



OWNER'S MANUAL

MS MONITOR SPEAKER ENCLOSURES
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 MS series powered monitor speaker system. The MS series monitor are specifically designed for using in hi-quality performance site and the precise sound commercial place. It includes three small and compact stage monitor models (MS8MA, MS10MA, MS12MA) This series 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. HF compression driver and vented LF for fully professional performance.

The MS powered monitor 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.

Enjoy your MS powered Monitor speaker and make sure to read this Manual carefully before operation!

2. FEATURES

The excellent quality of MS series-powered monitor speaker cabinets will provide the following features:

- Small and compact stage monitor
- Trapezium configuration decreases the resonance of the standing wave in the cabinet
- Using hi-density matrix spray-paint technics for the cabinets
- The bottom bracket design makes mounting quickly and flexibly
- HF compression driver and vented LF for fully professional performance
- With modeller include have 16 "sound mode " which are suitable for different tastes and applications
- Switch mode power supply and digital power circuitry



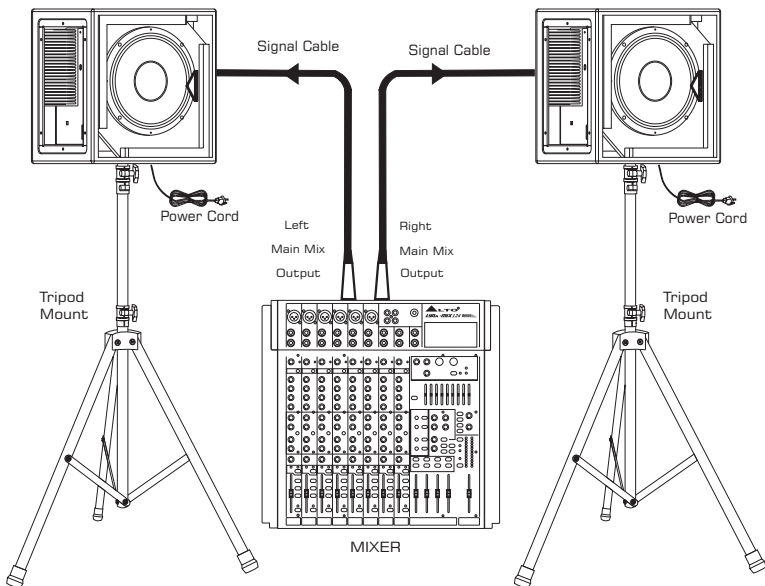
3. APPLICATIONS

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

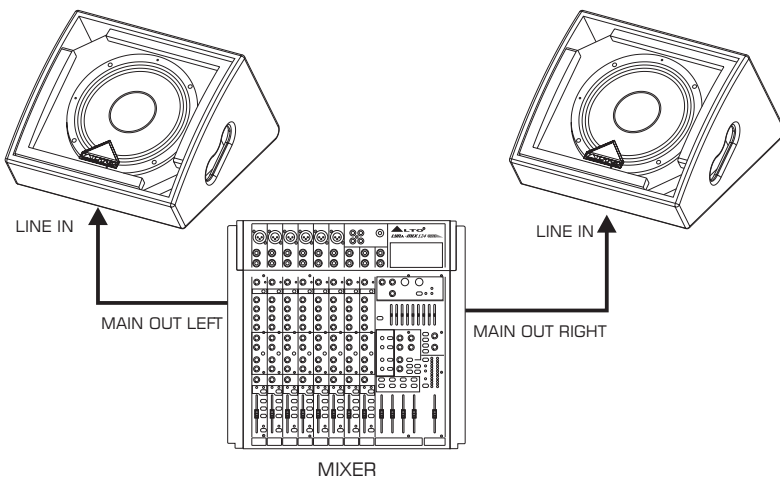
- 1). Connect one side of the signal cable at your mixer into the Main Output Left /Right (with 1/4"Jack or XLR) and the other side of the cable in to the Line Input (COMBO) of your MS monitor speaker cabinet (with 1/4"Jack or XLR).
- 2). Connect the power cord to mains.
- 3). Turn ON your mixer first, then the MS cabinets.
- 4). Turn up the volume control of the MS cabinets.
- 5). Use PFL function to get the proper input level for the mixer, and adjust the Main Mix Level control to reach the desired output level.
- 6). After use, turn off your active speaker cabinets first, then the mixer.

3. APPLICATIONS

For MS Monitors with stand



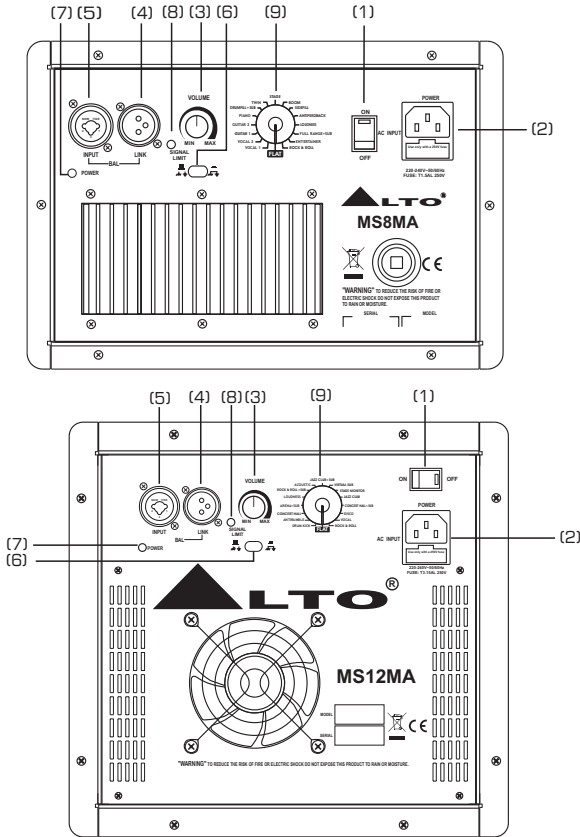
For MS Monitors on the floor





4. PANEL DESCRIPTION

POWERED MONITOR: MS8MA/MS10MA/MS12MA



- (1) **ON-OFF** main power switch
- (2) Input **AC power socket** with main fuse
- (3) **VOLUME** main power amplifier control
- (4) **LINE OUT** at +4 dB on XLR connector
- (5) **LINE IN** at +4 dB on COMBO connector
- (6) **Ground Switch**
- (7) **POWER**, Green LED, indicate ON status
- (8) **SIGNAL LIMIT**, Red LED, indicate ON status
- (9) **Presets Selector**

Via this knob, you can select the right effect you wish to perform.
There are totally 16 options for you:



4. PANEL DESCRIPTION

1. **FLAT:** This is the "default" MODEL. The frequency response is typical of floor monitor. This Model suits all the applications where reproduction of the whole audio content is required.
2. **VOCAL 1:** This Model is similar to FLAT model but includes a High-pass Filter to cut out the selected low frequencies. It is advisable to use this preset for human voice reproduction. Especially male voice. Also very good for speech.
3. **VOCAL 2:** It is similar to VOCAL 1, but we have added a Low-pass Filter to remove the selected high-frequencies. In this way, all the acoustic content is dedicated to the Middle frequencies to get the best possible reproduction of the human voice for stage monitor applications.
4. **GUITAR 1:** This Model has been optimized for electric guitar monitoring. But it can also be used directly connected to a Guitar Preamplifier making use of digital effects, modelling, ect, both in MONO and in STEREO systems.
5. **GUITAR 2:** This model is great for Acoustic Guitar. The booming frequencies of the hollow body guitar are taken away while a gentle crispy touch is added to compensate lack of high frequencies reproduction from the pick up. Try it with your Acoustic guitar directly connected to the Input and you will not need a dedicate amplifier anymore.
6. **PIANO:** This model has been created for effective monitor of acoustic piano but it is also suitable for other keyboards such as Rhodes, the Wurlitzer and it is also good with Hammond style sounds.
7. **DRUMFILL+ SUB:** In this case we have provided this model with a sharp high-pass filter so that your MS monitor can be used together with a subwoofer in DRUMFILL systems.
8. **TWIN:** In this Model we have created a low-cut and high-frequencies enhance-ment with the goal of optimizing the frequency response of the MS Monitor when more than one unit are used together.
9. **STAGE:** Very often Stage Monitors are positioned on suspended floor made of wood or metal. This Model prevent the nasty resonance on low frequency produced by such positioning.
10. **BOOM:** This model must be used when the monitor is positioned on a microphone Boom for near-field monitoring.
11. **SIDEFILL:** To be used with MS Monitor in sidefill position.
12. **ANTIFEEBACK:** With this Model the frequencies that are responsible for feedback are reduced sharply.
13. **LOUDNESS:** It generates the typical "happy face" curve. To be used with prolonged listening at low SPL.



4. PANEL DESCRIPTION

- 14. **FULL RANGE + SUB:** Made to reduce distortion and moving coil overheating to reduce power compression when the cabinet is used in conjunction with a subwoofer.
- 15. **ENTERTAINER:** This Model has been thought for Piano Bar Players and Entertaining Musicians using digital keyboard and microphones together with karaoke and MP3 devices. You get a crispy sound on the high frequencies and a gentle peak on low frequencies so that you do not need a lot of external equalization.
- 16. **ROCK & ROLL:** Made for maximum dynamic range without compromising amplifier headroom and speaker power handling.

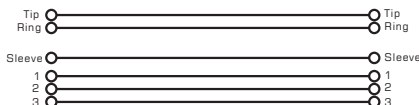


5. WIRE CONNECTIONS

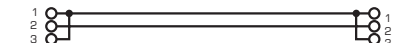
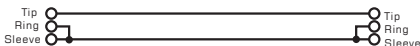
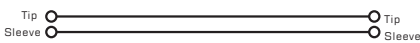
- For Active Speaker Cabinets

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

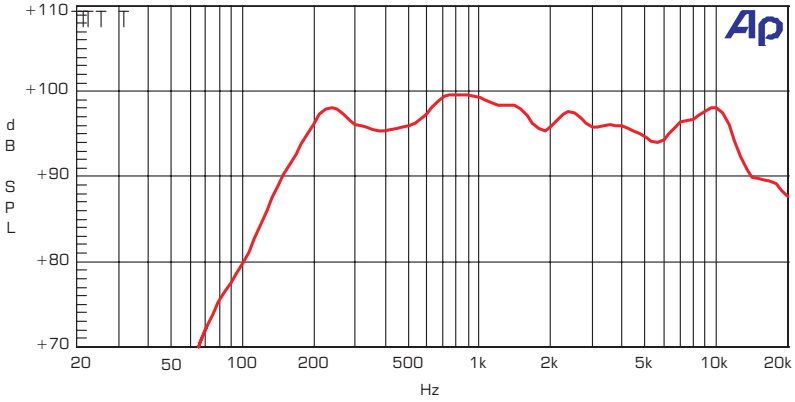


• Unbalanced

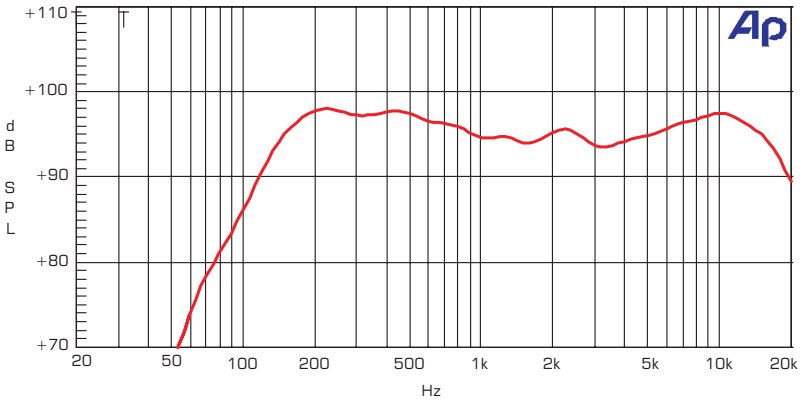


6. FREQUENCY RESPONSE DIAGRAM

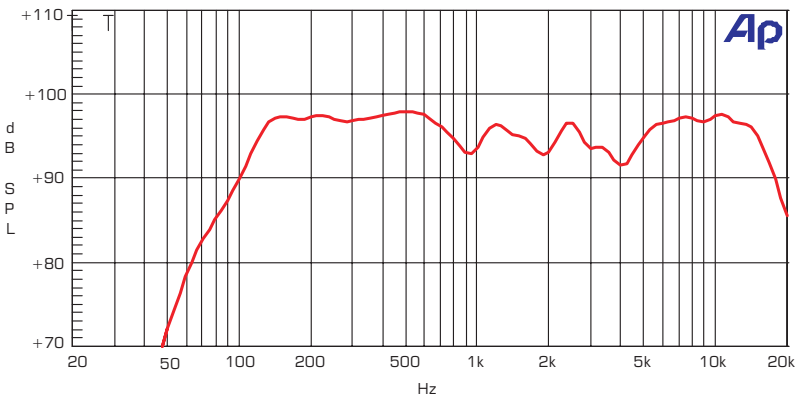
MS8MA



MS10MA



MS12MA



7. TECHNICAL SPECIFICATION

| | |
|------------------------|---|
| Model Item | MS8MA |
| Active System Type | Full Range with MODELLER |
| Output Power | 100 Watt |
| Peak Power | 150 Watt EIAJ |
| Max SPL 1mt | 114 dB SPL Nominal/116 dB Peak |
| Frequency Response | MODELLER Presets Setting |
| Protection Low - High | Analog Limiter |
| Input Impedance | 30 k Ω Balanced/15 k Ω Unbalanced |
| Input Sensitivity | Line +4 dB |
| Low Frequency Device | 8" Dual Cone/1.5"Voice Coil |
| High Frequency Device | 1" Neodymium Driver/1" Voice Coil |
| Coverage(H° x V°) | 70° H x 70° V |
| Connectors | Input with Combo/Link with XLR |
| Cabinet | Trapezoidal Shape/Multi-layer Plywood/Handle/Black Paint Finishing |
| External Control | MODELLER with 16 Presets/Line Volume/Clipping LED indicator /Ground Switch |
| Dimensions(H x W x D) | 210 x 300 x 356 (mm) |
| Net Weight (lbs/kg) | 16.98 lbs/7.7 kg |

| | |
|------------------------|--|
| Model Item | MS10MA |
| Active System Type | 2-way Bi-Amp. With MODELLER |
| Low Output Power | 350 Watt EIAJ |
| High output Power | 65 Watt EIAJ |
| Max SPL 1mt | 120 dB SPL Calculated EIAJ |
| Frequency Response | MODELLER Presets Setting |
| Protection Low - High | Analog Limiter |
| Input Impedance | 30 k Ω Balanced/15 k Ω Unbalanced |
| Input Sensitivity | Line +4 dB |
| Low Frequency Device | 10" Coax/2" Voice Coil |
| High Frequency Device | 1" Neodymium Driver/1" Voice Coil |
| Coverage(H° x V°) | 70° H x 70° V Spherical Horn |
| Connectors | Input With Combo/Link With XLR |
| Cabinet | Trapezoidal Shape/Multi-layer Plywood/Handle/Black Paint Finishing |
| External Control | MODELLER with 16 Preset/Line Volume/Clipping LED indicator /Ground Switch |
| Dimensions(H x W x D) | 273 x 362 x 454 (mm) |
| Net Weight (lbs/kg) | 22.75 lbs/10.32 kg |

| | |
|------------------------|---|
| Model Item | MS12MA |
| Active System Type | 2-Way Bi-Amp. with MODELLER |
| Low Output Power | 350 Watt EIAJ |
| High output Power | 65 Watt EIAJ |
| Max SPL 1mt | 121 dB SPL Calculated EIAJ |
| Frequency Response | MODELLER Presets Setting |
| Protection Low - High | Analog Limiter |
| Input Impedance | 30 k Ω Balanced/15 k Ω Unbalanced |
| Input Sensitivity | Line +4 dB |
| Low Frequency Device | 12" Coax/2" Voice Coil |
| High Frequency Device | 1" Neodymium Driver/1" Voice Coil |
| Coverage(H° x V°) | 70° H x 70° V Spherical Horn |
| Connectors | Input with Combo/Link with XLR |
| Cabinet | Trapezoidal Shape/Multi-layer Plywood/Handle/Black Paint Finishing |
| External Control | MODELLER with 16 Presets/Line Volume/Clipping LED Indicator /Ground Switch |
| Dimensions(H x W x D) | 313 x 393 x 513 (mm) |
| Net Weight (lbs / kg) | 26.12 lbs/11.85 kg |

8. 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.

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