

# Installation Manual and Operating Instructions



**4 Channel - 2 Zone - VOX - Mute -  
MOH - Phone Interface**

**DMA 3060 - 60 Watt RMS  
DMA 3120 - 120 Watt RMS**

**IMPORTANT NOTE:** THIS OPERATING MANUAL IS PROVIDED AS AN INSTALLATION AND AS AN OPERATING AID. PASO SOUND PRODUCTS, INC. DOES NOT ASSUME ANY RESPONSIBILITY AS TO ITS ACCURACY AND SHALL NOT BE LIABLE IN TORT OR CONTRACT FOR ANY DIRECT CONSEQUENTIAL OR INCIDENTAL LOSS OR DAMAGE ARISING FROM THE INSTALLATION, USE OR INABILITY TO USE THIS PRODUCT.

**CAUTION !**

**TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS APPLIANCE TO WATER, RAIN OR MOISTURE**



*Innovation through technology since 1931*

**Digital Music Amplifiers**

## DESCRIPTION AND APPLICATIONS

- ❑ High Performance - High Reliability Design
- ❑ Wide Frequency Response - Very Low Distortion
- ❑ 5 Channel Inputs - 2 Zone Outputs
- ❑ Up to 3 Balanced Microphone Inputs
- ❑ Phantom Power on all MIC Inputs
- ❑ MIC 2/AUX 1 and MIC 3/AUX 2 Inputs  
    With Stereo Summing
- ❑ AUX1 and AUX2 Inputs Attenuator
- ❑ 600 ohm Transformer Balanced  
    Telephone Paging Input
- ❑ MIX Buss and 600 ohm Line Output
- ❑ Independent Input Controls
- ❑ AUX1 Remote Volume Controls
- ❑ External EQ Link
- ❑ Tone by-pass and EQ Link switches
- ❑ Addressable VOX Buss  
    Voice Activated Muting
- ❑ VOX Variable Time Delay Function
- ❑ Addressable MUTE Buss
- ❑ Direct Muting and Unmuting
- ❑ 600 ohm and 8 ohm 2 Watt Max.  
    Music on Hold Amplifier
- ❑ MOH Amplifier Source Selector
- ❑ Zone 2, 2 Watt - 8 ohm Output  
    with Separate Control
- ❑ 24 V DC 250 mA Regulated Power Supply Output
- ❑ 8 ohm, 25 Volt & 70 Volt Output
- ❑ Optional 19" Rack Mounting with Kit
- ❑ Low profile - 2-Unit of Vertical Rack space
- ❑ UL 6500 Listed (US - CANADA)

## UNPACKING

Immediately upon receipt of the amplifier, inspect the unit and shipping container for indications of improper handling or in transit damage. The equipment was carefully inspected and tested before leaving the factory. Notify the Transportation Company immediately if any damage is found. **ONLY THE CONSIGNEE CAN FILE A CLAIM WITH THE CARRIER FOR DAMAGE DURING SHIPMENT.** Be sure to save the carton and packing material as evidence of damage for the shipper inspection. **DO NOT SHIP** the unit back to the factory unless authorized by the factory.

IN TRANSIT DAMAGES ARE NOT COVERED BY THE PASO WARRANTY.

## SPECIFICATIONS

<b>POWER OUTPUT:</b>	<b>DMA3060</b>	<b>60 Watt RMS</b>
	<b>DMA3120</b>	<b>120 Watt RMS</b>
<b>Distortion:</b>	0.01% THD at 1 kHz rated power	
<b>Frequency Response:</b>	20 hz - 30 Khz ± 2 dB	
<b>Inputs:</b>		
<b>Input 1</b>	MIC Electronically Balanced, Transformer Balanced with MT250 (optional)	
<b>Input 2</b>	Telephone Transformer Balanced	
<b>Input 3</b>	MIC Electronically Balanced - AUX 1 (Stereo Sum.)	
<b>Input 4</b>	MIC Electronically Balanced - AUX 2 (Stereo Sum.)	
<b>Input 5</b>	Module Port	
<b>Sensitivity &amp; Z:</b>		
<b>Input 1</b>	<i>Mic 1</i> = 1.5 Mv - 250 ohm	
<b>Input 2</b>	<i>Tel</i> =100 Mv - 600 ohm - Transformer Balanced	
<b>Input 3</b>	<i>Mic 3</i> = 1.5 Mv - 250 ohm - AUX 1 = 100 Mv - 47K ohm	
<b>Input 4</b>	<i>Mic 4</i> = 1.5 Mv - 250 ohm - AUX 2 = 100 Mv - 47K ohm	
<b>Input Attenuator:</b>	AUX 1 and AUX 2	
<b>Phantom Power:</b>	All Microphone Inputs by internal jumper (18 V)	
<b>Hum &amp; Noise:</b>	<i>Mic</i> -70 db, <i>Aux</i> -75 db 600 ohm Transformer balanced	
<b>Telephone Paging Input:</b>	600 ohm Transformer Balanced	
<b>EQ LINK:</b>	Preamp. out, Power Amp in with EQ Link Switch	
<b>Line Output:</b>	Line Out 600 ohm - 1.5 V loaded	
<b>Inputs/Outputs:</b>	MIX BUSS	
<b>Zone 1 Output:</b>	2 Watt Max. - 8 ohm with Control	
<b>Music on Hold Output:</b>	600 ohm-1 Volt Transformer Balanced	
<b>Zone 2 Output:</b>	2 Watt Max. - 8 ohm with Control	
<b>Main Output Impedance:</b>	8 ohm, 25 Volt and 70 Volt line	
<b>Controls:</b>		
<b>Front Panel:</b>	Input 1 Volume, Input 2 Volume, Input 3 Volume, Input 4 Volume, Module Volume, Bass and Treble	
<b>Rear Panel:</b>	AUX 1 Attenuator - AUX 2 Attenuator, VOX1 Sensitivity, VOX2 Sensitivity, MOH/ZONE 1 Level Control - ZONE 2 Level Control - VOX Sensitivity - MUTE Delay <b>Bass and Treble</b> ± 10 dB at 100 hZ and 10 KHz On - Off Switch Rear Panel	
<b>Tone Controls:</b>	<b>INPUT 3 - AUX 1</b> Input Volume	
<b>Tone By-Pass:</b>	AUX 1 and AUX 2	
<b>Remote Volume Control:</b>	AUX 1 and AUX 2	
<b>MOH Source Select:</b>	Available on all Inputs by internal Jumper	
<b>Zone 2 Source Select:</b>	Available on all Inputs by internal Jumper	
<b>VOX BUSS:</b>	Adjustable from 3 Sec to 60 Sec (rear panel control)	
<b>MUTE BUSS:</b>	M1, M2 External Contact Closure	
<b>MUTE DELAY:</b>	MUTES/UNMUTES MIC 1 only	
<b>Direct Muting:</b>	24 V DC - 250 mA Regulated	
<b>Unmuting:</b>	Optional 19" Rack Kit	
<b>Power Supply Output:</b>	Thermally Controlled	
<b>Rack Mounting:</b>	Power Surge, Overload and Thermal Protection	
<b>Internal Cooling Fan:</b>	117 Volt, 50-60 hZ	
<b>Protection:</b>	<b>DMA3060</b> = 670VA - <b>DMA3120</b> = 850VA Max.	
<b>Power Requirement:</b>	117 v - 500 W Max. Unswitched	
<b>Power Consumption:</b>	Screw Terminals, RCA Jacks	
<b>AC Accessory Outlet:</b>	Black	
<b>Terminations:</b>	Multi-color LED Signal and Clip	
<b>Housing Finish:</b>	10.75" W., 11" D., 4" H. with feet (274X280X102 mm)	
<b>Housing Finish:</b>	3.5" H (89 mm). less feet	
<b>Output Power Indicator:</b>	<b>DMA3060</b> = 16 Lbs (7.3 Kg)	
<b>Dimensions:</b>	<b>DMA3120</b> = 19 Lbs (8.7 Kg)	
<b>Net Weight:</b>		

## IMPORTANT SAFETY INSTRUCTIONS

### READ BEFORE OPERATING

*BEFORE OPERATING THE AMPLIFIER, BE SURE YOU FULLY UNDERSTAND ALL INSTRUCTIONS AND FEATURES OF THE UNIT.*

- 1) **Read these instructions carefully.**
- 2) **Keep these instructions.**
- 3) **Heed all Warnings.**
- 4) **Follow all instructions.**
- 5) **DO NOT** use this apparatus near water.
- 6) Clean **ONLY** with a damp cloth.
- 7) **DO NOT** block any of the ventilation openings. Install in accordance with the instructions provided.
- 8) **DO NOT** install near any heat sources such as radiators, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) **DO NOT** mount amplifier into a container or a closed unventilated closet while operating.
- 10) **DO NOT** place any object or accessory equipment such as Tuners, Mixers, Cassette Decks, etc. on top of the amplifier. Obstructing or closing the cabinet ventilation openings may cause overheating.
- 11) **DO NOT** defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade and or the third prong is provided for your safety. When the provided plug does not fit into your

### READ BEFORE OPERATING

outlet, consult an electrician for replacement of the obsolete outlet.

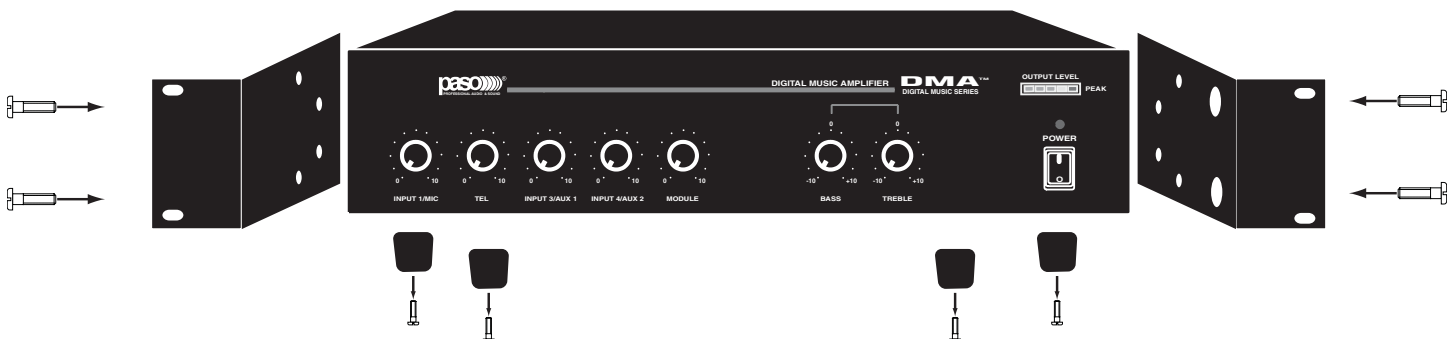
- 12) Use only the attachments and accessories specified in this manual.
- 13) If a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 14) Unplug this apparatus during lighting storms or when unused for long periods of time.
- 15) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 16) **DO NOT** replace fuses unless power cord is removed from the AC wall outlet.
- 17) **DO NOT** install accessories unless the power cord is removed from the AC wall outlet.

***TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS APPLIANCE TO WATER, RAIN OR MOISTURE***

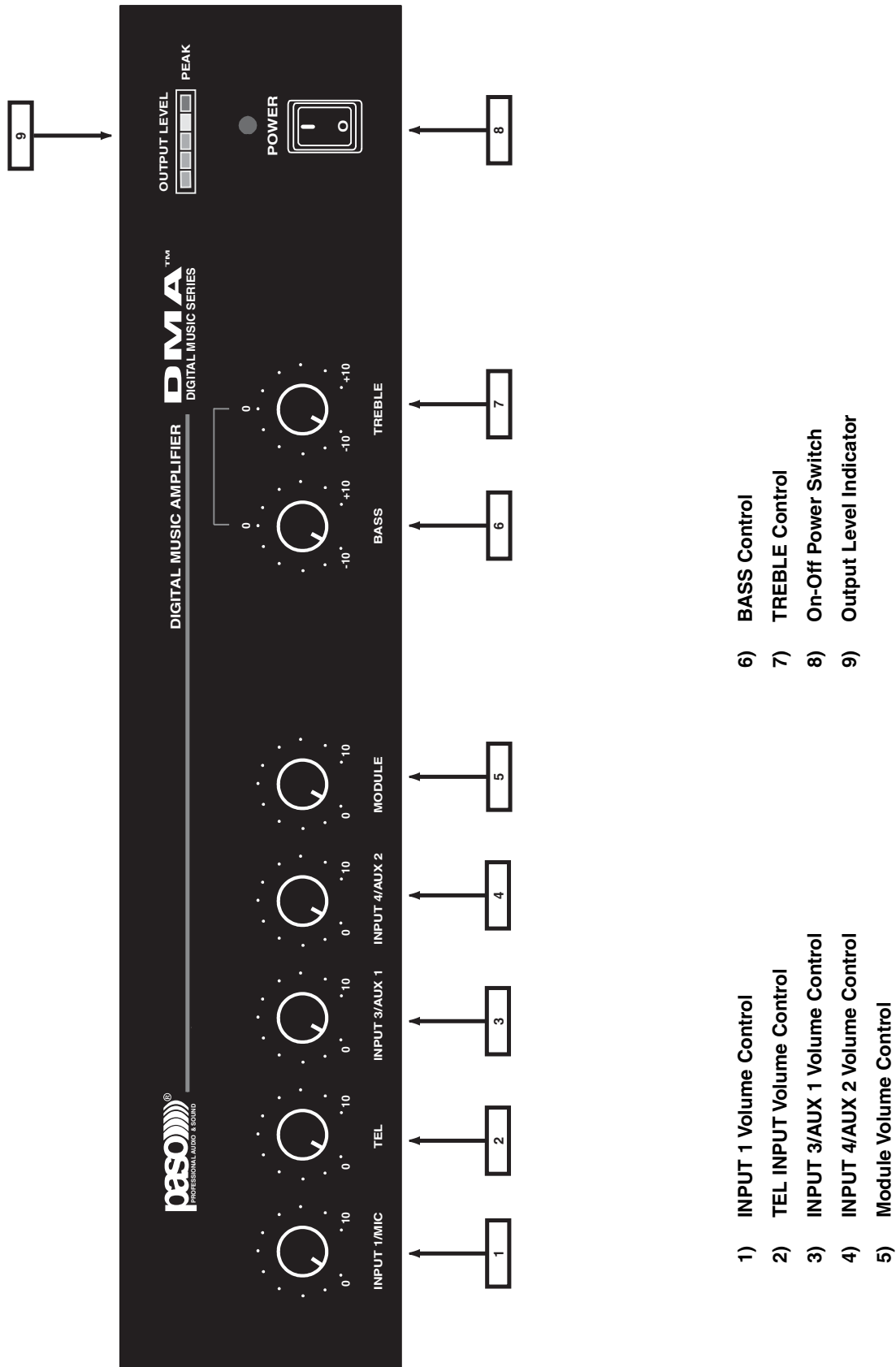
### RACK MOUNTING

- A) Procure the optional accessory Rack Mount Kit Model 27/3500.
- B) Turn amplifier up side down and remove the four rubber feet by unscrewing the four holding screws.
- C) Remove the bottom front screws on each side of the amplifier holding the amplifier cover.
- D) Install the rack kit brackets by using the self-tapping screws provided.

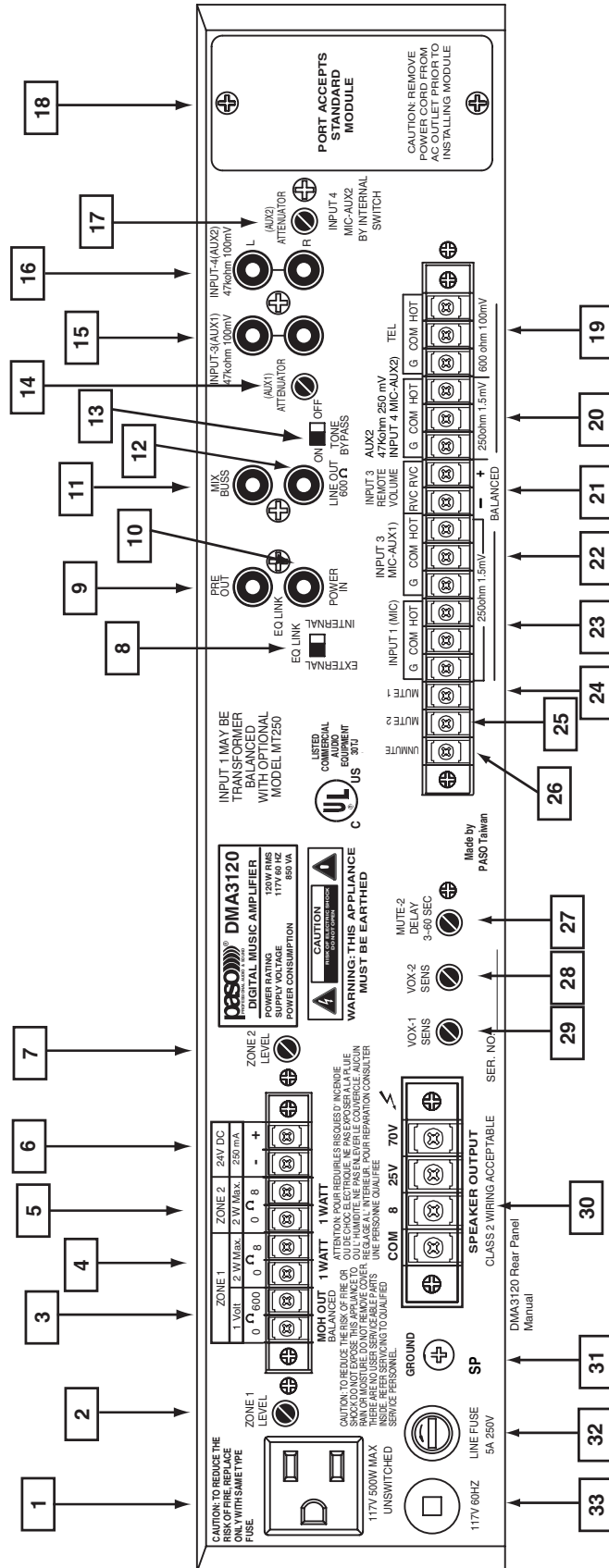
**Fig. 3 - Rack Kit Mounting**



**Fig. 4 - FRONT PANEL CONTROLS**



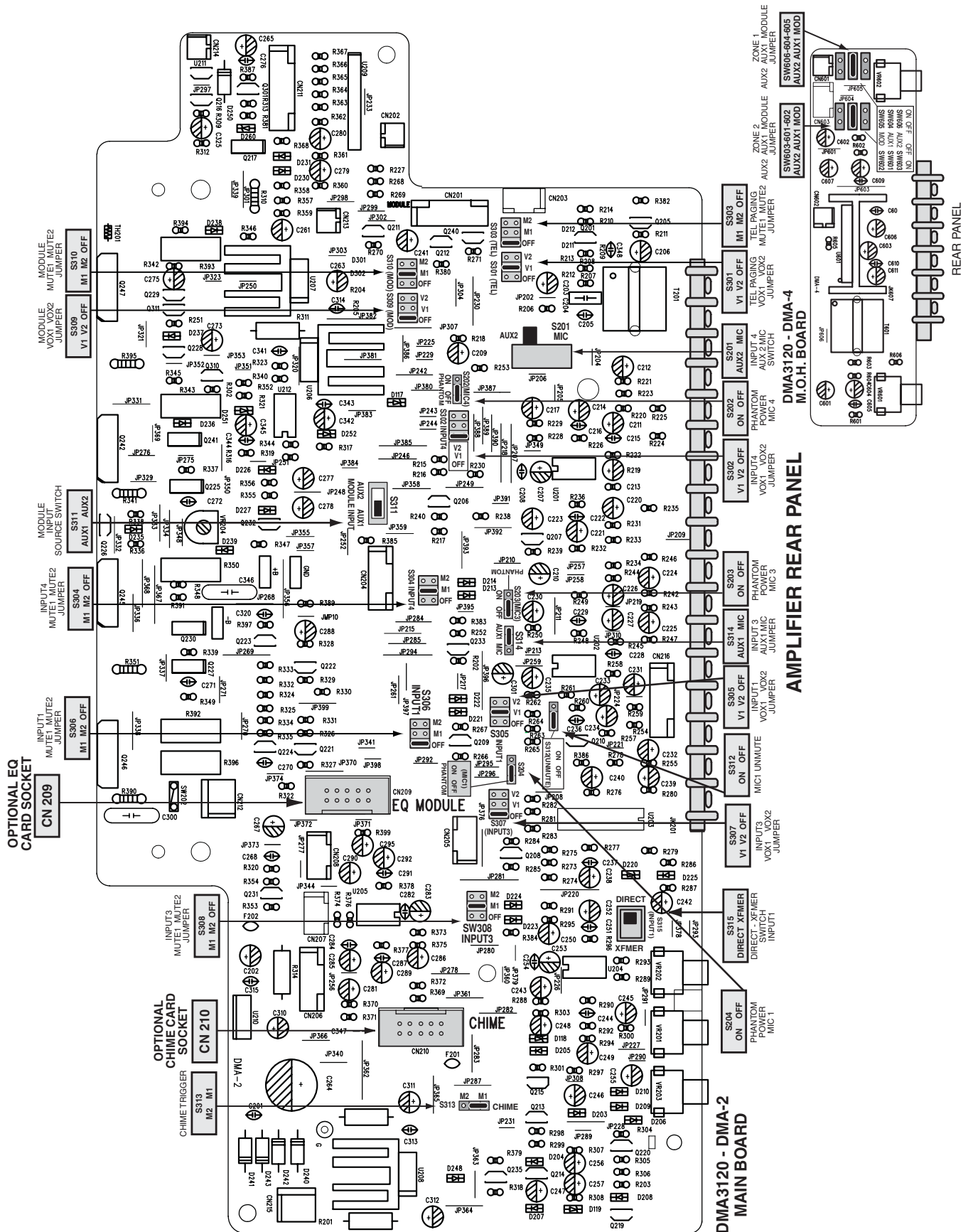
**Fig. 5- REAR PANEL INPUTS - OUTPUTS - CONTROLS**



- |   |   |
|---|---|
| 1) Unswitched AC Auxiliary Socket           | 18) Standard Module Port                    |
| 2) MOH - ZONE 1 Output Level Control        | 19) TELEPHONE PAGING BALANCED INPUT 600 Ohm |
| 3) 1 MOH - 600 ohm, 1 Volt Output           | 20) INPUT 4 - AUX 2 BALANCED INPUT          |
| 4) ZONE 1 - 8 ohm Output                    | 21) INPUT 3 Remote Volume Terminals         |
| 5) ZONE 2 - 8 ohm Output                    | 22) INPUT 3 - AUX 2 BALANCED INPUT          |
| 6) 24 Volt DC Regulated Power Supply Output | 23) INPUT 1 - MIC 1 BALANCED INPUT          |
| 7) ZONE 2 Output Level Control              | 24) MUTE 1 Terminal                         |
| 8) EQ LINK Switch                           | 25) MUTE 2 Terminal                         |
| 9) EQ LINK - PREAMP. OUT                    | 26) MIC 1 UNMUTE Terminal                   |
| 10) EQ LINK - POWER AMP IN                  | 27) MUTE TIME DELAY CONTROL                 |
| 11) MIX BUSS                                | 28) VOX 2 SENSITIVITY CONTROL               |
| 12) LINE OUT 600 Ohm                        | 29) VOX 1 SENSITIVITY CONTROL               |
| 13) TONE BYPASS - ON/OFF SWITCH             | 30) Speaker Output Terminals                |
| 14) INPUT 3 - AUX 1 Input Attenuator        | 31) Chassis Ground Screw                    |
| 15) INPUT 3 - AUX 1 - Stereo Summing Jacks  | 32) AC Line Fuse                            |
| 16) INPUT 4 - AUX 2 - Stereo Summing Jacks  | 33) AC Power Cord                           |
| 17) INPUT 4 - AUX 2 Input Attenuator        |   |

## FUNCTION SWITCHES AND JUMPERS LOCATION

**Fig. 6 - MAIN AND PREAMPLIFIER BOARD TOP VIEW**



**CAUTION ! REMOVAL OF THE AMPLIFIER COVER PRESENTS AN ELECTRICAL SHOCK HAZARD ALWAYS REMOVE THE POWER CORD FROM THE AC WALL OUTLET**

THE FOLLOWING INSTRUCTIONS REQUIRE THE REMOVAL OF THE AMPLIFIER PROTECTIVE COVER AND ARE PROVIDED FOR USE BY QUALIFIED PERSONNEL ONLY.

TO AVOID THE RISK OF ELECTRICAL SHOCK DO NOT PERFORM ANY INSTALLATION OR SERVICING UNLESS YOU ARE QUALIFIED TO DO SO. REFER INSTALLATION OR SERVICING TO QUALIFIED PERSONNEL.

## FUNCTION SWITCHES AND JUMPERS DEFAULT SETTING TABLE

JUMPER AND SWITCH ID NO.	JUMPER REFERENCE	FUNCTION DESCRIPTION	FACTORY SETTING	FACTORY SETTING
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### PREAMPLIFIER PCB JUMPERS (Main Board)

S202	INPUT 4 (MIC 4)	PHANTOM POWER ON - OFF	OFF	
S203	INPUT 3 (MIC 3)	PHANTOM POWER ON - OFF	OFF	
S204	INPUT 1 (MIC 1)	PHANTOM POWER ON - OFF	OFF	
S301	TEL INPUT	VOX 1 - VOX 2 - OFF		V1
S302	INPUT 4	VOX 1 - VOX 2 - OFF	OFF	
S307	INPUT 3	VOX 1 - VOX 2 - OFF	OFF	
S309	MODULE	VOX 1 - VOX 2 - OFF	OFF	
S305	INPUT 1 (MIC 1)	VOX 1 - VOX 2 - OFF		V1
S312	INPUT 1 (MIC 1)	UNMUTE ON - OFF	OFF	
S203	TEL INPUT	MUTE 1 - MUTE 2 - OFF	OFF	
S304	INPUT 4 (AUX 2/MIC)	MUTE 1 - MUTE 2 - OFF		M1
S308	INPUT 3 (AUX 1/MIC)	MUTE 1 - MUTE 2 - OFF		M1
S310	MODULE	MUTE 1 - MUTE 2 - OFF	OFF	
S306	INPUT 1 (MIC 1)	MUTE 1 - MUTE 2 - OFF	OFF	

### SWITCHES/JUMPERS

S201	INPUT 4	MIC 4 OR AUX 2	SWITCH AUX 2
S315	INPUT 1	XFMR/DIRECT	SWITCH DIRECT
S314	INPUT 3 -	MIC 3 OR AUX 1	JUMPER AUX 1
S311	MODULE INPUT -	AUX 1 - AUX 2	SWITCH AUX 1

### MOH/ZONE 1 BOARD JUMPERS

S604-605-606	MOH/ZONE 1 INPUT	AUX 1 - AUX 2	AUX 1
S601-602-603	ZONE 2 INPUT	AUX 1 - AUX 2	AUX 1

### REAR PANEL SWITCHES

S102	EQ LINK	Inserts External EQ between Preamp Out and Power Amp Input	INTERNAL
S101	TONE BYPASS	Defeats Front Panel Bass & Treble Controls	SWITCH OFF

## CUSTOMER SERVICE

### REPLACEMENT PARTS

#### REPLACEMENT PARTS

Please provide complete information when you request replacement parts from either the Factory or a Paso Authorized Distributor. Be certain to include the Part Number and Description as it appears on the parts list, the Model Number of the unit and if possible the Serial Number and the date of purchase of the unit. Replacement parts inventory is maintained specifically to repair Paso products. Part sales for other reasons or applications will be declined.

#### ORDERING FROM THE FACTORY

Print all information on a purchase order form and mail to:  
PASO SOUND PRODUCTS, INC.  
4750 Goer Drive - Building F  
CHARLESTON, SC 29406

Be sure to include the following:

- Paso part number
- Part description
- Quantity required
- Model number of the unit
- Serial number of the unit
- Your payment or your authorization for COD shipment for parts not covered by the Warranty or if your company has a current account with the factory

*RETAIN ORIGINAL IN WARRANTY PARTS UNTIL YOU RECEIVE REPLACEMENTS. PARTS THAT SHOULD BE RETURNED TO THE FACTORY WILL BE LISTED ON YOUR PACKING SLIP.*

For your convenience replacement parts are also available through Paso Authorized Distributors and Dealers nation wide. Obtain a location list directly from the Factory or your regional Paso Representative.

#### TECHNICAL CONSULTATION

- Need help with your installation ?
- Need help with the operation of the unit ?
- Need help with a repair ?

Call or write for assistance. You will find our Technical Dept. eager to help or assist you with any technical problem you may have encountered except "Customizing" for a unique application.

The effectiveness of our consultation service depends on the accuracy of the information you furnish.

Be sure to tell us:

- The Model and Serial number of the unit
- The date of purchase
- An exact description of the difficulty
- All you have done in attempting to correct the problem

Call our toll-free phone number:

**1-800 231 3034**

### REPAIR SERVICE

#### REPAIR SERVICE

Repair service for out of warranty Paso products may be obtained from your local Paso distributor or any other qualified repair station.

In warranty repairs must be returned to the Factory. Prior authorization must be obtained from the Factory. Products received without authorization will be refused by our Receiving Dept..

#### IN WARRANTY REPAIR SERVICE

Call or write the Factory to obtain an authorization to return the product for repairs.

Pack the equipment in the original carton or in a strong carton with at least THREE INCHES of resilient packing material on all sides, top and bottom. Seal the carton with reinforced tape and mark it FRAGILE on at least two sides. Remember, the Carrier will not accept liability for shipping damages if the unit is improperly packed.

*EQUIPMENT RECEIVED IN DAMAGED CONDITION DUE TO POOR PACKING WILL BE REFUSED AND THE WARRANTY COVERAGE IS AUTOMATICALLY VOIDED.*

The Paso Sound Limited Warranty provides:

The examination of the returned product must disclose in our judgement, a manufacturing defect. The warranty does not extend to any product that has been subject to misuse, neglect, accident, improper installation or where the serial number of the product has been removed or defaced.

Ship via insured prepaid United Parcel Service or Parcel Post to:

#### PASO SOUND PRODUCTS, INC.

4750 Goer Drive - Building F  
CHARLESTON, SC 29406

#### Attn. SERVICE DEPARTMENT

The equipment will be returned freight prepaid after repairs.

Be sure to include the following:

- Your name and address
- Date of purchase and copy of invoice
- A brief description of the difficulty
- A return address shipping label
- 

#### OUT OF WARRANTY REPAIR SERVICE

Follow return instructions as per in warranty repair service. Prior to performing all necessary repairs, you will be advised of the charges and at that time a written authorization by you will be required including authorization to return the equipment COD for the service and shipping charges. This will avoid unnecessary delays in returning the equipment to you.