

SAMCEN

Professional Audio Conference System

Fully Digital Congress System

User Manual

Please read the instruction carefully before using.

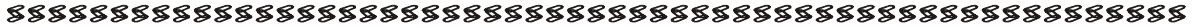
The **Professional Audio Conference System User Manual** provides reference for the models of SCS-6100MA、SCS-6100E、SCS-6001C/D、SCS-6030C/D、SCS-6040C/D、SCS-6050C/D、SCS-6070C/D、SCS-6010VC/D、SCS-6130C/D、SCS-6140C/D、SCS-6150C/D、SCS-6170C/D、SCS-350MA、SCS-350TA、SCS-360RA etc. It is only an instruction for operators, not for any maintenance usage.

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Please check SAMCEN website or contact local supplier for updates.

<http://www.samcen.com>

Safety Operation Guide



In order to ensure the credibility use of the product and the user's safety, please comply with the following items during installation and maintenance:

- ①
The system must be earthed properly. Please do not use two blades plugs and ensure the alternating power supply ranged from 100v to 240v and from 50Hz to 60Hz.

- ②
Do not put the machine in a place of too hot or too cold.

- ③
To avoid any damage by over heat, please keep the working environment good in ventilation to radiate the heat when running the machine.

- ④
The machine should be turned off when in rainy and humid days or nonuse for a long time.

- ⑤
The AC power supply line should be disconnected with the power socket during the following operation.
A. Take out or reinstall any component of the machine.
B. Disconnect or re-connect any connector of the machine.

- ⑥
Please do not attempt to maintain and uncover the machine for there is a high-voltage component inside and the risk of the electric shock.

- ⑦
Do not splash any chemical product or liquid on or near the equipment.

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Samcen Conference System Introduction

1.1. About Samcen system

SCS (Samcen Conference System), central control system and matrix switcher system are 3 most important product lines of SAMCEN Corporation. It consists of the function modules as contribution, simultaneous interpretation, IR language distribution, telephone conference, voting and video tracking.

SAMCEN is always dedicated to integrated system solutions. Therefore, the SCS is not only a Hi-tech electronically system, but also a powerful conference control solution while cooperating with the central control system seamlessly.

1.2. Features of SCS

Safety: The safety of every delegate is the most important thing to each conference.

- The power of delegate unit and chairman unit are supplied by the central control unit with 24V safety current.
- To improve the antistatic performance, the parts are selected carefully to avoid point discharge current and the earth line is ensured to be enough thick. As a result, the antistatic performance is up to 8000V.

Security and anti-jamming: Everything discussed in a conference must be important and sensitive. To keep the signals and information securely and distortion-free is highly required.

- The discussion system is shielded-cable linked, which can prevent the radio disturbance and wiretapping effectively.

Perfect audio quality: The more clearly we “say”, the more clearly we get.

- The contribution equipment adopts condenser microphone with unidirectional response.
- The contribution equipment adopts built-in hi-fi loudspeaker.
- The lightweight earphone with a hanging design can reproduce the audio vividly and it is comfortable to wear. It is very suitable for a long time use without any feeling of oppressive or unhappy.

Maneuverability: Simple operation and control represent efficiency.

- Easy installation: the communication method of daisy-chaining the units simplifies the work of installation and saves the cost.
- Easy operation: everyone can easily control the unit by press a button to address and turn the knob to

adjust the volume of speaker or earphone.

Maintainability: An excellent system design leads to low maintenance cost, lesser upgrade expense, long life-span and high efficiency.

- The communication method of daisy-chain is easy to maintain and locate the problem unit.
- Even the end user technician can maintain the system well with a short-term training.
- All the equipments are produced and tested under ISO9001 strictly. They are international qualified.

Expansibility: The capability of expansible protects users' benefit and makes the system more flexible and powerful.

- To cope with the increasing number of delegates, the only thing to do is just adding in the delegate units.

The modular system can be easily expanded by putting in the proper functional module. When adding in a voting unit, it becomes a voting conference system; when adding in the camera tracking module, it becomes a simultaneous A/V conference system.

1.3. Product list

Audio Conference System Product Models	
SCS Control Units	
SCS-6100MA	Control host
SCS-6100E	Expanded host
SCS Discuss Contribution Units	
SCS-6070C	Chairman unit desktop design
SCS-6070D	Delegate unit flush-mount design
SCS-6050C	Chairman unit with LCD display
SCS-6050D	Delegate unit with LCD display
SCS-6040C	Chairman unit desktop design
SCS-6040D	Delegate unit desktop design
SCS-6030C	Chairman unit with LCD display
SCS-6030D	Delegate unit with LCD display
SCS-6010VC	Chairman unit desktop design
SCS-6010VD	Delegate unit desktop design
SCS Digital Voting System Unit	
SCS-6130C	Chairman voting unit with LCD display
SCS-6130D	Delegate voting unit with LCD display
SCS-6140C	Chairman voting unit desktop design
SCS-6140D	Delegate voting unit desktop design
SCS-6150C	Chairman voting unit with LCD display
SCS-6150D	Delegate voting unit with LCD display
SCS-6170C	Chairman voting unit flush-mount design
SCS-6170D	Delegate voting unit flush-mount design
SCS Simultaneous Interpreter Unit	
SCS-320PA	Interpreter Unit
Camera Auto-tracking System	
SCS-6100MA	Control host
SCS-680HD	High-speed preposition auto dome camera
SCS-690	preposition auto dome camera
SCS-690HD	High-speed preposition auto dome camera

IR Language Distribution System	
SCS-350MA	Transmitter host
SCS-350TA	Radiator unit
SCS-360RA/8/12/32	Receiver unit
Accessories	
SCS-E1A	Single earphone
SCS-E2	Headphone
SCS-E3A	Earphone
CBL CABLE	8-pin cable with connectors

2. SCS Control Units

2.1. Introduction

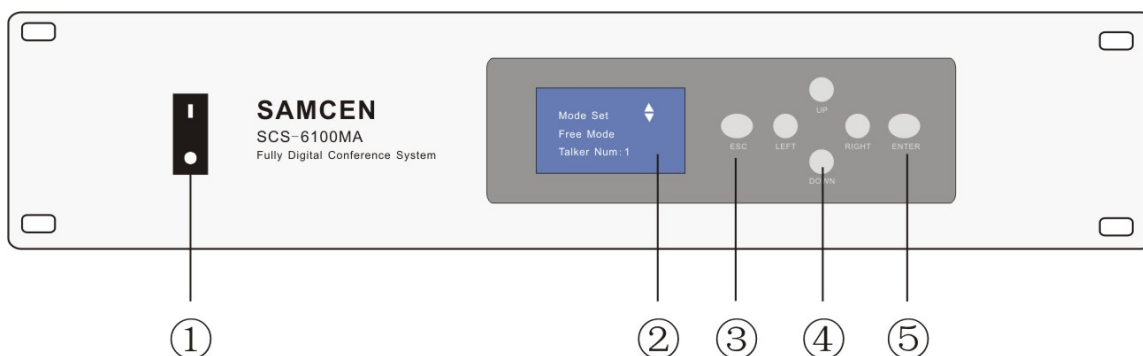
- SCS-6100MA SCS control host
- SCS-6100E SCS expanded host

2.1.1. Features

1. The host itself can provide system accessing for up to 128 contribution units and can be expanded to 4096 at the most.
2. Communicating in the hand in hand daisy-chain, it is easy to install and maintain.
3. Equipped with audio-in connector, it is able to have background music.
4. Equipped with enough audio-out connectors, it is able to output the audio signal to different audio devices.
5. The activity microphones can be limited in different numbers according to requirements.
6. FIFO mode can automatically control the active microphones.
7. Built-in equalizer can adjust and balance the audio signals as well as restrain the howling for excellent audio quality.
8. Cooperating with the central control system, it becomes a powerful conference controller and achieve the super function of camera auto-tracking.
9. Working with the Telephone Interface, it can open a telephone conference with remote user.
10. Support voting and its data managing.
11. Cover with metal material and earth well to ensure the 8000V antistatic performance.
12. Rack-mountable enclosure. It can be installed in the standard 19" rack conveniently.

2.2. SCS-6100MA SCS control host

2.2.1. Front Panel



- ① Power switch: Please to make sure that the supply power is 100V—240V AC /50Hz before connected the power.
- ② LCD screen: to indicate the working state. After energized, the first indication welcome message, such as "Welcome to Digital Congress System" Then the LCD display system that is the mode of work, such as : FIFO-3 said the system in the first-in first-out meeting mode, allowing three individuals speak at the same time. After the main machine electrifying seconds, if not carried out any operation, the screen will display the current system of audio level. Such as : ■■■■■■ black box said Level size.
- ③ "Esc", exit / return button, press it will return to the previous menu when setting the working mode.

After about 4-7 seconds, if not carried out any operation, it will automatically switch back to the screen mode interface.

- ④ "Menu", select the upper and lower, left and right function according to the LCD Menu or ball machine.
- ⑤ "Enter", the enter / confirm button. setting and switching the modes with the selection button together, Confirmed that each of the functions and working mode

Operation Introduction

A. Conference mode

- * Restrict mode: you can set the number of speakers for the 1-6 in this mode, but 12 peoples can allow to speak at the same time through the PC operation. When the representative of the number of speakers to reach the number set, it can not increase the unit open. So as to achieve the purpose of restrictions on the number of speakers.
- * FIFO mode: you can set the number of speakers for the 1-6 in this mode, but 12 peoples can allow to speak at the same time through the PC operation. When the representative of the number of speakers to reach the number set, if the follow-up speaker want to open the microphone to speak, then the first speaker will automatically exit the speaking statement, but not all speakers exit.
- * Open mode: speakers unrestricted in this mode.
- * Chairman mode: only allows the President to speak in this mode

B. System balanced: high, medium and low three kinds balanced can be adjusted.

C. System volume: input-output volume can be adjusted.

D. System settings.

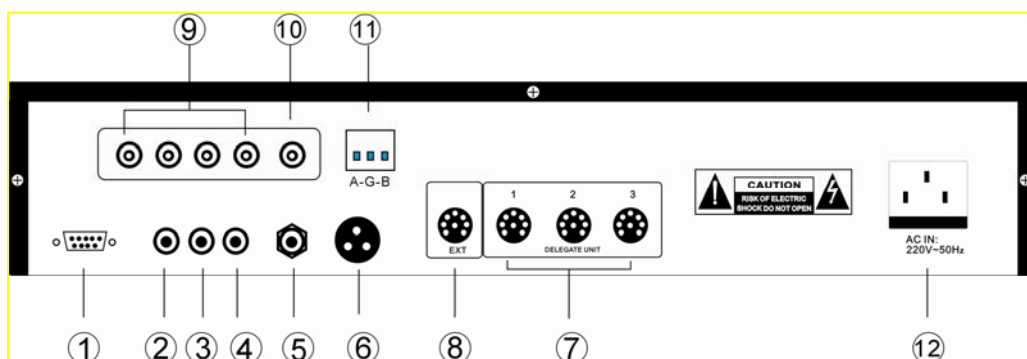
- * Language selection: Chinese and English languages can be converted;
- * System unit: setting the unit numbers.
- * The distribution unit number: the microphone unit ID can bad arranged and changed.
- * Unit reset:

E. Ball machine set up: to choose preset point of view; save preset point; communication speed, protocol options; direction, speed, distance adjustment;

F. Speakers quantity restricted: a maximum of open microphone at the same time the number of optional 1,2,3,4,5,6, the Chairman unit unrestricted

G. Unit control: designated to speak directly through the open or closed the corresponding unit

2.2.2. Rear Panel



- ① Serial communication port: With 9-pin connectors to connected the computer.
- ② LINE IN: can be connected the CD player etc. as the background music for the venue.
- ③ LINE OUT, can be connected the Power amplifier or mixer.
- ④ REC OUT, high impedance output, can be connected recording equipment.
- ⑤ PHONE OUT, headphone socket, can be linked to the 16 -68ohm headphone or other equipments.
- ⑥ Balance output for connecting the equipment which need to balance input.

- ⑦ Microphone unit jack in branch, each road can be connected 25 -55 units depending on the venue situation.
- ⑧ expansion jack: for expanding the mainframe to connecting more SCS-6100E extension main unit.
- ⑨ Video signal input
- ⑩ Video signal output
- (11) Camera communication port
- (12) Main power jack. This machine be used: AC110V 60Hz ~ AC24V 50Hz..

Controller direction of use

- The controller shell is made of metal, line and shell have strengthened the connection with the ground to ensure that available with anti-static 8000V ability to meet the national standard GB/T17618-1998.
- Conference unit is power by the controller, operating voltage of DC 24V, meet safety standards.
- Equipped with AC and DC dual-channel safety devices.
- Built-in auto-alarm function, when the electricity instability, error or system connected in error, the system automatically Bell alarm.
- Hand in hand with line-type model of connectivity conference unit, it's easily to install and maintain.
- Controller have three output port, each port max 40units,all port max 120units. Expanded through the expansion of port access to the other controller, the max connected to 2000units, and no interference with each other.
- Controller have phone coupler, it can be configured for remote telephone conference.
- Four built-in video switch matrix can be configured up to four High Speed Dome through the default sitting to the visual tracking.
- Built-in equalizer, the output signals of the system high, bass fine-tuned to meet the demands of different hearing.
- Built-in frequency shifter, you can effectively inhibit the whistle.
- With the standard PAL or NTSC video output port can be connected TV, projector display devices, DVR, Video Capture Card, and so on to recording conference video. External audio and video decoding, it can conduct remote video conference.
- Controller connected to computer used RS232 protocol, so that security and stability of signal transmission.
- Controller connected to High Speed Dome used RS485 protocol, resulting in long-distance signal transmission, without interference.
- Controller use standard 1U design, steady and solidity. It can be installed in the 19-inch standard rack.
- When you without computer, through the controller to achieve the following functions:
 - Open mode: speakers unrestricted in this mode.
 - Restrict mode: you can set the number of speakers for the 1-6 in this mode, but 12 peoples can allow to speak at the same time through the PC operation. When the representative of the number of speakers to reach the number set, it can not increase the unit open. So as to achieve the purpose of restrictions on the number of speakers.
 - FIFO mode: you can set the number of speakers for the 1-6 in this mode, but 12 peoples can allow to speak at the same time through the PC operation. When the representative of the number of speakers to reach the number set, if the follow-up speaker want to open the microphone to speak, then the first speaker will automatically exit the speaking statement, but not all speakers exit.
 - Apply for speaking mode: at the same time to opened unit number to 1-6, after the seventh unit automatically opens the application queue to speak, to speak by the chairman to reject or approve applications for it.

- Video Track mode: when the unit was opened, you can control the camera zoom, speed, preset position, to fine-tune and save.
- Designated to speak mode: To assigning any unit to be opened or closed.
- Connect your computer to used, you need to copy the software (CD-ROM) to your computer, plug in the USB Software Encryption Lock, and use R232 protocol.
- Through the software, it have following function:

A Presentations Model Management:

Limited function: To setting the speaking time from 1 minute to 600 minutes

System Detection: Online testing of each unit working conditions, and accurately locate faults Unit.

System Repair function: When the system error, through the system reset function to restore the original factory settings

Look-up function: To checking the speaking unit or which applying to speak.

Camera tracking function: To tracking and saving the case.

Marking name speech function: Real-time display of the number and the name of the floor units and other information

B. Voting function and data management

Voting results are in accordance with the "actual number of participants," or "should be the number of participants," to calculation. Vote can not be modified, but can be re-vote, voting results can be printed out or stored in a computer. It can be choose by software:

1. Voting model: agree, against, abstain.
2. Election Mode: 3 Select one only.

To establish a process prior to the meeting, including agenda, and to the meeting who signed, seating, and so on. It can choose name or no name voting to ensure the confidentiality of the voting system.

Results will be obtained within 10 seconds the results display option: column, pie-shaped, digital text.

Conference Unit ID setting

1. Delegate ID set up the meeting is to give the system a meeting of each unit assigned a unique address in this system for controller recognition. When a conferencing system to connect the same ID exists, the same conference ID function operation unit synchronization will occur, so the product of a conference system before use the need for all meetings of the unit is set to ID, to ensure that each unit ID in the system is a unique ID.
2. The way to setting unit: After conferencing system connected, to choose "System Set" on the controller, next to choose "SET ID" and choose the ID number, confirm, and then the MIC Indicator light will flashes(Red----Off----Green),turn on unit MIC, Indicator light will off, setting completed.

Chairman & Delegate direction of use

Delegate unit: when you want to speak, press on/off, at the same time light ring illuminates, you can speak. After speak, press on/off, light ring off, Standby.

Chairman unit: when you want to speak, press "on/off", at the same time light ring illuminates, you can speak.

After speak, press "on/off", light ring off, Standby.

Press "precedence", It can off all the delegate unit which were opened, except Chairman.

Speaking device can be adjusted through the volume (or digital adjustment button) to adjust the volume of the machine;

More about controller and software, detailed " Conference Management Software"

Voting function

1. Check in

At beginning of the meeting check in, light ring flashes. After the representative of admission, please press “ATTEND” to check in, and then light ring off. Check in completed.

2. vote

There are five buttons on the voting machine, As for the voting in the first three buttons representing “yes”, “no”, “abstain”.

When the motion is the commencement of voting, light ring light, and then you can press “yes”, “no”, “abstain”, light ring off, you have voted, effective. Before the end of the vote, you can modify the vote. result of the voting buttons at last prevail.

3. Voting

If used in the election, the five keys representing five candidates. “Candidate 1” “Candidate 2” “Candidate 3” “Candidate 4” “Candidate 5”

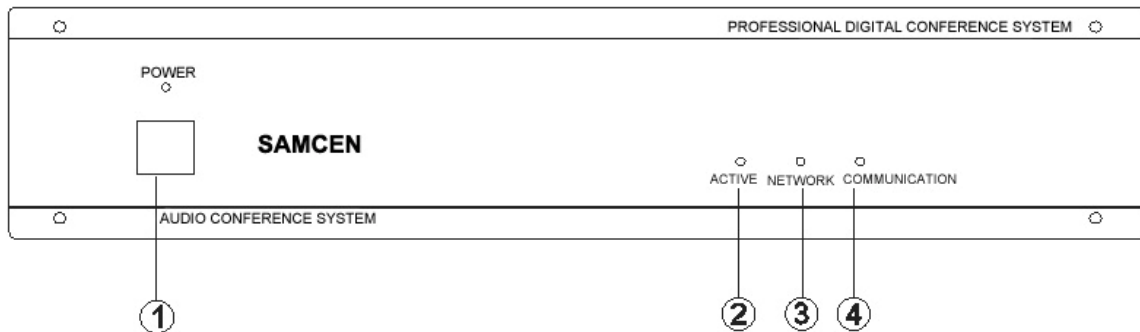
There are many options can be used for the mode of Voting (3to3 5to1 5to5). When the Voting beginning, light ring light, and you can choose candidate, light ring off, you have voted, effective. Before the end of the vote, you can modify the vote. result of the voting buttons at last prevail.

4. Democracy Discussions

Use for democracy discussions, five keys representing: “- -” (0) “-” (25) “0” (50) “+” (75) “++” (100)

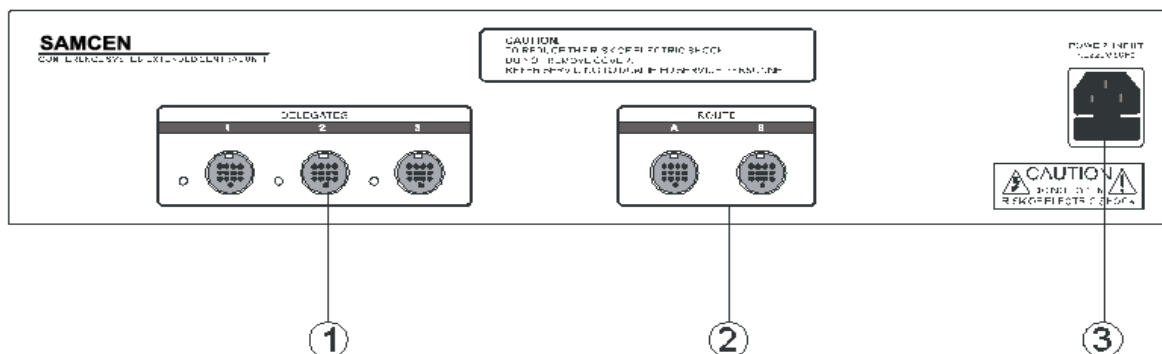
2.3. SCS-6100E expand main host

2.3.1. Front Panel



- 1) POWER and power indicator
- 2) ACTIVE indicator
- 3) NETWORK indicator
- 4) COMMUNICATION indicator

2.3.2. Rear Panel:



1. DELEGATE

It is the interface to the contribution units. There are 3 channels to access the system, and each can link to not more than 64 contribution units in hand in hand daisy-chain. There is no limitation for the chairman unit. It can be located anywhere in the chain.

2. ROUTE

A is the interface to the SCS-6100MA control host. B is the expanded interface to another SCS-6100E expanded control host. When in a multilevel expansion, A is the interface to the front level, and B is the interface to the next level.

3. POWER INPUT

Power supply of 100V—240V AC.

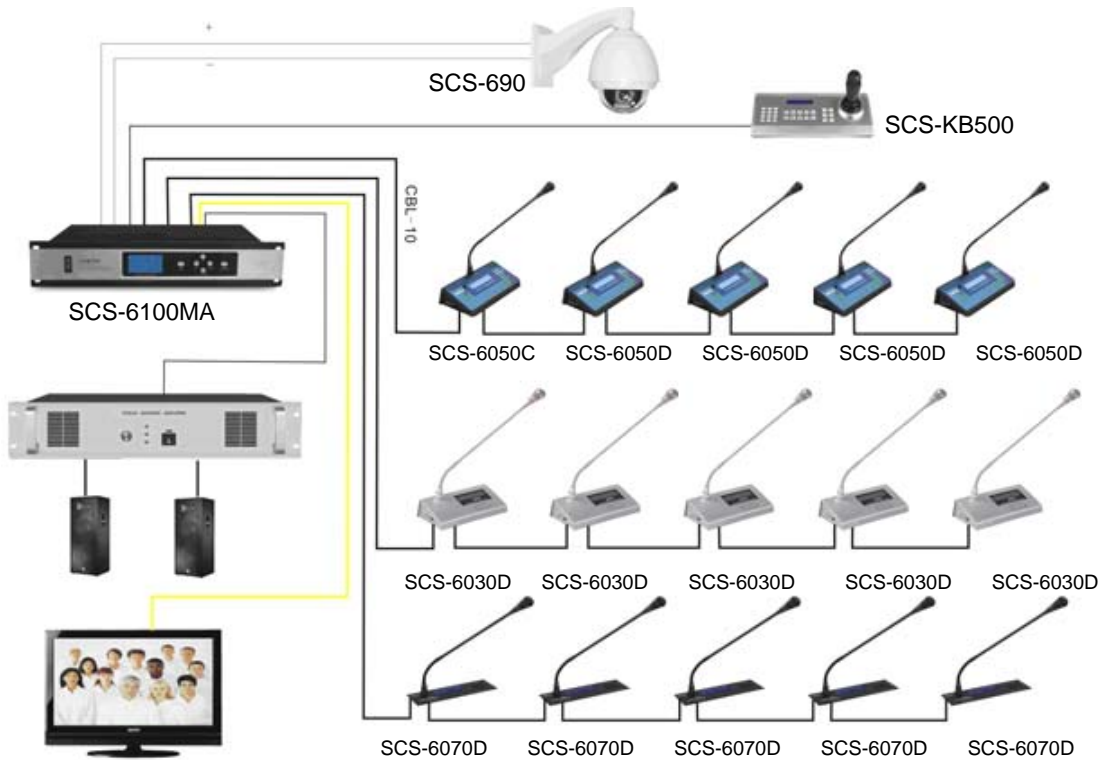
2.3.3. Features

1. Working with SCS-6100MA control host to expand the contribution units in system
2. Input voltage between 100—240V, it can endure 3500V high voltage.
3. Cover with metal material and earth well to ensure the 8000V antistatic performance.
4. Rack-mountable enclosure. It can be installed in the standard 19” rack conveniently.

2.4. Technical parameter

Model	SCS-6100MA	SCS-6100E
Power supply	100-240V	100-240V
Static consumption	10W	10W
Nominal power consumption	350W	350W
Output power	≤110W/24V	≤110W/24V
Audio output	Impedance: 600Ω unbalanced	Impedance: 600Ω unbalanced
Audio input	Impedance: 100kΩ	Impedance: 100kΩ
	Level: -60 dB	Level: -60 dB
	Unbalanced	Unbalanced
Frequency response	60—12kHz	60—12kHz
SNR	> 80dB	> 80dB
Harmonic distortion	< 0.5%	< 0.5%
Harmonic distortion at overload	<1%	<1%
Crosstalk attenuation at 1kHz	>50dB	>50dB
Weight	7.2KG	7.2KG
Dimension	430L x 275W x90H (mm)	430L x 275W x90H (mm)
Color	White/grey	Grey

2.5. System Diagram

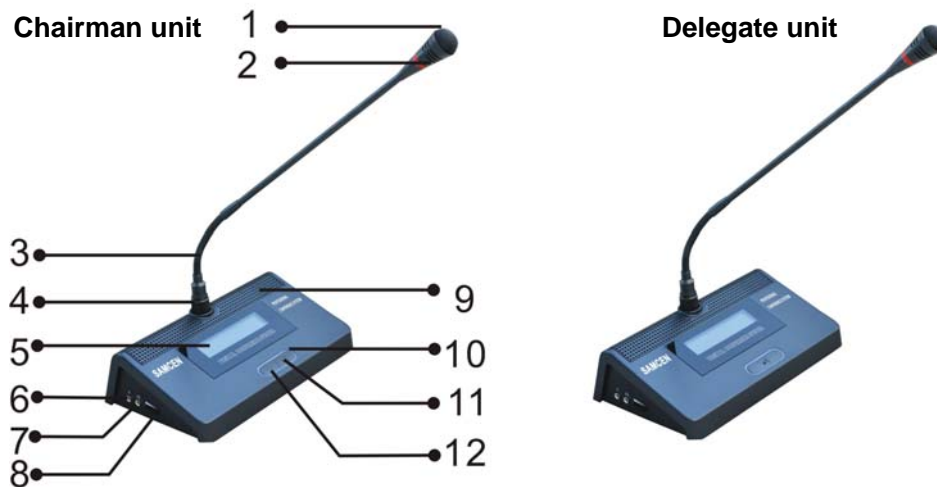


2.6. Products introduction

Model	Description	Outline	MIC button	Voting buttons	Channel selection	LCD
SCS-6050C	Chairman unit	Desktop	√	×	×	√
SCS-6050D	Delegate unit	Desktop	√	×	×	√
SCS-6070C	Chairman speak unit	Embedded	√	×	×	√
SCS-6070D	Delegate speak unit	Embedded	√	×	×	√
SCS-6030C	Chairman unit	Desktop	√	×	×	√
SCS-6030D	Delegate unit	Desktop	√	×	×	√
SCS-6040C	Chairman unit	Desktop	√	×	×	×
SCS-6040D	Delegate unit	Desktop	√	×	×	×
SCS-6010VC	Chairman unit	Tabletop	√	×	×	×
SCS-6010VD	Delegate unit	Tabletop	√	×	×	×
SCS-6130C	Chairman unit	Desktop	√	√	×	√
SCS-6150D	Delegate unit	Desktop	√	√	×	√
SCS-6150C	Chairman unit	Desktop	√	√	×	√
SCS-6170D	Chairman voting unit	Embedded	√	√	×	√
SCS-6170C	Delegate voting unit	Embedded	√	√	×	√
SCS-6130D	Delegate unit	Desktop	√	√	×	√
SCS-6140C	Chairman unit	Desktop	√	√	×	×
SCS-6140D	Delegate unit	Desktop	√	√	×	×
SCS-6002C	Chairman voting unit	embedded	×	√	×	×
SCS-6002D	Delegate voting unit	embedded	×	√	×	×

2.7. SCS-6050C/D discussion system unit

2.7.1. function direction:



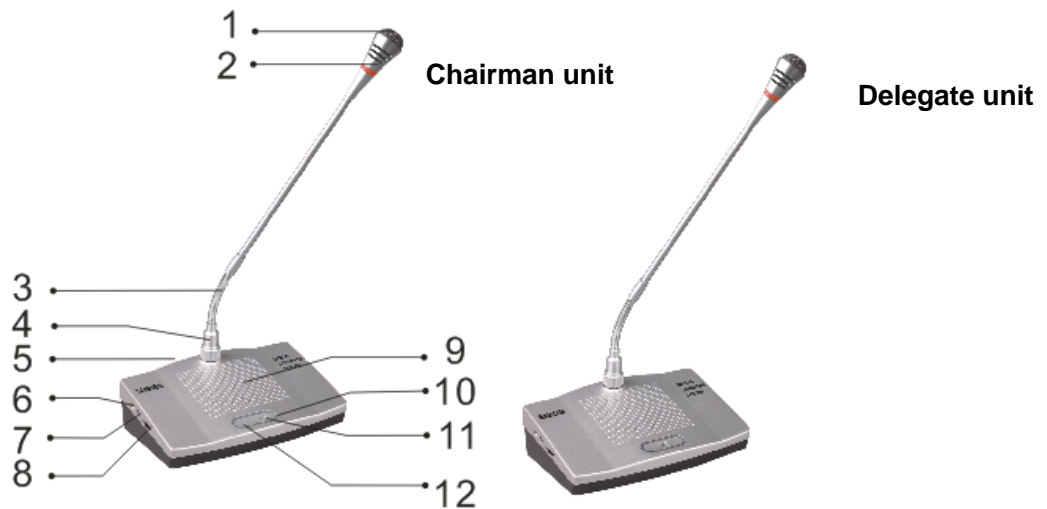
- 1、 Microphone words head.
- 2、 Unit-bright ring. It illuminates when the unit is ON.
- 3、 Activity part: Used to adjust the direction and height of the microphone, so to speak speaker to facilitate.
- 4、 Detachable plug: Professional 4-pin air plugs and fixed with metal nut to ensure that the microphone is not loose.
- 5、 LCD DISPLAY: With a backlit LCD display can clearly show if the current usage.
- 6、 Lapel microphone jack: After connect lapel microphone, the microphone would be broken rod.
- 7、 Headphone input.
- 8、 Amplifier's VOL control: to control the headphone or amplifier's VOL, to achieve the best result
- 9、 Built-in amplifier: the amplifier will be cut off when turn on the microphone or connect the headphone.
- 10、 Microphone unit indicator: double LED, in red, the microphone can be used, if in green, the microphone is limited
- 11、 ON/OFF button, chairman has the priority.
- 12、 The first in switch of chairman unit: Controlled or limit the unit.

2.7.2. Features:

1. Pluggable unidirectional microphone with red ring indicator.
2. Build-in loudspeaker and earphone jack with excellent audio quality and adjustable volume control.
3. The power of delegate unit and chairman unit are supplied by the central control unit with 24V safety current.
4. The loudspeaker will automatically mute to avoid howling when the microphone turns on.
5. The contribution units are equipped with shielded 8-pin cable, which can prevent the radio disturbance well.
6. Communicating in the hand in hand daisy-chain, it is easy to install and maintain.

2.8. SCS-6040C/D discussion system unit

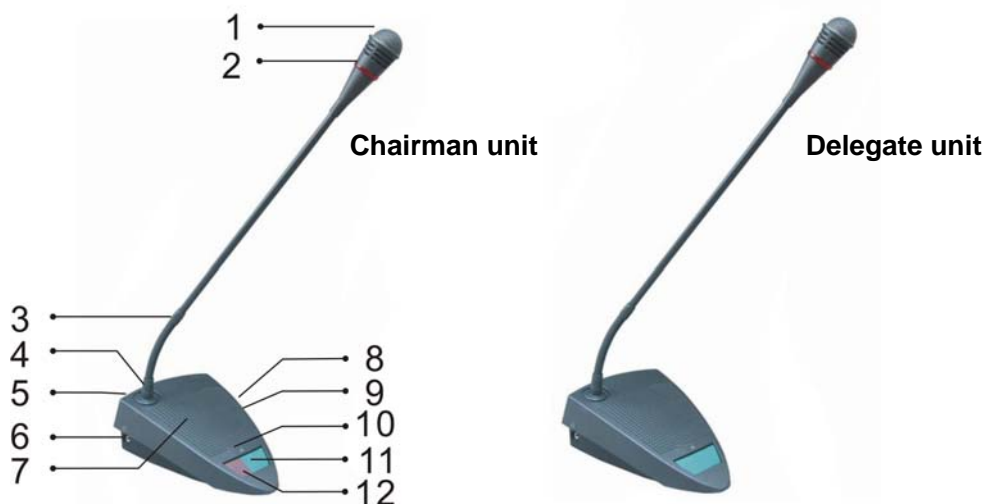
2.8.1. function direction:



- 1、 Microphone words head.
- 2、 Unit-bright ring: It illuminates when the unit is ON.
- 3、 Activity part: Used to adjust the direction and height of the microphone, so to speak speaker to facilitate.
- 4、 Detachable plug: Professional 4-pin air plugs and fixed with metal nut to ensure that the microphone is not loose.
- 5、 Microphone unit connected interface, (Female Plug) it used to connected the next microphone with 2.1meter cables.
- 6、 Lapel microphone jack: After connect lapel microphone, the microphone would be broken rod
- 7、 Headphone input.
- 8、 Amplifier's VOL control: to control the headphone or amplifier's VOL, to achieve the best result
- 9、 Built-in amplifier: the amplifier will be cut off when turn on the microphone or connect the headphone.
- 10、 Microphone unit indicator: double LED, in red, the microphone can be used, if in green, the microphone is limited
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- 12、 The first in switch of chairman unit: controlled or limit the unit.

2.9. SCS-6010VC/D discussion system unit

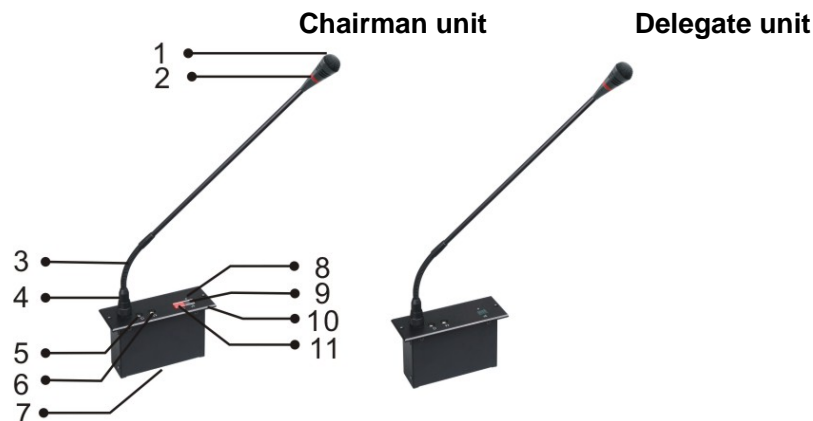
2.9.1. Function Directions:



- 1、 Microphone words head.
- 2、 Unit-bright ring. It illuminates when the unit is ON.
- 3、 Activity part: Used to adjust the direction and height of the microphone, so to speak speaker to facilitate.
- 4、 Fix microphone: to ensure that the microphone is not loose., it can choose detachable microphone.
- 5、 Microphone unit connected interface, (Female Plug) it used to connected the next microphone with 2.1meter cables
- 6、 Lapel microphone jack: After connect lapel microphone, the microphone would be broken rod.
- 7、 Built-in amplifier: the amplifier will be cut off when turn on the microphone or connect the headphone.
- 8、 Headphone input.
- 9、 Amplifier's VOL control: to control the headphone or amplifier's VOL, to achieve the best result
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- 11、 ON/OFF button, chairman has the priority.
- 12、 The first in switch of chairman unit: controlled or limit the unit.

2.10. SCS-6001C/D discussion unit

2.10.1. Function Directions

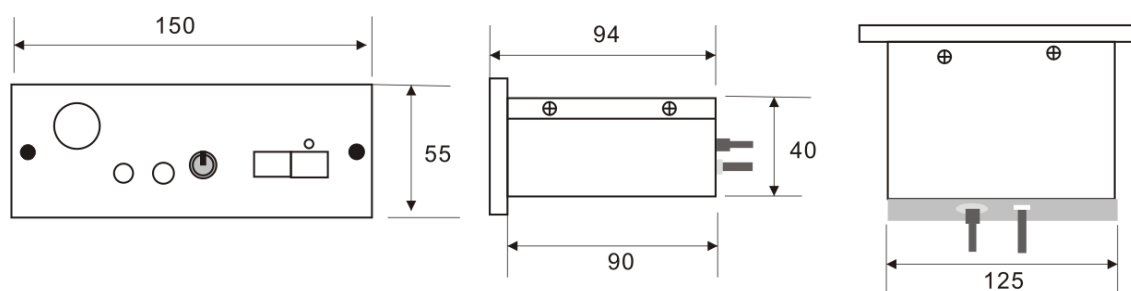


- 1、 Microphone words head.
- 2、 Unit-bright ring: It illuminates when the unit is ON.
- 3、 Activity part: Used to adjust the direction and height of the microphone, so to speak speaker to facilitate.
- 4、 Detachable plug: Professional 4-pin air plugs and fixed with metal nut to ensure that the microphone is not loose.
- 5、 Lapel microphone jack: After connect lapel microphone, the microphone would be broken rod.
- 6、 Headphone input
- 7、 Microphone unit connected interface, (Female Plug) it used to connected the next microphone with 2.1meter cables.
- 8、 Microphone unit indicator: double LED, in red, the microphone can be used, if in green, the microphone is limited
- 9、 ON/OFF button, chairman has the priority.
- 10、 High strength aluminum alloy panel
- 11、 The first in switch of chairman unit: controlled or limit the unit.

2.10.2. Features:

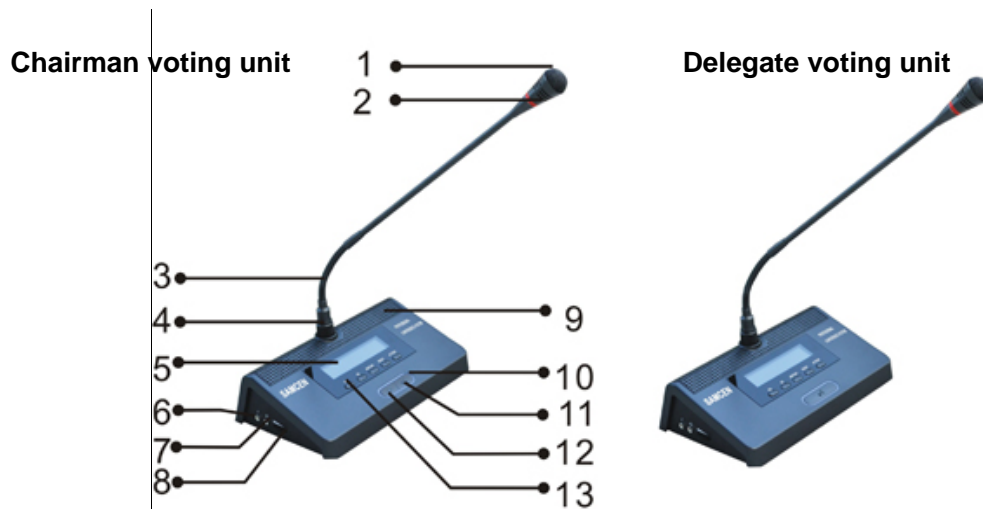
1. Build-in loudspeaker and earphone jack with excellent audio quality and adjustable volume control.
2. Pluggable unidirectional microphone with red ring indicator. Easy operation. Press only the MIC button to address.
3. The loudspeaker will automatically mute to avoid howling when the microphone turns on.
4. Chairman unit can manage and control the whole conference conveniently.
5. The contribution units are equipped with shielded 8-pin cable, which can prevent the radio disturbance well.

2.10.3. Hole size unit(mm)



2.11. SCS-6150C/D voting system unit

2.11.1. function direction:



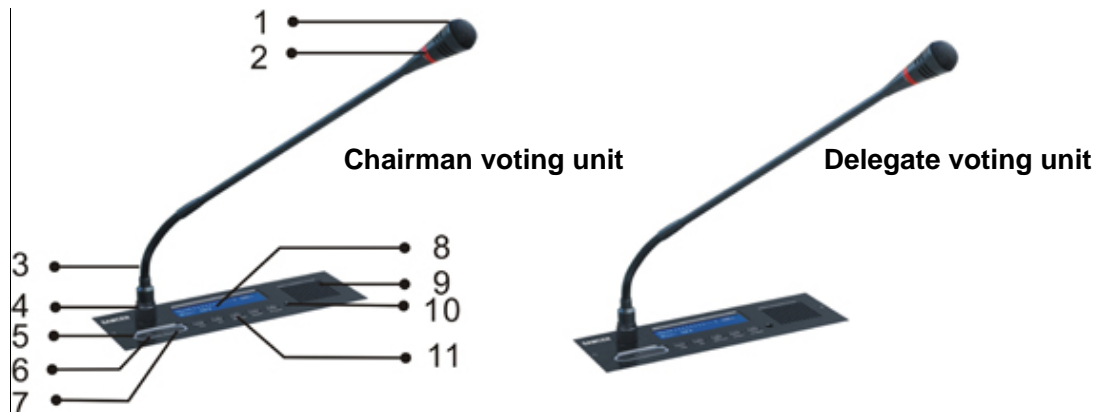
- 1、 Microphone words head.
- 2、 Unit-bright ring. It illuminates when the unit is ON.
- 3、 Activity part: Used to adjust the direction and height of the microphone, so to speak speaker to facilitate.
- 4、 Detachable plug: Professional 4-pin air plugs and fixed with metal nut to ensure that the microphone is not loose.
- 5、 LCD DISPLAY: With a backlit LCD display can clearly show if the current usage.
- 6、 Lapel microphone jack: After connect lapel microphone, the microphone would be broken rod.
- 7、 Headphone input.
- 8、 Amplifier's VOL control: to control the headphone or amplifier's VOL, to achieve the best result
- 9、 Built-in amplifier: the amplifier will be cut off when turn on the microphone or connect the headphone.
- 10、 Microphone unit indicator: double LED, in red, the microphone can be used, if in green, the microphone is limited
- 11、 ON/OFF button, chairman has the priority.
- 12、 The first in switch of chairman unit: controlled or limit the unit
- 13、 Five buttons on the voting machine, 1、 "YES" 2、 "NO" 3、 "ABSTAIN" 4、 "RESET" 5、 "ATTEND"

2.11.2. Features:

7. Pluggable unidirectional microphone with red ring indicator.
8. Build-in loudspeaker and earphone jack with excellent audio quality and adjustable volume control.
9. The power of delegate unit and chairman unit are supplied by the central control unit with 24V safety current.
10. The loudspeaker will automatically mute to avoid howling when the microphone turns on.
11. The contribution units are equipped with shielded 8-pin cable, which can prevent the radio disturbance well.
12. Communicating in the hand in hand daisy-chain, it is easy to install and maintain.

2.12. SCS-6170C/D voting system unit

2.12.1. function direction:

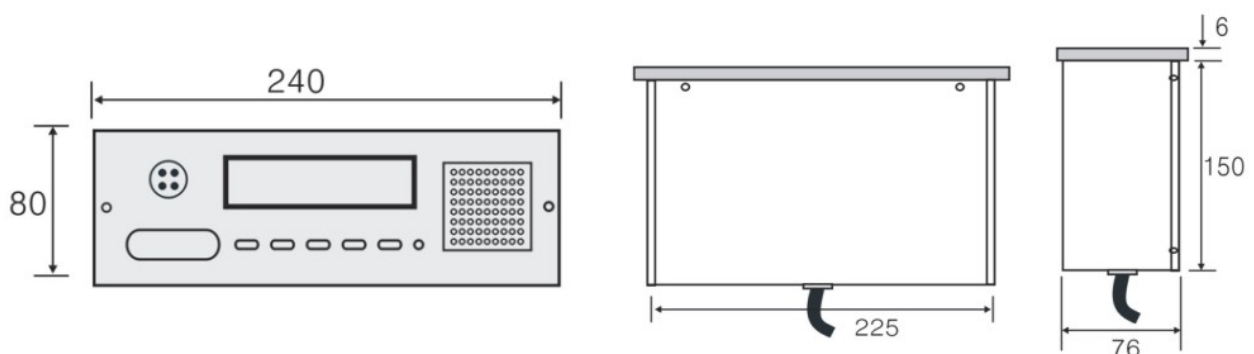


- 1、 Microphone words head.
- 2、 Unit-bright ring. It illuminates when the unit is ON.
- 3、 Activity part: Used to adjust the direction and height of the microphone, so to speak speaker to facilitate.
- 4、 Detachable plug: Professional 4-pin air plugs and fixed with metal nut to ensure that the microphone is not loose.
- 5、 Microphone unit indicator: double LED, in red, the microphone can be used, if in green, the microphone is limited
- 6、 The first in switch of chairman unit: controlled or limit the unit
- 7、 ON/OFF button, chairman has the priority.
- 8、 LCD DISPLAY: With a backlit LCD display can clearly show if the current usage.
- 9、 Built-in amplifier: the amplifier will be cut off when turn on the microphone or connect the headphone.
- 10、 Amplifier's VOL control: to control the headphone or amplifier's VOL, to achieve the best result
- 11、 Five buttons on the voting machine, 1、 "YES" 2、 "NO" 3、 "ABSTAIN" 4、 "RESET" 5、 "ATTEND"

2.12.2. Features:

- 1) Pluggable unidirectional microphone with red ring indicator.
- 2) Build-in loudspeaker and earphone jack with excellent audio quality and adjustable volume control.
- 3) The power of delegate unit and chairman unit are supplied by the central control unit with 24V safety current.
- 4) The loudspeaker will automatically mute to avoid howling when the microphone turns on.
- 5) The contribution units are equipped with shielded 8-pin cable, which can prevent the radio disturbance well.
- 6) Communicating in the hand in hand daisy-chain, it is easy to install and maintain.

2.12.3. Hole size: unit(mm)

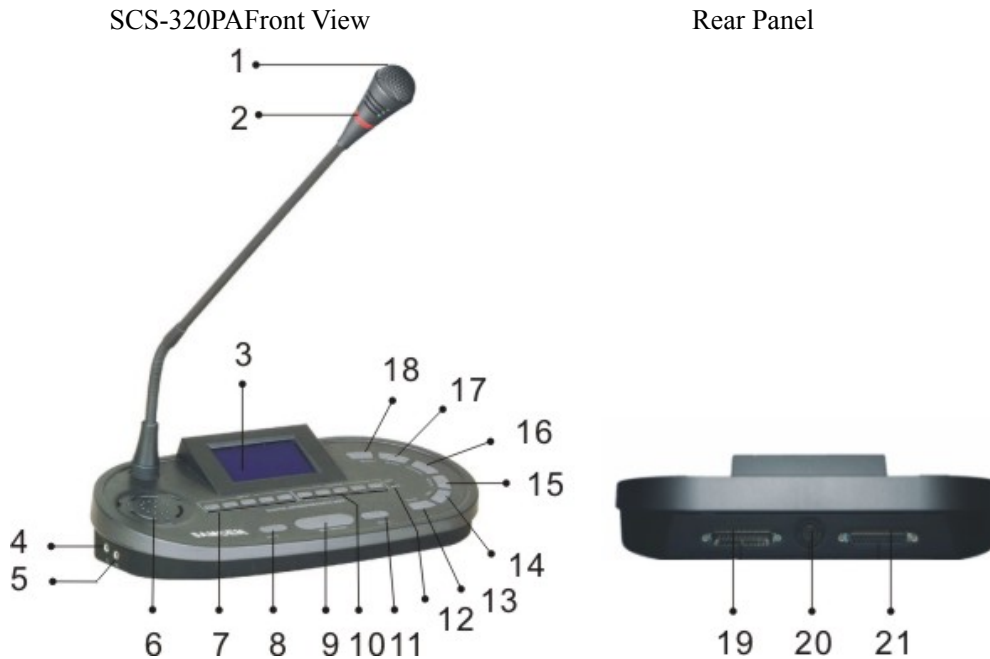


3. SCS Simultaneous Interpreter Unit

3.1. Introduction

SCS-320PA interpreter unit

3.2. Physical View



1. Microphone red indicator to show mic state
2. Unidirectional electret MIC
3. Microphone LCD, can display input and output channel
4. MIC. 3.5mm input jack to connect the microphone.
5. Phone 3.5mm input jack
6. Inner speaker
7. Microphone input channel (fast key channel 0-4)
8. Slow key: Delegates/Interpreter speak too fast; give a request for slow the speed.
9. Microphone on/off key
10. Microphone output channel (fast key channel 1-5)
11. Mute key: Prevention on interpreter's cough
12. Channel busy/mute indicator
13. Volume -: Decrease the input volume
14. Volume +: Increase the input volume
15. Output channel -
16. Output channel +
17. Input put channel -
18. Input channel +
19. Input DB25 connector: first unit connect to the main unit, and the next unit connect the previous unit output port.
20. 13P connector, use for connect 13P interpretation system
21. Output DB25 connector: connect the next interpreter's unit.

3.3. Connection Diagram



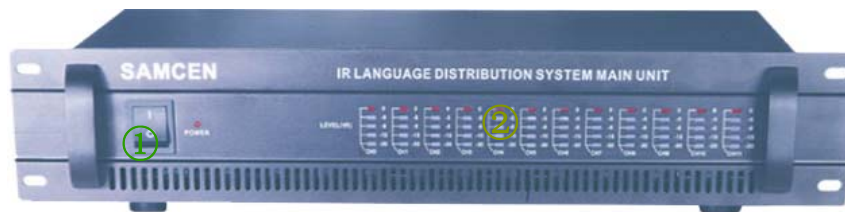
4. SCS IR Language Distribution System

4.1. Introduction

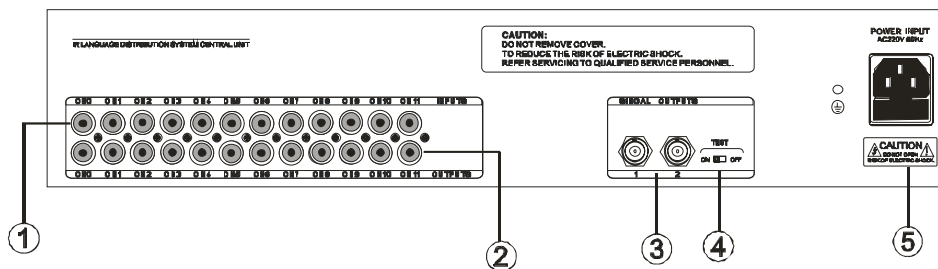
- SCS-350MA IR language distribution system transmitter host
- SCS-350TA IR language distribution system radiator unit
- SCS-360RA IR language distribution system receiver unit

4.2. SCS-350MA IR Language Distribution System Transmitter

4.2.1. Front panel



- ① POWER
- ② Input channel indicators: Indicates the working channel from 1 to 6 in red and from 7 to 12 in green.



- ① INPUTS ——11+1 Channel audio inputs, connect with conference host outputs.
- ② OUTPUTS ——11+1channel audio outputs, can send 12 audio outputs to recorder or amplifier and other audio devices.
- ③ SINGAL OUTPUTS——connect with IR radiator board.
- ④ TEST ——Test button.
- ⑤ POWER INPUT ——Power input, support with AC100V~240V input.

4.2.2. Features

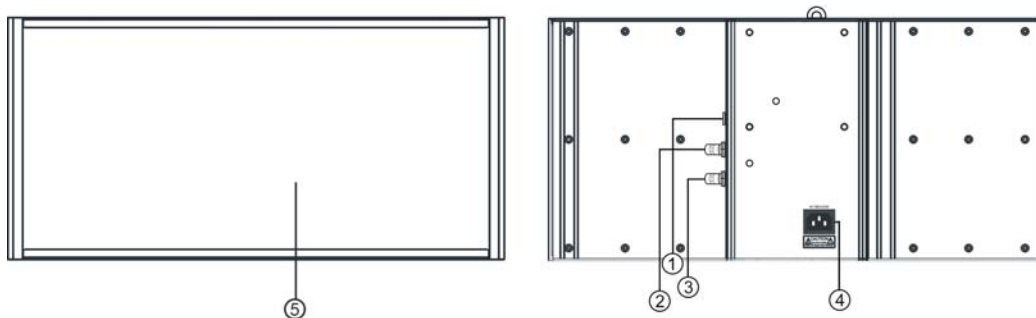
- 1) Wireless directional transmission avoided the radio disturbance and wiretapping.
- 2) Automatic Level Control (ALC)
- 3) Adopt high frequency (2M-20MHz) transmission to ensure anti-jamming from high frequency

lamp-house.

- 4) Adopt phase-locked loop (PLL) technique to achieve stable transmitting frequency.
- 5) Equipped with 12 input audio connectors, it is able to input external audio signals.
- 6) Equipped with 12 output audio connectors, it is able to output audio signals to different audio devices like amplifier and audio recorder.
- 7) The test function can create 12 various frequency audio signals for system test.
- 8) Level indicators can monitor the intensity of the input audio level directly.
- 9) Alarm function can automatically send out the warning message to all the audio channels.
- 10) Cover with metal material and earth well to ensure the 8000V antistatic performance

4.3. SCS-350TA-15 IR Radiator

4.3.1. Physical View



- ① LOW/HIGH ——power magnitude selector for IR radiation
- ① IN ——the interface to connect the SINGAL OUTPUTS of the transmitter host or the 'OUT' of the radiator board.
- ③ OUT ——connect with next 'IN'.
- ④ POWER INPUT——support with AC100V~240V input.
- ⑤ IR region

4.3.2. Features

- 1) Powerful ability of IR radiation (50 meters at 25W or 30 meters at 15W)
- 2) Support with 4 IR radiator board class-connection
- 3) Easy installation with free attachable bracket or triangle bracket
- 4) Half radiator angle: $\pm 22^\circ$

4.4. SCS-360RA/08/12/32 IR Receiver unit

4.4.1. Physical View

- 1) Display monitor, display language channel batter lever, Volume lever
- 2) Channel——Language receiver channel selector channel”+”
- 3) Volume knob for adjustment Volume”+”
- 4) IR Sensor, for receiving the IR signal.
- 5) Earphone (3.5mm), connect with the monitor earphone.
- 6) For hang up the receiver in the pocket
- 7) Channel——Language receiver channel selector channel”-“
- 8) Volume knob for adjustment Volume “-“



- 9) Power switch button.
- 10) Sensor for recharge the product power

4.4.2. Features

- 1) Cooperate with SCS-E3A headphone.
- 2) Adopt the special anti-noisy technique to reduce the noisy while switching, 8-32 selectable channel.
- 3) Adjustable volume.
- 4) The quantity of the receiver unit is not limited in the covered area of IR radiation
- 5) Adopt PLL technique for improving received stability to up to 10PPM
- 6) Convenient to keep. Strap and hang it up on the neck or just put it in the pocket

4.5. Technical Data

Model	SCS-350MA
Power supply	100-240V
Power consumption	15W/25W (selectable)
Crystal	Crystal control
Modulation	PPL, narrow band
Carrier wave frequency	2M—20MHz (BAND4)
Pre-emphasis	100 μ s
Deviation	\pm 6kHz (peak value \pm 7kHz)
Total harmonic distortion	<1%
SNR	>80dB
Frequency response	60—12KHz
Input Sensitivity	50mV-1.5V
RF output	2 BNC, 100mV RMS
RF output impedance	50 Ω
Dimension	430L x 275W x 90H (mm)
Weight	6.8KG
Color	Black
Model	SCS-350TA
Power supply	AC100-240V
Transmit power	15W/25W/40W (selectable)
Average transmit angle	\pm 22 $^{\circ}$
RF input	Impedance: 5k Ω , voltage: 150mV—3V
Maximum covered distance	30M (15W)
Automatically opened threshold	50mV RF signal
Dimension	430L x 320W x 95H (mm)
Weight	7.8KG
Color	Purple
Model	SCS-360RA/08/12/32
Power supply	AAA NIMH rechargeable battery
Receiving frequency	2M-20MHz, 40KHz channel separated
Intermediate frequency	10.7MHz
Modulation	FM
Nominal frequency difference	\pm 6kHz
Peak value deviation	\pm 8kHz

Signal reversion	150ms
Total harmonic distortion	<1%
SNR	> 80dB
Am restraint	> 45dB
Maximum sound pressure level	110dB
Frequency response	608 kHz
Dimension	108L x 62W x 28H (mm)
Weight	0.4KG
Color	Black

5. SCS Video Auto-tracking System

5.1. SCS690HD High Definition Camera

5.1.1. Features

- .Integrated and handle fast installation
- .Support YPbPr Video Output
- .Built-in zoom with 120 times(10x optical, 12x digital).
- .Screen will display pan/ tilt position, zoom etc.
- .Communications: RS485
- .IP66 all-day defend cover.
- .128 presets(titles can be set), 4 tours; 8 programmable zones(titles can be set)
- .Pan 360°, Tilt 90°continuously rotation with auto-flip, humanize focus and speed proportion.
- .Built-in heating and radiating system, four alarms input, one alarm output as factory default, IP board is optional.
- .Park action function, can auto-call presets or start-up tour, pattern, scan and display areas after dome is idle for a period of time.
- .Built-in TVS1500W lightning-proof, surge-proof and wave-proof.



5.1.2. Technical Data

Model	SCS-690HD
Imaging element	1/3"HD COMS
Significant pixel (H×V)	752(H)X582(V)
Video output	YPbPr,1.0±0.2Vp-p
S/N ratio (S/N)	≥50dB
Illumination	3Lux(F1.4)
White balance	Auto/manual (R/B gain control)
Back-compensation	Off/auto
Focus	5.1mm ~51mm
Electron Shutter	1/2 ~ 1/10,000 s
Manual speed	Pan (0.5°~160°/s) ;Tilt (0.5°~90°/s)
Preset speed	320°/s
Rotation	Continuously 360°; tilt 0~90° with auto-flip

Speed Proportion	As the length of focus, to auto-adjust the speed
Zoom	Total zoom 120X (Optical 10X; Digital 12X)
Preset	128 preset, title can be edited
Auto-flip	Tilt down 90°, with auto-flip 180°
Display zone	8 programmable zones with titles
Sync model	Internal
Decoder	Built-in
Video output	Female BNC
Remote controlling	RS485
Baud rate (RS485)	2400 / 4800 / 9600/19200 bps
ID range	1~254
Temperature	-30°C ~50°C
Protection grade	IP66, 1500w lightning-proof, surge-proof, all-day defend cover
Power supply	AC 24V
Power consumption	< 12W
weight	2.5Kg
Dome Dimension (L*W*H)	154X154X152.6 mm

6. Accessories

6.1. SCS-E1A Single Earphone

6.1.1. Features

- 1) Working with interpreter units or SCS-350TA IR receiver units.
- 2) Avoid being interfered in conference.
- 3) Build-in 1.5 meter cable. Hi-fi audio quality.



6.1.2. Technical Data

Model	SCS-E1A
Interface	3.5mm mono connector
Frequency response	80Hz – 2KHz
Sensitivity	90dB
SNR	> 80dB
Distortion	< 0.1dB
Impedance	32 Ω
Dynamic range	> 85 dB
Output power	80mW

6.2. SCS-E2 Headphone

6.2.1. Features

- 1) Working with interpreter units or SCS-350TA IR receiver units.
- 2) Avoid being interfered in conference.

- 3) Build-in 1.5 meter cable.
- 4) Hi-fi audio quality.

6.2.2. Technical Data

Model	SCS-E2
Interface	3.5mm stereo connector
Frequency response	80Hz – 2KHz
Sensitivity	90dB
SNR	> 80dB
Distortion	< 0.1dB
Impedance	32 Ω
Dynamic range	> 85 dB
Output power	100mW



6.3. SCS-E3A Earphone with Microphone

6.3.1. Introduction

- 1) Working with interpreter units.
- 2) Avoid being interfered in conference.
- 3) Build-in 1.5 meter cable.
- 4) Hi-fi audio quality

6.3.2. Technical Data

Model	SCS-E3A
Interface	3.5mm stereo connector
Frequency response	80Hz – 2KHz
Sensitivity	90dB
SNR	> 80dB
Distortion	< 0.1dB
Impedance	32 Ω
Dynamic range	> 85 dB
Output power	80mW



6.4. Cable

Introduction

- 1) CBL- 005 5 meters cable with connectors (male & female)
- 2) CBL- 010 10 meters cable with connectors (male & female)
- 3) CBL- 020 20 meters cable with connectors (male & female)
- 4) CBL- 100 100 meters cable with connectors (male & female)

Features

- Use to connect the contribution units and the host.
- 8-pin cable with connectors (male & female)
Up to 1000 meters transmission distance



7. SCS Engineering Examples

The following engineering examples are with different conference scales and share the same design principle. Due to the modularized structure of SAMCEN SCS, engineers just need to expand the SCS modules to strengthen the functions according to the user's request and the scale of the conference. It is easy and cost-saving for both users and engineering designers.

7.1. Basic Discussion Conference & Video Auto Tracking

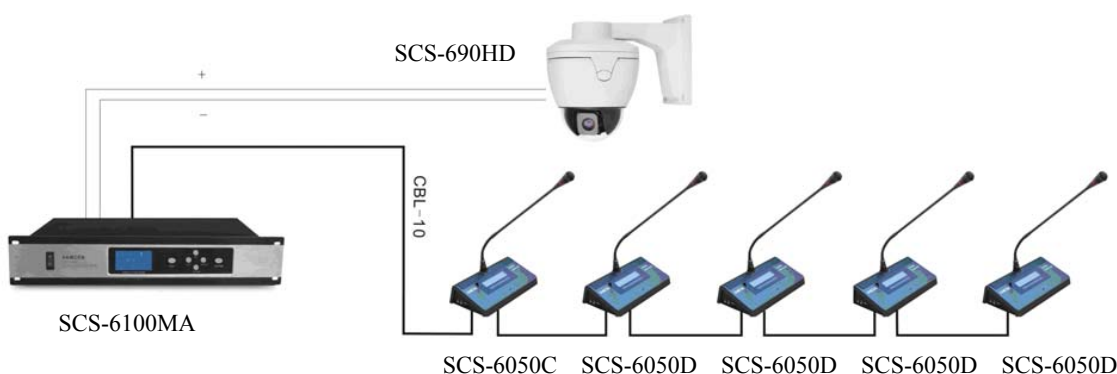
7.1.1. Function Description

- Implement basic discussion function.
- The video auto tracking function, when the delegate is ON, the camera focus to speaker automatically.
- Control the conference by setting the limitation of active microphones and active mode from the control host or software in console PC.
- Addresser's voice will be transferred to the build-in loudspeaker of each contribution unit. Need to input some background music and output the audio to amplifier and recorder.

7.1.2. Configuration

- SCS-6100MA SCS control host
- SCS-6050C SCS chairman unit
- SCS-6050D SCS delegate units
- SCS-690HD SCS high speed dome camera
- CBL CABLE SCS cable
- SCS-E3A Earphone
- PC Console PC
- PA Amplifier
- DVD DVD player

7.1.3. System Diagram



7.2. Discussion & Voting Conference & Video Auto Tracking

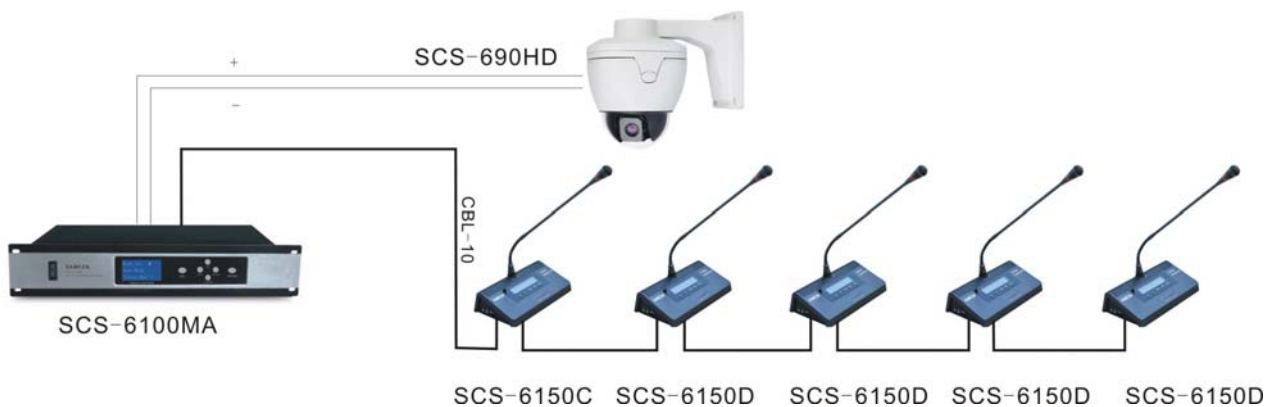
7.2.1. Function Description

- Implement discussion and **voting** function.
 - Control the conference by setting the limitation of active microphones and active mode from the control host or software in console PC.
 - Addresser's voice will be transferred to the build-in loudspeaker of each contribution unit.
- 1 Need to input some background music and output the audio to amplifier and recorder.

7.2.2. System Configuration

- SCS-6100MA SCS control host
- SCS-6150C SCS chairman unit
- SCS-6150D SCS delegate units
- Software package (optional)
- SCS-690HD SCS high speed dome camera
- CBL CABLE SCS cable
- SCS-E1 Single earphone
- PC Console PC
- PA Amplifier
- DVD DVD player
- CASSETTE Recorder

7.2.3. System connection



7.3. Discussion + Voting + Interpretation Conference

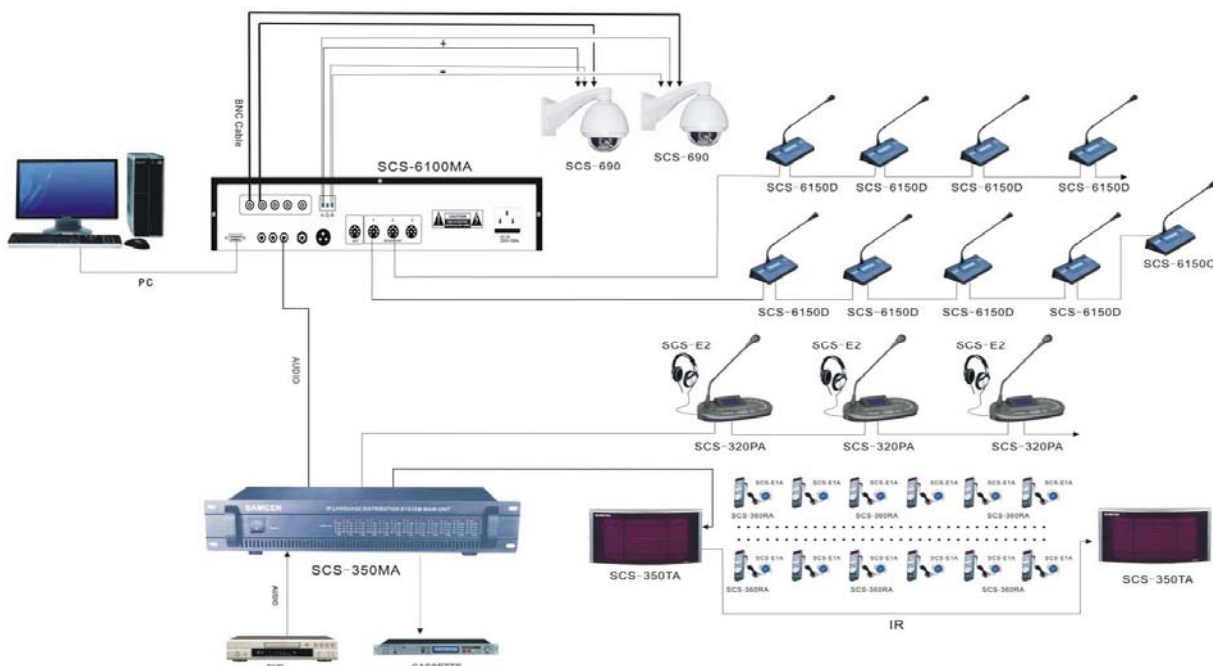
7.3.1. Function Description

- Implement discussion, voting, **interpretation and video auto tracking** function.
 - Control the conference by setting the limitation of active microphones and active mode from the control host or software in console PC.
 - Addresser's voice will be transferred to the build-in loudspeaker of each contribution unit.
 - Need to input some background music and output the audio to amplifier and recorder.
 - Except the original language, this international conference needs to interpret up to 31 foreign languages.
 - Many auditors will attend this conference and select their own languages to hear.
- SCS should cooperate with central control system to control and manage the whole conference.

7.3.2. System Configuration

- SCS-6100MA SCS control host
- SCS-6150C SCS chairman unit
- SCS-6150D SCS delegate units
- SCS-320PA SCS interpreter units
- SCS-350MA IR language distribution system transmitter host
- SCS-350TA IR language distribution system radiator unit
- SCS-360RA IR language distribution system receiver unit
- SCS-690 SCS speed dome camera
- Software package
- SCS-E1A Single earphone
- SCS-E2 Earphone with microphone
- PC Console PC
- PA Amplifier
- DVD DVD player

7.3.3. System connection



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