



OWNER'S MANUAL

MS8/MS8A/MS12S/MS12SA
SPEAKER ENCLOSURE
PASSIVE/ACTIVE MODELS



www.altoproaudio.com
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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.

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1. INTRODUCTION

Thank you very much for expressing your confidence in ▲LTO products by purchasing MS8/MS8A/MS12S/MS12SA speaker system. The MS series cabinets are specifically designed for using in hi-quality performance site and the precise sound reinforcement commercial place. uses trapezium configuration which greatly decreases the resonance of the standing wave in the cabinet. These cabinets uses hi-density matrix spray-paint technics and the bottom bracket design which make mounting quickly and Flexibly. The HF compression driver and vented LF for fully professional performance.

The MS8A/MS12SA speaker cabinets include some exclusive innovations such as switch mode power supply and digital power circuitry (in selected modes) that make them the lightest powered cabinets of this kind ever made.

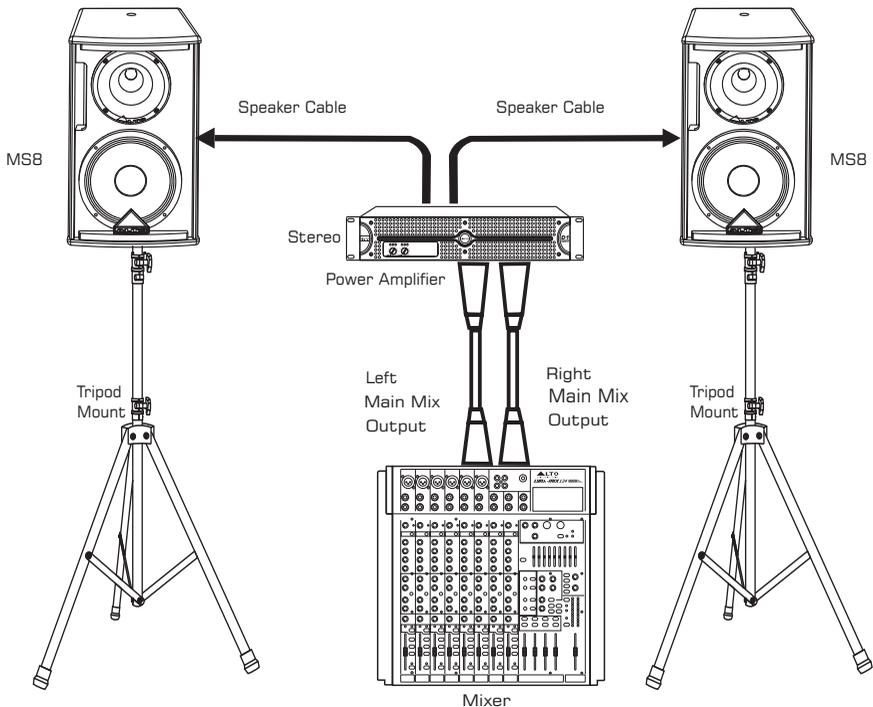
The MS full range models include another Alto innovation: The MODELLER. Thanks to this circuitry, User can select 16 different tastes and applications. The 16 kinds of sound presets especially thought for application with or without subwoofer, for voice optimised application, for Disco Music, for jazz, for Rock & Roll among others.

Enjoy your MS8/MS8A/MS12S/MS12SA speaker cabinet and make sure to read this manual carefully before operation.

2. SPEAKER CABINET QUICK START

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

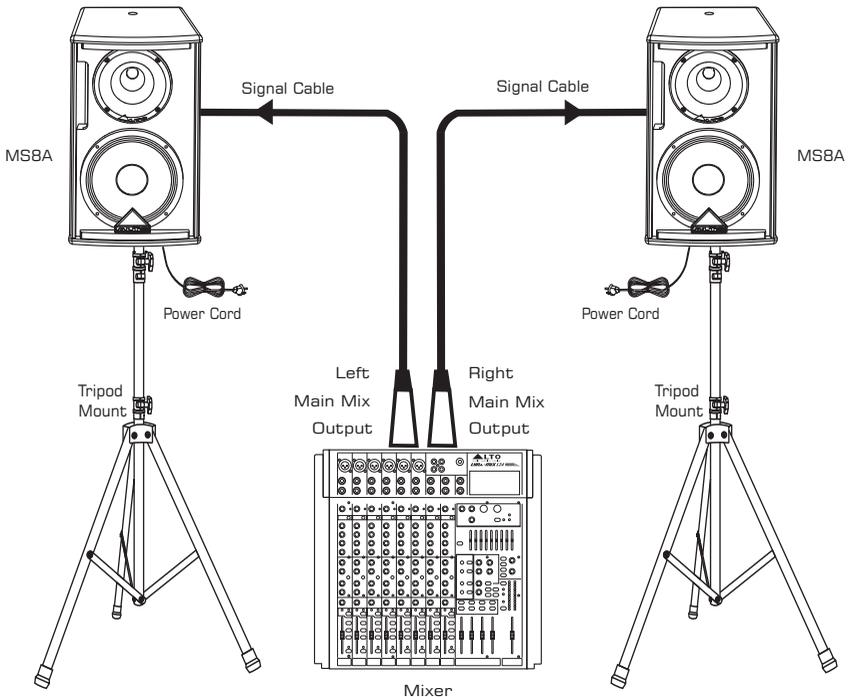
- 1). Connect one side of the speaker cable to the output CHA/CHB or Binding Post of your stereo power amplifier and the other side to the input socket of your speaker cabinet.
- 2). Complete other connections as illustrated.
- 3). Turn on your mixer first, then the stereo power amplifier.
- 4). Turn 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 power amplifier first, then the mixer.



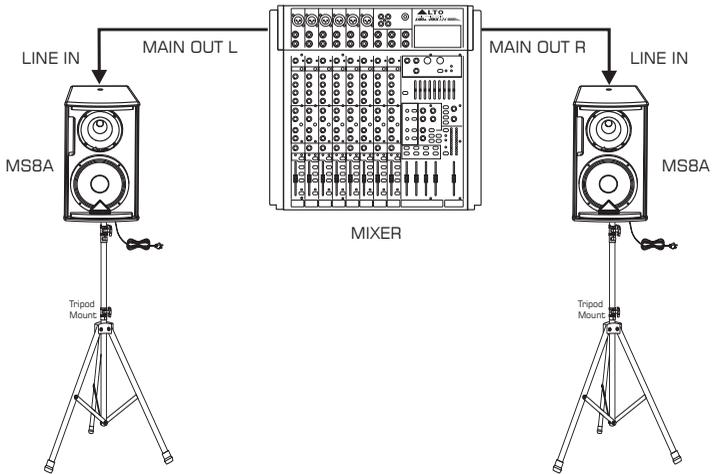
2. SPEAKER CABINET QUICK START

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

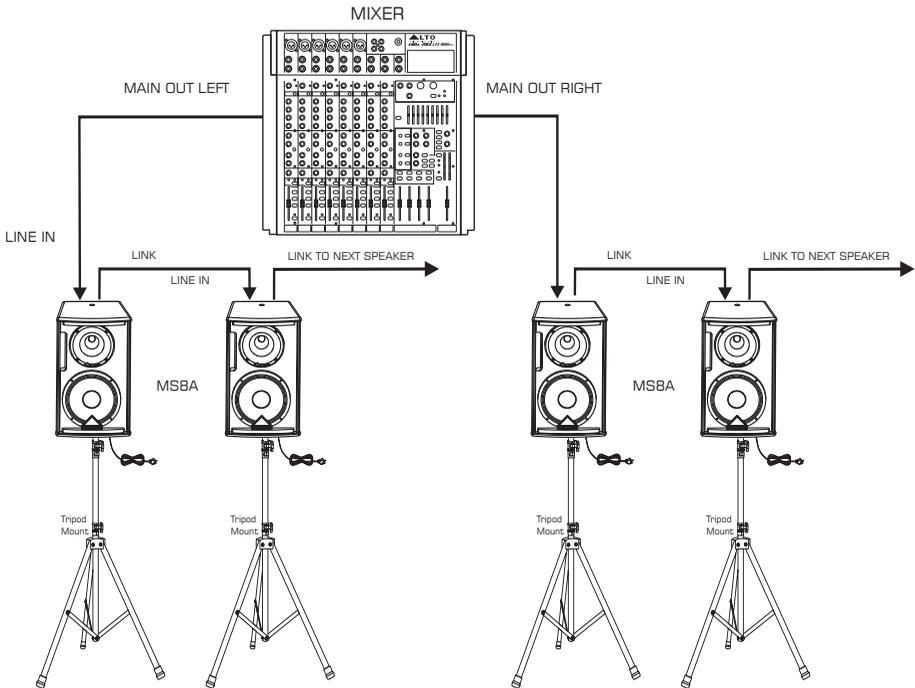
- 1). Connect one side of the signal cable at your audio mixer into output left /right (with Stereo-Jack or XLR) and the other side of the cable into the line input (Stereo-Jack) of your active speaker cabinet.
- 2). Connect the power cord to mains.
- 3). Turn on your mixer first, then the active speaker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



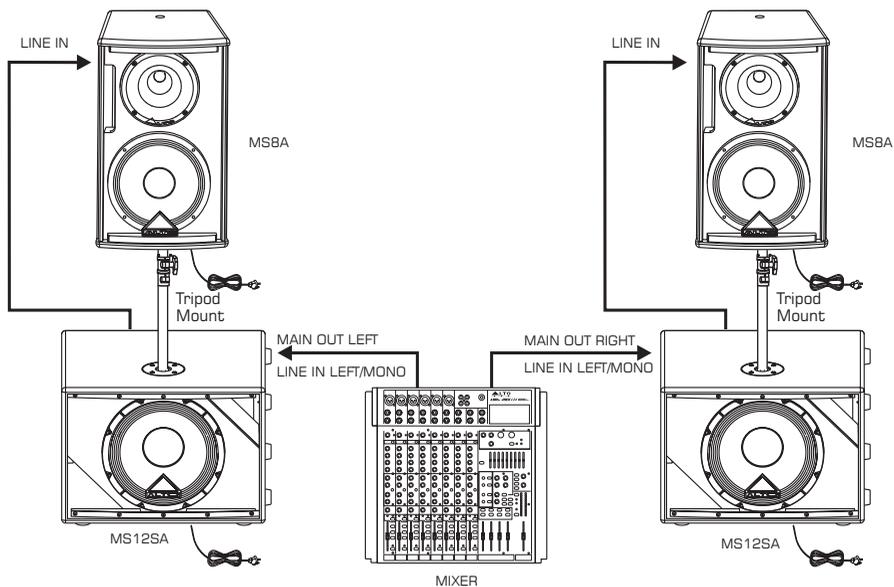
Two active speaker in stereo operation



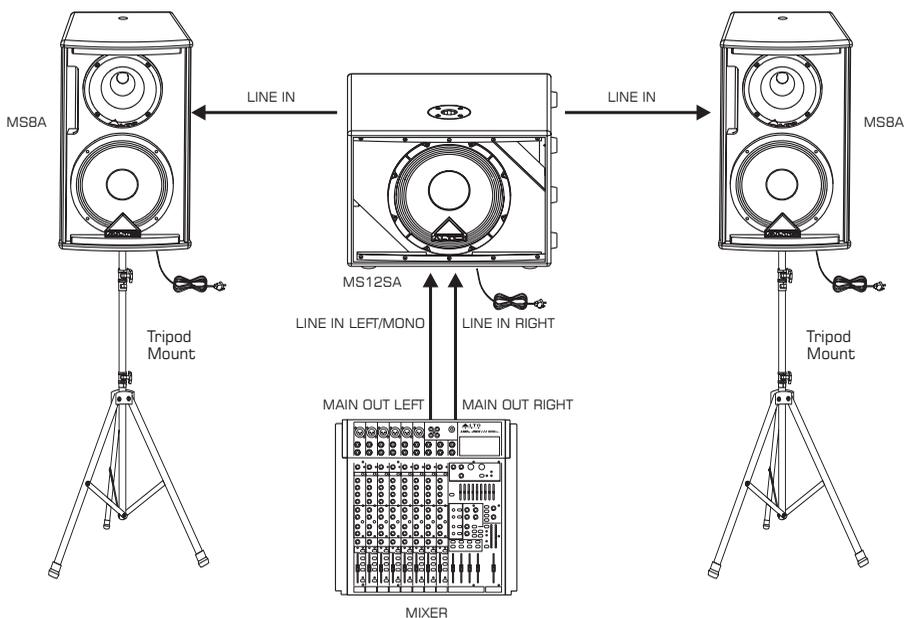
Multiple active speakers with the same stereo source



Two active subwoofers and two active satellite speakers



One active subwoofers and two active satellite speakers

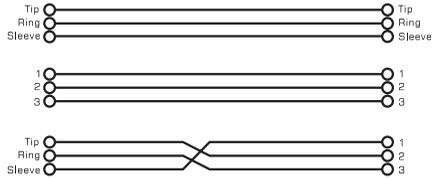
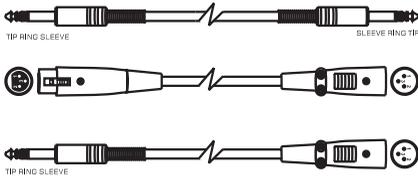


4. WIRE CONNECTIONS

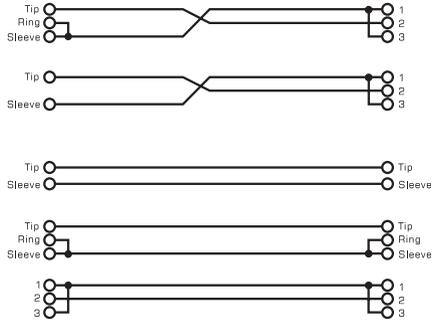
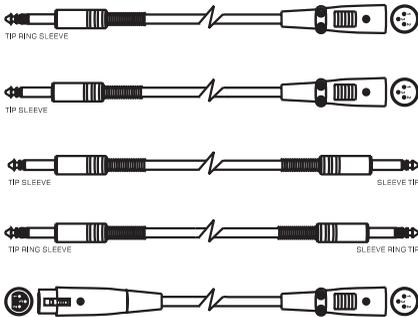
-For Active Speaker Cabinets

As to these circumstances, audio connections is mostly intended for the signal flow, so, determine the wire configuration according to your real application system and its connecting facility. Normally, you have the following choices:

• Balanced

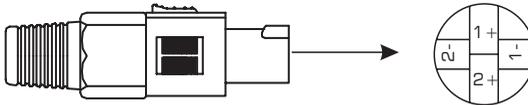


• Unbalanced



-For Passive Speaker Cabinets

Please only use 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-.



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

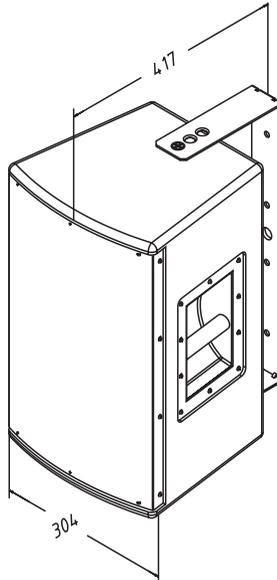
5. RIGGING

The MS8/MS8A speaker cabinet also provides the bracket for fixed installation, How to use them?

1).Inventory

Before beginning installation, inventory kit to items listed.

Item	Q'ty	Description
I	1PCS	MH-8B Bracket / Wallmount
II	2PCS	Screw, M10*30*1.5PH, Black (in the cabinet)
III	2PCS	Washer, Neoprene, 1.5t* \varnothing 35mm



Warning:

Installation should only be done by an experienced technician. Improper installation may cause serious injury . The surface where the bracket/cabinet is to be fastened must have enough structural integrity .

2).Mounting the Bracket

Due to various construction methods and materials used today, the hardware for securing the bracket to the mounting surface is not supplied. It is recommended that you consult a building professional for the proper mounting hardware before mounting the bracket.

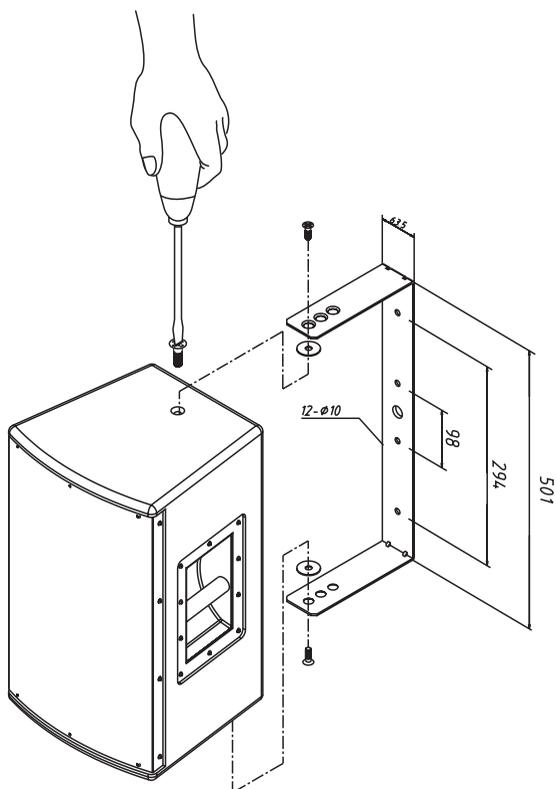
3).Removing the Shipping Hardware, Remove the flat head screws from the top and the bottom of the cabinet using a 5mm wrench.

5. RIGGING

4). Choosing which slot to use there are three slots in each bracket arm. use the forward slot (as shown) when the cabinet is facing perpendicular to the bracket mounting surface.

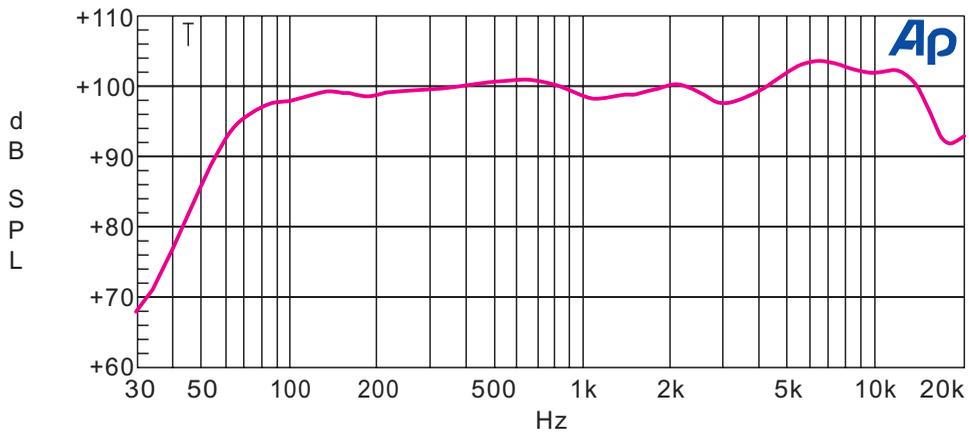
5). Hanging the Cabinet

- A.** Place a neoprene gasket on the bracket's lower arm. Center it on the appropriate slot.
- B.** Position the cabinet between the bracket arms.
- C.** Align the bracket's top slot to the cabinet's M10 threaded hole.
- D.** Holding the cabinet in position, insert the screw through the bracket slot and into the cabinet's top threaded hole and hand tighten.
- E.** Repeat step D through the bottom bracket hole.
- F.** Position cabinet and tighten both screws with a 5mm wrench.

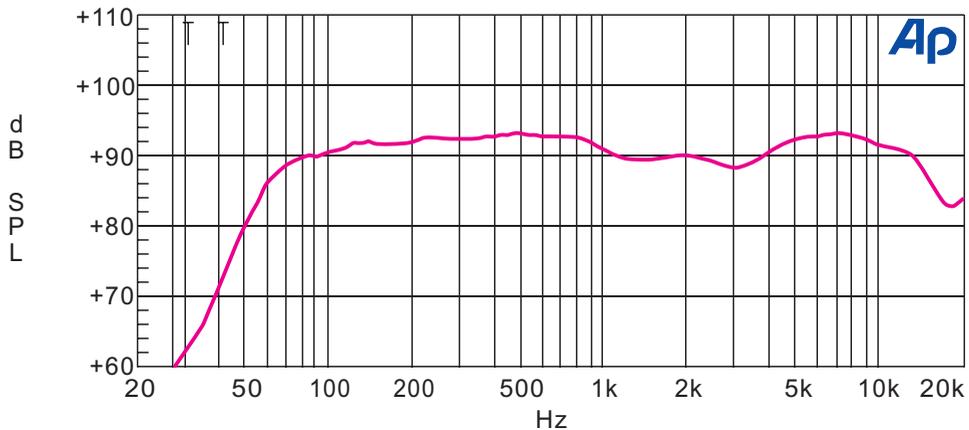


6. FREQUENCY RESPONSE

MS8A

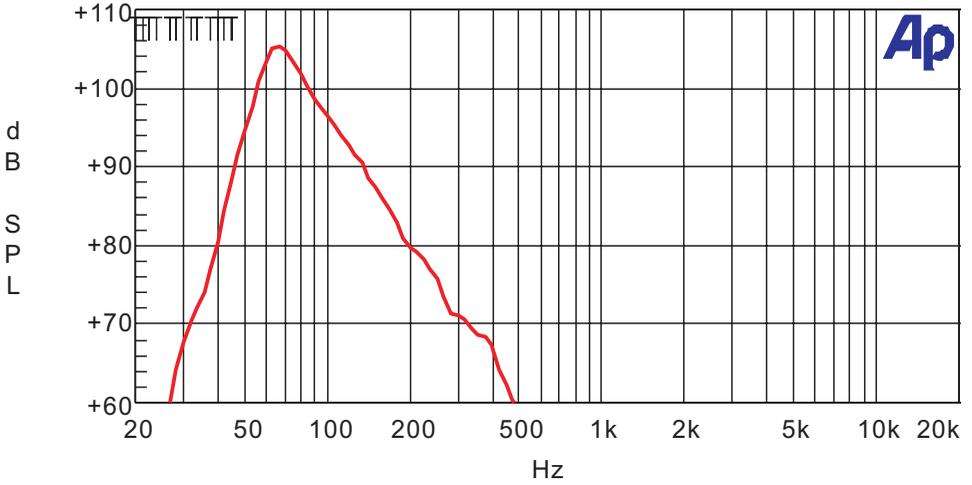


MS8

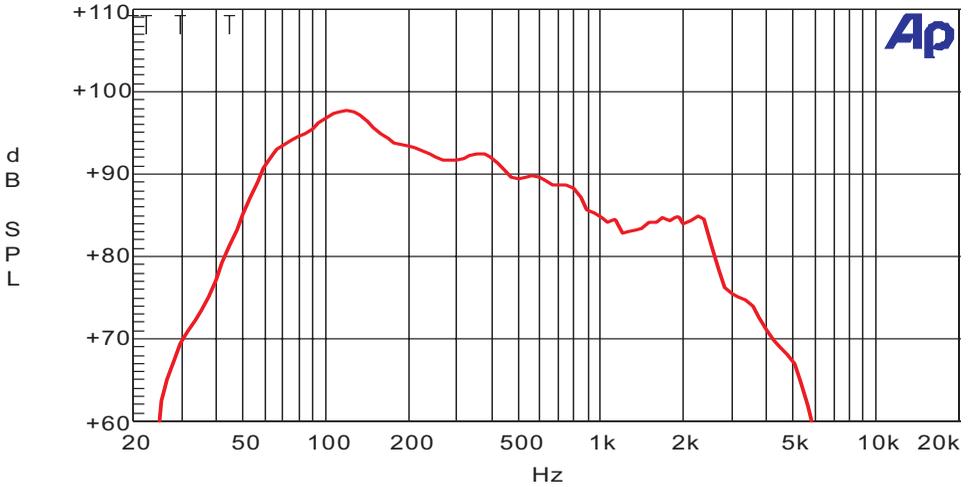


6. FREQUENCY RESPONSE

MS12SA



MS12S



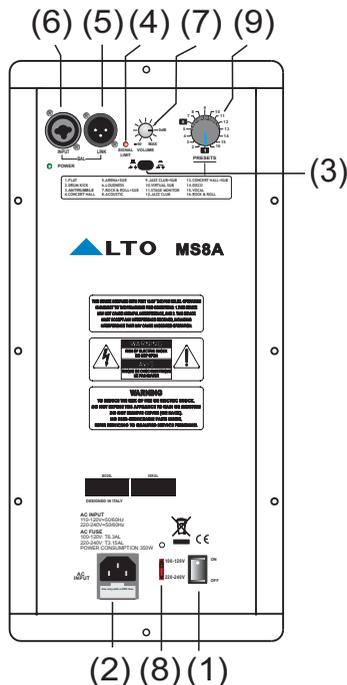


7. PANEL DESCRIPTION-MS8A

ACTIVE FULL RANGE: MS8A

- (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) LINE INPUT ON COMBO CONNECTOR
- (7) MAIN VOLUME CONTROL
- (8) POWER SWITCHUNG BUTTON
- (9) PRESETS SELECTOR

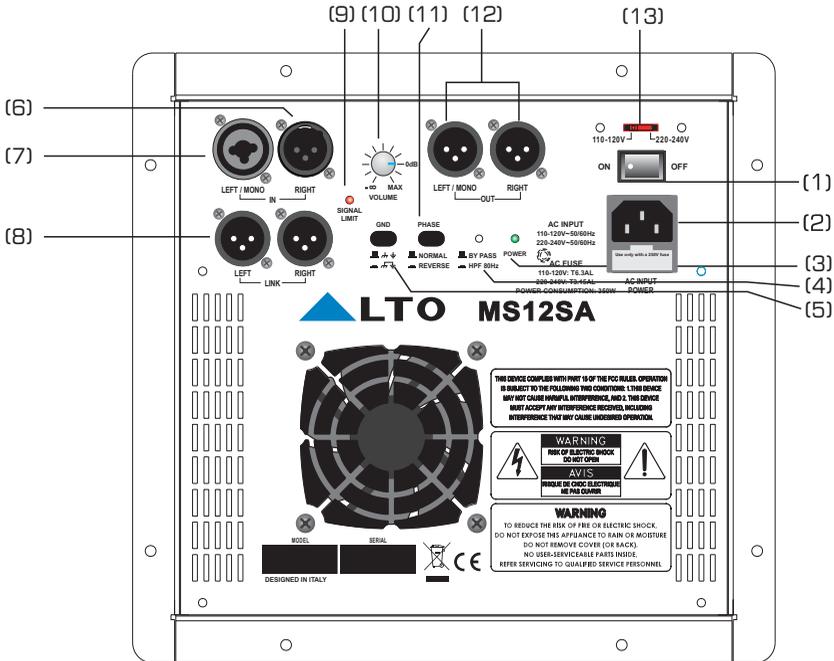
Via this knob, you can select the right effect you wish to perform. There are total 16 options for you, JAZZ CLUB+SUB, VERTICAL SUB, STAGE MONITOR, JAZZ CLUB, CONCERT HALL+SUB, DISCO, VOCAL, ROCK & ROLL, FLAT, DRUM KICK, ANTIRUMBLE, CONCERT HALL, ARENA+SUB, LOUDNESS, ROCK & ROLL+SUB and ACOUSTIC.





7. PANEL DESCRIPTION-MS12SA

ACTIVE SUBWOOFERS: MS12SA



- (1) ON-OFF main power switch
- (2) Input AC power socket with main fuse
- (3) POWER, Green LED, indicate ON status
- (4) BYPASS Switch Select the High pass filter or by pass
- (5) Ground Lift Switch
- (6) LINE IN RIGHT.ON XLR CONNECTOR
- (7) LINE IN LEFT/MONO ON COMBO CONNECTOR
- (8) LINK LEFT/RIGHT ON XLR CONNECTOR
- (9) SIGNAL/LIMIT, Red LED, indicate ON status
- (10) VOLUME main power amplifier control
- (11) PHASE Switch Reverse the Polarity of the subwoofer output
- (12) OUT LEFT/RIGHT ON 2xXLR CONNECTOR
- (13) POWER SWITCHUNG BUTTOM



8. PANEL DESCRIPTION-MS8/MS12S

CONNECTION PLATE

PASSIVE FULL RANGE: MS8

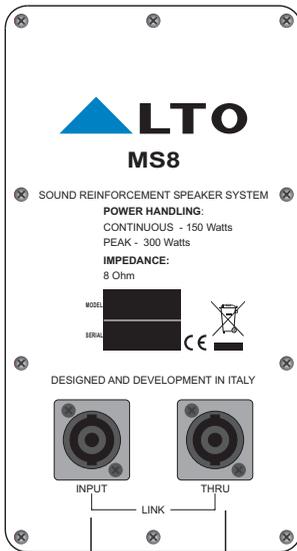
(1) INPUT

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.



(1)

(2)



(a)

(b)

PASSIVE SUBWOOFERS: MS12S

- a). **INPUT:** Receive the signal coming from an external amplifier.
(SPK +1/-1 connected; +2/-2 not connected).
- b). **OUTPUT:** Power output for satellite speaker, under passive crossover filtered at 125Hz (SPK +1/-1 connected; +2/-2 not connected).



9. TECHNICAL SPECIFICATION

MS8A	8" 2-way Active Modelling Loudspeaker
Active System Type	2-way Bi-Amp, with MODELLER
Power System	350W-LOW CLASS D/65W-HIGH CLASS AB in EIAJ 200W-LOW CLASS D/35W-HI CLASS AB in Continuous
Frequency Response	MODELLER presets setting
Maximum SPL @ 1m	120dB Continuous/123dB Peak (Calculated)
Coverage (HxV)	70° x 70° nominal
Transducer Low	8" Woofer, 1.5"voice coil, with double ventilation
Transducer High	1" Neodymium on Spherical Horn (Tractrix contour)
Active Crossover	2KHz under analog processor
Input Connector	LINE-COMBO/ LINK-XLR-F Balanced (15kohm)
Input Sensitivity	Line +0dB
External Control	MODELLER with 16 Preset / Volume Control/ Power ON with Green LED/ Clip Limiter with Red LED/ Ground Lift.
Power Supply	120-240 Volt, in Switching Power mode.
Enclosure Construction	MDF wood cabinet, glued and reinforced, black painted, one metal handle and rubber foot.
Mounting / Suspension	Two point for suspension, one metal pole-mount, optional bracket.
Dimensions (HxWxD)	493 x 304 x 293 mm (19.41" x 11.97 x 11.54")
Net Weight	12.06kg / 26.53 lbs
Shipping Weight	14.56kg / 32.03 lbs

MS8	8" 2-way Passive Speaker Cabinet
Passive System Type	2-way Passive
Power System	150W continuous / 300W peak
Frequency Response (-10dB)	67Hz-18kHz
Sensitivity (1w @ 1mt)	94.5dB SPL
Impedance:	8 Ω (nominal)
Maximum SPL @ 1m	116dB continuous/119dB peak (Calculated)
Coverage (HxV)	70° x 70° nominal
Transducer Low	8" Woofer, 1.5"voice coil, with double ventilation
Transducer High	1" Neodymium on Spherical Horn (Tractrix contour)
Passive Crossover	2.25kHz at 12dB/oct, with HF protection
Input Connectors	Two Parallel SPK NL-4 for INPUT/ THRU
Enclosure Construction	MDF wood cabinet, glued and reinforced, black painted; one metal handle and rubber foot.
Mounting / Suspension	Two point for suspension , one standard pole-mount plus a optional bracket.
Dimensions (HxWxD)	493 x 304 x 293 mm (19.41" x 11.97 x 11.54")
Net Weight	11.29kg / 24.84 lbs
Shipping weight	13.79 kg / 30.34 lbs



9. TECHNICAL SPECIFICATION

MS12SA	12" Active Subwoofer Speaker Cabinets
Power System	350W Class D in EIAJ/300W Class D in Continuous
Frequency Response (-10dB)	47Hz-125Hz
Maximum SPL @ 1m	121dB Continuous/124dB Peak (Calculated)
Transducer Low	12" Woofer, 2.5"voice coil, with double ventilation
Active Crossover	HPF 80Hz under analog processor
Input Connector	L-R Input (Combo/ XLR-F) / L-R Link (2-XLR-M) / L-R Output (2-XLR-M) Balanced (15kohm)
Input Level	L-R Input Line 0dBu
External Control	Volume Control/ Phase Switch / HPF-80Hz By-Pass/ Power ON with Green LED/ Clip Limiter with Red LED/ Ground Lift.
Power Supply	120-240 Volt, in Switching Power mode.
Enclosure Construction	15mm Plywood cabinet, glued and reinforced, resistant black paint, metal grille, rubber foot.
Mounting	One metal standard pole-mount plus one metal handle
Dimensions (HxWxD)	370x 530 x 480 mm (14.57" x 20.87 x 18.90")
Net Weight	18.6kg / 41.01 lbs
Shipping Weight	20.8kg / 45.86 lbs

MS12S	12"Passive Subwoofer Speaker Cabinet
Power System	300W continuous
Frequency Response (-10dB)	47Hz-160Hz
Sensitivity (1w @ 1mt)	96dB SPL
Impedance:	4 Ω (nominal)
Maximum SPL @ 1m	120dB continuous/123dB peak (Calculated)
Transducer Low	12" Woofer, 2.5"voice coil, with double ventilation
Passive Crossover	125Hz at 6dB/oct
Enclosure Construction	15mm Plywood cabinet, glued and reinforced, resistant black paint, metal grille, rubber foot.
Input Connectors	INPUT-SPK NL-4 / OUTPUT-SPK NL-4, for Satellite Speaker
Mounting	One metal standard pole-mount plus one metal handle
Dimensions (HxWxD)	370x 530 x 480 mm (14.57" x 20.87 x 18.90")
Net Weight	18.10 kg / 39.90 lbs
Shipping weight	20.30 kg / 44.8 lbs

10. 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 purport 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
- 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
- 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

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