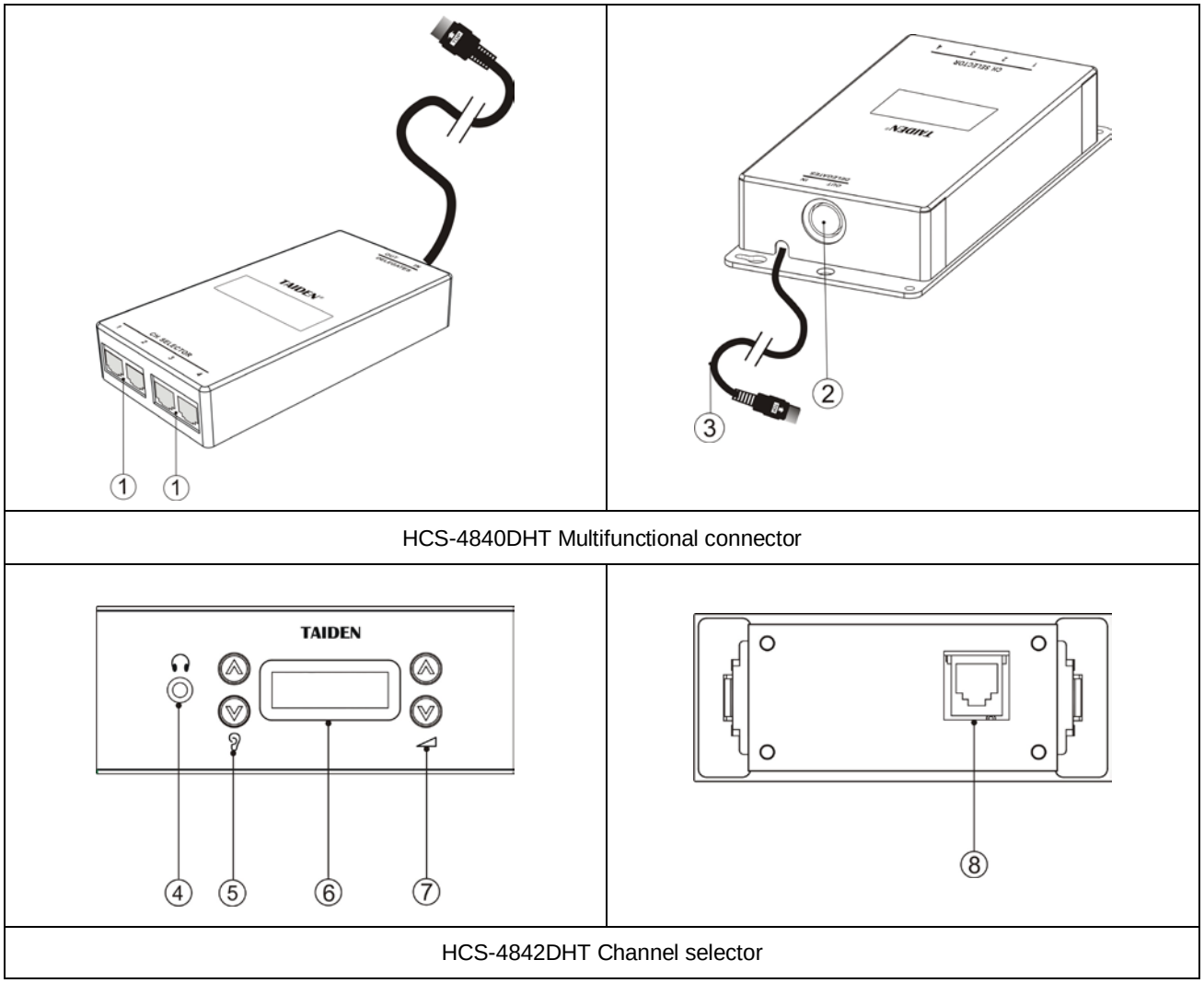
Chairman unit with voting cannot originate voting without a PC.

When connecting with PC software:

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

3.9 HCS-4840DHT & HCS-4842DHT

3.9.1 Functions and indications



HCS-4840DHT Multifunctional connector

HCS-4842DHT Channel selector

Figure 3.9.1 HCS-4840DHT and HCS-4842DHT

Figure 3.9.1

1. CH. Selector socket

- Connecting to RJ45 cable of HCS-4842DHT.

2. 8P-DIN cable standard socket (female x 1)

3. 2.1-meter 8P-DIN cable with standard plug (male x 1)

4. Earphone jack (Ø 3.5 mm)

5. Simultaneous interpretation channel selector

- Available when earphone is plugged.

6. OLED screen

- Display SI channel language and earphone volume.

7. Earphone volume control

8. Standard RJ45 socket

- Connecting to HCS-4840DHT.

3.9.2 Installation

■ **Installation**

a. Make holes on the table according to the dimensional diagram;
b. Fix the fixed iron plates with self tapping screws (KA3 × 12) according to the holes;
c. Hook up the unit onto the fixed iron plates.

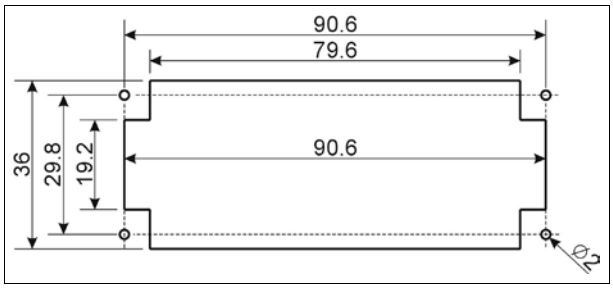


Figure 3.9.2 Positioning diagram of HCS-4842DHT (unit: mm)

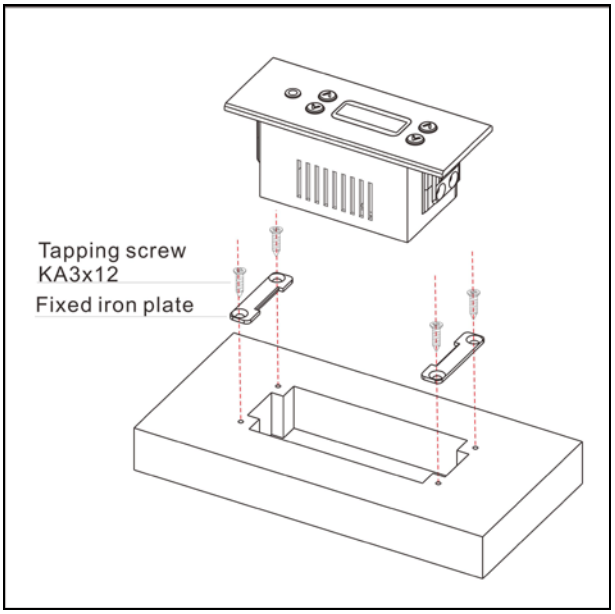


Figure 3.9.3 Installation diagram of HCS-4842DHT

■ **Disassembly**

When disassembling, insert a screwdriver from the bottom, release the buckle, raise it from one side, then raise the other side, and lift the unit.

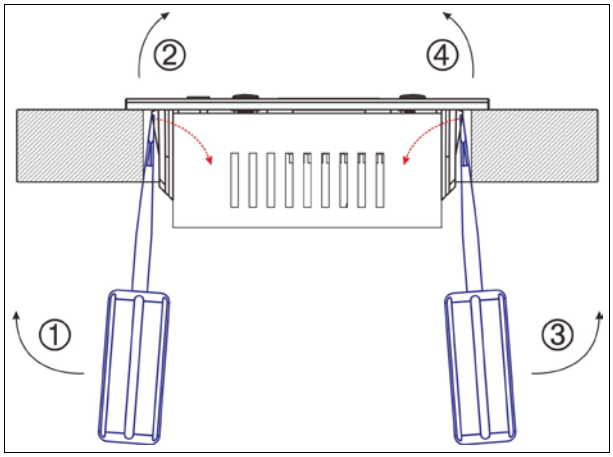


Figure 3.9.4 Disassembly caution of HCS-4842DHT

3.9.3 Connection

3.9.3.1 Multi-function connector connected to the CMU or the EMU

When connecting to the CMU or the EMU, the HCS-4842DHT channel selector must be connected to the HCS-4840DHT multi-function connector, and the multi-function connectors connected to the CMU or the EMU in a daisy-chain arrangement with the 8-PIN cable.

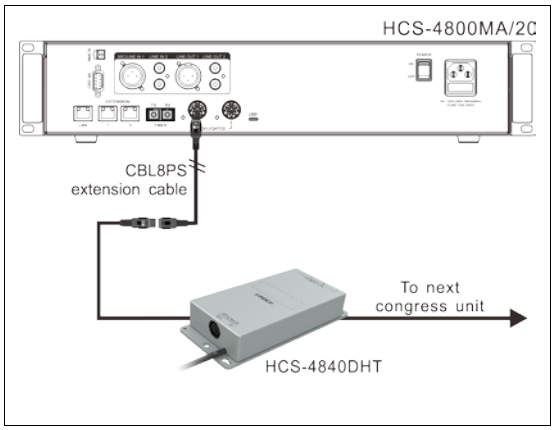


Figure 3.9.3 HCS-4840DHT connected to CMU/EMU

For a longer distance between the contribution unit and the CMU/EMU, a CBL8PS 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.

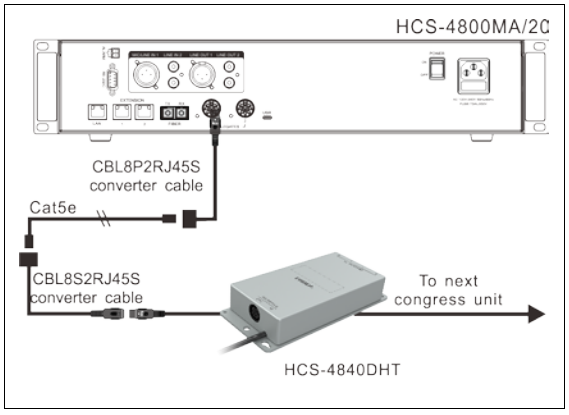


Figure 3.9.4 HCS-4840DHT connected to CMU/EMU2

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 CBL8PS extension cable.

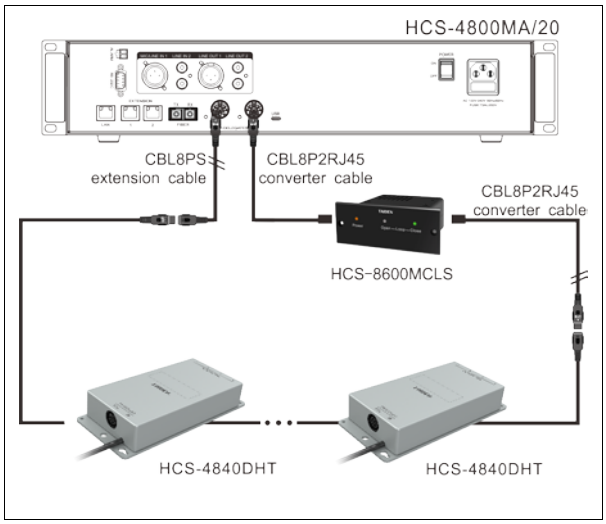


Figure 3.9.5 “Closed Loop - Daisy Chain” connection topology

3.9.3.2 Connections between multi-function connectors

All HCS-4840DHT multi-function connectors are daisy-chained easily and conveniently by dedicated 8P-DIN cables.

When connecting to another congress unit, just connect the 8P-DIN standard male connector on the 2.1-meter cable of the next multi-function connector to the 8P-DIN standard female socket of this multi-function connector

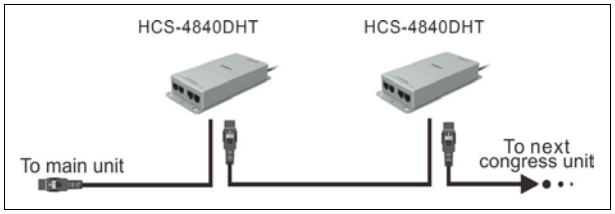


Figure 3.9.6 “Daisy-chain” connection between HCS-4840DHT multi-function connectors

3.9.3.3 HCS-4840DHT connected to the HCS-4842DHT

The HCS-4842DHT channel selector is equipped with a standard RJ45 socket. When connecting to the HCS-4840DHT multi-function connector, just use Cat.5 cable with standard RJ45 plugs to connect the RJ45 socket of the congress unit into the corresponding RJ45 socket of the multi-function connector.

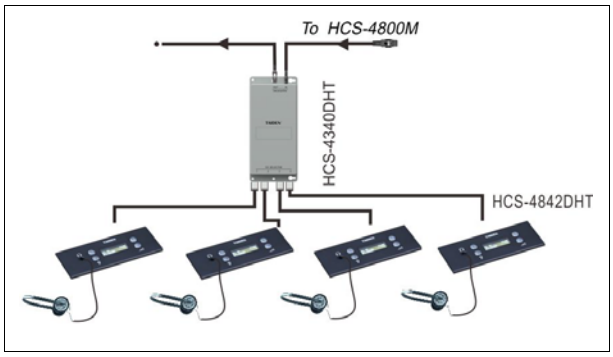
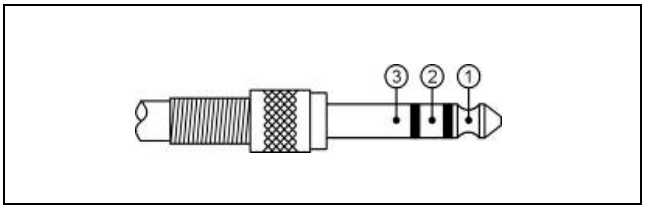


Figure 3.9.5 HCS-4840DHT multi-function connector connected to HCS-4842DHT channel selector

3.9.3.4 External earphone

An external earphone can be connected to the earphone jack of HCS-4842DHT channel selector. Its volume can be adjusted by the earphone volume control button. The external earphone shall have Ø 3.5 mm plug, as the following figure:



Functions and indications:

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

3.9.4 Operation

Before a meeting starts, the congress units need to be configured by the operator. During the meeting, the participators can use the congress unit to select SI channel to listen.

1. **Channel selection** (only for units with simultaneous interpretation)
   - 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.

2. **Volume control** (only for units with simultaneous interpretation)
   - When the earphone is plugged, its volume can be adjusted by the earphone volume control of the unit.

3.10 HCS-4841DMIC Multifunction Connector

3.10.1 Functions and indications

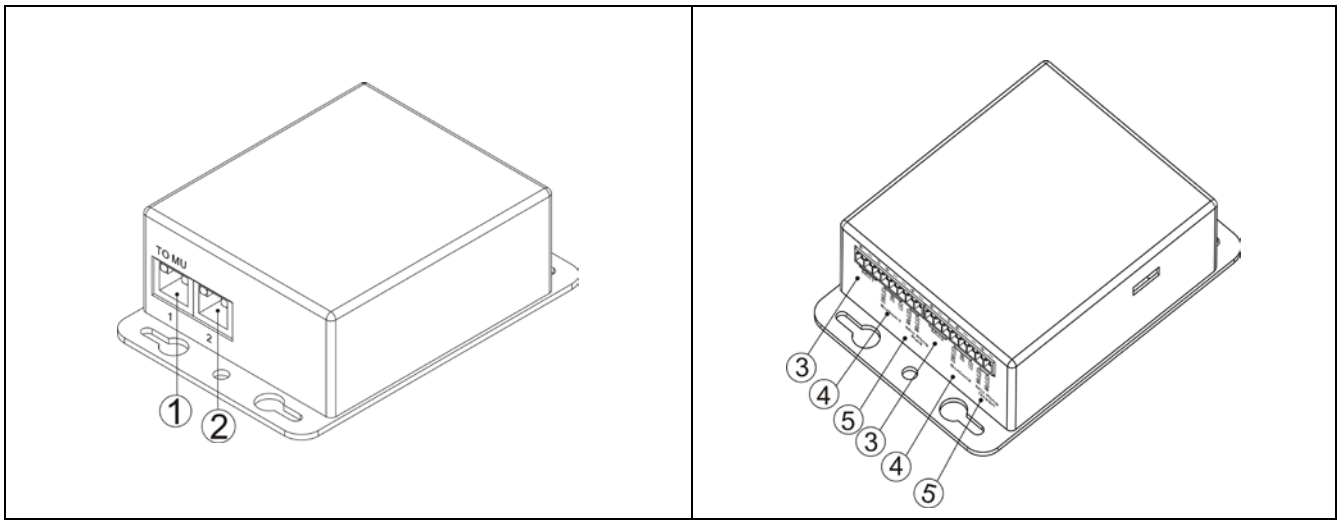


Figure 3.10.1 HCS-4841DMIC Multifunction Connector

Figure 3.10.1

1&2 RJ45 cable

- Use for “Daisy-chain” connection
- Recommended use of cat5e cable with a drain wire & RJ45 plug with metal shield, via the CBL8P2RJ45S converter cable connect to the EMU

3. Condenser microphone port

- Available for 2 condenser microphones, 48V phantom power

4.Microphone switch button port

5. Reserved

3.10.2 Connection

3.10.2.1 Connect to the CMU

HCS-4841DMIC multifunction connector have 2 RJ45 cable and adopt CBL8P2RJ45S converter cable for CMU connection while multifunction connector connect through daisy chain. One HCS-4841DMIC can connect 2 condenser microphone and 2 microphone switch button.

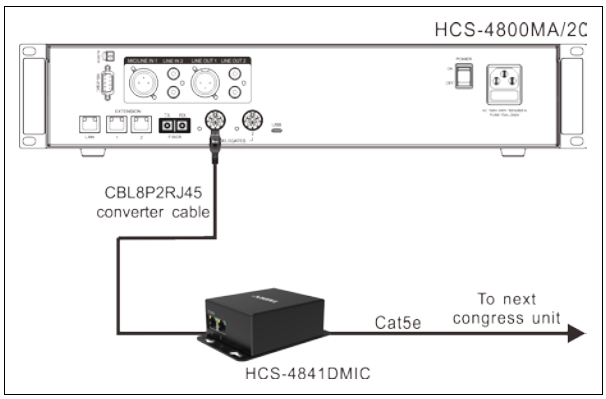


Figure 3.10.2 HCS-4841DMIC connected to CMU/EMU

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.

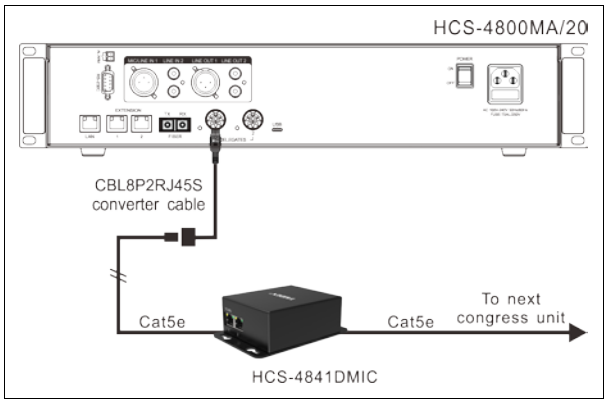


Figure 3.10.3 HCS-4841DMIC connected to CMU/EMU 2

3.10.2.2 Connections between multifunction connectors

All congress units of HCS-4841DMIC series congress units system are daisy-chained easily and conveniently by dedicated Cat5e cables. When connecting to another congress unit, just connect the RJ45 socket by Cat5e of a congress unit with another.

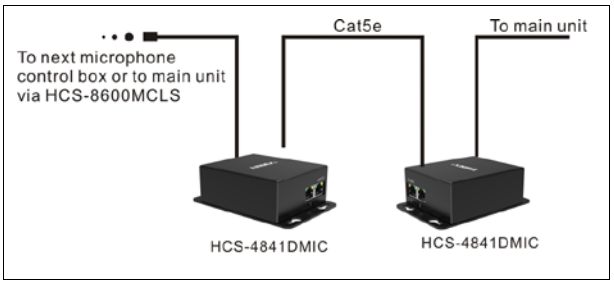


Figure 3.10.4 “Daisy-chain” connection between HCS-4841DMIC multi-function connectors

3.10.3 Button with Cable Installation

a. Cut holes in the table for the first unit according to the positioning diagram (figure 3.10.5);

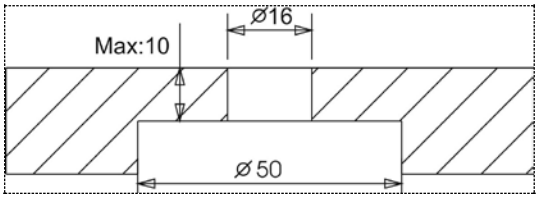


Figure 3.10.5 Holes drawing (unit: mm)

b. Take off the hexagon nut;

c. Put the cable cross from top to bottom of hole of the table;

d. Put the cable cross the hexagon nut;

e. Use the hexagon nut to lock the button.

Note: If the thickness of the desktop is over 10mm, please cut a 50mm diameter hole for easier installation.

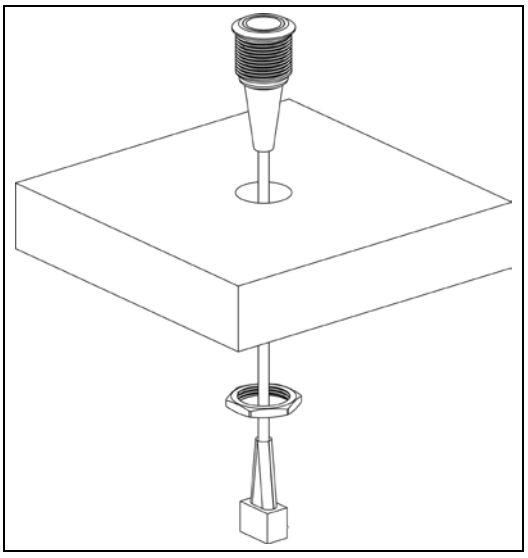


Figure 3.10.6 button installation

3.10.4 Operation

Before a meeting starts, the congress units need to be configured by the operator, including: numbering and testing.Then introduce the operation of HCS-4841DMIC multifunction connector.

1. Number

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

Note:

☞ When numbering, please number the congress units one by one and do NOT press the microphone On/Off button of several congress units at the same time.

2. 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 8, 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 100 microphones at most, set up the request microphone number limit at DCS or web control). 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:

☞ Active microphone number(1~8) setting is only effective to congress unit. The maximum capacity is 8 units (including chairman unit and VIP unit).

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).

3. VIP unit

1.Any delegate unit can be assigned as a VIP unit by the TAIDEN conference management system software.

2.As long as the active microphone capacity is not full, the microphone of the VIP unit can be activated freely;

3.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.

3.11 HCS-4813 Series Congress Unit

3.11.1 Function and indications

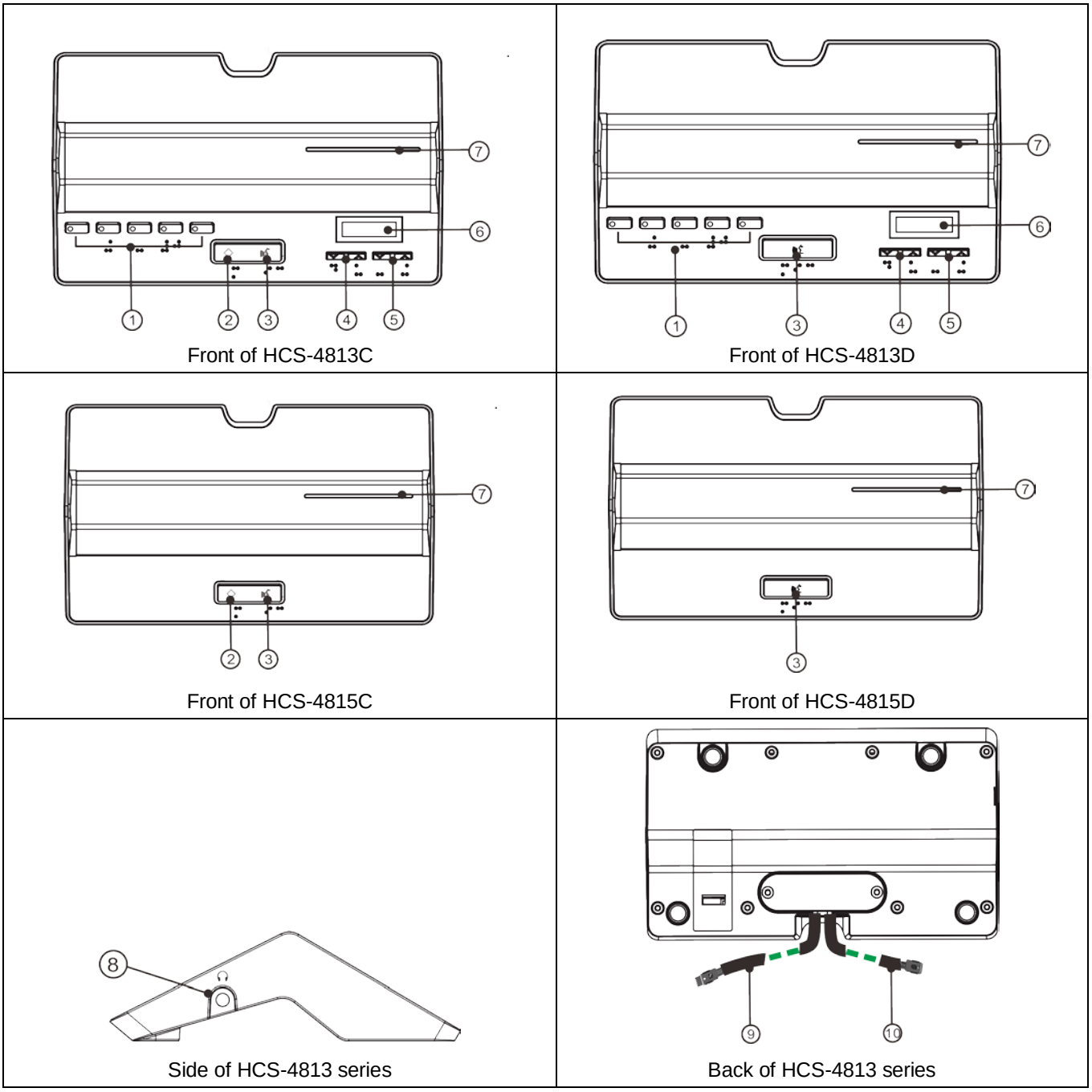


Figure 3.11.1 HCS-4813 series congress unit

Figure 3.11.1

1.Vote buttons

- ♦ 5 buttons for 2/3/4/5 voting

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

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

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

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

- Chairman unit: press this key to activate/deactivate the microphone; Under “Open” and “Request” mode, pressing this key will approve delegates’ requests to speak);
- Delegate unit: press this key to activate/deactivate the microphone or request/cancel request to speak.

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

4. Volume adjustment button

5. Channel select button

6. OLED screen

- Display SI channel language and earphone volume.

7. Microphone status indicator

8.Earphone jack (Ø 3.5 mm)

9. 1.5-meter 8P-DIN cable with standard plug (male x 1)

10. 0.6-meter 8P-DIN cable with standard socket(female x 1)

Table 3.11.1 List of multi-functional keys - 5 keys

Function / Keys			1/- -	2/-	3/0	4/+	5/++
Numbering			Number				
Key-press sign-in			Sign-in				
Voting	**Parliamentary**			YES	NO	ABSTAIN	
	Election		Candidate1	Candidate 2	Candidate 3	Candidate 4	Candidate 5
	Audience response		--/0	-/25	0/50	+/75	++/100
	For/Against			For	Against		
	Parliamentary （NPPV）			YES	NO	ABSTAIN	NPPV
	Appraisal	**Satisfied**	Perfectly satisfied	Satisfied	Basically satisfied	Unsatisfied	
		Qualified	Perfectly qualified	Qualified	Basically qualified	Unqualified	
		Competent	Perfectly competent	Competent	Basically	Incompetent	

3.11.2 Connection

3.11.2.1 Connect to the CMU or EMU

HCS-4813 series congress unit have 2 RJ45 cables and adopt CBL8P2RJ45 converter cable for CMU connection while multifunction connector connect through daisy chain. When connecting the CMU to the contribution units, just connect the male connector of the first unit to the socket of the CMU.

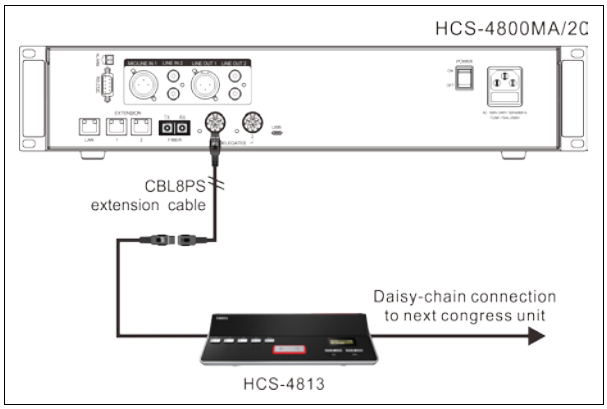


Figure 3.11.2 HCS-4813 series congress unit connected to the CMU/EMU

For a longer distance between the contribution unit and the CMU/EMU, a CBL8PS 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.

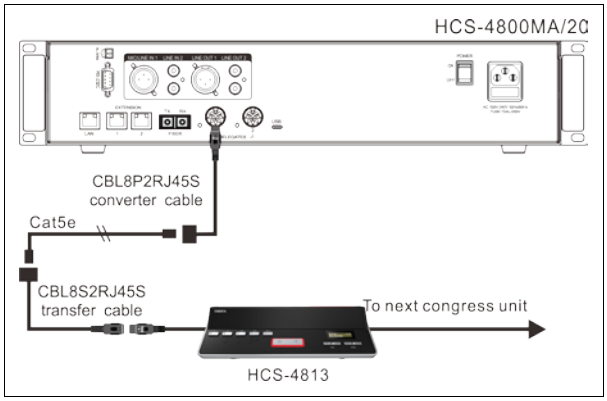


Figure 3.12.3 HCS-4813 series congress unit connected to the CMU/EMU

Neither the replacement of congress units nor cable faults between congress units will affect the other units if “Closed Loop - Daisy Chain” connection topology is selected. “Closed Loop - Daisy Chain” connection, achieved by closing the loop of the daisy-chained units, increases system reliability. 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.

Neither the replacement of congress units nor cable faults between congress units will affect the other units if “Closed Loop - Daisy Chain” connection topology is selected. “Closed Loop - Daisy Chain” connection, achieved by closing the loop of the daisy-chained units, increases system reliability. 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 CBL8PS extension cable.

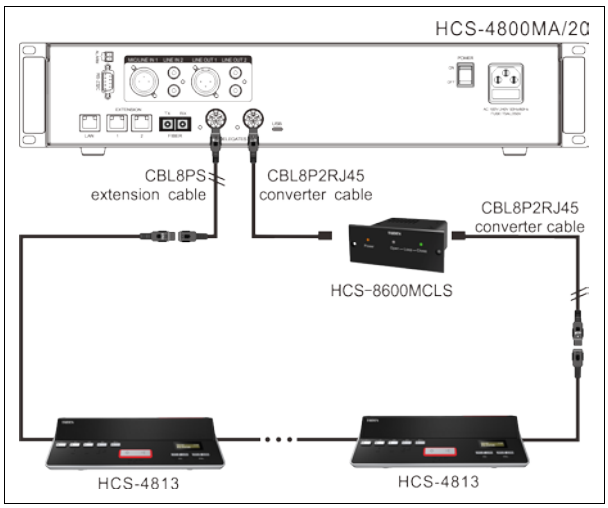


Figure 3.12.4 “Closed Loop - Daisy Chain” connection between the CMU and HCS-4813 series congress units

3.11.2.2 Connection between congress units

All congress units of HCS-4813 series congress units system are daisy-chained easily and conveniently by dedicated 8P-DIN cables.

When connecting to another congress unit, just connect the 0.6m 8P-DIN standard female connector to the 1.5m 8P-DIN standard male connector.

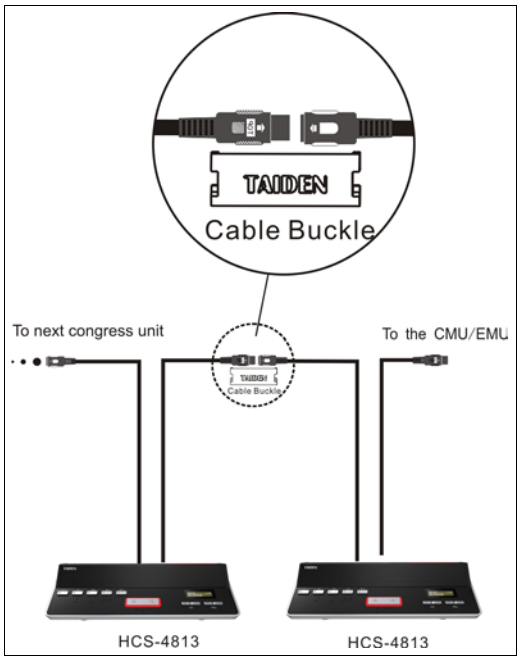
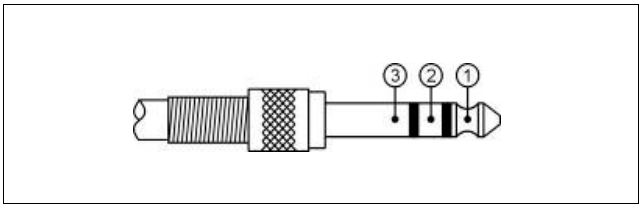


Figure 3.12.5 “Daisy-chain” connection between HCS-4813 series congress units

3.13.2.3 External earphone

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



Functions and indications:

1 ..... Left stereo channel signal

2 ..... Right stereo channel signal

3 ..... Power ground/Shield

3.11.3 Operation

Before a meeting starts, the congress units need to be configured by the operator, including: numbering and testing. During the meeting, the participators can use the congress unit to activate microphone, request to speak, etc.

3.11.3.1 Delegate unit

We introduce all the operation of HCS-4813 series congress units. The congress units of this series feature one or more of these functions.

1. Numbering

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

The number indicating light of all connected congress units will blink. Press the key "1" (HCS-4813 series)or microphone On/Off button (HCS-4815 series)of every congress unit one by one. The number indicating light will be deactivated. Once all congress units numbered, restart the CMU to update the number information.

Note:

☞ When numbering, please number the congress units one by one and do NOT press the microphone On/Off button of several congress units at the same time.

2.Sign-in(with software)

When the system enters the sign-in state, the key 1 indicator on the meeting unit blinks. Press the key 1 and the indicator is off, indicating that the terminal has confirmed sign-in. (For units without numeric keys, press the speak button to sign in)

3. Speaking (without software)

Speaking mode is configured on the CMU.

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 8, 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 100 microphones at most, set up the request microphone number limit at DCS or web control). 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:

☞ Active microphone number(1~8) setting is only effective to congress unit. The maximum capacity is 8 units (including chairman unit and VIP unit).

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(for units with voting function)

Voting can be originated by TAIDEN conference management system software. Supports 5 key voting(table 3.11.1), 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 (for units with SI function)

- 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(for units with volume control button)

- The Vol headset button, can adjust the volume of earphones.

7. VIP unit

- Any delegate unit can be assigned as a VIP unit by the TAIDEN conference management system software.

  1.As long as the active microphone capacity is not full, the microphone of the VIP unit can be activated freely;

  2.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.

3.11.3.2 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 delegate microphones (except VIP units) will be muted temporarily when this key is pressed and they will restore when this key is released;
- If the priority mode on the main unit is configured as “All off”, all active delegate 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 have not reach to the maximum amount, the chairman can activate his/her microphone normally, the operation is the same as for the delegate unit;
- If the active microphone capacity reach to the maximum amount, 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

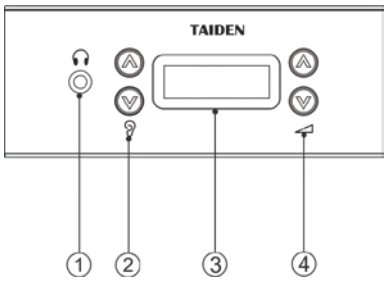
Without PC and under “Request” mode, when a delegate requests to speak, a ring tone will be emitted by the built-in loudspeaker in the chairman’s unit. The chairman can now approve delegate’s request and activate delegate’s microphone by pressing “1” button or reject delegate’s request by pressing “5” button.
Chairman unit without voting fucntion, approve delegate’s request and activate delegate’s microphone by pressing “On” button or reject delegate’s request by pressing “Priority” button.

B. Turn off or mute delegate microphone

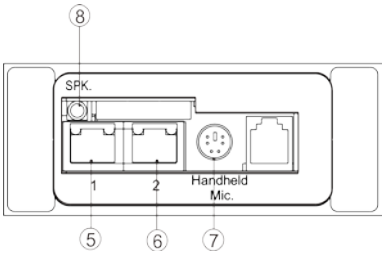
The chairman can use the priority key to execute “All mute” or “All off” operation.

3.12 HCS-4827H Handheld Microphone&HCS-SELM 64 Channel Selector

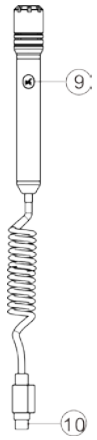
3.12.1 Function and indications



Front of HCS-4827SELM



Bottom of HCS-4827SELM



HCS-4827H Handheld Microphone

Figure 3.12.1 HCS-4827SELM 64 Channel Selector&HCS-4827H Handheld Microphone

Figure 3.12.1

1.Earphone jack(Ø 3.5 mm**)**

2. SI Channel selection buttons

- Select SI channel after the earphone is plugged.

3. OLED screen

- Display SI channel language and earphone volume.

4. Earphone volume control button

- Adjust earphone volume after the earphone is plugged.

5.&6. 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.

7. Mini 6P-PIN input

- Connecting to the HCS-4827H handheld microphone

8. Loudspeaker jack (Ø 3.5 mm)

9. Micphone turn on/off button and indicator

Working state	Indicating light
Microphone on	Red (on)
Microphone off	Red (off)

10. Mini 6PIN connector to connect channel selector

- Available when earphone is plugged.

3.12.2 Installation

3.12.2.1 Channel selector separate installation

a. Cut holes on the table according to the dimensional diagram;

b. Fix the fixed iron plates with self tapping screws
(KA3 × 12) according to the holes;

c. Hook up the unit onto the fixed iron plates.

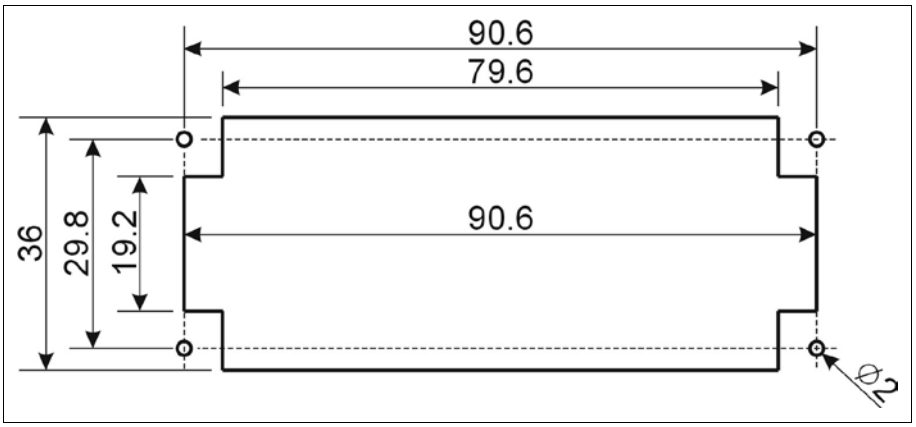


Figure 3.12.2 Positioning diagram of HCS-4827SELM channel selector (unit: mm)

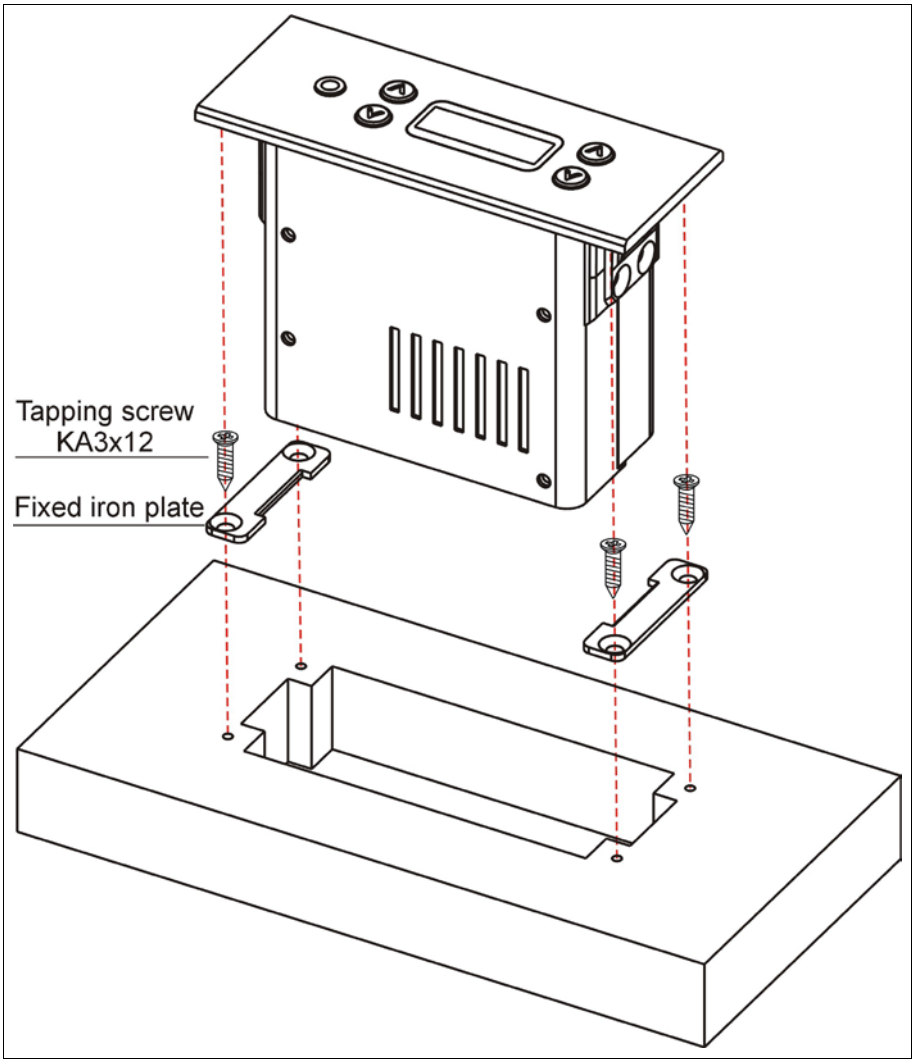


Figure 3.12.3 Installation diagram of HCS-4827SELM series congress unit

■ **Disassembly**

When disassembling, insert a screwdriver from the bottom, release the buckle, raise it from one side, then raise the other side, and lift the unit.

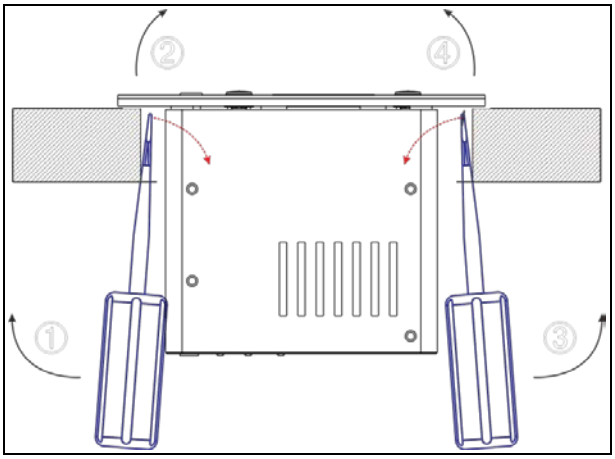


Figure 3.12.4 Disassembly caution of HCS-4827SELM

3.12.2.2 HCS-4827H&4827SELM combined installation

a.Cut holes on the table according to the dimensional diagram;

b.Place the microphone base and channel selector on the desk, aim to holes;

c. Put the nut ring on the microphone seat cover and tighten it counterclockwise;

d. Place the channel selector into the fixing hole and arrange it as required line direction, and screw tight;

e. After installation, place the microphone vertically into the microphone holder;

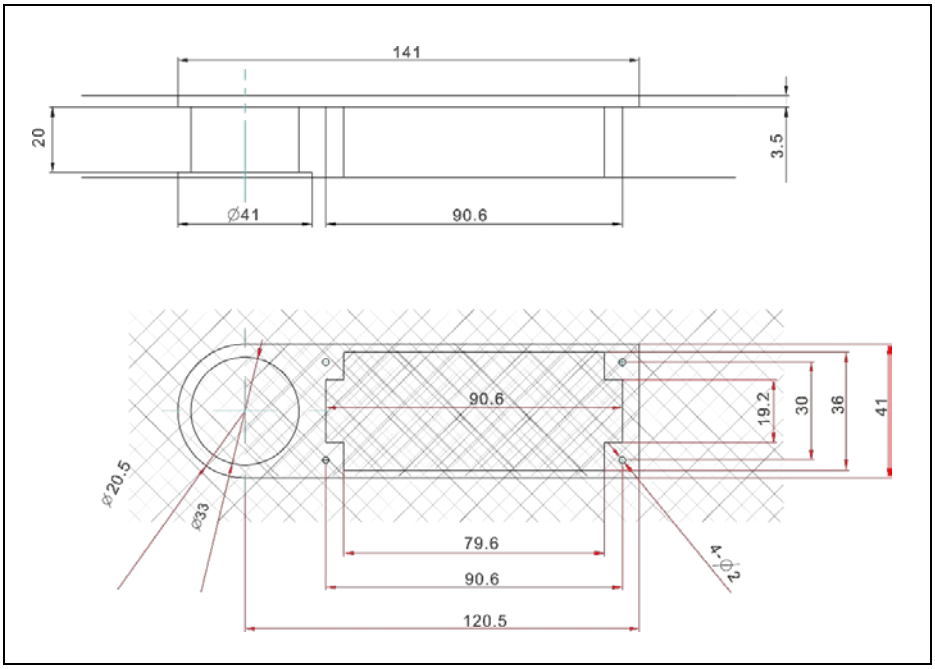


Figure 3.12.5 HCS-4827H&HCS-4827SELM combined installation hole drowing

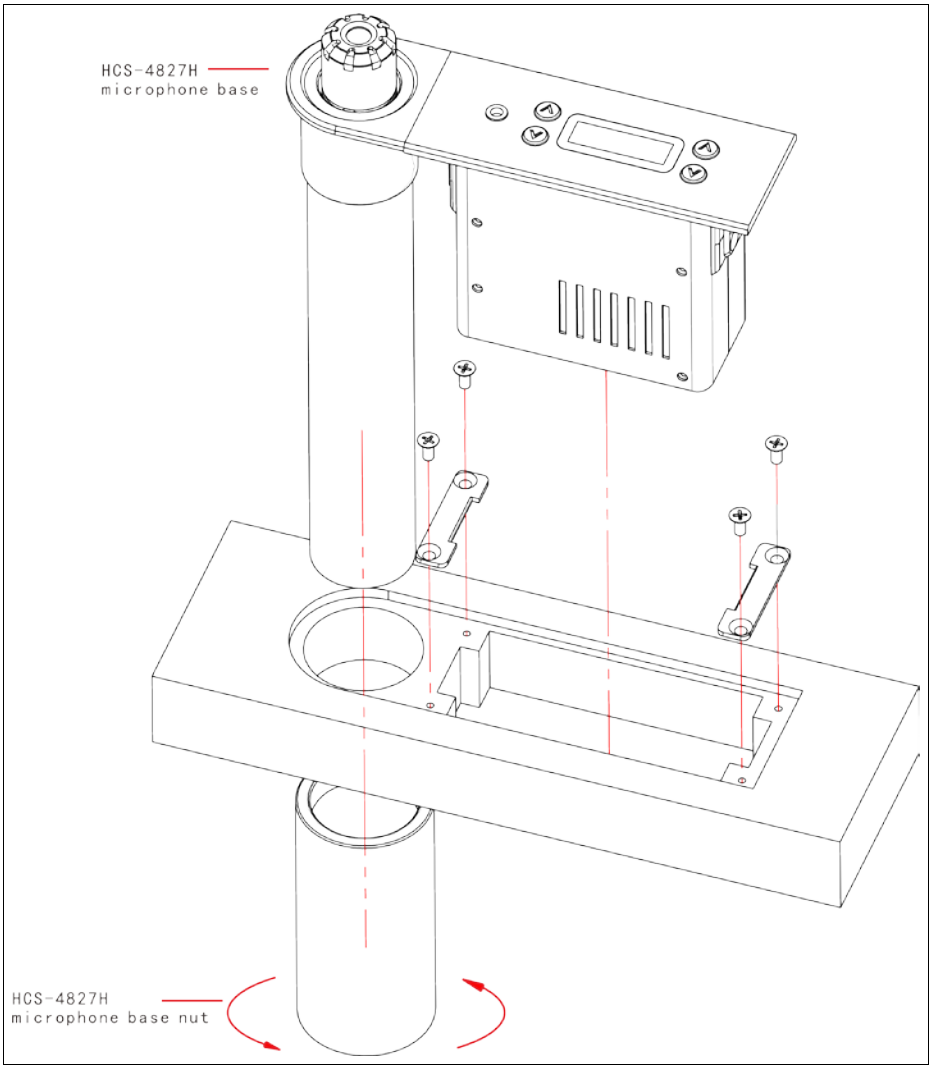


Figure 3.12.6 HCS-4827H&4827SELM combined installation

■ **Disassembly**

When disassembiling, first turn the outer nut ring clockwise and remove it, and then pull the microphone up .

3.12.3 Connection

3.12.3.1 To contribution units

The HCS-4827SELM congress unit is 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.

- One HCS-4827SELM channel selector can be connected to one HCS-4827H Handheld microphone;

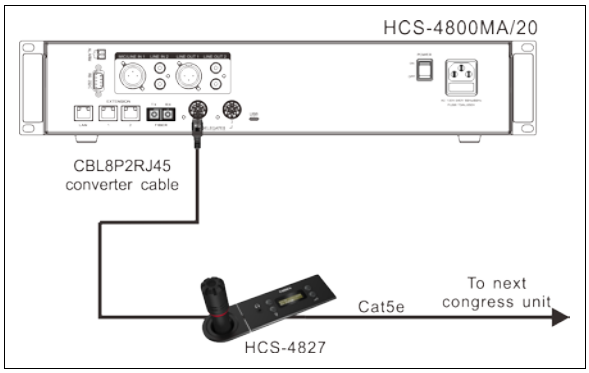


Figure 3.12.7 HCS-4827 series congress unit connected to the CMU/EMU

For a longer distance between the contribution unit and the CMU/EMU, a Cat5e cable can be used as 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 contribution unit.

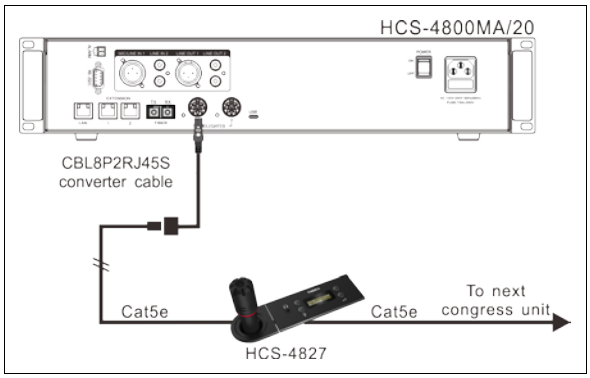


Figure 3.12.8 HCS-4827 series congress unit connected to the CMU/EMU2

Neither the replacement of congress units nor cable faults between congress units will affect the other units if “Closed Loop - Daisy Chain” connection topology is selected. “Closed Loop - Daisy Chain” connection, achieved by closing the loop of the daisy-chained units, increases system reliability. 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.

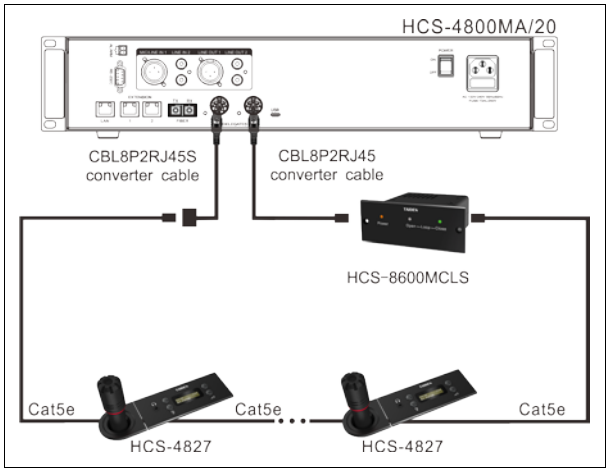


Figure 3.12.9 “Closed Loop - Daisy Chain” connection between the CMU and HCS-4827 series congress unit

3.12.3.2 Connections between congress units

HCS-4827H and HCS-4827SELM congress units are daisy-chained easily and conveniently by dedicated Cat5e cables.

When connecting to another congress unit, just use the Cat5e cable of the unit to another RJ45 socket of the next unit.

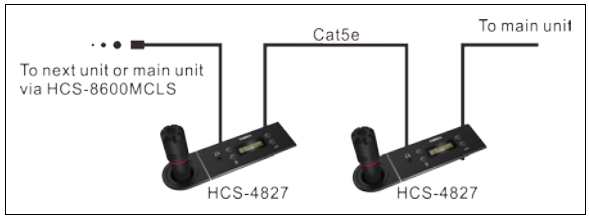
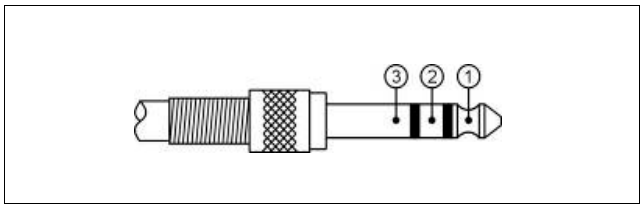


Figure 3.12.10 “Daisy-chain” connection between HCS-4827 series congress units

3.12.3.3 External earphone

An external earphone can be connected to the earphone jack of HCS-48U6SELM channel selector. Its volume can be adjusted by the earphone volume control button. The external earphone shall have Ø 3.5 mm plug, as the following figure:



Functions and indications:

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

3.12.4 Operation

Before a meeting starts, the congress units need to be configured by the operator, including: numbering and testing.

1. Numbering

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

The indicator of connected congress unit will flashing, press

- Press “Unit Numbering” on application software. The system now goes to numbering status. At this time, press the of each congress unit in one by one. Once all congress terminals numbered, restart the CMU to update the number information.
- Rotate the function knob to select “0.5 Numbering”, then select and press “start” .The LCD screen of the main unit shows “Press key of DCS Units, one by one and reboot EMU”; meanwhile, LCD screen of those connected congress units will pop up a number; press “numbering” key of congress units one by one; reboot the main unit after all congress units being numbered for updating .

Note:

☞ Please number the congress units one by one and do NOT press the button of several congress units at the same time.

2. Speaking (without software)

Speaking mode is configured on the CMU.

A. “Open” mode

- Active microphone number limitation (1~8) **NOT reached**:
  - c. The microphone will be activated when the microphone On/Off key is pressed, the speaker can give his/her speech;
  - d. The microphone will be deactivated when the microphone On/Off key is pressed again.
- Active microphone number limitation (1~8) **reached**:
  - d. Press the microphone On/Off key to request to speak;
  - e. Press the microphone On/Off key again to cancel the request to speak;
  - f. 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**:
  - c. The microphone will be activated when the microphone On/Off key is pressed, the speaker can give his/her speech;
  - d. 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**:
  - d. 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;
  - e. 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);
  - f. 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

c. Request to speak when the microphone On/Off key is pressed (default 100 microphones at most, set up the request microphone number limit at DCS or web control). The chairman unit can approve or reject his/her speak;

d. 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:**

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

d. 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:

☞ Active microphone number(1~8) setting is only effective to congress unit. The maximum capacity is 8 units.

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).

3 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.

4. Volume control

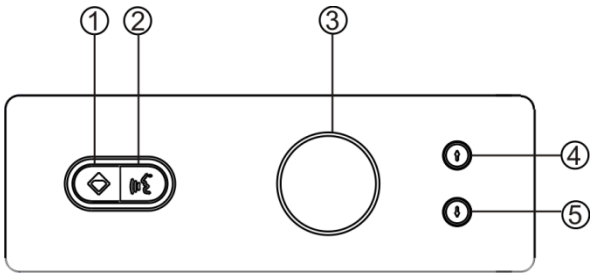
- The volume of HCS-4827H can be adjusted by HCS-4827SELM channel selector.

5. VIP unit (for delegate discussion unit of this series only)

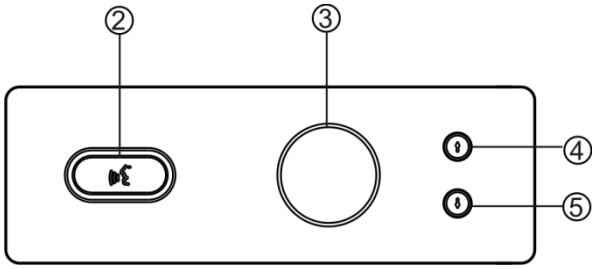
- Any delegate unit can be assigned as a VIP unit by the TAIDEN conference management system software.
- As long as the active microphone capacity is not full, the microphone of the VIP unit can be activated freely;
- If the active microphone capacity is full, the microphone of the VIP unit cannot be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

3.13 HCS-4857 Series Lifting Microphone

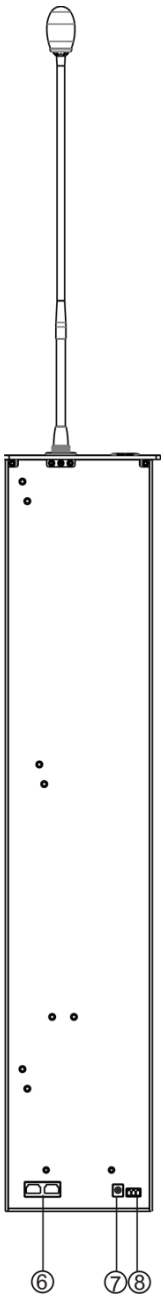
3.13.1 Function and indications



Front of HCS-4857C Lift Microphone Chairman Unit



Front of HCS-4857D Lift Microphone Delegate Unit



Bottom shell of HCS-4857 Lifting Microphone

Figure :3.13.1 HCS-4857 Lifting Microphone

Figure :3.13.1

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

- According to the priority mode configuration on the main unit:
  - ◊ If configured as "All mute", all active delegate microphones (except VIP units) will be muted temporarily 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 switched off when this key is pressed. Under "Open" and "Request" mode, pressing this key will clear the request list (deny all delegates' requests to speak);
- If the chairman microphone is not active, pressing this key will activate it;
- If the ring mode is configured as "ON", a ring tone will be produced when this key is pressed.

2.Microphone On/Off key (for the chairman unit)

Microphone On/Off/request key (for the delegate unit):

- Chairman unit: press this key to activate/deactivate the microphone;
- Delegate unit: press this key to activate/deactivate the microphone or request/cancel request to speak.

3. Microphone lift interface and indicator

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

4. &5 Up/Down button

- Press the buttons, the microphone goes up/down, press again to stop the process

6.2x RJ45 socket

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

7.DC socket

- For 12V, 5A Power supply

8.RS485 socket

- For central system connection

3.13.2 Installation

a.Cut the table according to the dimensional diagram;(table thickness must be greater than 35mm)

b.Put the HCS-4857 lifting microphone into the empty space vertically.(table height must be greater than 710mm)

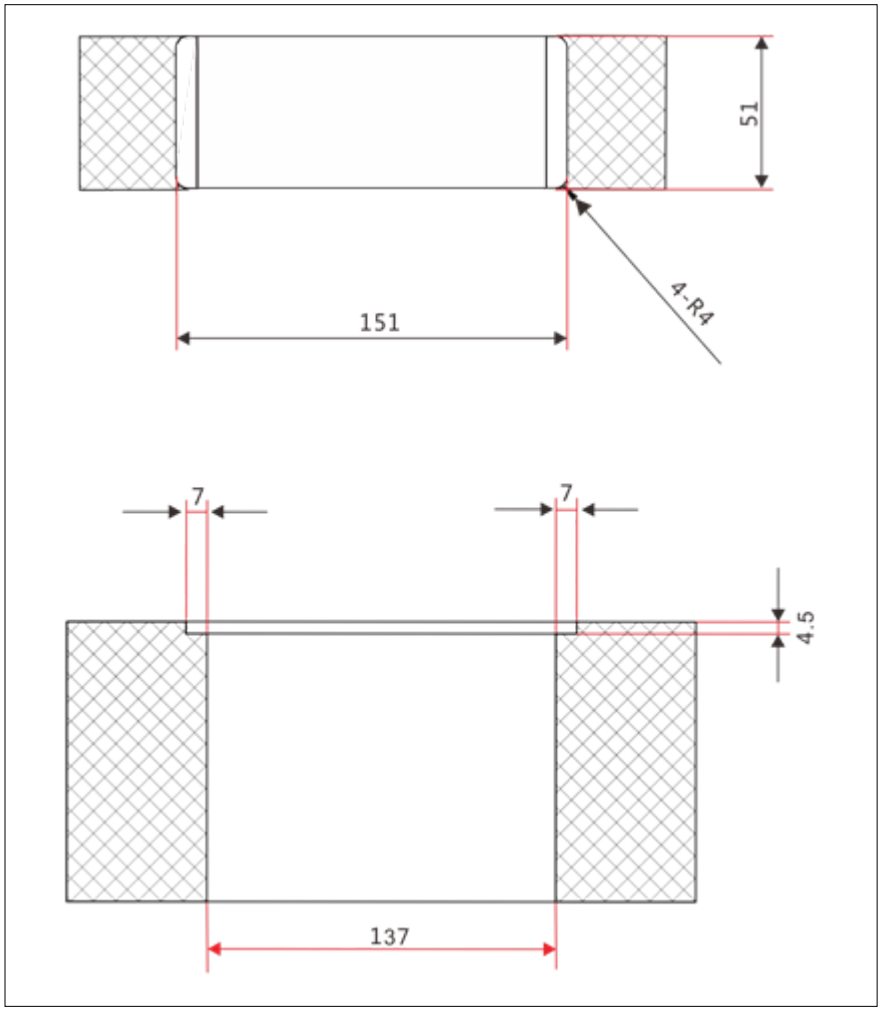


Figure 3.13.2 Cutout of HCS-4857 series congress unit (unit: mm)

3.13.3 Connection

The HCS-4857 series congress unit is 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.

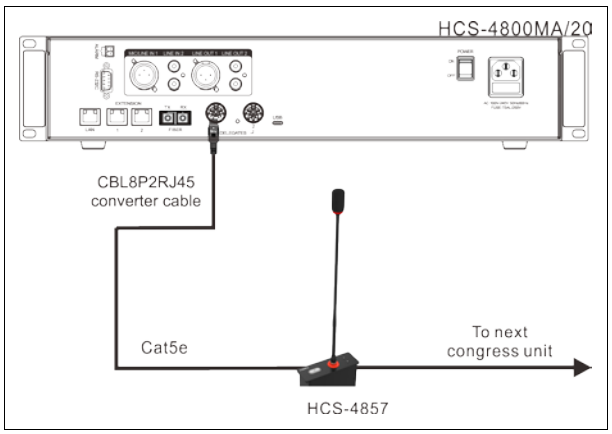


Figure 3.13.3 HCS-4857 series congress unit connected to the CMU/EMU

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.

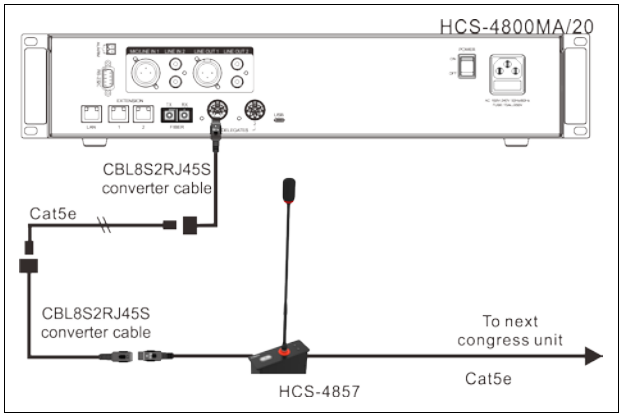


Figure 3.13.4 HCS-4857 series congress unit connected to the CMU/EMU2

3.13.3.2 Connection between congress units

All congress units of HCS-4857 series congress units system are daisy-chained easily and conveniently by dedicated Cat5e cables. When connecting to another congress unit, just connect the RJ45 socket by Cat5e of a congress unit with another.

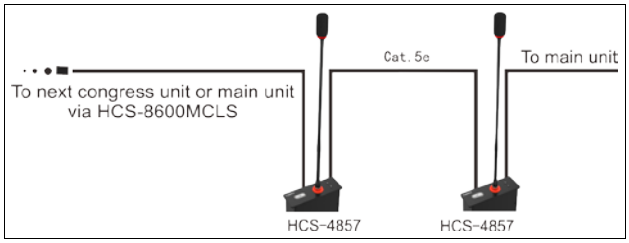


Figure 3.13.5 “Daisy-chain” connection between HCS-4857 series congress units

3.13.4 Operation

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

3.13.4.1 Delegate unit

We introduce all the operation of HCS-4857 series congress units. The congress units of this series feature one or more of these functions.

1. Numbering

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

The indicator of connected congress unit will flashing, press

- Press “Unit Numbering” on application software. The system now goes to numbering status. At this time, press the of each congress unit in one by one. Once all congress terminals numbered, restart the CMU to update the number information.
- Rotate the function knob to select “0.5 Numbering”, then select and press “start” .The LCD screen of the main unit shows “Press key of DCS Units, one by one and reboot EMU”; meanwhile, LCD screen of those connected congress units will pop up a number; press “numbering” key of congress units one by one; reboot the main unit after all congress units being numbered for updating .

Note:

☞ Please number the congress units one by one and do NOT press the button of several congress units at the same time.

2. 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**:
  - e. The microphone will be activated when the microphone On/Off key is pressed, the speaker can give his/her speech;
  - f. The microphone will be deactivated when the microphone On/Off key is pressed again.
- Active microphone number limitation (1~8) **reached**:
  - g. Press the microphone On/Off key to request to speak;
  - h. Press the microphone On/Off key again to cancel the request to speak;
  - i. 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**:
  - e. The microphone will be activated when the microphone On/Off key is pressed, the speaker can give his/her speech;
  - f. 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**:
  - g. 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;
  - h. If the delegate does not speak for several seconds, the microphone will be deactivated automatically. The interval time can be adjusted

i. at the main unit (refer to section 2.1.3);

j. 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

e. Request to speak when the microphone On/Off key is pressed (default 100 microphones at most, set up the request microphone number limit at DCS or web control). The chairman unit can approve or reject his/her speak;

f. 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:**

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

f. 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:

☞ Active microphone number(1~8) setting is only effective to congress unit. The maximum capacity is 8 units (including chairman unit and VIP unit).

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).

3.13.4.2 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 delegate microphones (except VIP units) will be muted temporarily when this key is pressed and they will restore when this key is released;
- If the priority mode on the main unit is configured as “All off”, all active delegate 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 have not reach to the maximum amount, the chairman can activate his/her microphone normally, the operation is the same as for the delegate unit;
- If the active microphone capacity reach to the maximum amount, 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

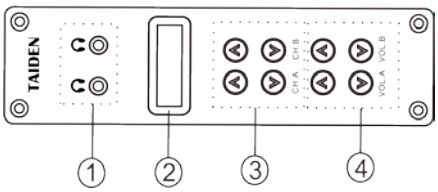
Without PC and under “Request” mode, when a delegate requests to speak, the microphone indicator of chairman’s unit will flash. Chairman unit without voting fucntion, approve delegate’s request and activate delegate’s microphone by pressing “On” button or reject delegate’s request by pressing “Priority” button.

B. Turn off or mute delegate microphone

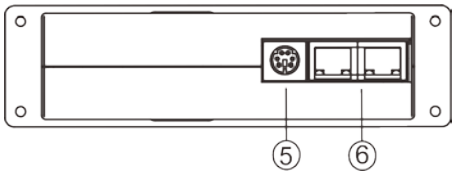
The chairman can use the priority key to execute “All mute” or “All off” operation.

3.14 HCS-4825 Dual 64 Channel Selector

3.14.1 Function and Indicator



Front of HCS-4825 dual 64 channel selector



Botton of HCS-4825 dual 64 channel selector

Figure 3.14.1 HCS-4825 dual channel selector

1. Earphone jack x2(Ø 3.5 mm**)**

2. OLED display

- Display two SI channel number and earphone volume

3. SI channel select button x2

- Select SI channel after the earphone is plugged.

4. Earphone volume adjust button x2

- Adjust earphone volume after the earphone is plugged.

5. 6P-DIN input

- Connect to HCS-4827H

6. 2x RJ45 socket

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

3.14.2 Installation

a. Cut holes on the table according to the dimensional diagram;
b. Put the channel selector into the fixed hole, arrange the outlet direction according to the actual situation, and tighten it with screws;

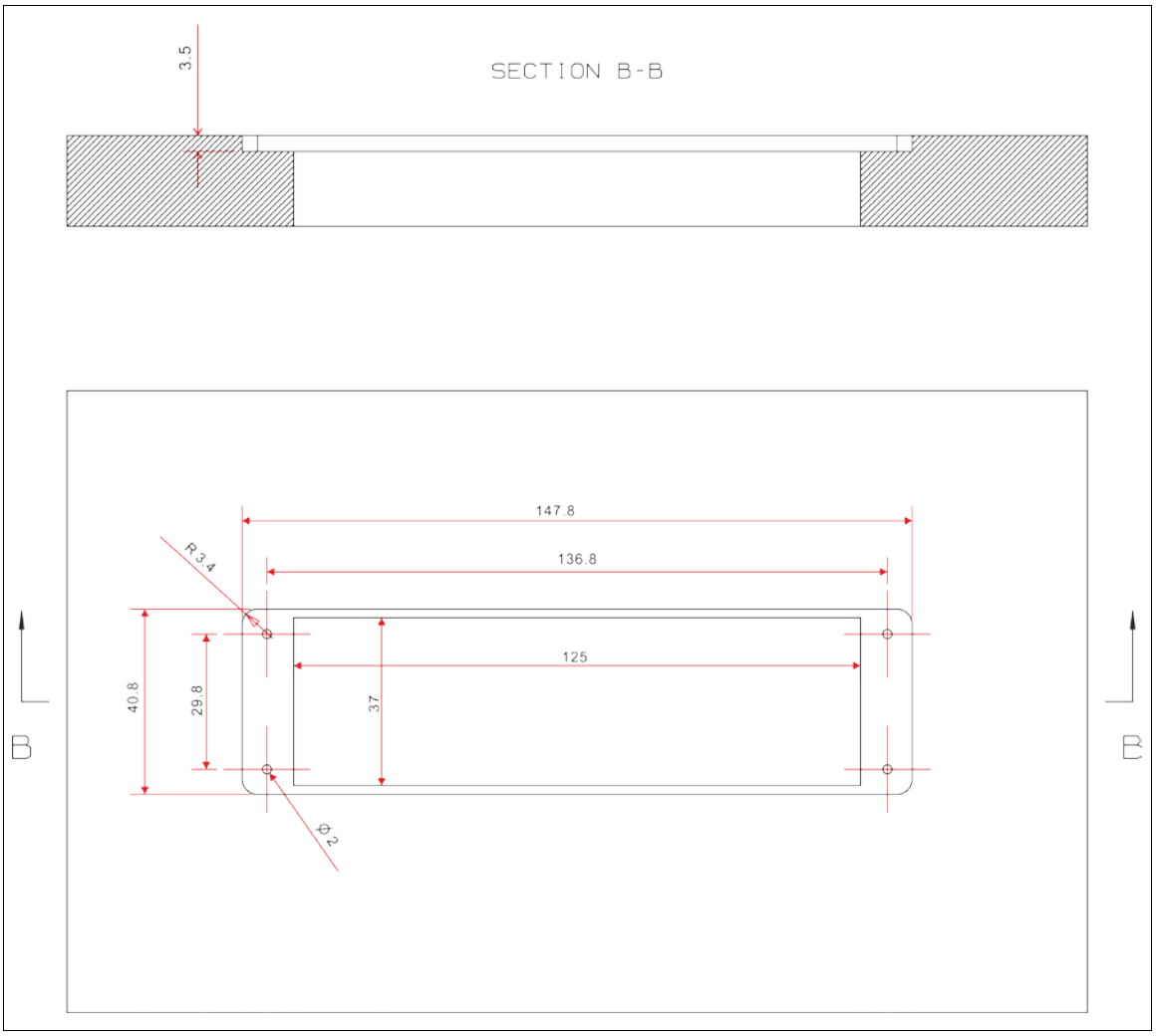


Figure 3.14.2 Cutout of HCS-4825 series congress unit (unit: mm)

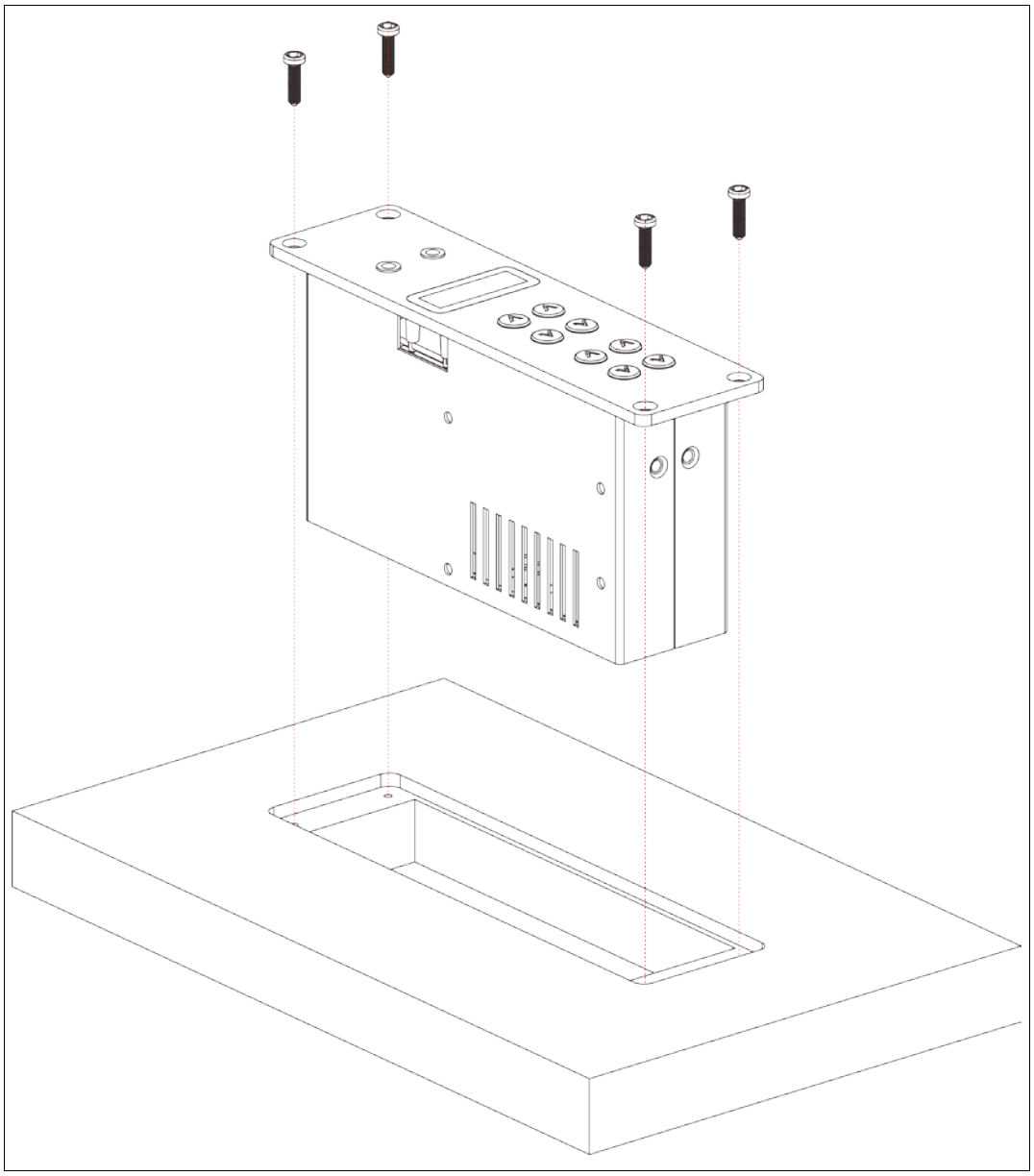


Figure 3.14.3 Installation of HCS-4825

3.14.3 Connection

3.14.3.1 To contribution units

The HCS-4825 channel selector is 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.

- One HCS-4825 channel selector can be connected to one HCS-4827H handheld microphone;

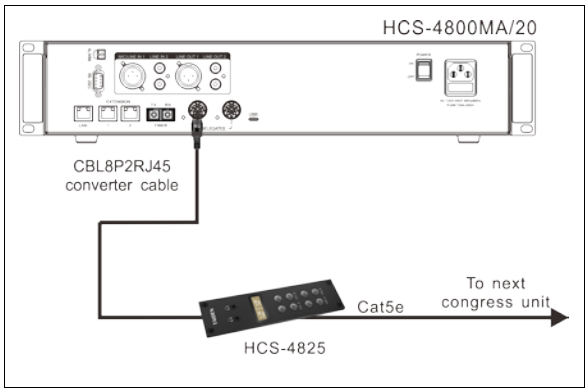


Figure 3.14.4 HCS-4825 series congress unit connected to the CMU/EMU

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.

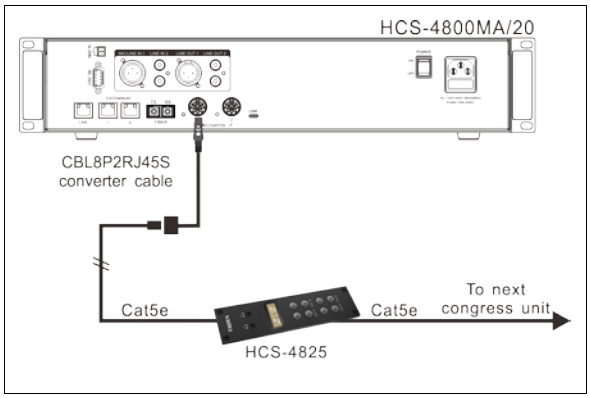


Figure 3.14.5 HCS-4825 series channel selector connected to the CMU/EMU2

Neither the replacement of congress units nor cable faults between congress units will affect the other units if “Closed Loop - Daisy Chain” connection topology is selected. “Closed Loop - Daisy Chain” connection, achieved by closing the loop of the daisy-chained units, increases system reliability. 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.

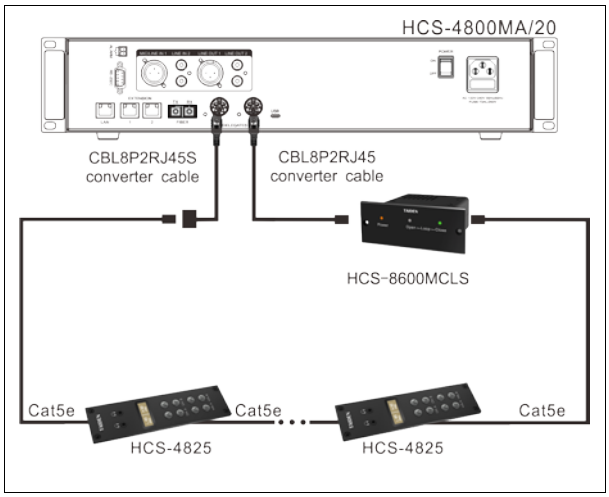


Figure 3.14.6 “Closed Loop - Daisy Chain” connection between the CMU and HCS-4825 channel selector

3.14.3.2 Connections between congress units

HCS-4825 channel selector are daisy-chained easily and conveniently by dedicated Cat5e cables.

When connecting to another congress unit, just use the Cat5e cable of the unit to another RJ45 socket of the next unit.

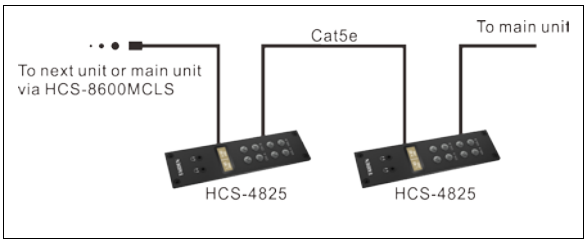


Figure 3.14.7 “Daisy-chain” connection between HCS-4825 channel selector

3.14.4 Operation

Before a meeting starts, the congress units need to be configured by the operator, including: numbering and testing. HCS-4825 can be used separately or with HCS-4827H, speaking function must be realize with HCS-4827H.

1.Numbering

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

The indicator of connected congress unit will flashing,

- Press “Unit Numbering” on application software. The system now goes to numbering status. At this time, press the of each congress unit in one by one. Once all congress terminals numbered, restart the CMU to update the number information.
- Rotate the function knob to select “0.5 Numbering”, then select and press “start” .The LCD screen of the main unit shows “Press key of DCS Units, one by one and reboot EMU”; meanwhile, LCD screen of those connected congress units will pop up a number; press “numbering” key of congress units one by one; reboot the main unit after all congress units being numbered for updating .

Note:

☞ Please number the congress units one by one and do NOT press the button of several congress units at the same time.

2. Speaking (without software,HCS-4827H is needed)

Speaking mode is configured on the CMU.

A. “Open” mode

- Active microphone number limitation (1~8) **NOT reached**:
  - g. The microphone will be activated when the microphone On/Off key is pressed, the speaker can give his/her speech;
  - h. The microphone will be deactivated when the microphone On/Off key is pressed again.
- Active microphone number limitation (1~8) **reached**:
  - j. Press the microphone On/Off key to request to speak;
  - k. Press the microphone On/Off key again to cancel the request to speak;
  - l. 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**:
  - g. The microphone will be activated when the microphone On/Off key is pressed, the speaker can give his/her speech;
  - h. 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**:
  - k. 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;
  - l. 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);
  - m. 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

g. Request to speak when the microphone On/Off key is pressed (default 100 microphones at most, set up the request microphone number limit at DCS or web control). The chairman unit can approve or reject his/her speak;

h. 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:**

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

h. 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.

3.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.

Note:

☞ If "Handheld Mic.PTT mode" is active, expect under "Request" mode, the microphone needs press and hold to turn on.

4. Volume control

- The volume of earplug can be adjusted by HCS-4825 channel selector.

5. VIP unit (for delegate discussion unit of this series only)

- 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.

Chapter 4 Interpreter unit

Simultaneous interpretation function of HCS-4800 and 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

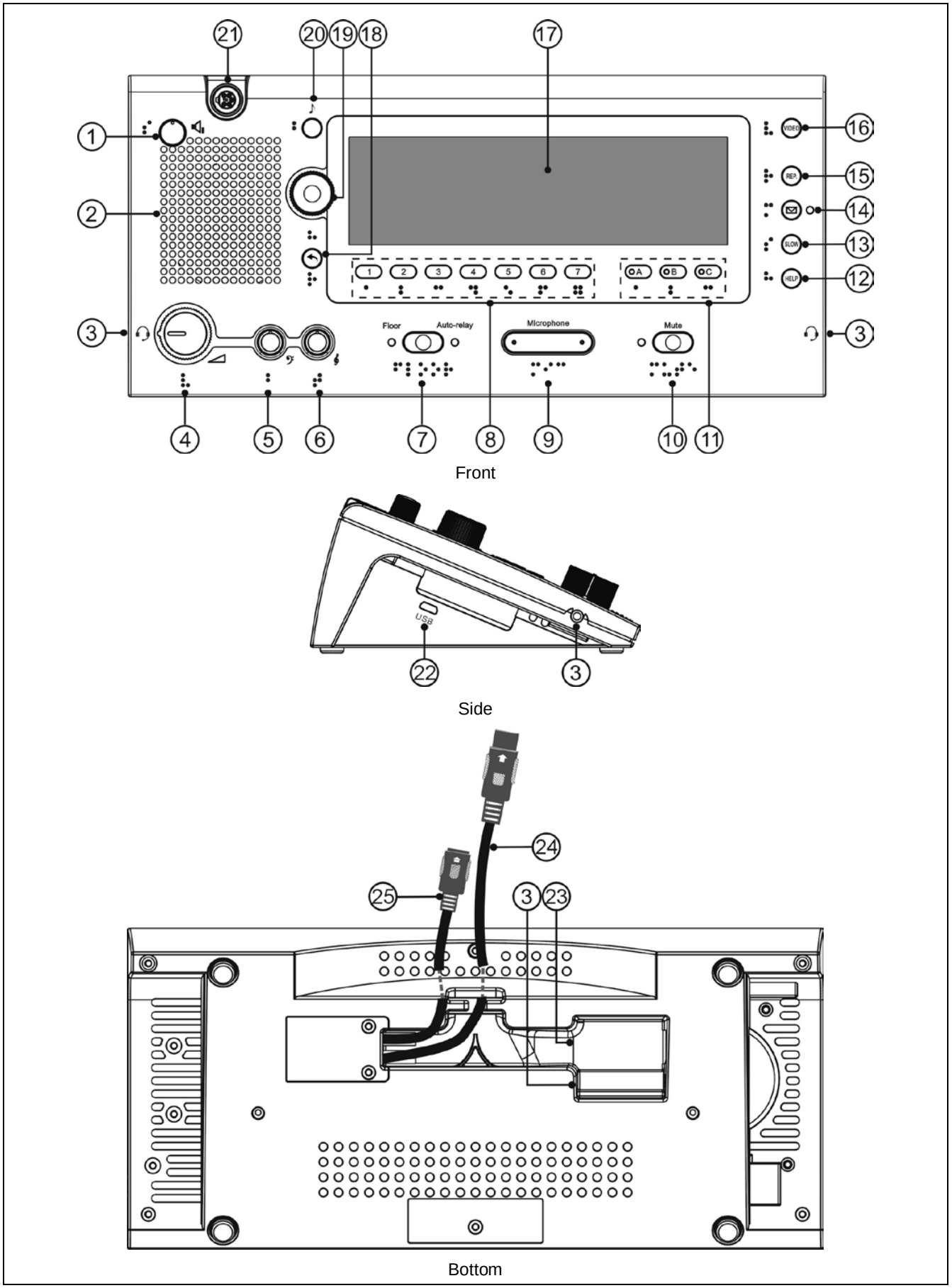


Figure 4.1 HCS-8685 Interpreter unit

◊ **Listening area:**

Loudspeaker/earphone control:

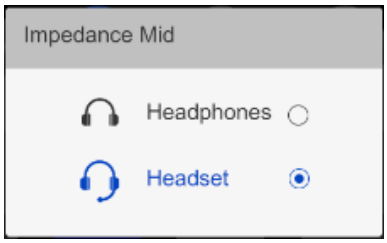
1. Loudspeaker volume control knob

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 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.

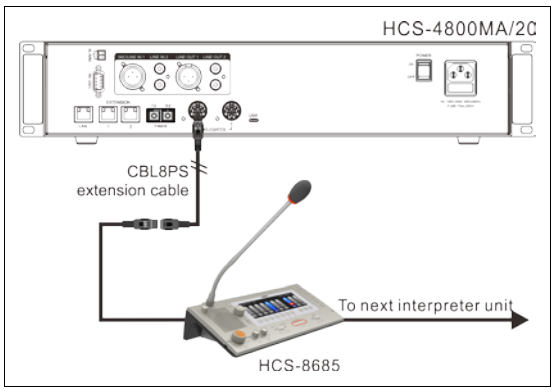


Figure 4.3 HCS-8685 Interpreter unit connected to the CMU or the EMU

For a longer distance between the interpreter unit and the CMU/EMU, a CBL8PS 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.

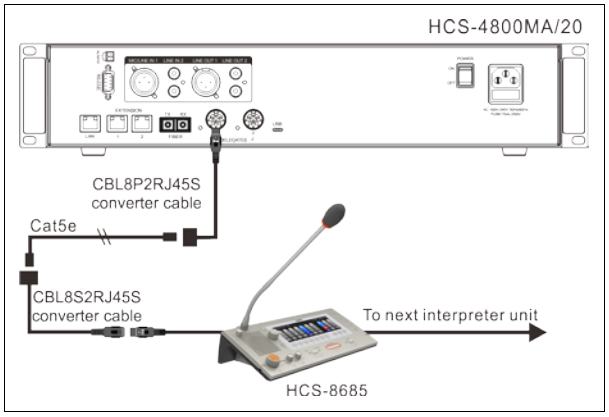


Figure 4.4 HCS-8685 Interpreter unit connected to the CMU or the EMU

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 CBL8PS extension cable.

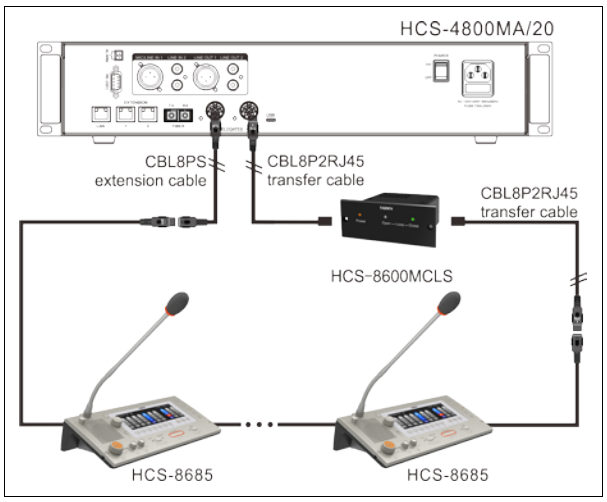


Figure 4.5 “Closed Loop - Daisy Chain” connection topology

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.

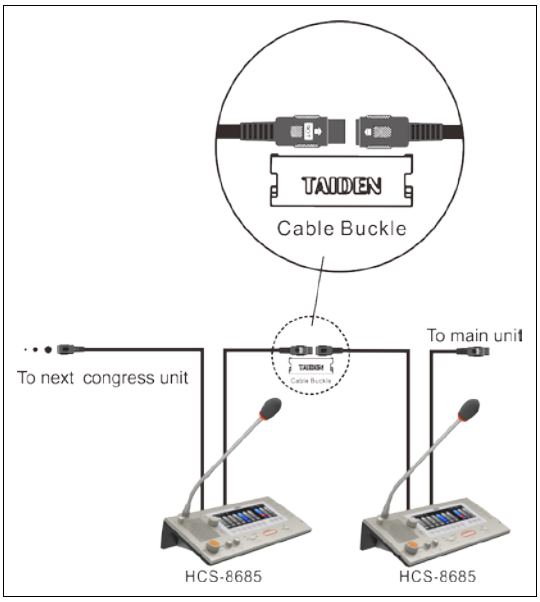
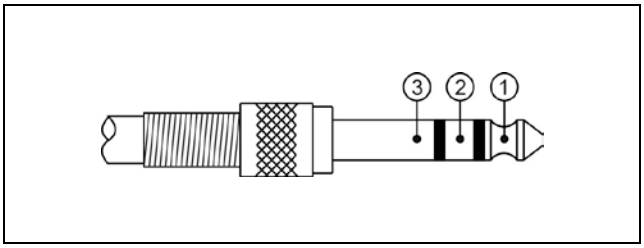


Figure 4.6 “Daisy-chain” connection between HCS-8685 Interpreter units

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:

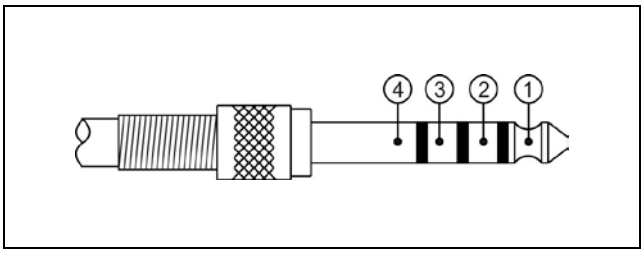


Functions and indications:

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:



Functions and indications:

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

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.

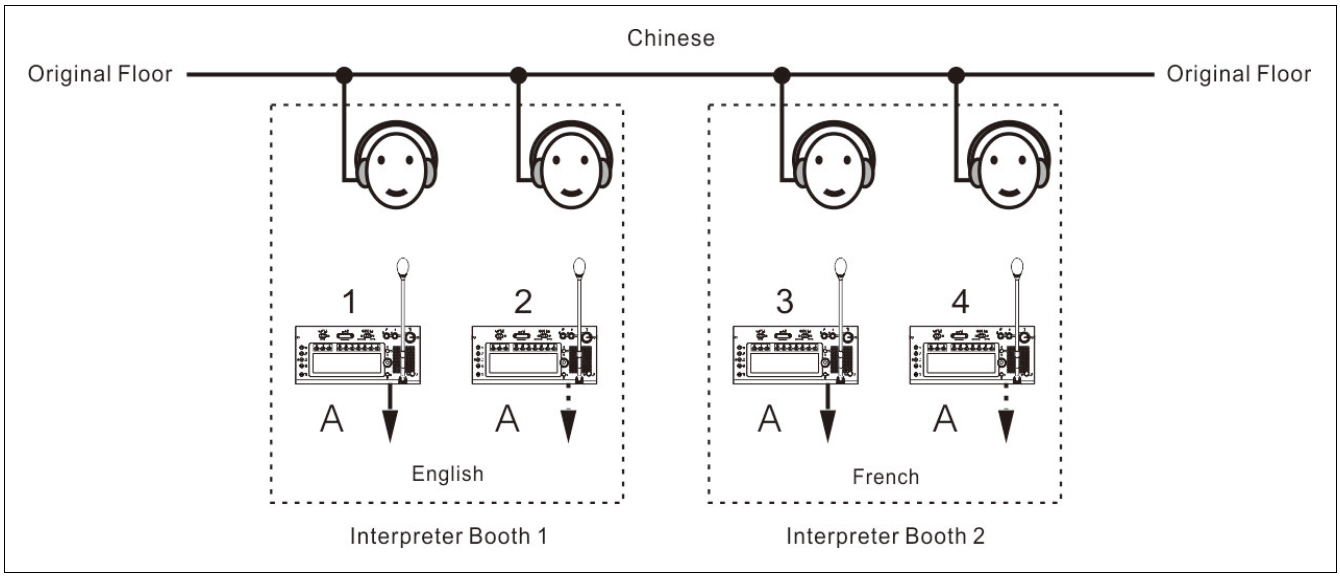


Figure 4.7 Direct interpretation

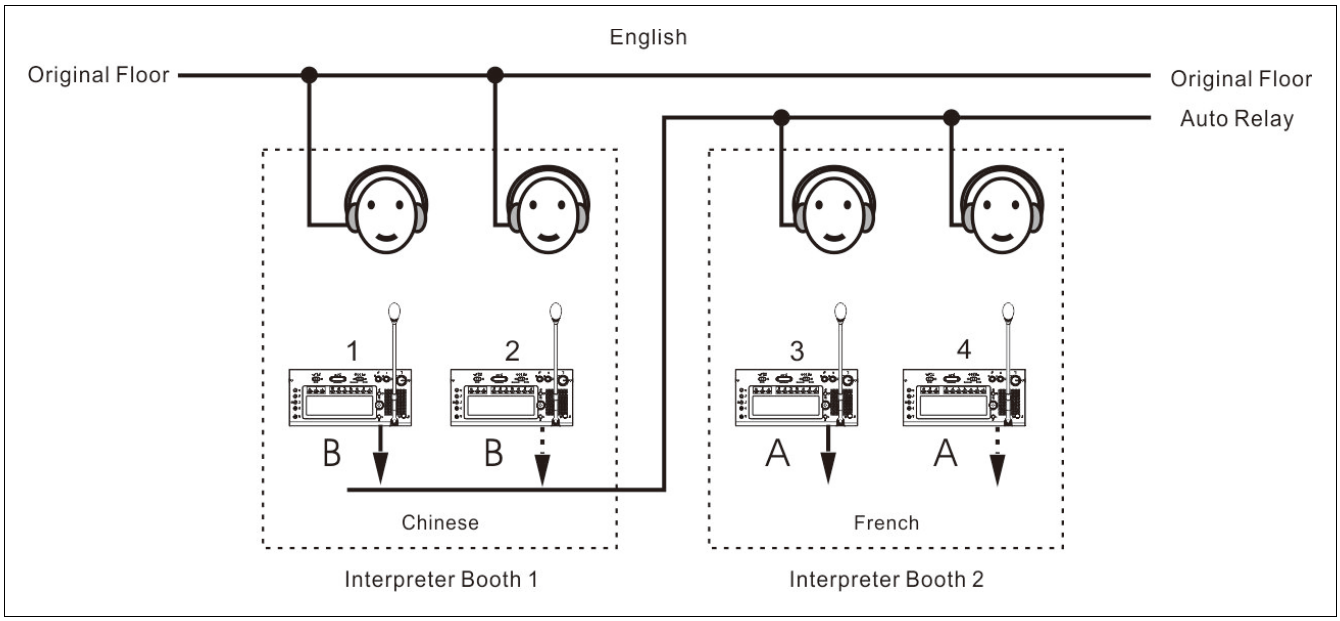


Figure 4.8 Relay interpretation

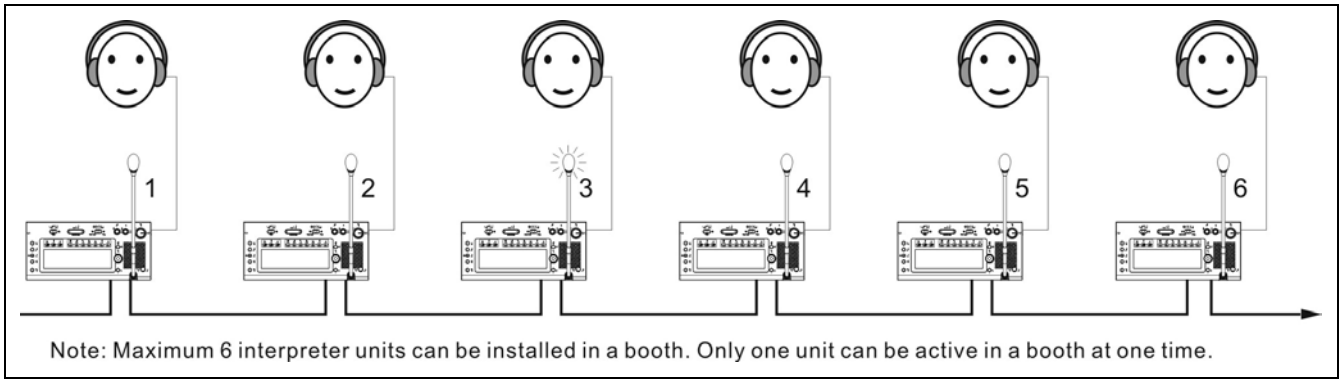
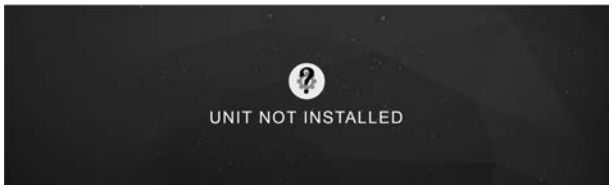


Figure 4.9 Schematic diagram of the connection of interpreter units

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.

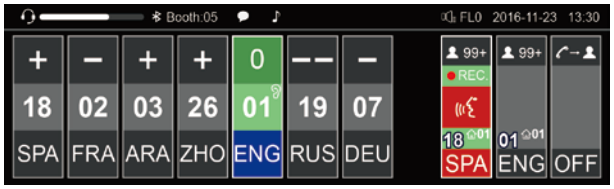
Icon on LCD:

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
● REC	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

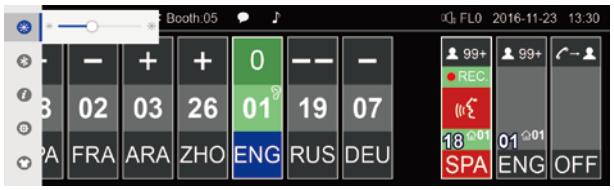
B）Menu configuration

The LCD menu includes:

Brightness Bluetooth
Setting About Skin

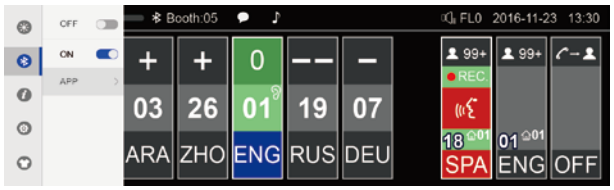
Brightness

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

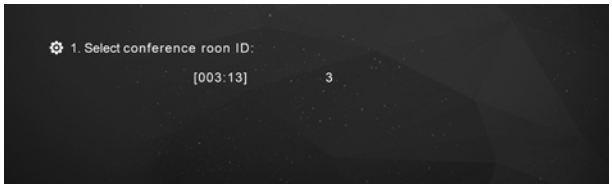
installation, you can send message to all or part booths via Bluetooth.

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.



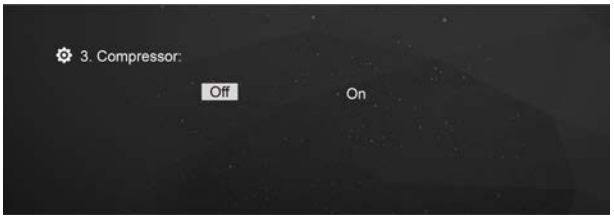
◆ **Select booth number**

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**

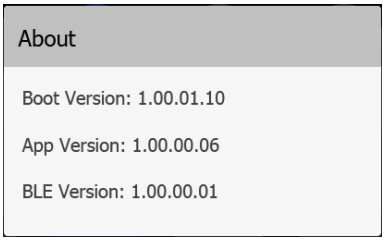
On or Off compressor.



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.

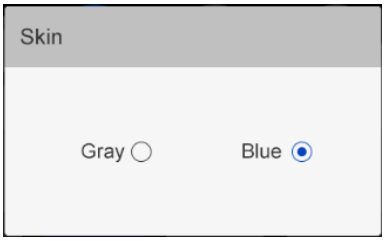
About

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



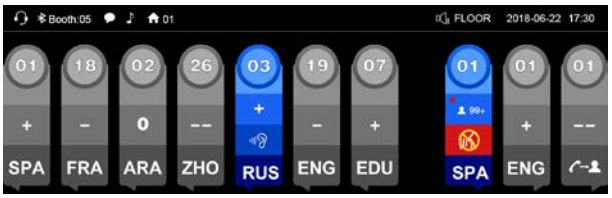
Skin

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 ⑲.
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.

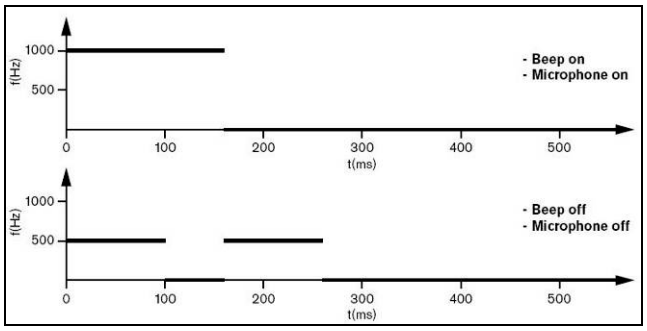
Quality	Description
0	The channel contains the floor language.
+	The channel contains a direct interpretation of the floor language.
-	The channel contains an indirect interpretation of the floor language.
--	The channel contains an indirect interpretation of an interpretation language.
X	The channel 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-4800 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-4800 series fully digital congress system are introduced by diagrams and examples.

5.1.1 Connection principles

In HCS-4800 series fully digital congress system, power is provided by HCS-4800M or HCS-8600MEA or HCS-8600EMS for all congress units. Thus, the total number of system units in any installation is limited by the maximum power handling capacity and control capacity of the HCS-4800M or HCS-8600MEA 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.

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-4800M CMU and HCS-8600M 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 4.3” LCD, microphone	HCS-4891/80	25	23	20	18
Equipped with OLED, microphone	HCS-4860/80	31	31	30	29
Equipped with OLED, speaker and microphone	HCS-48U6/80	14	13	12	12
Equipped with OLED, speaker and microphone	HCS-4838/80& HCS-4838R/2M	14	14	13	13
Equipped with OLED, array microphone	HCS-4813/HCS-4815	33	32	31	29
Channel selector, handheld microphone	HCS-4827	31	27	23	-
Equipped with 256*64 LCD, speaker and microphone	HCS-48U8/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	6	6
Voting unit	HCS-4868/4869	52	50	48	46

5.1.2 Connection between the CMU/EMU and the contribution units

HCS-4800 series congress units 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).

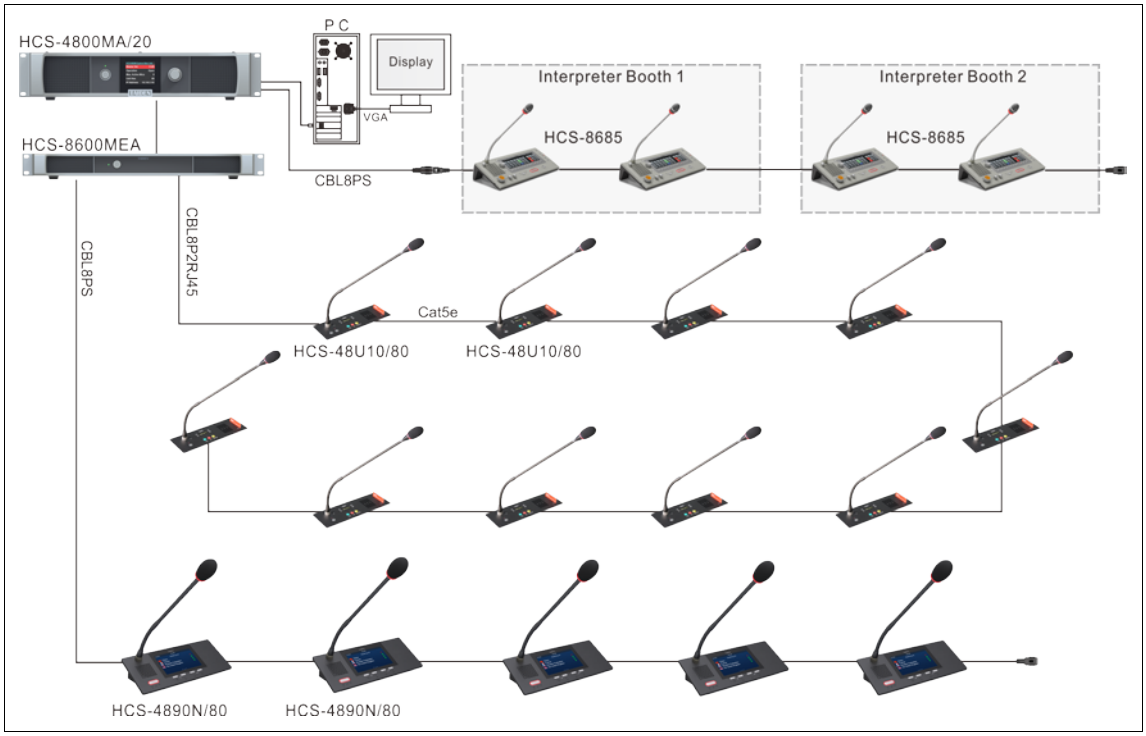


Figure 5.1.1 Congress main unit connecting to HCS-4890N/80, HCS-48U10/80 series contribution units and HCS-8685 interpreter units

5.1.3 Connection between HCS-4800 system and automatic video tracking system

HCS-4800 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-4800M 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.

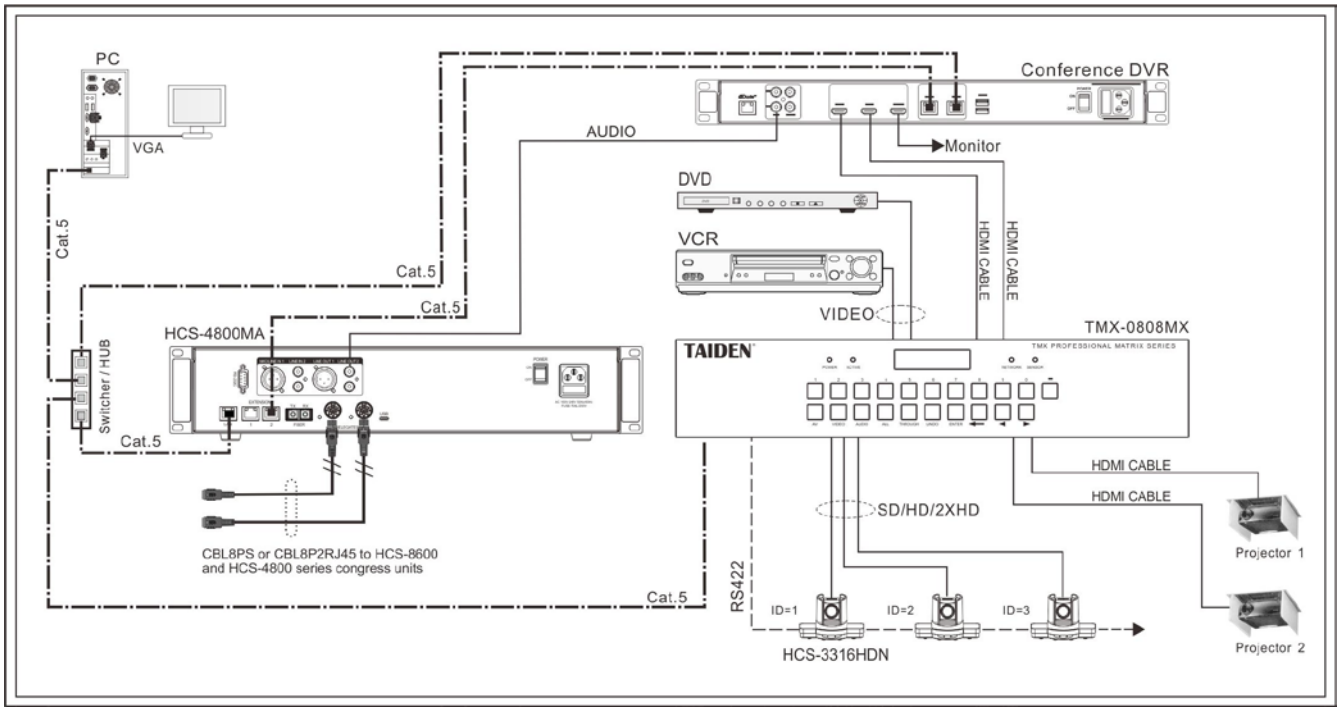


Figure 5.1.2 HCS-8600M congress main unit connecting to the automatic video tracking system

5.1.4 Connection between HCS-4800 system and Conference Sign-in System

Conference Sign-in System aims at providing the reliable, effective and convenient congress sign-in solution for various large congress. Conference Sign-in System 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 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 Conference Sign-in System and HCS-8600 series congress system:

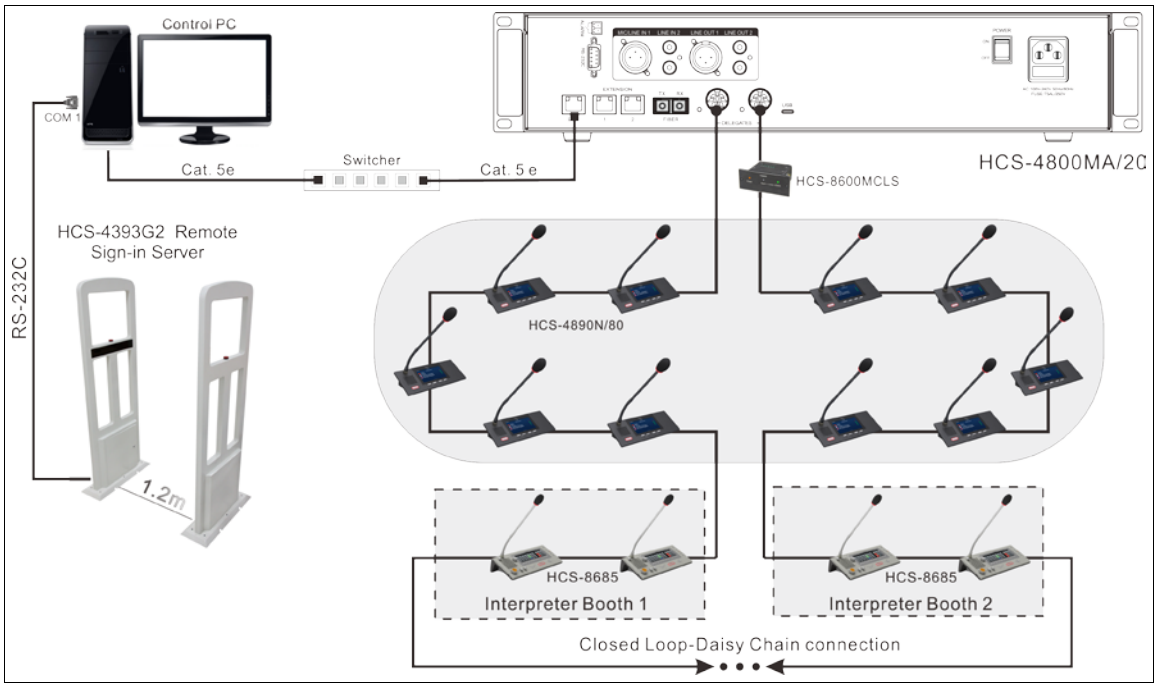


Figure 5.1.3 Connection between Conference Sign-in System and HCS-4800 system

5.2 Basic configuration of a congress system

The basic configuration is described below by a simple example.

This system is composed of one HCS-4800MA CMU, one HCS-8600MEA EMU, four HCS-8685 interpreter units, ten HCS-48U10/80 discussion units (including chairman unit and delegate units) and five HCS-4890N/80 discussion units (including chairman unit and delegate units). The connection diagram is shown in the following figure:

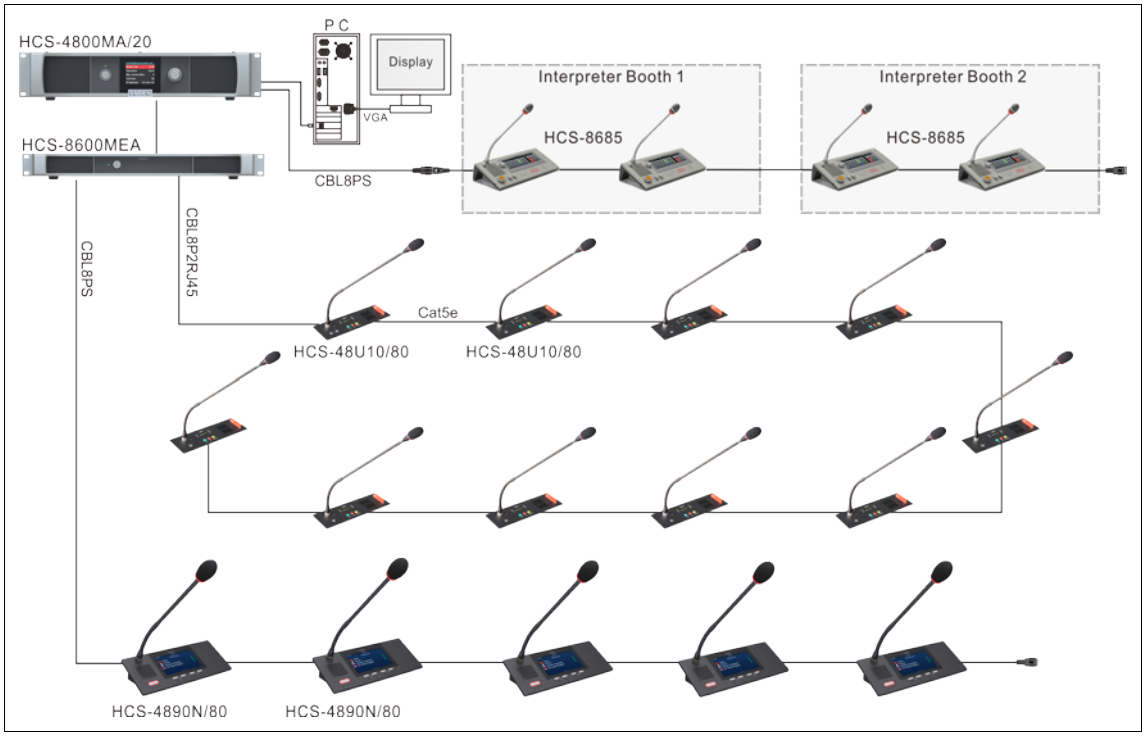


Figure 5.2.1 Connection example of HCS-4800 system

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. Configurate 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. Configurate 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 Peripheral equipment and accessories

6.1 Microphone

- **Removable stem microphone**

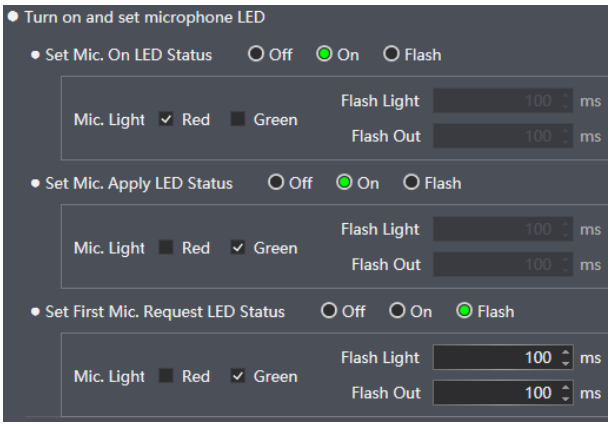
Functions and instructions:

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)

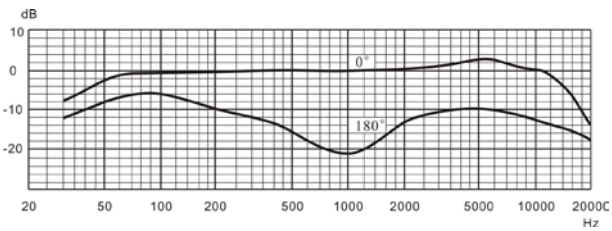
Note: The LED ring state can be set by conference management software or main unit webpage.



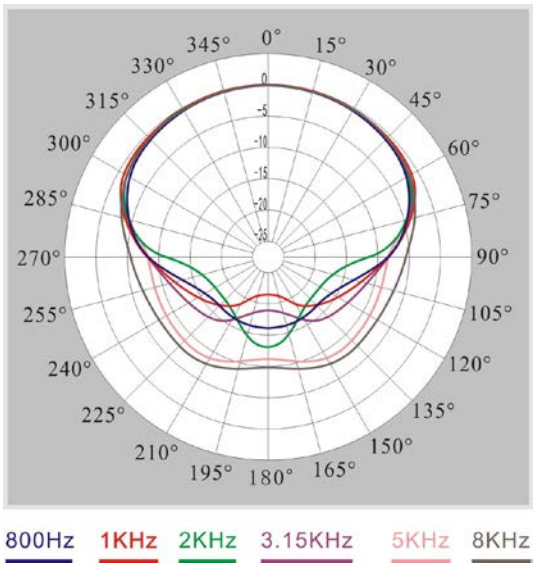
3. Metal stem with goose-neck to adjust angle and direction freely

4. Socket with screw thread. The stem microphone can be removed and collected during the adjournment

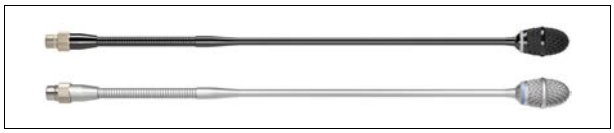
Frequency:



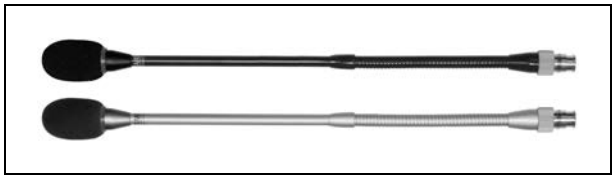
Direction:



- **MSXXEGB series pluggable stem microphone**

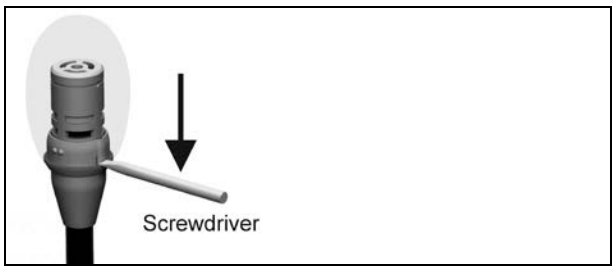


- **MSXXEGF series pluggable stem microphone**



- **M-style Foam Windshield** (MSXXEGF series)

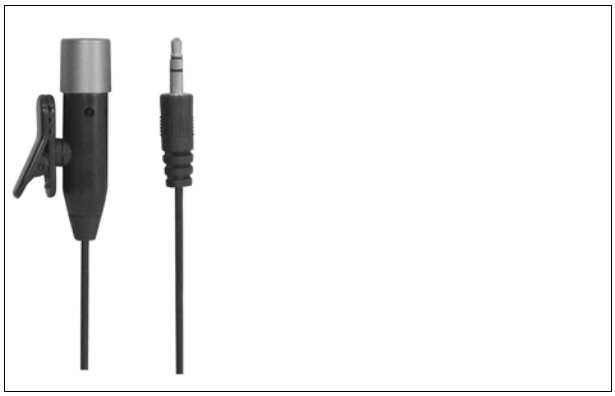
Detaching of the M-model windshield



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**



6.2 Earphones

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

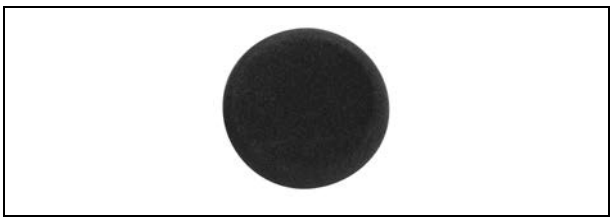
- EP-960AN Interpreter headset

- EP-960BH Interpreter headphone

- EP-960HD Detachable Earshells

- HCS-5100PA Headphone

- Sponge Ear Pads



- Other compatible types please refer to chapter 8.

6.3 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
- Solderable 8DIN Standard Socket (insulating)
- CBL8P2RJ45S-01 8-pin to RJ45 converter cable
- CBL8S2RJ45S-01 8-pin to RJ45 converter cable
- CBL8P2RJ45-01 8-pin to RJ45 converter cable
- CBL8P2SJ45-01 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-4853T 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. 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

4. 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

5. CBL8S2RJ45S-01 8-pin to RJ45 converter cable

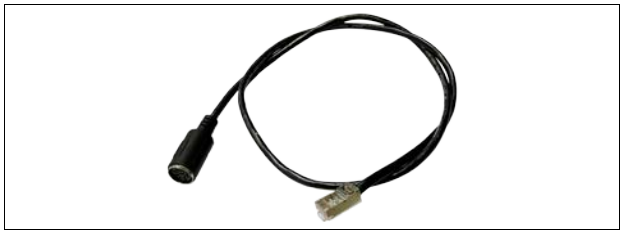
- Suitable for HCS-4800 series and HCS-8600 series conference systems
- Standard connectors (8P-DIN female plug at one end and a RJ45 socket at the opposite end)
- Cable: FTP CABLE with drain wire
- Length: 1 m

6. 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

7. CBL8S2RJ45-01 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 plug at the opposite end)
- Cable: FTP CABLE with drain wire
- Length: 1 m

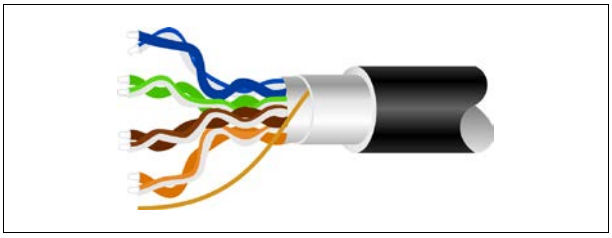


8. CBLRJ45 Ethernet Extension Cable

- 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

9. 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

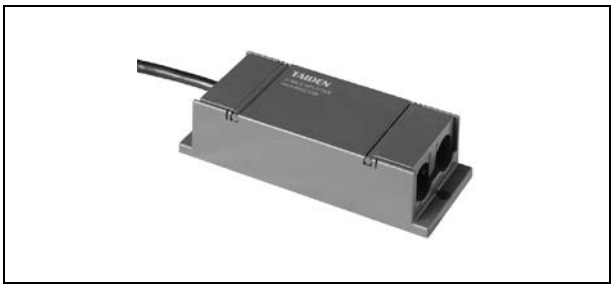


10. RJ45 plug

- For Ethernet cable making
- With metal shield
- Used in conjunction with FTP CABLE with drain wire
- Metal shield connected with drain wire

11. 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 × w × d: 35 × 149 × 90 mm



12. 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 × w × d: 24 × 103 × 66 mm

13. HCS-4853T Cable Splitter

- Relay facility, amplification of the communication signals
- "1 in / 3 out " structure for connection
- For connection between HCS-8685 Interpretation Unit and HCS-8300M series, HCS-4100M/50 series, HCS-5100MA/B series
- 2m-cable with a 6P-DIN connector at the input end
- Three 8PIN output interfaces, can drive 60-meter long extension cable
- Dimensions (h × w × d): 35 × 149 × 90 mm

14. 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

15. 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

16. 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

Chapter 7 Working environment and maintenance

Suitable working environment and proper maintenance methods can extend service life of the equipment effectively. 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-4100/50 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 the 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 with EN 55022

EMC immunity: Compliant with EN 55024

EMC approvals: CE, FCC

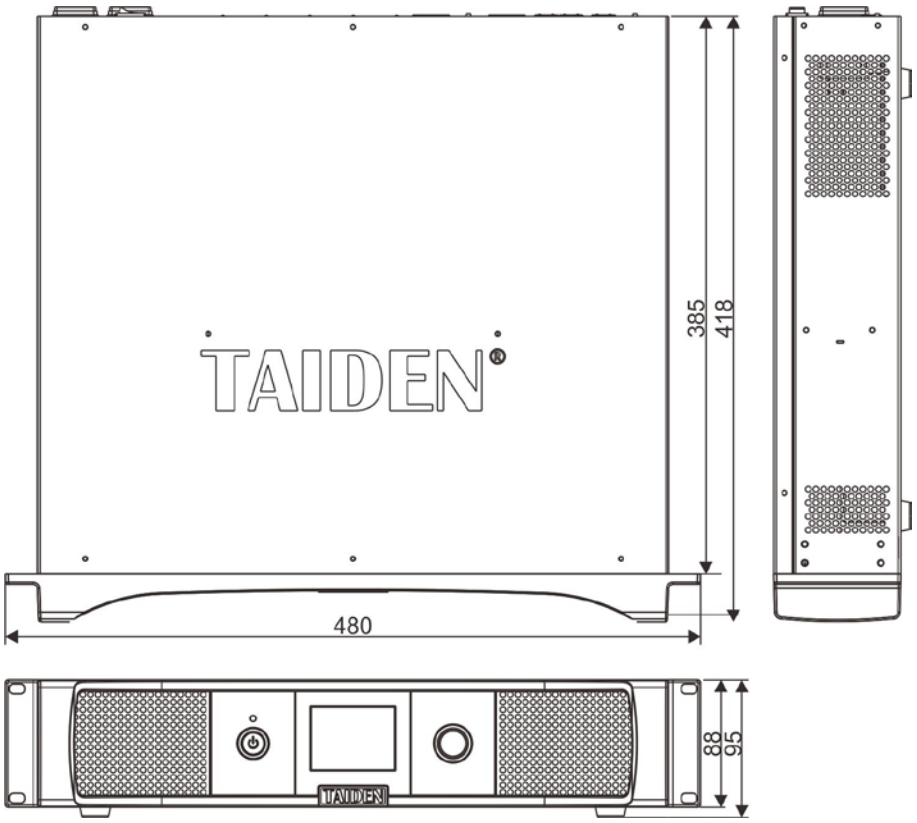
Power harmonic: Compliant with EN 61000-3-2

Voltage fluctuations and flicker: Compliant with EN 61000-3-3

8.2 Congress system main unit

8.2.1 Congress main unit

8.2.1.1 Physical characteristics

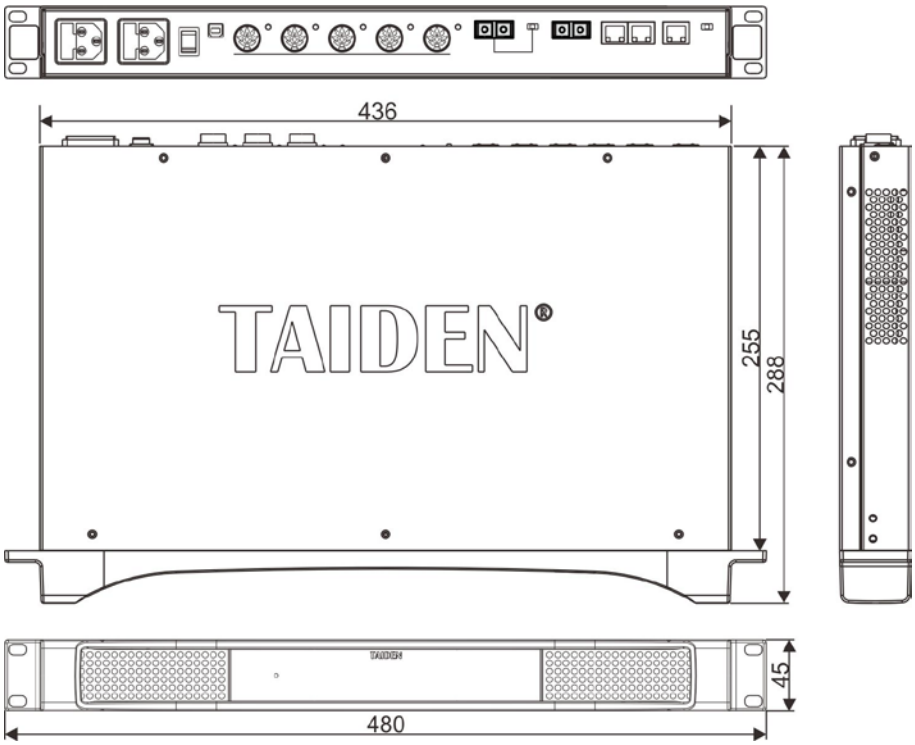
Types	HCS-4800M series
Installation	Tabletop / standard 19-inch rackmount
Dimensions (mm)	
Color	Black (PANTONE 419 C)
Weight	7.9 kg

8.2.1.2 Electrical characteristics

Types	HCS-4800MA/20	HCS-4800MB/20	HCS-4800MC&HCS-4800MC20
Microphone capacity	≤4096		
Channels	64CHs		
Frequency response	20- 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		
Audio input	LINE IN 1: +10 dBu balanced Input impedance: >10 kΩ LINE IN 2: +10 dBu unbalanced Input impedance: >5 kΩ		
Audio output	LINE OUT 1: +20 dBu balanced Output impedance: <100 Ω LINE OUT 2: +20 dBu unbalanced Output impedance: <100 Ω		
Power output	-	2×160 W (8 Ω) 2×200 W (4 Ω)	-
Output load	>1 kΩ		
Control interface	9 PIN，D-type female head, connecting the central control system main unit		
	RJ45 Ethernet, connecting to PC		
Power consumption	20W		
Load capacity	200W		
Connection	Dedicated cable (8 PIN)		
Connector	DIN6P with buckle		

8.2.2 Congress extension main unit

8.2.2.1 Physical characteristics

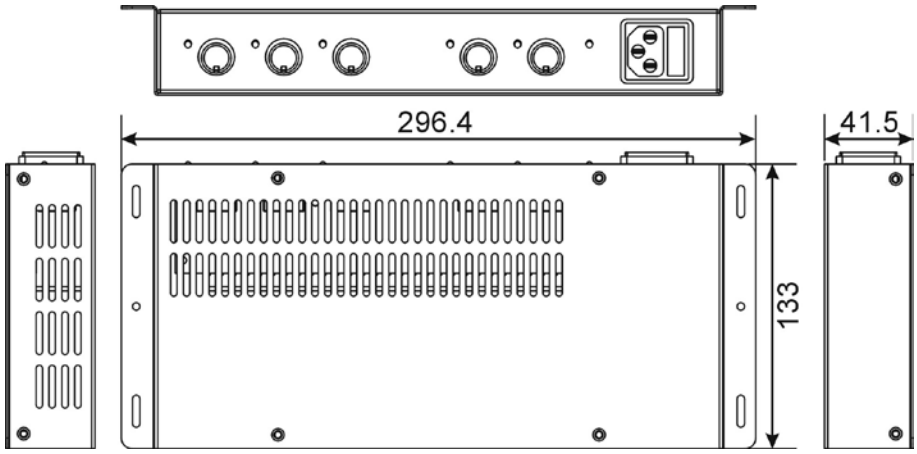
Types	HCS-8600MEA Series
Installation	Tabletop / standard 19-inch rackmount
Dimensions（mm）	
Color	Black（PANTONE 419 C）
Weight	3.6 kg

8.2.2.2 Electrical characteristics

Types	HCS-8600MEA Series
Mains power supply	AC 100 V - 120 V　60 Hz
Output load	>1 kΩ
Power consumption	20 W
Load capacity	200W
Connection	Dedicated cable (8-PIN)
Connector	DIN8P with buckle

8.2.3 Congress extension main unit

8.2.3.1 Physical characteristics

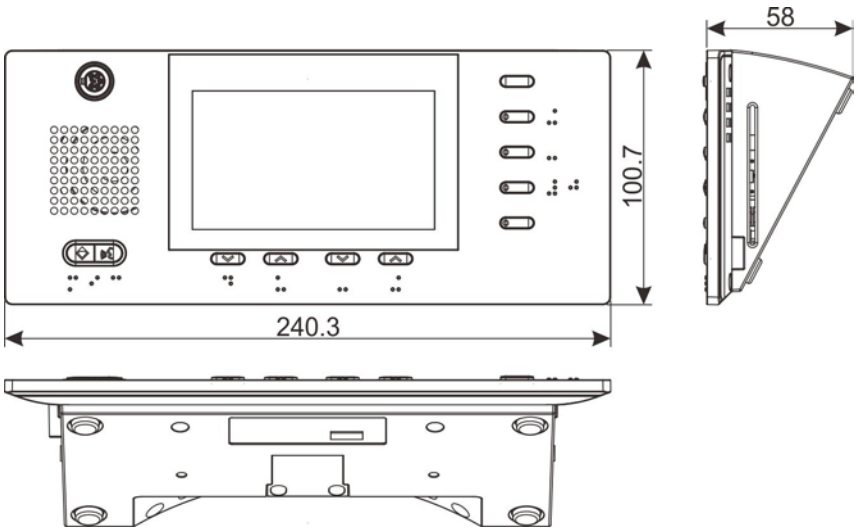
Extension unit	HCS-8600MES
Installation	Tabletop / standard 19-inch rackmount
Dimensions（mm）	
Color	Black（PANTONE 419 C）
Weight	1.5 kg

8.2.3.2 Electrical characteristics

Extension host	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

8.2.4 HCS-4890N/80 series congress unit

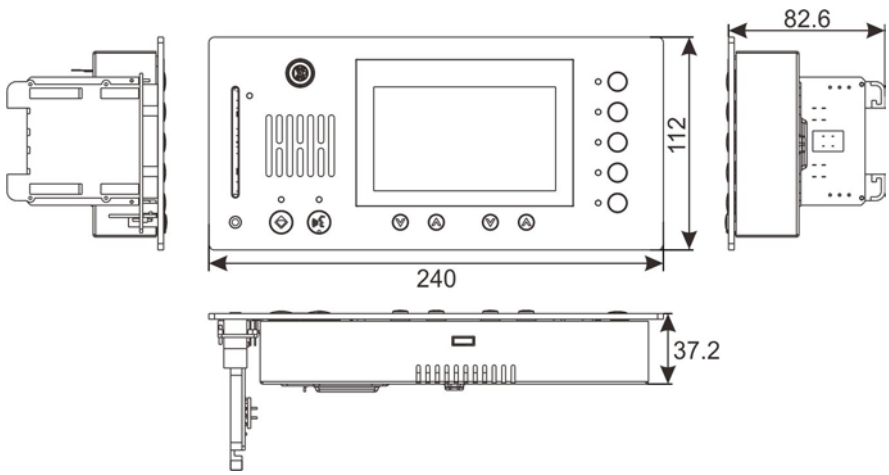
8.2.4.1 Physical Characteristics

Types	HCS-4890N/80 series
Installation	Tabletop
Dimensions (mm)	
Color	Black (PANTONE 419 C)
Weight	1.1 kg

8.2.4.2 Electrical Characteristics

Types	HCS-4890N/80 series
Output frequency response	20 - 20000 Hz
Earphone load	⩾16 Ω
Earphone volume	10 mW
Earphone output	Ø 3.5 mm stereo jack
Max. power consumption	3.6 W
Connection	8P-DIN dedicated cable with buckle

8.2.4.3 Physical Characteristics

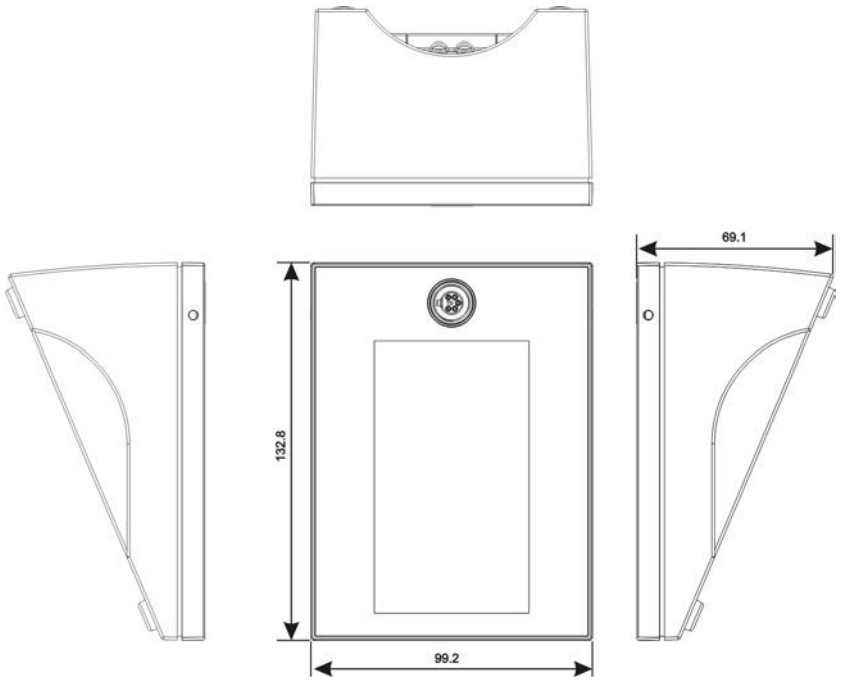
Types	HCS-4890N/FM/80 series
Installation	Flush-mounted
Dimensions (mm)	
Color	Black (PANTONE 419 C)
Weight	0.9 kg

8.2.4.4 Electrical Characteristics

Types	HCS-4890N/FM/80 series
Output frequency response	20 - 20000 Hz
Earphone load	⩾16 Ω
Earphone volume	10 mW
Earphone output	Ø 3.5 mm stereo jack
Max. power consumption	3.6 W
Connection	8P-DIN dedicated cable with buckle

8.2.5 HCS-4891/80 series congress unit

8.2.5.1 Physical Characteristics

Types	HCS-4891/80 series
Installation	Tabletop
Dimensions (mm)	
Color	Black (PANTONE 419 C)
Weight	HCS-4891/80 1.0 kg HCS-4891R/80 1.4kg

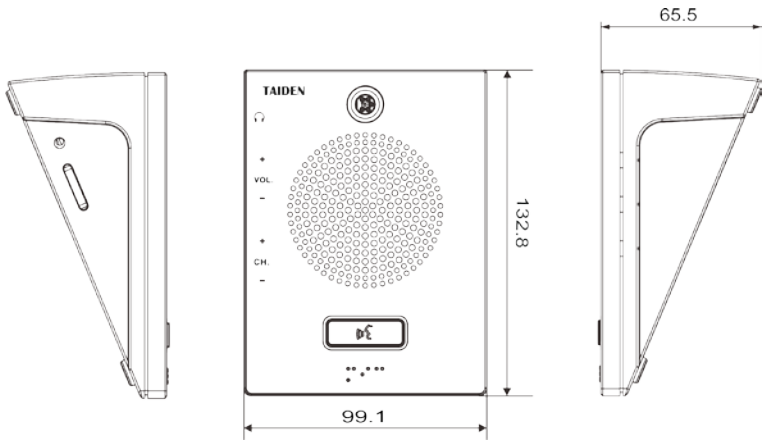
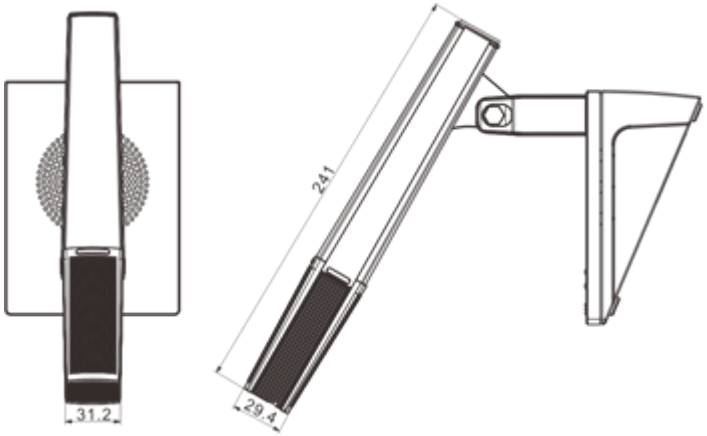
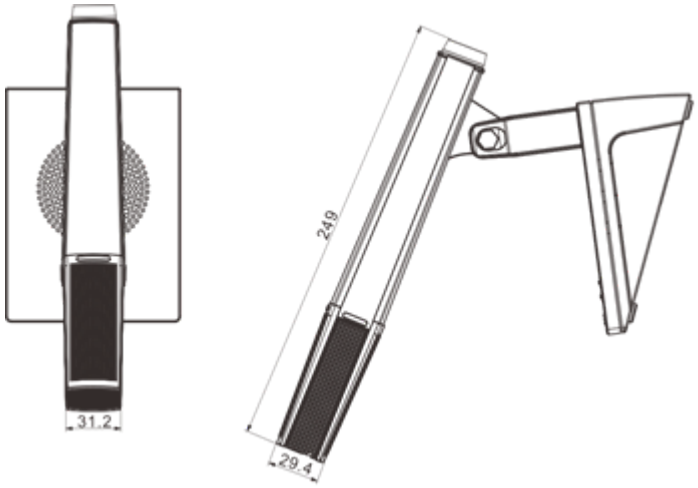
8.2.5.2 Electrical Characteristics

Types	HCS-4891/80 series
Output frequency response	20 - 20000 Hz
Earphone load	⩾16 Ω
Earphone volume	10 mW
Earphone output	Ø 3.5 mm stereo jack
Max. power consumption	3.6 W
Connection	8P-DIN dedicated cable with buckle

Microphone parameters of HCS-4891/R	
Type	Hypercardioid uni-directional 14mm gold-plating capacitance sound head
Sensitivity	-37 dB at 680 Ohm(0 dB =1V/Pa at 1 kHz)
Frequency response	20 - 20000 Hz
Input impedance	2 kΩ
Directivity 0°/135°	≥20 dB (1 kHz)
Directivity 0°/180°	≥15 dB (1 kHz)
Equivalent noise	20 dBA (SPL)
Maximum sound pressure level	139 dB (THD<3%)

8.2.6 HCS-4838 series congress unit

8.2.6.1 Physical Characteristics

Types	HCS-4838 series
Installation	Tabletop
Dimensions (mm)	   Note:HCS-4838R/2M series microphone length is 241mm
Color	HCS-4838/80 series: charcoal gray (PANTONE Cool Gray 11 C) HCS-4838R/80 series&HCS-4838R/2M: black microphone (PANTONE 419 C) charcoal gray base (PANTONE Cool Gray 11 C)

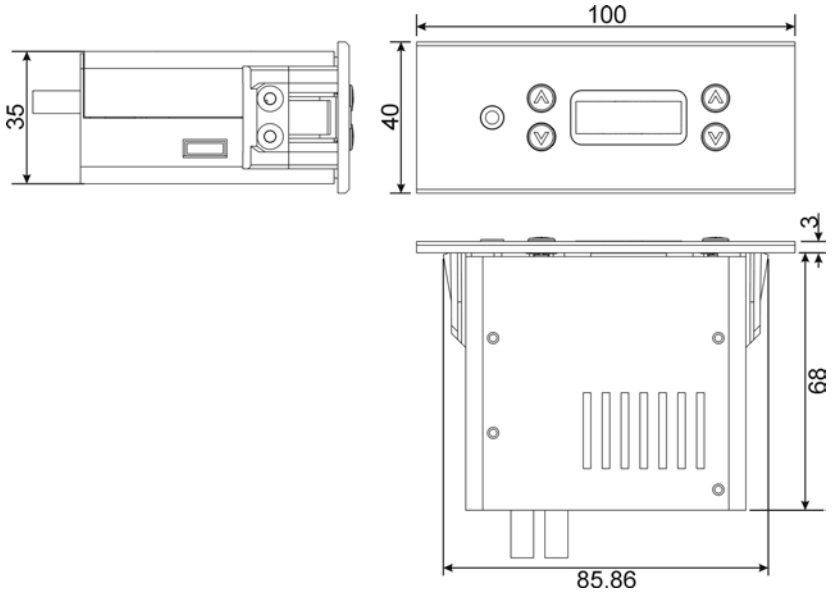
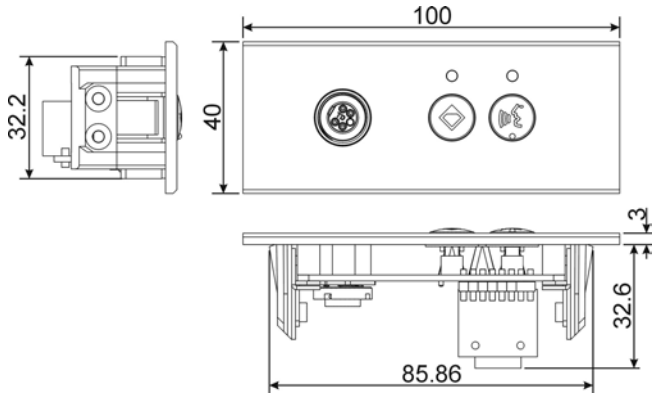
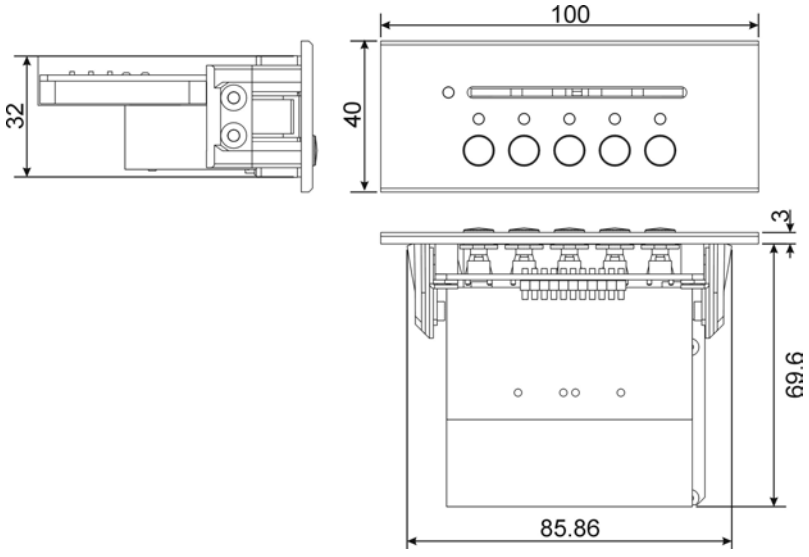
Weight	HCS-4838/80 series: 0.9 kg HCS-4838R/80 series: 1.1 kg HCS-4838R/2M series: 1.1kg

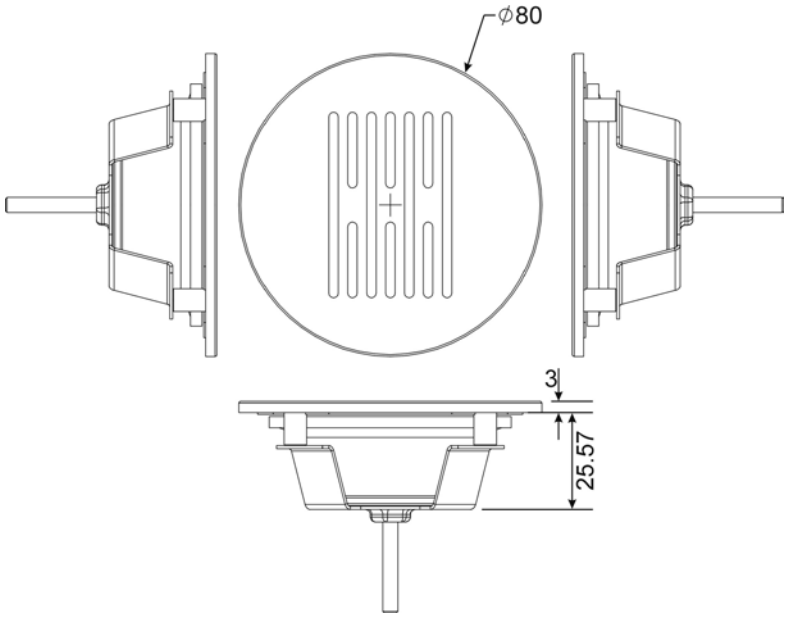
8.2.6.2 Electrical Characteristics

Types	HCS-4838/80
Output frequency response	20 - 20000 Hz
Earphone load	⩾16 Ω
Earphone volume	10 mW
Earphone output	Ø 3.5 mm stereo jack
Max. power consumption	1.9 W
Connection	8P-DIN dedicated cable with buckle
Microphone parameters of HCS-4838R/80& Main microphone parameters of HCS-4838R/2M	
Type	Supercardioid uni-directional electret condenser microphone 14mm gold-plating capacitance sound head
Sensitivity	-37 dB at 680 Ohm(0 dB =1V/Pa at 1 kHz)
Frequency response	20 - 20000 Hz
Input impedance	2 kΩ
Directivity 0°/135°	≥20 dB (1 kHz)
Directivity 0°/180°	≥ 15 dB (1 kHz)
Equivalent noise	20 dBA (SPL)
Maximum sound pressure level	139 dB (THD<3%)
Backup microphone parameters of HCS-4838R/2M	
Type	Supercardioid uni-directional electret condenser microphone 14mm gold-plating capacitance sound head
Sensitivity	-37 dB at 680 Ohm(0 dB =1V/Pa at 1 kHz)
Frequency response	20 - 20000 Hz
Output impedance	280 Ω
Directivity 0°/135°	≥ 20 dB (1 kHz)
Directivity 0°/180°	≥ 15 dB (1 kHz)
Equivalent noise	20 dBA (SPL)
Maximum sound pressure level	139 dB (THD<3%)
Phantom power	11~52 VDC, 4 mA
Connection	XLRM-type connector

8.2.7 HCS-48U6/80 series congress unit

8.2.7.1 Physical characteristics

Types		HCS-48U6/80
Installation		Flush-mounted
Dimensions (mm)	HCS-48U6MICM/80 HCS-48U6SELM/80	
	HCS-48U6MICS	
	HCS-48U6DVOT	

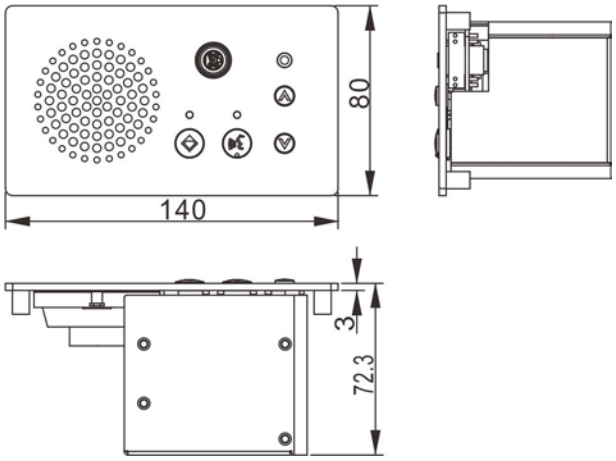
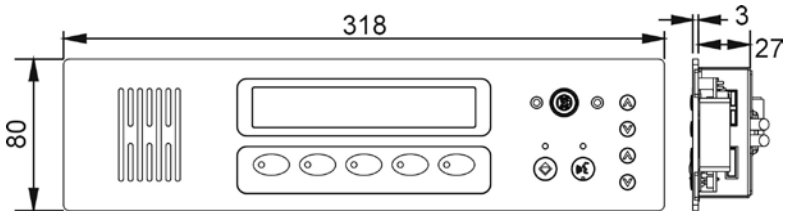
HCS-48U6SPK	
Color	Black (PANTONE 419 C)
Weight	0.35 kg (HCS-48U6MICM HCS-48U6SELM) 0.08kg(HCS-48U6MICS HCS-48U6DVOT) 0.18 kg （HCS-48U6SPK）

8.2.7.2 Electrical characteristics

Types	HCS-48U6/80
Output frequency response	20 - 20000 Hz
Earphone load	>16 Ω
Earphone volume	10 mW
Earphone output	Ø 3.5 mm stereo jack
Max. power consumption	2.0 W (MIC+SEL+VOT+SPK)
Connection	2 × RJ45 socket for daisy chain connection (recommended use of cat5e cable with a drain wire & RJ45 plug with metal shield)

8.2.8 HCS-48U7/U9 series congress unit

8.2.8.1 Physical characteristics

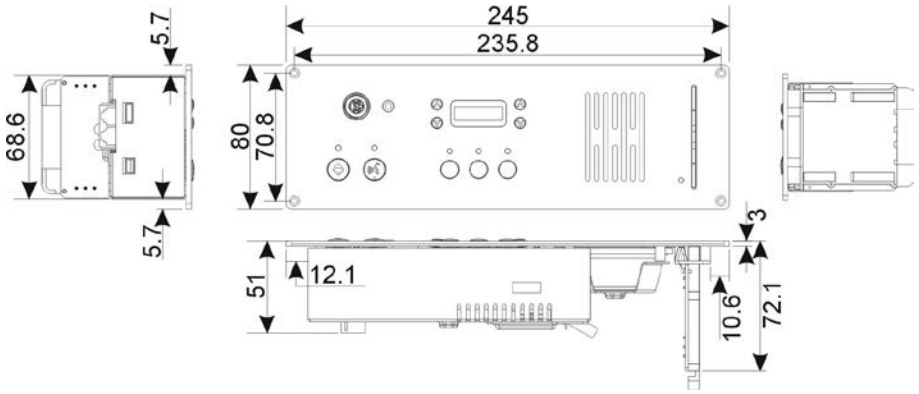
Types		HCS-48U7/U9/80
Installation		Flush-mounted
	HCS-48U7M/80	
	HCS-48U9	
Color		Black (PANTONE 419 C)
Weight		0.7 kg (HCS-48U7M/80) 0.9kg (HCS-48U9)

8.2.8.2 Electrical characteristics

Types	HCS-48U7/U9/80
Output frequency response	20 - 20000 Hz
Earphone load	>16 Ω
Earphone volume	10 mW
Earphone output	Ø 3.5 mm stereo jack
Max. power consumption	HCS-48U9/80 2.3 W HCS-48U7/80 2.0 W
Connection	2 × RJ45 socket for daisy chain connection (recommended use of cat5e cable with a drain wire & RJ45 plug with metal shield)

8.2.9 HCS-48U10/80 series congress unit

8.2.9.1 Physical Characteristics

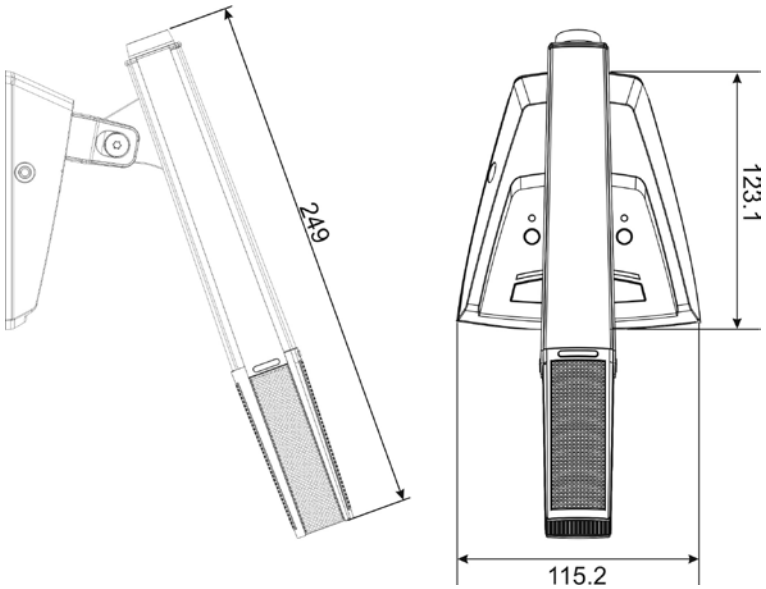
Types	HCS-48U10/80
Installation	Flush-mounted
Dimensions (mm)	 Note: The height for HCS-48U10DDS/80 and HCS-48U10DS/80 is 51 mm.
Color	Black (PANTONE 419 C)
Weight	0.8 kg

8.2.9.2 Electrical Characteristics

Types	HCS-48U10/80
Output frequency response	20 - 20000 Hz
Earphone load	>16 Ω
Earphone volume	10 mW
Earphone output	Ø 3.5 mm stereo jack
Max. power consumption	2.4 W
Connection	2 × RJ45 socket for daisy chain connection (recommended use of cat5e cable with a drain wire & RJ45 plug with metal shield)

8.2.10 HCS-4860 series congress unit

8.2.10.1 Physical Characteristics

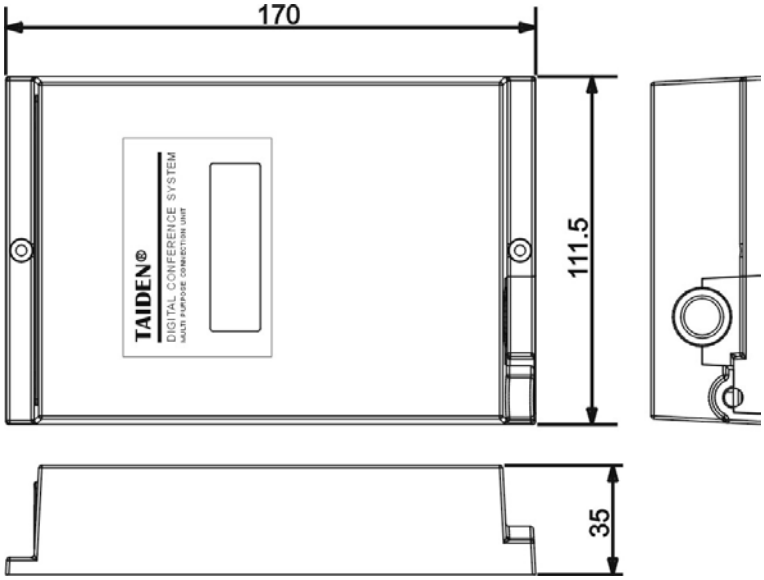
Types	HCS-4860/80
Installation	Tabletop
Dimensions (mm)	 Note:The length of microphone of HCS-4860/80 is 241 mm. HCS-4860X/80 have same base size with HCS-4860/80.
Color	Black (PANTONE 419 C)
Weight	HCS-4860/80: 1.1 kg HCS-4860/80/2M: 1.2 kg HCS-4860X/80: 0.6 kg

8.2.10.2 Electrical Characteristics

Types	HCS-4860/80
Output frequency response	20 - 20000 Hz
Earphone load	>16 Ω
Earphone volume	10 mW
Earphone output	Ø 3.5 mm stereo jack
Max. power consumption	1.8 W
Connection	8P-DIN dedicated cable with buckle
Microphone parameters of HCS-4860	
Type	Supercardioid uni-directional electret condenser microphone 14mm gold-plating capacitance sound head
Sensitivity	-37 dBV/Pa
Frequency response	20 - 20000 Hz
Input impedance	2 kΩ
Directivity 0°/135°	≥20 dB (1 kHz)
Directivity 0°/180°	≥15 dB (1 kHz)
Equivalent noise	20 dBA (SPL)
Maximum sound pressure level	139 dB (THD<3%)
Backup microphone parameters of HCS-4860/50/2M	
Type	Supercardioid uni-directional electret condenser microphone
Sensitivity	-37 dB at 680 Ohm(0 dB =1V/Pa at 1 kHz)
Frequency response	20 - 20000 Hz
Output impedance	280 Ω
Directivity 0°/135°	≥ 20 dB (1 kHz)
Directivity 0°/180°	≥ 15 dB (1 kHz)
Equivalent noise	20 dBA (SPL)
Maximum sound pressure level	139 dB (THD<3%)
Phantom power	11~52 VDC, 2 mA
Connection	XLRM-type connector

8.2.11 HCS-4840DHT multi-function connector

8.2.11.1 Physical Characteristics

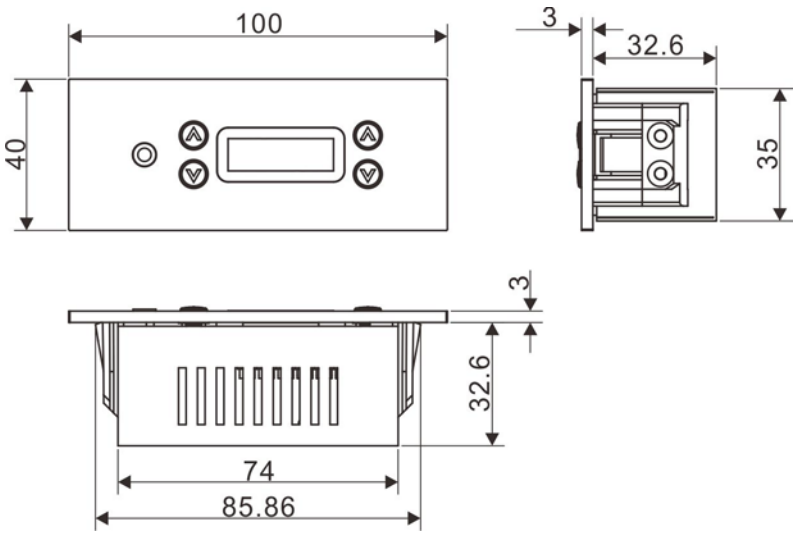
Types	HCS-4840DHT
Installation	Fixed installation
Dimensions (mm)	
Color	Charcoal gray (PANTONE 401 C)
Weight	0.9 kg

8.2.11.2 Electrical Characteristics

Types	HCS-4840DHT
Interface	4 channel selectors
Max. power consumption	2.1 W
Connection	8P-DIN dedicated cable with buckle

8.2.12 HCS-4842DHT channel selector

8.2.12.1 Physical Characteristics

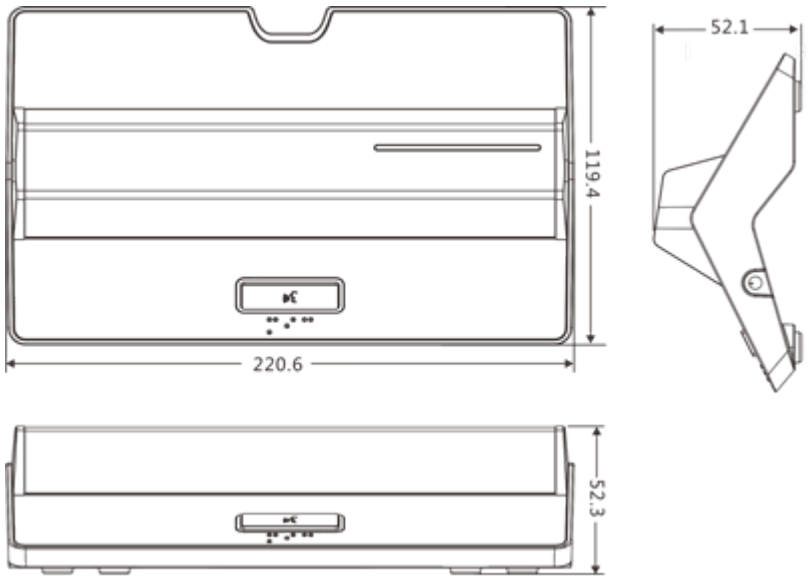
Types	HCS-4842DHT
Installation	Flush-mounted
Dimensions (mm)	
Color	Black (PANTONE 419 C)
Weight	0.1 kg

8.2.12.2 Electrical Characteristics

Types	HCS-4842DHT
Output frequency response	20 - 20000 Hz
Earphone load	>16 Ω
Earphone volume	10 mW
Earphone output	Ø 3.5 mm stereo jack
Connection	Cat.5 cable with standard RJ45 plug, connecting to HCS-4840DHT

8.2.13 HCS-4813&HCS-4815 congress unit

8.2.13.1 Physical Characteristics

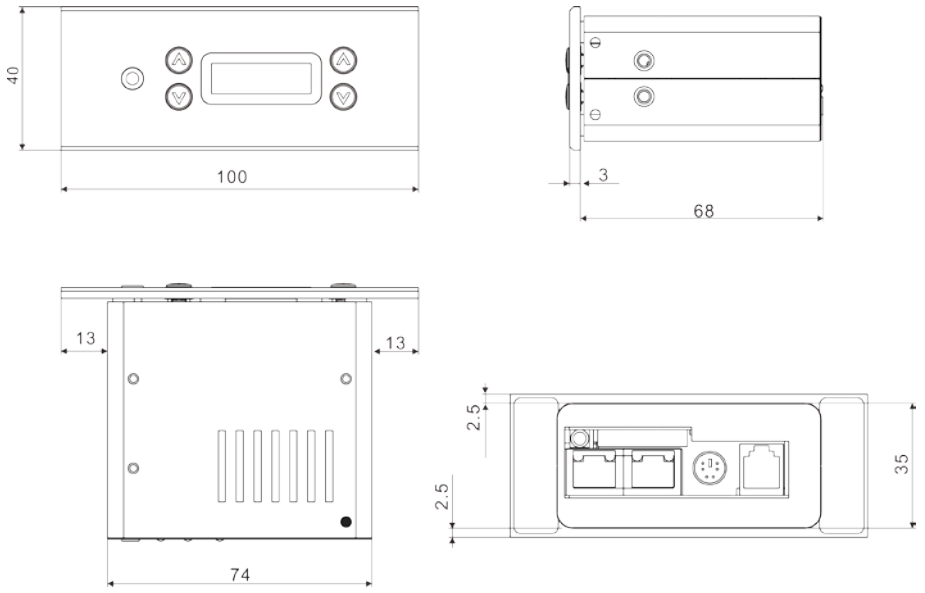
Type	HCS-4813/HCS-4815
Installation	Tabletop
Dimension（mm）	 Note: HCS-4813 and HCS-4815 are same in their size, but different in appearances.
Color	Black（PANTONE 419 C）
Weight	0.7kg

8.2.13.2 Electrical Characteristics

Type	HCS-4813/HCS-4815
Output frequency response	20 - 20000 Hz
Earphone load	≥16 Ω
Earphone volume	10 mW
Earphone output	Ø 3.5 mm stereo jack
Max. power consumption	1.8W
Connection	8P-DIN dedicated cable with buckle
Type	Supercardioid uni-directional electret condenser microphone
Sensitivity	-46B at 680 Ohm(0 dB =1V/Pa at 1 kHz)
Frequency response	50 - 20000 Hz
Input impedance	2 kΩ
Equivalent noise	20 dBA (SPL)
Maximum sound pressure level	125 (THD<3%)
Output frequency response	280 Ω
Directivity 0°/180°	> 20dB (1 kHz)

8.2.14 HCS-4827H Handheld Microphone & HCS-4827SELM 64 Channel Selector

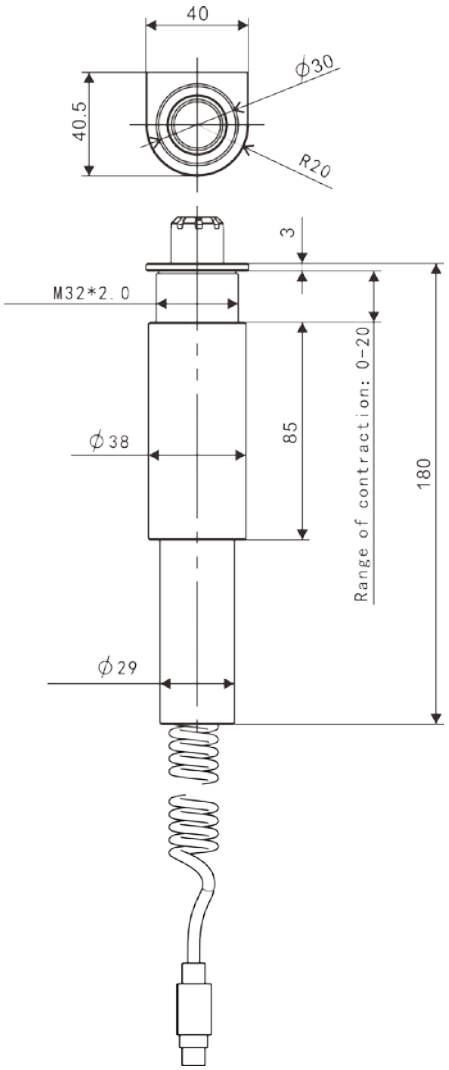
8.2.14.1 Physical Characteristics

Type	HCS-4827SELM 64 Channel Selector
Installation	Flush-mounted
Dimension（mm）	
Color	Black（PANTONE 419 C）
Weight	0.4kg

8.2.14.2 Electrical Characteristics

Type	HCS-4827SELM 64 Channel Selector
Output frequency response	20 - 20000 Hz
Max. power consumption	2.1W
Earphone load	≥16 Ω
Earphone volume	10 mW
Earphone output	Ø 3.5 mm stereo jack
Connection	RJ45 socket for daisy chain connection (recommended use of cat5e cable with a drain wire & RJ45 plug with metal shield)

8.2.14.3 Physical Characteristics

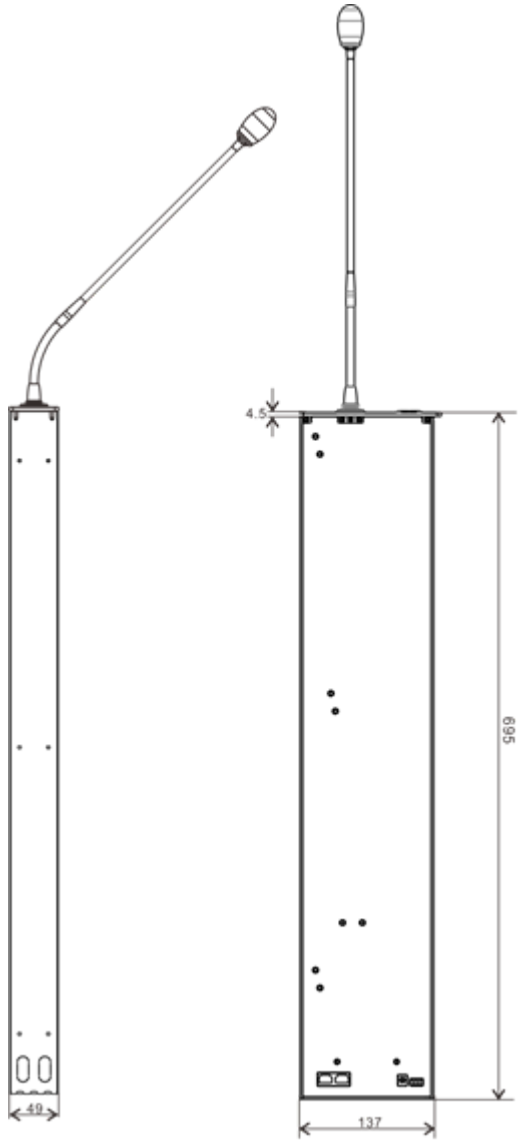
Congress unit	HCS-4827H
Installtion	Flush-mounted
Dimension （mm）	
Color	Black（PANTONE 419 C）
Weight	0.1kg

8.2.14.4 Electrical Characteristics

Type	HCS-4827H
Output frequency response	20 - 20000 Hz
Sensitivity	-46 dB at 680 Ohm(0 dB =1V/Pa at 1 kHz)
Frequency response	50 Hz ~ 20 kHz
Input impedance	2 kΩ
0°/180°	⩾20 dB (1 kHz)
Equivalent noise	20 dBA (SPL)
Maximum sound pressure level	125 dB (THD<3%)

8.2.15 HCS-4857 Lifting microphone

8.2.15.1 Physical Characteristics

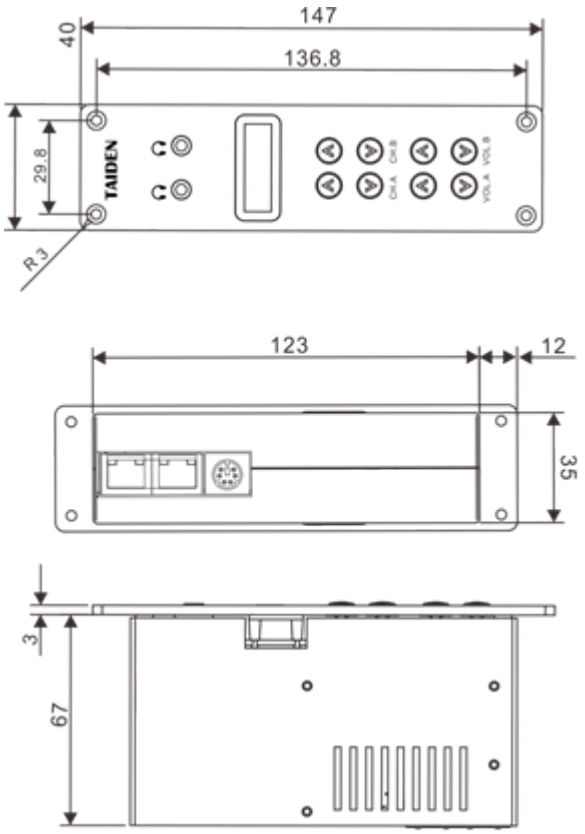
Congress Unit	HCS-4857
Mount	Flush-mounted
Dimension（mm）	 Note: The height of the desk is reconmend above 710mm.
Color	Black（PANTONE 419 C）
Weight	3.1kg

8.2.15.2 Electrical Characteristics

Type		HCS-4857
Output frequency response		20 - 20000 Hz
Power supply		DC 15V, 5A
Connection		2 × RJ45 socket for daisy chain connection (recommended use of cat5e cable with a drain wire & RJ45 plug with metal shield)
Microphone	**Type**	Uni-directional electret condenser microphone with 14mm gold plated capacitor tone head
	Sensitivity	-37 dB at 680 Ohm(0 dB =1V/Pa at 1 kHz)
	Frequency response	20 - 20000 Hz
	Input impedance	2 kΩ
	Directivity 0°/180°	⩾20 dB (1 kHz)
	Equivalent noise	20 dBA (SPL)
	Maximum sound pressure level	139 dB (THD<3%)

8.2.16 HCS-4825 Dual 64-Channel Selector

8.2.16.1 Physical Characteristics

Congress Unit	HCS-4825
Mount	Flush-mounted
Dimension **（mm）**	
Color	Black（PANTONE 419 C）
Weight	0.25kg

8.2.16.2 Electrical Characteristics

Type	HCS-4825
Output frequency response	20 - 20000 Hz
Max. power consumption	2.2W
Earphone load	>16 Ω
Earphone volume	10 mW
Earphone output	Ø 3.5 mm stereo jack x2
Connection	2 × RJ45 socket for daisy chain connection (recommended use of cat5e cable with a drain wire & RJ45 plug with metal shield)

8.3 Peripheral equipment and accessories

8.3.1 MS**E type stem microphone

Type	MSxxEGF1	MS33EGFS	MSxxEGA1	MSxxEGB1	MSxxEGE1	MSxxEGG1B	MSxxEGF2B	MSxxEHA1B
Picture								
Length (cm)	33/41/47	33	33/41/47	33/41/47	41	33/41/47	50/60/70	33/41/47
Color	Champagne /Black					Black		Black
Windshield	MIC-CAPM (Lockable)		-	-	-	lockable windshield	MIC-CAPM (Lockable)	MIC-CAPH_B
Indicator	Bi-color illuminated ring							
Mic. Type	Uni-directional Electret-condenser							14 mm uni-directional Electret condenser
Sensitivity	-46 dB @680Ω (0dB=1V/Pa)							-37 dB @680Ω (0dB=1V/Pa)
Frequency response	50 Hz to 20 kHz							20 Hz to 20 kHz
Input impedance	2 kOhm							2 kOhm
Directivity 0°/180°	⩾20 dB (1 kHz)							⩾ 20 dB (1 kHz)
Equivalent noise	20 dBA (SPL)							20 dBA (SPL)
Max. SPL.	125 dB (THD<3%)							139 dB (THD<3%)

8.3.2 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
  - Ø 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, Ø 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
  - Ø 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-8685 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 × 2，Ø 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 × 2，Ø 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 Ω×2, Ø 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

8.3.3 Accessories

- **CBL8PS dedicated 8-pin Extension Cable**
  - Both ends are 8P-DIN male plug and 8P-DIN female plug
  - Length: 1 m, 3 m, 5 m, 10 m, 20 m, 30 m, 40 m and 50 m

- **CBL8PP-02 dedicated 8-pin Extension Cable**
  - Male connector at both ends
  - Length: 2 m

- **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

- **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 × w × d: 35 × 149 × 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 × w × d: 24 × 103 × 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 × 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

- **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

- **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

8.4 System connection

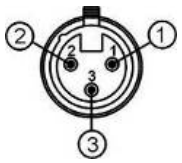
8.4.1 Mains cables

Blue	Neutral
Brown	Hot (Phase)
Green/Yellow	Earth/Ground

8.4.2 Audio cables

3-pole XLR connector (female)

Pin 1 Earth
Pin 2 Signal +
Pin 3 Signal -



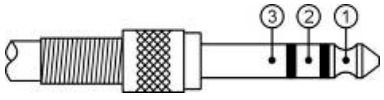
Chinch connector (male)

Pin 1 Signal +
Pin 2 GND

8.4.3 Earphone

3.5 mm Jack plug

Tip (1) Signal left
Ring (2) Signal Right
Sleeve (3) Electrical earth/screen



8.5 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
加泰罗利亚	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
希伯莱语	Hebrew	HEB	HEB	HE	斯洛伐克语	Slovak	SLK	SLO	SK
匈亚利语	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	乌尔都语	Urdu	URD	URD	UR
旁遮普语	Panjabi	PAN	PAN	PA	威尔士语	Welsh	CYM	WEL	CY
罗曼什语	Romansh	ROH	ROH	-	祖鲁语	Zulu	ZUL	ZUL	ZU
梵文	Sanskrit	SAN	SAN	SA	壮族语	Zhuang	ZHA	ZHA	ZA
信德语	Sindhi	SND	SND	SD	傣族语	Dai	DIJ	DIJ	-
僧加罗语	Sinhala / Sinhalese	SIN	SIN	SI	维吾尔语	Uighur	UIG	UIG	UG
梭托语	Southern Sotho / Sotho	SOT	SOT	ST	文莱语	Brunei	KXD	BRN	-
斯瓦西里语	Swahili	SWA	SWA	SW	北印度语	Hindi	HIN	HND (SIL14)	HI
泰米尔语	Tamil	TAM	TAM	TA	*马耳他语	Maltese	MLT	MLT	MT
泰卢固语	Telugu	TEL	TEL	TE	*乌兹别克语	Uzbek	UZB	UZB	UZ
茨瓦纳语	Tswana	TSN	TSN	TN					

*Only available for HCS-4890NCVSE/80,HCS-4890NDVSE/80,HCS-4890NCVSE/FM/80, HCS-4890NDVSE/FM/80,HCS-4890NCS/80,HCS-4890NDS/80.

Appendix: Custom-made cable

How to Select and Wire Ethernet Cable for TAIDEN New Generation System

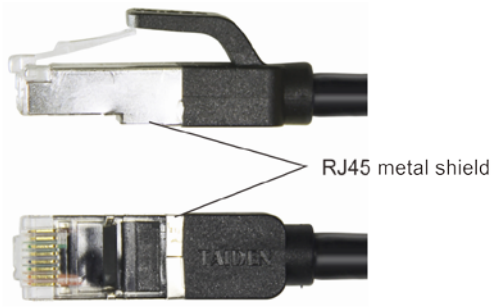
CAT5e Ethernet cable with a drain wire connected to shielded RJ45 crimp connectors is required for setting up TAIDEN New Generation System. Audio and control signal, and other data are all transmitted over CAT5e cables. No attenuation in signal quality and amplitude, can avoid ground noise and possible 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:

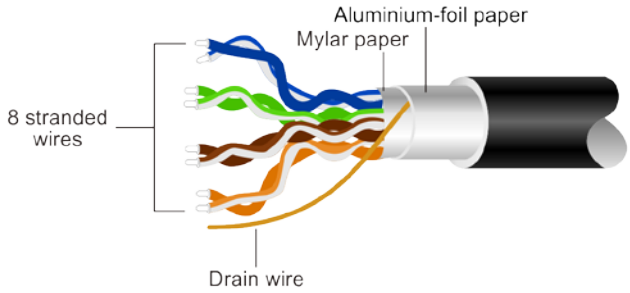
HCS-86** series multimedia terminal	HCS-4800 series flush-mounting unit
Education products with RJ45 connector	HCS-1082N series electronic nameplate

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:



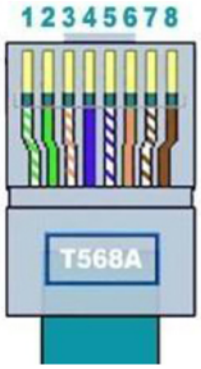
Shielded RJ45 crimp connector



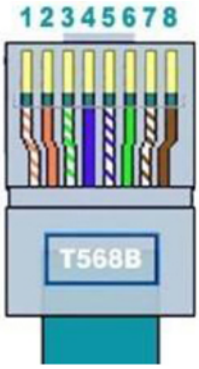
CAT5e cables as shown above,
with a drain wire between aluminium-foil paper and mylar paper

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

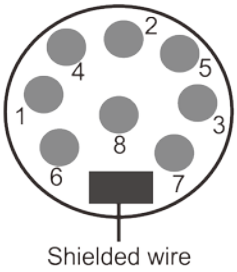


Wiring order (1-8) according to T568B standard:
white-orange, orange, white-green, blue,
white-blue, green, white-brown, brown

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.

Appendix: Dedicated 8 PIN Extension Cable

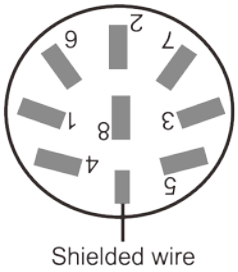
8P male plug



6 Blue/White
1 Green/White
4 Orange/White
2 Orange
5 Brown/White
3 Blue
7 Brown
8 Green

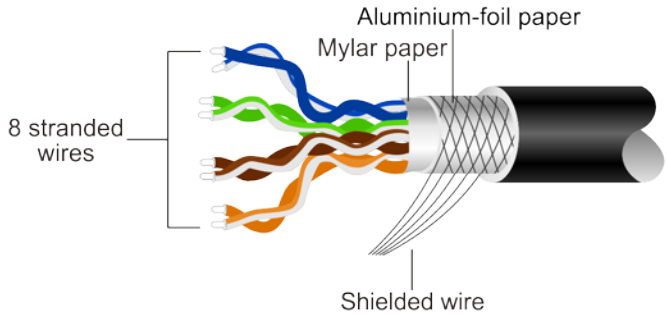
Shielded wire

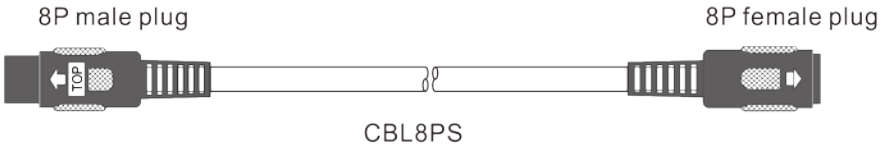
8P female plug/socket

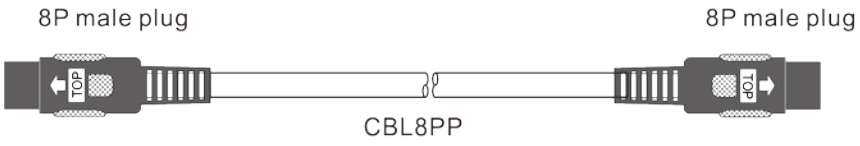


5 Blue/White
3 Green/White
7 Orange/White
2 Orange
6 Brown/White
1 Blue
4 Brown
8 Green

Shielded wire

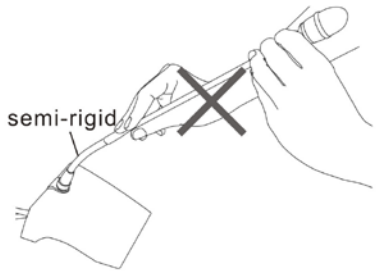




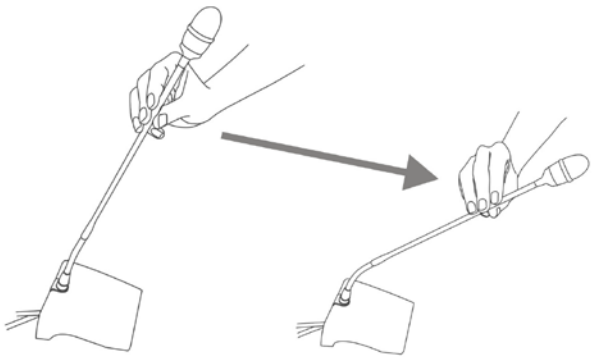


Appendix Microphone Stem Precautions

1.Adjusting stem microphone angle

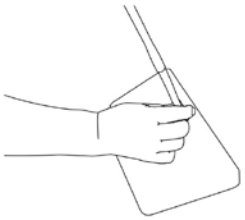


The stem microphone relies on a semi-rigid part to adjust the angle. The straight part should not be bent forcibly

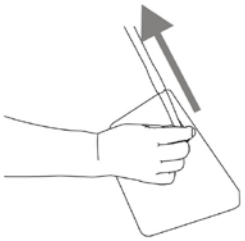


Squeeze the straight part with one hand and adjust the microphone pole to the right angle. In order to ensure the service life of the stem microphone, it is recommended that the bending angle does not exceed 90 degrees.

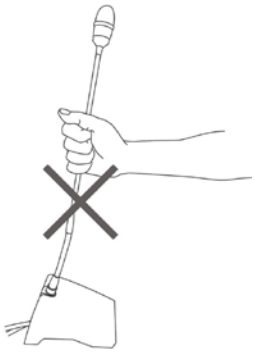
2.Removal of the stem microphone



Unscrew the spiral component at the root of the microphone stem

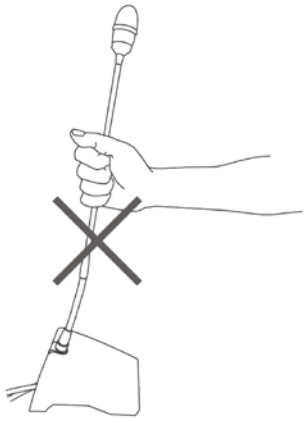


Squeeze the root of the microphone stick to pull out the microphone stick

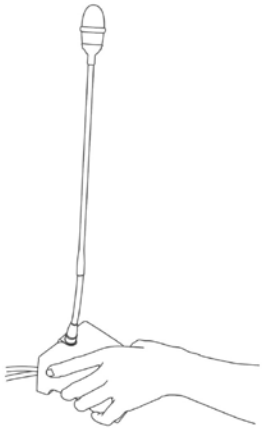


Do not hold the microphone stem and pull it upward.

3.Mobile conference units



Do not hold the microphone stem to move the conference unit.



Please move the conference unit by holding the unit base

Appendix Control Protocol of HCS-8679 series & HCS-4857 series

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Applicable Models

- HCS-8679 series congress terminal and HCS-4857 series congress unit

Version:2.1

Data	Version	Author	Description
2023-11-30	V2.0	cjx	485 control protocol
2024-04-01	V2.1	cjx	Command add

485 Serial Port Protocol

- The central controller communicates with the lifting panel through the RS485 serial port.

Command format

- A 5-byte command.

Protocol format

Communication

Protocol	Baud Rate	Data bit	Stop bit	Parity bit
UART - RS485	2400	8	1	None

Command list

Pause Control

- Controls the pause command of the connected device
- When controlling a device with a microphone, the microphone and screen will pause together.
- Commands as follows:
- 0xFF 0xEE 0xEE 0xEE 0xCC

Rise control

- Controlling the connected device to execute the rise command
- When controlling a device with a microphone, the microphone and screen rise together.
- When the screen is not at the very top, it rises first and then it will flip automatically;
- Flips automatically when the screen is at the very top.
- Commands as follows:
- 0xFF 0xEE 0xEE 0xEE 0xDD

Drop control

- Controlling the connected device to execute the drop command
- When controlling a device with a microphone, the microphone and screen drop together.
- When the screen is at the top, it flips over and then drops automatically;
- When the screen is not at the top, it will drop directly.
- Commands as follows:
- 0xFF 0xEE 0xEE 0xEE 0xEE

Screen pause control

- Controlling the connected screen of the device to execute the pause command
- When excute this command,the screen will stop rise/drop
- Commands as follows:
- 0xFF 0xEE 0xEE 0xEE 0x66

Screen rise control

- Controlling the connected screen of the device to execute the rise command
- Commands as follows:
- 0xFF 0xEE 0xEE 0xEE 0x77

Screen drop control

- When controlling a device with a microphone, the microphone and screen drop together.
- When the screen is at the top, it flips over and then drops automatically;
- When the screen is not at the top, it will drop directly.
- Commands as follows:
- 0xFF 0xEE 0xEE 0xEE 0x88

Microphone pause control

- Controlling the connected microphone of the device to execute the pause command
- The connected microphone of the device stop rise/drop
- Commands as follows:
- 0xFF 0xEE 0xEE 0xEE 0x99

Microphone rise control

- Controlling the connected microphone of the device to execute the rise command
- The connected microphone of the device rise
- Commands as follows:
- 0xFF 0xEE 0xEE 0xEE 0xAA

Microphone drop control

- Controlling the connected microphone of the device to execute the drop command
- The connected microphone of the device drop
- Commands as follows:
- 0xFF 0xEE 0xEE 0xEE 0xBB

TAIDEN INDUSTRIAL CO., LTD.
6/F, Block B, Future Plaza, 4060 Qiaoxiang Rd, Nanshan District, Shenzhen, China
P.C.: 518053
Website: http://www.taiden.com

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