



## PUBLIC ADDRESS SYSTEM

# OPERATION MANUAL

TI-60U  
TI-120U  
TI-240U  
MIXER 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.

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## 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

**ITC** series of public address mixer amplifiers have power ratings from 60 to 240 watts and feature optional balanced MIC inputs, AUX level inputs and EMC (priority) level inputs.

## 3. FEATURES

With USB port and fluorescent to display the sound number.

Four function buttons: previous, play/stop, next and repeat.

Remote control over USB for EQ, volume up, volume down & mute.

Mixer amplifier for paging and background music system.

In 2U height.

70V, 100V and low impedance 4-16ohm speaker output.

5 zone and zone speaker terminals.

Three Mic inputs by phone jack type.

Mic 1 with VOX priority and VOX level on rear panel.

Mic 2-3 by phone jack on rear panel.

Two Aux Inputs and 2 line inputs for spare use.

One EMC priority inputs.

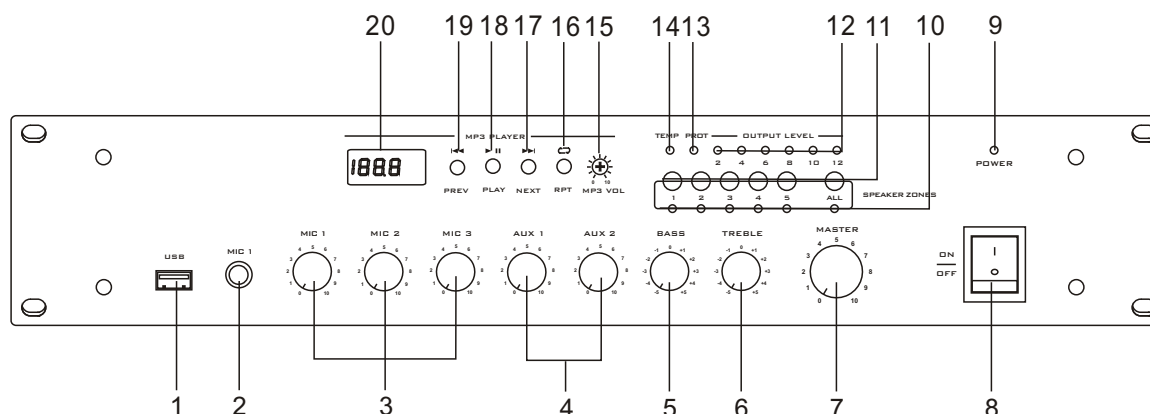
EMC 1 has priority over all inputs except MIC1.

Mic 1-3, Aux1-2 and master volume controls and bass/treble tone control.

High temp, overload & short-circuit protection.

## 4. NOMENCLATURE AND FUNCTIONS

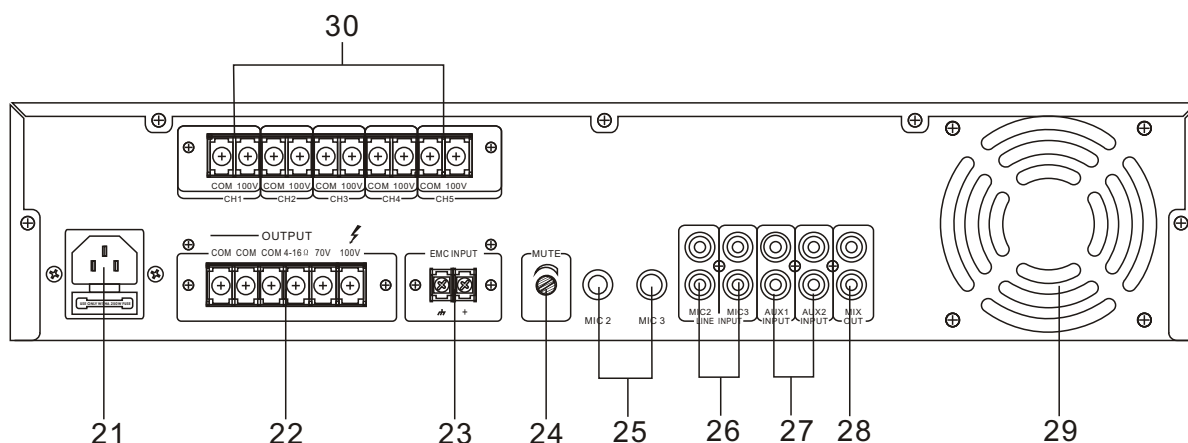
### 4.1 FRONT PANEL



- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. <b>USB</b><br/>USB Port Download and store Mp3 song</li> <li>2. <b>MIC1</b><br/>MIC1 input 6.3 Microphone jack input</li> <li>3. <b>MIC1 \ MIC2 \ MIC3</b><br/>MIC volume control (MIC1/MIC2/MIC3)</li> <li>4. <b>AUX1 \ AUX2</b><br/>AUX volume control(AUX 1/AUX 2).</li> <li>5. <b>BASS</b><br/>Adjust bass response. Rotate clockwise to increase bass output and anticlockwise to reduce it</li> <li>6. <b>TREBLE</b><br/>Adjust treble response. Rotate clockwise to increase treble output and anticlockwise to reduce it</li> <li>7. <b>MASTER VOL.</b><br/>Master volume control</li> <li>8. <b>POWER SWITCH</b><br/>On top of the opening Power<br/>Press the end, power shut down</li> <li>9. <b>POWER</b><br/>Power indicator</li> </ol> | <ol style="list-style-type: none"> <li>10. <b>SPEAKER ZONE(1~5)</b><br/>Speaker zone(1~5) indicator</li> <li>11. <b>SPEAKER ZONE(1~5)</b><br/>Speaker zone(1~5) button control</li> <li>12. <b>LEVEL INDICATORS</b><br/>Level meters 6 output level indicators</li> <li>13. <b>PROT</b><br/>Protection indicator</li> <li>14. <b>TEMP</b><br/>Temperature indicator</li> <li>15. <b>MP3</b><br/>MP3 volume control</li> <li>16. <b>REPEAT</b></li> <li>17. <b>NEXT</b></li> <li>18. <b>PLAY/PAUSE</b><br/>Play/Pause button (Mp3)</li> <li>19. <b>LAST</b></li> <li>20. <b>TUNER SCREEN</b><br/>Display the working state of tuner</li> </ol> |
|--|---|

## NOMENCLATURE AND FUNCTIONS

### 4.2 REAR PANEL



**21. ~220-240 50/60Hz AC POWER INPUT**

**22. SPEAKER TERMINALS**

Connectors for 4-16 ohms or 70V and 100V speaker

**23. EMC**

EMC Input Fire alarm signal input

**24. MUTE**

Mute Microphone 1 mute level control

**25. MIC2\MIC3**

MIC Balanced inputs

**26. LINE1 \LINE2**

**27. AUX1/AUX2**

Auxiliary input jack, Non-equilibrium of connecting peripherals signal

**28. OUT**

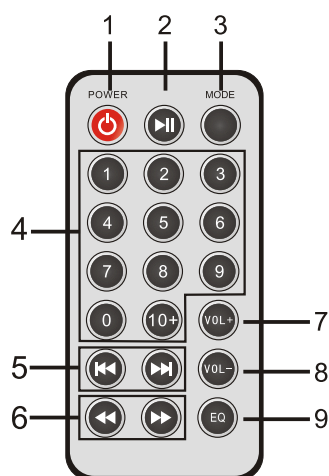
Line output, Non-equilibrium type, the output of all input signals.

**29. COOLING FANS**

**30. (1~5) ZONE OUTPUT TERMINAL (100V)**

Connecting speakers

### 4.3 REMOTE CONTROL INSTRUCTIONS



1. Power button

2. Play / Pause / confirm button

3. MODE

4. Number control

5. Last/Next

6. REW/Fast forward key

7. volume(+)

8. Volume(-)

9. Sound Effect Control

## NOMENCLATURE AND FUNCTIONS

### Remote control using distance:

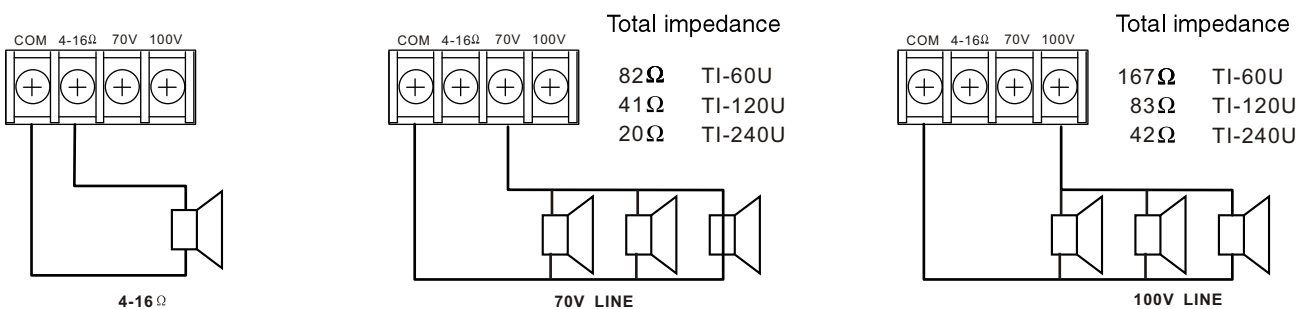
Using remote control distance: usually remote control distance is 8 meters, remote control Angle: horizontal plus or minus 35 degrees, vertical plus or minus 15 degrees are effective.

### Attention:

1. When installing the battery, pay attention to the positive and negative polarity of battery;
2. Aim the remote control transmitter host receives the window, please operate; When found the remote control distance smaller and insensitive, please replace the battery;
3. Don't use the remote control for a long time, please remove the battery;
4. Light to take light put the remote control, take precautions against falling.

## 5. CONNECTIONS

### 5.1 SPEAKER CONNECTIONS



### Notes

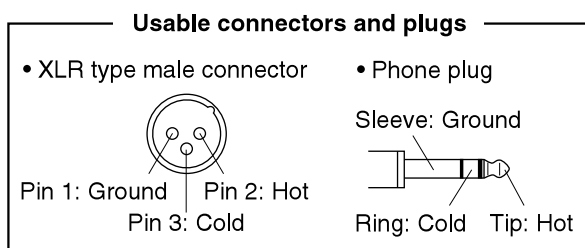
- Both the 4 – 16 Ω and 70V/100V terminals cannot be used at the same time.
- Impedances indicated in the figures represent the total speaker system (load) impedances.

## ⚠ WARNING

Be sure to attach the supplied terminal cover after connection completion. Because high voltage is applied to the speaker terminals, never touch these terminals to avoid electric shock.

### 5.2 XLR CONNECTIONS

Combined XLR (female)/phone jack connectors.





## 6. MACHINE OPERATION

### OPERATION ATTENTION

The four output connectors only can choose two connectors work together. If voltage is 70V/100V, the speakers must be with transformer and make sure the total power wattage of speaker is 15% less than the power wattage of amplifier.

### MUTE FUNCTION

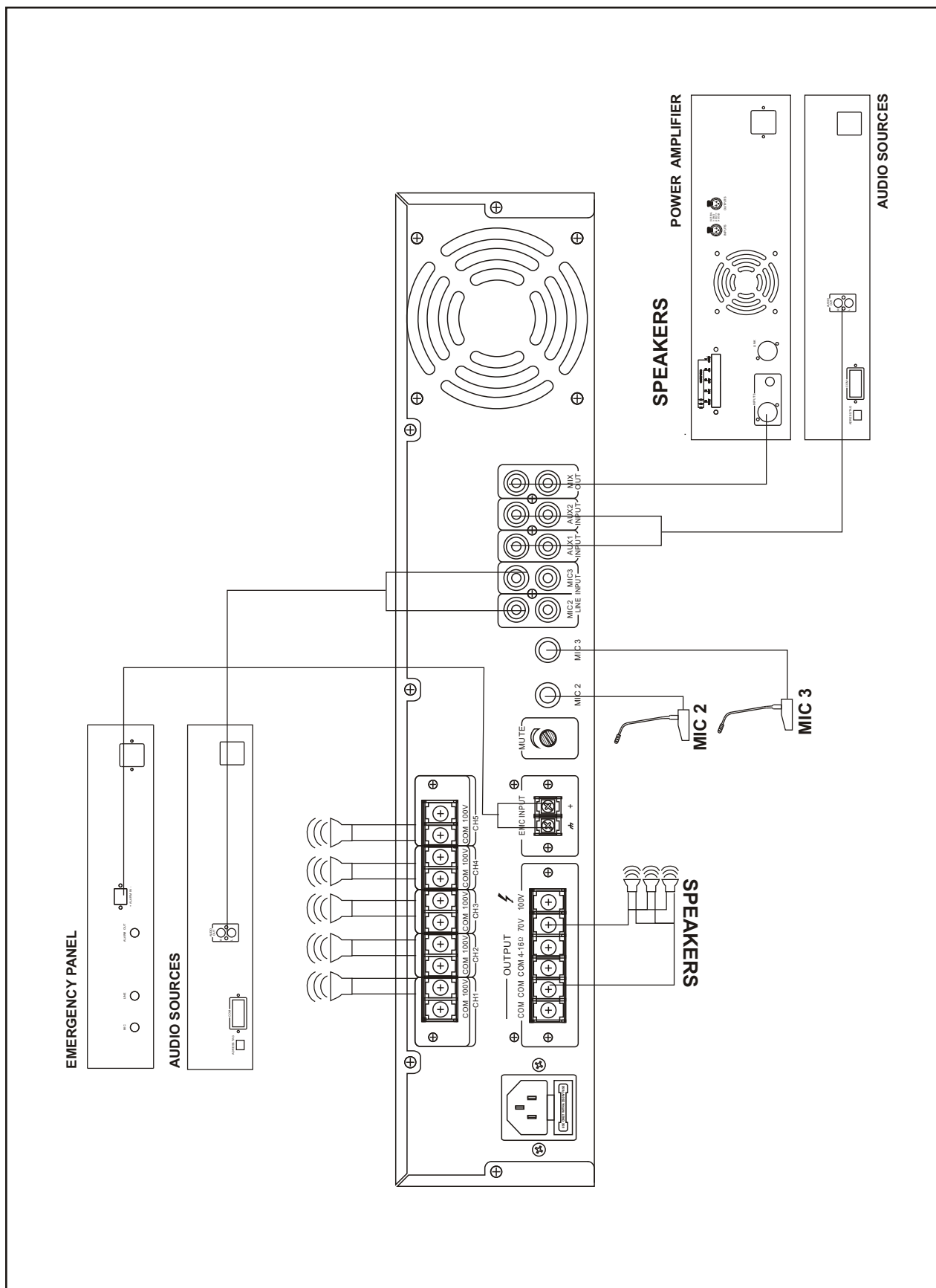
MIC 1 with the first priority over other inputs, the adjustment should be kept within 0-30db with the mute connector, 30db is the original setting.

### GUIDANCE OF EXCLUDING ERRORS

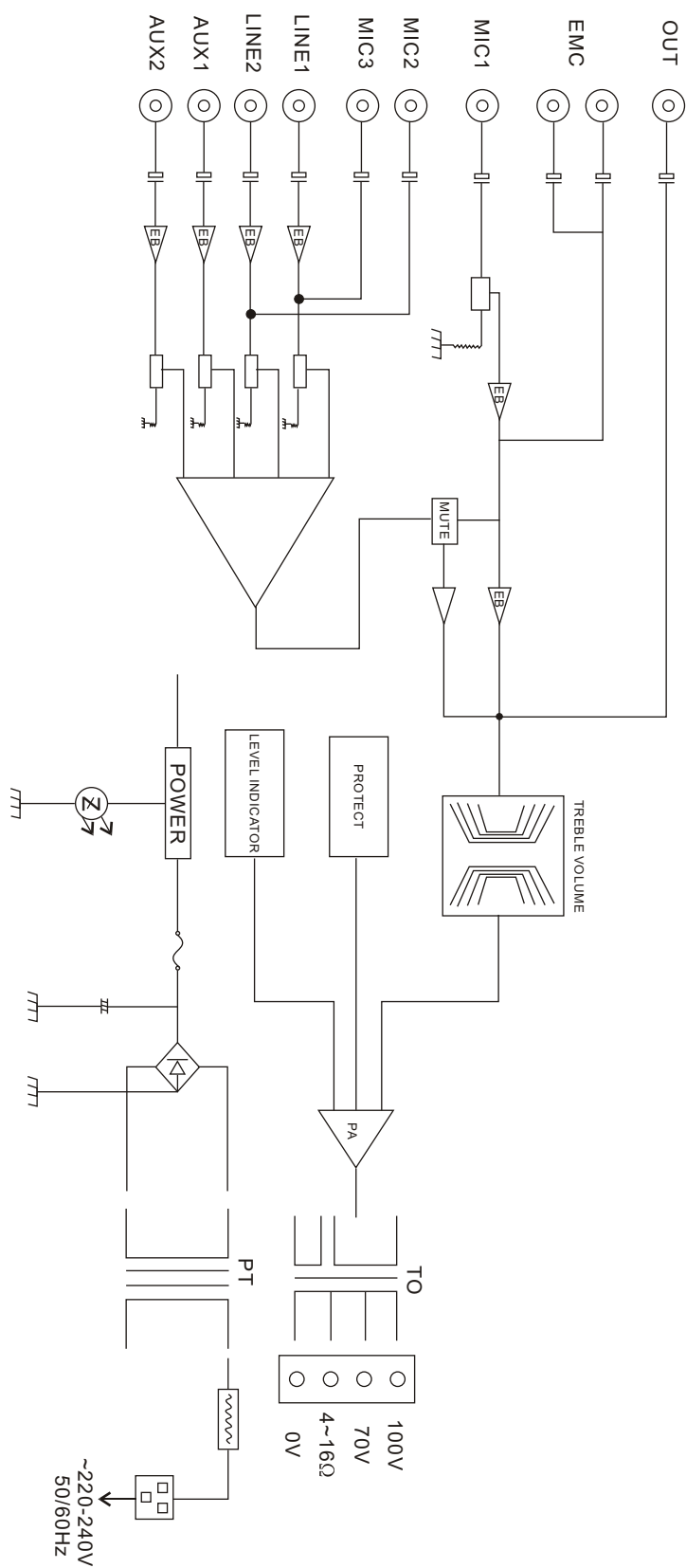
Phenomena	Cause
All the wires are connected well but no voice output	1 No power or wrong plug connection 2 Fuse is burned 3 Volume is town off 4 No input signal
Power on but alarming signal	1 Overloading or short circuit 2 Voltage is not stable, too high or low
No voice output in normal condition	1 Machine is in protection condition in case of high temperature 2 Wrong wire connection

## 7. APPLICATIONS

### REAR PANEL CONNECTIONS



## 8. BLOCK DIAGRAM

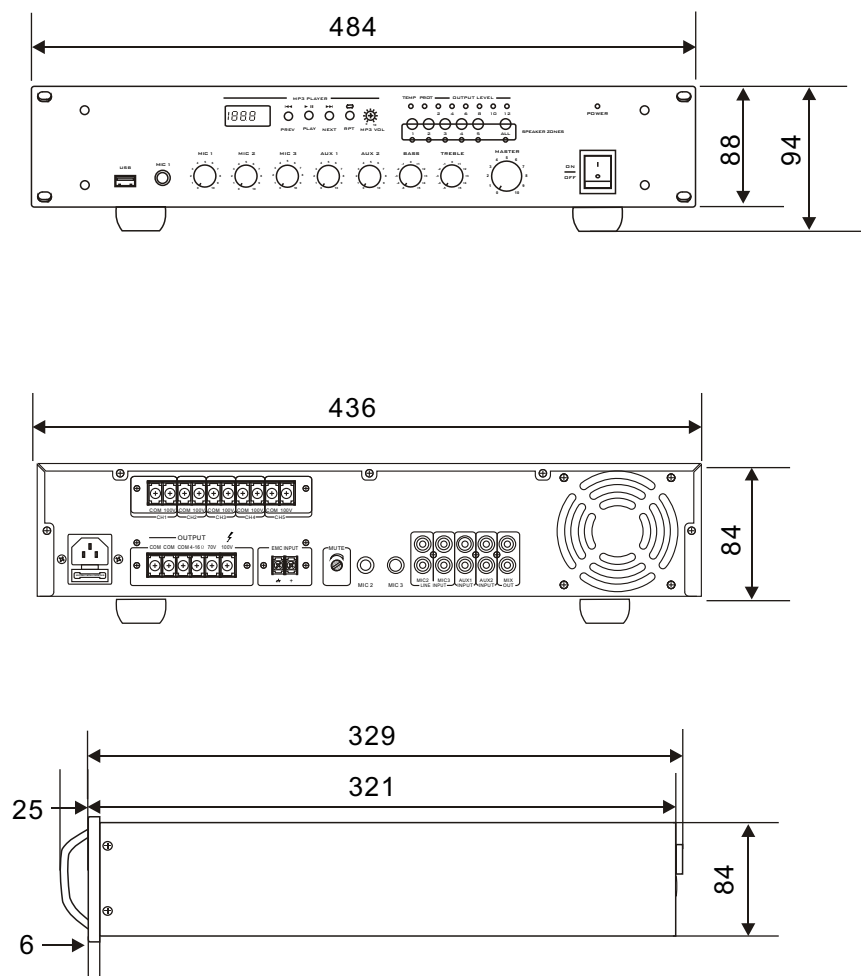


## 9. SPECIFICATIONS

5 ZONE MIXER AMPLIFIER(2U)			
MODEL	TI-60U	TI-120U	TI-240U
RATED POWER OUTPUT	60W	120W	240W
SPEAKER OUTPUTS	4~16 $\Omega$ ,70V/100V		
INPUT	MIC 1.2.3: 5mV/600 Ohms Unbalanced TRS input MIC2.3:LINE:775mV/10KOhms,Unbalanced RCA input AUX 1. 2: 350mV/10KOhms, Unbalanced RCA input EMC:775mV/10KOhms, Unbalanced EMC input		
TONE	Bass:±10dB at 100Hz Treble:±10dB at 10KHz		
FREQUENCY RESPONSE	50Hz~15KHz		
S/N RATIO	MIC 1,2,3: 66dB;AUX 1,2: 80dB		
T.H.D	Less than 1% at 1KHz,1/3 rated power		
CROSSTALK	MIC : 80dB;AUX 85dB		
MUTING FUNCTION	MIC 1 over other input signals with 0~30dB attenuation EMC 1 over all inputs except MIC 1		
CONTROLS	Individual gain controls, power switch		
INDICATORS	Power LED,LED level meter,protect		
PROTECTION	AC fuse, short-circuit and high temperature		
POWER REQUIREMENTS	~220-240V 50/60Hz		
POWER CONSUMPTION	100W	200W	400W
DIMENSION(mm)	484X353X88		
NET WEIGHT	7.3Kg	9.94Kg	17.4Kg
GROSS WEIGHT	7.8Kg	10.14Kg	18.9Kg

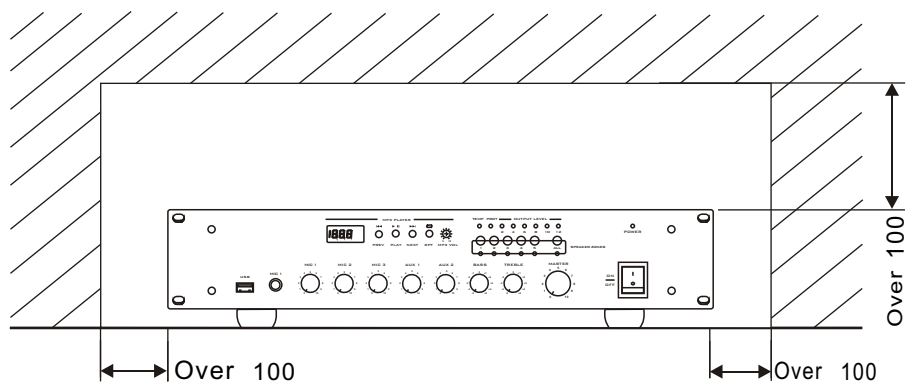
## 10. DIMENSIONAL DIAGRAM

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



# PUBLIC ADDRESS SYSTEM

