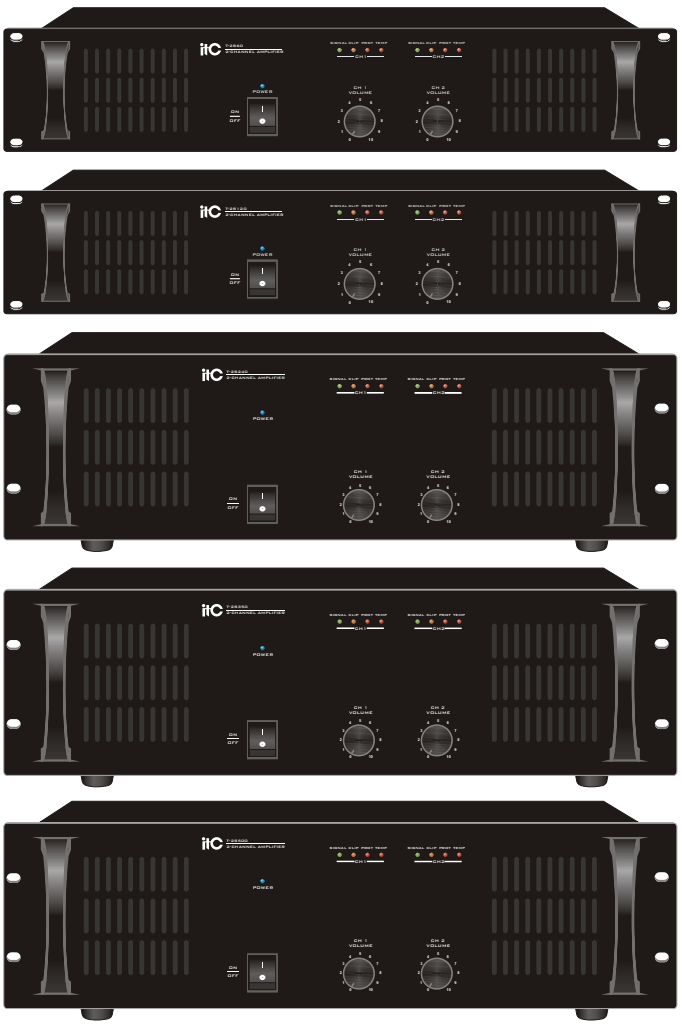
PUBLIC ADDRESS SYSTEM

# OPERATION MANUAL

- T-2S60
- T-2S120
- T-2S240
- T-2S350
- T-2S500



**2-CHANNEL 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

- 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

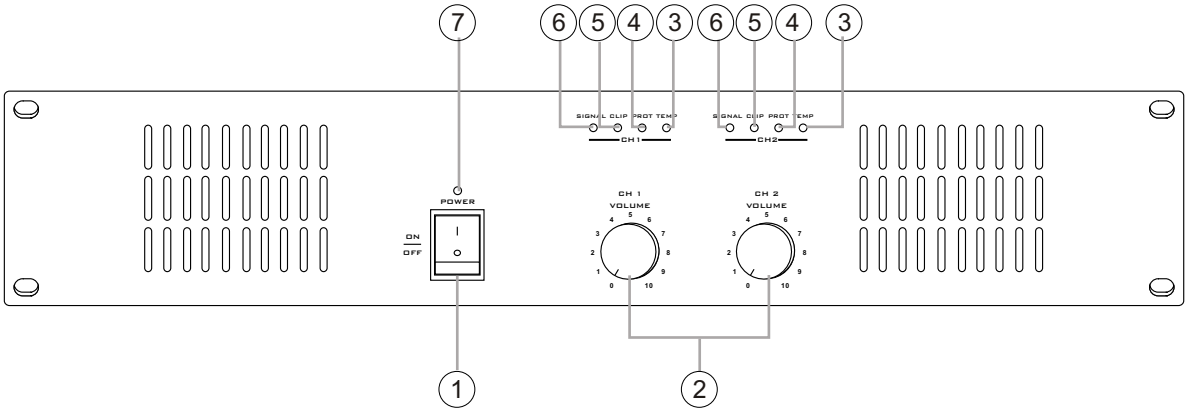
With two separate power amplifiers in a single chassis and power ratings from 60 to 500 watts RMS, these sleek, attractive units provide a compact solution for ITC system amplification and distribution.Both balanced and unbalanced line inputs make it selectable for installer, balanced line output feeds to another power amplifier as well as secures the signal transmission is less noise and longer distance. 70V, 100V and 4ohm speaker outputs are convenient for installation when selection different speaker matching. A master volume control is included. Complete protection includes clip, short circuit, high temp and overload. Indications for power, signal, clip, protection and temp.

## 3. FEATURES

1. Rated outputs : 60W to 500W.
2. 100V/70V line transformer-isolated speaker outputs, low impedance 4 ohms speaker outputs.
3. 2 independent amps in a singale chassis.
4. LED status indicators.
5. Volumre controls for each channel.
6. Short-circuit, clipping and high-temp protection.

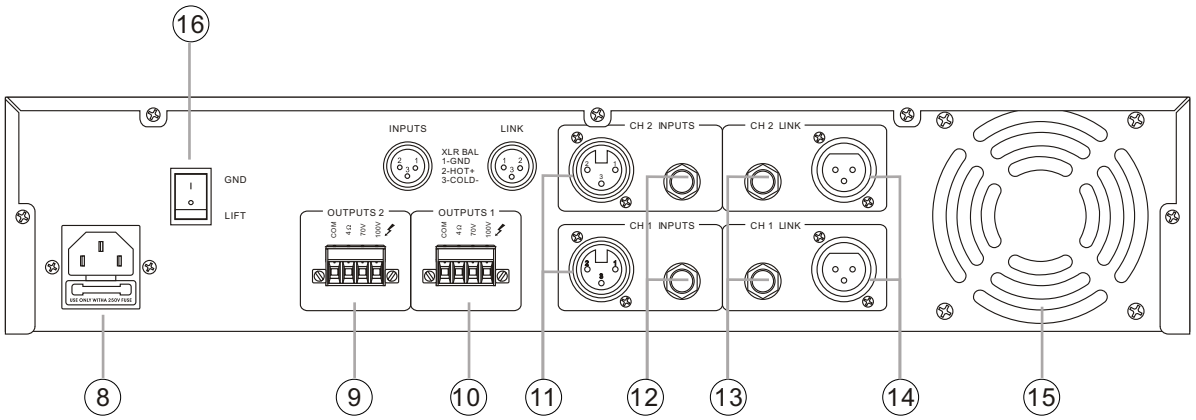
# 4. NOMENCLATURE AND FUNCTIONS

## 4.1 FRONT PANEL(2U)




1. **POWER SWITCH**
   On top of the opening Power ， Press the end, power shut down
2. **CH1\CH2 VOLUME**
   volume control
3. **TEMP (CH1\CH2)**
   Device when the internal temperature is too high, the indicator light and disconnect the output protection device. When the device internal temperature drops to a safe temperature (90 degrees) the following is to lift the protection, the device starts normal operation
4. **PROT (CH1\CH2)**
   Equipment, normal working hours, lights out, when the output connection overload (more than 1.6 times the rated output power) will disconnect the output protection device
5. **CLIP (CH1\CH2)**
   Clip lit when max wattage output & output signal distortion.
6. **SIGNAL (CH1\CH2)**
   Signal indicator When lit input signal is detected.
7. **POWER**
   Power indicator

## 4.2 REAR PANEL(2U)




**8. ~220-240V 50/60Hz POWER INPUT**

**9. OUTPUTS2**

Connectors for 4 ohms or 70V and 100V speaker

**10. OUTPUTS1**

Connectors for 4 ohms or 70V and 100V speaker

**11. LINE INPUT (XLR)**

Music signal input balance

**12. LINE INPUT (6.35TRS)**

Balanced or unbalanced input music signal (unbalanced input, use of non-equilibrium 6.35TRS jack)

**13. LINK OUTPUT (6.35TRS)**

Balanced or unbalanced output music signal (unbalanced output, use of non-equilibrium 6.35TRS jack)

**14. LINE CASCADE OUTPUT (CORLEONE SOCKET)**

XLR, output signal of power amplifier

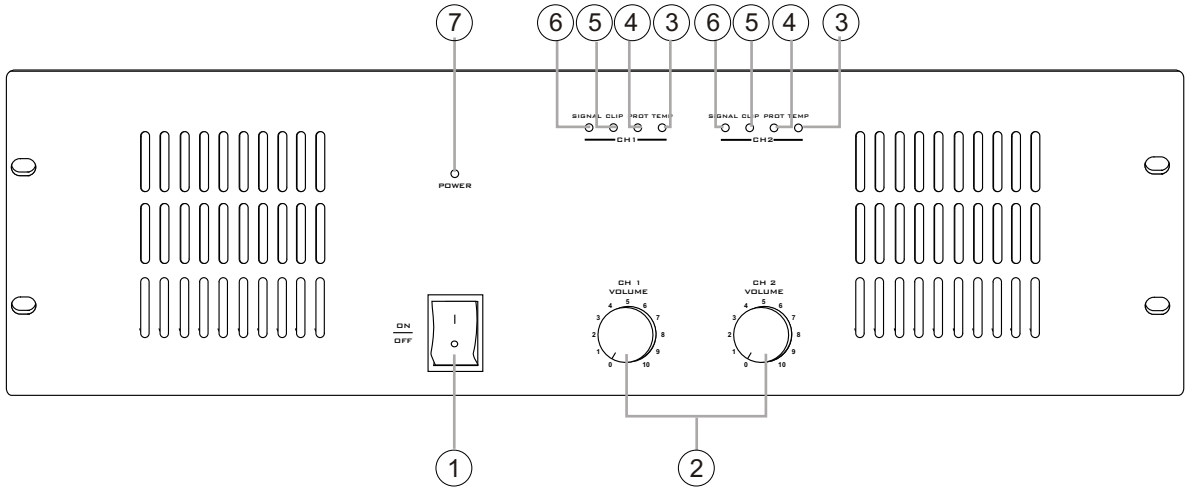
**15. COOLING FANS**

**16. GROUND LIFTER**

Earth line ground or lift switch. Enable the switch to "GND" position when one unit is used, disable the switch "LIFT" when several units are used to avoid noise caused by several earth line grounded.

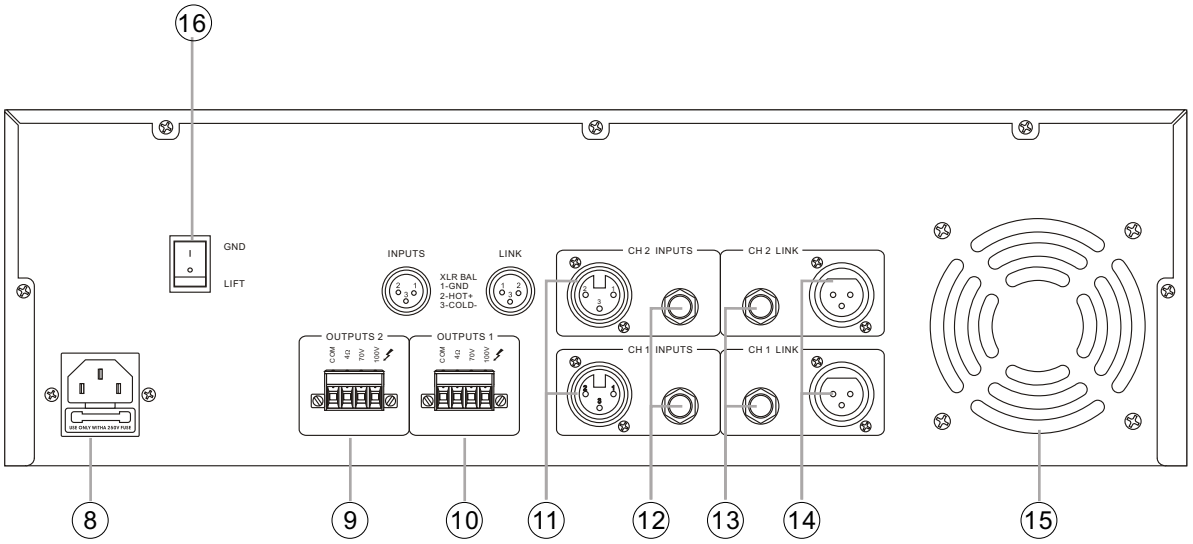
# NOMENCLATURE AND FUNCTIONS

### 4.3 FRONT PANEL(3U)




1. **POWER SWITCH**
   On top of the opening Power， Press the end, power shut down
2. **CH1\CH2 VOLUME**
   Channel volume control
3. **TEMP (CH1\CH2)**
   The protection indicator will be light on when the inside temperature is over 90℃, the output will be cut to protect the amplifier from damage. It will resume to work after cooling down
4. **PROT (CH1\CH2)**
   The protection indicator will be light on when the constant output is 160% higher than the rated output, the output will be cut to protection the amplifier from damage. This indicator will be extinguished when amplifier is under normal working conditions.
5. **CLIP (CH1\CH2)**
   Clip lit when max wattage output & output signal distortion.
6. **SIGNAL (CH1\CH2)**
   Signal indicator LED When lit input signal is detected.
7. **POWER**
   Power indicator LED

### 4.4 REAR PANEL(3U)




**8. ~220-240V 50/60Hz POWER INPUT**

**9. OUTPUTS2**

Connectors for 4 ohms or 70V and 100V speaker

**10. OUTPUTS1**

Connectors for 4 ohms or 70V and 100V speaker

**11. LINE INPUT (XLR)**

Music signal input balance

**12. LINE INPUT (6.35TRS)**

Balanced or unbalanced input music signal (unbalanced input, use of non-equilibrium 6.35TRS jack)

**13. LINK OUTPUT (6.35TRS)**

Balanced or unbalanced output music signal (unbalanced output, use of non-equilibrium 6.35TRS jack)

**14. LINE CASCADE OUTPUT (CORLEONE SOCKET)**

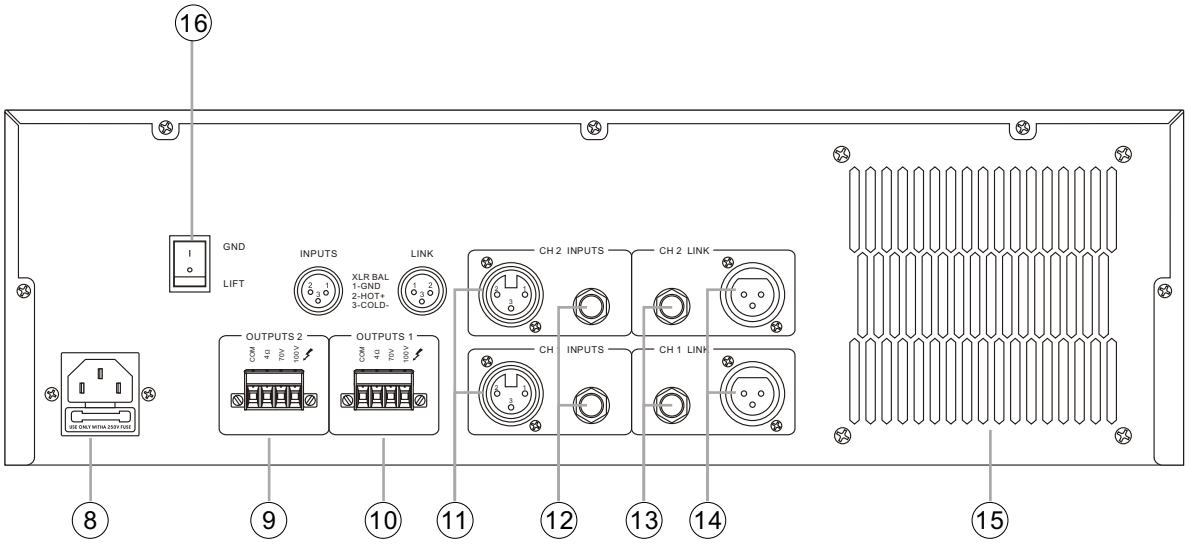
XLR, output signal of power amplifier

**15. COOLING FANS**

**16. GROUND LIFTER**

Earth line ground or lift switch. Enable the switch to "GND" position when one unit is used, disable the switch "LIFT" when several units are used to avoid noise caused by several earth line grounded.

### 4.5 REAR PANEL(3U)




**8. ~220-240V 50/60Hz POWER INPUT**

**9. OUTPUTS2**

Connectors for 4 ohms or 70V and 100V speaker

**10. OUTPUTS1**

Connectors for 4 ohms or 70V and 100V speaker

**11. LINE INPUT (XLR)**

Music signal input balance

**12. LINE INPUT (6.35TRS)**

Balanced or unbalanced input music signal (unbalanced input, use of non-equilibrium 6.35TRS jack)

**13. LINK OUTPUT (6.35TRS)**

Balanced or unbalanced output music signal (unbalanced output, use of non-equilibrium 6.35TRS jack)

**14. LINE CASCADE OUTPUT (CORLEONE SOCKET)**

XLR, output signal of power amplifier

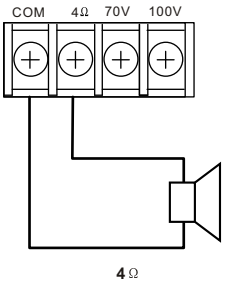
**15. COOLING FANS**

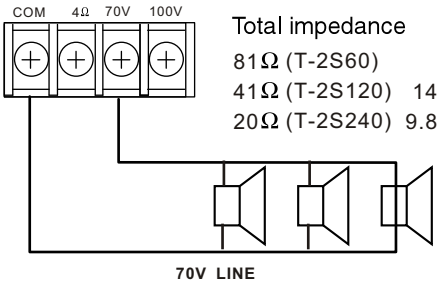
**16. GROUND LIFTER**

Earth line ground or lift switch. Enable the switch to "GND" position when one unit is used, disable the switch "LIFT" when several units are used to avoid noise caused by several earth line grounded.

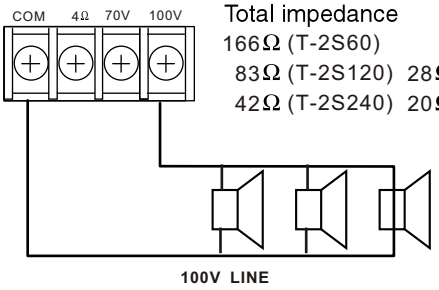
# 5. CONNECTIONS

## SPEAKER CONNECTIONS




Total impedance
81Ω (T-2S60)
41Ω (T-2S120) 14Ω (T-2S350)
20Ω (T-2S240) 9.8Ω (T-2S500)




Total impedance
166Ω (T-2S60)
83Ω (T-2S120) 28Ω (T-2S350)
42Ω (T-2S240) 20Ω (T-2S500)

**Notes**

- Both the 4Ω and **70V/**100 V 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.

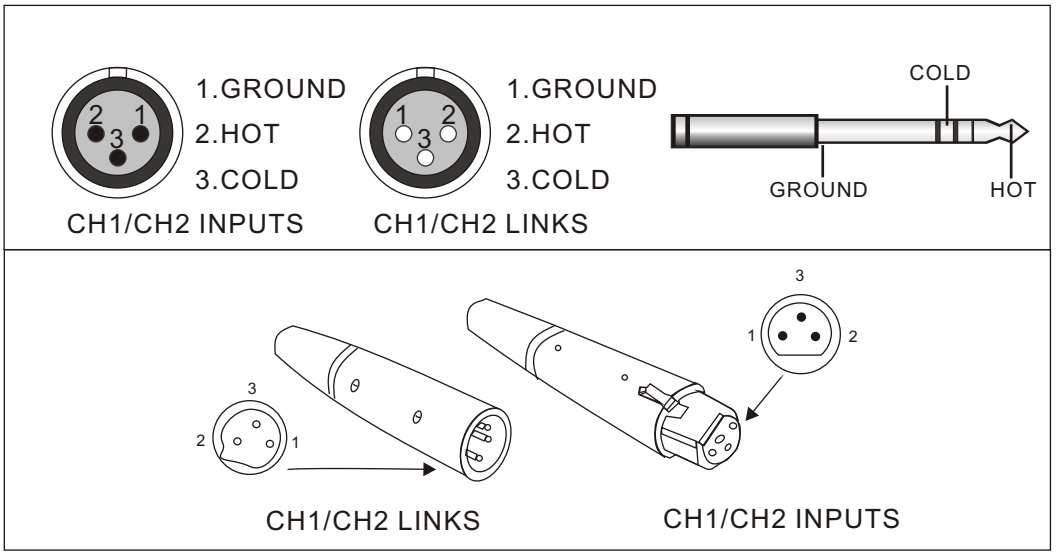
# 6. MACHINE OPERATION

**MIC INPUT CHANNEL 1~3**

This is a special connector which will accept 3-conductor XLR.

These inputs are suitable to receive signal from microphones level devices.

| MIC JACK (XLR JACK) | LINE JACK (TRS PHONE JACK) |
|---|---|
| Pin 1:GROUND | Sleeve:GROUND |
| Pin 2:HOT(+) | Tip:HOT(+) |
| Pin 3:COLD(-) | Ring:COLD(-) |




## OPERATION ATTENTION

It indicate signal distortion when the panel's CLIP LED is lighting red and it may caused by:

1. If there is excess signal input, the power LED will light,in this case,please turn signal to the minimum.
2. There is overload output if the LED is not ligh-ting, please check the input circuit.

When you start the machine, it will run into auto-checking condition, its protection LED (yellow) will shine 3 seconds.If the protection time is too long, please check the machine or contact with our distribution of your local place.

Do not open and close the machine frequently. Reopen should be after 10 seconds

Power supply should match up to the machine.

The machine outfit with ground line, so please plug on the connected-ground wire-net

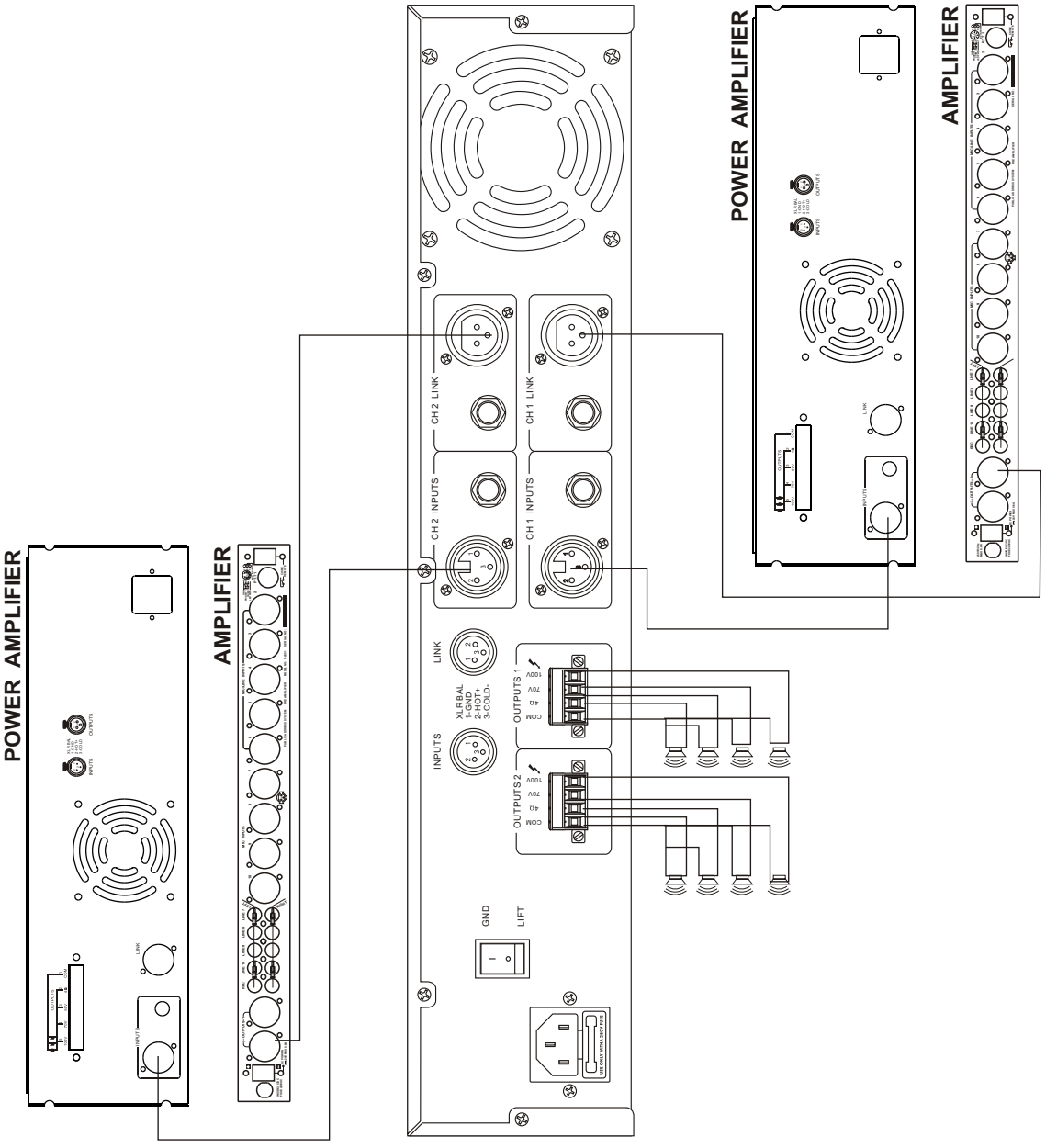
As formidable shock or impact on machine such as (thunder shock, halfway signal pause,excess rated signal input or other interference), the ma -chine will auto-check and reopen automatically.

Please switch off the switch till there is no noise if there is a badly power abnormality or interfe-rence.

Contact with our local distributions if machine is failure to work.

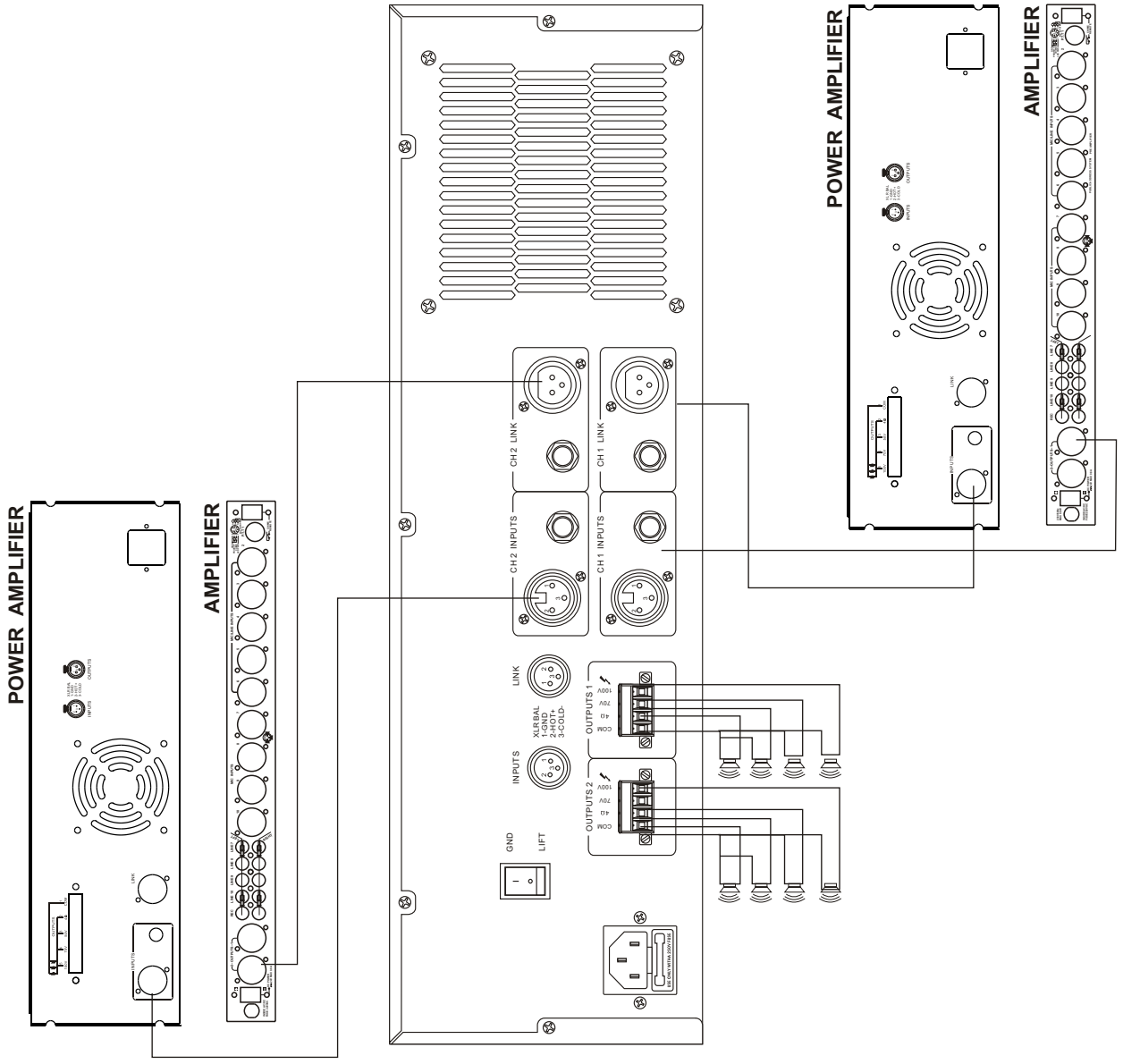
# 7. APPLICATIONS

## REAR PANEL CONNECTIONS

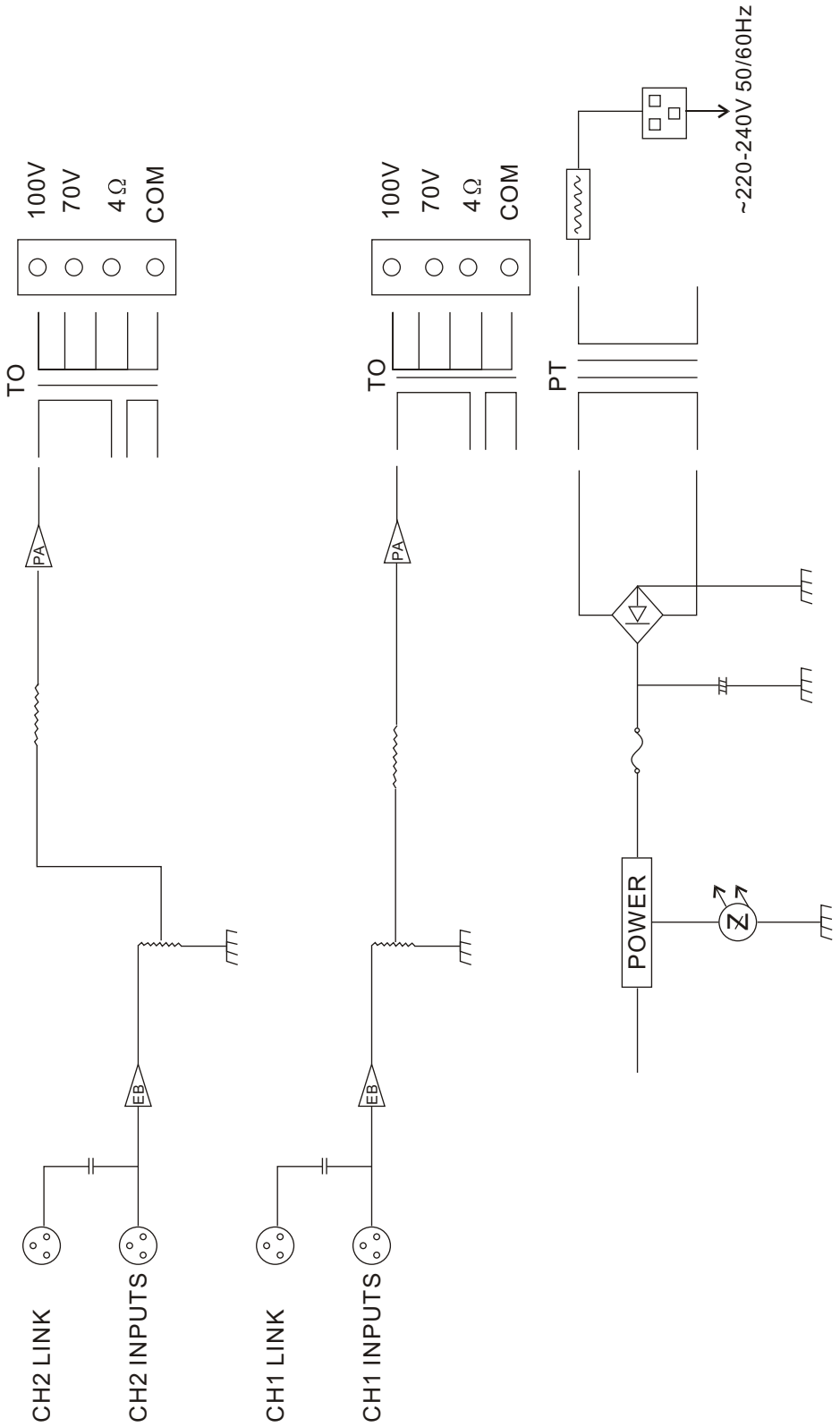


# APPLICATIONS

## REAR PANEL CONNECTIONS



## 8. BLOCK DIAGRAM



# 9. SPECIFICATIONS

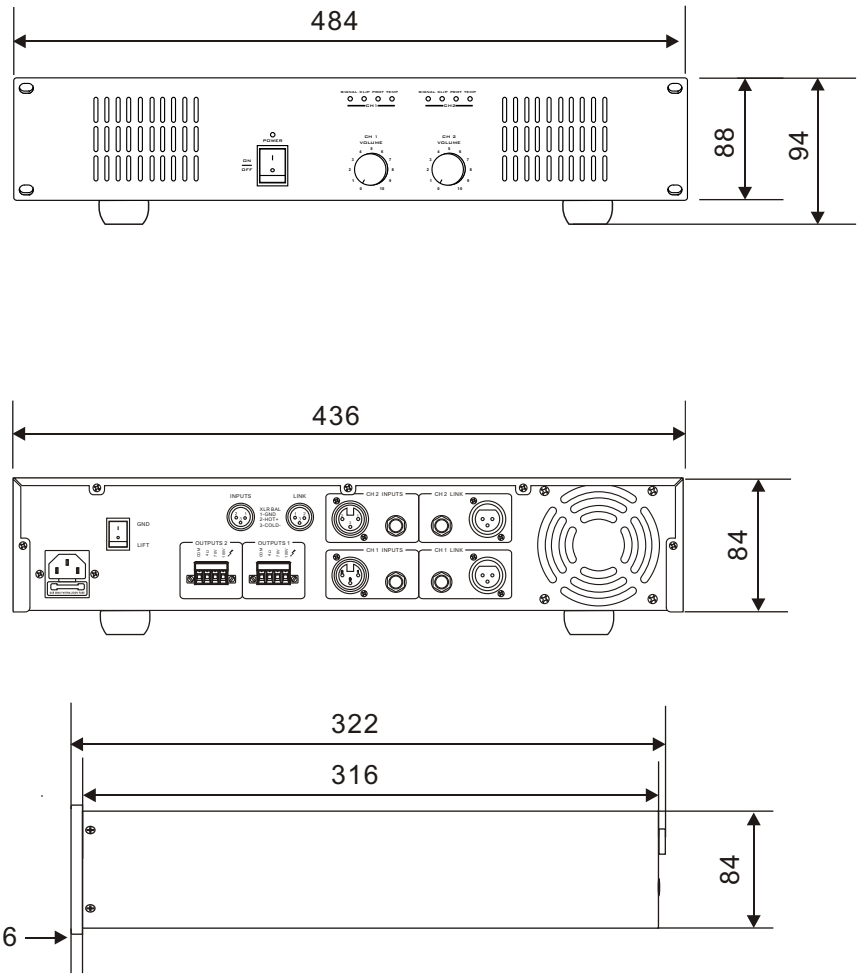
| MODEL | T-2S60 | T-2S120 | T-2S240 |
|---|---|---|---|
| RATED POWER OUTPUT | 2X60W | 2X120W | 2X240W |
| SPEAKER OUTPUTS | 4Ω,70V/100V | | |
| INPUT SENSITIVITY | 775mV/0dB | | |
| FREQUENCY RESPONSE | 50Hz~15KHz ±3dB | | |
| S/N RATIO | >90dB | | |
| T.H.D | <1% | | |
| RADIATOR METHOD | Compulsive wind cooling | | |
| INDICATORS | Power, Signal, Protection and Overheat | | |
| PROTECTION | Power,Overheat, Overload and short-circuit | | |
| POWER REQUIREMENTS | ~220-240V 50/60Hz | | |
| POWER CONSUMPTION | 200W | 400W | 720W |
| DIMENSION(mm) | 484X358X88 | | 484X359X132 |
| NET WEIGHT | 11.3Kg | 14.3Kg | 24.3Kg |
| GROSS WEIGHT | 12.5Kg | 16.5Kg | 26.5Kg |

# SPECIFICATIONS

| | | |
|---|---|---|
| MODEL | T-2S350 | T-2S500 |
| RATED POWER OUTPUT | 2X350W | 2X500W |
| SPEAKER OUTPUTS | 4Ω,70V/100V | |
| INPUT SENSITIVITY | 775mV/0dB | |
| FREQUENCY RESPONSE | 50Hz~15KHz ±3dB | |
| S/N RATIO | >90dB | |
| T.H.D | <1% | |
| RADIATOR METHOD | Compulsive wind cooling | |
| INDICATORS | Power, Signal, Protection and Overheat | |
| PROTECTION | Power,Overheat, Overload and short-circuit | |
| POWER REQUIREMENTS | ~220-240V 50/60Hz | |
| POWER CONSUMPTION | 1000W | 1500W |
| DIMENSION(mm) | 484X359X132 | |
| NET WEIGHT | 22.5Kg | 24.3Kg |
| GROSS WEIGHT | 23.4Kg | 26.5Kg |

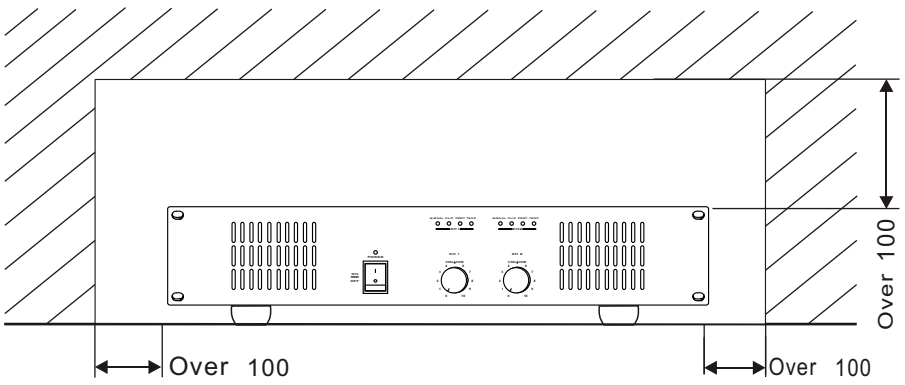
# 10. DIMENSIONAL DIAGRAM

UNIT :mm



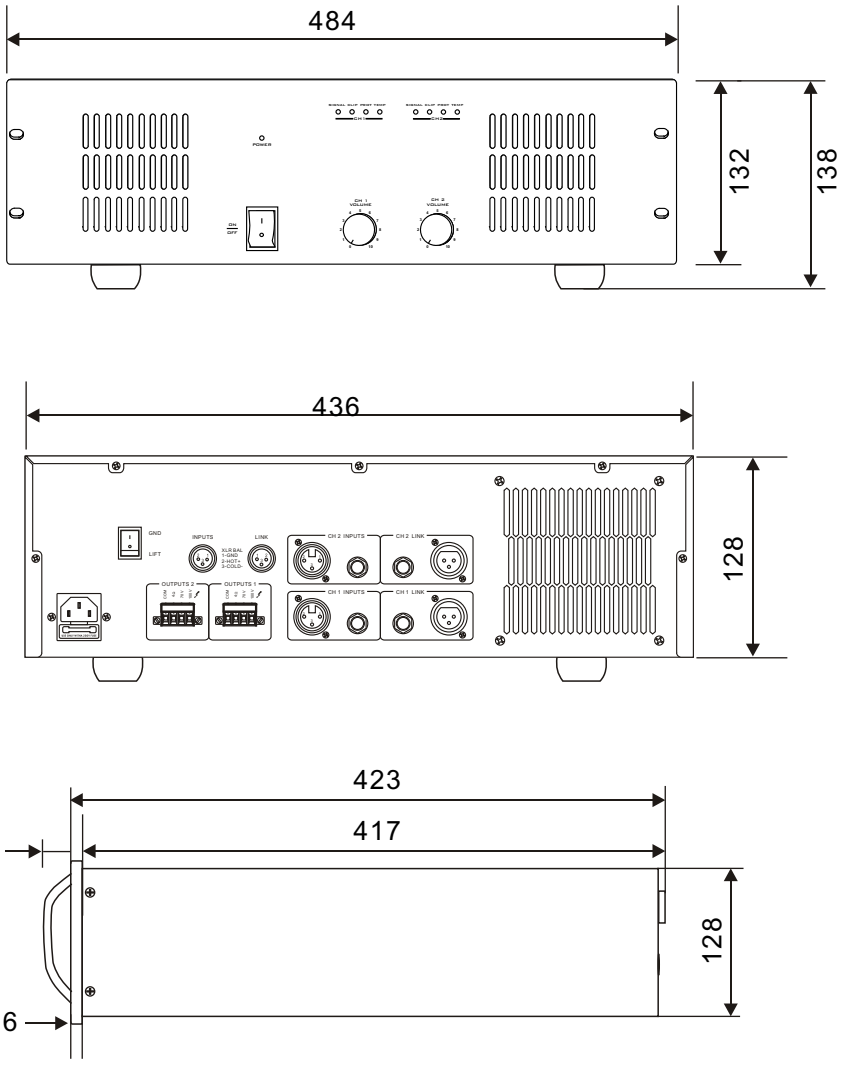

Keep the unit's all sides over 10 cm away from objects that may obstruct air flow to prevent the unit's internal temperature rise.

UNIT :mm



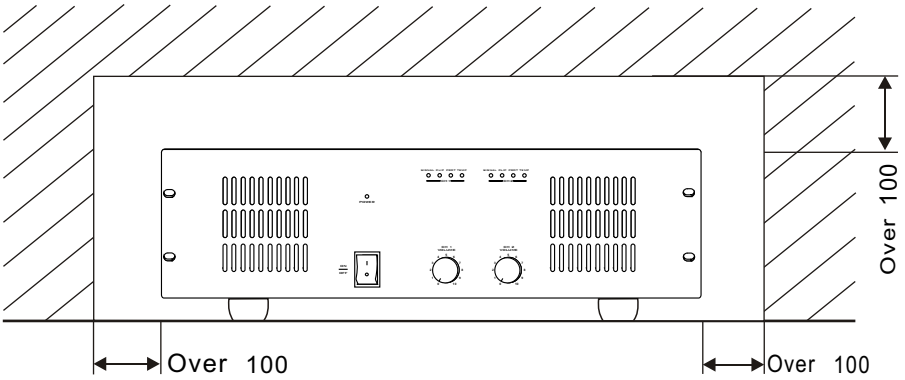
# DIMENSIONAL DIAGRAM

**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

Version V0.4