



Simple Wireless Conference System

User Manual

TS-W100MS

Before using this system, please read this manual carefully

Notification

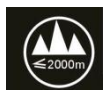


WARNING

To ensure the reliability of the equipment and the safety of personnel, please observe the following when installing, using and maintaining:

- If any of the following conditions are found, please immediately turn off the power, plug out and quickly contact your nearest dealer. Do not continue using this unit, which may cause a fire or electric shock.
 - If you find smoke or have a strange taste from the machine.
 - If water or metal falls into the machine.
 - If the unit is dropped or the case is damaged.
 - If the wire is damaged (wire core exposure, broken wire, etc.).
- If the machine contains high-pressure parts, in order to avoid the fire or electric shock, absolutely don't open the case, if any questions please inform your nearest dealer.
- Do not place cups, bowls, vases or metal and other water-filled substances on the unit. Serious spilled liquid may cause a fire or electric shock.
- Never expose the unit to rain and any moisture or water, which may cause electric shock or fire.
- Do not place metal objects or flammable materials from the vents on the machine cover, nor place coins, which may cause fire or electric shock.
- Do not place heavy objects on the unit to avoid personal injury or property damage when the unit is slipping.
- Make sure that the volume is turned on at the beginning of the boot, and the high volume of the boot may cause hearing problems.
- Make sure that the volume is turned on at the beginning of the boot, and the high volume of the boot may cause hearing problems.
- For long-term accumulation of dust to be cleaned, please inform your dealer to regularly clean the machine, so as to avoid damage to the machine or cause a fire.
- The battery must be replaced with the same type of product and the correct installation should be made in order to avoid electrical damage and explosion hazard.
- The product is a Class I device. The device must be well connected to ground. The power plug must be connected to a power outlet with a grounding device to ensure that the equipment is fully grounded.

- This product uses a power plug or appliance input socket as a disconnecting device with the power supply, and must be disconnected if necessary for safety reasons.



- This equipment is only suitable for safe use at altitudes above 2000 meters.

Precautions

1. The installation environment

When installing the unit, in order to ensure the normal cooling of the host, should avoid the poor ventilation of the place or high temperature environment, to avoid direct sunlight.

Recommend to install cabinet or other well-ventilated place indoor. If you use the machine in the outdoors, please pay attention to waterproof, moisture, lightning protection measures.

Avoid installing in a violent place of vibration; do not place other equipment on the machine.

Working temperature : -10℃~ 60℃.

Humidity is limited to 5% to 90% (non-condensing).

2. To avoid electric shock and fire

Do not touch the hands and the source with wet hands

Do not spill liquid on the machine, so as to avoid short-circuit or fire inside the machine.

Do not place other equipment directly on the top of the unit.

Non-professional service personnel Do not disassemble the unit yourself to avoid damage and electric shock.

3. Transport and handling

The packaging of the machine is designed and tested to ensure that the host will not be accidentally damaged during transport. It is best to use the original packaging when handling the unit.

Do not move the host device between the place or cold or over hot to avoid condensation inside the machine, affecting equipment life.

4. Please follow the warning instructions on this product, the warning signs on behalf of:

	Applicable to 2000 meters above sea level and below safe use
	Safe use only in non-tropical climates

5. Agreement

Please strictly follow the instructions in this manual. The software, hardware and appearance of this product will be upgraded and updated continually. The above changes will be made without notice.

Non-professional maintenance personnel, do not remove the product, to avoid damage and electric shock.

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1. System Profile

The TS-W100MS economic WIFI conference system adopts ITC original independent intellectual property rights of network communication and digital transmission processing technology. It applies digital technology and network technology, and perfect combination of WIFI and wired full digital technology to make a breakthrough on conference filed.

2. Product Description

TS-W100MS Economic WIFI Conference System

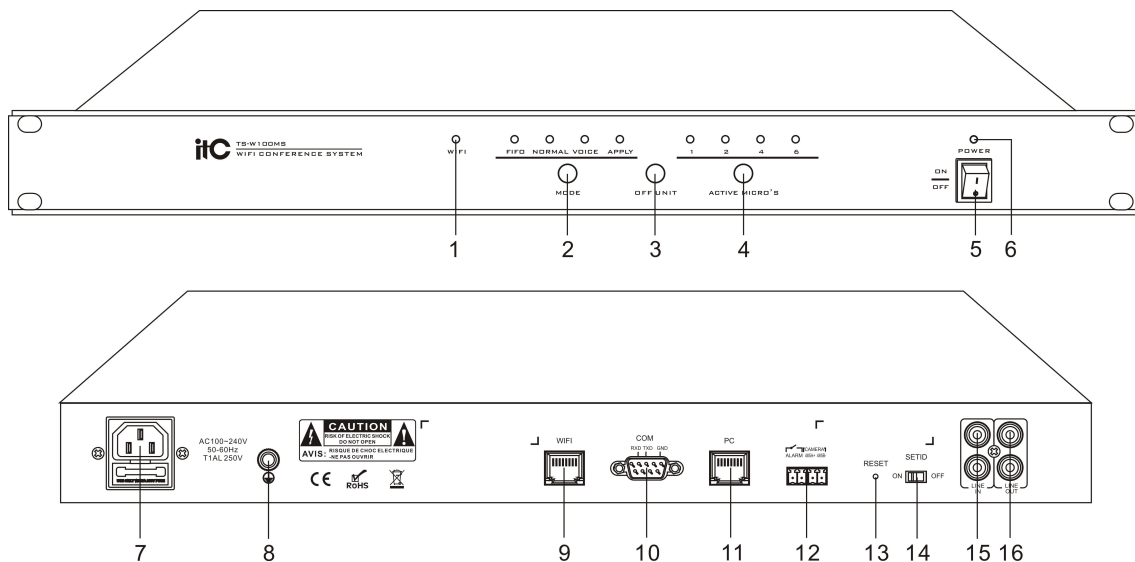


Feature

1. Adopts 5GHz communication band; With stronger anti-interference capability; with higher bandwidth and transmission speed; No interference by mobile phone and other Bluetooth device to make sure the best receiving signal.
2. It adopts the 128 bit AES encryption technology, supports WPA/WPA2 wireless security technology to prevent eavesdropping and unauthorized access to provide a higher confidentiality of conference system.
3. With extra-large capacity, the system supports up to 300 wireless conference units, support to open maximum 8 microphones at the same time, and for wireless delegate unites, support to open maximum 6 microphones at the same time.
4. With original digital processing and transmission technology, 48K sampling rate and uncompressed audio transmission with 20 Hz~20 kHz, to ensure the perfect sound quality.
5. With WiFi network interface(with POE), to connect to wireless AP directly, also support to expand AP quantity by network switch, and to provide much wider WIFI coverage
6. Support PC software uniform management system and fault analysis. Adopts TCP/IP network protocol to ensure the reliability and stability of the system, while supporting the system to separate from the PC software to work independently.
7. With fire alarm linkage trigger interface to provide fire alarm information, which remind the venue staff to evacuate ensure the safety of the participants at first time.

8. Support PELCO-D, VISCA camera control protocol, which can cooperate with high-definition camera tracking host, to achieve automatic camera tracking.
9. Four microphone management mode: FIFO/NORMAL/ VOICE (voice control) / APPLY.
10. Supports audio input and output to connect external audio sources

Interface Function Description

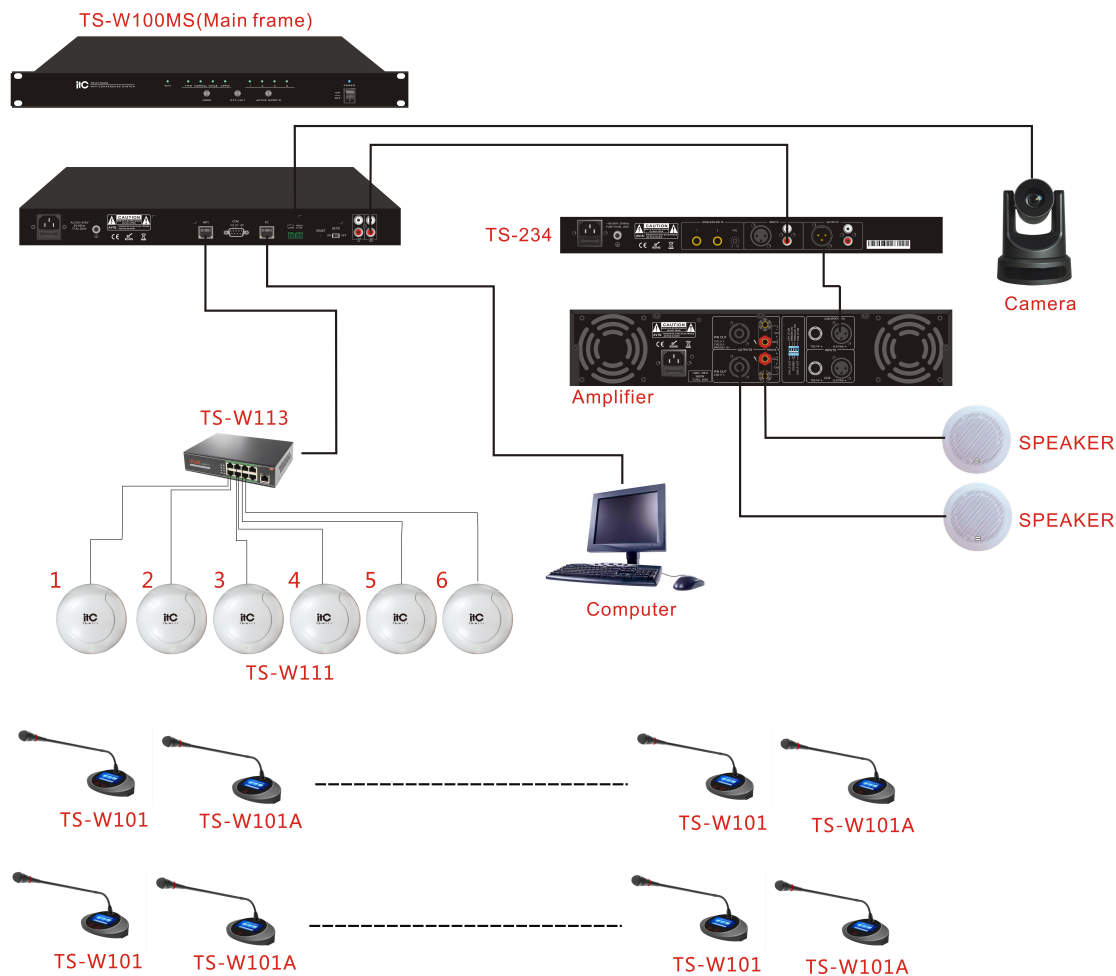


1. Indicator for wireless devices access
2. Speech mode setting
3. One button to switch off
4. Speech number limit
5. Power switch
6. Power indicator
7. AC power input socket, supports AC 100~240V/50~60Hz input;
8. Grounding rod
9. Wireless communication interface (with POE function)
10. RS-232 serial port, connect the camera
11. PC management network interface
12. Short circuit trigger fire alarm interface & RS485 interface to connect camera
13. Reset button
14. ID setting switch
15. Line audio RCA unbalanced input
16. Line audio RCA unbalanced output

Specifications

Model	TS-W100MS
Microphone capacity	≤ 300
Frequency response	20 ~ 20KHz
Signal to noise ratio	>80 dB(A)
Dynamic Range	>80 dB
Total harmonic distortion	<0.05%
Main power	90~264VAC 47~63Hz
Audio input	LINE IN : 350mV Unbalance
Audio output	LINE OUT : 1V Unbalance
Output impedance	470 Ω
WIFI network interface	With POE function, it can support single AP connection
Static power	25W
Standard	IEC60914
Operating temperature	-10℃~+60℃
Working humidity	20%~80% Relative humidity, no condensation
Colour	Black
Weight	2.1Kg
Size (L*W*H)	484×180×44mm
Installation method	19 Standard Cabinet

3. Specifications



4. Operation Instructions

4.1 Wireless Conference Management

Total 4 Mic modes, can switch to choose one according to the requirements. The number of mic is the max number of mic currently allowed $N(N=1/2/4/8)$, can switch to choose one.

4.1.1.1 FIFO Model

①FIFO delegate units working management

First in first out: when the total number of working mic units is less than N , delegate units will be turned on directly; when the total number of working mic units is N and not all chairman units, delegate units will be first in first out working.

②FIFO chairman units working management

Preemption Mechanism: Chairman unit can seize the turn on right of delegate unit.(the total number of working mics is N and has delegate units, turn on the current chairman unit, the first opened delegate unit will be kicked out. Turn off the delegate unit and turn on the current chairman unit).

Tips for opened mics number is full. Chairman units has no FIFO mechanism, when the total number of working mic is N , and all are chairman units, turn on more chairman unit, the interface will display “mic number is full” .

Priority: press “priority” button of chairman unit, start the chairman priority function, then all delegate units will be turned off immediately. If this chairman unit is not turned on before, then this chairman unit will be turned on(if current working mic is full and all are chairman units, this chairman unit will not be turned on).

4.1.2 NORMAL Model

①NORMAL delegate units working management

Waiting mechanism: when number of working mic unit is N , turn on more delegate units will enter into waiting status, the max number of waiting will be N . delegate units which is waiting can be dropped out the waiting status if press “ON” again. When one unit is turned off, the first unit in waiting status will be turned on automatically.

②NORMAL chairman units working management

Preemption Mechanism: when number of working mic is N , turn on the Chairman unit can squeeze out the delegate unit.(turn off the first delegate unit, then turn on the current mic unit).

Tips for working mics number is full. Chairman units has no waiting mechanism, when the total number of working mic is full, and all are chairman units, turn on more chairman unit, the interface will display “mic number is full”

Priority: press “priority” button of chairman unit, start the chairman priority function, then turn off all delegate units or stop waiting status . If this chairman unit is not turned on before, then this chairman unit will be turned on(if current working mic is full and all are chairman units, this chairman unit will not be turned on).

4.1.3 Voice control mode(VOICE)

①VOICE delegate units working management

Waiting mechanism: when number of delegate unit reach to N, turn on more delegate units, it will enter into waiting status, the max number of waiting will be N. Delegate units which is waiting can be dropped out of the waiting status if press “ON” again. When one unit is turned off, the first unit in waiting status will be turned on automatically.

②VOICE chairman units working management

Voice mechanism: chairman unit can automatically detect the current speech, speak to the chairman unit can automatically turn on its microphone.

Preemption Mechanism: when number of opened mic is N, open the Chairman unit can squeeze out the delegate unit.(close the first delegate unit, then open the current mic unit)

Tips for opened mics number is full. Chairman units has no waiting mechanism, when the total number of opened mic is full, and all are chairman units, open more chairman unit, the interface will display ”mic number is full”.

Priority: press “priority” button of chairman unit, start the chairman priority function, that means all delegate units opened status and waiting status will be invalid immediately. If this chairman unit is not opened before, then this chairman unit will be opened(if current opened mic is full and all are chairman units, this chairman unit will not be opened).

4.1.4 Apply Mode (APPLY)

①APPLY delegate units working management

APPLY Mechanism: press”ON” button of delegate unit, that means apply to open the mic from Chairman unit. The button “3” of chairman unit will twinkle, and display” delegate unit apply to speak”(Chairman unit press button”3” means agreed, then the mic units which applied to speak will be opened.) The total number of applied mic is N, if exceed N, will display “Mic Applied is Full”. Press “ON” button of delegate unit again when it is on applying status, can exit the applying status.

Automatic revocation mechanism: when the delegate enter into the applying status, if the chairman unit didn’t agree after 15S, then applying will be autorollback and exit applying status.

②APPLY chairman units working management

Preemption Mechanism: when number of opened mic is not exceed N, open the Chairman unit can squeeze out the delegate unit.(close the first delegate unit, then open the current mic unit).

Tips for opened mics number is full. Chairman units has no apply mechanism, when the total number of opened mic is full, and all are chairman units, open more chairman unit, the interface will display ”mic number is full”.

Priority: press “priority” button of chairman unit, start the chairman priority function, that means all delegate units opened status and applying status will be invalid immediately. If this chairman unit is not opened before, then this chairman unit will be opened(if current opened mic is full and all are chairman units, this chairman unit will not be opened).

4.2 Edit ID

The wireless unit only support edit ID by manual operation.

>>Edit ID manually, turn the dial switcher to "ON" to start programming ID. Then it can be manually operated to open all the microphone key of unit to edit ID (the local ID and currently available ID will be displayed on the unit), if it shows the red indicator light on the rear panel, meaning the operation is valid (setting the current ID as the local ID).

Turn to " OFF" to end the edit ID status.

>>When the ID is duplicated, it will show the duplication of ID number on the unit. The ID function will be automatically reprogrammed after 3 seconds. After the ID is reprogrammed, the switch must be turned ON and then returned to OFF to stop ID editing.

>> Under the edit ID state, the panel key is invalid and the indicator light flashes.

4.3 Camera control

The conference controller supports the VISCA/PELDCD_D camera protocol, the user not only can directly connect a single camera via 232/485, but also can connect a camera tracking controller to connect multiple cameras, the camera settings need to be implemented by using PC software.

4.3.1 Camera connection and setting

①485 mode - users can use the CAMERA-485 interface on the rear panel of controller, to directly connect to the camera, and prepare the meeting by the PC software ->make operation of the VISCA/PELDCD_D protocol camera on camera control page, set the appropriate location and choose to save the default position, and then save the preset bits of all the units, select and save the panoramic location (must be operated in order). After saving, the user can choose to the default position to check if it is correct. After completed, please check whether the retreat mechanism of the camera is correct by switching the microphone.

②232 mode - users can directly connect to the COM interface of conference controller through the camera's original configuration 232 cable. Then it can operate the camera just like the 485 mode.

③Connect the COM interface to the CONTROL interface of the camera tracking controller TS-0698 through the 232 cable, and then connect the T/R+ and T/R- ports of the tracking controller's CAMERA NET to the camera's control port, and the VISCA/PELDCD-D camera can be controlled as above .

4.3.2 Camera tracking introduction

①Advanced: open the microphone and the camera automatically tracks the newly opened microphone position.

②Retired: when the microphone is turned off, the camera automatically returns to the

microphone position in the current last opened microphone position.

③State changing in the midway:when the microphone is closed during using, the position of the microphone will be automatically cleared, and the advance and retiring mechanism will remain as the same.

④Without Microphone state: the camera will turn to the panoramic position.

For example: if there is 1, 2, 3, and 4 cameras, when the 1, 2, 3, and 4 microphones are turned on one by one, the camera tracks the positions of the microphones 1, 2, 3, and 4 in order. If the microphone 2 is turned off at this time, the camera will change the position. If you turn off the number 4 microphone, the camera will track to the 3 position. If the number 3 microphone is turned off, the camera tracks to position 1. The camera will point to the panoramic position when you turn off the microphone 1 .

4.4 Fire Alarm

By short-circuiting of the two interface signal pin of the ALARM output on the rear of the conference controller(analog sending the fire alarm signal to controller), the LED light of conference controller panel flashes (key is invalid), the unit shields, and displays of prompt information on the PC software. At this time, the conference unit has no change on display screen , and other features are still available. When this interface signal pin detects the cancellation of fire alarm (ie, open circuit), it automatically returns to normal state.

4.5 Reset function

Click the reset key for 2 seconds to reset, then the device restarts.

4.6 One-key power off function

Click the “OFF UNIT” key for 2 seconds to turn off all the online units of the current controller.

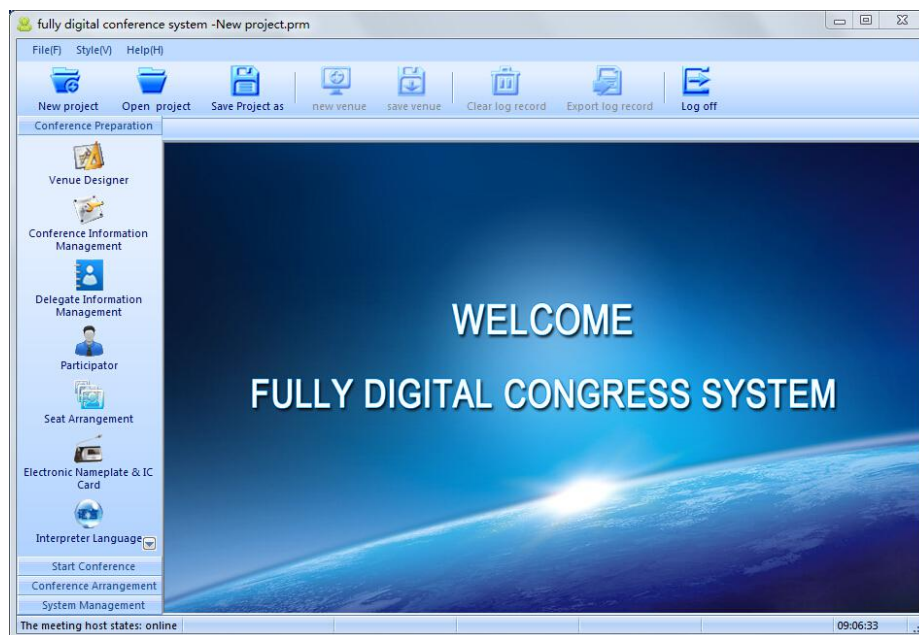
4.7 Others

When the system is in the state of edit ID, check-in, voting, etc., it is normal that the indicator light of the controller panel flashes regularly, and the keys are invalid.

5. Conference PC Software Instruction

Digital Conference System PC control software is powerful, easy to operate, including most of the functionality needed in meeting; it is designed according to meeting procedure sequence. Users only need to follow the principles from the top to the bottom of the left column.

The bottom column of the software shows the current host status, interpreter unit quantity, chairman unit quantity, delegate unit quantity, current computer time and other information. If there is microphone being plugged, lost connection, the quantity change will prompt up to alert the operator.



System Management Interface introduction: The information displayed on the left of System Management Interface is the four functional modules, including preparation before meeting, starting meeting, sorting material after meeting and system management.

Each of these modules also contains several small modules.

Preparations before meeting includes the sub-modules: venue design, conference management, personnel management, delegates, staff qualifying, electronic nameplate and sign cards, interpreter unit languages and projection edition.

Starting meeting includes the sub-modules: sign in control, agenda control, conference control;

Sorting material after meeting includes the sub-modules: data reporting, logging.

System management includes the sub-modules: user management, host configuration.

Due to the limited space in this manual, the specific operation of the digital conference system software instructions here is not mentioned in details, please refer to "ITC Digital Conference System Software User Manual".

Simple Wireless Conference System

