

# Operation Manual

**PA-6230A**

**PA-6250A**

**PA-6270A**

PA series Contractor Power Amplifier



# **Thinuna**

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## Welcome

A personal welcome to you from the management and employees of Thinuna global.

Thanks you for choosing PA and HPA series power amplifier, we will always provide innovative, advanced, reliable products like before.

We are sincerely trust these products will provide years of satisfactory service, but if anything is not to your complete satisfaction, we will endeavor to make things right.

Welcome to thinuna again, and thank you for becoming part of our worldwide extended family!

## Warning



**CAUTION**  
RISK OF ELECTRIC SHOCK DON'T OPEN



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,  
DO NOT REMOVE COVER (OR BACK).  
NO USER-SERVICEABLE PARTS INSIDE.  
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

**WARNING**

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Attention: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

\* Do not install this equipment in a confined space such as a book case or similar unit.  
\* The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.  
\* Worded: "WARNING FOR YOUR PROTECTION PLEASE READ THE FOLLOWING-WATER AND MOISTURE: Unit should not be used near water(e.g. near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so than objects do not fall and liquids are not spilled into the enclosure through openings."  
**Service Instructions**  
\* Worded: "Caution: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so."  
\* Location: Instruction Manual.

**NOTE :** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## Installation Environment

Installation this system is not difficult and complex. But you still need to spend some time to read this manual and ensure the connection and installation is exact.

Never place this product in an environment which could alter its performance or reduce its service life. Such environments usually include high levels of heat, dust, moisture, and vibration.

## Important Safety Instructions



1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

### - Avoid excessive heat, humidity, dust and vibration

Keep the unit away from locations where it is likely to be exposed to high temperatures or humidity-such as near radiators, stoves, etc. Also avoid locations which are subject to excessive dust accumulation, or to vibration that could cause mechanical damage.

### - Avoid physical shocks

Strong physical shocks to the unit may cause damage. Handle the unit with care.

### - Do not open the case or attempt repairs or modifications yourself

This product contains no user-serviceable parts. Refer all maintenance to qualified Thinuna service personnel. Opening the case and/or tampering with internal circuitry voids the warranty.

### - Always power off before making connections

Always turn the AC mains OFF before connecting or disconnecting cables. This is important to prevent damage to the unit itself as well as other connected equipment.

### - Handle cables carefully

Always plug and unplug cables (including the AC mains power cord) by gripping the connector, not the cord.

### - Clear with a soft dry cloth

Never use solvents such as benzene or paint thinner to clean the unit. Wipe clean with a soft, dry cloth.

## Features

- \* Reliable, durable and excellent high power and low distortion design.
- \* Balanced XLR, unbalanced RCA, and unbalanced 6.3mm TS audio input.
- \* Unbalanced RCA and 6.3mm TS link audio output.
- \* EMC emergency audio input with priority.
- \* 100V, 70V and 8Ω output for different applications.
- \* Convenient output volume control on front panel.
- \* Input signal, CLIP, temperature and protect LED indicator.
- \* Overheating, overvoltage, overcurrent, short, DC, and muting during power on protections
- \* Having features of high efficiency, low heating.
- \* Dual speed temperature control fan.
- \* Compact 2U space design.

## Accessories

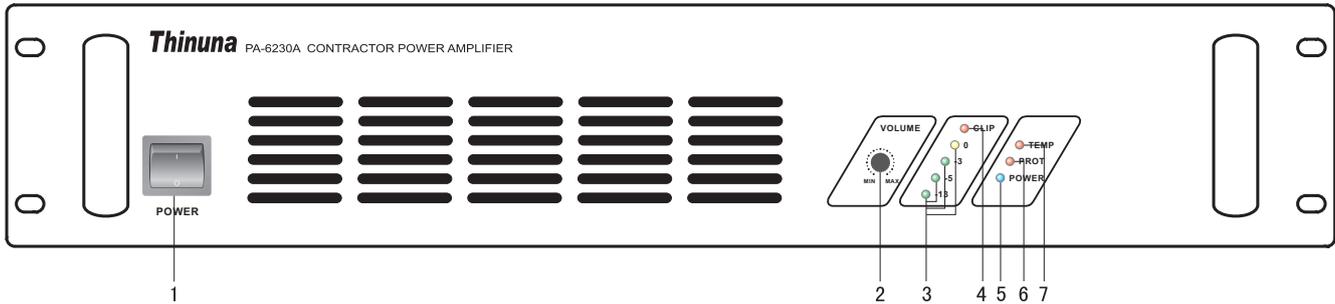
One detachable AC power cord is provided for use with this product.

## Operation

Make certain that speakers and input sources are properly connected before power on.  
Keep volume levels turned down before switching on.

NOTE: The system's operation is delayed by approximately three seconds after pressing the power switch.  
This is due to the built-in protection circuitry, designed to protect speakers and other system components.

## Front Panel



### 1. POWER SWITCH

Pressing this switch turns the unit on, as indicated by the Power LED. Pressing it again turns the unit off.

#### ATTENTION:

- Make certain that speakers and input sources are properly connected before power on.
- Keep volume levels turned down before power on.

**NOTE:** The system's operation is delayed by approximately three seconds after pressing the power switch. This is due to the built-in protection circuitry, designed to protect speakers and other system components.

### 2. OUTPUT LEVEL CONTROL

This knob provides continuous control of the amplifier's output level. Turning the knob clockwise increases the level, and turning it counter-clockwise decreases the level.

### 3. OUTPUT LEVEL LED

These five LEDs indicate the amplifier's output status.

### 4. CLIP LED

The LED indicate that you need to turn down the amplifier's output volume. Do not operate the unit with the CLIP RED LED continuously on (illuminated).

### 5. POWER LED

When the unit power on, this LED is on; when the unit power off, this LED is off.

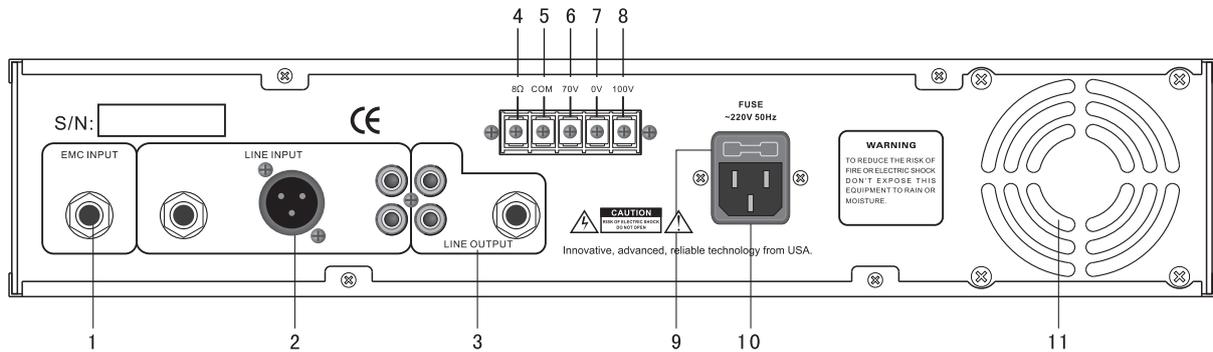
### 6. PROTECTION INDICATOR

This LED indicates the state of the amplifier's protection circuitry. When the Protection LED is on (illuminated), the protection circuitry is active, indicating that the unit is not operating normally. This is typically due to overheating or power limiting. Please check the Input and Output condition of the amplifier.

### 7. TEMPERATURE PROTECTION LED

When the temperature reaches warning value, this LED is on (illuminated), the protection circuitry is active, indicating that the unit is not operating normally.

## Rear Panel



1. EMERGENCY AUDIO INPUT PORT  
6.3mm TS input port to connect the emergency audio input which has the priority to mute other audio input.
2. AUDIO INPUT PORT (LINE)  
Three types input ports are provided to connect the balanced XLR, unbalanced 6.3mm TS and stereo RCA audio input.
3. AUDIO INPUT PORT (LINE)  
Two types input ports are provided to connect the unbalanced 6.3mm TS and stereo RCA audio input. And this amplifier has built-in the pre-amplifier, it is very convenient to link multiple amplifier.
4. 8Ω SPEAKER OUTPUT TERMINAL  
Connect to the "+" of 8ohms low impedance speaker.
5. 8Ω SPEAKER OUTPUT TERMINAL  
Connect to the "-" of 8ohms low impedance speaker.
6. 70V SPEAKER OUTPUT TERMINAL  
Connect to the "+" of 70V high impedance speaker.
7. 100V/70V SPEAKER OUTPUT TERMINAL "0V"  
Connect to the "-" of 100V/70V high impedance speaker.
8. 100V SPEAKER OUTPUT TERMINAL  
Connect to the "+" of 100V high impedance speaker.
9. AC FUSE HOLDER  
The fuse holder contains the AC overload protection fuse. If the fuse has blown out, replace it with a fuse of the same specifications. If the fuse continues to blow, refer servicing to a qualified service technician.
10. AC POWER INPUT PORT  
Connect the supplied standard AC input cable here.
11. FAN VENTS  
These vents provide hot air flow out of the unit. It is important to keep them free of obstructions, to prevent the unit from overheating. It is also important to operate the unit in a dust-free environment.

**Specifications**

Model No.	PA-6230A	PA-6250A	PA-6270A
Rated Power	300W	500W	700W
Audio Input	0dB, 20k $\Omega$ balanced XLR, 10k $\Omega$ unbalanced 6.3mm TS or RCA		
Output Level Adjustment	-12dB~0dB		
EMC input	0dB, 10k $\Omega$ unbalanced 6.3mm TS, with priority		
Speaker Output	High Impedence: 100V, 70V; Low Impedence: 8 $\Omega$ ;		
Protection	AC fuse, overheating, overvoltage, overcurrent, short, DC, and muting during power on protections		
Frequency Response	20~20kHz ( $\pm$ 3dB)		
S/N	>95dB		
T.H.D	<0.5% at 1kHz		
Power Source	220~240VAC, 50/60Hz		
Power Consumption	450W at rated power	730W at rated power	1000W at rated power
Weight	14kg	16kg	17kg
Temperature / Humidity	-10°C ~ +40°C, <95%		
Dimensions	482(W) $\times$ 88(H) $\times$ 350(D) mm		
Shipping Weight	16kg	18kg	19kg
Shipping Dimensions	0.0382CBM, 58(W) $\times$ 47(H) $\times$ 14(D) cm		

## Common Faults And Solutions

No.	Fault	Cause	Solutions
01	No power	A: power supply poor contact	Use a good power supply outlet or sequence power supplier.
		B: fuse has failed	Replace with the same specifications fuse.
02	Power on but unwork	A: Audio Input error	Check the correct audio signal.
		B: wrong speaker load	Connect the speakers correctly
03	Distortion	A: excessive audio output	Set the correct output volume level
		B: wrong input level	Connect the right audio input, don't connect microphone signal into this amplifier.
		C: total speaker power is not correct	Connect the speaker correctly, and the total power of speakers can't exceed the rated power of these amplifier. And need to excess power for long distance transmission.
		D: incorrect speaker cable	Use a correct speaker cable.
04	Protected activation	A: shorted speaker cable or excessive power	Turn the power off, check the speaker cable and make the correct connection. Turn the power on.
		B: other problems	Check other problems which may cause protected. If still has problem, please contact Thinuna directly or the authorized Distributor for your specific country or region.

## Service

### Procedures

Ensure the problem is not related to operator error, or external system devices, Once it is certain that the problem is related to the product contact your warranty provider as described in the warranty section of this manual.

### Schematic

A Schematic is available by contacting your warranty provider.

### Parts List

A Parts List is available by contacting your warranty provider.

### Variations

Variations of this product exist to reflect the variations in AC power requirements throughout the world. Product supplied through local sources are compatible with local AC power requirements.

### Options

No optional items are available for this product.

### Warranty

Warranty terms and conditions vary by country and may not be the same for all products. Terms and conditions of warranty for a given product may be determined first by locating the appropriate country which the product was purchased in, then by locating the product type.

To obtain specific warranty information and available service locations contact Thinuna directly or the authorized Thinuna Distributor for your specific country or region.



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Notice: Thinuna Technology makes every effort to ensure the accuracy of information on this manual. The documents, graphics, and other information included in this manual may include technical inaccuracies, typographical, or other errors.

Specifications are subject to change without notice.