PUBLIC ADDRESS SYSTEM

OPERATION MANUAL

TI-1206S
TI-2406S
TI-3506S
TI-5006S
MIXER ZONE AMPLIFIER

Please follow the instructions in this manual to obtain the optimum results from this unit.
We also recommend that you keep this manual handy for future reference.

TABLE OF CONTENTS

1. SAFETY PRECAUTIONS 3

2. GENERAL DESCRIPTION 5

3. FEATURES 5

4. NOMENCLATURE AND FUNCTIONS

4.1 Front Panel 6

4.2 Remote control 6

4.3 Rear Panel 7

5. OPERATION ILLUSTRATION 8

6. TROUBLESHOOTING 11

7. APPLICATIONS 12

8.BLOCK DIAGRAM 13

9.SPECIFICATIONS 14

10.DIMENSIONAL DIAGRAM 15

1. SAFETY PRECAUTIONS

- Be sure to read the instructions in this section carefully before use.
- Make sure to observe the instructions in this manual as the conventions of safety symbols and messages regarded as very important precautions are included.
- We also recommend you keep this instruction manual handy for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety

⚠ **WARNING**	Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.
⚠ **CAUTION**	Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

⚠ WARNING

When Installing the Unit

- Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.
- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid using the power cord in close proximity to heaters, and never place heavy objects -- including the unit itself -- on the power cord, as doing so may result in fire or electric shock.
- Be sure to replace the unit's terminal cover after connection completion. Because high voltage is applied to the speaker terminals, never touch these terminals to avoid electric shock.
- Be sure to ground to the safety ground (earth) terminal to avoid electric shock. Never ground to a gas pipe as a catastrophic disaster may result.
- Avoid installing or mounting the unit in unstable locations, such as on a rickety table or a slanted surface. Doing so may result in the unit falling down, causing personal injury and/or property damage.

When the Unit is in Use

- Should the following irregularity be found during use, immediately switch off the power, disconnect the power supply plug from the AC outlet and contact your nearest ITC dealer. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.
  - If you detect smoke or a strange smell coming from the unit.
  - If water or any metallic object gets into the unit
  - If the unit falls, or the unit case breaks
  - If the power supply cord is damaged (exposure of the core, disconnection, etc.)
  - If it is malfunctioning (no tone sounds.)
- To prevent a fire or electric shock, never open nor remove the unit case as there are high voltage components inside the unit. Refer all servicing to your nearest ITC dealer.
- Do not place cups, bowls, or other containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.
- Do not insert nor drop metallic objects or flammable materials in the ventilation slots of the unit's cover, as this may result in fire or electric shock.

⚠ CAUTION

When Installing the Unit

- Never plug in nor remove the power supply plug with wet hands, as doing so may cause electric shock.
- When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.
- When moving the unit, be sure to remove its power supply cord from the wall outlet. Moving the unit with the power cord connected to the outlet may cause damage to the power cord, resulting in fire or electric shock. When removing the power cord, be sure to hold its plug to pull.
- Do not block the ventilation slots in the unit's cover. Doing so may cause heat to build up inside the unit and result in fire.
- Avoid installing the unit in humid or dusty locations, in locations exposed to the direct sunlight, near the heaters, or in locations generating sooty smoke or steam as doing otherwise may result in fire or electric shock.

When the Unit is in Use

- Do not place heavy objects on the unit as this may cause it to fall or break which may result in personal injury and/or property damage. In addition, the object itself may fall off and cause injury and/or damage.
- Make sure that the volume control is set to minimum position before power is switched on. Loud noise produced at high volume when power is switched on can impair hearing.
- Do not operate the unit for an extended period of time with the sound distorting. This is an indication of a malfunction, which in turn can cause heat to generate and result in a fire.
- Contact your ITC dealer as to the cleaning. If dust is allowed to accumulate in the unit over a long period of time, a fire or damage to the unit may result.
- If dust accumulates on the power supply plug or in the wall AC outlet, a fire may result. Clean it periodically. In addition, insert the plug in the wall outlet securely.
- Switch off the power, and unplug the power supply plug from the AC outlet for safety purposes when cleaning or leaving the unit unused for 10 days or more. Doing otherwise may cause a fire or electric shock.

An all-pole mains switch with a contact separation of at least 3 mm in each pole shall be incorporated in the electrical installation of the building.

Due to product upgrades, while some of the features and specification in the user manual does not match the actual functions, sorry for any inconvenience and thanks for your kind understanding!

2. GENERAL DESCRIPTION

This product is a six zones mixer amplifier, combining of high-performance switching power supply+H -class amplifier chip Built in Bluetooth and Tuner, with 2U chassis design, high efficiency, light weight, beautiful appearance.

3. FEATURES

1. 4 channel Mic inputs, 2 channel line inputs, separated treble and bass control.
2. 6 zone outputs with independent volume control.
3. Built-in chime, chime tone optional: 4 tones and 2 tones (built-in), alarm generator.
4. MP3 decoder module supports USB / SD / Bluetooth / FM Tuner playback. Configure MP3 remote control, support power-off memory, MIC recording function.
5. When start the built-in generator, the background music will be off and 6-channel zone output will be on automatically, switch output volume to be maximum.
6. Built-in 24V DC power input.
7. MIC1-4 built-in 48V phantom power, with independent control switch.
8. T-216 remote control microphone can remote control zones outputs, up to 6 units cascaded .
9. The audio input with separate control, tone control and master volume control.
10. A variety of LED display (signal, clip, protection LED indicator).
11. With fan forced cooling structure, to ensure long time working.
12. There are 5 level priority functions:

    The first level of EMC priority: When the EMC alarm signal input, it will force to close all audio sources, 6-way partition output will automatically open.

    The second level of alarm generator, except EMC input, It is higher priority than any other signal input, will force to close all other audio sources, 6-way partition output will automatically open.

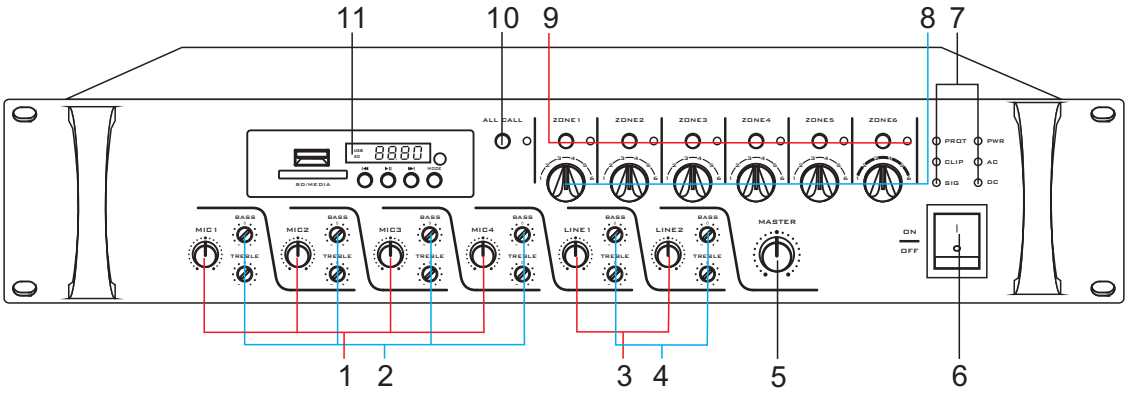
    The third level of built-in TEL/REM MIC, it is higher priority than MIC1-4, LINE1-2, bell tone.

    The fourth level of built-in bell tone, it is higher priority than MIC1-4, LINE1-2.

    The fifth level of built-in MIC1, it is higher priority than MIC2-4, LINE1-2.
13. The constant voltage output: 70V, 100V, constant impedance output: 4-16Ω.

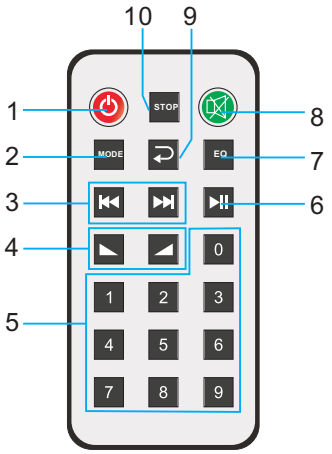
4. NOMENCLATURE AND FUNCTIONS

4.1 FRONT PANEL



1. MIC1 / MIC2 / MIC3 / MIC4 volume control adjustment
2. MIC1 / MIC2 / MIC3 / MIC4 treble and bass adjustment
3. LINE1 / LINE2 volume control adjustment
4. LINE1 / LINE2 treble and bass adjustment
5. MASTER-master volume control
6. Power switch
7. PROT / CLIP / SIG / PWR / AC / DC status indicator
8. Six zones voltage switch knob
9. Six zones switch button and indicator
10. All zones switch button and indicator
11. Built-in MP3 player module

4.2 Remote control



1. Power switch
2. Mode
3. Previous/next
4. Volume increase/decrease
5. 0~9 number button
6. Play/pause
7. Sound effect control
8. Mute
9. Cycle play button
10. Pause

Normal usage distance of remote control:

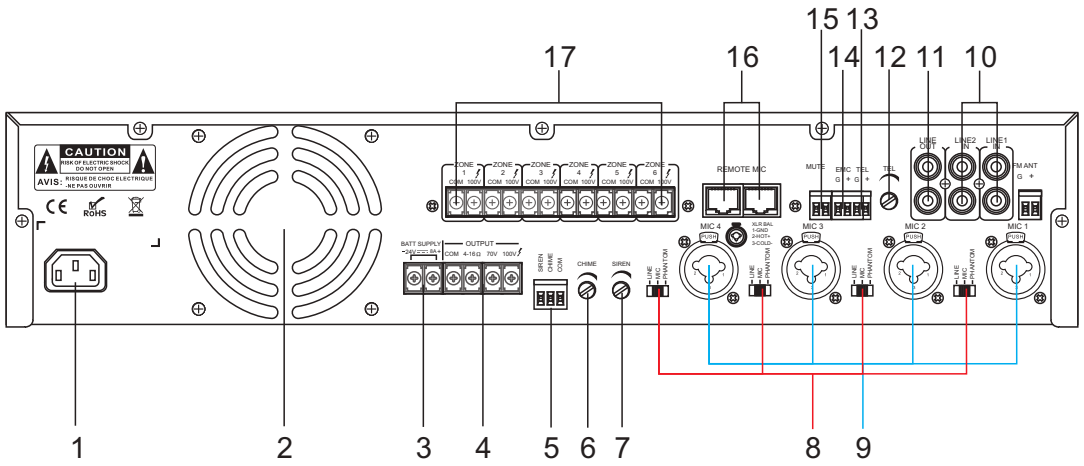
Remote control distance: 8 meter, angle: level ±35, vertical±15.

Remote control usage attention:

1. When install battery, please mind electrode.
2. Please let remote control aim right with window of host machine.
3. When found remote distance get short and insensitive, please change battery.
4. Please take out battery when don't use it for a long time.
5. Take it easy in case of falling.

4. NOMENCLATURE AND FUNCTIONS

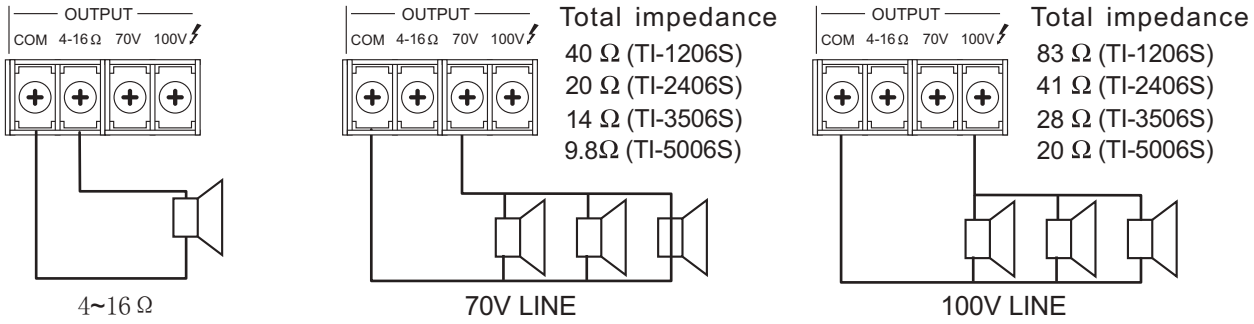
4.3 REAR PANEL



1. The AC power input socket
2. The cooling fan
3. Spare (battery) power connector
4. 4~16Ω / 70V / 100V Speaker output port,
   Connecting the speaker terminal. COM is for public terminal which could be connected with negative terminal and the ground wire. 4~16Ω terminal is used to connect the speaker with impedance 4~16Ω; 70V terminal is used to connect the speaker with 70V; 100V terminal is used to connect the speaker with 100V.
5. Alarm /Chime trigger control interface
6. Chime volume control
7. Alarm volume control
8. MIC1 / MIC2 / MIC3 / MIC4 line / microphone / phantom power switch
9. MIC1 / MIC2 / MIC3 / MIC4 balanced input port
10. Two-way line input interface, used to connect the line output interface
11. Line output interface, used to connect the line input interface
12. Telephone volume control
13. Telephone signal input port
14. EMC input port
15. Mute input port
16. Remote Microphone Control Port
17. Six-zone 100V speaker output port

5. OPERATION ILLUSTRATION

1. Connect the speakers:



1. Before connecting the speakers, please make sure that the equipment is powered off. In the case of power on, may have the risk of electric shock.
2. It is not possible to use 4~16Ω / 70V / 100V terminals at the same time.
3. Please make sure there are no applied load to the speaker cables.
4. During the installation of speakers, please make sure that the sum of the rated input power of the speakers to be connected is less than rated power of equipment.

WARNING:

Be sure to attach the supplide terminal cover after conncection completion. Because high voltage is applied to speaker terminals, never touch terminals to avoid eletric shock.

2.Connect external devices:

①Please ensure that the equipment and all equipment will be connected are powered off.

②Using the corresponding cable to connect this equipment and other external equipment.

3.Connect the power line and turn it on:

①Please make sure that the power switch of equipment and its connected equipment are turned off (in the OFF position).

②Turn the volume knob to the left

③Connect the supplied power line to the AC IN interface

④Plug the power line into the applicable socket

⑤Turn on the connected equipment (CD player, etc.), and then turn on the equipment.

Note:

1. Before powering on, please check and make sure there is no problem with the cable and connection.
2. When you turn off the system, turn off the equipment, and then turn off the connected equipment.

5. OPERATION ILLUSTRATION

4.Microphone using:

1.Turning the volume knob to the left,Connect the microphone and microphone input interface.

2.Turning the volume knob in the right position.

3.Facing the microphone and Speak loudly, turn the volume knob to the right, until the output signal no longer distortion.If input is high but output is low voice, and then increase the volume by using the volume knob.If the speaker volume is very high, then reduce the volume by using the volume knob.

5.Shutdown the system:

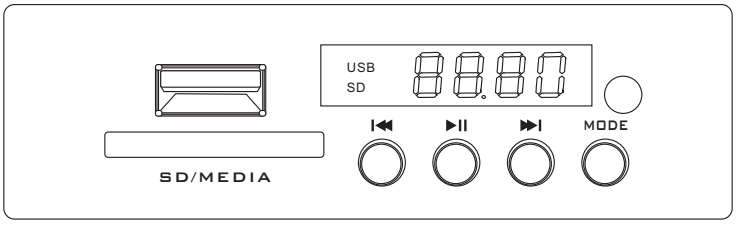
1. Turning the volume knob to the left until the minimum position.

2. Turning off the panel power switch of the professional power amplifier, at 0ff.In turn shutoff processor equipment and audio source equipment.

Note:

1. Turn off the power switch,Please wait about 5 seconds before turning on again.Continuous rapid turning on and off the power switch, it will lead to equipment failure.
2. Even the switch is in the off status, there will be a little current in equipment. If it won't use the equipment in a long time, please unplug the power cord from the wall AC socket.

6.Built-in MP3 player operation method:



①USB and SD card interface with functions of "priority to automatically play audio".

②"MODE"button: press the "MODE": choose radio, bluetooth or audio playback.

③" ⏮ " button: If press quickly, it is last song;Long press is the volume decrease.

④" ⏯ " button: When playing music, press one time quickly is pause, press again is play.

⑤" ⏭ " button: If press quickly, it is next song;Long press is the volume increase.

Note:

1. When using the built-in MP3 player buttons, please pay attention the strength when control, avoid excessive force to cause damage of MP3 player button.
2. When insert SD card or USB interface, Please insert in a right way, avoid the wrong way or too hard to cause the damage of the SD card or USB interface.

7.Mobile phone bluetooth operation method:

①Press the "MODE" button on the MP3 player and set to bluetooth MODE.

②Enter the mobile phone Settings, find the bluetooth related Settings.

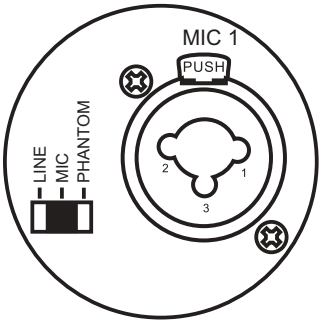
③Click on the bluetooth switch, turn on the bluetooth, if already turned on, then ignore. Because mobile phone system is different, setting interface may be a little different.

④Pay attention, after turn on bluetooth , you must be set to let all the devices are detected when search the bluetooth paired phone , or may not be able to complete the search match.

⑤When search the target device, click it, it will connect automatically, once connect successfully, it can normally play mobile phone music.

8.Operation instruction for MIC/MIC2/MIC3/MIC4 input switch:

As shown in the right picture, the input switch included:
line input, Mic input, Phantom power supply.



①When switch to Line input, you can input the source from such as CD, VCD, DVD and some other external audio equipment.

②When switch to the MIC input, you can use the electret condenser microphone.

③When switch to PHANTOM, the input interface with 48V phantom power supply, you can use the condenser microphone.

9.How to operate a remote microphone:

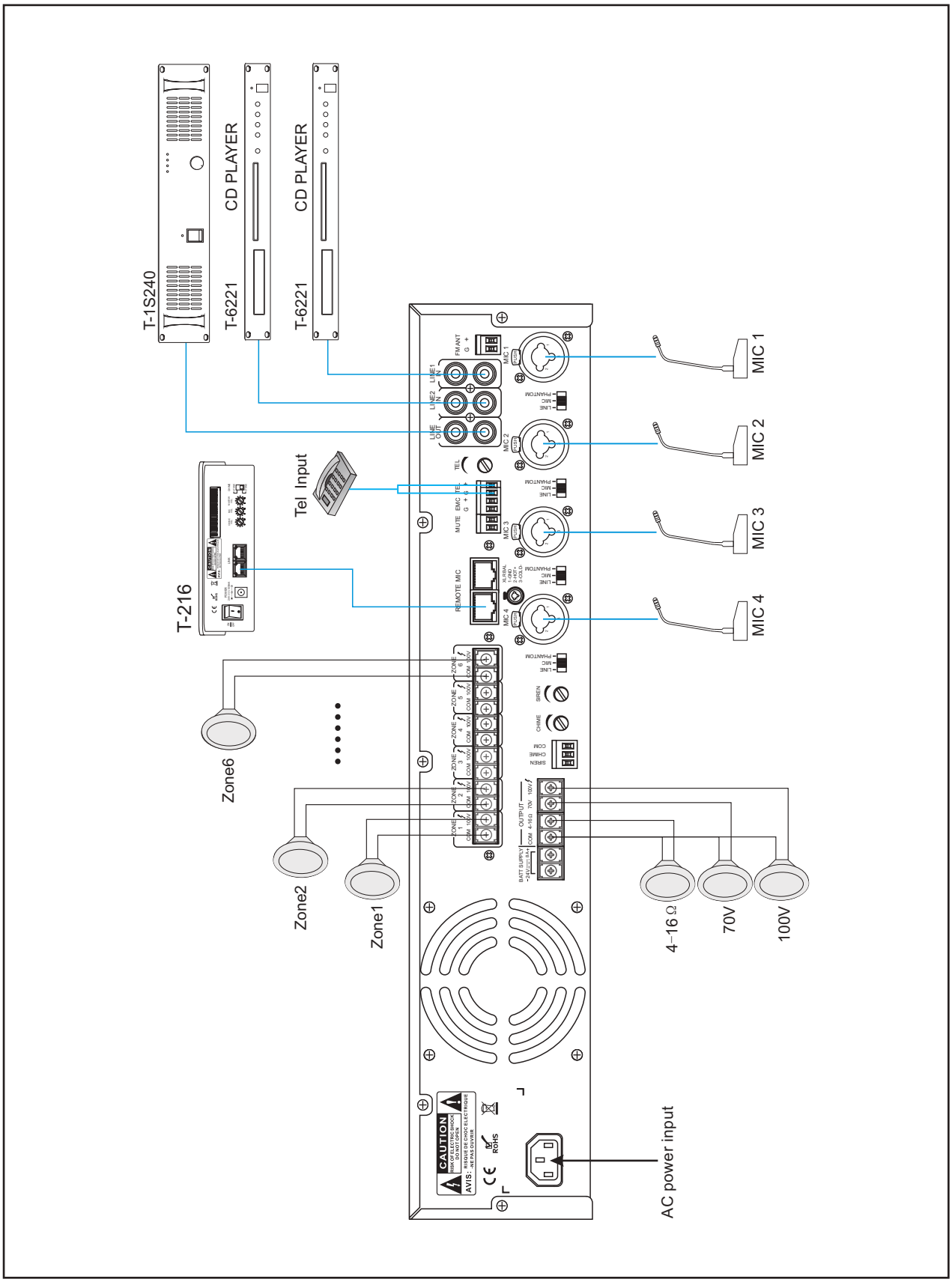
"REMOTE MIC" remote microphone interface: external connect"T-216 remote call microphone"for any call and the whole area calls, chime ring control.

6. TROUBLESHOOTING

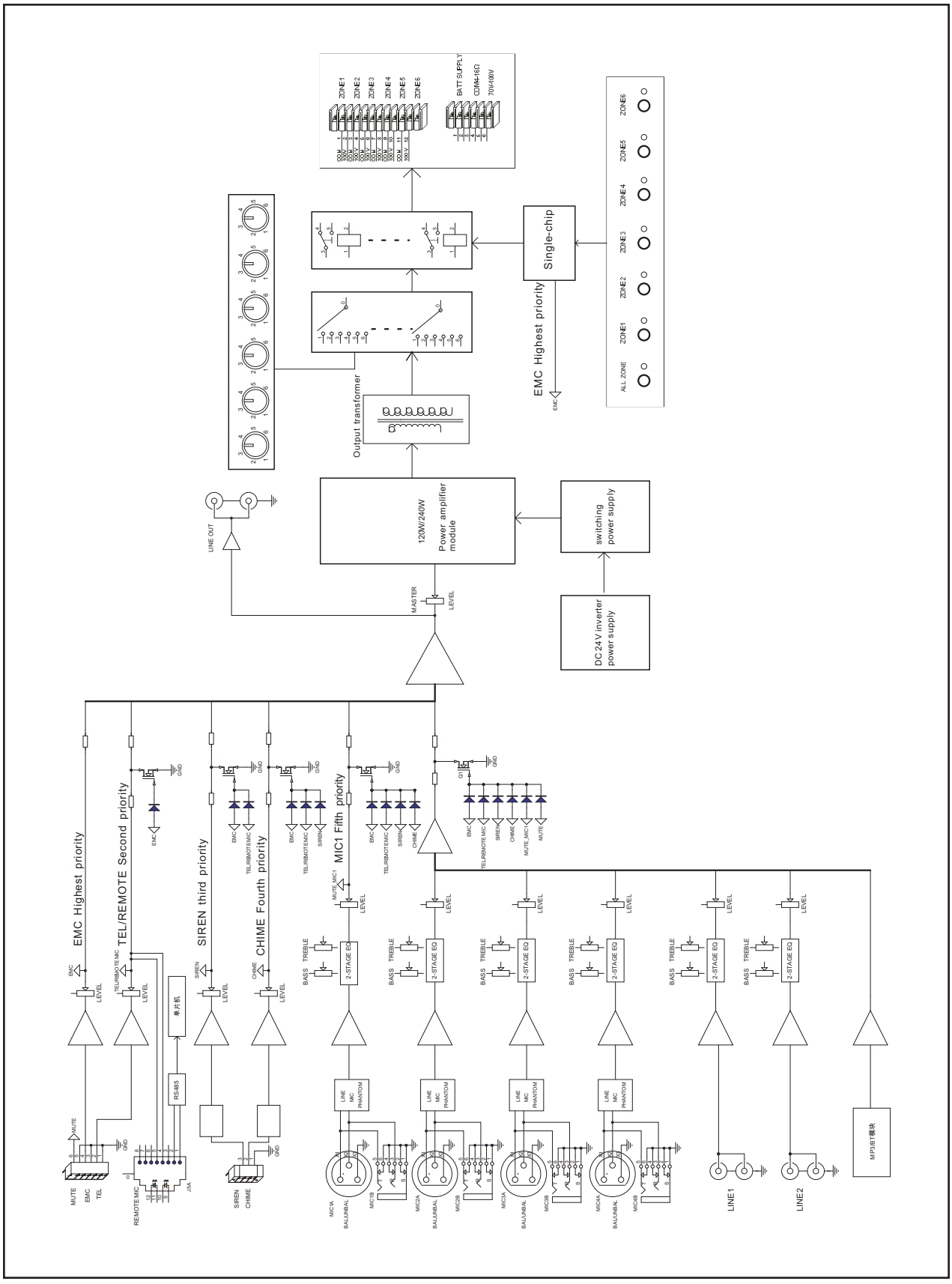
Failure phenomena	Failure cause
1. Power switch is not opened	1. Power line is cut off 2. The protection function of the equipment is not activated
2. All lines are connected, but there is no sound.	1. The power switch is not opened or the power plug is bad contacted. 2. The fuse is burnt 3. The volume knob is not opened or turned down to a extra low level 4. There is no audio signal input 5. There is short-circuit in the speaker line.
3. The sound suddenly disappears in normal status.	1. The equipment is in very high temperature to make it into protection status. 2. The connection wire is bad contact.
4. Low sound	The equipment is set to be low impedance connection, but the speakers connected is with high impedance.
5. Sound is distorted	The input level of Mic or external equipment is too high

7. APPLICATIONS

REAR PANEL CONNECTIONS



8. BLOCK DIAGRAM

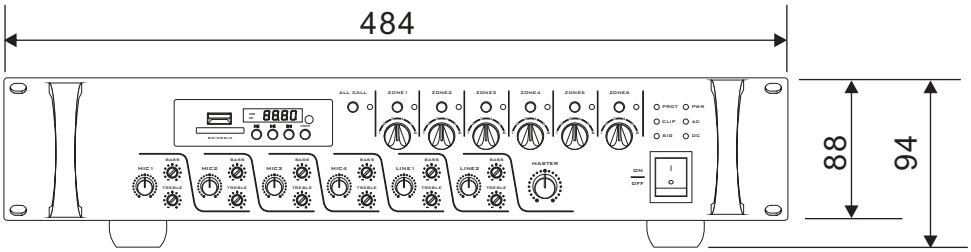


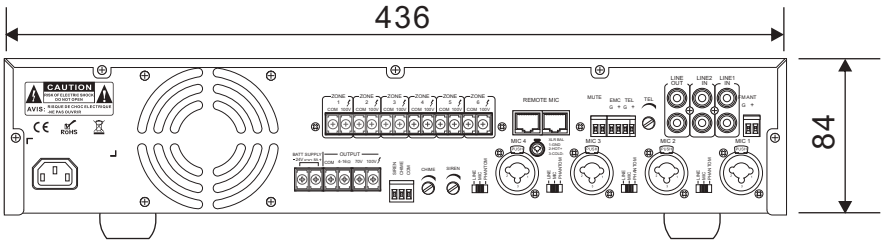
9. SPECIFICATIONS

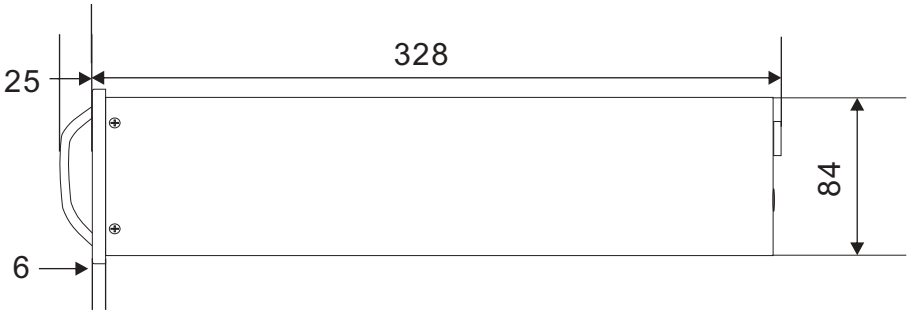
Model	TI-1206S	TI-2406S	TI-3506S	TI-5006S
Rated Power	120W	240W	350W	500W
Speaker Output	4~16Ω/70V/100V			
Input Sensitivity	MIC:5mV±1mV LINE: 350mV±20mV AUX: 350mV±20mV EMC/TEL: 775mV			
Pre-output	AUDIO OUT: 1V±50mV/100Ω			
Mic Tones	Low frequency: ±10dB at 100Hz; High frequency: ±10dB at 10KHz			
Music Tones	Low frequency: ±10dB at 100Hz; High frequency: ±10dB at 10KHz			
Effector Parameter				
Frequency Response	MIC：80Hz~16KHz（±3dB） LINE：20Hz~20KHz（±3dB）			
SNR	MIC：≥65dB; Music:≥70dB			
THD	THD+N≤0. 1%			
Indicator	Power indicator			
Short-circuit Mode	Short-circuit, no voltage			
Cooling Mode	Air cooling			
Protection Mode	Overheat/Short-circuit			
Operation Temperature	+5℃~+40℃			
Storage Temperature	-20℃~+70℃			
Relative Humidity	<95%(No condensation)			
Voltage	☐ ~110V 50Hz ☐ ~110V 60Hz ☐ ~120V 50Hz ☐ ~120V 60Hz ☐ ~220V 50Hz ☐ ~220V 60Hz ☐ ~230V 50Hz ☐ ~230V 60Hz ☐ ~240V 50Hz ☐ ~240V 60Hz			
Power Consumption	210W	380W	530W	800W
Weight	6.7Kg	7.2Kg	8.2Kg	8.4Kg
Dimension	484×353×88mm			

10. DIMENSIONAL DIAGRAM

UNIT:mm

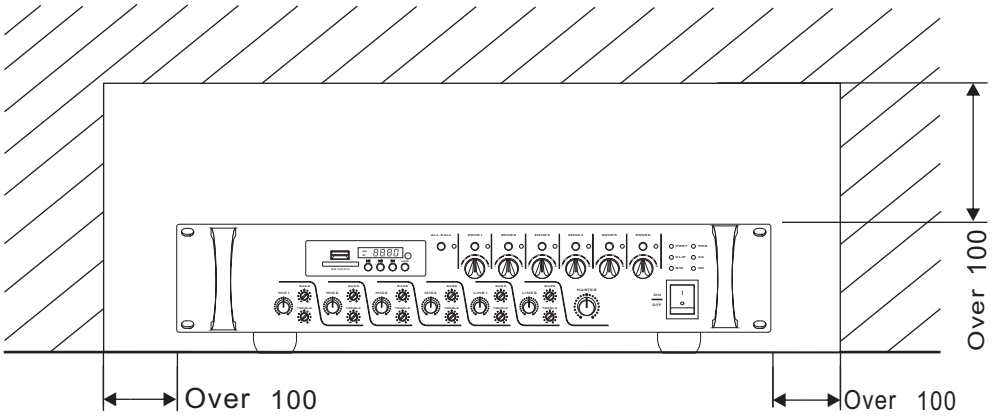






Keep the unit's all sides over 10 cm away from objects that may obstruct air flow to prevent the unit's internal temperature rise.

UNIT:mm



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Version V0.5