



---

# **Fully Digital Conference System**

## **User Manual**

**TS-0303/0303A**

**Before using this system, please read this manual carefully**

## Notification



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 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.

Working temperature : -10°C~ 60°C.

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.

# Content

<b>1. Descriptions.....</b>	<b>6</b>
<b>2. Introductions.....</b>	<b>6</b>
2.1 FEATURES.....	6
2.2 FUNCTION INTRODUCTION.....	7
2.3 SPECIFICATIONS.....	8
<b>3. System connection diagrams.....</b>	<b>9</b>
3.1 CONNECTION DIAGRAM 1.....	9
3.2 CONNECTION DIAGRAM 2.....	9
<b>4、 TS-0303/TS-0303A operation instructions.....</b>	<b>10</b>
4.1. DIGITAL-ANALOG DUAL BACKUP FUNCTION.....	10
4.2. UNIT TYPE.....	10
4.3. CONFERENCE MANAGEMENT.....	10
4.4. SIGN-IN.....	10
4.5. FIRE ALARM.....	11
4.6. TIMED SPEECH AND SPEECH TIMING.....	11
4.7. <b>AUDIO ADJUSTMENT</b> .....	11
4.8. THE UNIT SUPPORTS THE ICMP PROTOCOL, PING COMMAND,ETC.....	11
4.9. CAMERA TRACKING FUNCTION.....	11
4.10. UNIT WEB PAGE LOGIN.....	11
4.11. SET UNIT ID NUMBER ON WEB.....	12
4.12. SET VOICE CONTROL FUNCTION ON WEB PAGE.....	12
4.13. SET LANGUAGE SWITCHING FUNCTION TEST ON WEB PAGE.....	12
4.14. SET SIGN-IN, VOTING FUNCTION ON WEB PAGE.....	12
4.15. SET UNIT AUDIO PARAMETERS ON WEB PAGE.....	13
4.16. VIEW UNIT BASIC INFORMATION ON WEB PAGE.....	14

## 1. Descriptions

The system adopts ITC original network communication and digital transmission processing technology, which are completely independent intellectual property rights of our company. The application of these two technologies to conference system has made a new breakthrough in the whole field.

## 2. Introductions

### TS-0303/TS-0303A

#### Digital-analog Dual Backup Conference Chairman/Delegate Unit



TS-0303(Chairman Unit)



TS-0303A (Delegate Unit)

### 2.1 Features

1. The microphone units have a digital-analog dual backup function, including a digital transmission link and an analog backup link. The two microphone links are completely independent. When the digital transmission link fails, it automatically switches to the analog backup link.
2. Microphone units adopt double sound head design, dual indicator lights with digital and analog link switch microphone.
3. The microphone units adopt the capacitive touch button, which can effectively eliminate the key knocking sound and ensure the good environment of the venue.
4. Support phantom power supply, 80Hz-16KHz bandwidth with perfect sound quality.
5. They can be used independently from the conference controller, but only have a switch microphone function at this time.
6. Support POE switch power supply, uncompressed audio transmission technology, 48K sampling rate, 80Hz-16KHz bandwidth with perfect sound quality.
7. They adopt 100M network transmission, and connects with the controller through the POE switch.

Long- distance transmission will not have any impact on the sound quality.

8. Support PC software microphone control and voice control function.

9. The chairman unit has the priority to close the speaking of the delegate unit.

10. Support the adjustment of microphone ID number, microphone sensitivity, microphone EQ and other parameters.

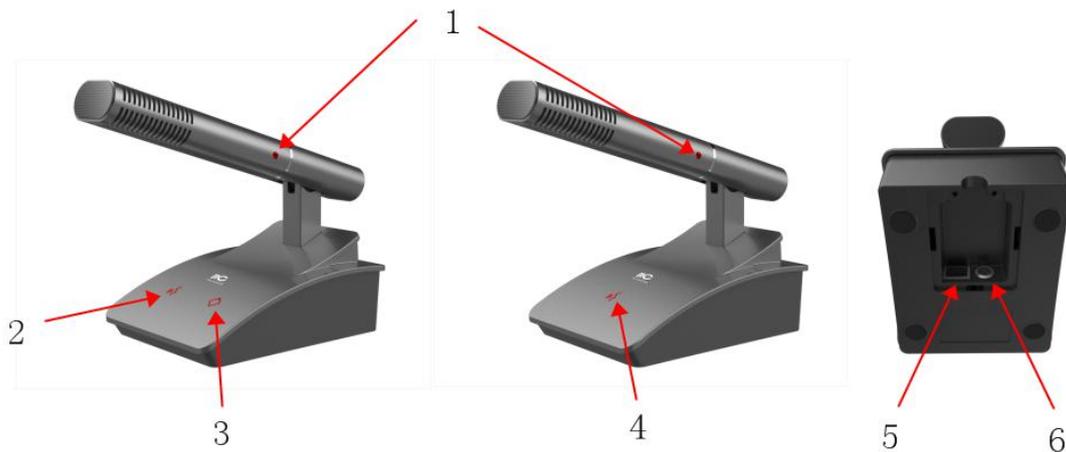
11. With the speaking timing and timed speaking function, the delegate unit can apply for speaking.

12. The microphone units support feedback suppression function, a voice control function, adjustable voice control sensitivity.

13. Support 5-band EQ adjustment function, which can adjust different sound effects for the speaker's sound characteristics until the perfect effect is achieved.

14. Support sign-in function. You can also disable and control the unit check-in, and other functions through the PC software.

## 2.2 Function introduction



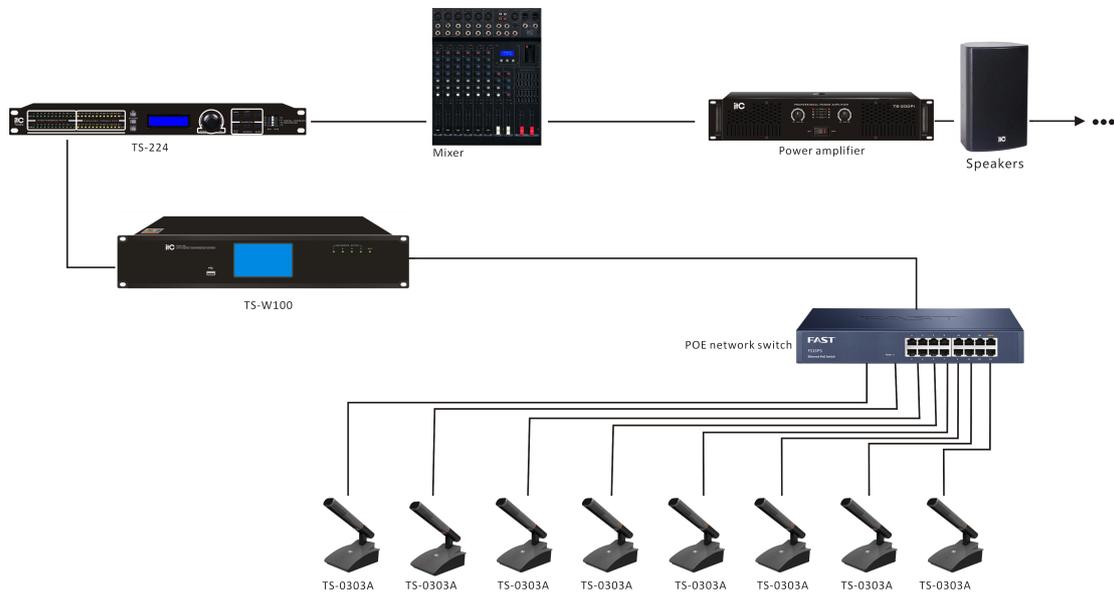
1. Microphone rod light;
2. Chairman microphone open button;
3. VIP button;
4. Delegate microphone open button;
5. Network interface;
6. Mini XLR male interface .

## 2.3 Specifications

Model	TS-0303/TS-0303A
Microphone type	Gold-plated capacitive dual-tone head
Microphone directionality	Cardioid
Frequency response	80Hz~16KHz
Microphone input impedance	1K $\Omega$
Sensitivity	-38 dBV/Pa
Maximum SPL	120dB (THD>3%)
SNR	>80dB(A)
Crosstalk	>70dB
Dynamic Range	>80dB
THD	<0.1%
Maximum power consumption	2.5W
Standard	IEC60914
Power supply	POE power supply / phantom power 48V
Check-in function	Button check-in
Dimensions (LxWxH)	220x134x105mm
Installation method	Desktop
Weight	About 0.92Kg

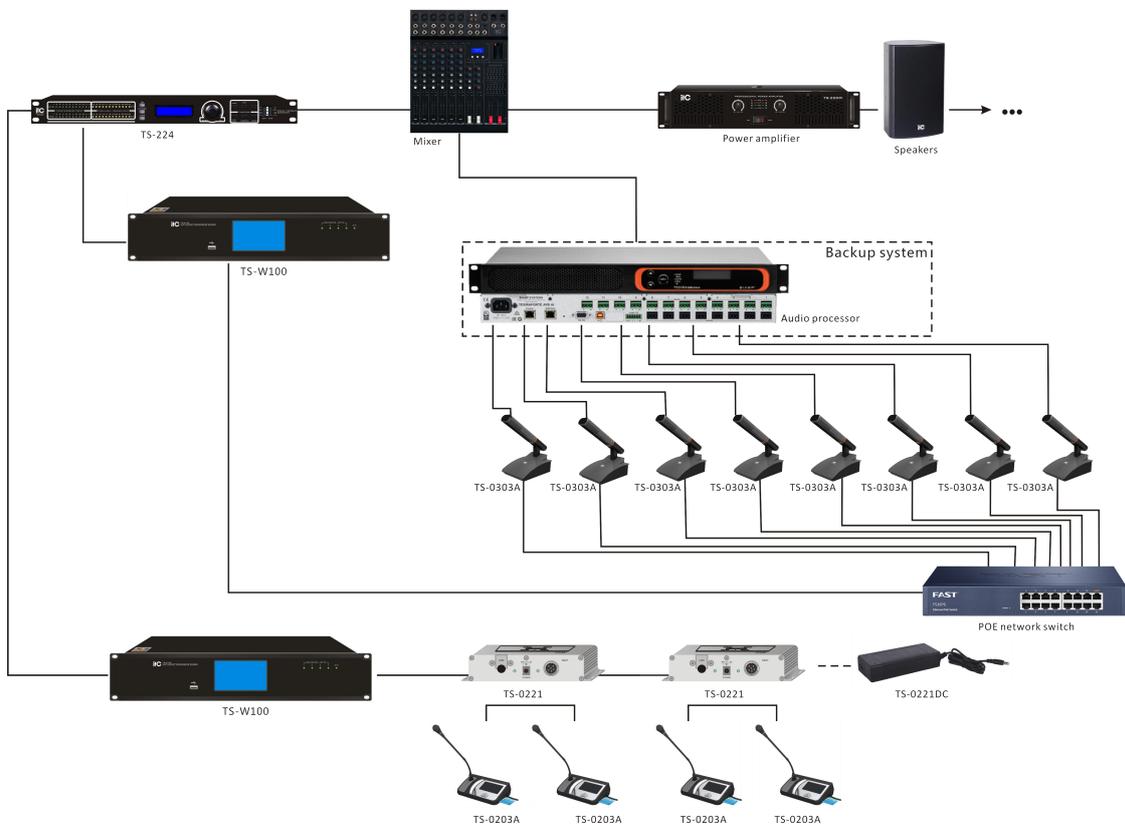
### 3. System connection diagrams

#### 3.1 Connection diagram 1



Remarks: Similar to hand in hand conference unit, no backup.

#### 3.2 Connection diagram 2



Remarks: TS-W100 controller+ 02 series microphones+ TS-0303 digital-analog dual backup system.

## **4、TS-0303/TS-0303A operation instructions**

### **4.1. Digital-analog dual backup function**

Analog backup link: connect the mixer to output audio through a three-core XLR; They can be used independently from the conference controller, but only have a switch microphone function at this time; the indicator light is blue when the switch is on.

Digital transmission link: Connect the POE switch through a network cable, connect the controller's extension port (EXT) to the POE switch, and output audio after mixing by the controller; with fully digital conference system functions, such as conference management, microphone number control, sign-in; The indicator light is red when the switch is on, and the light is green during waiting.

Digital-to-analog switching principle: When digital and analog are connected at the same time, the digital transmission link has priority, that is, when the communication between the controller and the unit is normal, the digital transmission link is preferentially entered. When the controller network cable is unplugged, the network fails, or the controller is not working properly, it automatically switches to the analog backup link.

### **4.2. Unit type**

The chairman unit has a microphone button and a priority button, which can be used to switch the microphone, perform priority, and sign in.

The delegate unit has a microphone button and no priority button, which can be used to switch the microphone on and sign in.

### **4.3. Conference management**

The microphone switch of the unit is controlled by the conference management, and its permission is configured by the conference controller. Refer to the conference mode description of the controller for the logic used.

Press the chairman unit priority button to turn off the microphones of all delegate units, which can only be turned on by the chairman unit.

### **4.4. Sign-in**

Sign in via PC software. At this time, you can press the microphone button to sign in, and the result will be displayed on the PC software.

The PC software can disable or enable the sign-in function.

#### **4.5. Fire alarm**

When the controller sends a fire alarm message, the red light on the microphone rod will flash until the controller cancels the alarm. If it is canceled, the unit returns to the state before the alarm.

#### **4.6. Timed speech and speech timing**

This function needs to be controlled by the conference PC software. For details, refer to the PC instruction manual. Its function is to switch the microphone on and off. When it is timed speech, the PC sends the time of speaking. The unit will count down to display the remaining speaking time. When the time is up, the microphone will be automatically turned off. Timed speech is only valid for the delegate unit and not for the chairman unit; At the speech timing, the PC designated unit counts the speech timing, and the PC will display the time.

#### **4.7. Audio adjustment**

This function needs to be controlled by the conference PC software. For details, refer to the PC instruction manual.

#### **4.8. The unit supports the ICMP protocol, ping command,etc.**

The PC calls up the CMD and can ping the corresponding unit IP address. Other devices can also ping to detect whether the unit is online.

#### **4.9. Camera tracking function**

The camera tracking function can be implemented through the conference controller, and the VISCA / PELCD\_D camera protocol is supported. Users can directly connect a single camera to the conference controller through 232/422, or use the camera tracking controller to connect multiple cameras. The camera settings are required to be implemented by PC software. For specific operations, please refer to the manual of the conference controller.

#### **4.10. Unit web page login**

Set the PC to the same network segment as the unit;

For the unit IP address, please refer to "8. Unit ID Number and Related IP Address";

The subnet mask is 255.255.0.0; all settings in the web page are effective after "Submitting Information".

The image shows two sections of a web interface for configuring a unit. The top section is titled 'UNIT BASIC SETTING' and contains the following controls:

- ID Number:** A numeric input field with a value of 10 and minus/plus buttons.
- Voice Mode:** A numeric input field with a value of 60 and minus/plus buttons.
- Sensitivity:** A label with no input field.
- Voice Mode Mute Interval:** A numeric input field with a value of 30 and minus/plus buttons.
- Language:** A dropdown menu with '中文' and 'english' options.
- Sign:** A toggle switch with 'Disable' and 'Enable' buttons.
- Vote:** A toggle switch with 'Disable' and 'Enable' buttons.
- Submit** and **Reset** buttons at the bottom.

The bottom section is titled 'UNIT AUDIO SETTING' and contains the following controls:

- Volume:** A numeric input field with a value of 12 and minus/plus buttons.
- MIC Sensitivity:** A dropdown menu with a value of 0 db and an upward arrow.
- Submit** and **Reset** buttons at the bottom.

#### 4.11. Set unit ID number on Web

Set the unit ID. The unit's IP address will change after setting.

After setting, if you want to set the web page parameters, you are required to perform login settings with the IP address bound by the new ID.

After setting, the controller needs to be powered on again.

#### 4.12. Set voice control function on web page

- (1) Set the microphone sensitivity for the voice control mode.
- (2) Set the no-signal off time in voice control mode (the chairman unit is not affected).

#### 4.13. Set language switching function test on web page

Chinese and English language switching on the web side.

#### 4.14. Set sign-in, voting function on web page

This function is required to be set in non-sign-in mode and non-voting mode. Generally, it is set before the meeting. (TS-0303 has no voting function and is reserved).

UNIT BASIC SETTING
>

---

ID Number	-	10	+
Voice Mode	-	60	+
Sensitivity			
Voice Mode Mute interval	-	30	+
Language	<input type="button" value="中文"/> <input checked="" type="button" value="english"/>		
Sign	<input type="button" value="Disable"/> <input checked="" type="button" value="Enable"/>		
Vote	<input type="button" value="Disable"/> <input checked="" type="button" value="Enable"/>		
<input type="button" value="Submit"/>		<input type="button" value="Reset"/>	

#### 4.15. Set unit audio parameters on web page

On this page, you can set the microphone speaker volume (TS-0303 without speakers, reserved function), microphone sensitivity, microphone EQ and others.

UNIT AUDIO SETTING
>

---

Volume	-	12	+
MIC Sensitivity	<input type="text" value="0 db"/> <input type="button" value="^"/>		
<input type="button" value="Submit"/>		<input type="button" value="Reset"/>	

UNIT EQUALIZER SETTING
>

---

80 ~ 175 HZ	105 HZ	0 dB
230 ~ 500 HZ	300 HZ	0 dB
650 ~ 1400 HZ	850 HZ	0 dB
1.8 ~ 4.1 KHZ	2400 HZ	0 dB
5.3 ~ 11.7 KHZ	6900 HZ	0 dB
<input type="button" value="Submit"/>		<input type="button" value="Reset"/>

#### 4.16. View unit basic information on web page

On this page, you can view basic information such as version number / MAC address / unit type.

UNIT BASIC INFORMATION >	
Version	20181211
MAC address	24:0A:C4:28:55:67
MIC type	Chairman

# Fully Digital Conference System

