



Safety instructions



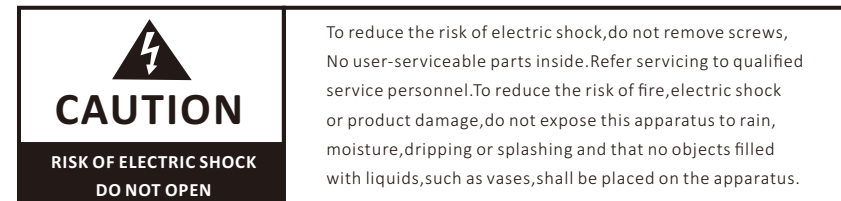
When using this electronic device, basic precautions should always be taken, including the following:

- 1 Read all instructions before using the product.
- 2 Do not use this product near water (e.g., near a bathtub, washbowl, kitchen sink, in a wet basement or near a swimming pool etc).
- 3 Use this device when you are sure that the controller has a stable base and it is fixed securely.
- 4 This product, in combination with loudspeakers and amplifier may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult with otorhinolaryngologists.
- 5 The product should be located away from heat sources such as radiators, heat vents, or other devices that produce heat.
- 6 The product should be connected to a power supply that is described in the operating instructions or are marked on the product.
- 7 Before the wiring always unplug equipment's from main power supply.
- 8 The power supply should be undamaged and never share an outlet or extension cord with other devices. Never leave device plugged in the outlet when it is not being used for a long period of time.
- 9 Care should be taken that objects do not fall into liquids and liquids would not be spilled on the device.
- 10 Do not block any ventilation openings. Install in accordance with the manufacturer's instruction.

Safety instructions



- 11 Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provide plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 12 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and point where they exit from the apparatus.
- 13 Only use attachments/accessories specified by the manufacturer.
- 14 Unplug this apparatus during lightning storms or when unused for long periods of time.
- 15 The apparatus shall be connected to a main socket output with a protective earthing connection.
- 16 The product should be serviced by qualified service personnel if :
 - The power supply or the plug has been damaged.
 - Objects have fallen into or liquid has been spilled on the product.
 - The product has been exposed to rain.
 - The product has been dropped or the enclosure damaged.
 - The display or main board damaged
- 17 There are some areas with high voltage inside, to reduce the risk of electric shock , do not remove cover of the controller or power supply. The cover should be removed by qualified personnel only.



WEEE Directive



If the time arises to throw away your product, please recycle all possible component.



This symbol indicates that when the end-user wishes to discard this product, it must be sent to separate collection facilities for recovery and recycling. By separating this product from other household-type waste, the volume of waste sent to incinerators or land-fills will be reduced and natural resources will thus be conserved.

The Waste Electrical and Electronic Equipment Directive (WEEE Directive) aims to minimise the impact of electrical and electronic goods on the environment. Gestton comply with the Directive 2012/19/EU of the European Parliament on waste electrical and electronic equipment (WEEE) in order to reduce the amount of WEEE that is being disposed of in land-fill site.

All of our products are marked with the WEEE symbol; this indicates that this product must NOT be disposed of with other waste. Instead it is the user's responsibility to dispose of their waste electrical and electronic equipment by handing it over to an approved reprocessor.

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Product overview



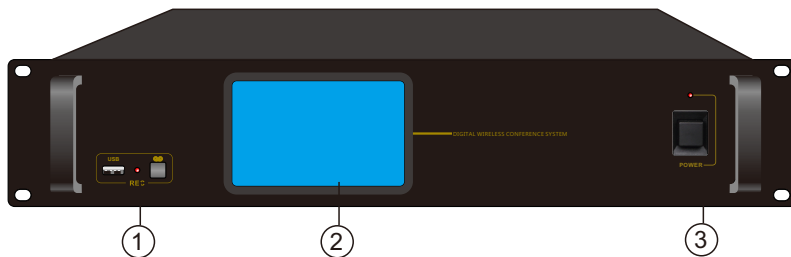
1.General Function

- ① Camera tracking can be set without any other auxiliary equipment.
- ② Main controller adopts 4.3 inch touch screen with friendly interface. Speaking unit adopts 1.7 inch TFT colorful screen.
- ③ System can be connected with multiple cameras via PELCO P/D, YAAN, BRC-Z330 camera agreement.
- ④ Maximum 1 chairman unit & 126 delegate units can be connected to one system. More than 2 systems can work in the same venue when using different frequency channel. Maximum 1 chairman unit & 3 delegate units can speak at the same time.
- ⑤ Address can be edited manually.
- ⑥ Meet mode: FIFO, LIFO, Limited
- ⑦ Chairman unit adopts priority function to cut off delegate unit.
- ⑧ With built-in Li-battery in microphone unit, can work for 7 hours constantly.
- ⑨ Main controller can shut all units down with "One Key Shutdown" function.

2.Installation

- ① System must be edited address before using. Two way of "Edit address": "Auto Setup" & "Manual Setup"
- ② Connect two receiving antenna to the rear panel, then pull the antenna to about 45° angle.
- ③ Power supply: AC110~220V.
- ④ To get the best communication, the minimum installation height to the ground shall be 1m, the minimum distance between launch antenna & receiving antenna shall be 2m, & the minimum distance to wall shall be 1m.
- ⑤ Keep antennas away from interference such as computer, digital equipment, TV & also big metal item.
- ⑥ Try to avoid putting barrier in between launch antenna & receiving antenna.

3.Front Panel

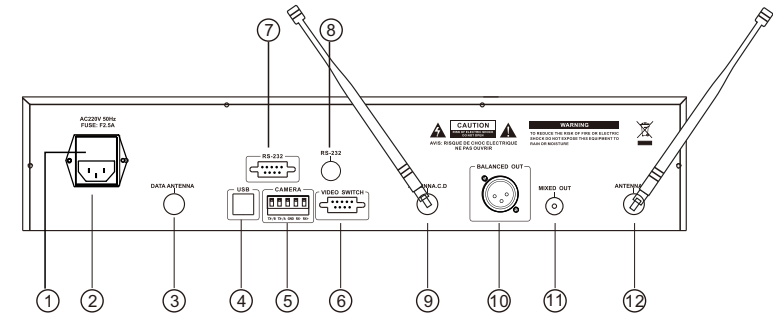


Product overview



- ① USB recorder, supports max.64G thumb drive in FAT32, MP3 recording format.
- ② Touch screen window: To indicate & set main controller parameter.
- ③ Power switch & indication light.

4.Rear Panel



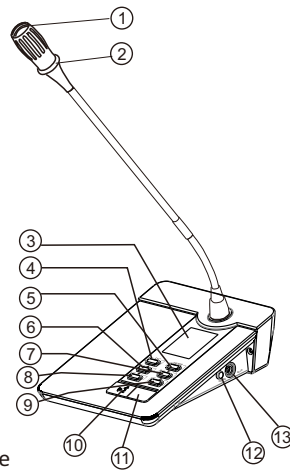
- ① Fuse holder, for 2.5A fuse;
- ② AC220V power socket;
- ③ BNC port for control signal receiving antenna.;
- ④ USB port, to connect with PC;
- ⑤ Camera port, for both RS485 & RS232 communication. When connecting RS485 camera, connect RX to TXD of camera, connect TX to RXD of camera, G to be grounded;
- ⑥ RS-232 port, for video switcher;
- ⑦ RS-232 port, programmable data port, to connect to central controller;
- ⑧ Camera port, for RS232 camera;
- ⑨ Audio channel UHF-C/D receiving antenna connector(BNC type);
- ⑩ Balance audio output;
- ⑪ 6.3 audio output;
- ⑫ Audio channel UHF-A/B receiving antenna connector(BNC type);

Product overview



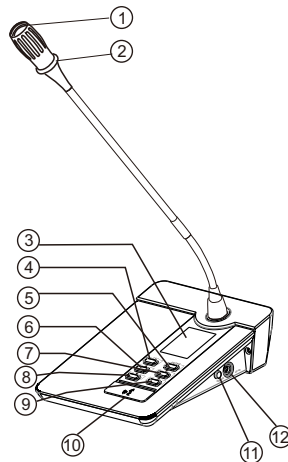
5. Chairman Unit

- ① Mic Capsule: to pickup vocal & transfer to amplify.
- ② Mic Light Loop
- ③ TFT colorful window: to indicate status & set parameter.
- ④ ESC
- ⑤ Enter
- ⑥ Up
- ⑦ Down
- ⑧ Turn down
- ⑨ Turn up
- ⑩ Priority Button: to cut off all the delegate units.
- ⑪ On/Off Button: to turn on/off the unit.
- ⑫ Power switch: Press it for about 3 seconds to turn on/off the power.
- ⑬ Charging Jack: to connect with charger.



6. Delegate Unit

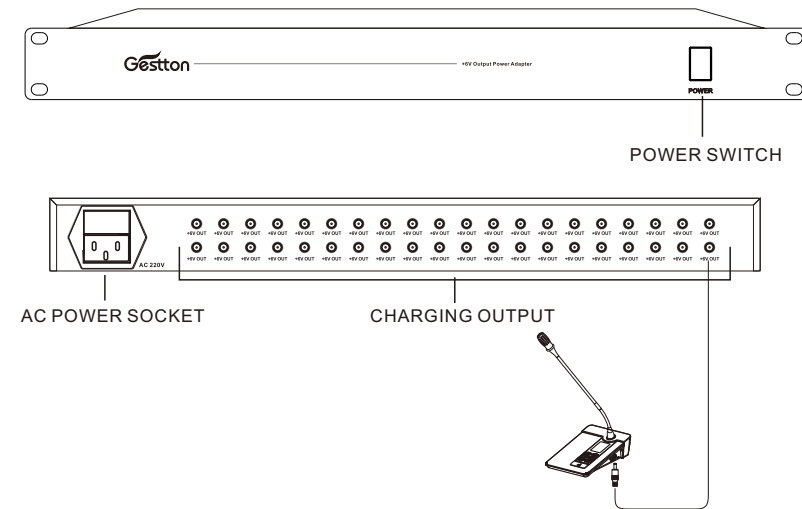
- ① Mic Capsule: to pickup vocal & transfer to amplify.
- ② Mic Light Loop
- ③ TFT colorful window: to indicate status & set parameter.
- ④ ESC
- ⑤ Enter
- ⑥ Up
- ⑦ Down
- ⑧ Turn down
- ⑨ Turn up
- ⑩ On/Off Button: to turn on/off the unit.
- ⑪ Power switch: Press it for about 3 seconds to turn on/off the power.
- ⑫ Charging Jack: to connect with charger.



Product overview



7. Charger unit



Charger unit supports charging 40 microphone units at a time. User should switch OFF the microphone units and connect the charging port of microphone units to the DC ports with supplied charging cable.

Charging time is approx. 4-5 hours.

8. Menu of Main Controller

Main controller adopts capacitive touch screen.

Setting Notice:

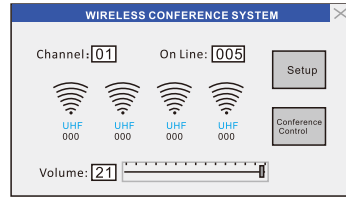
- ① Select one textbox while text inside turns red, then modify value by the numeric keyboard or “↑↓”. Press “< >” to move cursor.
- ② If the manually set value is lower than the minimum value of the parameter, system will automatically choose the minimum value. In a similar way, system will choose the maximum value if manually set value is higher than the maximum value.
- ③ Those textbox with grey background color can not be modified.
- ④ There will be a countdown for 5 second asking for confirmation for some of the menus.
- ⑤ When enter “Camera Tracking”, “Edit address”, “Shift Channel”, and “Detect Channel” menus, system will pause meeting. In this stage, all the speaking units can't be turned on.

Operation



8.1 Status Indication

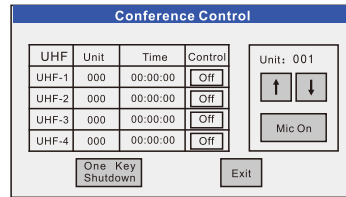
Indicate: total number of online units, current channel, audio UHF status & signal level, battery level(only indicate when low battery), indicate & set volume.



8.2 Meet Control

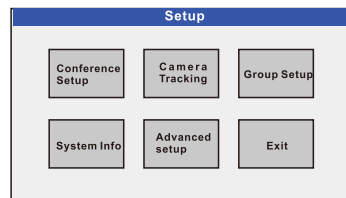
Functions:

- (1) Check the current UHF audio channel status.
- (2) Cut off the unit on the channel.
- (3) Turn on a certain unit.
- (4) One Key Shutdown, to shut all the units down.

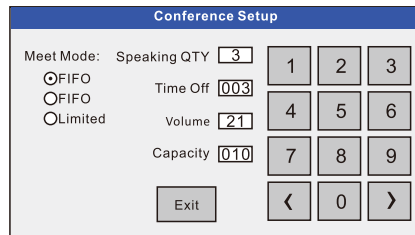


8.3 Setup

Main Menu Interface of Setup



8.4 Conference Setup



① Meet Mode:

- FIFO: Once the total number of speaking units exceed the set limited number, the first turned on unit will be cut off automatically.
- LIFO: When the total number of speaking units achieve the set limited number, system will cut off the last turned on unit once there are one more unit turned on.
- Limited Mode: No more unit can be turned on when the total number or speaking unit achieve the set limited number.

② Speaking QTY:

- To set the limit of total number of speaking unit. Maximum 4 units can speak in the same time(1 chairman, 3 delegates).

Operation



③ Time Off:

- To turn off the unit compulsively by the set certain time (001~999 second). "000" mean this function is disable.

④ Volume:

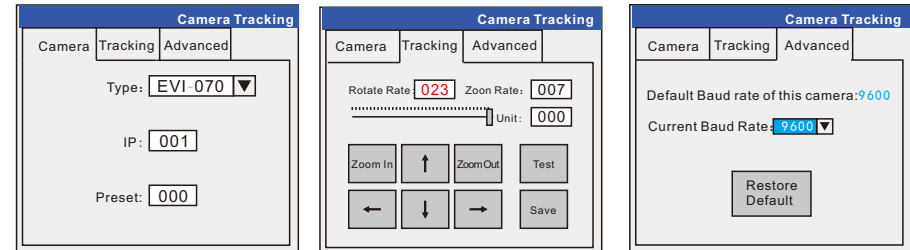
- To set the volume of main controller output.

⑤ Capacity:

- To limit the total amount of online units.
- When the unit address is beyond system capacity, it can't connect to the system.
- For example, when set system capacity is 3, system can only connect with those units with address of 1,2,3.

8.5 Camera Tracking

There are 3 tabs for this menu.



A. Description

Type: to select camera type

Address: to select a camera.

Preset Point: It is the reference number in the camera for saving the camera tracking position. (Sony-D70 & BRC-Z330 can't set preset point)

Rotate Rate: to set the camera rotating rate.

Zoom Rate: to set the zoom in/out rate.

Unit: the current tracking unit. "000" is for full view.

Baud Rate: communication speed for RS-232/RS-485. Some of the cameras to be with optional baud rate.

Operation



B. Operation Procedure

- (1) Set the camera type & address, then connect camera with main controller.
- (2) Enter above interface.
- (3) Set "type", "address" & "preset" in the camera tab. Normally, no need to set "baud rate".
- (4) After above setting, enter "tracking" tab.
- (5) Rotate & zoom the camera to a certain position. In the meantime, the mic loop light of tracked unit is flashing.
- (6) After setting, click "Save" to save the tracking position. Then unit/preset will plus 1 automatically for another tracking point setting.
- (7) Click "Test" to check preset point.

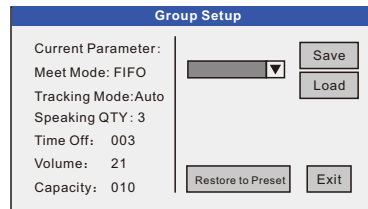
8.6 Parameter setting.

Parameter setting can be saved as group in this menu. Groups can be loaded to the current system.

There are 8 groups can be saved in one main controller. Each group included below parameters: "Meet Mode", "Tracking mode" "Speaking QTY", "Time Off", "Volume", "Capacity".

Use "Restore to Preset", to go back to default setting as below:

- Meet Mode: FIFO
- Tracking Mode: auto
- Speaking QTY: 3
- Time Off: 000
- Volume: 24
- Capacity: 020



Notice:

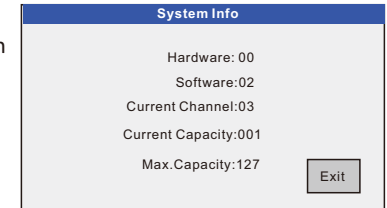
- a. There is no "Channel" in group.
- b. Only those saved groups can be loaded, otherwise, system will prompt "group invalid"
- c. Be careful about the system capacity when loading group or restore factory setting.
 - Modify system capacity according to the actual amount of units.

Operation



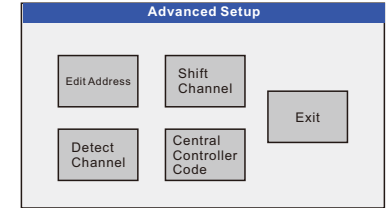
8.7 System Info

To check technical specification of main controller.

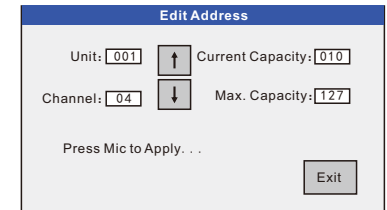


8.8 Advanced setting

Interface of advanced setting.



8.8.1 Edit Address



System must be edited address before first used.

Description:

- a. Unit: address for the current applying unit.
- b. Channel: The channel for current applying unit. After finishing "edit address", system will enter this channel

Current Capacity: current system's capacity. System will keep the last capacity. If the total number of edited address units is beyond last system capacity, system will modify the current capacity accordingly.

- ① All the units of the same channel will be controlled to enter "Edit Address" interface.
- ② Set "unit" and "channel", then wait for unit's address applying.
- ③ Press the on/off button on the units in order to obtain address.

Notice:

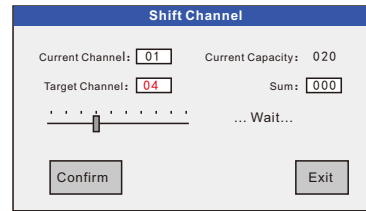
- ① If there are units not in interface of "Edit Address" (could be because of different channels), these units can be manually set to enter "Edit Address" according to below unit menu instruction.
- ② Chairman unit must be edited "001", so that it's priority function can be carried out.
- ③ Try not to manually modify "unit" and "channel" after editing address started. Otherwise, it may cause error.

8.8.2 Shift Channel

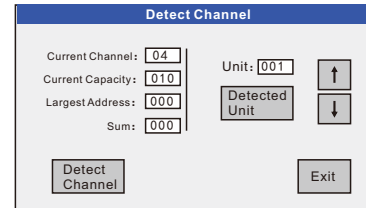
This is to shift current channel to another channel, so that multiple systems can be used in the same venue.

Operating Introduction:

- ① Move slide to select the target channel.
- ② Click “confirm” to activate shifting.
- ③ Main controller shift units' channel to target channel, in the meantime, it calculate the shifted units amount.
- ④ After finished shifting, check if “current capacity” & “Sum” are the same or not. If not, please shift those unshifted units to target channel manually.

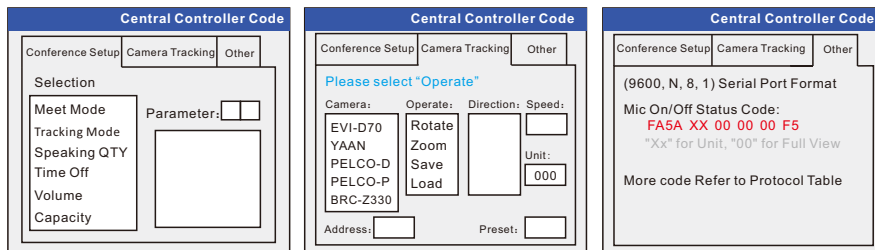


8.8.3 Detect Channel



- This can check all the units of this current channel & it's range is “1~127”. It can also check a single unit. The mic loop light will flash once when it's unit receive testing order.
- “check channel” can check the information of “largest unit address” & “online units sum”.
- Normally, “current capacity”, “largest unit address” & “online unit sum” should be the same. If they are not the same, please check for below: 1) failed communication; 2) repetitive address; 3) not enough capacity.

8.8.4 Central Controller Code



- Main controller can communicate with central controller in both-way via RS-232 port. Central controller can send order to set system parameter. Main controller sends system status to central controller.
- In this interface, central controller code will be automatically generated after selecting. It is very easy for user to set central controller by this code generator.
- Terms in “Meet Setup” refer to 7.4

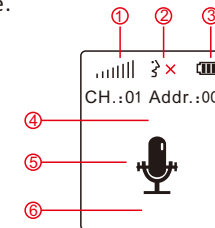
9. Unit Menu

Operation :

- ① Click ENTER to enter menu
- ② Click ESC to go back
- ③ Click “↑↓” to move cursor, “←→” to modify value
- ④ Select “edit address” or “manual set”, then click ENTER. There will be a dialog asking for confirmation. Click ENTER again.

9.1 Status Indication

“Channel”, “Address”, “Mic status”, “Battery status(surplus, charging)”, “communication status”, “communication abnormal warning”, “Mic off reason” can be indicated in this interface.



- ① [Signal strength bar] It shows the constantly communication between unit & main controller. When the unit is disconnected with main controller,
- ② [Mic off icon] Mic off
- ③ [Mic on/off icon] Mic is on the procedure of turning on/off.
- ④ [Signal strength bar] Mic on & vocal electric level.
- ⑤ [Battery icon] It shows the battery surplus by three cells. There will be a low battery warning when the surplus is one cell or less. When it is charging, cells will be increasing.

④ System Info.

Config Abnormal: unit can not communicate with main controller due to failed channel/address.

No Signal: It means the unit lost connection for more than 8 seconds. It will be automatically turned off.

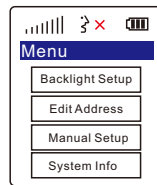
Under Setting: It means main controller is now being set (tracking, shift channel, check channel). In this case, units can't be turned on.

⑤ Mic On/Off

⑥ Mic off reason: One of below reason for cutting off unit: chairman priority, time off, Limited QTY, No response, System Off. It will last for 1.5seconds.

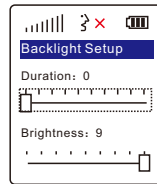
9.2 Main Menu

Below is the main menu of unit. Press “↑↓” to move cursor, then press ENTER.

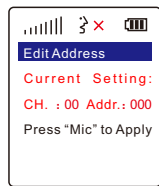


9.3 Backlight setup

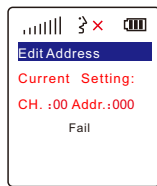
To set backlight time & brightness
Backlight time “0” means no time limitation.



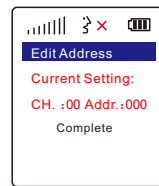
9.4 Edit Address



①



②



③



④

Notice:

- ① Last set channel & address info will be deleted when entering this menu. When go back without successfully address editing, address will be “000” & channel will be “00”, then status interface will show “abnormal”.
- ② Main controller need to enter “edit address” menu first, so that units can carry out “edit address” function.
- ③ Chairman unit can't carry out priority function until it's address is set “001”. Apply for address by pressing Mic button as picture①.

Once unit is successfully edited address, it will shows as picture③.

System will go back to status interface when exiting “edit address” menu. If failed to edit address, unit will show “abnormal” as picture④.

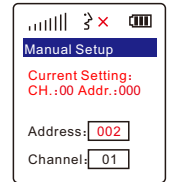
9.5 Manual Setup

Manual setting on the unit is auxiliary setting for “edit address”.

Normally using “edit address” on the main controller to edit address for the whole system is recommended.Operation

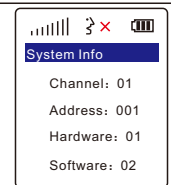
Instruction:

Click “↑↓” to move cursor, “←→” to modify value

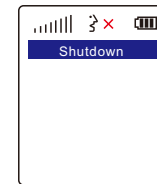


9.6 System Info.

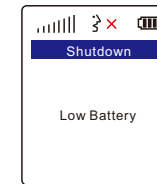
“Channel”, “Address”, “Hardware”, “Software” can be checked.



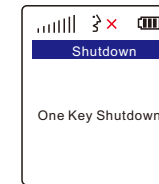
9.7 Shutdown



①



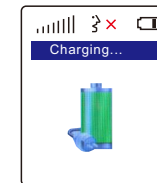
②



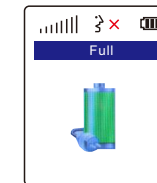
③

- Interface for manual shutdown
- Interface for low battery shutdown
- Interface for shutdown by main controller
- Unit will either be shut down after above three interfaces, or will be turned to charging interface by the external power supply.

9.8 Charge



①



②

- In above charging interface, unit can't be carried out any function. Press power button to go back to menu interface.
- Unit will show as picture① for a unfinished charging unit. The battery cells keep increasing.
- Unit will show as picture② for a finished charging unit. The three battery cells stay still

10. Software Guide

10.1 Launching the software

Noted: User should connect the USB port at the rear panel of the controller with PC, and link TV or projector to PC as the display for voting content output.

Click below icon to open operation software.

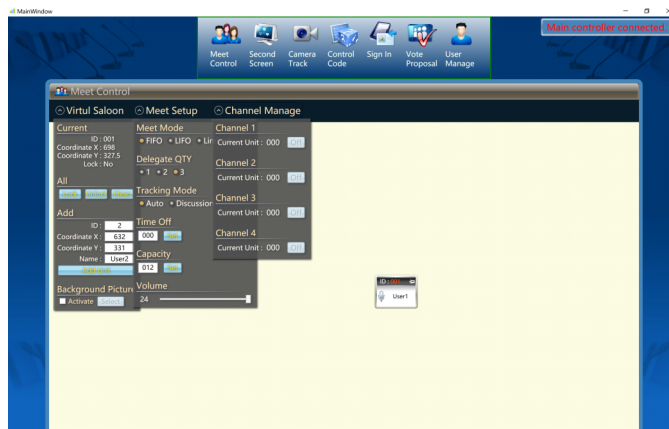


Enter the User Name and Password in the login box.



User Name (Default): admin
Password (Default): admin

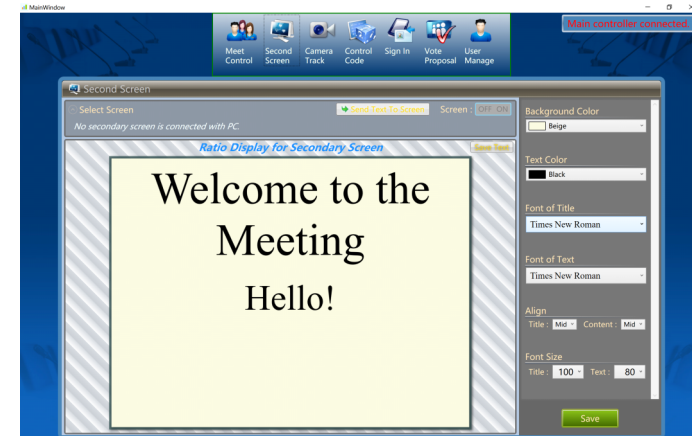
10.2 Meet Control



- Virtual Saloon : Allow user to draw the layout of the meeting table pattern, the ID relates to the ID assigned to each microphone unit.
- Meet Setup : User can configure the setup of the system via this panel including Meet mode, Delegate QTY, Tracking mode, Time off, Capacity, Volume.
- Channel Manage : Switch ON/OFF the microphone operated on each channel.

9.3 Second Screen

This window allows user to pre-adjust the content format which will be displayed on the TV/projection during the voting process.



10.4 Camera Track

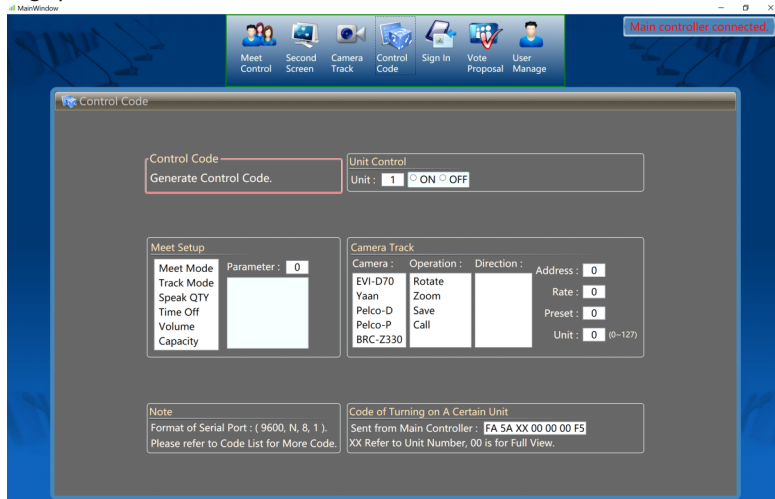
The menu provides an intuitive interface to setup the camera tracking of the system via computer.

Please refer to section 8.5 for more details.



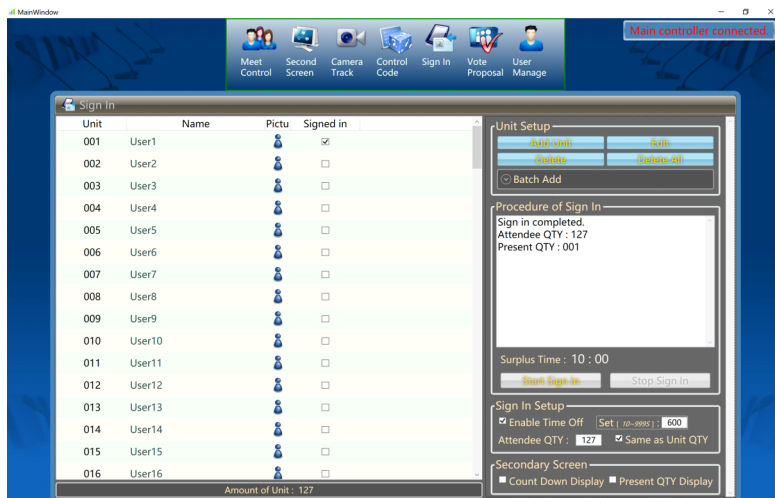
10.5 Control Code

Relevant commands will be generated after different parameters selected in this section, user can use those commands to communicate the system via third-parties central controlling system.



10.6 Sign In

Sign-in process is the necessary step that needs to be taken before launching the voting process, this process allows system to count the actual number of attendees in which will be included in the voting process.



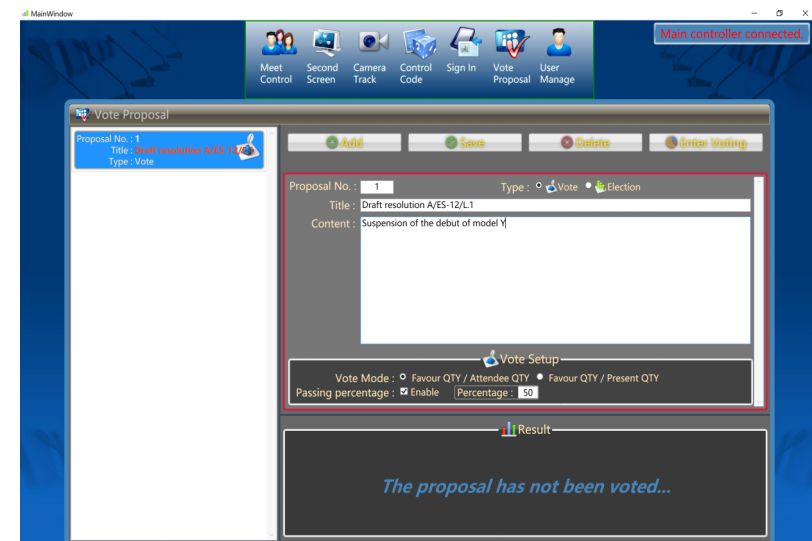
1) Operator can batch add or manually adding the microphone units in the UNIT SETUP menu before the kicking-off of sign-in process, this allows operator to monitor the sign-in state of each unit after the process is done. If no unit is added in this menu, operator can still run the Sign-in process normally, but no individual unit state will be shown on the Sign-in window.

2) Parameters can be selected from SIGN-IN SETUP and SECONDARY SCREEN menu accordingly.

3) Press “Start Sign-in” to kick off the process, operator can see the process message from the PROCEDURE OF SIGN-IN window, and attendees will see the system message prompted on the display of each microphone unit connected. Attendee should press the ENTER button on the microphone to finish the sign-in.

4) Operator can end the process manually by pressing Stop Sign-in button or the process will end when setup time is over.

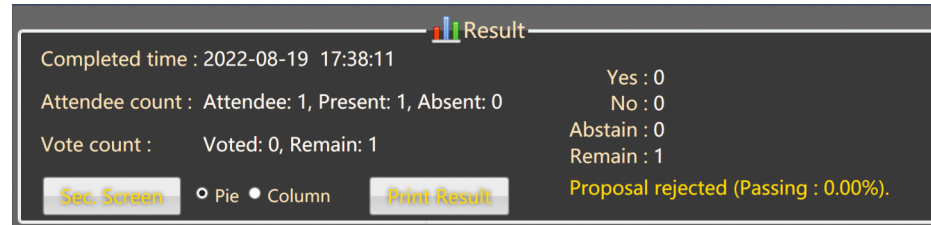
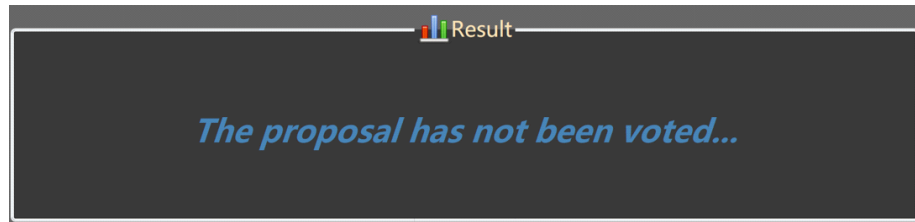
10.7 Vote Proposal



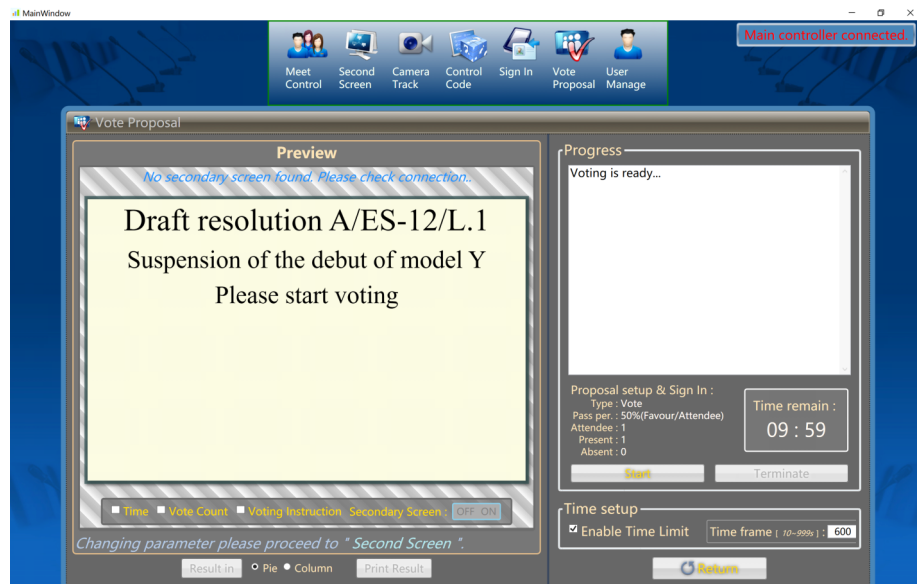
Voting process will be carried based on each proposal created, operator should create the proposal before entering the voting process.

1) Press “Add” to create a new proposal, user can input the proposal content in this section, and to define parameters such as voting type, passing criteria.

2) Press “Save” to store the proposal setup, then you can see the proposal presents at the list on the left. The RESULT window at the bottom can indicate the status of each proposal, “The proposal has not been voted” is shown if the proposal has not been commended in a voting process, otherwise the voting result will be displayed in this window.

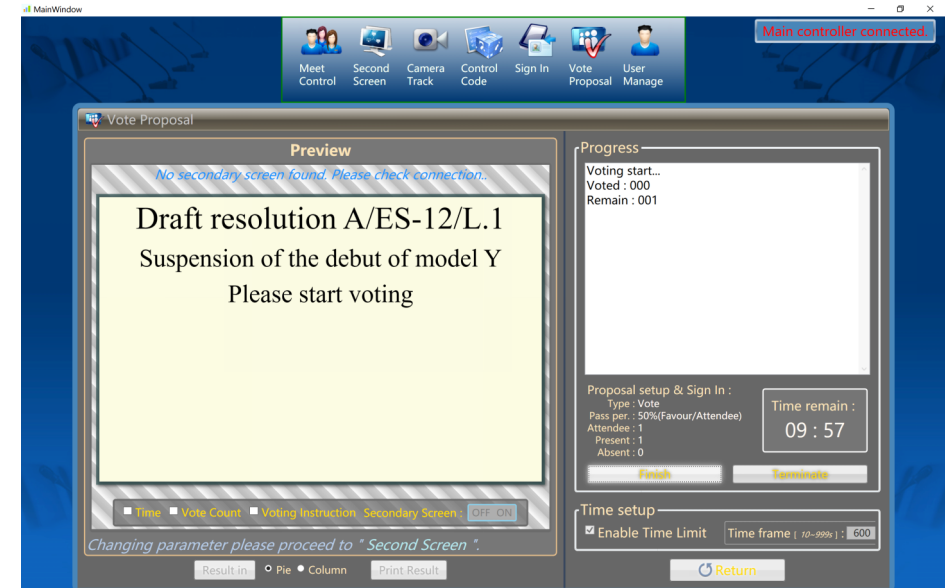


3) Click "Enter Voting" to enter the voting process.



Operator will see the content will be displayed to TV/Projector in the PREVIEW window, the Secondary Screen NO/OFF switch allows operator to display those content as needed.

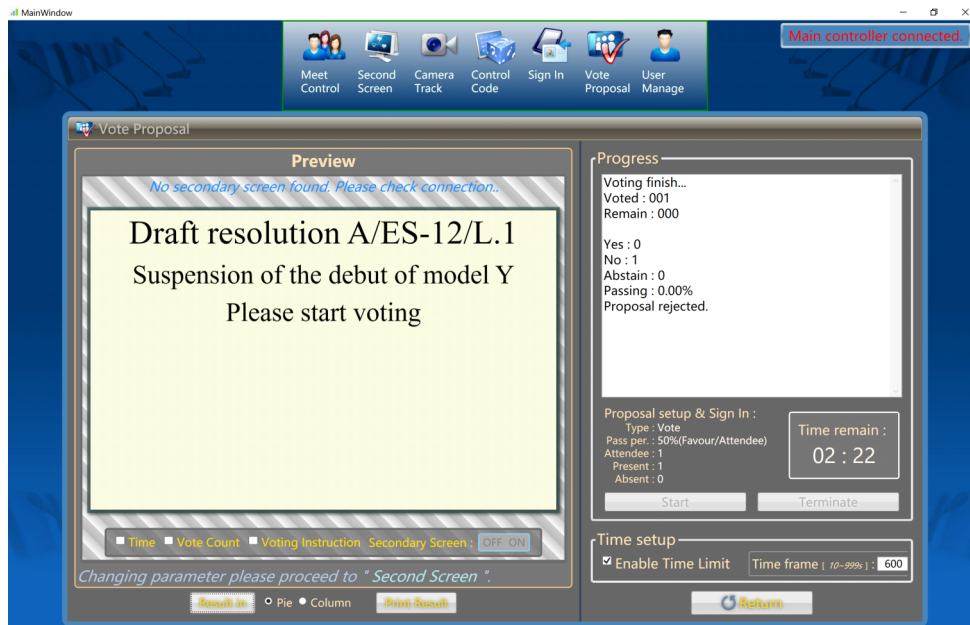
4) Click "Start" at progress window can commence the voting immediately.



Voting options will be shown on the display of each microphone unit connected in this process. Attendees can press YES/NO/ABST/1/2/3/4/5 button on their microphone units, and pressing "Enter" to confirm their selection.

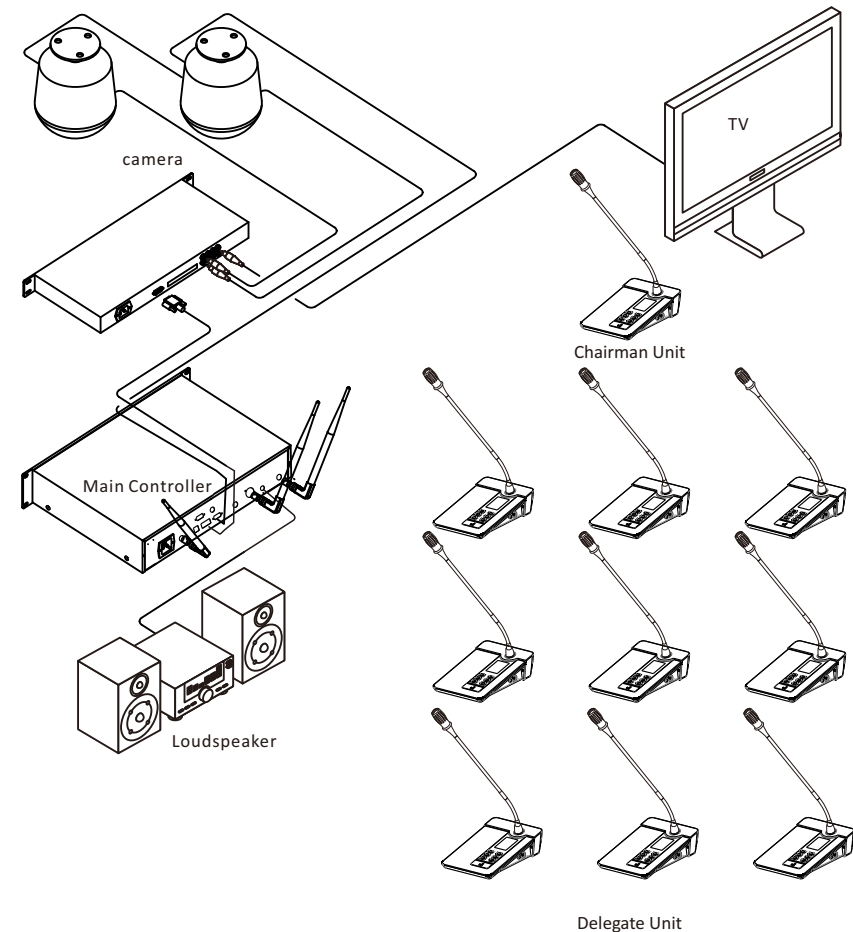
Voting data will collected to the system in real-time basis, operator can see the number of voted units and remaining unvoted units in the PROGRESS window. Operator can click the "Finish" button manually to end the process or automatically ending it when setup time frame is over.

5) Click “Finish” to end the voting process, operator can see the result at PROGRESS window and the result can be shown on secondary screen for attendees as well.



Note : During the voting process, if operator press FINISH to end the voting, then the proposal will be considered as a finished voting, operator will not be able to re-enter the voting process under this proposal but can only view the result of it. But if operator press TERMINATE in the middle of this process, then the process will be aborted and the proposal can be re-selected to enter the voting process.

11. System connection



12. Specification

Main Controller

Carrier frequency	UHF603—630MHz
Modulation	FM
Operation distance	60M
Oscillation	PLL
Sensitivity	SNR>60dB@25KHz,6dBv
Bandwidth	30MHz
Max Deviation range	+45KHz
SNR	>105dB
T.H.D	<0.7% @1KHz
Frequency response	45HZ—18KHZ+-1dB
Power supply	AC110V~240V
Output	XLR*1,RCA*1
Weight	5.1kg
Dimension	483*323*90mm

Microphone Units

Carrier frequency	UHF603—630MHz
Oscillation	PLL
Harmonic radiation	<-65dBm
Bandwidth	30MHz
Max Deviation range	+45KHz
Capsule	Condenser, Hyper-cardioid
RF Power	15mW
Power supply	DC 3.7
Current consumption	<200mA
Battery life	7-8 hours
Gooseneck length	420mm
Weight	1kg
Dimension	150*120*440mm

Charger Unit

Power supply	100V-240V
Power	100W
No.of charging port	40
Max current	700mA
Charging time	4-5hours
Working temperature	0°C-40°C

13.FQA

	Question	Reason	Solution
1	How to edit address		Operation Procedure: 1) Turn on main controller & all the units. 2) Main controller enter "Edit Address" interface & control all the units to enter "Edit Address" interface. 3) Set "address" & "channel" on the main controller.
2	"Abnormal"on units	1) Main controller is off.	Turn on Main controller.
		2) Main controller & unit are in different channel.	1)Revise channel on the main controller according to "7.8.2" 2) Revise channel on unit according to "8.5". 3)Re-edit address for the whole system.
		3) Unit address is beyond system capacity.	1) Modify the capacity of system according to 7.4 2)Set "Manual Setup" in the unit according to 8.5 3)Re-edit address for the whole system.
3	Main controller can't control unit to enter "Edit Address" interface	Main controller & unit are in different channel.	Enter unit's "Edit Address" interface manually.
4	Chairman unit can't carry out priority function.	Chairman address is not "001"	1) Enter unit's "Manual Setup" & set the address to "001". 2)Re-edit address for the whole system & set the chairman unit for "001"
5	How to add new units for system.		1)Firstly check "System Info" in the main controller. Check the value for channel & current capacity. Then manually set the unit as the same channel & address to be current capacity+1. For example: system channel—01, current capacity---30, then unit shall be set as channel---01, address---31. Details refer to 8.5. 2)Re-edit address for the whole system.