



*User's Manual*

**PS 4L/4LA**  
**SPEAKER ENCLOSURE**  
**ACTIVE/PASSIVE MODELS**



[www.altoproaudio.com](http://www.altoproaudio.com)  
Version 1.3 Aug. 2008

***English***

# IMPORTANT SAFETY INSTRUCTION



**TO REDUCE THE RISK OF ELECTRIC SHOCK PLEASE DO NOT REMOVE THE COVER OR THE BACK PANEL OF THIS EQUIPMENT. THERE ARE NO PARTS NEEDED BY USER INSIDE THE EQUIPMENT. FOR SERVICE, PLEASE CONTACT QUALIFIED SERVICE CENTERS.**

 This symbol, wherever used, alerts you to the presence of un-insulated and dangerous voltages within the product enclosure. These are voltages that may be sufficient to constitute the risk of electric shock or death.

 This symbol, wherever used, alerts you to important operating and maintenance instructions. Please read.

- ⊕ Protective Ground Terminal
- ~ AC mains (Alternating Current)
- ⚡ Hazardous Live Terminal

ON: Denotes the product is turned on.  
OFF: Denotes the product is turned off.

### CAUTION

Describes precautions that should be observed to prevent damage to the product.

1. Read this Manual carefully before operation.
2. Keep this Manual in a safe place.
3. Be aware of all warnings reported with this symbol. 
4. Keep this Equipment away from water and moisture.
5. Clean it only with dry cloth. Do not use solvent or other chemicals.
6. Do not damp or cover any cooling opening. Install the equipment only in accordance with the Manufacturer's instructions.
7. Power Cords are designed for your safety. Do not remove Ground connections! If the plug does not fit your AC outlet, seek advice from a qualified electrician. Protect the power cord and plug from any physical stress to avoid risk of electric shock. Do not place heavy objects on the power cord. This could cause electric shock or fire.
8. Unplug this equipment when unused for long periods of time or during a storm.
9. Refer all service to qualified service personnel only. Do not perform any servicing other than those instructions contained within the User's Manual.
10. To prevent fire and damage to the product, use only the recommended fuse type as indicated in this manual. Do not short-circuit the fuse holder. Before replacing the fuse, make sure that the product is OFF and disconnected from the AC outlet.

## WARNING

**To reduce the risk of electric shock and fire, do not expose this equipment to moisture or rain.**



**Dispose of this product should not be placed in municipal waste and should be separate collection.**

11. Move this Equipment only with a cart, stand, tripod, or bracket, specified by the manufacturer, or sold with the Equipment. When a cart is used, use caution when moving the cart / equipment combination to avoid possible injury from tip-over. 

12. Permanent hearing loss may be caused by exposure to extremely high noise levels. The US Government's Occupational Safety and Health Administration (OSHA) has specified the permissible exposure to noise level. These are shown in the following chart:

HOURS X DAY	SPL	EXAMPLE
8	90	Small gig
6	92	train
4	95	Subway train
3	97	High level desktop monitors
2	100	Classic music concert
1,5	102	
1	105	
0,5	110	
0,25 or less	115	Rock concert

According to OSHA, an exposure to high SPL in excess of these limits may result in the loss of heat. To avoid the potential damage of heat, it is recommended that Personnel exposed to equipment capable of generating high SPL use hearing protection while such equipment is under operation.

The apparatus shall be connected to a mains socket outlet with a protective earthing connection.

The mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

## IN THIS MANUAL:

1. INTRODUCTION .....	1
2. QUICK START - PS 4L .....	2
3. QUICK START - PS 4LA.....	3
4. HOOK-UP DIAGRAMS .....	4
5. RIGGING .....	5
6. PANEL DESCRIPTION-PS 4LA .....	6
7. PANEL DESCRIPTION-PS 4L .....	7
8. TECHNICAL SPECIFICATION.....	8
9. WARRANTY .....	9

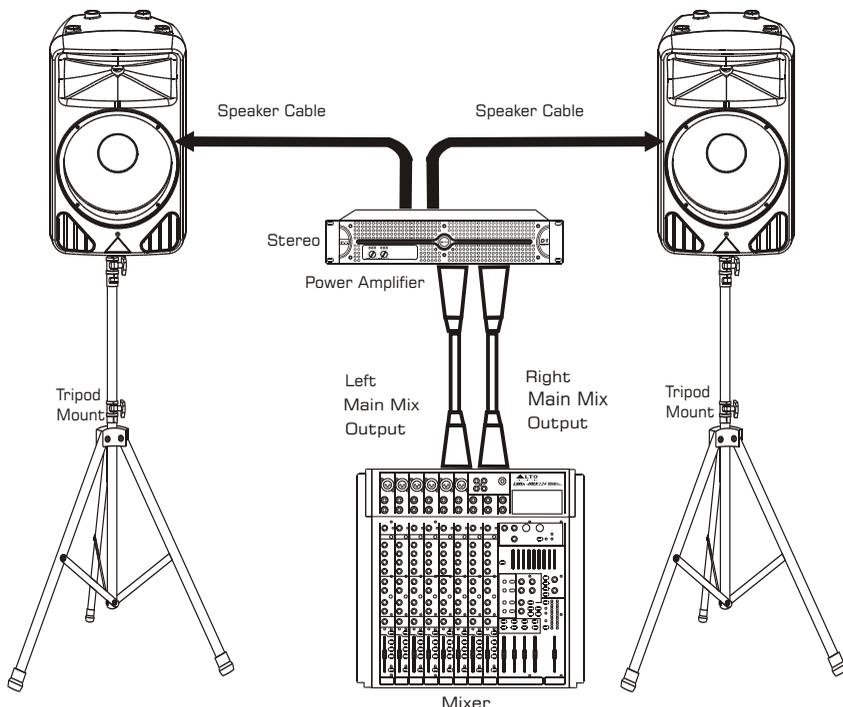
## 1. INTRODUCTION

Thank you for your purchasing of the PS4L/4LA, 2-way active sound reinforcement speaker enclosures. It is just one of the many Alto products that a talented, multinational Team of Audio Engineers and Musicians have developed with their great passion for music. Your PS4L/4LA is capable of enormous sound pressure level and it has been created to give you a performance that is better than any loudspeaker in this range. Thanks to the quality of its transducers, built-in amplifier and digital processor. We design all our transducers and cabinets in Emilia-Romagna of Italy, a lowland famous for music and fast cars. In fact, Lamborghini, Maserati and Ferrari are made just a few miles away from our design centres. The same area has a long tradition in designing and manufacturing some of the world's best professional transducer and plastic moldings. Enjoy your PS4L/4LA and make sure to read this Manual carefully before operation!

**1. PS 4L PASSIVE SPEAKER CABINET**

Make all initial connections with all the equipment powered off, and ensure that all the main volume controls are turned completely down.

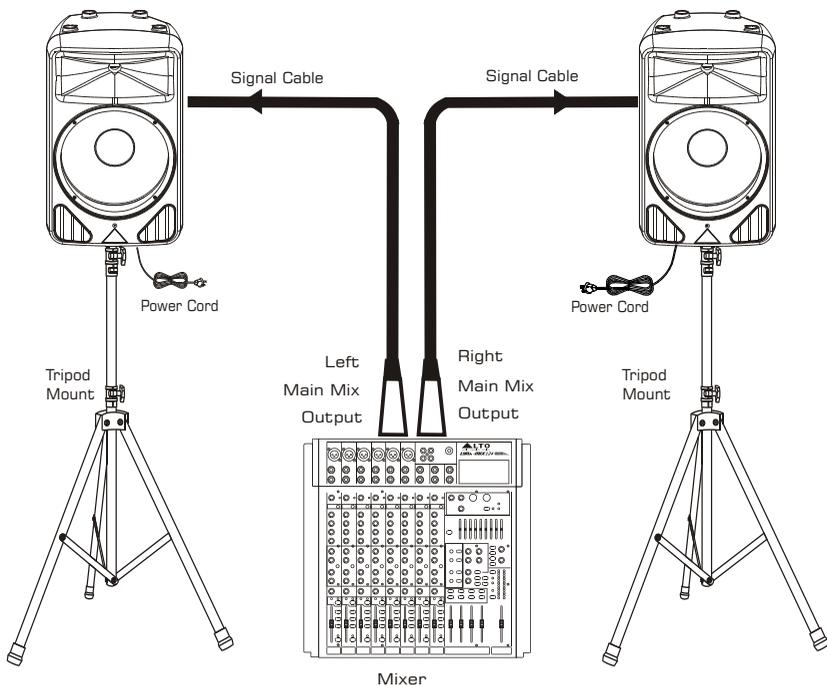
- 1). Connect one side of the speaker cable to the output CHA/CHB or Binding Post of your stereo power amplifier and the other side to the input socket of your speaker cabinet.
- 2). Complete other connections as illustrated.
- 3). Turn on your mixer first, then the stereo power amplifier:
- 4). Turn up the volume controls of your amplifier to about 70%.
- 5). Use PFL function to get the proper input level for the mixer, and adjust the main mix level control to manipulate the output level.
- 6). After using, turn off your stereo power amplifier first, then the mixer:



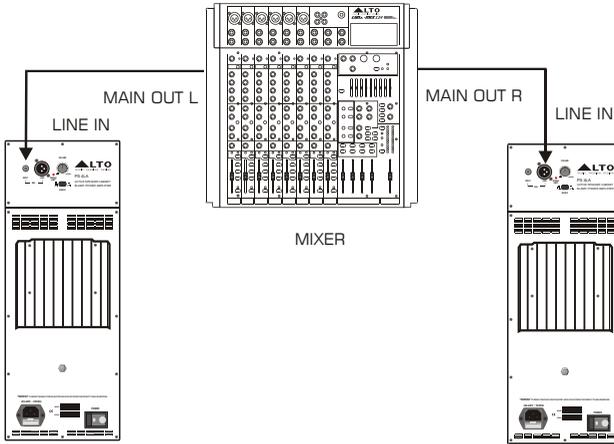
**2. PS 4LA ACTIVE SPEAKER CABINET**

Make all initial connections with all the equipment powered off, and ensure that all the main volume controls are turned completely down.

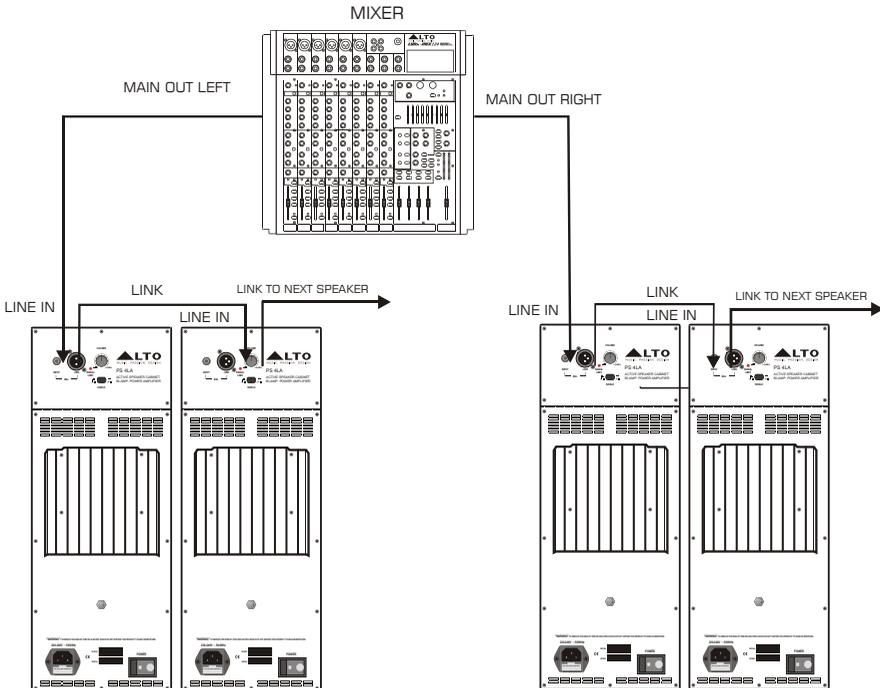
- 1). Connect one side of the signal cable at your audio mixer into output left /right (with Stereo-Jack or XLR) and the other side of the cable into the line input (Stereo-Jack) of your active speaker cabinet.
- 2). Connect the power cord to mains.
- 3). Turn on your mixer first, then the active speaker cabinets.
- 4). Turn up the volume control of the active speaker cabinets.
- 5). Use PFL function to get the proper input level for the mixer, and adjust the main mix level control to manipulate the output level.
- 6). After using, turn off your active speaker cabinets first, then the mixer.



## 4.1 Two speakers in stereo operation

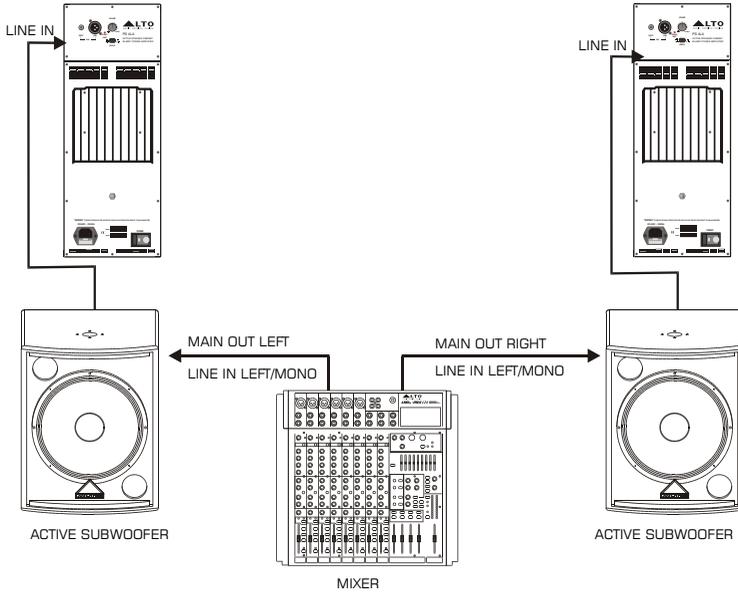


## 4.2 Multiple speakers with the same stereo source



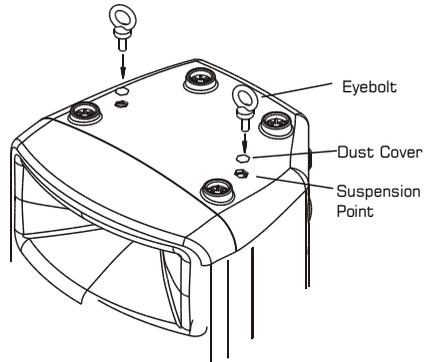
## 4. HOOK-UP DIAGRAMS

### 4.3 Two subwoofers and two satellite speakers



## 5. RIGGING

The PS4L / 4LA speaker cabinet also provides the suspension points for fixed installation. How to use them? First, open the dust covers, and the next, mount the flying rings to the suspension points (M10x1.5PH LENGTH: 30mm). For further details, please refer to the right illustration.

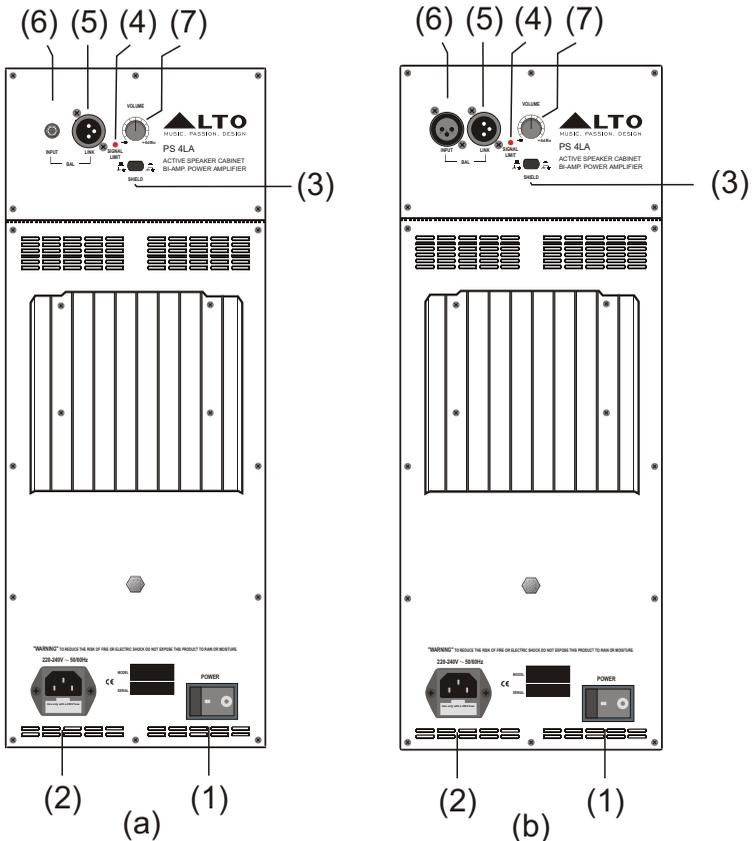




## 6. PANEL DESCRIPTION-PS 4LA

### -. CONNECTION PLATE

- (1) BI-POLAR MAIN POWER SWITCH
- (2) AC POWER SOCKET WITH MAIN FUSE
- (3) GROUND SWITCH
- (4) CLIP INDICATOR RED LED
- (5) LINK OUT ON XLR CONNECTOR
- (6) a. STEREO JACK INPUT  
b. LINE INPUT ON XLR CONNECTOR
- (7) MAIN VOLUME CONTROL





## 7. PANEL DESCRIPTION-PS 4L

### - CONNECTION PLATE

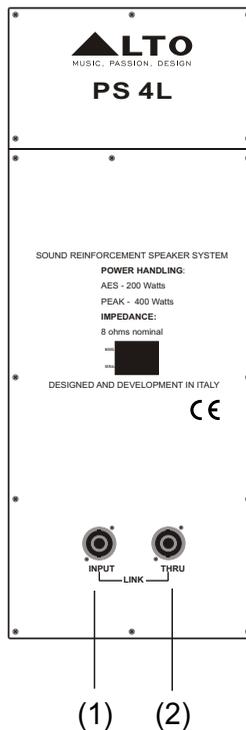
#### (1) INPUT

Receive the power coming from an external power amplifier. (SPK +1/-1 connected; +2/-2 not connected)

#### (2) THRU

Direct LINK for connect in parallel a second speaker cabinet. (SPK +1/-1 connected; +2/-2 not connected)

Besides, the passive crossover included the electronic protection on the driver:



## 8. TECHNICAL SPECIFICATION

<b>Model Item</b>	<b>PS 4L</b>
System type	2 - way vented box
Continuous Power	180 Watt AES Standard
Peak Power Rating	360 Watt Peak
Sensitivity at 1W, 1mt	96dB SPL
Max SPL at 1mt	119dB SPL
Frequency Response	60Hz / 20kHz +/- 10dB
Impedance	8 Ohm Nominal
Crossover Frequency	2450Hz 12dB/Oct
Lower - Frequency	12" / 318mm - 2" Voice Coil
High - Frequency	1" Compression Driver - 1" Voice Coil
High Frequency Protection	Electronic Dynamic Protection
Dimensions HxWxD	660mm x 396mm x 384mm (26" x 15.6" x 15.1")
Net Weight kg/lbs	17.1kg / 37.7lbs
Gross Weight lbs/kg	19.82kg / 43.69lbs
Shipping Volume	4.83CFT

<b>Model Item</b>	<b>PS 4LA</b>
Powered System type	Bi-Amp. With analog processor
LOW Output Power	108W (RMS) / 141W (EIAJ)
HIGH Output Power	45W (RMS) / 56.3W(EIAJ)
Max SPL at 1 m	119dB SPL
Frequency Response	55Hz / 20kHz +/- 10dB
Impedance Low - High	Low 8 Ohm - High 8 Ohm
Crossover Frequency	Complex EQ processor
Protection Low - High	Limiter / Compressor plus PTC
Low - Frequency	12" / 318mm - 2" voice coil
High - Frequency	1"Compression Driver - 1" Voice Coil
Horn Coverage H° x V°	90°H x 45°V
Input Sensitivity	Line + 4dB / 1.23V
Input Impedance	30k Ohms Balanced - 15k Ohms Unbalanced
Connectors	Input with Jack / Link with XLR
Plastic Reinforced Cabinet	Trapezoidal & Monitor shape
Hardware Suspension	SIX suspension points
Amplifier Protections	Soft Start - Short Circuit - DC voltage - Thermal Protection
External Control	Volume - Clip - Ground Switch
Power Supply	230Volt / 115Volt 50 /60Hz
Dimensions HxWxD	660mm x 396mm x 384mm (26" x 15.6" x 15.1")
Net Weight kg/lbs	19.40kg / 42.81lbs
Gross Weight lbs/kg	22.05kg / 48.61lbs
Shipping Volume	4.83CFT

# 9. WARRANTY

## 1. WARRANTY REGISTRATION CARD

To obtain Warranty Service, the buyer should first fill out and return the enclosed Warranty Registration Card within 10 days of the Purchase Date.

All the information presented in this Warranty Registration Card gives the manufacturer a better understanding of the sales status, so as to provide a more effective and efficient after-sales warranty service. Please fill out all the information carefully and genuinely, miswriting or absence of this card will void your warranty service.

## 2. RETURN NOTICE

- 2.1 In case of return for any warranty service, please make sure that the product is well packed in its original shipping carton, and it can protect your unit from any other extra damage.
- 2.2 Please provide a copy of your sales receipt or other proof of purchase with the returned machine, and give detail information about your return address and contact telephone number.
- 2.3 A brief description of the defect will be appreciated.
- 2.4 Please prepay all the costs involved in the return shipping, handling and insurance.

## 3. TERMS AND CONDITIONS

- 3.1 ▲LTO warrants that this product will be free from any defects in materials and/or workmanship for a period of 1 year from the purchase date if you have completed the Warranty Registration Card in time.
- 3.2 The warranty service is only available to the original consumer, who purchased this product directly from the retail dealer, and it can not be transferred.
- 3.3 During the warranty service, ▲LTO may repair or replace this product at its own option at no charge to you for parts or for labor in accordance with the right side of this limited warranty.
- 3.4 This warranty does not apply to the damages to this product that occurred as the following conditions:
  - Instead of operating in accordance with the user's manual thoroughly, any abuse or misuse of this product.
  - Normal tear and wear.
  - The product has been altered or modified in any way.
  - Damage which may have been caused either directly or indirectly by another product / force / etc.
  - Abnormal service or repairing by anyone other than the qualified personnel or technician.

And in such cases, all the expenses will be charged to the buyer:

- 3.5 In no event shall ▲LTO be liable for any incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you.
- 3.6 This warranty gives you the specific rights, and these rights are compatible with the state laws, you may also have other statutory rights that may vary from state to state.

**SEIKAKU TECHNICAL GROUP LIMITED**  
**NO. 1, Lane 17, Sec. 2, Han Shi West Road, Taichung 40151, Taiwan**  
**www.altoproaudio.com Tel: 886-4-22313737**  
**email: info@altoproaudio.com Fax: 886-4-22346757**

All rights reserved to ALTO. All features and content might be changed without prior notice. Any photocopy, translation, or reproduction of part of this manual without written permission is forbidden. Copyright ©2008 Seikaku Group