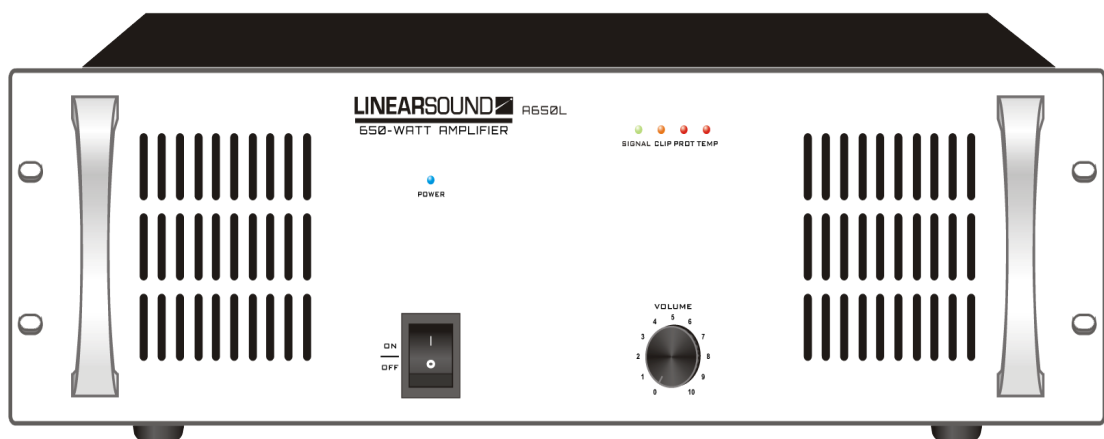


650W AMPLIFIER LTS.A650L Operation manual



*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 dealer. Make no further attempt to operate the unit in this conditions 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 or remove the unit case as there are high voltage components inside the unit. Refer all servicing to your nearest 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

- 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 dealer. Make no further attempt to operate the unit in this conditions this may cause fire or electric shock, ...
- To prevent a fire or electric shock, never open or remove the unit case as there are high voltage components inside the unit. Refer all servicing to your nearest 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.
- 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 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.

Note : 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.

2. GENERAL DESCRIPTION

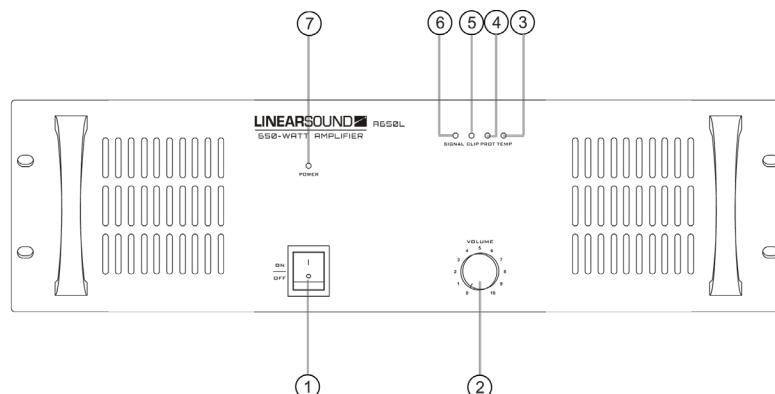
Heavy-duty public address power amplifiers deliver clean audio power 650 watts RMS with less than 0.5% distortion. Rugged and overbuilt to provide years of reliable service they are equipped with toroidal transformers, extensive heat-sinking, forced fan cooling and protective circuits against short-circuit, clipping and over-temperature.

3. FEATURES

- Rated outputs : 650W
- 100V/70V constant voltage outputs and 4~16 ohms constant resistance outputs.
- Commercial-grade toroidal transformers produce high performance audio on a wide range of frequencies with minimal noise and high fidelity, even at high volume.
- Intelligent limiter can reduce excess signal.
- Reliable protection against overload, short circuit, and power fluctuation for optimum reliability.
- Heat sinks and fan protect against overheating, protecting the amplifiers working life.
- Rubber feet and rack mount ears-may be placed on tables or installed in rack mount cabinets.

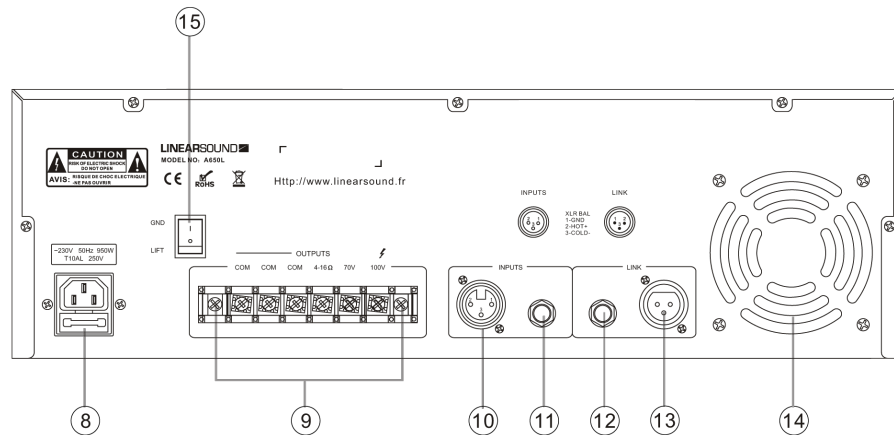
4. NOMENCLATURE AND FUNCTIONS

a. Front panel



1. POWER SWITCH : On top of the opening Power. Press the end, power shut down
2. VOLUME : Channel volume control
3. TEMP : Temp lit when over heat
4. PROT : Protection indicator LED Prot lit when over heat,short circuit and overloading.
5. CLIP : Clip lit when max wattage output & output signal distortion.
6. SIGNAL : Signal indicator LED. When lit input signal is detected.
7. POWER : Power indicator LED.

4.2 Rear panel



8. ~230V 50 Hz AC POWER INPUT

9. COMMON SPEAKER OUTPUT : Connectors for 4~16 ohms or 70V and 100V speaker.

10. LINE INPUT (XLR) : Music signal input balance.

11. LINE INPUT (6.35TRS) : Balanced or unbalanced input music signal (unbalanced input, use of non-equilibrium 6.35TRS jack)

12. LINK OUTPUT (6.35TRS) : Balanced or unbalanced output music signal (unbalanced output, use of non-equilibrium 6.35TRS jack)

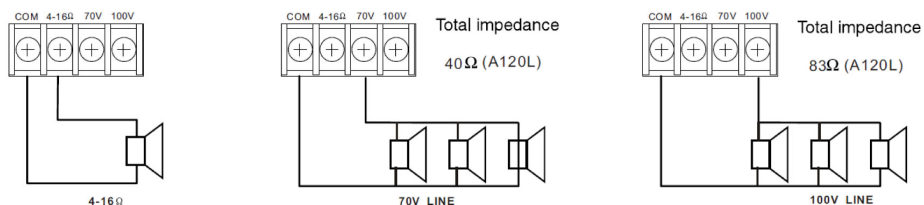
13. LINE CASCADE OUTPUT (CORLEONE SOCKET) : XLR, output signal of power amplifier.

14. FAN : Equipment, exhaust vents, equipment work properly, you must wrap the hole can not have any object covered, to avoid overheating protection.

15. 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

a. Speaker connections



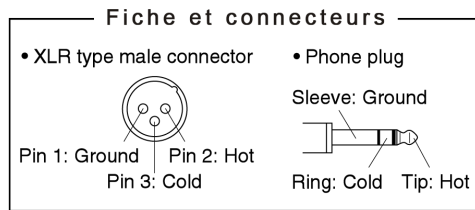
Note : Both the 4 - 16 ohms and 70V / 100V terminals cannot be used at the same time. Impedances indicated in the figures represent the total speaker system (load) impedances.

WARNING

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.

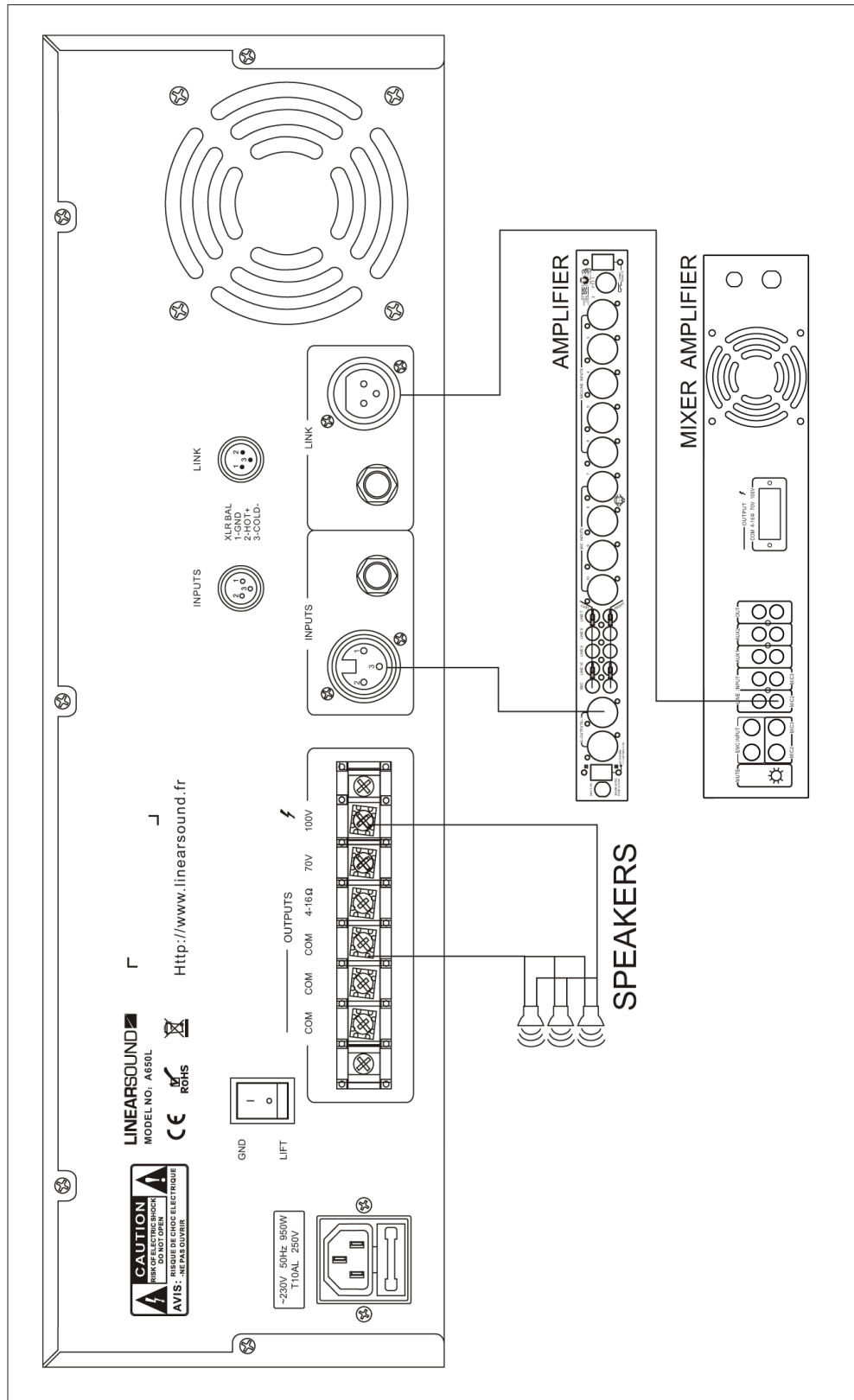
b. XLR connections

Combined XLR (female) phone jack connectors.

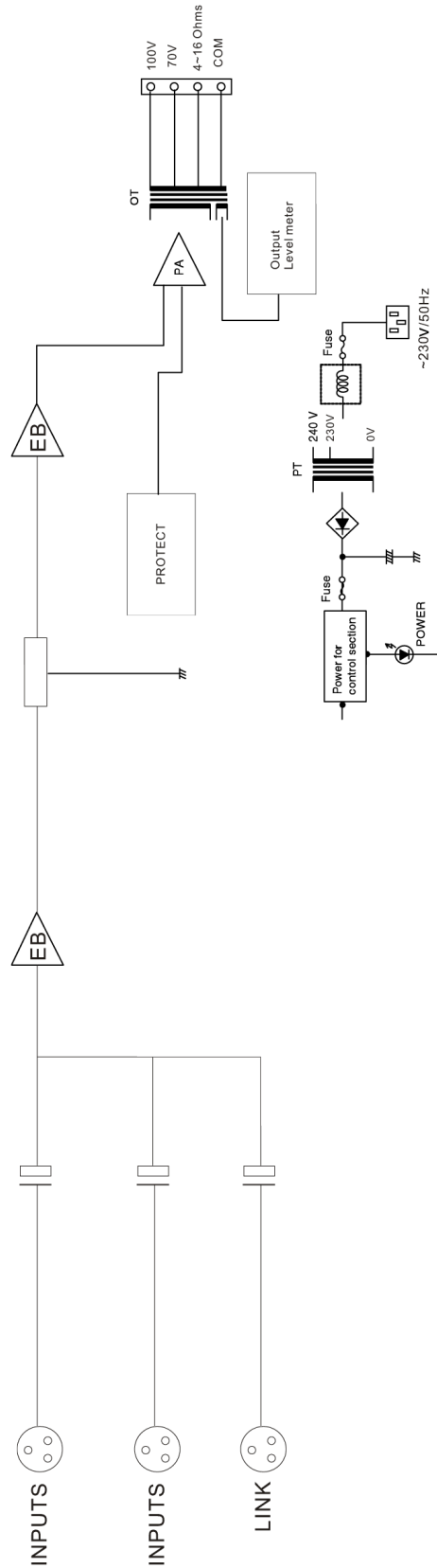


6. APPLICATIONS

Rear panel connection



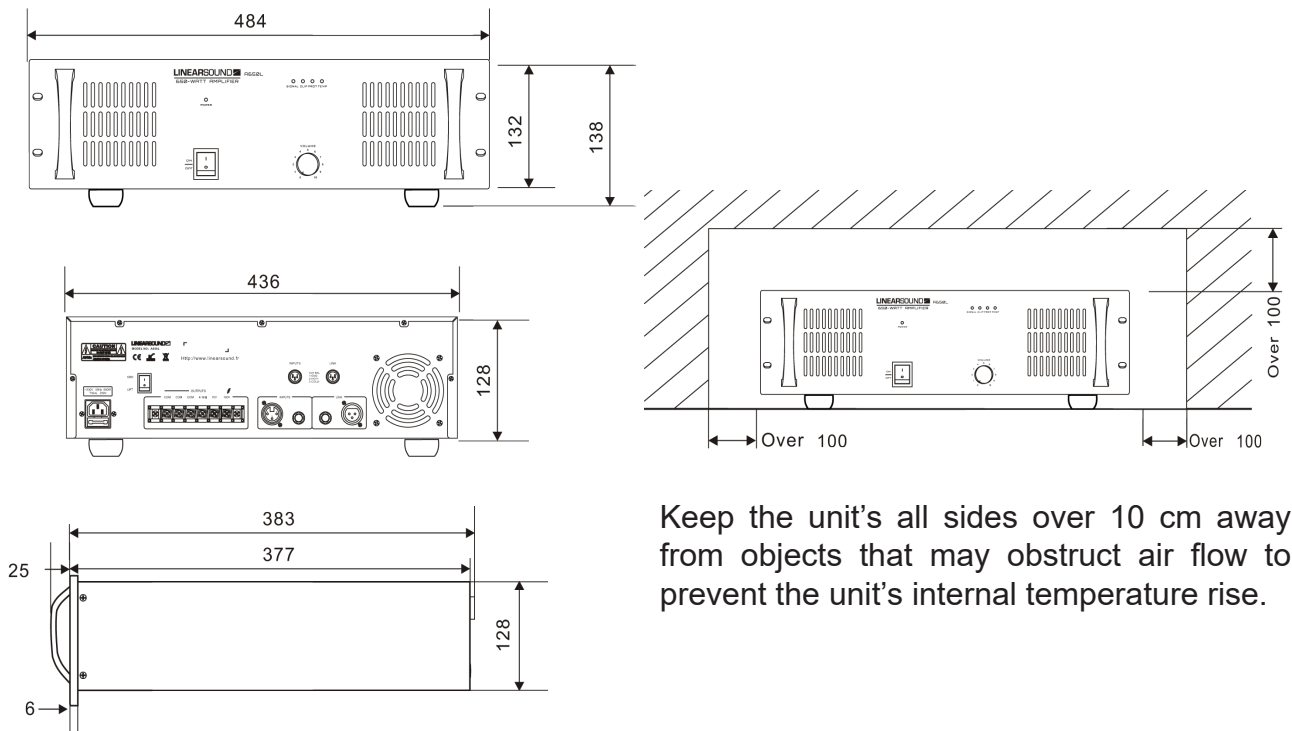
7. BLOCK DIAGRAM



8. SPECIFICATIONS

Model	A650L
Rated power output	650W
Speaker outputs	4~16, 70V / 100V
Input sensitivity	775 mV / 0 dB
Frequency response	50 Hz ~ 18 KHz
S/N ratio	Better than 105 dB
T.H.D	Less than 1% at 1 KHz, 1/3 rated power
Controls	Power switch, volume control
Indicators	Power, clipping , signal , protect and high
Protection	AC fuse, short-circuit, clipping and high temperature
Power requirements	~ 230V / 50 Hz
Power consumption	950W
Dimensions (mm)	484 x 408 x 132
Weight	18.5 kg

9. DIMENSIONAL DIAGRAM



LINEARSOUND



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