



## D62 Series Smart Digital Conference System

# Installation and Operation Manual

**Guangzhou DSPPA Audio Co., Ltd.**

<http://www.DSPPA.com>

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# Warning!


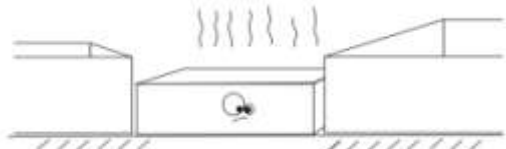
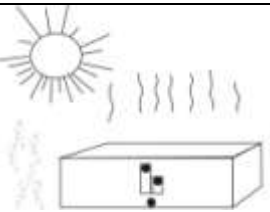
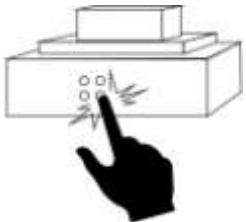
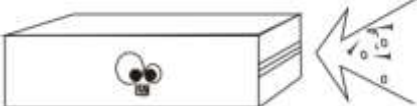

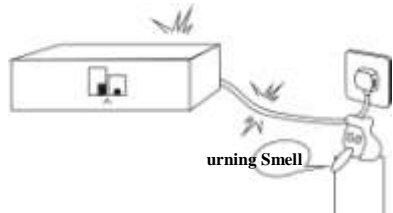
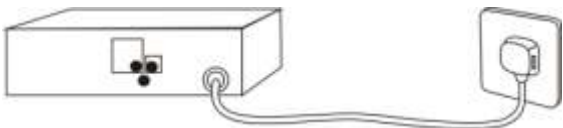
Please follow the instructions listed below, to avoid possible hazards to the user or any other person(s), equipment damage or property loss:



indicates the operation is **PROHIBITED**



indicates the operation is **ALLOWED**

<p>■ Please make sure that the power wire is NOT damaged. Do NOT unplug the equipment by pulling the power wire; otherwise it may cause electric shock, short circuit or fire.</p> 	<p>■ When the equipment is in use, DO NOT block the air outlet which should be kept clear, in order to avoid overheat.</p> 
<p>■ Do NOT store this equipment in any place with heavy dust or vibration, or where it is extremely cold or hot.</p> 	<p>■ Please do NOT place any heavy article on this equipment. Please operate switches, buttons or external audio source carefully.</p> 
<p>■ Please prevent foreign matters (such as paper, metal etc.) entering the equipment through the gaps or opening, in such cases, please cut off the power supply immediately.</p> 	<p>■ Do NOT attempt to remove any internal component from the equipment, or to modify the equipment in whatever manner.</p> 
<p>■ In case that sound is suddenly off or there is abnormal odor or smoke, please unplug the equipment from the power socket to avoid potential electric shock, fire or other accident. The equipment should be inspected by professional personnel.</p> 	<p>■ If the equipment is not in use for a long period, please unplug it from the AC power socket to realize zero energy consumption.</p> 

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# About this Manual

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The Installation and Operation Manual of **D62** series smart digital conference system includes detailed description with respect to installation and operation of all equipment of the conference system of such series. This Manual mainly includes description of the functions and ports of all equipment units in the D62 series conference system, graphic illustration of connection between equipment, description of system configuration and operation instructions as well as precautions and technical indexes. Please read this Manual carefully before disassembly of the equipment and preparation for installation, in order to install and operate the equipment properly.

Please keep this Manual in good custody for future reference.

For other information or parameters with respect to the equipment uncovered in this Manual, please contact the local dealer or after-sales service personnel of our Company.

This Manual applies to the installation and operation of the following models:

**D6201** (Smart Digital Conference Controller)

**D6211** (Smart Digital Conference Extension Controller)

**D6221** (Desktop Chairman Speech/Vote Unit)

**D6222** (Desktop Conventioneer Speech/Vote Unit)

**D6223** (Desktop Chairman Speech Unit)

**D6224** (Desktop Conventioneer Speech Unit)

**D6215** (Smart Digital Conference System Interpreter Controller)

**D6229** (12 Channel Interpretation Unit)

The Manual is composed of the following chapters:

## **Chapter I: System Overview**

This chapter introduces the composition, function, features and purpose of the system.

## **Chapter II: Conference Controller**

This chapter introduces the functions and appearances, installation and connection, configuration and operation as well as the performance index of conference controller D6201 and extension controller D6211.

## **Chapter III: Conference Unit**

This chapter describes, in details, the functions and appearances, installation and connection, configuration and operation as well as the performance index of the chairman unit, conventioneer unit and conference speech unit of D62 series digital conference system.

## **Chapter IV: Interpreter controller / interpretation unit**

This chapter describes the functions and appearances, installation and connection, configuration and operation as well as the performance index of the interpreter controller and interpretation unit of D62 series digital conference system.

## **Chapter V: System Connection**

This chapter describes the connection between all equipment in the D62 series digital conference system (taking the typical application as an example).

## **Chapter VI: External and Spare Parts**

This chapter introduces the peripheral equipment and relevant accessories of D62 series digital conference system.

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# Demonstration of D62 Series Smart Digital Conference System

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Conference Controller D6201



Extension Controller D6211



Interpreter Controller D6215



Chairman Speech/vote unit  
D6221



Chairman Speech unit  
D6223



Conventioner Speech Unit  
D6224



Conventioner Speech/vote Unit  
D6222



Interpretation Unit  
D6229

# Chapter I System Overview

## 1.1 Overview

D62 series Digital Conference System is based on ARM9 Embedded System Platform and adopts high performance DSP technologies and Hi-Fi circuit design, which integrates the advanced control technologies and audio processing technologies effectively, to realize a comprehensive solution with digital control, high-level audio transmission and visualized operation. The system can easily realize conference recording throughout the whole process and can be connected to PCs to realize remote conference control and it supports wireless control via an Android tablet PC.

D62 series smart digital conference system provides functions such as discussion speech, votes, conference check-in, simultaneous interpretation, infrared voice distribution, teleconference and automatic camera tracking, etc. The system is composed of controllers, conference units, cameras and corresponding application software. The conference system includes conference controllers and extension controllers. The conference units include chairman speech units, conventioner speech units, vote units, interpretation units and infrared voice receiving units, etc. Application software includes computer remote control software, Android tablet PC control software and other application software.

The conference units in the system are connected to one another by "+ shape" adapters in a series with 8-core cables, which is simply for installation and engineering, safe and reliable and has good anti-jamming capability.

## 1.2 Technical features

### 1. Built-in high performance ARM processor

The system adopts embedded operating system, so it is stable and reliable and supports TCP/IP connection and voice recording functions, etc.

### 2. 4.3" high-definition color touch screen on controllers

All functions and setup operations process are displayed via a GUI, with which the functions are clear and the touch operations are visualized and simply. The human-machine interaction is easy-to-go.



Interface of system

### 3. TCP/IP network interface

The system integrates modern network technologies and realizes network connection to PC via the Ethernet, so that you can use the remote control software independently developed by our company for the conference system to control all functions of the conference system, such as voting, check-in and system configuration, etc.

### 4. Mobile control terminals

The system integrates WIFI technologies, so that users can make use of the Android system platform to realize control, via a tablet PC with Android OS and 3G (wired or wireless connection), over all functions of the conference system. (In case WIFI is used, such tablet PC only needs to be in a same network with the conference system, while if 3G technology is used, remote control may be used by professional network engineers.)



Control panel of the tablet PC

## 5. Built-in high performance DSP technology

It adopts high performance DSP technology and realizes 14-band graphic equalizer, frequency shifter, low cut and other feedback inhibition functions. The equalizer can six settings in manual mode and the system also provides a variety of default modes, so that it ensures that the system can output Hi-Fi audio signals.



Equalizer setup interface of conference controller

## 6. Automatic Camera Tracking System

The system allows connection to maximally 4 cameras, which provides the automatic camera tracking function. The angle and the swing speed are both adjustable and their values will be stored. The system supports cameras compatible with PELCO D/PELCO P/VISCA protocols. If all four ports are used at a same time, they must be connected to cameras of the same model.

## 7. Conference System Controller

The conference system controller is the core equipment of the whole conference system, and it provides electric power supply to the conference units connected to it. It is a platform integrating ARM, DSP and other software with system hardware to realize system control. A controller may be connected to maximally 128 conference units and with extension controllers (a system allows a maximum number of 31 extension controllers) the system can be connected to up to 4096 conference units, in which any number of chairman speech units may be connected to the system and two of them may be designated as control units. The conference controller can realize conference control, unit configuration, electronic voting, camera tracking and audio input/output, and can be connected seamlessly to the central control system. When the system controller is connected via Ethernet to PC where remote control software is installed, it can realize remote conference control.

## 8. Conference Unit

The conference unit is basic equipment for conventioners to participate in and operate the conference. Conference units include chairman units, conventioner units, interpreter units and speech units, etc., and such conference unit for each conventioner may vary from person to person, for instance, the chairman may use a chairman speech unit which has absolute control and operation on the conference. The conference units are uniformly powered by the controller where there are ports for speakers and headphones. Conference units with integrated speech and vote functions are also equipped with

a LCD and a LED indicating light, while those conference units only for use in speech or votes have only LED indicating lights but they do not have any LCD screen.

## 1.3 Functional features

### 1. Discussion speech

- There is a limit (1/2/3/4/5/6) on the number of spokesmen speaking at a same time and there is also a countdown function for timed speeches;
- A conference may have two chairman units;
- A VIP conventioner speech unit can be configured in the system  
In the system software, a conventioner speech unit may be set as a VIP unit, which works under the FREE mode, where VIP unit can make free speeches when maximally 20 units (including VIP units and normal units) are activated, while in other modes, the VIP unit can make speech freely when the total activated units are no more than 10. The system allows a maximum number of 30 VIP units.

- The system provides five speech modes:
  - a) FIFO mode: Speech is delivered in a first-in-first-out mode. After the activated conventioner units reach the maximum limit, any newly activated units will deactivate the first activated one.
  - b) NORMAL mode: Speech will be delivered in queue. After the number of activated conventioner units reaches the maximum limit, all newly activated units may wait in a queue until a previously activated unit is off.
  - c) VOICE mode: The conference units are in a voice control mode (VIP units and chairman units are free from such control). Within the maximum unit limit, the speech unit will be activated by voice signal received. Both the sensitivity and length of speech are adjustable.
  - d) FREE mode: The conference units work under a free mode (free from control by the chairman unit). Within the limits on activated speech units, the order of speech is free of any limitation.
  - e) APPLY mode: The conference units are in a speech application mode (VIP units and chairman units are free from such limitation). An individual speech unit sends an application for speech, and the speech will be delivered after such application is approved by the chairman unit.

### 2. Voting

The Vote function is only available on the conference units with vote functions. For a unit with LCD screen:

- The LCD screen on chairman unit and conventioner units will display all indication content for the voting operation and the chairman and the conventioners can complete the voting operation

(Affirmative/Negative/Abstention) on basis of such indication.

- The LCD screen will display the total number of votes, affirmative votes, negative votes and abstention votes.
- With the system, it allows voting in a number of manners.

For units without LCD, the voting is initialized on PC application software and the conventioners may vote by pressing the corresponding buttons in accordance with instructions at the conference venue. The result of votes will be displayed on the PC software.

### **3. Conference Check-in**

Conference check-in is initialized by the PC end control software and after the conference unit enters its check-in mode, the conventioner may complete the check-in by pressing corresponding buttons in according to the indication on such conference unit.

### **4. Sound Control**

Sound control includes adjustment to input volume on AUX, control of master volume (control all input/output volume) low cut, frequency shifter and equalizer.

### **5. Camera Tracking System**

The conference systems also provide a camera tracking system and 4-way camera ports through which the system can realize automatic camera tracking function.

### **6. Conference recording**

The system can realize recording of the entire conference and provides two recording modes, namely automatic recording and manual recording, and the user can choose the desired one.

### **7. Unit Inspection**

Before the conference commences, the system will check if the microphone, LCD screen, buttons, LED lights and speakers of such conference units work properly. This inspection can be made automatically or manually.

### **8. Speech timing and countdown**

With the speech timing function, the user can set a time limit for each speech or deactivate this function. The speech time may be set within a range of 1-300 minutes and the warning countdown at the end of such speech time may be set to be 1-60 seconds.

### **9. System Time Adjustment and Configuration of LCD Status**

The user can adjust the system time and the time of screen saver.

### **10. Messages on the LCD screen may be in Chinese or English**

The messages displayed on the screen may be in Chinese or English and the user may choose the desired language.

### **11. Remote Control**

The system can be connected to a PC via TCP/IP or to a Android tablet PC via WIFI, in order to realize remote control of the conference system and to realize centralized control over several conference systems.

### **12. Seamless Connection to Control System**

D62 smart digital conference system can be connected seamlessly to a smart central control room, to form a complete conference system solution, so that users can realize comprehensive management over the multi-media peripheral equipment, lights, projectors and audio system at the conference venue. It can make the system integrated, specialized and smart to its largest extent, to simplify the system layout and to save resources.

### **13. Other functions**

The system provides audio input/output ports and breaking-in of warning signals. The system may be connected to players and amplifiers and may be connected to the fire control center to realize emergent fire alarm function.

# Chapter II Conference Controller

## 2.1 General Description of Conference Controller

D62 series conference system includes conference controllers and extension controllers and provides the automatic camera tracking function, 4.3" TFT touch screen, simply and clear GUI display as well as other advanced management and control functions, and will lead the design trend of conference system equipment. The conference controllers can provide power supply to all conference units and is extensible and is the core equipment of the conference system.

D62 series digital conference controller supports functions such as check-in, vote, camera tracking, automatic inspection and data management. It provides a number of conference modes for users (FIFO, NORMAL, FREE, VOICE, APPLY). A controller may be connected to maximally 128 conference units and with extension controllers (a system allows a maximum number of 31 extension controllers) the system can be connected to up to 4096 conference units, in which any number of chairman speech units may be connected to the system and two of them may be designated as control units. On the controller, the user may set any unit as a VIP unit. The system allows automatic or manual inspection to the microphone, speaker, buttons, LED lights and screen on the conference units. The controller has a Digital Signal Processor (DSP) which provides several EQ modes, so that the user can select the desired one in accordance with the conference situations. In addition, the controller also provides frequency shifters, which can effectively reduce the howl back; the audio input/output ports and breaking-in of warning signals can extend the broadcasting functions; the limitation of spokesman and timed speech function can help to manage good order at the conference venue;

the four camera ports allows connection to four cameras to realize tracking functions. In all, the conference controller is very powerful, highly integrated and has very simply system architecture, and it is easy wire and provides visualized operation and message display in Chinese and English, so it becomes an ideal choice for audio system of high-end conferences.

### Models of conference controllers

D6201 Conference Controller

D6211 Extension Controller

## 2.2 D6201 Conference

### 2.2.1 Functional feature

- ◆ Compliant with IEC 60914 international standard.
- ◆ The conference controller allows connection of a maximum number of 128 conference units and with the extension controller, the conference system allows connection of up to 4096 units.
- ◆ Connection through 8-core aviation plugs in a series mode.
- ◆ Limitation of number of spokesman at a same time (1/2/3/4/5/6).
- ◆ Vote function, timed speech and other data management functions.
- ◆ 4.3" TFT display/touch screen:
  - ✓ The system adopts graphic interface and all functions and configuration messages as well as basic information of the units are displayed clearly, besides it has artistic and modern appearance;
  - ✓ Operation via touch screen makes human-machine interaction easier.
- ◆ Users can adjust the system time and back light duration, in order to save energy.
- ◆ Messages on the system LCD screen may be in Chinese or English
- ◆ Users can set a number of VIP speech units, which when the total number of activated units is less than the limit of 20 (20 in FREE mode and 10 in other modes), can be activated and if free of any limitation of conference mode. A maximum number of 30 VIP units are allowed.
- ◆ The system supports five conference modes, namely FIFO, NORMAL, VOICE, FREE and APPLY.
- ◆ The system has embedded a DSP, including low cut, frequency shifter and equalizer.
- ◆ The system can realize recording of the entire conference and provides two recording modes, namely automatic recording and manual recording, and the user can choose the desired one.
- ◆ The system provides unit inspection function, with which inspection to the conference units may be realized automatically or manually.
- ◆ It provides speech timing and countdown function. With the speech timing function, the user can set a time limit for each speech or deactivate this function.
- ◆ The conference systems also provides a camera tracking system and 4 BNC camera ports through which the system can realize automatic camera tracking function.
- ◆ The system provides one RS232 serial port, with which the system can be connected to the central control system seamlessly, in addition, it also provides one RS422 serial port for connection of camera control circuit to realize centralized control on the four cameras.
- ◆ The 8-core aviation socket: one is for connection of interpreter controller, another for connection to extension controller and three for conference units.
- ◆ RCA sockets:
  - ✓ Two secondary audio input ports, for connection to audio players, etc;
  - ✓ Two secondary audio output ports, for connection to specialized amplifiers;
  - ✓ Two warning audio signal input ports for connection to warning audio signals in the fire control center.
- ◆ Cannon socket: It is a secondary audio output port and is used to realize parallel output together with two secondary audio output RCA sockets (LINE OUT) and for connection to specialized amplifiers.
- ◆ The system also provides a +5V trigger voltage warning input port, which, together with the warning audio input port, is used to realize warning breaking in function.
- ◆ The system provides RJ45 ports under TCP/IP protocol, which is used for connection to the network where a PC application program will be used to control all functions of the system.
- ◆ The equipment casing is made from metal materials and all the lines and casing are properly grounded, so the system has an antistatic of 10kV in case of physical contact and 15kV in case of air contact.
- ◆ The system adopts high-grade appearance design, 2U standard chassis, and can be installed in a 19 inch standard cabinet.

2.2.2 Front panel

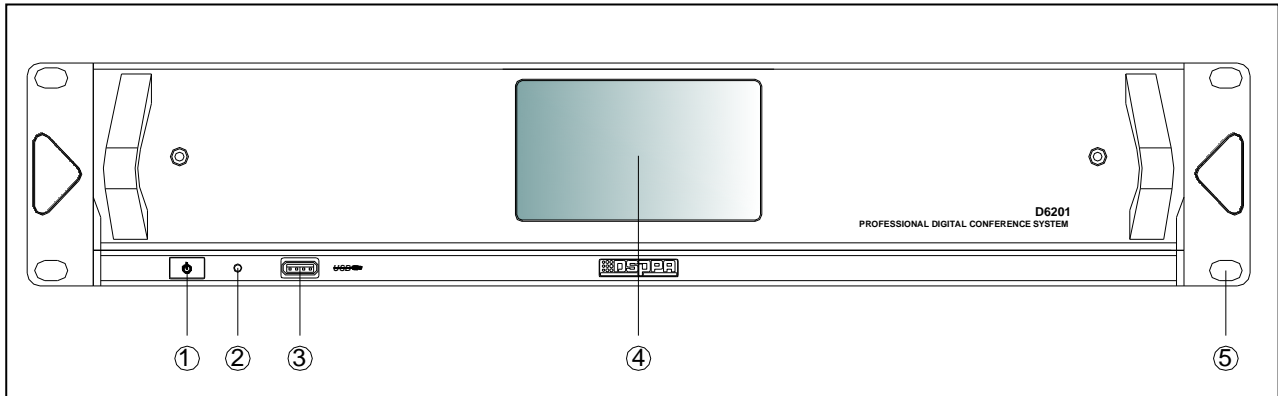


Fig. 2.1 Front panel of D6201 conference controller

Functions on front panel of the controller:

1. Power switch (POWER)

- Power is on when the button is pushed down and is off when the button is ejected.

2. Power indicating light (ON)

- The indicating light will be on, when the system is powered on, and it is off when the system is powered off.

3. USB port (USB)

- For connection of USB flash disks during the recording process;
- A mouse with USB port may be connected to operate the system.

4. LCD touch screen display

- For display of function icons and menus in the operation process; touch screen is used in configuration.

5. Screw holes for installation in cabinets

2.2.3 Rear panel

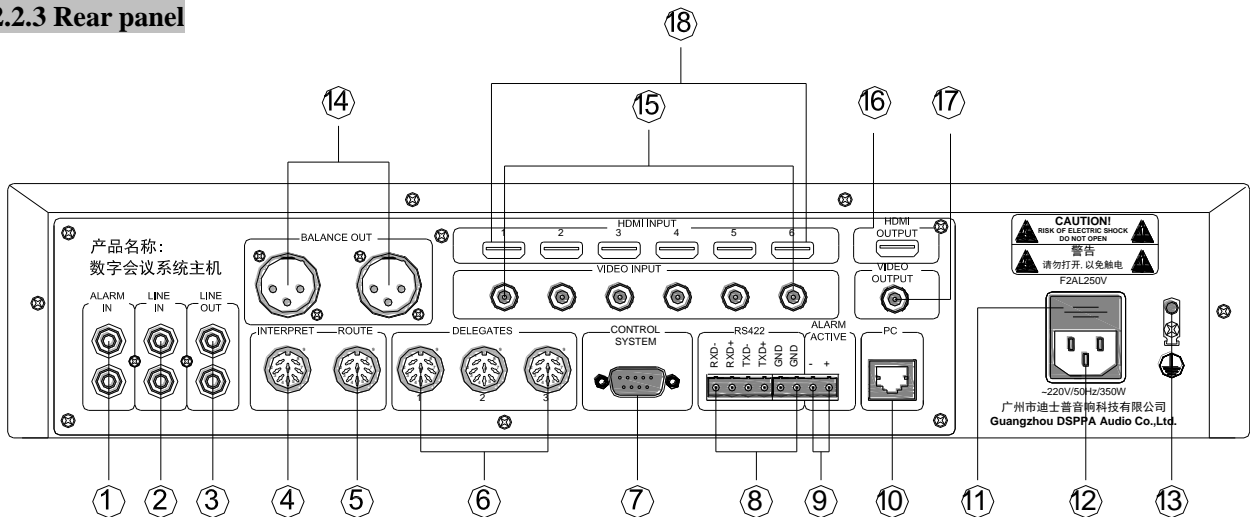


Fig. 2.3 Rear panel of D6201 conference controller

Functions on rear panel of the controller:

1. Warning audio signal input port (ALARM IN)

- It is used for connection to warning signals from the fire control center and is interlocked to the warning triggering

signal as mentioned in ⑨.

2. Line audio signal input port (LINE IN)

- It is for connection of sound source or sound console equipment to provide line audio signal to this system.

3. Mix output of audio signal (LINE OUT)

- It is for connection of amplifiers, and the output signal includes line audio signals, warning signals and microphone signals.

#### 4. Port for connection of interpreter controller to the system

(INTERPRET)

#### 5. Extension port (ROUTE)

- It is used to connect the conference controller and extension controllers and to transmit audio signals and communication signals.

#### 6. Conference unit output port (3-way output, DELEGATES1-3)

- The three ports allows connection of up to 128 conference units.

#### 7. Port for central control system (CONTROL SYSTEM)

- It is used to connect the system to a smart central control system, to realize centralized control over the conference system by far infrared.

#### 8. Camera control port (RS422)

- It is used for connection of control signals of 4 cameras, which are connected in serial manner.

#### 9. Fire alarm interlocking and activation port (ALARMACTIVE)

- The system adopts +5V voltage to trigger the alarm interlocking, in which "Alarm" will be displayed on the screen of all conference units and the microphones of all conference units will be deactivated.
- When the +5V voltage on this port is off, the system will automatically return to the working status before such alarm.

#### 10. Ethernet port (PC)

- The conference can realize remote control via TCP/IP network;
- When the system is connected to a WIFI network, it allows wireless conference control via a tablet PC.

#### 11. Fuse in power supply of the system

- F2AL250V fuse socket;
- If the fuse is blown, please replace it with a fuse of the same specification;
- If the fuse is blown, it indicates equipment fault, so please replace the fuse after such fault has been eliminated;
- See description on Page 30 for procedures of replacing the fuse.

#### 12. Power input

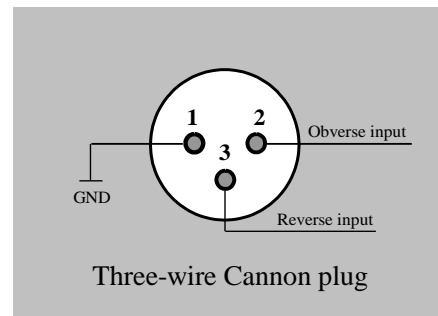
- AC220V/50Hz/350W power input.

#### 13. Grounding connection

- It is used to connect the conference controller to the ground, so as to avoid electric shock or equipment damages caused by electric leakage.

#### 14. Mix output of audio signals (Cannon balance output socket)

- This port is connected in parallel to output port as mentioned in ③ (LINE OUT), and is a balance output socket. The signals on the three pins are defined as below:



#### 15. 6 common cameras connection ports

- Each port allows connection to one camera;
- All 6 cameras connected to this system must be of the same brand;
- Cameras are connected by coaxial cable.

#### 16. HD video output interface

- Connect the projector and other video equipment, Input the camera content to the big screen

#### 17. Common Video output port

- The port is used for connection to projectors or other video equipment, with which the content captured by cameras will be output to a large screen.

#### 18. 6 HD camera connection port

- Each port allows connection to one camera;
- All 6 cameras connected to this system must be of the same brand;
- Cameras are connected by coaxial cable.

### 2.2.4 Index Parameters

Item	Index parameters
LINE input voltage	250 ( $\pm 30$ ) mV
ALARM input voltage	250 ( $\pm 30$ ) mV
LINE output voltage	1 ( $\pm 0.1$ ) V
BALANCE output voltage	1 ( $\pm 0.1$ ) V
Frequency response	40Hz-20kHz (-3dB)
Maximum input voltage	4 ( $\pm 0.2$ ) V
SNR	>80 dB
Harmonic distortion	<0.3%
Output power	$\leq 110$ W/3-way, 24V
Max. power	350W
Static power consumption	15W
Quantity of maximum units	128 ps
Control interface	RJ45, RS232, RS422
Power source	Switch Mode Power Supply 220V-240V/50Hz/350W
Net Weight	6.9kg
Dimension	484×385×88 mm

## 2.3 D6211 extension controller

### 2.3.1 Functional feature

- ◆ It works with the conference controller to extend the maximum number of conference units.
- ◆ In a conference system, it supports up to 32 extension controllers.
- ◆ 8P-DIN sockets: One for connection with conference controller and three for connection with conference units.
- ◆ An extension controller allows connection of up to 128 conference units.
- ◆ 2U luxurious cabinet design, with fashionable and artistic appearance.
- ◆ It may be installed on a 19 inch standard cabinet and is easy to install and space saving.
- ◆ The equipment casing is made from metal materials and all the lines and casing are properly grounded, so the system has an antistatic of 10kV in case of physical contact and 15kV in case of air contact.

### 2.3.2 Front Panel

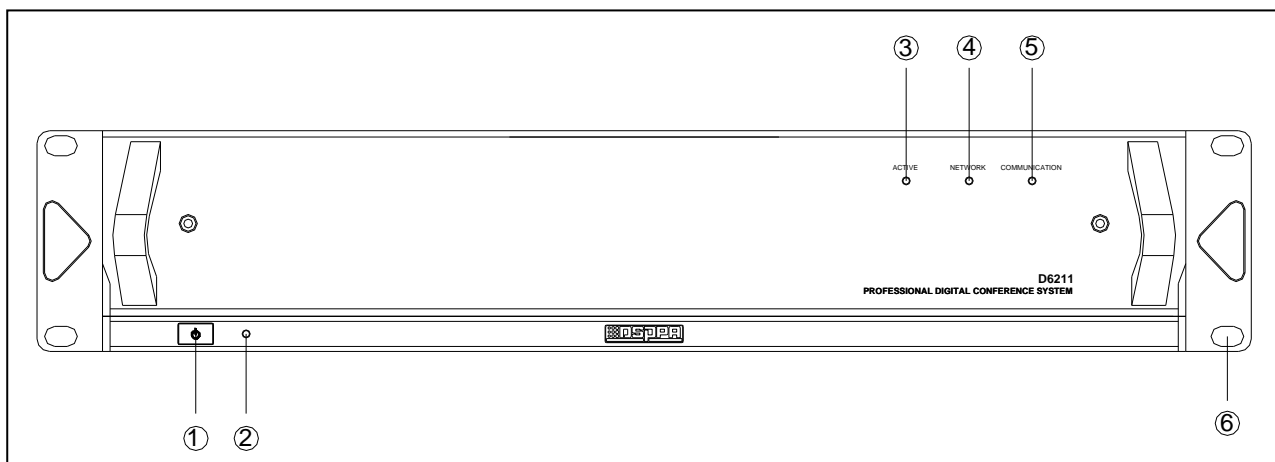


Fig. 2.2 Front panel of D6211 extension controller

#### Functions on front panel of the extension controller:

##### 1. Power switch on extension controller (POWER)

- Power is on when the button is pushed down and is off when the button is ejected.

##### 2. Power indicating light on extension controller (ON)

- The indicating light will be on, when the system is powered on, and it is off when the system is powered off.

##### 3. Signal indicator (ACTIVE)

- This indicating light will flicker when

the conference unit connected to the extension controller sends signals to the conference controller.

##### 4. Signal indicator (NETWORK)

- This indicating light will flicker when there is communication between the conference controller and the extension controller.

##### 5. Signal indicator (COMMUNICATION)

- This indicating light will flicker when the conference controller sends signals to a conference unit connected to the extension controller.

##### 6. Screw holes for installation in cabinets

2.3.3 Introduction to rear panel of D6211

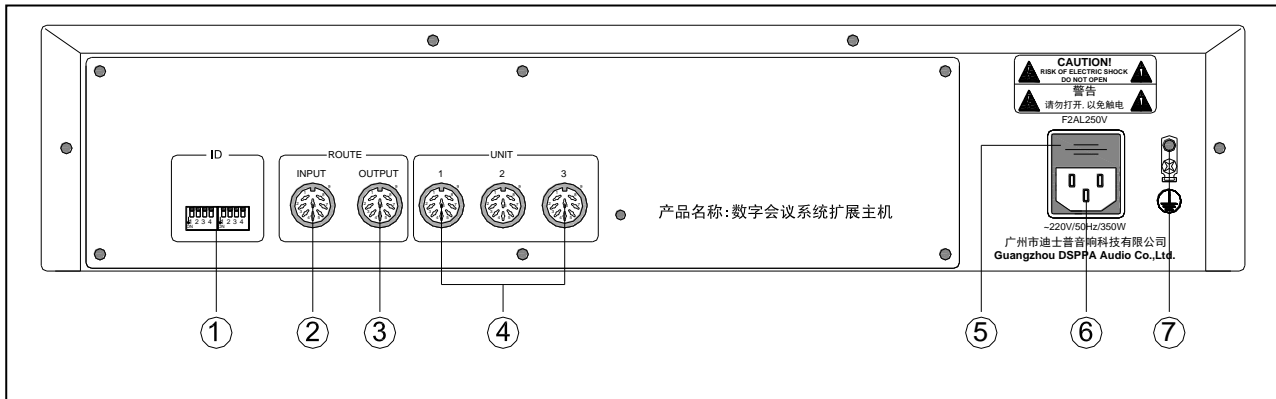


Fig. 2.4 Rear panel of D6211 extension controller

**Functions on rear panel of the extension controller:**

**1. DIP switch for address setup (ID)**

- In order to tell the 31 extension controllers from one another, it is necessary to set a unique ID for each extension controller. See description in Page 35 for procedures of setting up ID of an extension controller.

**2. Extension input port (ROUTE INPUT)**

- This port on the first extension controller is connected to the ROUTE extension port on the conference controller, and such port on all other extension controllers will be connected to the ROUTE OUTPUT port of the another controller.

**3. Extension output port (ROUTE OUTPUT)**

- It is used for connection to the ROUTE INPUT of the next extension controller.

**4. Conference unit output port (UNIT)**

- The three ports allows connection of up to 128 conference units.

**5. Fuse in power supply of the system**

- F2AL250V fuse socket;
- If the fuse is blown, please replace it with a fuse of the same specification;
- If the fuse is blown, it indicates equipment fault, so please replace the fuse after such fault has been eliminated;
- See description on Page 30 for procedures of replacing the fuse.

**6. Power input**

- AC220V/50Hz/350W power input.

**7. Grounding connection**

- It is used to connect the extension controller to the ground, so as to avoid electric shock or equipment damages caused by electric leakage.

**2.3.4 Index Parameters**

Item	Index parameters
Frequency response	40Hz-20kHz (-3dB)
SNR	>80dB
Harmonic distortion	<0.3%V
Static power consumption	10W
Max. power	350W
Output power	≤110W/3 way, 24V
Quantity of maximum units	128ps
Power source	Switch Mode Power Supply 220V-240V/50Hz/350W
Net Weight	6.3 kg
Dimensions (L×W×H)	484×385×88 (mm)

## 2.4 Connection

### 2.4.1 Connection between conference controller and conference units

D62 series digital conference system has three conference unit outputs and all conference units for this series digital conference system are supplied with a 2m cable with plugs. A maximum number of 128 conference units can be connected to the system via the three output ports. Since the conference units are powered by the conference controller, the 128 units should be connected barely equally to the three routes. If 128 conference units are connected to a single route, then a power supply extension equipment should be installed respectively at 1/3 and 2/3 positions of such units; if 128 conference units are connected to three routes, but there is very long extension cable in any route, a power supply extension equipment is also required. When the conference units are connected to the conference controller, in addition to the cables provided with such conference units, additional extension cable and "+" adapters may be needed. The system connection is as follows:

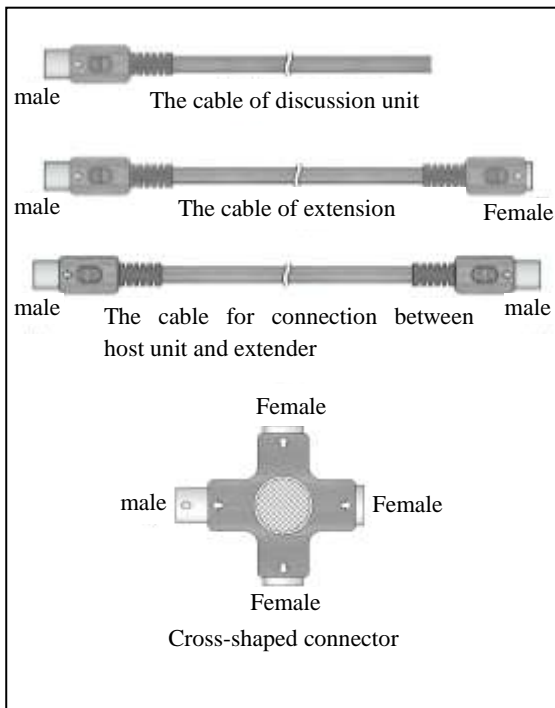


Fig. 2.1 Connection diagram of conference system  
In the diagram above:

- ◆ One of the two ends of the cables are connected to the conference units, while the other end is connected to an adapter and there is little chance that such conference units are directly connected to the conference controller.
- ◆ The extension cables may be 2m, 10m, 20m, 50m or 100m in length. Extension

cables with a plug on one end and a socket on the other end are used to connect such conference units, while extension cables with plugs on both ends are used to connect the conference controller and extension controllers and to connect the conference units and extension controllers.

- ◆ "+" adapters are required for connection of all conference units.

In order to connect the conference units, please connect the plug to the unit output port on the conference controller first and then connect the socket on the other end to the plug of the "+" adapter, and then connect the plug to the socket on the "+" adapter. Connection of 128 conference units to the 3 route outputs are as shown below:

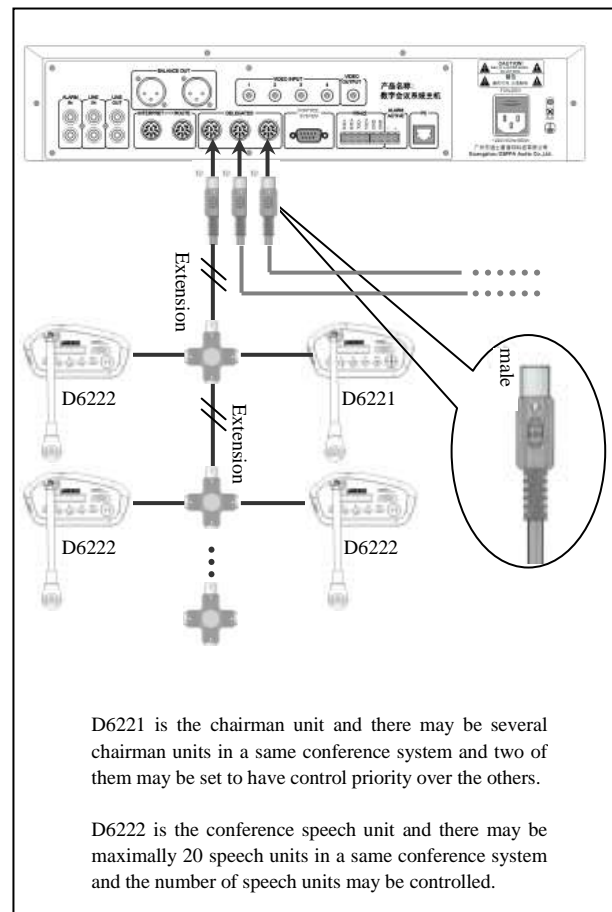


Fig. 2.2 Connection between conference controller and conference units

When 128 units are all connected to one route output, it is necessary to ensure that the total power consumption of all units on a route, plus the power loss of extension cables, is no greater than the overall power on such port. otherwise it may lead to system faults. When the number of conference units connected to a single route is more than 1/3 of 128, it is

necessary to configure an extension power supply. It is as shown below:

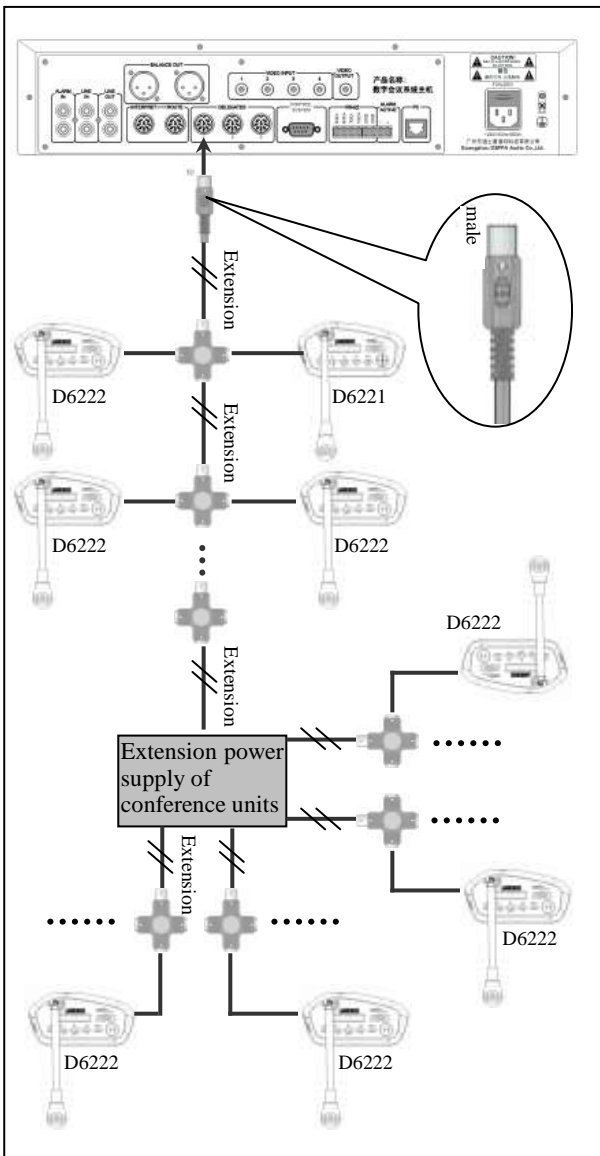


Fig. 2.3 Connection between conference controller and conference units

2.4.2 Connection of cameras

D62 series digital conference system provides 4 camera ports, one video output port and one camera control port. When such cameras are connected, the control signals of all 4 cameras are connected in a serial manner. The 4 cameras will not work simultaneously and only one will be activated, so the control signal does not have to identify the cameras and it only needs to control the one selected and in use. The connection of cameras is as shown below:

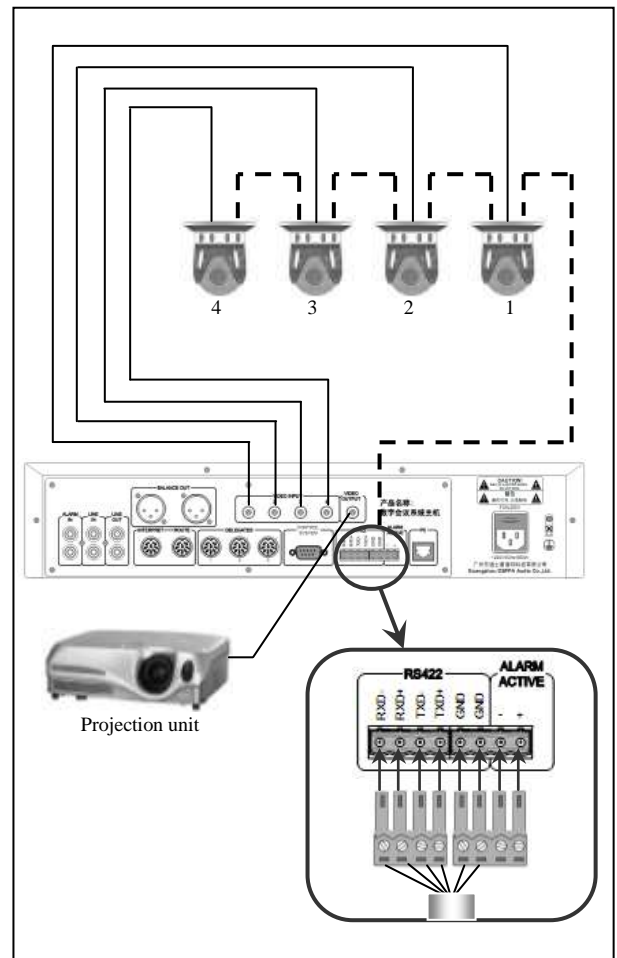
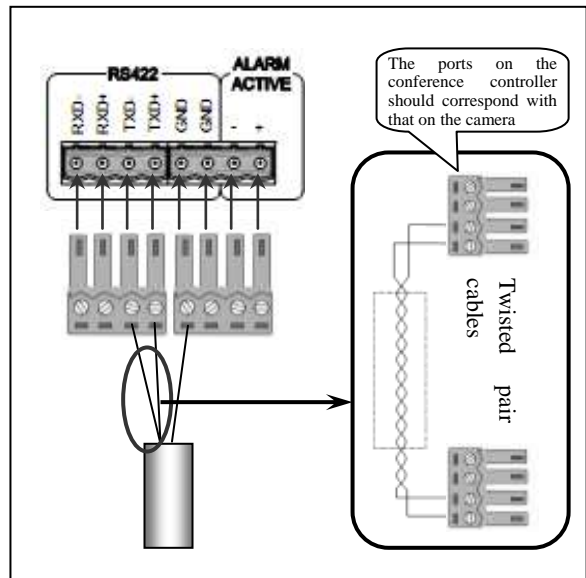


Fig. 2.4 Connection between conference controller and cameras

In the above figure, twisted pair cables are recommended to be used as control cable of the cameras, and one pair of the cables are used to connect the TXD+ and TXD- ports, another pair is used to connect the RXD+ and RXD- ports. Since the two GND ports are connected in parallel, the user only needs to connect any one of them. There are two methods for making the plugs for RS422 ports:

1) The procedures are as follows if unidirectional transmission of signals is required (read-only):



2) The procedures are as follows if bidirectional transmission of signals is required (read-write):

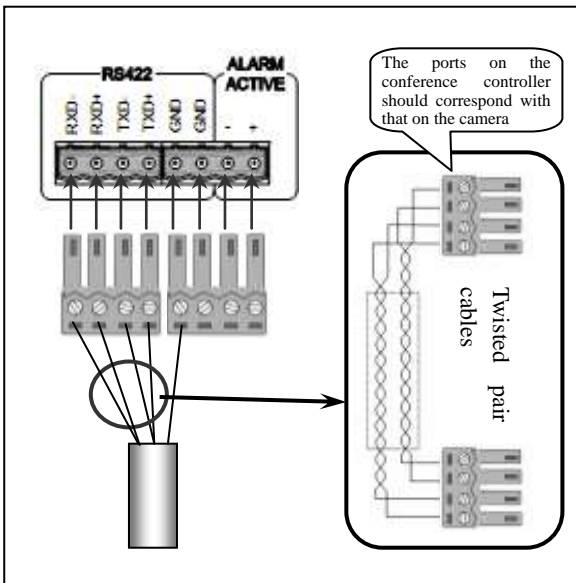


Fig. 2.5 Procedures for making control wires of camera

2.4.3 Connection of alarm and line in and line out

Alarm input is connected to the fire control center, and LINE IN port is connected to the external audio equipment, while the LINE OUT is connected to amplifiers, which will amplify and output the alarm audio, secondary audio and voices of the spokesman. Audio lines with RCA sockets on both ends are used for the connection.

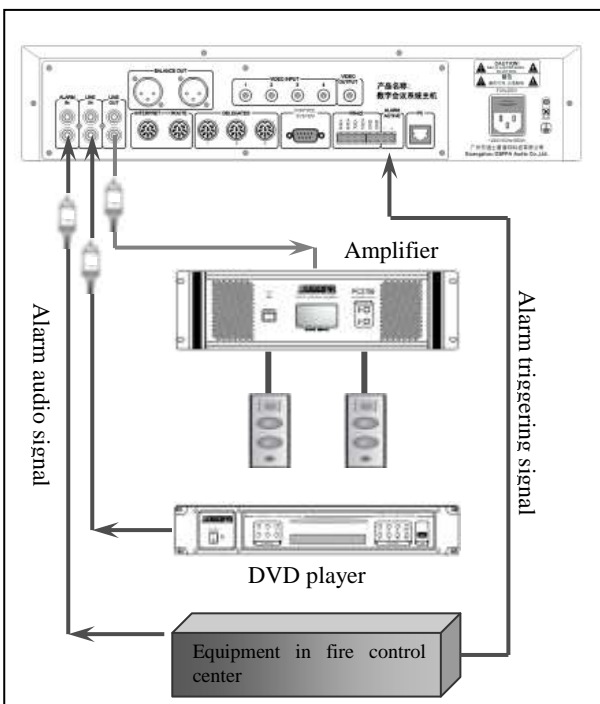


Fig. 2.6 Connection of alarm and audio input/output

2.4.4 Control system and network connection

D62 series smart digital conference system may be connected to a central control room, to realize centralized control, or otherwise, it may also be connected via TCP/IP to realize remote control on PCs. Remote control may be realized by computers or Android tablet PCs, iPad, and tablet with Win8 OS.

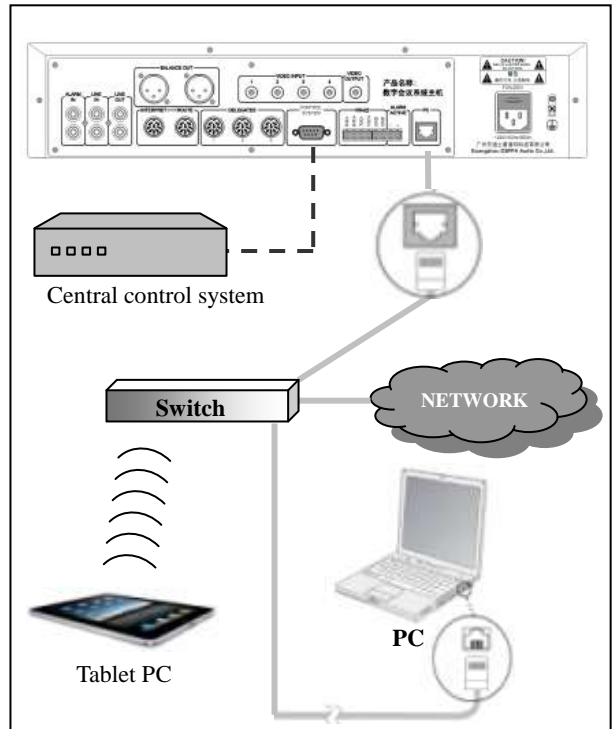


Fig. 2.7 Control system and network connection

As shown above, as long as the conference system, PC or tablet PC are in a same network, remote control may be realized.

2.4.5 Connection between conference controllers and extension controllers

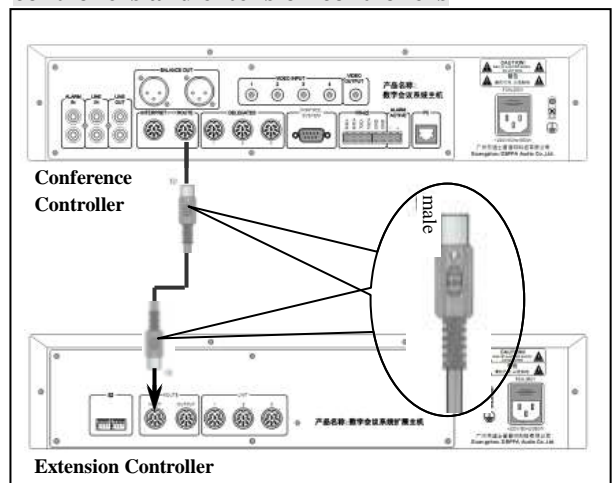


Fig. 2.8 Connection between conference controllers and extension controllers

### 2.4.6 Connection of conference units to extension controllers

There are maximally 32 extension controllers in a same system and each extension controller may be connected to 128 conference units.

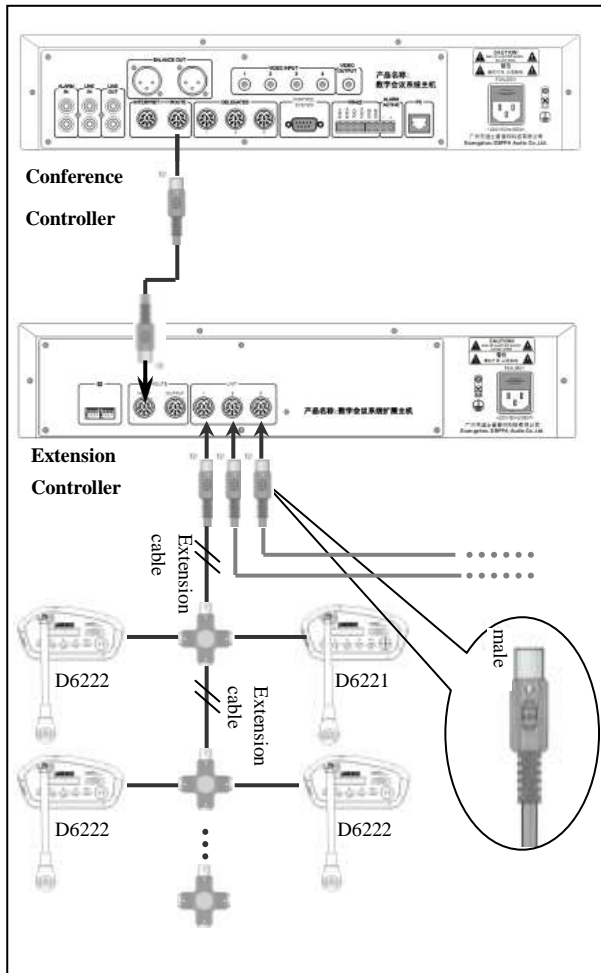


Fig. 2.9 Connection of conference units to extension controllers

## 2.5 Description of configuration and operation

After all installation and connection operations are completed, the user need to configure the functions of the conference system and these entire configurations must be completed before the conference commences.

### 2.5.1 Power on the equipment

Press the power switch (the blue indicating light will be on), and the equipment will start its operating system and then start the conference control software. After the system is started, the conference system will be initialized, which will take some time. After the initialization, the system will show the main interface (start interface).



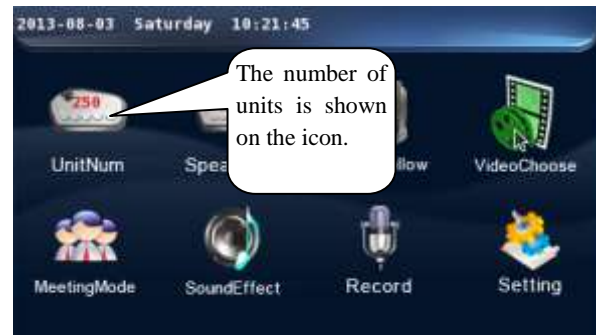
Main functions displayed on the main interface, excluding system time displayed on the top, includes:

- "Number of units connected to the system"
- "Speech settings"
- "Camera tracking"
- "Camera selection"
- "Conference mode"
- "EQ Control"
- "Recording operation"
- "System settings"

Users can access the corresponding operating interface by touching these icons on the touch screen.

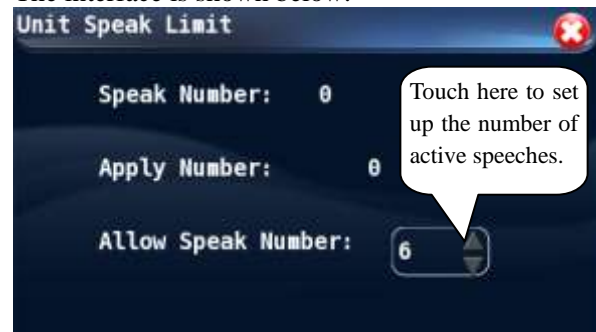
### 2.5.2 View the number of maximum units

On the main interface, the number on the icon of "Units" will directly indicate the number of units currently connected to the system, including chairman units, conventioner units and the total number of all units.



### 2.3.3 Number of active speech

The number of active speech configured here is effective in an incompletely open conference mode. Users can view the number of active speech by touching the icon of "Speech" on the main interface, and enter the configuration interface of "maximum number of active speech". The interface is shown below:



The interface indicates the number of currently active speeches, number of speech application and the maximum speech allowed, of which the maximum speech allowed may be modified by pressing the small arrows in the value box:

- 1) Touch the UP arrow to increase such value by 1;
- 2) Touch the DOWN arrow to decrease such value by 1;
- 3) The maximum active speeches is 6;
- 4) After configuration and viewing operations are completed, touch the icon to close the unit limit interface and return to the main interface.

### 2.5.4 Camera tracking

On the main interface, touch the "Camera

Tracking" icon to enter the configuration interface of camera tracking function. As shown below, the camera tracking function may be Enabled or Disabled on this interface. Touch the options, and if the icon before the option is green as shown below, it means that the camera tracking function has been set to the selected status. If the camera tracking is set as "Off",




then the camera tracking function will be disabled for this conference but the cameras are not shut. In such cases, if the camera is directed to a fix point, then it may be controlled by the PC software (See description of PC software control for detailed procedures) or central control system.

**2.5.5 Camera selection**

The camera may be selected on conditions that the camera tracking function is off, otherwise users will not be able to select the desired camera.

On the main interface, touch the icon of "Camera Selection" to access the manual camera selection interface. The interface is as shown below:




The operable functions on the interface includes:  
 1) Camera selection: This system allows connection of up to 4 cameras, and only one of them will be selected and in use. If the user selects one camera on this interface (for example, Camera 1), then all settings on other cameras will be applied on the selected one, (for example Camera 2 is selected), then the user may need to reset the selected camera, including the "ON/OFF setting of camera tracking function" and "camera tracking and positioning". To select a camera, the user may touch the  icon before the desired camera, green color indicates that the camera has been selected.

2) Camera naming: On the "Camera Selection"

interface, the user may touch the "Camera Naming" icon to access the operation interface to name the camera. On this interface, the user may name the four cameras. The default names are as follows before such cameras are named. The user does not have to name the cameras unless he/she has special needs.

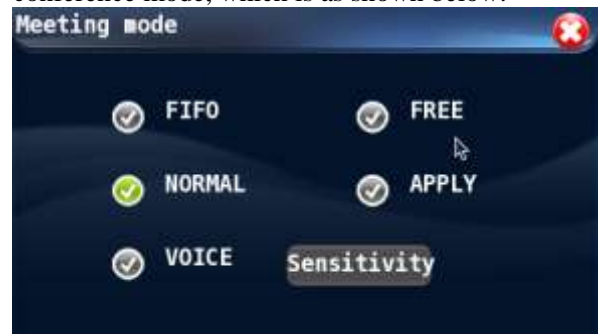


Procedures to name a camera:

- On the interface as shown above, touch the "Modify" button after the camera to be renamed, then a keyboard will show;
- Enter the new name of such camera and touch the "Ent" button to confirm and quit the key board;
- After the operation completes, touch the  on the upper right to exit the interface and return to the upper interface.


**2.5.6 Conference mode**

On the main interface, touch the "Conference mode" icon to enter the configuration interface of conference mode, which is as shown below:

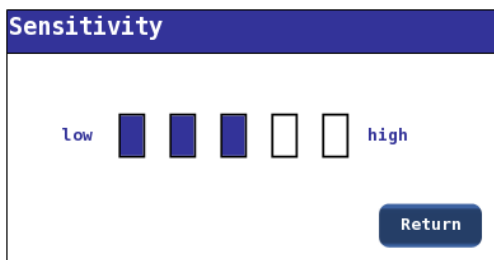


On the interface, the user can select a mode for the conference system. If "VOICE" is selected, the user needs to set up the voice sensitivity. Please refer to the description in "System Features" (Page 4) for the features of each conference mode.

- 1) Touch the desired conference mode to select (for example, touch NORMAL to select the

NORMAL mode), the conference is selected when the  icon before such conference mode is in green color.

- 2) If "VOICE" mode is selected as the conference mode, then the user needs to set up the sensitivity of the microphones on conference units. The procedures for setting up the sensitivity is as follows:
  - When the icon before "VOICE" mode is in green color, touch the "Sensitivity" button after it will call the sensitivity setting interface.




On such interface, touch the boxes which indicates the sensitivity and the boxes becomes blue, it means that the adjustment has completed. After the configuration is complete, touch the "Return" button to exit the sensitivity configuration interface.

**2.5.7 Sound Control**

On the main interface, touch the "EQ" icon to enter the EQ interface, which is as shown below:

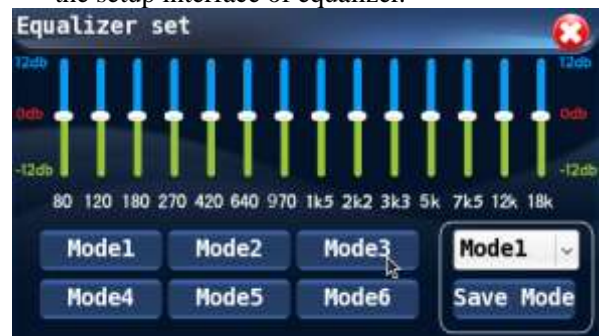


On the interface, the user can control the AUX volume, main volume, low cut, frequency shifter and equalizer setting.

- 1) AUX volume: It is used to adjust the volume of secondary audio input.
- 2) Main volume: It is used to adjust the volume of secondary output, alarm output and the volume of all conference units.
- 3) Low cut: With this option, the user may decide if the low frequency under 801Hz will be cut or not. If this option is selected, (the  icon before the option is green) the low cut

function will be activated, otherwise, it will be in active. If the low cut function is required, the option must be properly set up before the conference. The low cut function may also be configured on the PC control software.

- 4) Frequency shifter: With this option, the user may decide if the frequency shifter function will be activated. Frequency shifter helps to reduce the howl of microphones to a certain extent.
- 5) Equalizer: With this option, the user may decide if the equalizer function will be activated. The system provides a 14 band graphic equalizer, which may be adjusted manually, and the results of manual adjustment will be saved for future user. If the equalizer function is activated, then the user may touch the "Setup" button after it to enter the setup interface of equalizer.



As shown in the picture, the 14 band graphic equalizer allows manual adjustment. Users may save the current value as mode 1 to mode 6.

- Users need to touch the mode button before making any adjustment to the equalizer (for example, "mode 1 is selected").
- After the adjustment is completed, touch the "Save mode" button to save the equalizer values to "mode 1", so in the future, the user may touch the "mode 1" button to call the equalizer values.

**2.5.8 Recorder**

On the main interface, touch the "Recorder" button to enter the recorder operation interface. The conference system can realize conference recording, and the audio file recorded may be saved on a USB flash disk. Before the recording is started, plug a USB flash disk to the front panel of the conference controller, otherwise the recording function cannot be realized.

The audio file generated by this conference system will be saved in wav format, which allows direct playing on most computers.



The system supports "Automatic recording" and "Manual recording" modes. On the recording interface as shown above, the user may touch the desired recording mode to select it.

- Automatic recording: If the automatic recording function is selected, the recording will start when any speech is delivered via any conference unit, and it will automatically stop when the last speaking unit is off. The recording may stop if there is not enough space on the USB flash disk.
- Manual recording: If manual recording is selected, the user may start recording by pressing the "Start" button and stop it by pressing the "Stop" button. Under manual recording mode, the recording will also automatically stop if there is not enough space on the USB flash disk.
- On the recording interface, the user may view the time length of recording, the file name of recorded files and the time left on the USB flash disk.
- Composition of file name:  
By default, the file is named by the starting date and time of the recording in wav format; for example if the recording starts at 12:30:50 of August 1st, then the audio file will be named as 08\_01\_12.30.50.wav. A new audio file will be generated when the recording is longer than 1 hour.

## 2.6 System Setup

On the main interface, the user can press the "System Setup" icon and then input the password (the default password is 111111 and may be changed by the user) and press the "OK" button to enter the "System Setup" interface, which is as shown below:



The functions provided on the system setup interface include:

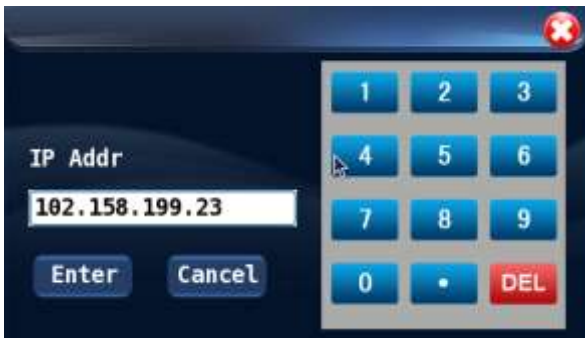
- "Network Setup"
- "Camera Tracking and Positioning"
- "Unit Inspection"
- "Unit ID"
- "Unit Setup"
- "Time Limit for Speeches"
- "Microphone On/Off tone"
- "System Time"
- "Display"
- "General"

### 2.6.1 Network setup


The Network setup includes "IP address", "Subnet mask" and "Gateway" settings of the host controller.



- Assign a unique IP address to the conference controller. Touch the boxes after the "IP Address" and the cursor starts to blink, at this time, the user may touch the "Modify" button to call the "IP Address modification" interface, in order to modify the IP address. The interface is as shown below:



Then, move the cursor to the desired digit and touch the red "DEL" button to remove the existing digits, and then the user may enter the target values on the number keyboard, and press the "OK" button to confirm the modification and exit the input interface.

- The procedures for setting up the subnet mask is the same as those of IP address.
- After all setup operations are completed, the user may press the  button on the upper right to exit the network setup interface.

### 2.6.2 Camera Tracking and Positioning

The user may touch the "Camera Positioning" icon on the "System Setup" interface to enter the camera tracking and positioning setup interface, which is as shown below:



On this interface, the user may select the desired communication protocol of cameras and can set up the swing speed of cameras and can enter the camera positioning interface for further operation.

**Tips: No speech will be delivered on the conference units during the setup period of camera tracking and positioning functions.**

- Communication protocol: D62 series smart digital conference system provides three options: PELCO D -9600, PELCO P -9600 and VISCA -9600. In order to select the desired option, the user can touch the black arrow after the protocol box to open the drop-down list, and then touch the target communication protocol in the list to complete the whole operation. The communication protocol may vary from cameras of different brands, therefore, all

the four cameras connected to the controller must be products of the same brand.

- Swing speed of camera: With this option, the user can set up the step size when the camera swings. Larger step size means faster swing speed, and the swing range will be larger, otherwise smaller step size means slower swing speed, and the swing range will be smaller. But slower swing speed will result in better positioning precision. In order to set up the swing speed, the user may only need to slide the block to the desired position to complete the setup process.
- Camera positioning: The user may touch the "Camera Positioning" button on the graphic interface to enter the setup interface, which is as shown below:



On this interface, the user may point a camera to a particular conference unit, and the setting will be saved for future use. With this interface, the user may set up 32 conference units which will be tracked by the cameras and save 32 camera positioning plans.

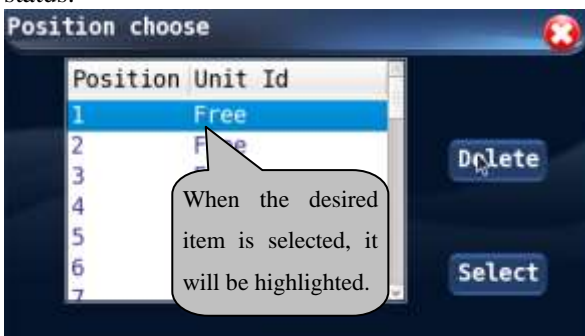
To set up the camera positioning, the user should select a camera (Camera 1# for example) and then modify the conference unit ID which will be tracked by the camera (The Unit ID should be the ID of conference unit to be tracked). The user may enter the desired unit ID (for example the unit ID is 0001), via a number keyboard, on the interface shown below, and then the user may use



the button to adjust the position and focal length when the camera is pointed to such conference unit;



Finally, the user should save the position information of cameras. He/she can touch the "Modify" button after the "Save as preset point" to enter the modification interface. Then he/she can touch the preset points (for example "1") and then touch the "Select" button to complete the operation and exit the interface. If after the user selects a preset point, he/she touch the "DEL" button, then the position information saved on such preset point will be deleted and the preset point will be in an idle status. Preset points without position information are also in idle status.



After modification to the preset points, the user can touch "Save" button to save the position information, and in future application, the user may touch the "Call" button to call the saved position plans. In each time, the system will call the preset point after the "saved preset point" (for example, the number box will display "2").

### 2.6.3 Unit Inspection


On the "System Setup" interface, the user can touch the "Unit Inspection" icon to enter the unit inspection interface. The interface is as shown below:



Before the conference commences, it is necessary

to inspect every conference units. The items to be inspected include: "microphone, LCD screen, operation buttons, LED indicating lights and speaker". Inspection may be done manually or automatically and the inspection time is also adjustable. The inspection will be carried out on the conference units currently displayed, and the ID of such units will be displayed on the upper left corner of the interface.

#### Procedures for automatic inspection:

- Touch the "Automatic Inspection" button and the button is selected if it is highlighted.
- Set the "Unit inspection time", which will be effective in automatic inspection. The time may be 20-100 seconds. Touch the small arrows  after the "Unit inspection time" to adjust the time. After the inspection time is set up, the system will automatically inspect all inspection items of a conference unit, including "microphone, LCD Screen, buttons, LED lights and speaker". After the inspection on one conference unit is completed, the system will automatically proceed with the next one.
- In order to stop the automatic inspection, please touch the "Stop inspection" button.

**Tips: No speech will be delivered on the conference units during inspection to the conference units.**

#### Procedures for manual inspection:

1) Inspection to microphone

- Touch the "Inspect the microphone" button (the button is selected when it is highlighted in light blue color);
- Touch the "Start Inspection" button to inspect if the microphone can be activated and deactivated normally. During the inspection, the LED on power button and surrounding the microphone will be on and messages of "Inspecting" will be displayed on the inspection interface and the "Start inspection" button will change to "Stop inspection". Message of "Microphone is being inspected..." will be displayed on the LCD screen of the conference unit.
- After the selected conference unit is inspected, the user can touch the "Stop inspection" button to stop the inspection and the LED lights on the conference unit inspected will be off. Or otherwise, the user may touch the "Previous Unit" or "Next Unit" to inspect other conference units connected to the conference controller and stop the inspection after all conference units are inspected.

## 2) Inspection to LCD screen

- Touch the "Inspection to LCD Screen" button and the button is selected if it is highlighted.
- Touch the "Start inspection" button to inspect the LCD screen of the selected unit.
- Touch the "Previous Unit" or "Next Unit" to inspect other conference units connected to the controller.

## 3) Inspection to buttons


- Touch the "Inspection to Buttons" button and the button is selected if it is highlighted.
- Touch the "Start inspection" button to enter unit button inspection status, and then the user should press the buttons on each conference unit to see if they work properly. When the user press a function button, if the corresponding indicating light is on and then is automatically off, it means that the button can work properly.
- After inspection to all buttons, the user should touch the "Stop inspection" button to stop the inspection, or he/she can touch other inspection item to continue with the inspection.

## 4) Inspection to LED indicating light

- Touch the "Inspection to LED" button and the button is selected if it is highlighted.
- Touch the "Start inspection" button to enter Unit LED inspection status, and then all LED indicating lights on the conference units being inspected will blink.
- The user may touch the "Stop inspection" button to stop the inspection, or he/she can touch other inspection item to continue with the inspection.

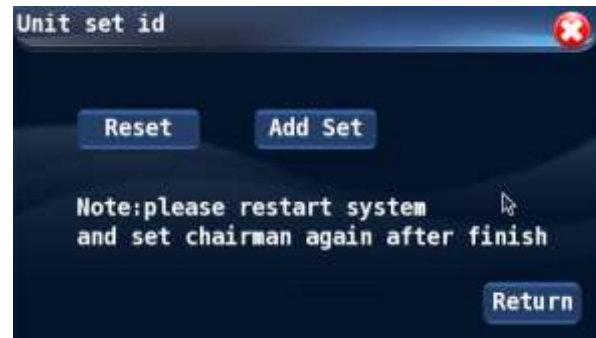
## 5) Inspection to speaker

- Touch the "Inspection to speaker" button and the button is selected if it is highlighted.
- Touch the "Start inspection" button to enter the unit speaker inspection status, and the speakers of conference units being inspected will beep, this means that the speaker can work properly.
- The user may touch the "Stop inspection" button to stop the inspection, or he/she can touch other inspection item to continue with the inspection.

After all inspection items are completed, the user should touch the  icon to exit the inspection interface.

### 2.6.4 Numbering of conference units

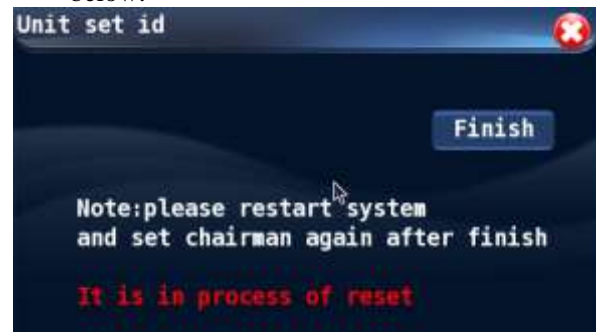
Touch the "Unit numbering" button on the "System setup" interface to enter the unit numbering interface which is as shown below:



On this interface, the user can renumber all the existing conference units and number the newly connected units.

#### 1) Renumbering

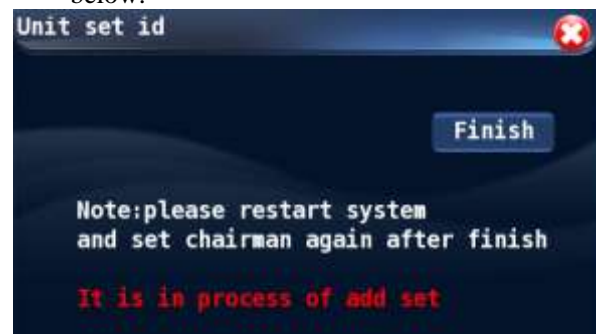
- On the "Unit Numbering" interface, the user can touch the "Renumber" button to enter the renumbering interface which is as shown below:



- On the interface shown above, the user should set up the unit ID on the conference units to be renumbered (please refer to the description on conference setup section for information with respect to unit numbering operations). After the operation has completed, the user should touch the "End" button as shown above, to exit the interface.
- After all conference units are numbered, the unit IDs renumbered will take effect after the conference controller is power off and restarted.

#### 2) Add new ID


- On the "Unit Numbering" interface, the user can touch the "Add new ID" button to enter the operation interface which is as shown below:



- The user should set up the IDs on newly added conference units and after the setup operation, he/she should touch the "END"

button on the interface shown above to exit the interface.

- After all new conference units are numbered, the newly added unit IDs will take effect after the conference controller is power off and restarted.

After the conference units are numbered, the user may touch the  icon on the upper right corner of the "Unit Numbering" interface to exit the numbering interface.

**Tips: After the conference units are renumbered, the camera tracking information and the chairman unit assigned will be deleted, so the user needs to reset them.**

### 2.6.5 Unit Setup

Touch the "Unit Setup" button on the "System setup" interface to enter the unit setup interface which is as shown below:




On the unit setup interface, the following setup operations are available:

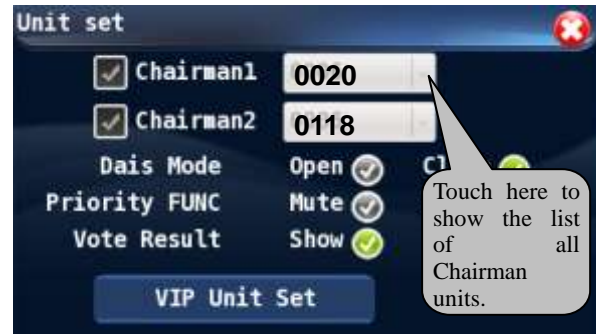
- "Chairman unit 1"
- "Chairman unit 2"
- "Platform mode"
- "Priority"
- "Vote result display"
- "Setting of VIP units"

#### 1) Chairman unit

D62 series smart digital conference system allows 2 chairman units which are given the priority to make speeches, and they can operate simultaneously. The setup procedures are as follows:

- On the "Unit Setup" interface, touch and select the "Chairman Unit" (for example, Chairman Unit 1 is selected). When an option is selected, the  icon before such option will be displayed in green color.
- Touch the black arrow after the ID box of conference unit to unfold the drop-down list, and select the ID from the menu for "Chairman Unit 1" or "Chairman Unit 2".

- After all conference units are numbered and the conference system is restarted, the Chairman Units will be automatically identified and its ID will be displayed in the list on the operation interface.
- The ID of conference unit set as a Chairman unit will be displayed on the following interface.



If ten chairman units are connected to the system, then after all conference units are renumbered, all the ten chairman units will be identified by the conference controller and will be displayed on the list as shown above.

#### 2) Platform mode

- To set up the platform on/off status of Chairman Unit 1 and Chairman Unit 2, the user may simply touch the desired option to complete the setup operation.
- If the Platform mode is "ON", then both the two chairman units will be always on and the ON/OFF button the chairmen unit will be ineffective; if the platform is "OFF", the chairman unit will be operated by the On/Off button on such units.

#### 3) Priority

- The user may set the priority of Chairman Unit 1 and Chairman Unit 2 as "Mute" or "Off". The user may touch the options after "Priority" on this interface to complete the setup.
- If "Mute" is selected, then in the conference, when the chairman presses the priority button, then all activated conventioner unit will be turned to mute status. After the activated conventioner unit is mute, the On/Off LED light on the microphone will blink, and a sound off message will be displayed on LCD screens of the Chairman unit and the conventioner units. Please refer to the description of conference unit setup section for detailed information as the content displayed and the operation instructions. If it is no longer necessary to turn off the microphones of conventioner units, they chairman may press the priority button and cancel the sound off status by following the instructions on the LCD screen, the conventioner unit will be able to

deliver speeches.

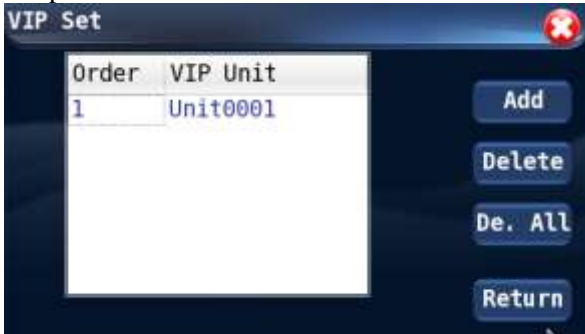
- If "Off" is selected, then in the conference, when the chairman presses the priority button, then all activated conventioner unit will be turned off.

4) Vote result display (**Only effective on units with LCD screen**)

- With this option, the user may decide if the vote result will be displayed on all conference units including the Chairman Unit 1 and Chairman Unit 2. The user may touch the options after "Vote Result Display" button to complete the setup.
- If "YES" is selected, then the vote result will be displayed on all conference units; of "NO" is selected, then the vote results will not be displayed on LCD screens of any conference unit other than the chairman unit 1 and 2.

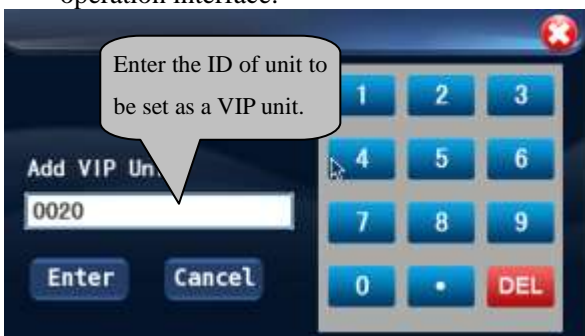
5) Setting of VIP units

The user may touch the "VIP Unit Setup" button on the "Unit Setup" interface to enter the VIP unit setup interface which is as shown below:



D62 series smart digital conference system allows a maximum number of 30 VIP units. The VIP unit may be a conference unit of whatever type. When the total activated conference unit is less than 20 under FREE mode and 10 under any other mode, the VIP unit is free from limitation of conference mode and may be turned on/off freely.

- On the interface shown above, the user may add new VIP units by touching the "ADD" button. The conference system allows a maximum number of 30 VIP units. Touch the "ADD" button to enter the VIP unit operation interface:



On the interface as shown above, they user may enter the ID of conference unit to be set as a VIP unit, and then touch the "OK" button to confirm

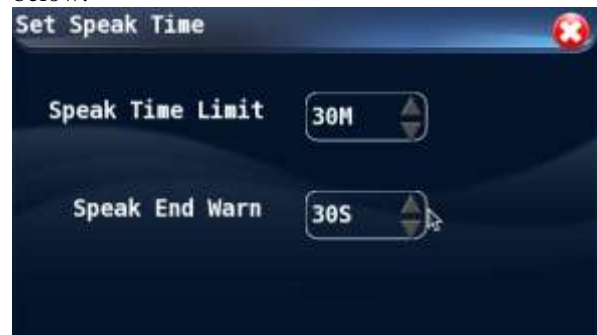
and exit the interface.

- The user can touch the "DEL" button to delete the VIP unit selected.
- They user may touch the "DELETE ALL" button to delete all existing VIP units.
- With the "Return" button or by touching the icon, the user can exit VIP setup interface and return to the unit setup interface.

After the unit setup is completed, the user may touch the icon on the upper right corner to exit the unit setup interface and return to the main interface of the system.

**2.6.6 Timing of speeches**

The user may touch the "Timing of Speeches" button on the "System Setup" interface to enter the timing setup interface which is as shown below:



On this interface, the user can set up the time limit for speeches of conventioners and the speech unit will be automatically shut off when the time is over. The time limit can be any value between 1 and 300 minutes. D62 series digital conference system provides a countdown warning function, and the user can set up the countdown time in this interface, which should be with the range between 1 and 60 seconds. The countdown will also be displayed on the speech unit. If the speech timing function is not needed in the conference, then it can be set as "OFF".

The user can adjust the values of time limit and countdown function to the desired value by touching the small gray arrows after the time

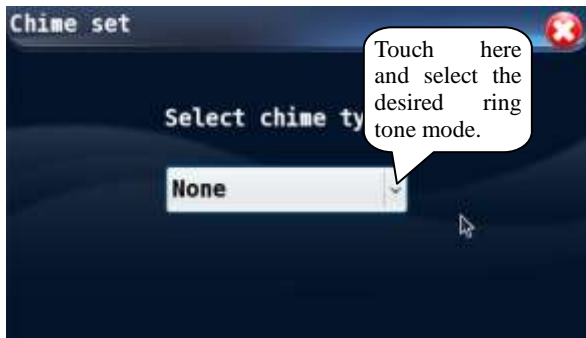


indication

After the time value setup is completed, the user may touch the icon on the upper right corner to exit the setup interface and return to the main interface of the system.

**2.6.7 Ring tone setup**

The user may touch the "Ring tone" icon on the "System Setup" interface to enter the ring tone setup interface which is as shown below:



Select the prompt tone when the microphone is turned on or off. The options available for setup includes:

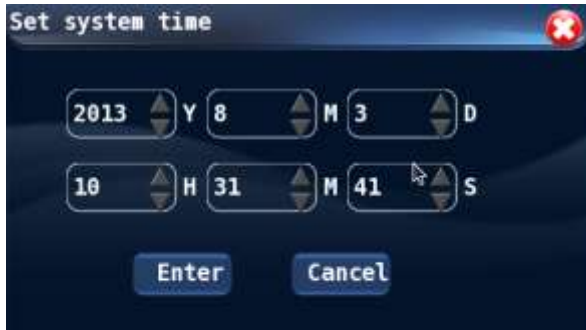
- "No ring tone"
- "Ring tone 1"
- "Ring tone 2"
- "Ring tone 3"

1) "No ring tone" means that there is no indicating sound when the microphone of conference unit is powered on or off.

2) "Ring tone 1- Ring tone 3" indicates that one of the ring tones will be played when the microphone on the conference unit is turned on/off.

### 2.6.8 System time setup

The user may touch the "Time" icon on the "System Setup" interface to enter the system time setup interface which is as shown below:



On this interface, the user may adjust the current system time which will be displayed on the main interface.

- 1) To set the system time, the user can touch the gray arrows respectively after the values of Year, Month, Data, Hour, Minute and Second to adjust the system time.
- 2) After the setup is completed, the user should touch the "OK" button to confirm and exit the system time setup interface.

### 2.6.9 Display setup

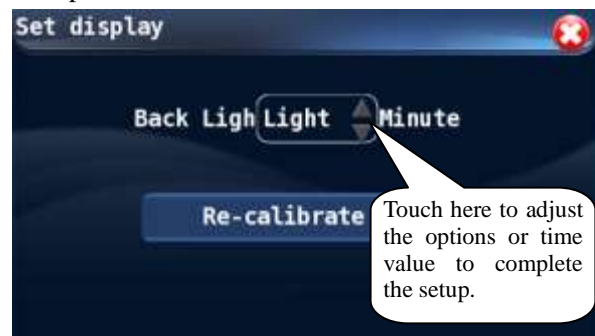
The user can touch the "Display" icon on the "System Setup" interface to enter the conference controller LCD screen setup interface. The options available for setup includes:

- "Backlight on time"
- "Touch screen calibration"

#### 1) Backlight on time

This is the time or status set for the backlight of LCD screen on the conference controller.

- After the user sets up the backlight times, if there is no operation on the equipment within such period of time, the back light of LCD screen will be off and it will be on again if any operation is made on the equipment, so that it helps to save energy and to extend the service life of LCD screen. The backlight time may be any value between 1 and 240 minutes.
- If the backlight is set as "Always On", then the backlight will be on for the period after the equipment is powered on and before it is powered off.



- The user can touch the gray arrows after the "backlight time" to adjust the option or backlight time.

#### 2) Touch screen calibration

After the equipment is used for a certain period, due to the rise of temperature or other factors, the touch point is not precise and it may be hard to move the touch point to the desired operation item, at such time, the user needs to calibrate the touch screen by following the following procedures:

- Touch the "Screen Calibration" button on the "Display Setup" interface to enter the screen calibration interface.
- After the touch screen is in the calibration status, the system will automatically restart and enter the screen calibration interface after a while.
- On the calibration interface, the user should touch the center of the small circle on the screen with the sharp end of the pen (Note: Touch the exact center of the circle).
- Repeat the calibration on all four corners and the center of the touch screen, otherwise, it will be hard to move the cursor to the desired option. In such cases, the user can connect a USB mouse to the system to enter the touch screen calibration interface, in order to restart the system and complete the calibration. Or otherwise, the user may also operate the system by using the mouse.

**Important:**

During touch screen calibration, it is very important to point the pen to the center of the "+", otherwise the user may not be able to operate the system. The touch pen should be used to operate the touch screen during the calibration, which helps to reduce the chances of misoperation.

**2.6.10 General Setup**

The user may touch the "General" icon on the "System Setup" interface to enter the general setup interface which is as shown below:



The options on the general setup interface includes:

- "Language"
- "Export configuration file to USB flash disk"
- "Import configuration file to the system"
- "Modify the Password on the Equipment"
- "Machine Code of this Equipment"

## 1) Language selection

With this option, the user can setup the display language for the system. The conference system supports Chinese and English languages. Touch the small arrow after the language bar to open the drop-down menu, and then touch the desired option. Then close the setup interface and return to the main interface.

## 2) "Export configuration file to USB flash disk"

- With this conference system, the user can back up the system to or restore the system from a USB flash disk. Before the export operation, please make sure that a USB flash disk has been connected to the USB port of the controller, otherwise the system will prompt: "No USB flash disk found, please check".
- Touch the "Export configuration file to USB flash disk" to complete the exportation operation. A dialog will show in the interface, indicating that the exportation operation has been successfully completed.

## 3) Import configuration file to the system

- With this operation, the user can restore backup system parameters to the conference

controller system, in order to restore such parameters. Before the import operation, please make sure that a USB flash disk has been connected to the USB port of the controller, otherwise the system will prompt: "No USB flash disk found, please check".

- Touch the "Import configuration file to the system", and then touch the "OK" button in the dialog box to copy the configuration file to the system. After the configuration file is copied to the system, the system will be restarted automatically in order to load the system parameters restored.

## 4) Modify the password on the equipment

The user can touch the "Modify the password" button on the "General Setup" interface to enter the password modification interface which is as shown below:



- The user may set a password for accessing the "System Setup" interface.
- To modify the password, the user need to input the current password, which is 111111 by default, and then touch the "OK" button to enter the new password and confirm the password by input such new password again. The new password will take effect after the user reconfirms such password.
- Every time when the user attempts to enter the "System Setup" interface, he/she should enter the password, so it is strongly recommended to remember the password.

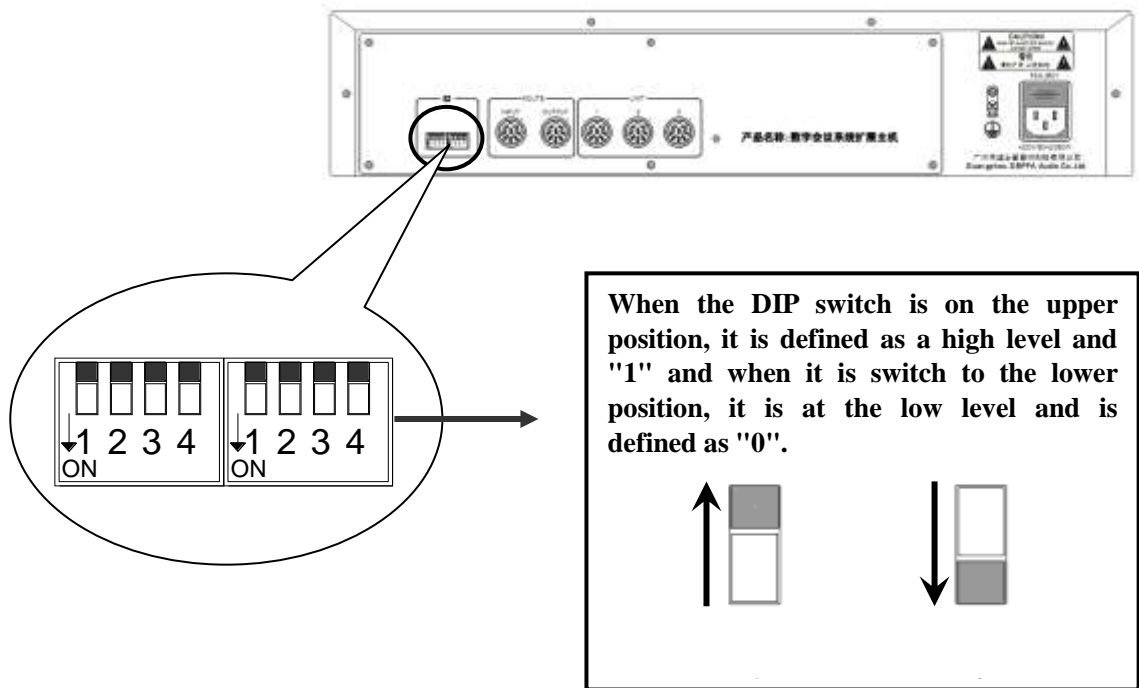
## 5) Machine Code of this Equipment

On this interface, the user can view the machine code, which is set when the equipment is delivered from the manufacturing factory. Each equipment has a unique machine code.

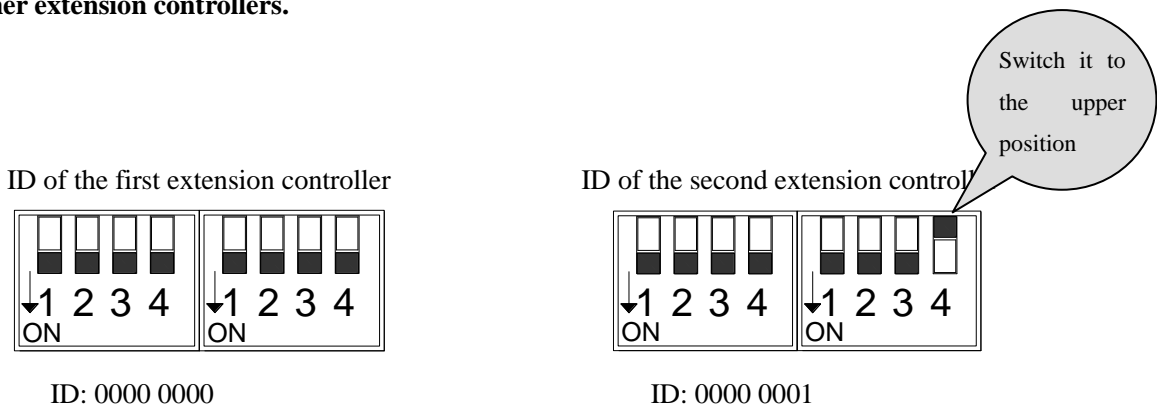
## 2.7 Configuration of Address Coding on Extension Controller

D62 series digital conference system has very good extensibility scalability. In the system up to 32 extension controllers may be connected to the conference controller, and with such extension controllers, the whole system may have 4096 conference units. In order to tell the controllers from one another, it is necessary to assign a unique address code (ID code) to each extension controller.

The address code of a extension controller is on the rear panel of such controller, which is realized by 8 bit ID DIP switches. The system connection is as follows:



For example, the ID code of the first extension controller is set as 0000 0000, then all such DIP are switched to the lower position; the ID code of the second controller is 0000 0001, then the last DIP is at the high level while all others are at the lower position. The setting on the rear panel of extension controller is as shown below. Please refer to the List of Extension Controller IDs for information with respect to the setup of other extension controllers.



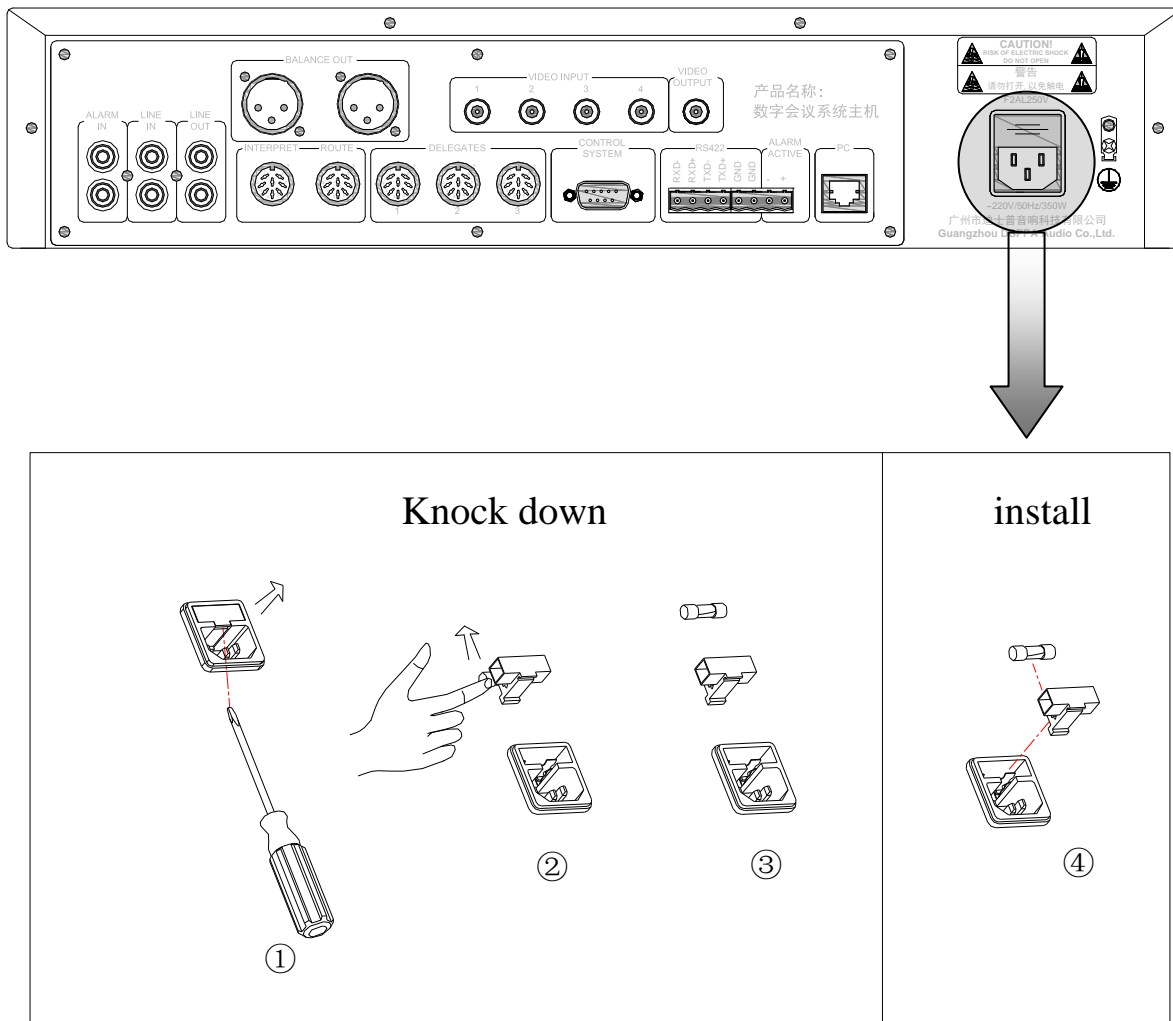
## List of Extension Controller ID

Equipment ID	ID	Equipment ID	ID
1#	0000 0000	27#	0001 0000
2#	0000 0001	28#	0001 0001
3#	0000 0010	19#	0001 0010
4#	0000 0011	20#	0001 0011
5#	0000 0100	21#	0001 0100
6#	0000 0101	22#	0001 0101
7#	0000 0110	23#	0001 0110
8#	0000 0111	24#	0001 0111
9#	0000 1000	25#	0001 1000
10#	0000 1001	26#	0001 1001
11#	0000 1010	27#	0001 1010
12#	0000 1011	28#	0001 1011
13#	0000 1100	29#	0001 1100
14#	0000 1101	30#	0001 1101
15#	0000 1110	31#	0001 1110
16#	0000 1111	32#	0001 1111

## 2.8 Installation/Removal of Fuse

If the fuse is blown, please replace it with fuse of the same specification. Please refer to the information printed under the power socket for information as to the specifications of fuse; or the user may refer to the "Power supply protection" section of the "Performance and specification -- General" on the User's Manual for information; or otherwise, the user may remove the blown fuse to check its specification.

**The position of the fuses is as indicated on the picture below:**



Procedures for replacement of fuses:

1. Before the fuse is replaced, please cut off the power supply and unplug the equipment from the socket.
2. As shown by Fig. ①, a straight screwdriver should be used to remove the fuse.
3. Remove the fuse from the holder and check if it is blown and its specification.
4. Install a fuse of the same specification back to the holder in accordance with the instructions shown on Fig. ④.

Note: When the fuse is pushed into the holder, there is a clicking noise which indicates that the fuse is in its position.

# Chapter III Conference unit

## 3.1 General Description of Conference Unit

The conference units provides functions such as speech, vote, check-in and self-checking. The exquisite design is humanized and has contemporary characteristics. The conference units adopt heart-shape directive microphone, built-in magnetic loudspeaker, headphone jack, and also provide power-on indicating light and button and light indicators. In VOICE mode, it can realize voice controller of/off function. It has high speed digital processors and HiFi audio circuits, and can indicate the work status of LCD screen. It can work under several operation modes, and also provides functions such as echo elimination, howl restraining, and background noise elimination.

The conference units include chairman speech units, conventioner speech units, speech-only units and interpretation units. By the functional features, conference units can be classified as integrated vote and speech unit, speech-only unit and vote-only unit; according to the design structure, they can be classified as desktop unit and embedded unit.

Chairman unit has the priority to deliver speeches and the authority to approve speech application from conventioners. It can call for voting and is free from limitations on number of spokesman. It has the full authority to take control on the discipline at the conference site; in a D62 series digital conference system, it allows 2 chairman units at a same time, and the position of chairman units are free from position restrictions.

Conference units are passive equipment and are powered by the controllers. The input voltage is 24V; they are easy to use, has clear voice and is

easy to install and has fashionable appearance.

### Models of conference units

**D6221 Desktop Chairman Speech/Vote Unit**

**D6222 Desktop Conventioner Speech/Vote Unit**

**D6223 Chairman Speech unit**

**D6224 Conventioner Speech Unit D6224**

## 3.2 D6221/D6222 unit

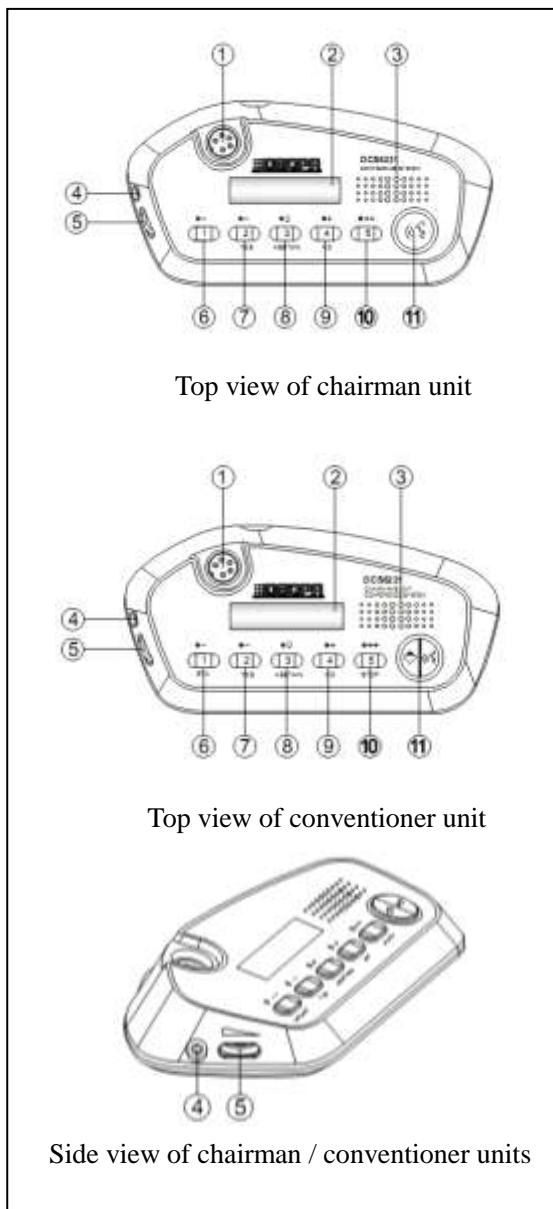
### D6221 Desktop Chairman Speech/Vote Unit

### D6222 Desktop Conventioneer Speech/Vote Unit

#### 3.2.1 Functional feature

- ◆ Compliant with IEC 60914 international standard.
- ◆ A conference unit integrating functions such as speeches and votes.
- ◆ The conference has 2m 8 core high-density DIN cable with an aviation plug.
- ◆ Electret, heart-shaped, directive, condenser type microphone, with double-color ring type indicating lights (red/green). The indicating light is red when speech is made and in green when an application has been sent.
- ◆ The microphone rod has a number of lengths for selection: 315mm, 320mm, 415mm and 430mm, and they may be in black or silver white colors.
- ◆ The microphone rod is removable, so it is easy to maintain and store.
- ◆ Magnet HiFi speaker, which is muted when the microphone is one, and it is not easy to produce howl.
- ◆ 3.5mm stereo headphone jack for connection of headphones and the headphone volume is adjustable.
- ◆ Very strong anti-jamming capability from mobile phones.
- ◆ Microphone on/off switch, 5 vote buttons and chairman units has additional chairman priority button.
- ◆ Conference check-in function.
- ◆ Each conference unit has a unique ID code.
- ◆ High brightness LCD screen, when in working it can display in real time:
  - ✓ The ID, number of conventioners applying for speech, vote results, number of check-in conventioners and other operation messages;
- ✓ User can switch between simplified Chinese and English languages in message displaying.
- ◆ With cameras, after properly configured on the conference controller or PC control software, it supports automatic camera tracking function.
- ◆ When used with a conference controller, the conference can realize self-checking function. The check items include: buttons, microphone, LED indicating lights, LCD screen and built-in speaker.
- ◆ The unit is a passive equipment and is powered by the system controller, with input voltage being 24V.
- ◆ When the microphone is one, the speaker in the conference unit will be closed automatically to avoid sound echo.
- ◆ The conference unit has prompt tones when it is powered on, and the prompt tone may be deactivated.
- ◆ After setup on the conference controller, the chairman unit has the priority (to turn off the sound or close the conventioner unit), platform mode (the chairman unit is always on).
- ◆ With the chairman unit, the conference chairman can approve applications of conventioners fro speeches.
- ◆ Chairman units are free from restrictions of speaking persons and may be activated freely.
- ◆ Chairman units has the priority to maintain order at the conference site.
- ◆ Chairman units are free from position limitations.
- ◆ Connection in "hand-in-hand" "T" and "+" modes.

### 3.2.2 Buttons and functions on the front panel



#### 1. Microphone jack

- Removable 5-core spiral microphone jack.

#### 2. LCD high-brightness screen

- Real-time display of the ID and working status of the conference unit as well as the vote results and operation information.

#### 3. Built-in speaker

- It is used to output the sound from speeches of other units and the secondary input audio. The volume may be adjusted by the unit or by the conference controller and remote control software.
- The speaker will be turned off when the microphone is powered on or an headphone is plugged.

#### 4. Headphone jack

- Headphone is connected to the unit via a 3.5mm connector.

#### 5. Volume adjusting knob

- It is used to adjust the volume of headphone and speaker.

#### 6. Button "1"

- It can work with the PC control software to realize rating operation. Please refer to the User's Manual of PC software for detailed operation procedures.

#### 7. Button "2"

- It is used to select the display language and is also a functional button in voting;
- It can work with PC control software to realize rating operation.

#### 8. Button "3"

- It is a functional button to view the status of microphone, to vote and to select the display language;
- It can work with PC control software to realize rating operation.

#### 9. Button "4"

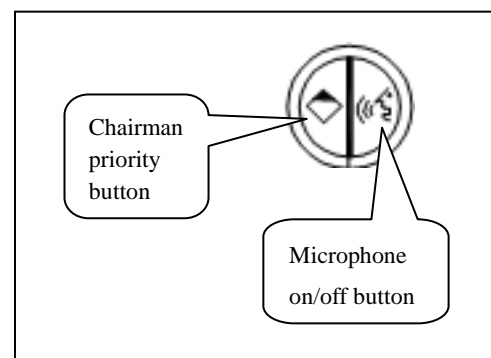
- It is used to select the display language, to vote and to return to the parent interface;
- It can work with PC control software to realize rating operation.

#### 10. Button "5"

- It is a functional button to end the voting / return to the parent interface;
- It can work with PC control software to realize rating operation.

#### 11. Microphone power on/off button and its indicating light

- Conventioner unit microphone on/off button/speech application button and button indicating light. The indicating light is one when this button is pressed to power on the microphone; the indicating light blinks when this button is pressed to send a speech application, when the conference units are renumbered and when the camera tracks the spokesman.
- Chairman unit microphone on/off button and chairman priority button and indicating light.



- The indicating light blinks when the button is pressed to power on the microphone, when the conference units are renumbered and when the camera tracks the spokesman.
- When the Chairman priority button is pressed, the conference unit delivering a speech will be mute or closed.

## 3.2.3 Index Parameters

Model	D6221/D6222	
Structure and Type	Desktop	
Output frequency response	45Hz-18kHz (-3dB)	
Speaker Power	1.5W	
Static power consumption	<1W	
Max. power consumption	2W	
SNR	>80dB	
Crosstalk Attenuation	>80dB	
Harmonic distortion	<0.5%	
Headphone Output	9dBu, 8-32Ω, 3.5mm	
Working Power Supply	DC 24V power supply	
Port on the unit	8pin DIN socket	
Microphone	Type of microphone	Electret, heart-shaped, condenser type
	Frequency response	40Hz-20kHz (-3dB)
	Sensitivity	-45dBV/pa
	Input impedance	2kΩ
	Equivalent Noise	20dB (SPL)
	Max SPL	125dB (THD<3%)

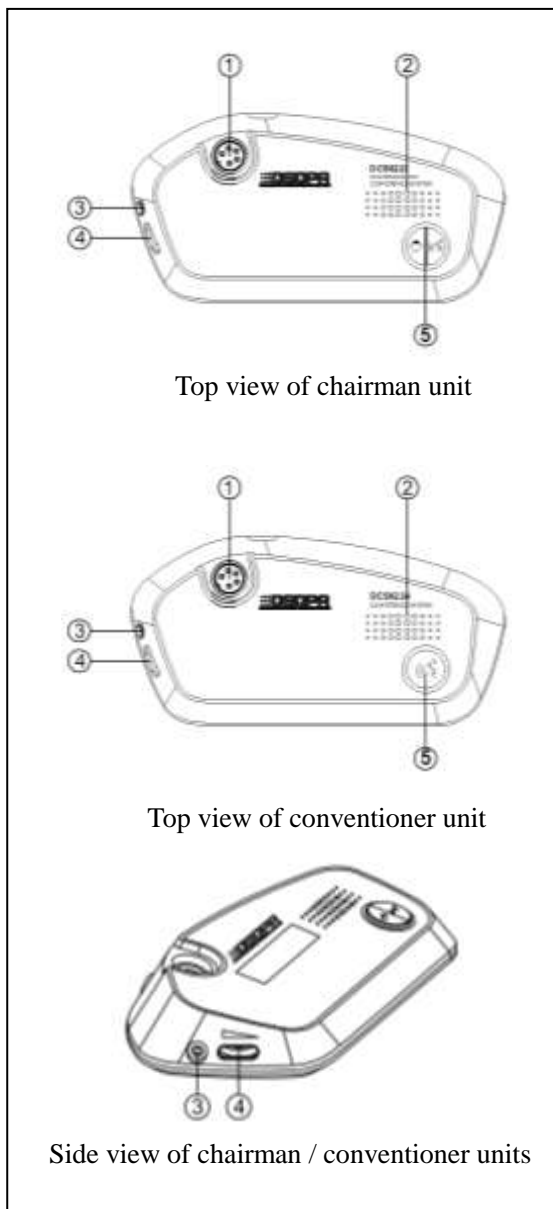
### 3.3 D6223/D6224 unit

#### D6223 Desktop Chairman Speech Unit D6224 Desktop Conventioneer Speech Unit

##### 3.3.1 Functional feature

- ◆ Compliant with IEC 60914 international standard.
- ◆ Speech-only conference unit.
- ◆ The conference has 2m 8 core high-density DIN cable with an aviation plug.
- ◆ Electret, heart-shaped, directive, condenser type microphone, with double-color ring type indicating lights (red/green). The indicating light is red when speech is made and in green when an application has been sent.
- ◆ It adopts microphones with knob connectors, mini microphone with a wind shield. The microphone rod may be 315mm, 320mm, 415mm or 430mm long and may be black or white in color.
- ◆ The microphone rod is removable, so it is easy to maintain and store.
- ◆ Magnet HiFi speaker, which is muted when the microphone is one, and it is not easy to produce howl .
- ◆ 3.5mm stereo headphone jack for connection of headphones and the headphone volume is adjustable.
- ◆ Very strong anti-jamming capability from mobile phones.
- ◆ It has a on/off button and the chairman unit has a chairman priority button.
- ◆ Conference check-in function.
- ◆ Each conference unit has a unique ID code.
- ◆ With cameras, after properly configured on the conference controller or PC control software, it supports automatic camera tracking function.
- ◆ When used with a conference controller, the conference can realize self-checking function. The check items include: buttons, microphone, LED indicating lights and built-in speaker.
- ◆ The unit is a passive equipment and is powered by the system controller, with input voltage being 24V.
- ◆ It has automatic EQ adjustment function, which helps to reduce howl. When the microphone is on, the speaker on the current conference unit will be automatically closed in order to avoid sound echo.
- ◆ The conference unit has prompt tones when it is powered on, and the prompt tone may be deactivated.
- ◆ After setup on the conference controller, the chairman unit has the priority (to turn off the sound or close the conventioneer unit), platform mode (the chairman unit is always on).
- ◆ With the chairman unit, the conference chairman can approve applications of conventioneers fro speeches.
- ◆ Chairman units are free from restrictions of speaking persons and may be activated freely.
- ◆ Chairman units has the priority to maintain order at the conference site.
- ◆ Chairman units are free from position limitations.
- ◆ Connection in "hand-in-hand" "T" and "+" modes.

### 3.3.2 Buttons and functions on the front panel



#### 1. Microphone jack

- Removable 5-core spiral microphone jack.

#### 2. Built-in speaker

- It is used to output the sound from speeches of other units and the secondary input audio. The volume may be adjusted by the unit or by the conference controller and remote control software.
- The speaker will be turned off when the microphone is powered on or an headphone is plugged.

#### 3. Headphone jack

- Headphone is connected to the unit via a 3.5mm connector.

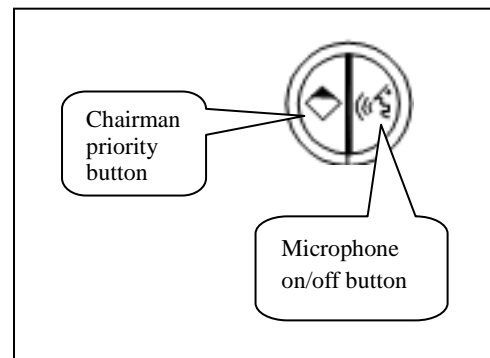
#### 4. Volume adjusting knob

- It is used to adjust the output volume of

headphone and speaker.

#### 5. Microphone power on/off button and its indicating light

- Conventioner unit microphone on/off button/speech application button and button indicating light. The indicating light is one when this button is pressed to power on the microphone; the indicating light blinks when this button is pressed to send a speech application, when the conference units are renumbered and when the camera tracks the spokesman.
- Chairman unit microphone on/off button and chairman priority button and indicating light.



- The indicating light blinks when the button is pressed to power on the microphone, when the conference units are renumbered and when the camera tracks the spokesman.
- When the Chairman priority button is pressed, the conference unit delivering a speech will be mute or closed.

### 3.3.3 Index Parameters

Model	D6223/D6224	
Structure and Type	Desktop	
Output frequency response	45Hz-18kHz (-3dB)	
Speaker Power	1.5W	
Static power consumption	<1W	
Max. power consumption	2W	
SNR	>80dB	
Crosstalk Attenuation	>80dB	
Harmonic distortion	<0.5%	
Headphone Output	9dBu, 8-32Ω, 3.5mm	
Working Power Supply	DC 24V power supply	
Port on the unit	8pin DIN socket	
Microphone	Type of microphone	Electret, heart-shaped, condenser type
	Frequency response	40Hz-20kHz (-3dB)
	Sensitivity	-45dBV/pa
	Input impedance	2kΩ
	Equivalent Noise	20dB (SPL)
	Max SPL	125dB (THD<3%)

## 3.4 Connection

### 3.4.1 Connection of conference units to controllers

All conference units for this series digital conference system have 2m cable with a plug. The conference units are connected to the controllers as shown in the figure below.

When the conference units are connected to the conference controller, in addition to the cables provided with such conference units, additional extension cable and "+" adapters may be needed. The system connection is as follows:

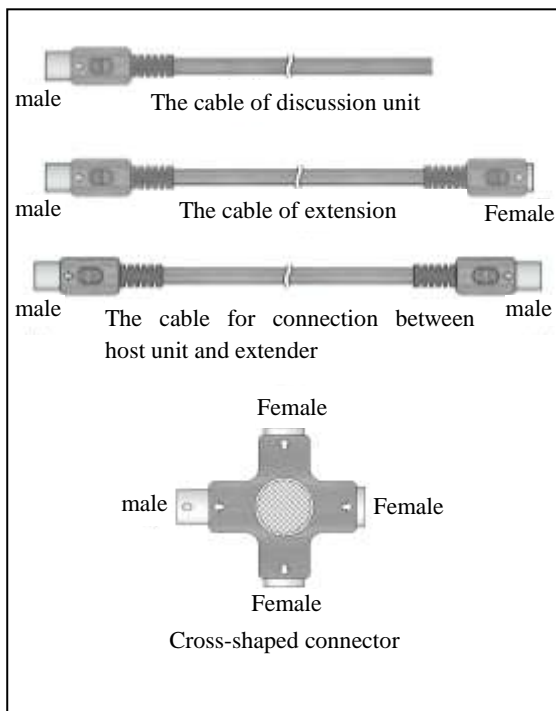


Fig. 3.1 Connection diagram of conference system

In the diagram above:

- ◆ One of the two ends of the cables are connected to the conference units, while in most cases, the other end is connected to the socket on an adapter and there is little chance that such conference units are directly connected to the conference controller.
- ◆ Standard extension cables may be 5m, 10m, 20m, 30m, 50m or 100m in length. Extension cables with a plug on one end and a socket on the other end are used to connect such conference units, while extension cables with plugs on both ends

are used to connect the conference controller and extension controllers and to connect the conference units and extension controllers.

- ◆ "+" adapters are required for connection of all conference units.

In order to connect the conference units, please connect the plug to the unit output port on the conference controller first and then connect the socket on the other end to the plug of the "+" adapter, and then connect the plug to the socket on the "+" adapter. Connection of 128 conference units to the 3 route outputs are as shown below:

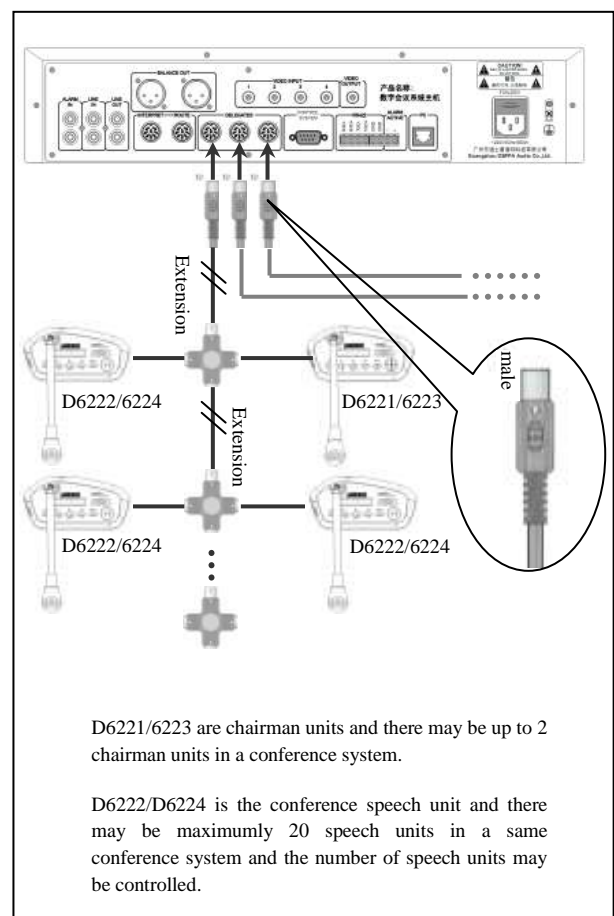
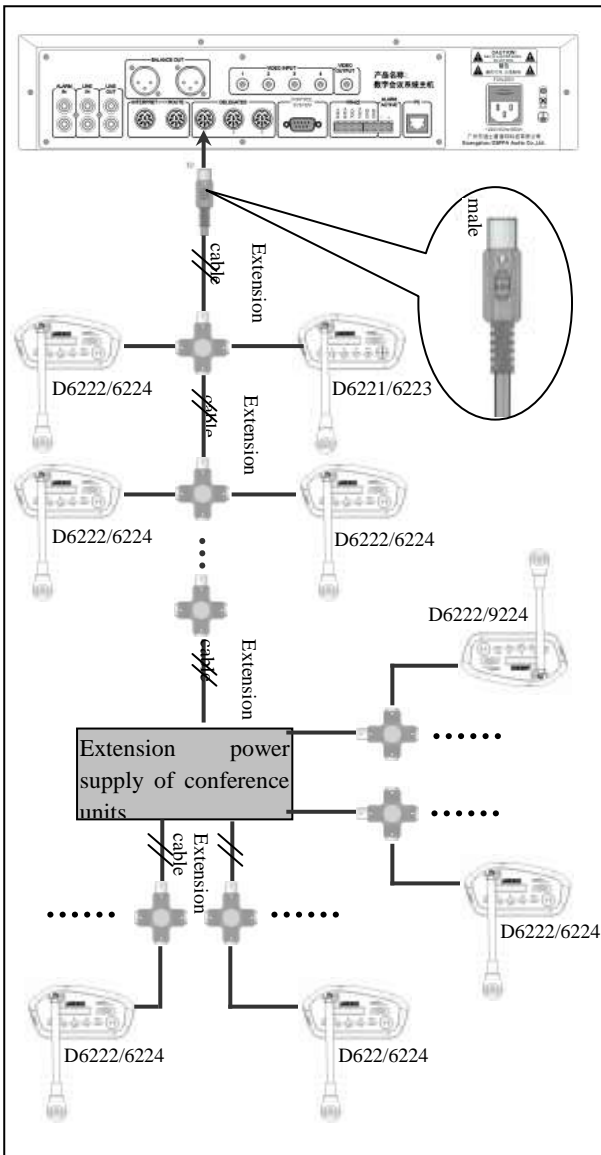


Fig. 3.2 Connection between conference controller and conference units

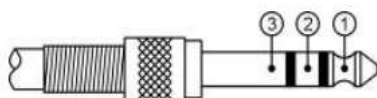
When 128 units are all connected to one route output, it is necessary to ensure that the total power consumption of all units on a route, plus the power loss of extension cables, is no greater than the overall power on such port. otherwise it may lead to system faults. When the number of conference units connected to a single route is more than 1/3 of 128, it is necessary to configure a extension power supply. It is as shown below:



**Fig. 3.3 Connection between conference controller and conference units**

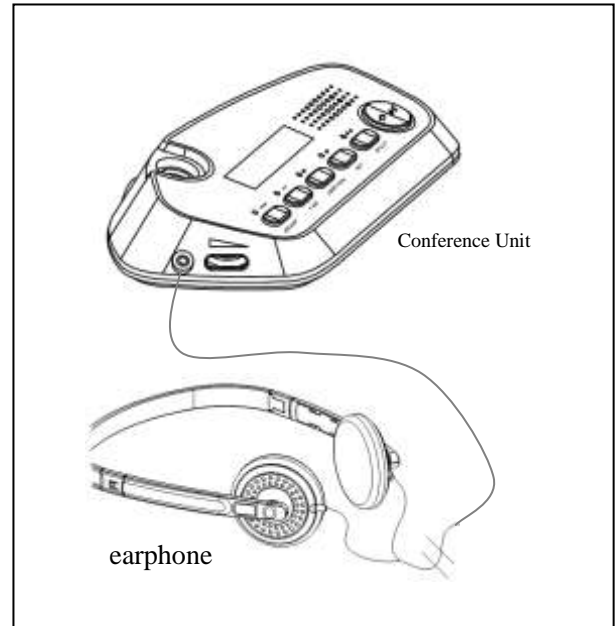
**3.4.2 Headphone connection**

A headphone can be connected to the conference unit via the headphone jack on the side of such conference unit and the headphone volume knob may be used to adjust the volume output. Headphones area connected via 3.5mm jacks, which is as shown below:



Description:

- 1: Left channel signal
- 2: Right channel signal
- 3: Power supply/shielding layer



**Fig. 3.4 Connection of headphone to the conference unit**

### 3.5 Operation

Conference units are powered by the controllers, so no power on/off operation is required on the local conference units. As long as the conference controller is powered on, all conference units connected to the controller will be automatically powered on. However, before the conference starts, the conference site maintenance personnel need to setup and inspect all conference units of the conference system, such as conference unit numbering, unit inspection and camera tracking and positioning, etc. After the conference commences, all conference units should provide such functions as the microphone on/off, speech, vote, display of messages on LCD screen, etc.

Operation on the conference units should follow the following descriptions:

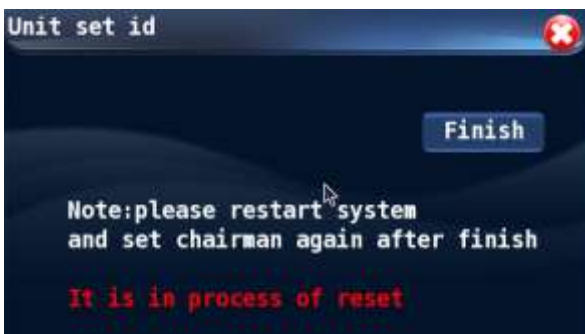
#### 3.5.1 Numbering of conference units

Enter the "Unit numbering" interface on the "System Setup" interface of the conference controller (please refer to the setup description of conference controller for detailed procedures), then the user will see the buttons to renumber the units and to number new units. When the renumbering button is pressed, all conference units will enter the renumbering status and the microphone on/off indicating lights on all conference units will blink and numbering messages will be displayed on the screen on such conference units.



Conference controller numbering interface

#### 1) Renumbering



Interface of "renumbering" conference controllers

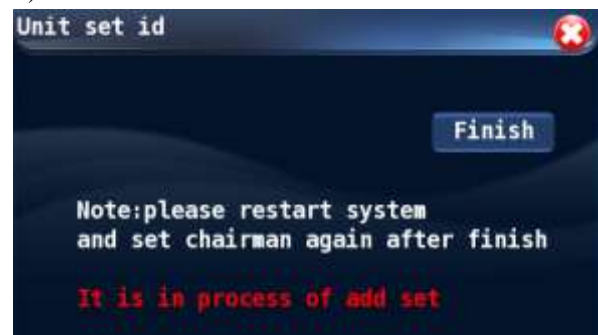


Interface of "renumbering" conference units

When the above interface is shown on the conference unit, press the on/off button of microphone and the conference units will be given an ID code on basis of the order, in which such buttons are pressed (for example, the unit, on which the microphone on/off button is first pressed, will be numbered as 0001; the second unit will be numbered as 0002; so on and so forth).

When the conference units are numbered, the same message will be displayed on the chairman unit and conventioner units and the operations on such conference units are the same. The ID generated will not be affected by the types of conference units.

#### 2) Add new ID



Interface of "Add new ID" on the conference controller



Interface of "Add new ID" on conference units

When the above interface is shown in the conference units, press the microphone on/off button to automatically generate IDs for new conference units. The ID of new conference before it is renumbered is "0000". The numbering of new conference units is only effective on units with no ID. The ID of new conference units will make up the vacancy of existing units. If there is no vacancy in the existing units, then the conference unit will be numbered by an ID immediately after the existing largest one.

**Caution**

When conference units are numbered, they should be numbered in accordance with the conference order, and it is wise to press several numbering buttons (microphone on/off button) at a same time, otherwise, the ID codes of conference units will be in disorder, which is not good for conference site management and maintenance.

### 3.5.2 Speech

#### 1) When the chairman is making a speech, he/she can power on the microphone and make the speech.

- Chairman speech is free from restrictions of conference mode and the conference unit may be powered on freely. In addition, chairman unit will not take up a quota of number of speech units.
- Chairman units have priority functions
  - During the conference period, if "Mute" is selected as the chairman priority mode, then three seconds after the priority button is pressed by the chairman, the following prompt message will be displayed on the unit:



If the button is pressed again for another 3 seconds, all conference units (including VIP units) delivering a speech will be turned mute.

- If the user releases the button immediately after the prompt interface is shown, then the conference units will not be turned mute but the local unit will return to the main interface.
- When all conference units are mute, if the priority button is pressed down and held for 6 seconds, such mute conference units will regain the speech.
- The chairman unit may take control over the status of microphones on the conventioner units.
  - Approve application of conventioners for speech: when the conference controller is in "APPLY" mode, when the microphone on/off button on the chairman unit is pressed, it will approve the application of conventioners for speech; if the priority button is pressed, such application will be rejected. One application will be operated at one press.
  - Close the microphone or turn it to mute status: Chairman unit may use the priority button to turn the conventioner unit delivering a speech to the mute status or close the microphone of such conventioner unit.

2) When a speech is being made via the conventioner unit, its manner of speech is subject to the conference mode as set on the conference controller (please refer to the description with respect to setup of conference controller). This system allows a maximum number of 30 VIP units which, in comparison with normal conference units, has the priority to other conference units (please refer to description of controller operation and setup).

For all conventioner units which are set as VIP units, VIP is indicated on the LCD screen after the ID of such conference units, as shown below:



- a. When the conference mode is set as FIFO on the

#### conference controller

- When a normal conventioner unit (not a VIP unit) is to deliver a speech, the total number of activated units in the system is the limit on speeches (1/2/3/4/5/6) as defined on the conference controller.
    - When the total number of activated units is **less than** the allowed number 1/2/3/4/5/6 (**Chairman unit is free from such limitation**), then when the microphone is powered on by pressing the on/off button, if the on/off indicating light and the indicating light on the microphone head is normally on, it means that the conference unit is allowed to make a speech, and when a speech is made, the built-in speaker will be turned off; after the speech is over, the spokesman may press the on/off button again to turn off the microphone, and at such time, the indicating lights on the on/off button and the microphone head will be off and the speaker will be activated.
    - If the speaker is activated, when a headphone is plugged, the speaker will be automatically turned off and it will be turned on again when the headphone is removed.
    - If the activated units reaches the upper limit on activated conference units (1/2/3/4/5/6), then when the on/off button on a conventioner unit is pressed, the microphone is on, while the first activated one will be turned off automatically. In such a manner, the total number of activated conventioner units will be kept within the limit.
  - If a VIP Unit is configured and the total activated units is 10 (the limit defined on the controller + VIP unit), then there may be 10 activated VIP units.
    - When the total number of activated units is more than 10, the VIP unit will remain on, while the newly activated unit will automatically turn off the firstly activated speech unit in a First In First Out mode, unless all 10 VIP units are activated and all conventioner units are off.
    - If VIP unit is activated first, and the total number of activated units has reached the limit defined by the conference controller, then the conventioner unit will not be activated; if the activated VIP units does not reach the limit defined on the controller, then the currently available conventioner units will be the number limit of the controller minus the number of activated VIP units. When total number of activated conventioner units and VIP units reaches the upper limit defined on the conference controller, any newly activated VIP unit will automatically turn off the earliest conventioner unit, until all 10 VIP units are activated and conventioner units are all off.
- b. When the conference mode is set as NORMAL on the conference controller
- When the conventioner units (not VIP units) are in NORMAL mode, the total number of activated units is the limit as defined on the conference controller (1/2/3/4/5/6).
    - When the total number of activated units is less than the allowed number 1/2/3/4/5/6 (Chairman unit is free from such limitation), then when the

microphone is powered on by pressing the on/off button, if the on/off indicating light and the indicating light on the microphone head is normally on, it means that the conference unit is allowed to make a speech, and when a speech is made, the built-in speaker will be turned off; after the speech is over, the spokesman may press the on/off button again to turn off the microphone, and at such time, the indicating lights on the on/off button and the microphone head will be off and the speaker will be activated. If the speaker is activated, when a headphone is plugged, the speaker will be automatically turned off and it will be turned on again when the headphone is removed.

- When the number of activated units reaches the upper limit defined on the conference controller (1/2/3/4/5/6), the newly activated units will automatically enter queue for speech. When an activated unit is closed, the first unit in the queue will be automatically activated, so on and so forth. In such a manner, the total number of activated conventioner units will be kept within the limit.
- If a VIP Unit is configured and the total activated units is 10 (the limit defined on the controller + VIP unit), then there may be 10 activated VIP units.
  - When the total number of activated unit is 10, newly activated units will enter the queue for speech until a previously activated unit is closed and the first unit in the queue will be automatically activated. When the indicating light on the microphone head of the units waiting in queue turns green and blinks, the following message will be displayed on the LCD of such unit:



When the microphone on/off indicating light and that on the microphone head turns red and remain normally on, it means that the unit is ready for the speech.

- If any VIP unit is waiting in the queue, then when the previously activated unit is closed, the VIP unit will have priority to get activated.
  - Only 20 conference units may enter the queue, which include normal conventioner units and VIP units.
- c. **When the conference mode is set as FREE on the conference controller**
- Under the FREE mode, the system supports simultaneous speech on 20 conference units, which include normal conventioner units and VIP units; another 20 conference units may enter the queue for speech, and VIP units have priority over conventioner units to get activated.
- To deliver a speech, press the microphone on/off button, and when the indicating light on microphone on/off button and the microphone head turns red and

normally on, it means that the unit is ready for a speech. After the speech is completed, the spokesman should press the microphone on/off button. When the on/off indicating light and that on the microphone head is off, the microphone is closed.

- When conference units activated for speech reach 20, the newly activated units will enter a queue and wait. The indicating light on the microphone head of the units waiting in queue turns green and blinks, and the following message will be displayed on the LCD of such unit:





When the microphone on/off indicating light and that on the microphone head turns red and remain normally on, it means that the unit is ready for the speech.

- If any VIP unit is waiting in the queue, then when the previously activated unit is closed, the VIP unit will have priority to get activated.
- d. **When the conference mode is set as APPLY on the conference controller**
- **Application of conventioner for speech**
    - If a conventioner applies for speech, he/she may power on the microphone when such application has been approved by the Chairman unit. The conventioner can press the microphone on/off button and the indicating light on the microphone head turns green and blink, the following message is displayed on the LCD screen:



Messages displayed on chairman unit:



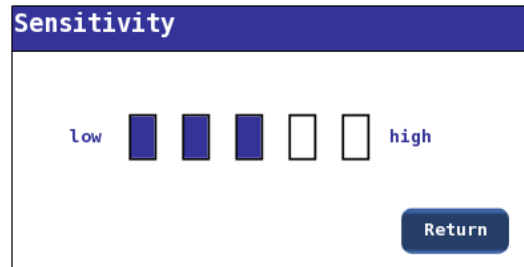
At such time, the chairman may press the  button to approve the application, and the applicant may deliver a speech. If the Chairman press  button to cancel the application, the application is rejected and the conventioner will not be able to make the speech.

- After the total number of activated units reach the limit (1/2/3/4/5/6) defined on the conference controller, the new application for speech will not be displayed on the LCD of chairman unit, until any previously activated unit is closed.
- **Speech application when VIP units are configured**

- Under this conference mode, VIP unit can make speech without approval of the chairman unit. If the total number of normal conventioner units and VIP units is 10, then units applying for speech thereafter (including normal units and VIP units) will be in waiting status. When a previously activated unit is closed, the units waiting for speech will be activated after approved by the chairman unit, but VIP units do not need approvals of the chairman to make the speech.
- If the number of activated VIP units reach the limit (1/2/3/4/5/6) defined on the conference controller, the application of normal conventioners will not be displayed on the Chairman unit, and the activated VIP units will take up all quotas, so conventioner units will not be activated until a VIP unit is turned off.

**e. When the conference mode is set as VOICE on the conference controller**

- Under the VOICE mode, when the number of activated units does not reach the limit (1/2/3/4/5/6) defined on the conference controller:
  - The microphone on/off indicating light is normally on, and when the conventioner approaches the microphone to make a speech, the indicating light on the microphone head will be on, indicating that the microphone has been activated and is ready for speech;
  - If the conventioner does not make the speech within a period of 1 minute, the microphone will be automatically turned off and the indicating light on the microphone head will turn off.
  - When the microphone is activated, the conventioner may close the microphone by pressing the on/off button.
- When the number of activated conventioner units has reached the limit (1/2/3/4/5/6) defined on the conference controller, no other units will be activated, until a previously activated unit is closed.
- When normal conference units and VIP units are activated at a same time, the system allows a maximum number of 10 activated units (normal conventioner units + VIP units).
  - If VIP units are activated first and the number of VIP units has reached the limit (1/2/3/4/5/6) defined on the conference controller, then normal conventioner unit cannot be activated.
  - If normal conventioner units are activated first and their number has reached the limit (1/2/3/4/5/6) defined on the conference controller, VIP can still be activated and the maximum number of activated VIP units is 10.
- If "VOICE" mode is selected as the conference mode, then the user needs to set up the sensitivity for this mode. The voice sensitivity refers to the sensitivity of voice-controlled microphone of/off button on the conference unit. The procedures for setting up the sensitivity is as follows:
  - On the "Conference Mode" interface, when the icon before "VOICE" mode is in green color, touch the "Sensitivity" button after it will call the sensitivity setting interface.



On such interface, touch the boxes which indicates the sensitivity and the boxes becomes blue, it means that the adjustment has completed.

- After the configuration is complete, touch the "Return" button to exit the setup interface.

- 3) When a speech is delivered from a conference unit, if the camera tracking function is activated, then when the microphone is on, the cameras connected to the conference controller will automatically turn to such conventioner, and the video may be transmitted to a projector which projects such video on a large screen.

### 3.5.3 Vote

With the D62 series smart digital conference system, the Chairman unit may call for vote which will be attended by all conventioner units; or otherwise, the vote may be called for by the remote control software.



- The above figure shows the main interface of chairman unit, on which the chairman may press button "2" to enter the vote mode. At such time, the corresponding light on the chairmen unit and the conventioner units will start to blink. Messages displayed on LCD screen on the chairman unit:



The corresponding button is "2" **Affirmative**  
 "3" **Abstention**  
 "4" **Negative**  
 "5" **"END"**

Messages displayed on LCD screen on the conventioner units:



The corresponding button is "2" **Affirmative**  
 "3" **Abstention**  
 "4" **Negative**

- After the conventioner votes by pressing the corresponding buttons, Button "5" on the chairman unit begins to blink. The chairman can press Button "5" to end the voting activity, and if the user has set up the "Vote result display" (on Unit Setup interface), then the vote results will be displayed on both the chairman unit and conventioner units, otherwise, the chairman press Button "5" to end the voting and return to the status before such voting activity. The LCD display is as shown below:



On the vote result display interface, press Button "5" to exit the vote result display interface and end the voting at the same time.

- Under the voting status, conference unit cannot be activated to deliver any speech.

### 3.5.4 Unit Inspection

Before the conference commences, it is necessary to inspect every conference units. The items to be inspected include: "microphone, LCD screen, operation buttons, LED indicating lights and speaker". Inspection may be done manually or automatically and the inspection time is also adjustable. The inspection will be carried out on the conference units currently displayed, and the ID of such units will be displayed on the upper left corner of the interface.

On the "System Setup" interface on the conference controller, the user may select the "Unit Inspection" function to enter the unit inspection interface, the user may touch the



unit information manually to inspect it, or he/she may touch the "Automatic Inspection" button and set up a time for automatic inspection.

After the user selects "Automatic Inspection", he/she should set up the time for such inspection, and touch the "Start inspection" button to start the inspection. After the automatic inspection started, the system will inspect all items of the unit within such time defined. After one unit is inspected, if the user does not touch the "Stop inspection" button on the conference controller, the system will continue to inspect the next unit and will complete the inspection to all units until the user touches the "Stop inspection" button.

Procedures for manual inspection are as follows:

1) Inspection to microphone

This is to inspect the microphone before the conference commences. The following message will be displayed on the LCD screen during inspection to the microphone:



- When the user selects "Microphone inspection" on the conference controller and presses the "Start inspection" button, the on/off button indicating light and the indicating light on the microphone head will be normally on, the tester may talk to the microphone to see if it works normally.
- During manual inspection, the user needs to touch the "Stop inspection" button on the

inspection interface of the conference controller to stop inspection to the microphone.

- During the time defined for automatic inspection, after the system finishes inspecting all items of one conference unit, it will continue to inspect the next one. The inspection will not stop until it is stopped on the conference controller.
- During inspection to microphones, the user can not power on/off the microphone on the unit being inspected.

2) Inspection to LCD screen

The user may touch the "Inspection to LCD" button on the conference controller and touch the "Start inspection" button to inspect the LCD screen on such conference unit. During the inspection, the following message will be displayed:



After the inspection is completed, the user should touch the "Stop inspection" button on the conference controller.

3) Inspection to buttons

It is to inspect the buttons on each conference unit before the conference commences.

- The user may touch the "Inspection to Buttons" button on the conference controller and touch the "Start inspection" button to start the inspection.
- In the button inspection status, the following message will be displayed on LCD screen of the conference unit:



- When the interface shown above is displayed on LCD of the conference unit, the user should press the buttons one by one as instructed by the system, including the microphone on/off button and the priority button on Chairman unit. If when the button is pressed, the corresponding light is on and when it is pressed again, such light is off, then it means that the buttons work properly.
- After all buttons are inspected, the user may touch the "Stop inspection" button on the conference controller.

4) Inspection to LED

It is to inspect all LED indicating lights on the conference units.

- The user may touch the "Inspection to LED" button on the conference controller and then touch the "Start inspection" button. Then the LED indicating lights on the conference unit being inspected, including the corresponding lights of 5 buttons, microphone on/off button, light on the microphone head (2 in total, one in

bright green, the other in bright red), will be inspected at a same time.

- In the LED inspection status, the following message will be displayed on LCD screen of the conference unit:



- When the interface shown above is displayed in the conference unit, all LED lights on the conference unit being inspected will be on and blink, indicating that the LED lights are working properly.
- The user may touch the "Stop inspection" button on the conference controller to stop inspection to the LED lights.

5) Inspection to speaker

It is to inspect the speaker on each conference unit before the conference commences.

- The user may touch the "Inspection to Speaker" button on the conference controller and touch the "Start inspection" button to start the inspection.
- In the speaker inspection status, the following message will be displayed on LCD screen of the conference unit being inspected.



- When the interface shown above is displayed, the speaker will beep, indicating that the speaker is working properly.
- The user may touch the "Stop inspection" button on the conference controller to stop such inspection to the speakers.

3.5.5 View microphone status

On the main interface of conference units (as shown below), the user may press Button "3" to have all conference units connected to the system enter the microphone operation status.



On the View Microphone Status interface, the user may view the following information:

1. Number of conference units connected to

the system;

2. Number of units delivery speeches;
3. Number of conference in the current mode applying for speech.

### 3.5.6 Language setting

It is to set up the display language on LCD screen on the conference units. Currently, the system supports two languages: simplified Chinese and "ENGLISH".

To set up the language, the user can press Button "4" on the main interface, as shown below:



On the interface shown above, the user may press Button "2" or "3" on the conference unit to switch between the two languages, and then press "Return" button to exit the setup interface.

# Chapter IV System Connection

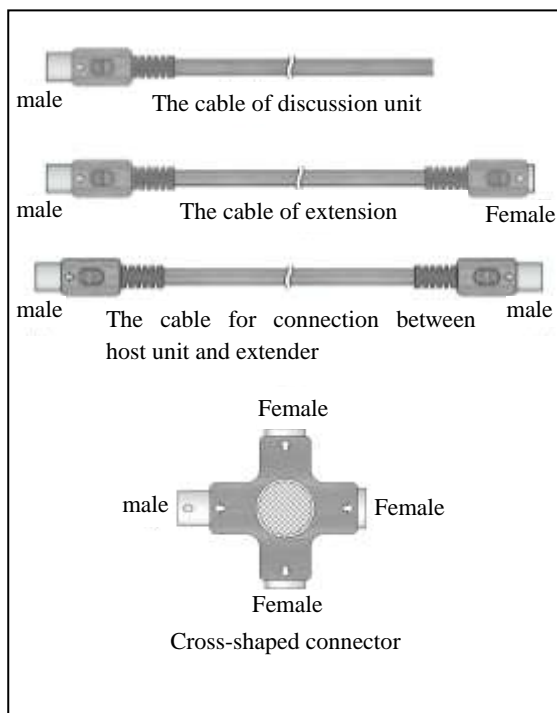
## 4.1 Description of System Connection

D62 series smart digital conference system is composed of conference controller, extension controller, conference units, camera and auxiliary audio equipment, etc. The system has simple architecture and is easy to install.

The basic cables required for system connection are 8 core cables, which may be 2m (provided with the conference units), 10m, 20m, 30m, 50m or 100m in length. According to the connectors on both ends of the cable, they can be classified as:

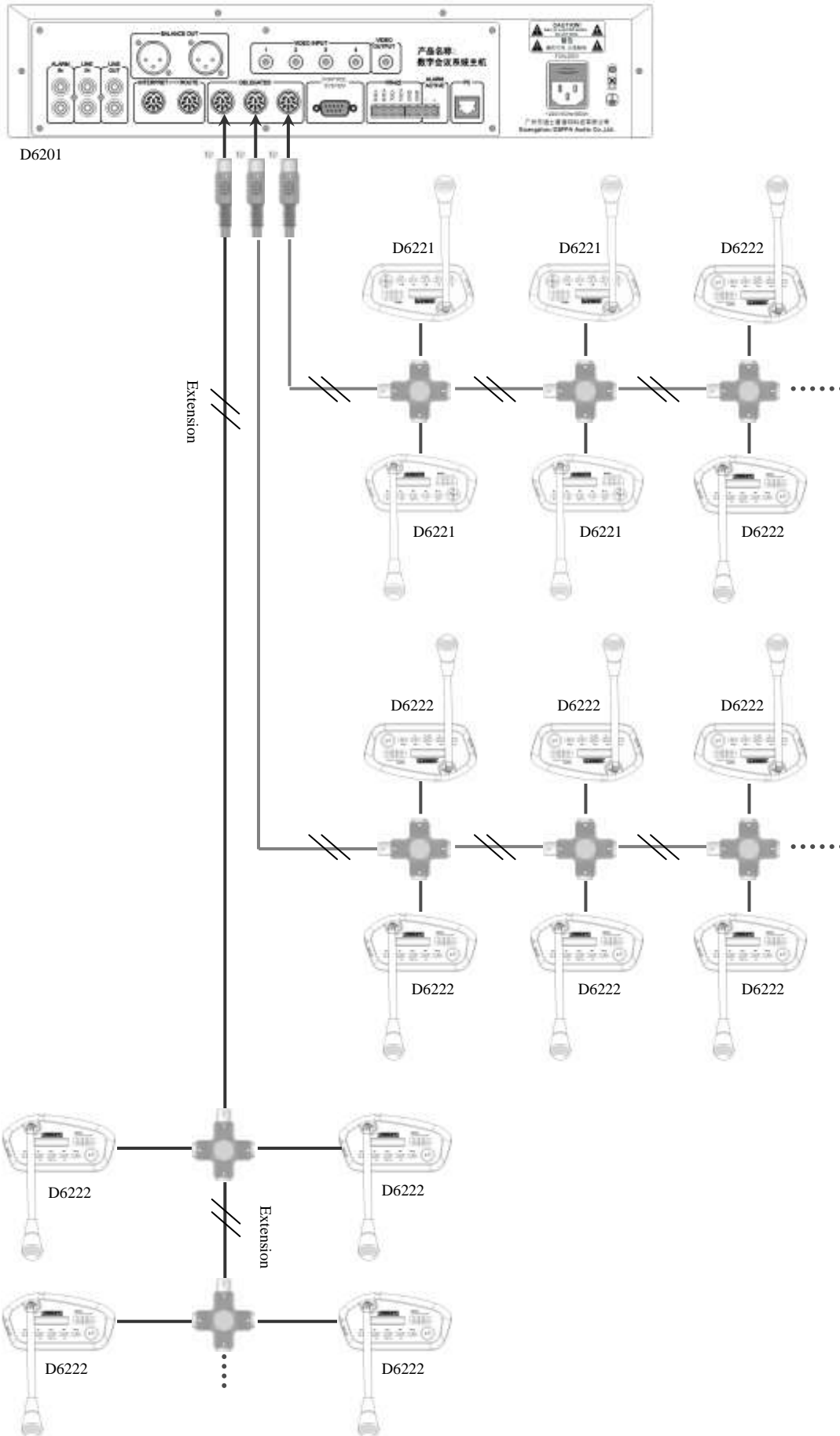
1. Cable provided with the conference unit;
2. Cable for connection between conference controllers and extension controllers;
3. Cable for connection between conference controller and cable with "+" connectors (extension cable);

It is as shown below:

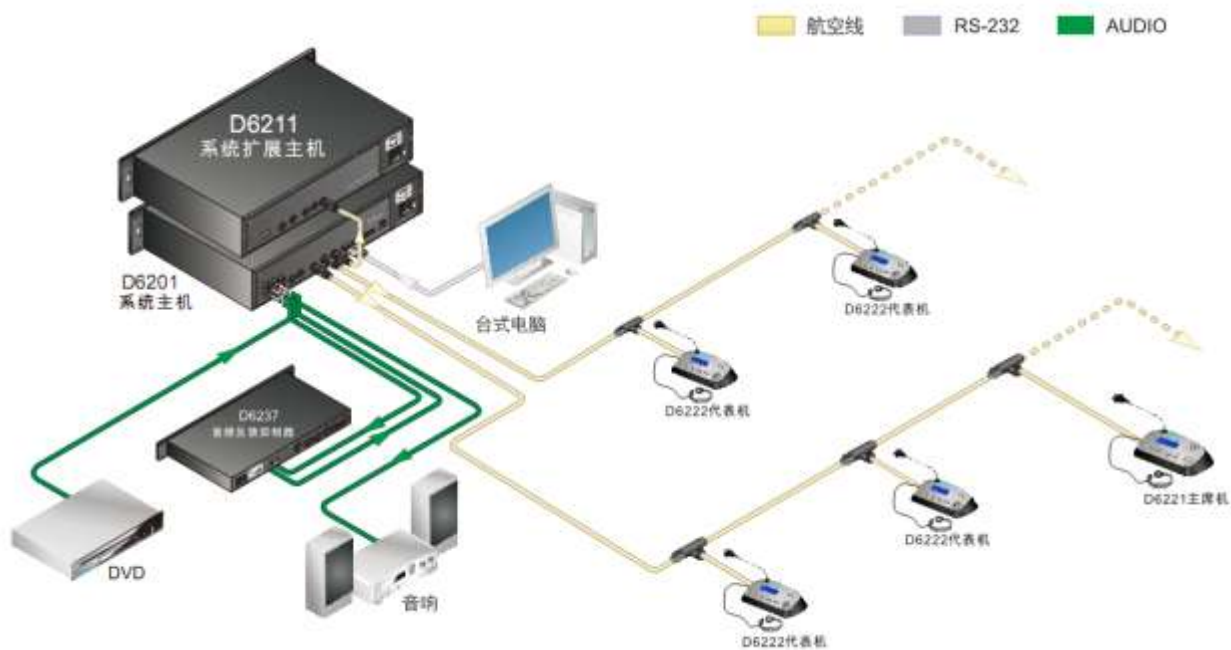


In the system connection, in addition to the 8 core cable for connection between conference controller and units, the following cables may also be needed: network cable, audio cable, coaxial line for connection of cameras (cable with BNC plug and RCA plug) and data cable.

### 4.2 Schematic Diagram for Connection between Controllers and Units



### 4.3 Typical Application Topological Graph of the System



# Chapter V Accessories

## Extension power supply

### Product Description

- Power supply to extend the conference units;
- AC110~240/50/60Hz input;
- Output: DC 24V/350W;
- 1 route UNIT input;
- 4 route DELEGATES output, supporting up to 128 conference units.



## Installation of cables

### Product Description:

8 core cable with plug on both ends, specialized for use by D62 series conference system

### Functional Features:

- Specialized 8 core high-density cable
- Connection between conference controllers, for example between the conference controller and extension controllers, conference controller and interpretation controller, and between two extension controllers;



The extension cable is used to connect the extension power supply to the conference controller, and to connect the extension power supply to extension controllers;

- There is a plug on either end of the cable;
- The standard length is 2m and can be extended by extension cable.

### Product Description:

8 core cable specialized for use by D62 series conference system

D6260.....	5m 8 core extension cable (with a plug and a socket)
D6261.....	10m 8 core extension cable (with a plug and a socket)
D6262.....	20m 8 core extension cable (with a plug and a socket)
D6263.....	30m 8 core extension cable (with a plug and a socket)
D6264.....	50m 8 core extension cable (with a plug and a socket)
D6265.....	100m 8 core extension cable (with a plug and a socket)

### Functional Features:

- Specialized 8 core high-density cable
  - For use to extend the cable and to connect the conference units to conference controller and extension controllers;
  - There is a plug on one end and a socket on the other end;
- Available at a length of 5m, 10m, 20m, 30m, 50 and 100m.



## Adapter

### Product Description

- For use in branch connection of conference units;
- 1 input port for 8 core high-density aviation connector (socket),  
3 input ports for 8 core high-density aviation connector (plug).



## Microphone Rod

### Product Description:

#### D62 series microphone rod with knob connector

### Functional Features:

- Electret, heart-shaped, directive, condenser type microphone;
- High-density 5 core aviation socket;
- Double-color (Red/Green) power on and operation indicating light
- 430mm and 320mm (L) (optional);
- Conference unit for use with D62 series smart digital conference system.



Length of microphone rod 430mm



Length of microphone rod 320mm

### Product Description:

#### D62 series microphone rod with knob connector

### Functional Features:

- Heart-shaped, directive, condenser type microphone;
- High-density 5 core aviation socket;
- Double-color (Red/Green) power on and operation indicating light
- 415mm and 315mm (L) (optional);
- Conference unit for use with D62 series smart digital conference system.



Length of microphone rod 415mm



Length of microphone rod 315mm



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Guangzhou DSPPA Audio Co., Ltd.

<http://www.dsppatech.com>

<http://www.dsppa.com>