

User's Manual

MS1

SPEAKER MODELLER



 **LTO**[®]
www.altoproaudio.com
Version 1.0 March 2006
— English —

SAFETY RELATED SYMBOLS



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.

WARNING

Describes precautions that should be observed to prevent the possibility of death or injury to the user.

CAUTION

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



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

WARNING

• Power Supply

Ensure that the mains source voltage (AC outlet) matches the voltage rating of the product. Failure to do so could result in damage to the product and possibly the user.

Unplug the product before electrical storms occur and when unused for long periods of time to reduce the risk of electric shock or fire.

• External Connection

Always use proper ready-made insulated mains cabling (power cord). Failure to do so could result in shock/death or fire. If in doubt, seek advice, from a registered electrician.

• Do not Remove any Covers

Within the product are areas where high voltages may present. To reduce the risk of electric shock do not remove any covers unless the AC mains power cord is removed.

Covers should be removed by qualified service personnel only.

No user serviceable parts inside.

• Fuse

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.

• Protective Ground

Before turning the product ON, make sure that it is connected to Ground. This is to prevent the risk of electric shock.

Never cut internal or external Ground wires. Likewise, never remove Ground wiring from the Protective Ground Terminal.

• Operating Conditions

Always install in accordance with the manufacturer's instructions.

To avoid the risk of electric shock and damage, do not subject this product to any liquid/rain or moisture. Do not use this product when in close proximity to water.

Do not install this product near any direct heat source.

Do not block areas of ventilation. Failure to do so could result in fire.

Keep product away from naked flames.

• **Servicing**

Refer all servicing to qualified service personnel only.

Do not perform any servicing other than those instructions contained within the User's Manual.

IMPORTANT SAFETY INSTRUCTIONS

Read these instructions

Follow all instructions

Keep these instructions. Do not discard.

Heed all warnings.

Only use attachments/accessories specified by the manufacturer.

• **Power Cord and Plug**

Do not tamper with the power cord or plug.

These 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.

• **Cleaning**

When required, either blow off dust from the product or use a dry cloth.

Do not use any solvents such as Benzol or Alcohol.

For safety, keep product clean and free from dust.

Preface

Dear Customer,

Thanks for choosing ▲LTO MS1 Processor and thanks for choosing one of the results of ▲LTO AUDIO TEAM job and researches.

For our ▲LTO AUDIO TEAM, music and sound are more than a job...are first of all passion and let us say...our obsession!

We have been designing professional audio products for a number of years in cooperation with many of the world's major brands in audio field.

The ▲LTO line presents unparalleled analogue and digital products made by Musicians for Musicians in our R&D centers in Italy, Netherlands, United Kingdom and Taiwan. We provide you with world-class designs, while our software development teams continue to develop and impressive range of audio specific algorithms.

Because we are convinced you are the most important member of ▲LTO AUDIO TEAM and the one confirming the quality of our job, we would like to share with you our work and our dreams, pay attention to your suggestions and your comments. Following this idea we create our products and we will create the new ones! From our side, we guarantee you and we will supply you also in future the best quality, and the best fruits of our continuous researches and the best prices.

Our MS1 Processor is the result of many hours of listening and tests involving Common People, area experts, musicians and technicians.

Nothing else to add, but that we would like to thank all the people that made the ▲LTO MS1 Processor a reality available to our customers, thank our designers and all the ▲LTO Staff, there to make possible the realization of products containing our idea of music and sound and there to support you, our customers, in the best way, conscious that you are our best richness.

Thank you very much.
▲LTO AUDIO TEAM

TABLE OF CONTENT

1. INTRODUCTION	5
2. FEATURES	5
3. CONTROL ELEMENTS	5
3.1 Front Panel	
3.2 Rear Panel	
4. INSTALLATION AND CONNECTION	6
5. TECHNICAL SPECIFICATION	7
6. WARRANTY.....	7

1. INTRODUCTION

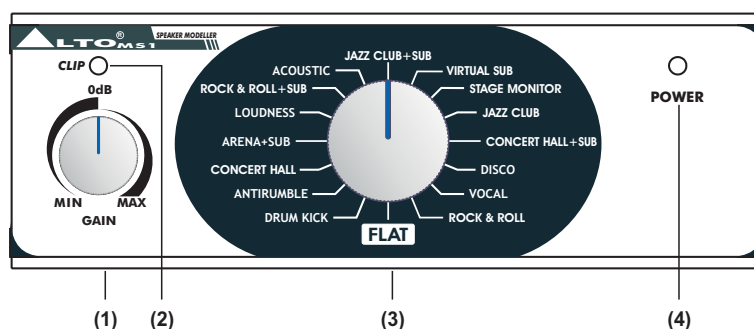
Thank you very much for expressing your confidence in ▲LTO products by purchasing ▲LTO MS1. The MS1 is a professional processor, which provides you an excellent electric performance. The MS1 is 2-Channel analog sound processor with 16 effects, and all input and output connectors are compatible with balanced jack. Thanks to the use of selected and expensive components, the performance of MS1 is worth much more than its price.

2. FEATURES

- 16 effects preset.
- 2 Channels input and output connectors are compatible with balanced JACK.
- Front panel LED indicators for clip and power on.
- Accurate level control.

3. CONTROL ELEMENTS

3.1 Front Panel:



1. Gain Control

This control adjusts the input gain by a range of -20 dB to +20dB.

2. Clip LED

This LED lights up when the input signal is too strong. It warns that the output signal may cause distortion. Please attenuate the level of the input signal.

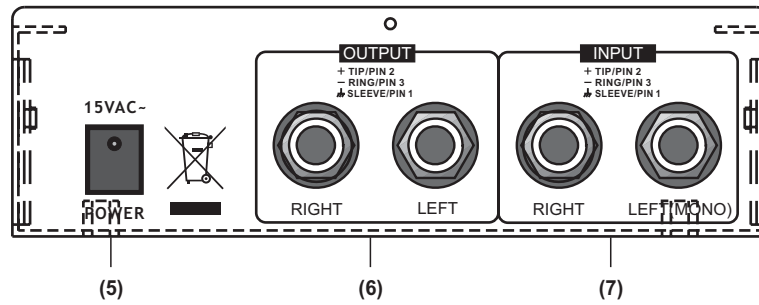
3. Presets Selector

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

4. Power LED

This LED lights up when the unit is powered on.

3.2 Rear Panel:



5. AC Inlet

This jack is used to connect the AC power supply with the supplied 15V AC adapter.

6. Output Connector

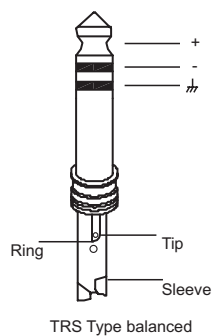
This is a balanced 1/4" TRS jack, which is used to connect devices such as the effects returns on a mixing console or power amplifier inputs.

7. Input Connector

This is a balanced 1/4" TRS jack, which connects to sources such as the effect sends of mixing console.

4. INSTALLATION AND CONNECTION

Please use shielded twisting pair which can reduce noise and signal loss. The wiring of the connector is as follow:



5. TECHNICAL SPECIFICATION

AUDIO INPUT	Connectors	1/4" jack
	Type	RF filtered, servo balanced input
	Impedance	30 Kohm balanced, 22 Kohm unbalanced
	Max. input level	+26 dBu balanced and Unbalanced
	CMRR	Typ.40db,>55db@1khz
AUDIO OUTPUT	Connectors	1/4" jack
	Type	Balanced
	Min. output impedance	100 Ohm
	Max. output level	+26 dBu balanced
SYSTEM SPECIFICATIONS	Frequency response	10Hz to 30kHz, +/-1dB(FLAT)
	S/N	>110dB, unweighted, 22 Hz to 22kHz
	THD	0.005% typ.@0 dBu, 1kHz,(unity gain), FLAT
INDICATORS	Input level	CLIP LED display: +7dbu
POWER SUPPLY	AC ADAPTOR	USA/Canada 120V~, 60Hz
		U.K./Australia 240V~, 50Hz
		Europe 230V~, 50Hz
	Power consumption	5W
PHYSICAL	Dimension	130(W)×117(D) ×45(H)mm(5.1"×4.6"×1.7")
	Net weigh	0.8kg

6. 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 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
<http://www.altoproaudio.com> Tel: 886-4-22313737
email: alto@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 © 2006 SEIKAKU GROUP