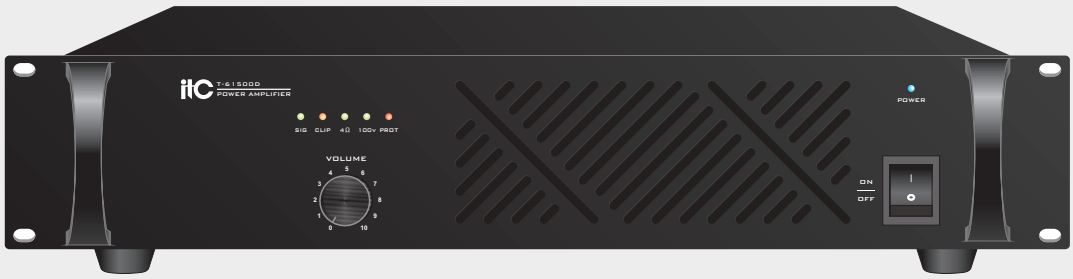
PUBLIC ADDRESS SYSTEM

OPERATION MANUAL

T-61000D
T-61500D
T-62000D
POWER 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. DESCRIPTIONS

Class-D broadcast power amplifier is a high-performance single-channel high-power power amplifier with switching power supply. The structure is compact and reasonable. The intelligent protection circuit adopts advanced class-D digital power amplifier and soft switching power supply to ensure the stability and reliability and protect amplifiers and speakers under extreme conditions.

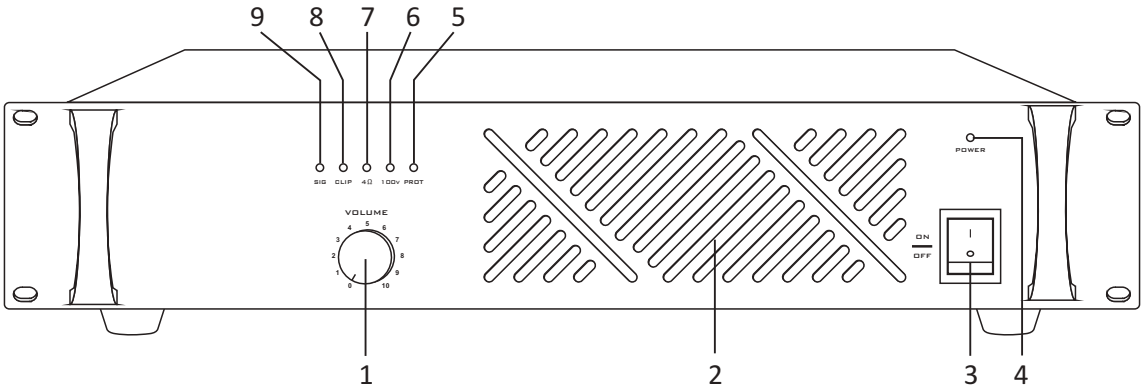
It can provide regional power amplification for the system, which is suitable for broadcasting reinforent in a large area, such as medium & large schools, buildings, clubs, venue bars,parks, etc.

3. FEATURES

1. The 2U streamlined black alumina brushed panel is perfectly combined with reasonable and compact interior, which is exquisite process.
2. The brand-new exclusive third-generation Class-D digital power amplifier, efficient power amplifier circuit, light weight, long system lifespan, high-fidelity sound quality, and perfectly restored sound source quality.
3. A good pipe-type heat dissipation structure and built-in automatic temperature control fan cooling system to effectively remove hot air, reduce temperature, and extend normal operation time.
4. 1-channel LINE unbalanced TRS/XLR high-quality multi-function input interface, 1-channel LINE balanced XLR cascade output..
5. Built-in PFC circuit and soft switching power supply technology. Automatic soft start enables 92% ultra-high system efficiency.
6. New power amplifier circuit to ensure zero crossover distortion and lossless signal quality during reinforent.
7. Built-in intelligent clipping distortion and over-current protection system can effectively protect the speaker unit.
8. It has multiple intelligent detection and protection systems for over temperature, over voltage, under voltage, over current and short circuit.
9. 2 output modes: constant impedance 4-16Ω and constant voltage 100V are optional.

4. FIONT AND REAR PANEL FUNCTIONS

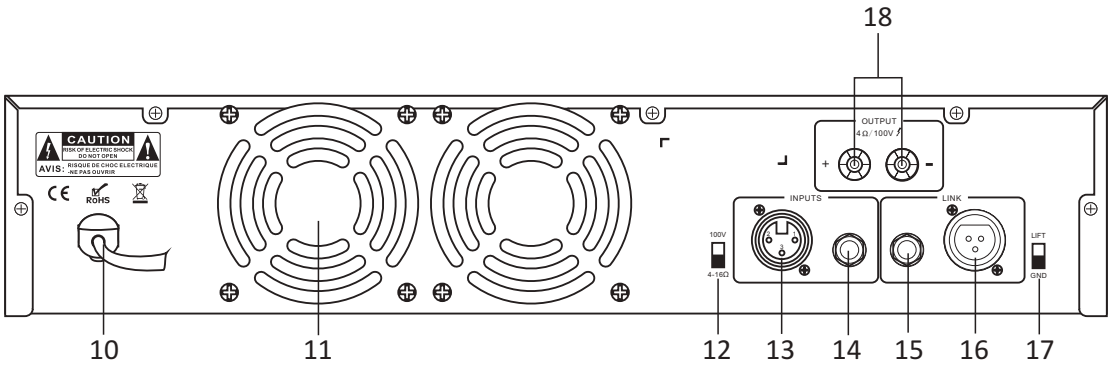
4.1 FRONT PANEL



1. Volume Gain Size Adjustment Knob: Adjusts the sound output to the speaker. Turn right Turn the volume up, and turn it to the left to mute it.
2. Air grid.
3. ON/OFF—Power switch, press the switch up to turn on the power; press the switch down to turn off the power.
4. POWER—power indicator light. When the power is turned on, the power indicator light is on, indicating that the machine is in working condition. When the power is off (shutdown), the power indicator goes out.
5. PROT—This indicator light is on when the machine protection function is activated. If the speaker wire is short-circuited, or the power of the connected speakers is 1.5 times greater than the rated power, the protection circuit inside the machine will work, and the power amplifier output will be disconnected and the protection indicator light will light up (the signal indicator is only used to indicate the input music signal, when in the protection state, the signal indicator still lights up according to the size of the input signal). When the machine is working normally, this indicator is off.
6. 100V—constant voltage 100V mode status indicator.
7. 4Ω—constant impedance 4Ω mode status indicator.
8. CLIP—Clip indicator. When the indicator on the machine is lit by signal, the output signal has been distorted at this time, indicating that the input signal is too large. Please reduce the input signal.
9. SIG—signal indicator, when there is music signal input, as the volume potentiometer is turned on, this signal indicator lights up; the brightness changes with the size of the input music signal.

4. FIONT AND REAR PANEL FUNCTIONS

4.2 REAR PANEL



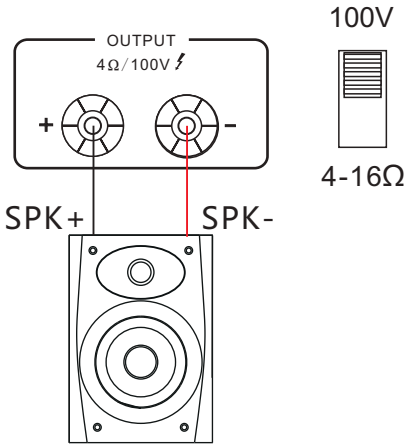
10. AC power input.
11. Vents and fans.
12. 100V /4-16Ω speaker output mode switch.
13. Balanced XLR input port.
14. 6.3 Balanced input interface.
15. 6.3 Balanced cascade output interface.
16. Balanced XLR cascade output port.
17. “Ground” suspension switch.
18. SPEAKERS output terminal.

Note: The 13 and 14 cannot be connected to the audio source at the same time, otherwise the equipment will be damaged.

5. OPERATION ILLUSTRATION

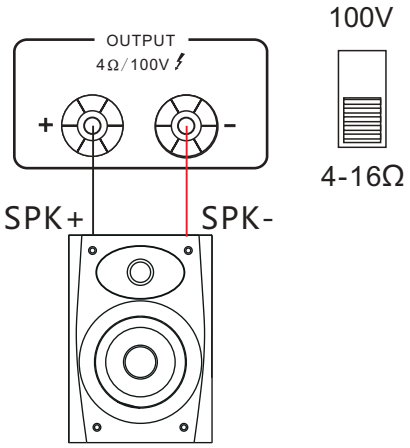
1. Connect the speakers:

①When the 100V and 4-16Ω selector switch to 100V position, as shown below:



Maximum output voltage: 100V

②When the 100V and 4-16Ω selector switch to 4-16Ω position, as shown below:



4Ω constant impedance speaker

Note:

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. Please make sure there are no applied load to the speaker cables.
3. 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.

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, Plug the microphone into the microphone connector of the pre -amplifier, and then connect the OUTPUT connector of the pre-amplifier to the INPUT connector on the rear panel of the machine.
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:

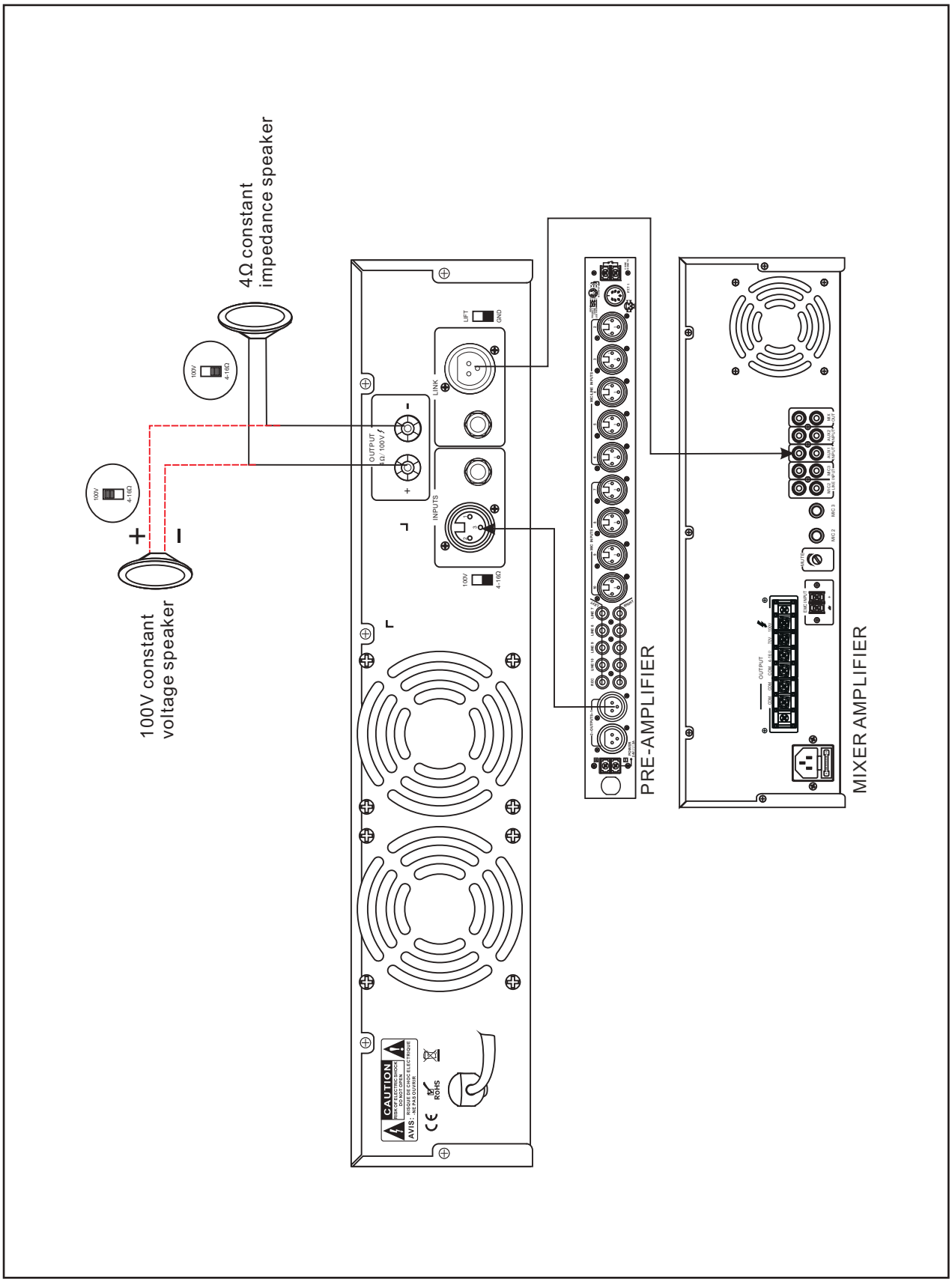
1. Turn off the power switch,Please wait about 5 seconds before turning on again.Continuous rapid turning on and off the power switch, it will lead to equipment failure.
2. Even the switch is in the off status, there will be a little current in equipment. If it won't use the equipment in a long time,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

6. TROUBLESHOOTING

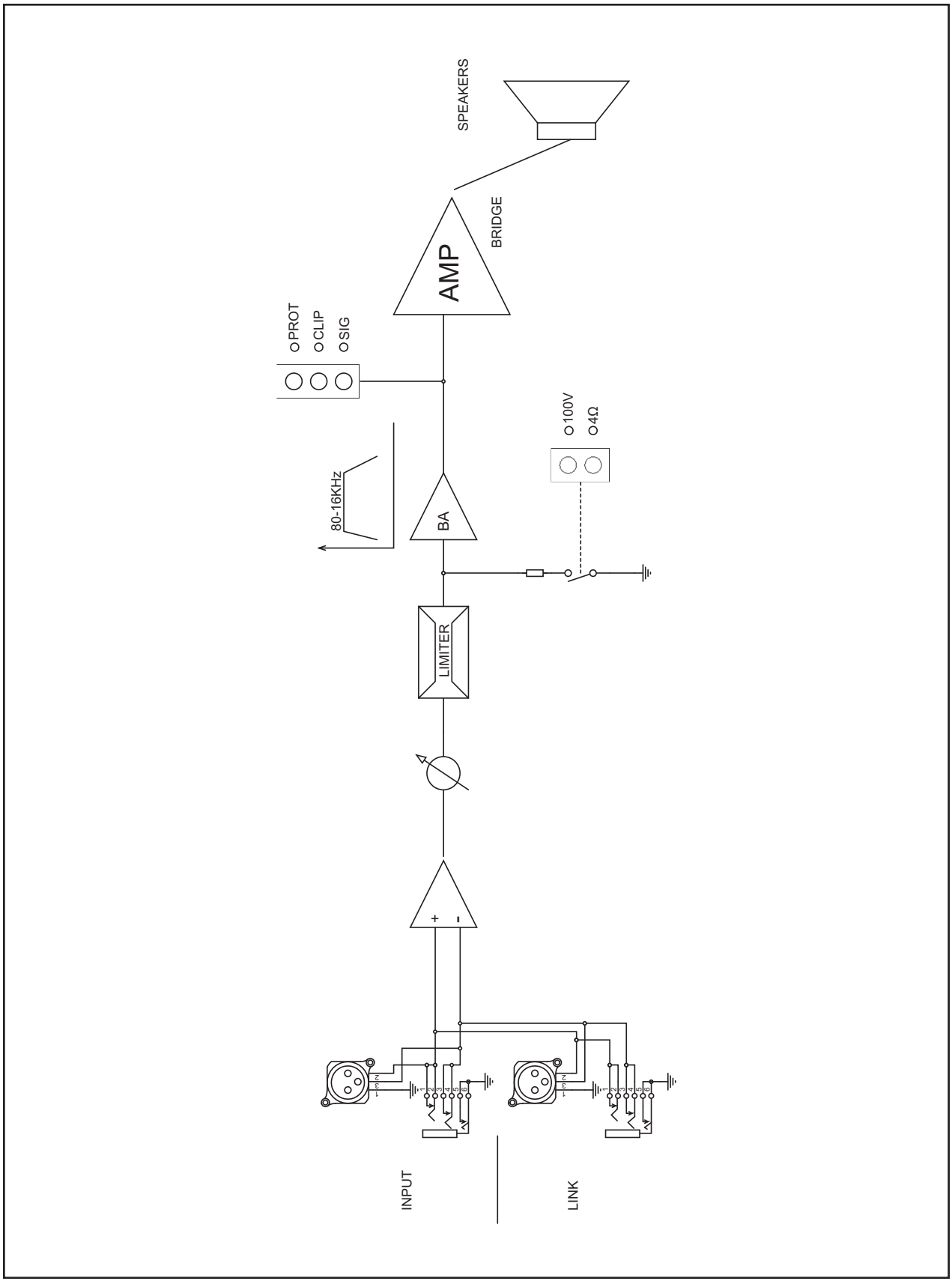
Failure phenomena	Failure cause
1. Power switch is not opened	1. Power line is cut off 2. The protection function of the equipment is not activated
2. All lines are connected, but there is no sound.	1. The power switch is not opened or the power plug is bad contacted. 2. The fuse is burnt 3. The volume 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. 6. The machine is set to a high-impedance connection, but is connected to a speaker use a low impedance input or connect too many loudspeakers
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
6. The protection indicator light is on	The internal temperature of the device is too high

7. APPLICATIONS

REAR PANEL CONNECTIONS



8. BLOCK DIAGRAM



9. SPECIFICATIONS

Model	T-61000D	T-61500D	T-62000D
Rated power output	1000W	1500W	2000W
Speaker output	4-16Ω/100V		
Input Sensitivity & Impedance	775mV/10KΩ, Unbalanced XLR/TRS Input		
Output Sensitivity & Impedance	775mV/470Ω, Balanced XLR output		
Frequency response	80Hz-16KHz(+1dB,-3dB)		
THD	0.5% at 1KHz, 1/3 output power		
SNR	>90dB		
Protection	Overheating, overload & short circuit		
Cooling	Forced air cooling from front to back. The built-in fan starts when the radiator temperature is 45 degrees		
“Ground”switch	Signal “ground” optional chassis or suspension		
Supply voltage	☐ ~110V 50Hz ☐ ~110V 60Hz ☐ ~120V 50Hz ☐ ~120V 60Hz ☐ ~220V 50Hz ☐ ~220V 60Hz ☐ ~230V 50Hz ☐ ~230V 60Hz ☐ ~240V 50Hz ☐ ~240V 60Hz		
Power Consumption	1300W	1800W	2500W
Weight	8.6Kg	8.7Kg	9.5Kg
Dimension	484×440×88mm		484×465×88mm

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