



Fully Digital Conference System

User Manual

TS-0304/0304A

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 III 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 under 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.

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. Product Introduction

Full-digital conference system adopts itc's original network communication and digital transmission processing technology with completely independent intellectual property rights, and applies digital technology and network technology to the conference system products, bringing breakthrough changes to the conference field.

2. Product Description

TS-0304/TS-0304A Digital-analog dual backup chairman unit/delegate unit



TS-0304 Chairman Unit



TS-0304A Delegate Unit

2.1 Features

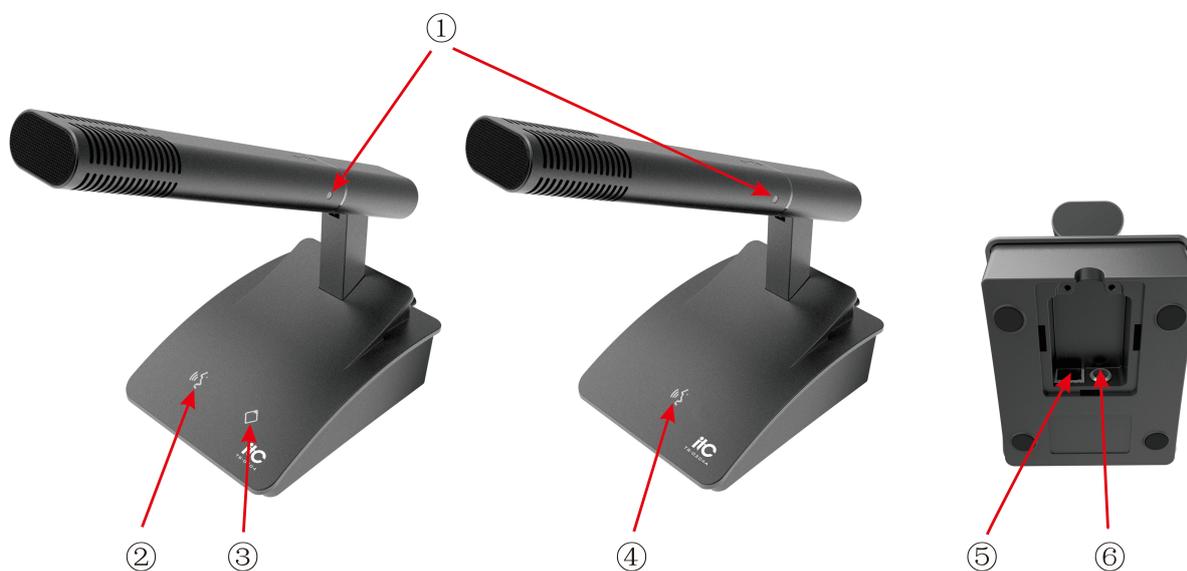
1. The microphone unit has digital-analog dual backup function, a digital transmission link, and an analog backup link.
2. Dual cartridges (14MM pure gold diaphragm cartridge*2) design, and with digital and analog link switch and dual indicator lights.
3. Digital transmission link, POE switch power supply, uncompressed audio transmission technology, 48K sampling rate, 80Hz-16KHz bandwidth, perfect sound quality.
4. Analog backup link, phantom power supply, 80Hz-16KHz bandwidth, perfect sound quality.
5. Capacitive touch buttons can ensure no button knocking noise and a good venue environment.
6. Digital transmission link, the microphone unit uses 100M network transmission and connects to the controller through a POE switch. Long-distance transmission will not have any impact on the sound quality.

7. Digital transmission link, support microphone control and voice control function through PC software.
8. Digital transmission link, the chairman unit has the priority right to turn off the speaking of the delegate unit.
9. Digital transmission link, the microphone unit has a TCP/IP protocol cluster and supports multiple protocols such as ICMP, HTTP, UDP, TCP, and IGMP.
10. Digital transmission link, support the PING package function.
11. Digital transmission link, each microphone unit has an independent web control page. Support four language switching, adjustment of microphone ID number, microphone sensitivity, microphone EQ and other parameters
12. Digital transmission link, support the function of speaking timing and timed speaking, and the delegate unit has the function of applying for speaking.
13. Digital transmission link, support feedback suppression function, a voice control function, and an adjustable voice control sensitivity.
14. Digital transmission link, the unit has 5-band EQ adjustment function, which can adjust different sound effects according to the voice characteristics of the speaker until the perfect effect is achieved.
15. Digital transmission link, support sign-in function. You can also disable and control the unit check-in, and other functions through the PC software.
16. Digital transmission link, support firmware upgrade function on the web page.
17. Digital transmission link, support the IP address sniffing function, the ID number, IP address and MAC address of unknown units can be found by PC software.

2.2 Product Interface Introduction

TS-0304 Chairman Unit:

TS-0304A Delegate Unit:



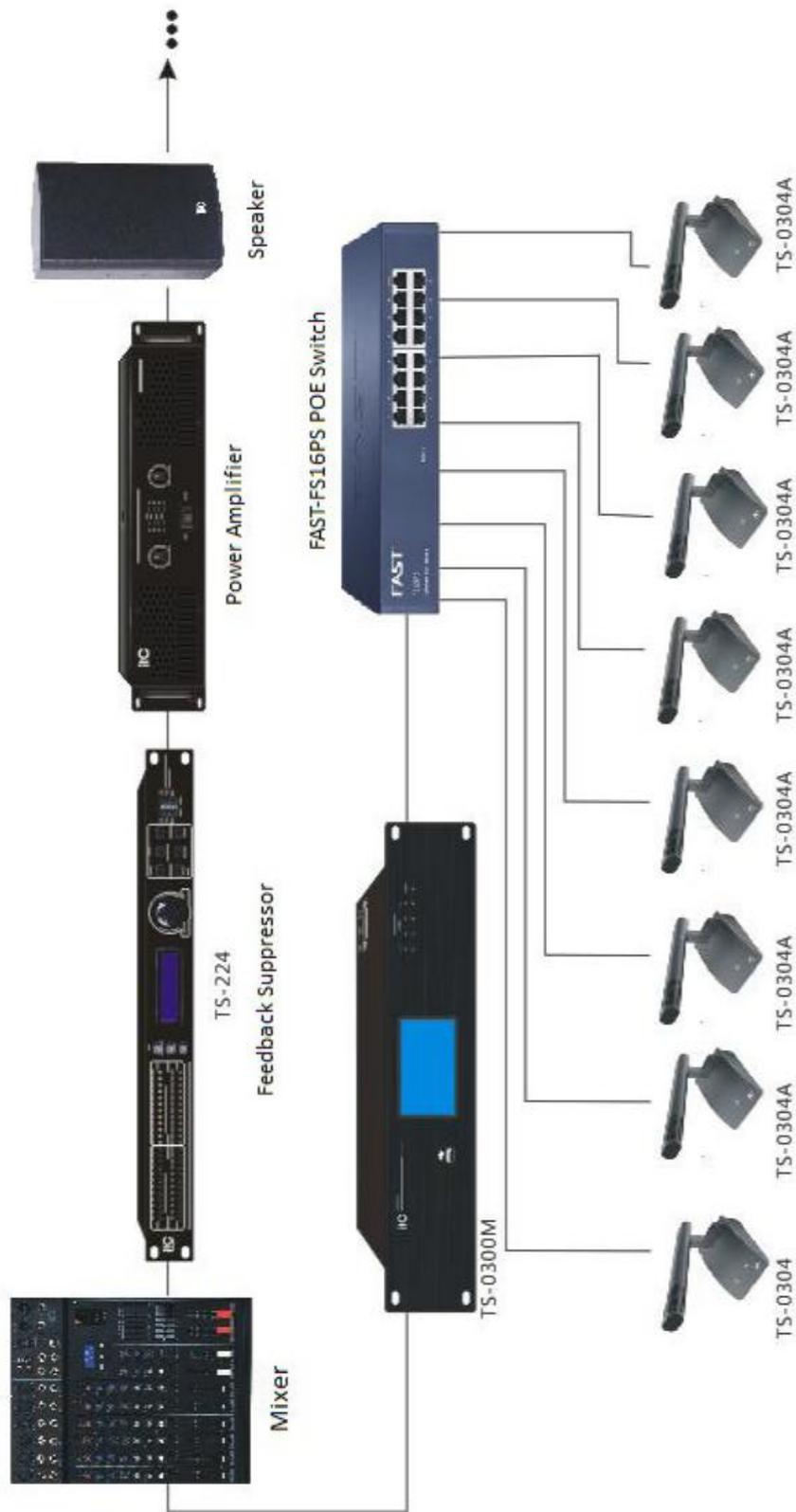
- ① Microphone pole light;
- ② Chairman unit power button;
- ③ VIP button;

- ④ Delegate unit power button;
- ⑤ Network interface;
- ⑥ Mini XLR male seat.

2.3 Specification

Model	TS-0304/TS-0304A
Microphone type	14mm gold-plated capacitive dual cartridge
Microphone directivity	Cardioid
Frequency response	80Hz~16KHz
Microphone input impedance	1K Ω
Sensitivity	-38 dBV/Pa
Maximum SPL	120dB(THD>3%)
SNR	>80dB(A)
Crosstalk	>70dB
Dynamic range	>80dB
THD	<0.1%
Maximum power consumption	2.5 W
Standard	IEC60914
Power supply	POE power supply/phantom power supply 48V
Color	Agarwood gray
Sign-in function	Key sign in
Dimension (LxWxH)	220 x 134 x 105mm
Installation method	Desktop
Weight	0.92Kg

3. Connection Diagram



4. TS-0304/TS-0304A Operating Instruction

4.1 Digital and analog dual backup function

- (1) Analog function: connect the mixer through three-core XLR for sound reinforcement; only with simple microphone switch function; the switch indicator is blue.
- (2) Digital function: connect the POE switch through network cable, connect the extension port (EXT) of controller to POE switch, and perform mixing and sound reinforcement through controller. The switch indicator is red.
- (3) Digital-to-analog switching principle: when digital and analog are connected at the same time, digital has priority. When the communication between the controller and the unit is normal, enter the digital mode first. When the controller network cable is unplugged, network fails, or the controller shuts down, it will automatically switch to the analog function.

4.2 Unit type

- (1) The chairman unit has microphone button and priority button, which can switch the microphone, perform priority, sign in and other operations.
- (2) The delegate unit has microphone button and no priority button, which can switch the microphone and sign in.

4.3 Meeting management

- (1) Microphone switching of unit is controlled by the conference management, and its authority is configured by the conference controller. Refer to the conference mode description of controller for use logic.
- (2) Press the priority button of chairman unit to turn off the microphone of all delegate units, and this chairman unit turns on the microphone.

4.4 Sign in

- (1) Initiate sign-in through PC software. At this time, you can press the microphone button of the unit to sign in, and the result will be displayed on the PC software after signing in.
- (2) The sign-in function of unit can be disabled or enabled through PC software.

4.5 Vote

No screen, voting mode is not supported.

4.6 Fire alarm

When the controller sends fire alarm, the red light on the microphone pole of the unit will flash until the controller cancels the fire alarm. And the unit returns to the state before the alarm.

4.7 Timed speech and speech timing

This function needs to be controlled by the conference PC software. Please refer to the PC instructions for details. For timed speaking, the PC will issue the time for the timed speech, the unit will count down and display the remaining speech time, and when the time is up, the microphone will be automatically turned off. The timed speech is only valid for delegate unit; For speaking timing, the PC specifies the unit to perform the speaking timing, and the speaking time will be displayed on the PC.

4.8 Audio adjustment

This function needs to be controlled by the conference PC software. Please refer to the PC instructions for details.

4.9 Unit ID number and related IP address

- (1) Use the current unit ID number as the unit IP address. The first two bytes of the IP address are fixed at 172.16; the last two bytes are the high 8 bits and the low 8 bits of the ID number.
- (2) For example: if the ID number is 1, the IP address is 172.16.0.1; if the ID number is 100, the IP address is 172.16.0.100; if the ID number is 300, the IP address is 172.16.1.44; if the ID number is 4090, then the IP address is 172.16.15.250;
- (3) If you forget the ID number, you can find the ID number and IP address of the current microphone through provided IP address view tool in PC.

4.10 Support ICMP protocol for PING packets

PC calls out CMD to ping the IP address of the corresponding unit.

4.11 Unit web page login

- (1) Set PC to the same network segment as the unit;
- (2) Please refer to 4.9 for unit IP address;
- (3) The subnet mask is 255.255.0.0;
- (4) All settings in the webpage are effective after "submit information".

UNIT BASIC SETTING ▼

ID number - 11 +

Voice mode sensitivity - 60 +

Voice mode mute interval - 30 +

Language 中文 **English** Русский Français

Sign Disable **Enable**

Submit Reset

UNIT AUDIO SETTING ▼

Mic sensitivity 0dB ▼

Submit Reset

UNIT EQUALIZER SETTING ▼

80 ~ 175 HZ	105 HZ ▼	0 dB ▼
230 ~ 500 HZ	385 HZ ▼	2 dB ▼
650 ~ 1400 HZ	850 HZ ▼	1 dB ▼
1.8 ~ 4.1 KHZ	2400 HZ ▼	0 dB ▼
5.3 ~ 11.7 KHZ	6900 HZ ▼	0 dB ▼

Submit Reset

4.12 Unit ID number setting in web

- (1) Set the unit ID, the IP address of the unit will change after setting.
- (2) After setting, if parameter setting of the web page is required, the login setting need to be set according to the IP address bound to the new ID.

4.13 Voice control function setting in web page

- (1) Set the open microphone sensitivity of the voice control mode.
- (2) Set the no-signal off time of the voice control mode (chairman unit will not be affected).

4.14 Language switching function setting in web page

- (1) Chinese, English, Russian and French switching.

4.15 Sign-in function setting in web page

(1) This function needs to be set in non-sign-in mode, which is usually set up before the meeting.

UNIT BASIC SETTING

ID number

Voice mode sensitivity

Voice mode mute interval

Language

Sign

4.16 Unit audio parameter setting in web page

(1) Microphone sensitivity.

(2) Microphone EQ.

UNIT AUDIO SETTING

Mic sensitivity

UNIT EQUALIZER SETTING

80 ~ 175 HZ	<input type="text" value="105 HZ"/>	<input type="text" value="0 dB"/>
230 ~ 500 HZ	<input type="text" value="385 HZ"/>	<input type="text" value="2 dB"/>
650 ~ 1400 HZ	<input type="text" value="850 HZ"/>	<input type="text" value="1 dB"/>
1.8 ~ 4.1 KHZ	<input type="text" value="2400 HZ"/>	<input type="text" value="0 dB"/>
5.3 ~ 11.7 KHZ	<input type="text" value="6900 HZ"/>	<input type="text" value="0 dB"/>

4.17 Unit basic information viewing in web page

(1) Version number.

(2) MAC address.

(3) Unit type.

UNIT BASIC INFORMATION

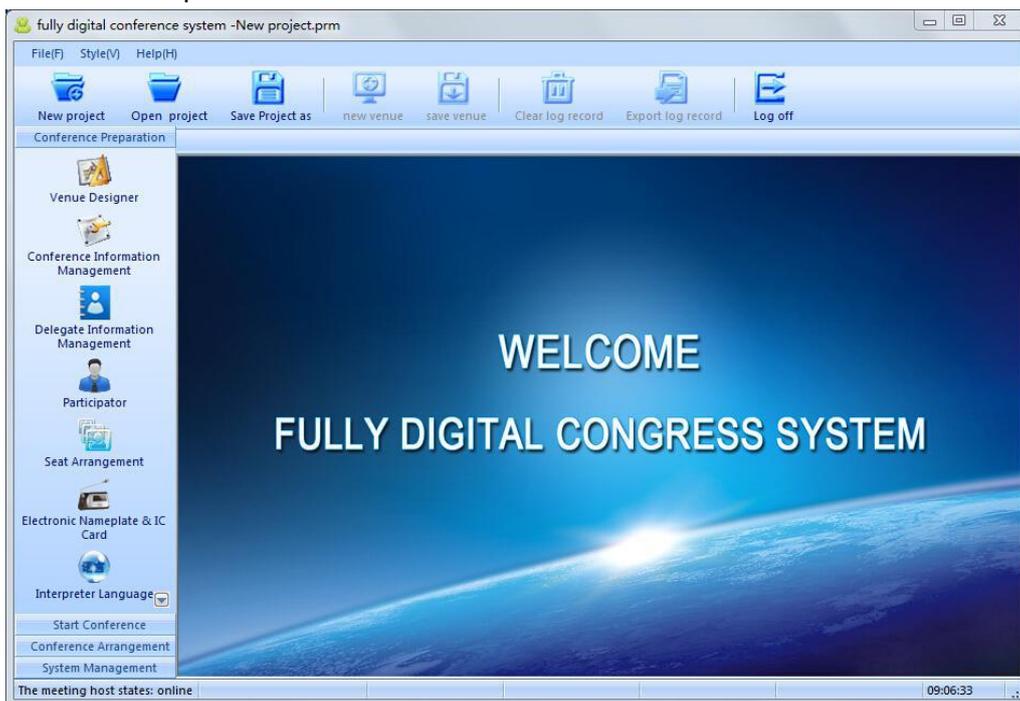


Kernel version	V1.1.0 H1110BA03
Application version	V1.4 M0908BAH3
MAC address	9C:9C:1F:1E:CC:DF
Unit type	Delegate

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 operate follow the left column.

Below software interface, there is a column to display the current conference 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".

Fully Digital Conference System

