



Fully Digital Conference System

User Manual

TS-0230M3

TS-0230MA3

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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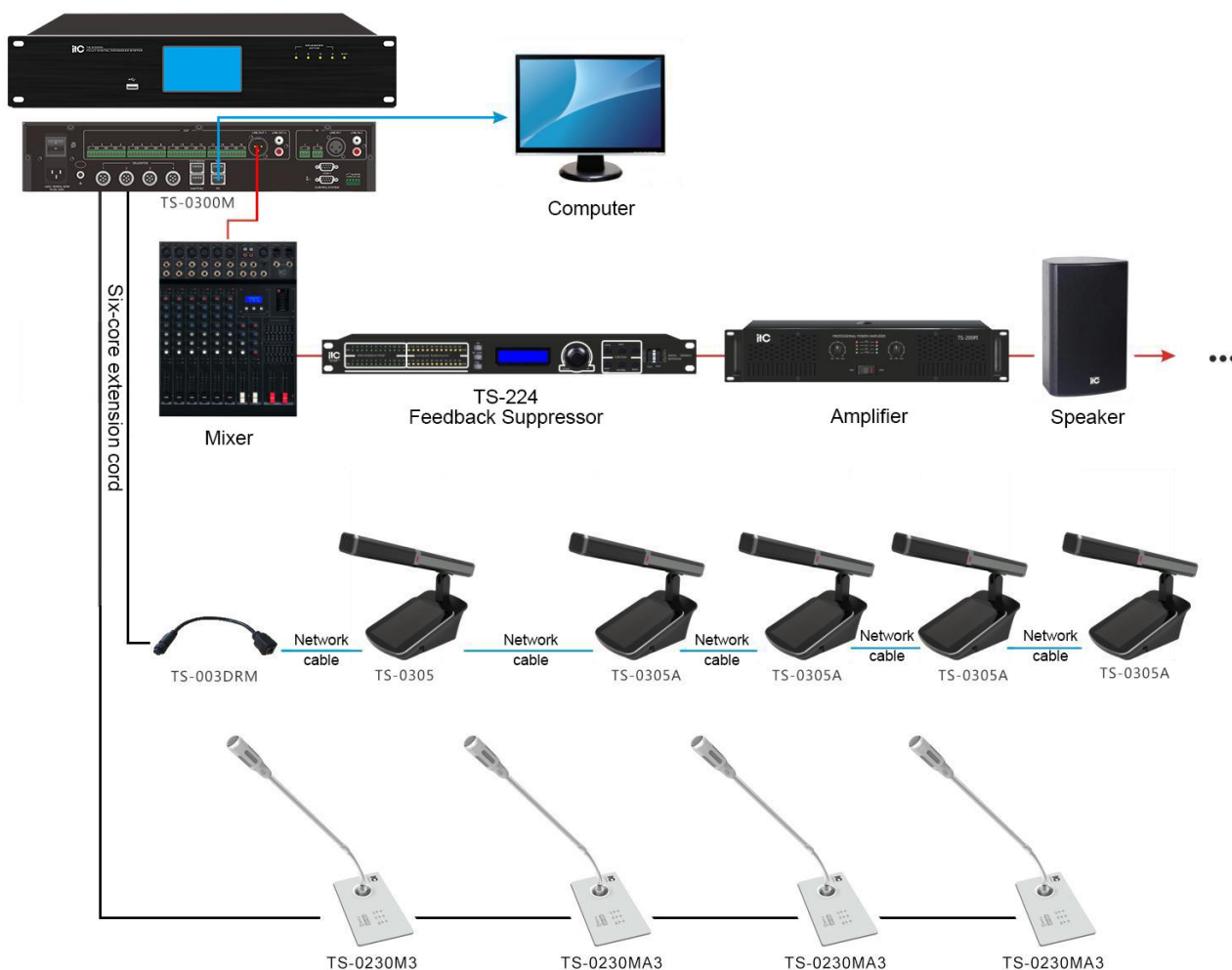
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1. System Overview

1.1 Introduction

Full-digital conference system adopts its 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.

1.2 System Connection Diagram



2. Product Description

2.1 Full digital lifting chairman/delegate discussion unit



TS-0230M3 Chairman unit



TS-0230MA3 Delegate unit

2.2 Features

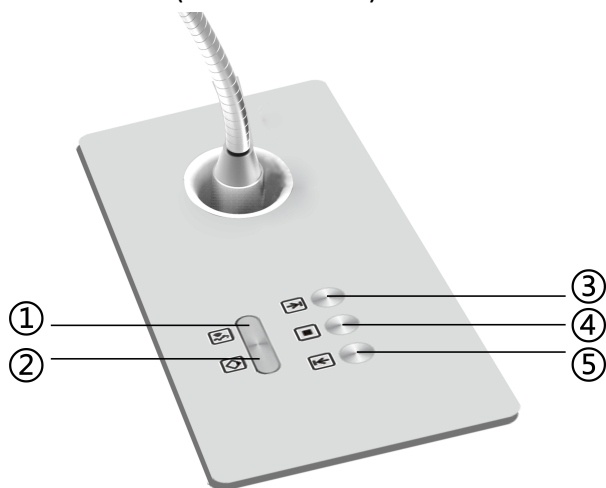
1. Embedded lifting design, neat and elegant appearance, simple and intuitive operation.
2. Winding condenser microphone pole, professional super cardioid condenser microphone core, extremely high sensitivity and speech intelligibility, and a ring-shaped red and green dual color indicator light.
3. Adopt 48KHz sampling rate, clear and bright sound, better than CD sound quality; adopt internal DSP audio processing, and no low frequency "pop" noise.
4. Support internal feedback suppression function, effectively prevent squealing.
5. Support 5-band EQ adjustment function, sound effects can be adjusted according to different speakers' voice characteristics to achieve the perfect effect.
6. The chairman has a priority function and can turn off all delegate microphones that are speaking.
7. Support voice control function, and adjustable sensitivity of the voice control. In the voice control mode, both the chairman unit and the delegate unit can turn on the microphone by voice control. After the delegate microphone is turned on, if no one speaking lasts for 30 seconds (default), the microphone will be automatically turned off, while the chairman is not limited by this.
8. With RS232 and RS485 dual serial port control connection mode, support connecting to the central control system, realizing unified lifting.
9. Using 100M network transmission to achieve hand-in-hand cascading, long-distance transmission will not have any impact on sound quality.
10. Support intelligent control of the microphone, the microphone can only be turned on when it is

lifted to the top, and will be automatically turned off when it is lowered.

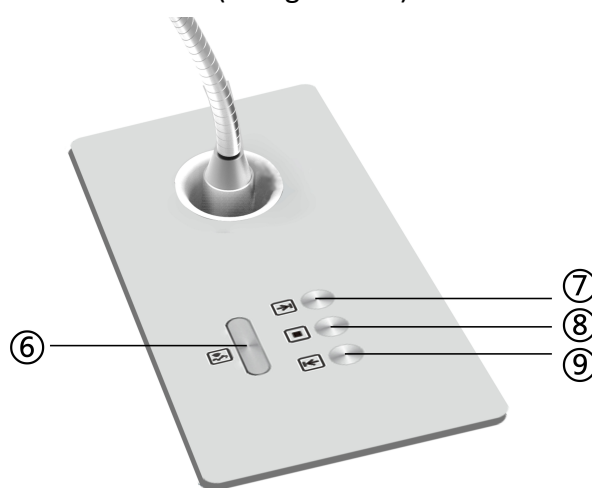
11. The conference controller can realize command issuing and control the unit lifting and lowering.

2.3 Product Function Introduction

TS-0230M3(Chairman unit):



TS-0230MA3(Delegate unit):



- ① Chairman unit microphone button
- ② Chairman unit microphone priority button
- ③ Lift button
- ④ Pause button
- ⑤ Lower button
- ⑥ Delegate unit microphone button
- ⑦ Lift button
- ⑧ Pause button
- ⑨ Lower button

2.4 Specification

Model	TS-0230M3/TS-0230MA3
Microphone type	Cardioid directional electret
Frequency response	80Hz-16KHz
Microphone input impedance	1K Ω
Sensitivity	-46dBV/Pa
Max SPL	125dB (THD>3%)
SNR	>80dB(A)
Dynamic range	>80dB
THD	<0.1%
Power consumption	3W
Connector	6-pin aviation connector
Power supply	Controller power supply DC 36V/3W
Control port	1 set of 232/485 input and output interface, can control the microphone lift, support hand-in-hand connection
Microphone port	2 sets of six-pin aviation ports, realize the hand-in-hand connection of multiple units
Power supply mode	Mains 110~240V 50/60HZ
Color	Silver
Sign-in function	Physical button sign-in
Weight	About 5.5 Kg
Size (L×W×H)	160×70×717mm
Installation method	Embedded installation
Desktop opening size (through hole) (L×W)	147×62mm
Panel sinking size (L×W×D)	161×71×4mm, rounded corner: 4×R4

3. Operating Instruction

3.1 Startup

Turn on the power of the controller and start the conference system, wait for a few seconds, if the microphone switching is normal, the system works normally. If the microphone switching is abnormal, troubleshooting need to be performed.

3.2 Unit Type

The chairman unit has a microphone key and a priority key, and the delegate unit has no priority key, but other functions are the same as the chairman unit.

3.3 ID Addressing

Turn on the TS-0300M conference controller, and in the ID addressing setting of the system settings, you can set the system manual ID addressing.

When the TS-0300M controller is set to the manual ID addressing mode, dial the ID addressing switch or click the ID addressing button on the touch screen to enter the manual ID addressing mode. At this time, the unit enters the ID addressing state, press the microphone button to perform ID addressing, the microphone pole light and the microphone indicator flash once and stay on, indicating that the unit ID addressing is successful. All units complete ID addressing in turn, and after finishing ID addressing, the unit returns to conference mode.

When there is a duplicate ID in the system, the TS-0300M controller will prompt that the ID is duplicated. At this time, any operation is invalid. You need to click the manual ID addressing on the TS-0300M controller to perform ID addressing of the unit again.

3.4 Meeting Management

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.

Press the MIC switch button to switch the microphone on and off.

In NOMAL mode, the excess delegate units enter the waiting state, waiting for the green light of the microphone to light up.

The chairman unit long presses the microphone button to turn off the delegate microphone.

3.5 Sign in

- (1) PC initiates sign-in;
- (2) PC enables and disables the sign-in function;
- (3) Switch the microphone in the sign-in mode.

3.6 Fire Alarm

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

3.7 Other functions

3.7.1 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; For speaking timing, the PC specifies the unit to perform the speaking timing, and the speaking time will be displayed on the unit.

3.7.2 Audio Adjustment

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

3.8 RS232 and RS485 Serial Port Control Commands

RS232 interface:

Microphone on/off: 5A A5 06 83 00 0B 01 00 0B

Baud rate: 115200

Data bits: 8

Stop bit: 1

Check digit: none

Flow control: none

RS485 interface:

Baud rate: 2400 Data bits: 8 Stop bit: 1 Check digit: none Flow control: none

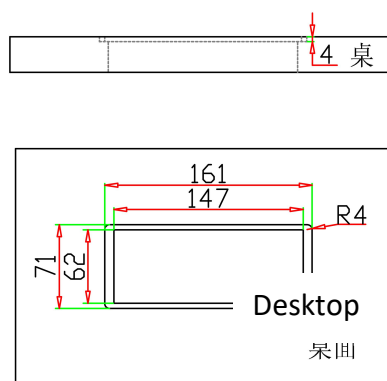
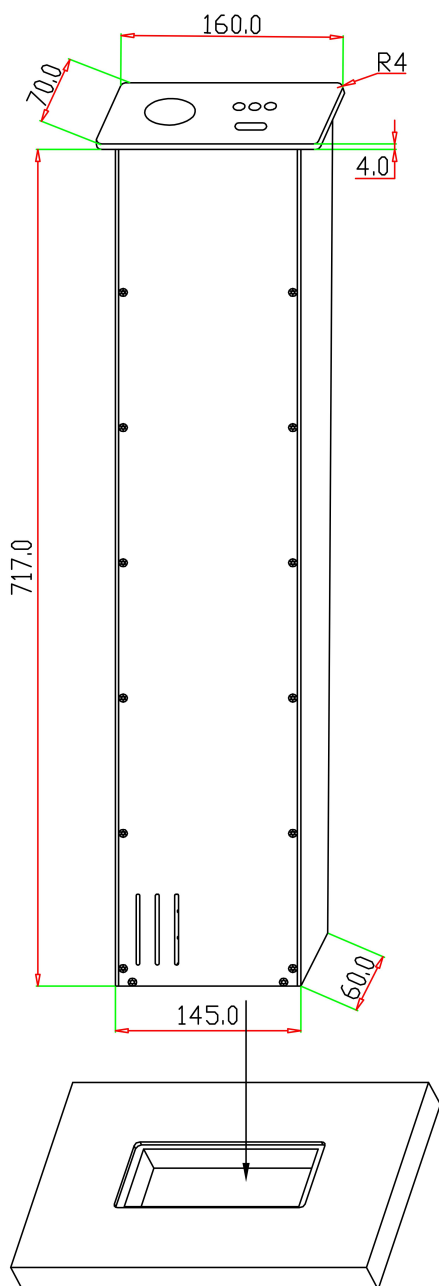
Rising code: FF EE EE EE DD Falling code: FF EE EE EE EE Stop code: FF EE EE EE CC

3.9 RS232 and RS485 Network Port Wiring Instructions

RS232 network port: 1, 3, 5 pins; corresponding to TXD, RXD, GND.

RS485 network port: 4,8 pins; corresponding to 485 negative and 485 positive

4. Desktop opening drawing



Installation steps:

1. As shown in the picture, first open a slot with a size of 161×71×4mm on the desktop, and the four sides are rounded corners R4.
2. Then open a through hole with a size of 147×62mm in the middle of the above slot.
3. Then put the chassis into the slot from top to bottom and fix it on the table.

Note: the microphone panel is facing the direction of the person, and the distance from the edge of the table is: 350mm~400mm; the distance between the back of the panel and the edge of the table is: 100mm~150mm, which is convenient for the back air line connection.

(Unit: mm)

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