

# User's Manual

## PS Series



[www.altoproaudio.com](http://www.altoproaudio.com)  
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— English —

## SAFETY INSTRUCTIONS



### ▲ "Electric discharge"

This symbol, alert you to the presence of uninsulated dangerous voltage inside the product enclosure, which constitutes a risk of electric shock.

### ▲ "Exclamatory point"

This symbol, alert the user to the presence of important operating and maintenance instructions in the owner's manual included to the product.

#### 1. Read Instructions

All the safety and operation instructions should be read before using the product and retain them for future reference.

#### 2. Water & Moisture

This product should not be used near water and will be protect from atmospheric agents in fixed or temporary installations.

#### 3. Heat

This product should be situated away from heat sources such as radiators, or other devices which produce heat.

#### 4. Liquid Entry

Care should be taken so that liquids are not spilled into the product and that objects do not fall on.

#### 5. Service Assistance

This product should be serviced only by qualified service personnel when :

- a. Liquids has spilled or objects have fallen into this product, or
- b. This product has been exposed to rain, or
- c. This product does not appear to operate normally or exhibits change in performance, or has been dropped or its cabinet / chassis damaged.

#### 6. Package

The package of this product has been tested, inspect the package before open, if any damage is found, notify to your dealer.

#### 7. Hearing

This product produce high acoustic levels may cause permanent hearing loss, (SPL in for a defined period of time).

#### 8. Installations

This product should be installed on the wall or in the floor with specific stands, according to the max weight.

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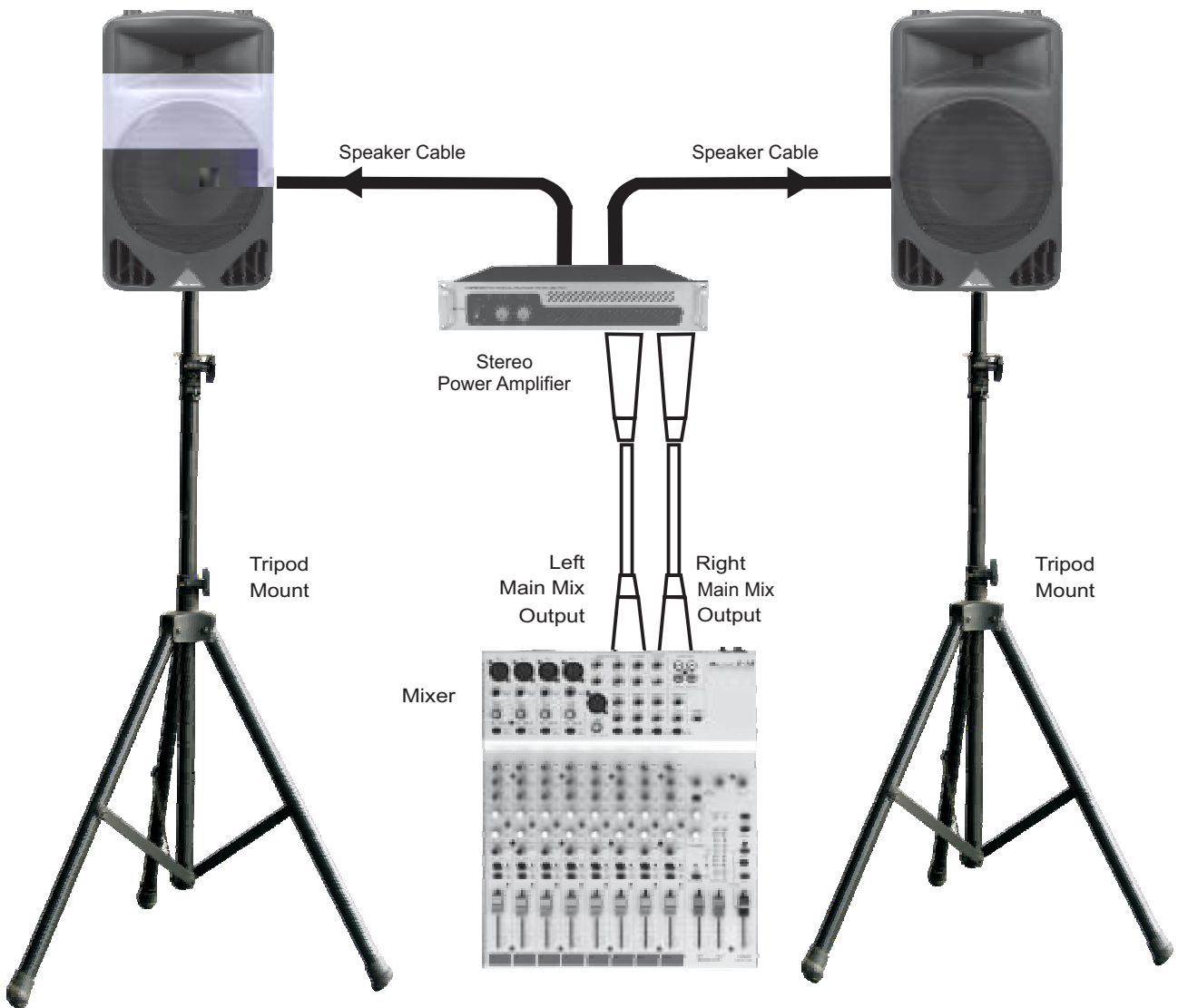
## 1. QUICK START - PASSIVE SPEAKER CABINET

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

### - For Passive Full-range Speakers

- 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.

### QUICK START PS Passive Full-range Speakers

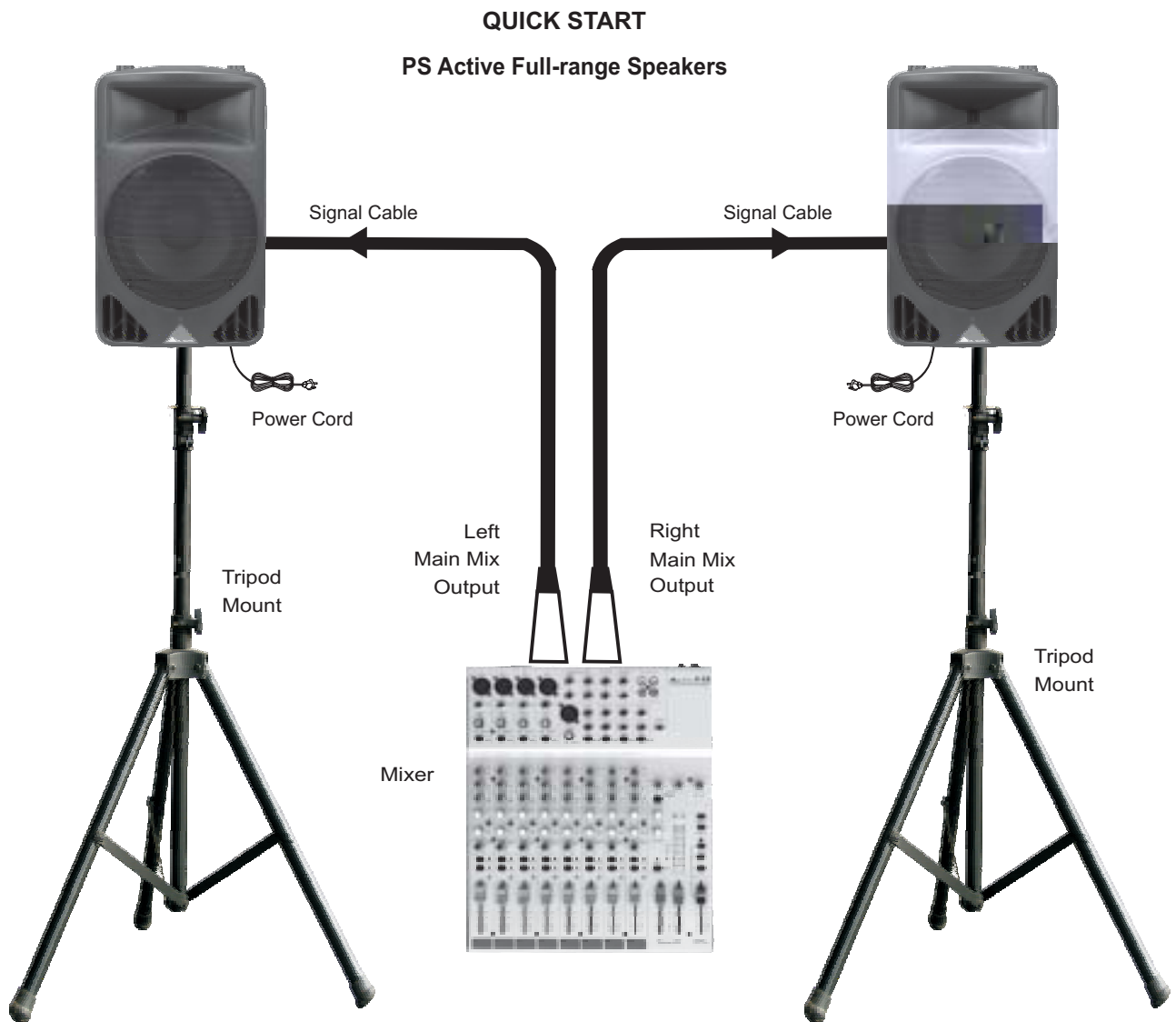


## 2. QUICK START - ACTIVE SPEAKER CABINET

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

### - For Active Speaker Cabinets

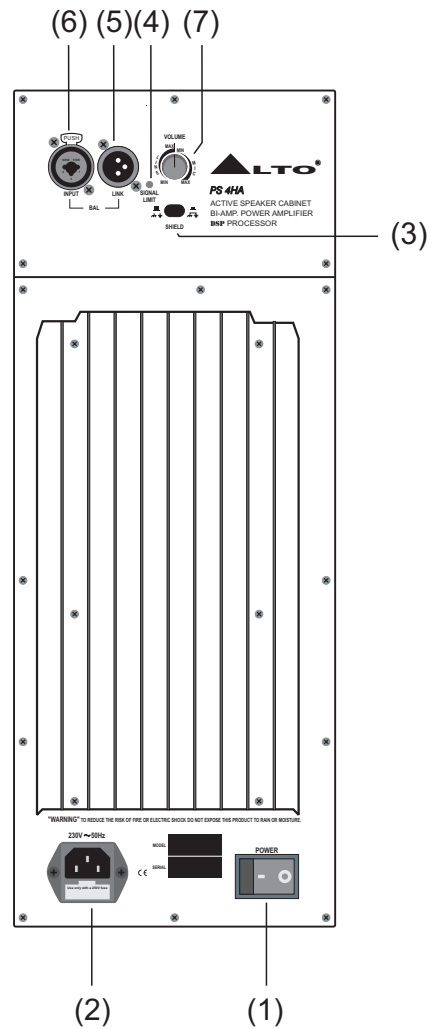
- 1). Connect one side of the signal cable at your audio mixer into output left /right (with Stereo-Jack or XLR) and the other side of the cable into the line input (COMBO) of your active speaker cabinet (with Stereo-Jack or XLR).
- 2). Connect the power cord to mains.
- 3). Turn on your mixer first, 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.



### 3. CONNECTION PLATE

#### - ACTIVE SPEAKER CABINET PS 4HA

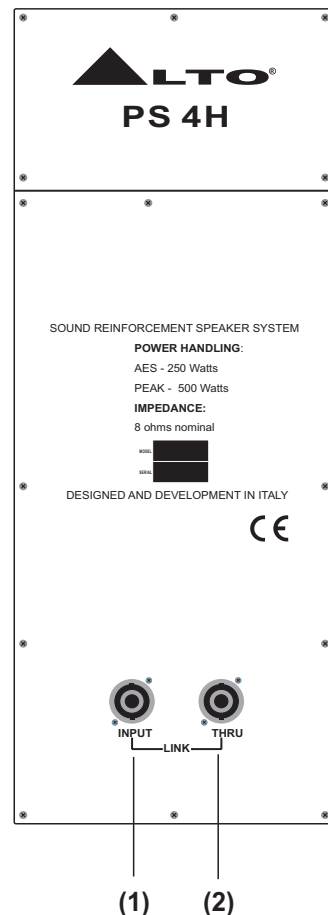
- (1) BI-POLAR MAIN POWER SWITCH
- (2) AC POWER SOCKET WITH MAIN FUSE
- (3) GROUND SWITCH
- (4) SIGNAL LIMIT, GREEN/RED LED
- (5) LINK OUT ON XLR CONNECTOR
- (6) LINE /MIC INPUT ON COMBO CONNECTOR
- (7) MAIN VOLUME CONTROL



#### - PASSIVE FULL-RANGE SPEAKER PS 4H

- (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).

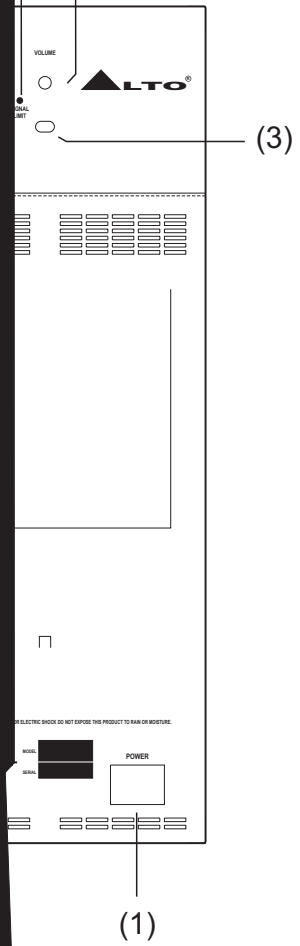
Besides, the passive crossover included the electronic protection on the driver.



**- ACTIVE SPEAKER**

- (1) BI-POL
- (2) AC POW
- (3) GROUND
- (4) CLIP IND
- (5) LINK OU
- (6) STEREO
- (7) MAIN VO

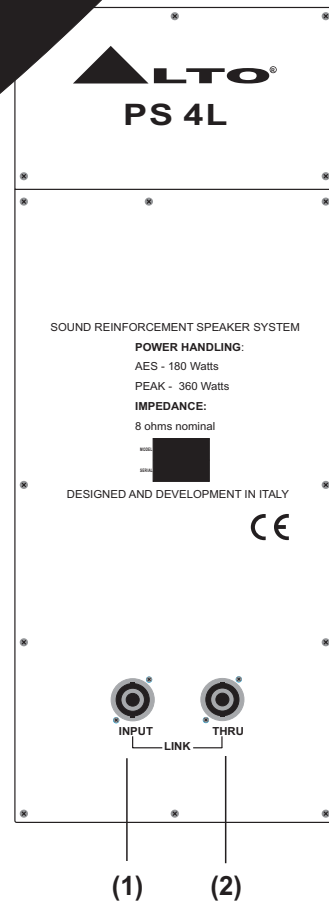
(4) (7)



**- PASSIVE FULL-RANGE SPEAKER**

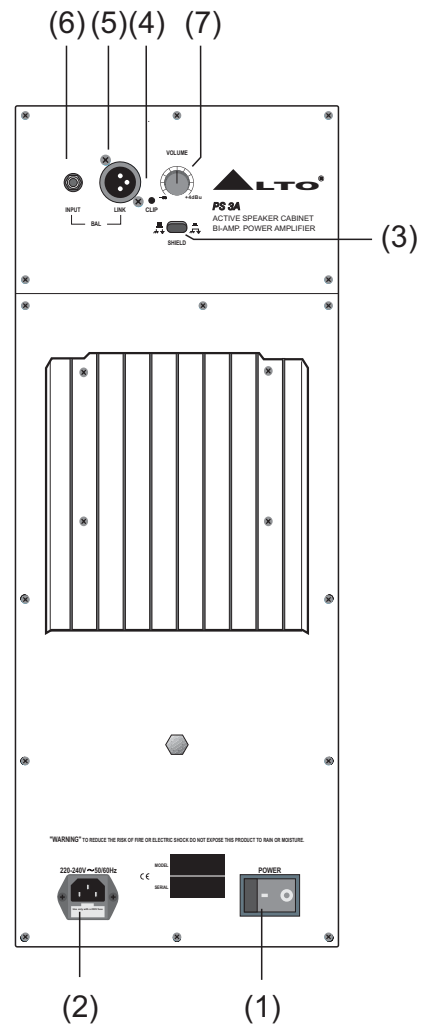
- (1) **INPUT:** Receive the power coming from the power amplifier (SPK +1/-1 not connected).
- (2) **THRU:** Direct LINK for connect in parallel a second speaker cabinet (SPK +1/-1 connected; +2/-2 not connected).

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



**- ACTIVE SPEAKER CABINET PS 3A**

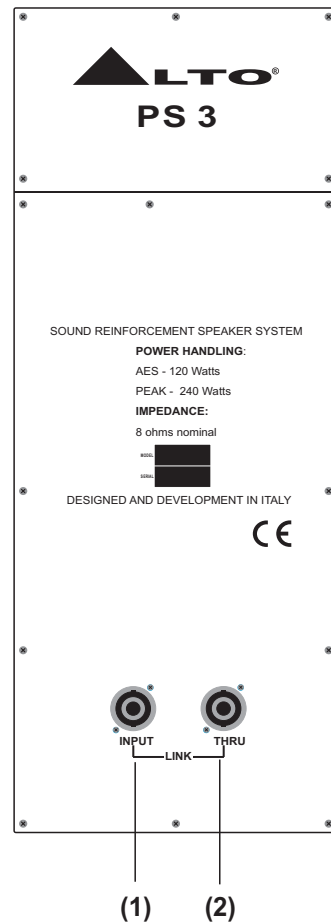
- (1) BI-POLAR MAIN POWER SWITCH
- (2) AC POWER SOCKET WITH MAIN FUSE
- (3) GROUND SWITCH
- (4) CLIP INDICATOR RED LED
- (5) LINK OUT ON XLR CONNECTOR
- (6) STEREO JACK INPUT
- (7) MAIN VOLUME CONTROL



**- PASSIVE FULL-RANGE SPEAKER PS 3**

- (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.

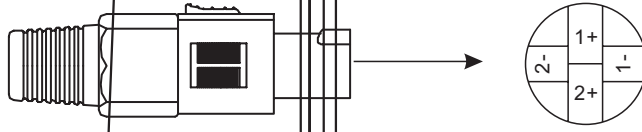




## 4. WIRE CONNECTIONS

### - For Passive Speaker Cabinets

Please use only the power connectors to make connections with other signal source equipment for the passive speaker cabinets. The power connector has four terminals: 1+, 1-, 2+, 2-. As to these circumstances, audio connections is mostly intended

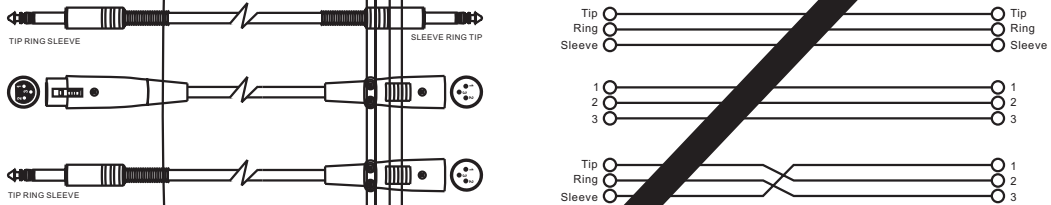


In our cabinets, only 1+/1- are used to connect the Speaker+/Speaker-, and 2+/2- are not used.

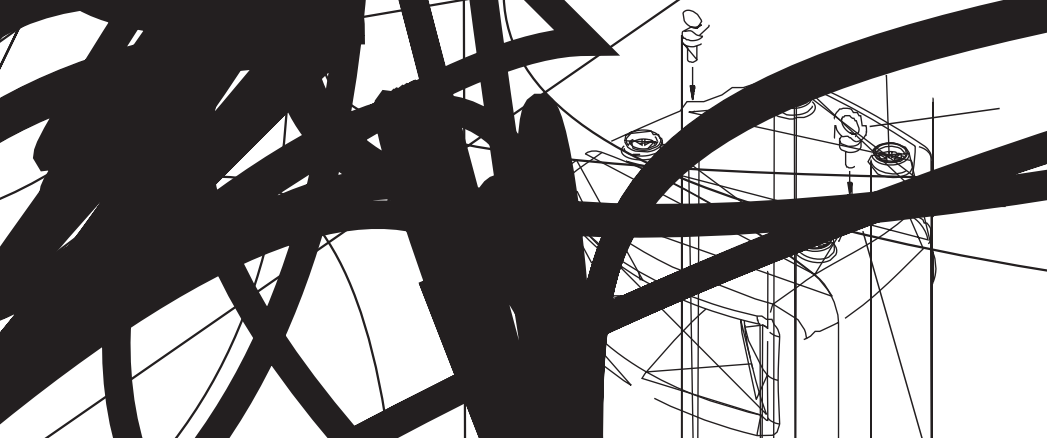
### - For Active Speaker Cabinets

according to your real application system and its connecting facility. Normally, you have the following choices:

#### • Balanced



#### • Unbalanced



## 6. TECHNICAL SPECIFICATIONS

Descriptions	PS4HA Active	PS4LA Active	PS3A Active
Active System type	Bi-Amp. with DSP processor	Bi-Amp. with analog processor	Bi-Amp. with analog processor
LOW - RMS Output Power	300Watt RMS Class H	150W RMS Class AB	70W RMS Class AB
HIGH - RMS Output Power	100Watt RMS Class AB	50W RMS Class AB	50W RMS Class AB
Max SPL at 1m	121.5dB SPL calculated	118.5dB SPL calculated	115.5dB SPL calculated
Frequency Response	50Hz / 20kHz +/-10dB	55Hz / 20kHz +/-10dB	60Hz / 20kHz +/-10dB
Impedance Low - High	Low 4 Ohm - High 8 Ohm	Low 4 Ohm - High 8 Ohm	Low 4 Ohm - High 8 Ohm
Crossover Frequency	2000Hz - DSP Processor	2500Hz 6 / 12dB/Oct.	3000Hz 6 / 12dB/Oct.
Protection Low - High	DSP Lim./ Comp. each sections	Analog Limiter / Compressor	Analog Limiter / Compressor
Low - Frequency	12" / 318mm - 2.5" voice coil	12" / 318mm - 2" voice coil	12" / 318mm - 2" voice coil
High - Frequency	Titanium Driver 1.35" Voice Coil	Aluminum Driver 1" Voice Coil	Aluminum Driver 1" Voice Coil
Horn Coverage H° x V°	90° H x 45° V		
Input Sensitivity	Line + 4dB / 1.23 V		
Input Impedance	30k Balanced -15k Unbalanced		
Connectors	Input with Combo/ Link with XLR	Input with Jack / Link with XLR	Input with Jack / Link with XLR
Plastic Reinforced Cabinet	Trapezoidal & Monitor shape		
Hardware Suspension	Six suspension point		
Amplifier Protections	Soft Start - Short Circuit - DC voltage - Thermal Protection		
External Control	Mic/Line Vol.-Clip-Ground Switch.	Volume- Clip - Ground Switch	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 lbs/kg	23.38kg / 51.54lbs	19.40kg / 42.76lbs	19.2kg / 42.32lbs
Gross Weight lbs/kg	26.06kg / 57.38lbs	22.05kg / 48.61lbs	21.85kg / 47.17lbs
Shipping Volume	4.83CFT	4.83CFT	4.83CFT

Descriptions	PS4H Passive	PS4L Passive	PS3 Passive
Passive System type	2-way vented box	2-way vented box	2-way vented box
Continuous Power Handling	250Watt AES Standard	180Watt AES Standard	120Watt AES Standard
Peak Power Rating	500Watt Peak	360Watt Peak	240Watt Peak
Sensitivity at 1W,1mt	97 dB SPL	96 dB SPL	95 dB SPL
Max SPL at 1mt	121 dB SPL Calculated	118.5 dB SPL Calculated	115 dB SPL Calculated
Frequency Response	55Hz / 20kHz +/-10dB	60Hz / 20kHz +/-10dB	65Hz / 20kHz +/-10dB
Impedance	8 Ohm Nominal	8 Ohm Nominal	8 Ohm Nominal
Crossover Frequency	2000Hz 12 / 24dB/Oct	2250Hz 6 / 12dB/Oct	3000Hz 6 / 12dB/Oct
Low - Frequency	12" / 318mm - 2.5" voice coil	12" / 318mm - 2" voice coil	12" / 318mm - 2" voice coil
High - Frequency	Titanium Driver 1.35" Voice Coil	Driver 1" Voice Coil	Driver 1" Voice Coil
High Frequency Protection	Electronic Dynamic Protection	Electronic Dynamic Protection	Electronic Dynamic Protection
Dimensions HxWxD	660mm x396mmx 384mm (26" x15.6" x15.1")		
Net Weight lbs/kg	18.75kg /41.34lbs	17.12kg / 37.74lbs	17.3kg / 38.13lbs
Gross Weight lbs/kg	22kg / 48.5lbs	22kg / 48.5lbs	19.95kg / 43.98lbs
Shipping Volume	4.83CFT	4.83CFT	4.83CFT

The AES 2 - 1984 Standard specification by Audio Engineering Society, is representative and commonly used for the measure in Professional Sound Reinforcement. It is defined as the square of the RMS voltage generated with a pre-defined and band-passed Pink Noise Signal, applied continuously for 2 hours, on the assembled speaker cabinet.

In this way, the declared power of ALTO passive speaker cabinet, is comparable to the RMS voltage value, measured on the equivalent power amplifier for the same value of impedance.

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