

Installation Manual and Operating Instructions



**3 Channel - VOX -MOH - Phone
and VoIP Interface**

**MD35M - 35 WATTS
MD60M - 60 WATTS
MD120M - 120 WATTS**

IMPORTANT NOTE: THIS OPERATING MANUAL IS PROVIDED AS AN INSTALLATION AND AS AN OPERATING AID. MEG CORPORATION and MEM AUDIO 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



REV. 1.1

MD35M SERIES

DESCRIPTION AND APPLICATIONS

- 3 Channel Inputs
- Wide Frequency Response
 - Very Low Distortion
- Balanced Microphone Input
- Phantom Power on MIC Input with Selector
- Balanced Telephone Paging Input
- VoIP Telephone paging Input
- Tel and Mic Vox Sensitivity Control
- Auxiliary Input With Stereo Summing
- Auxiliary Input Gain
- Independent Input Controls
 - Bass and Treble Controls
- VOX - Voice Activated Muting
- Direct Muting or Unmuting
- 12 Volt Accessory Power Output
- 600 ohm or 10K (VoIP) MOH Output
 - with Separate Output Level Control
- 8 ohm, 25 Volt & 70 Volt
 - Output Impedance
- Rack Mounting with Optional Kits

SPECIFICATIONS

Power Output:	35/ 60/ 120 Watts RMS
Distortion:	Less than 0.5% THD
Frequency Response:	20 - 20,000 Hz \pm 2 db
Inputs:	
Input 1	Auxiliary
Input 2	Microphone Balanced
Input 3	Telephone Transformer Balanced
Sensitivity & Z:	
Input 1	<i>Mic</i> =1 Mv - 250 ohm balanced
Input 2*	<i>Tel</i> =100 Mv - 600 ohm balanced
Input 3	<i>Aux</i> =200 Mv - 47K ohm
*	<i>VoIP</i> 50K ohm 100 Mv unbalanced
Hum & Noise:	<i>Mic</i> -70 db, <i>Aux</i> -75 db
Telephone Input:	600 ohm Transformer balanced
Music on Hold Output:	600 ohm-1 Volt Transf. balanced VoIP 10K - 1 Volt unbalanced
Output Impedance:	8 ohm, 25 Volt and 70 Volt line
Controls:	
Front Panel:	AUX Volume, MIC Volume, Telpage Volume, Bass, Treble
Rear Panel:	AUX Input Gain, MOH Level MIC/ TEL Vox Sensitivity
Phantom Power:	On MIC Input w/internal jumper
MOH Source:	AUX Input
Tone Control Action:	+/-10 db at 100 Hz and 10 K hz
VOX:	Voice Activated Muting MIC/TEL mutes AUX Input External Contacts
Direct Muting:	
MIC Unmuting:	Mutes or Unmutes MIC Input only
Rack Mounting:	Optional Rack Kits
Power Requirement:	120 Volt, 50-60 Hz
Power Consumption:	110/ 230/ 600 VA
Terminations:	Phoenix Connectors, RCA Jacks
Housing Finish:	Black
Dimensions:	12.5"W., 8.5"D., 1.75"H. (317.5x215.9x44.45mm)
Net Weight:	10.95 Lbs (5.0 Kg)

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 MEM WARRANTY.

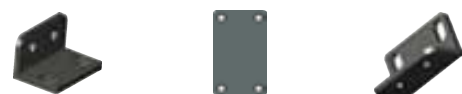
ACCESSORIES

- MRK 1 - Standard 19" Rack Mounting Kit. Black finish. Complete with hardware
- MRK 2 - Dual Amplifier 19" Rack Mounting Kit. Black finish. Complete with hardware

MRK1 Rack Kit



MRK2 Rack Kit



IMPORTANT SAFETY INSTRUCTIONS

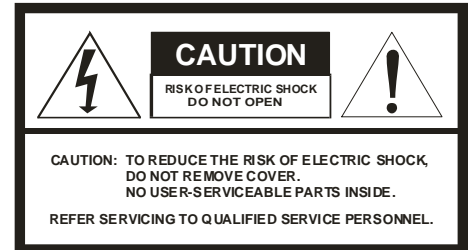
READ BEFORE OPERATING

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

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



CAUTION

- 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 outlet, consult a certified electrician for replacement of the obsolete outlet.
- 12) Use only the attachments and accessories specified in this manual.



13) Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a person, and serious damage to the product. If a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

14) Unplug this apparatus during lightning storms or when unused for long periods of time.

15) **Refer all servicing to qualified service personnel only.** 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.

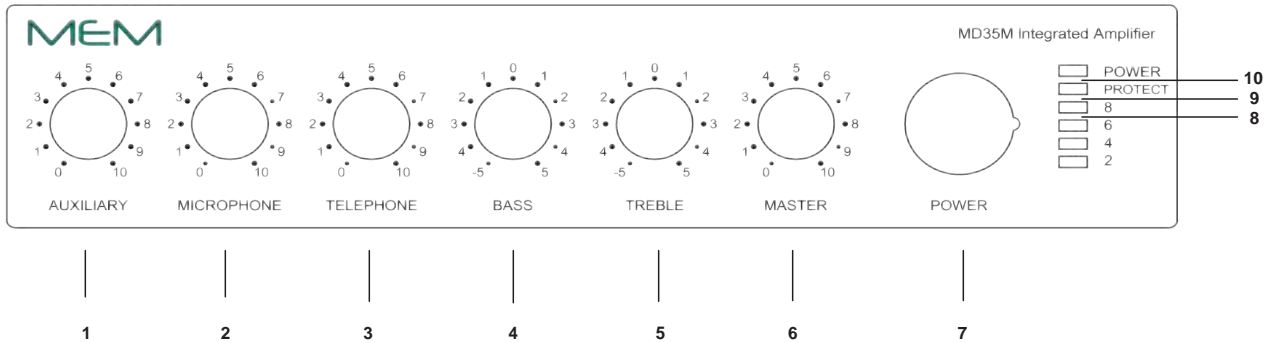
17) **DO NOT** install accessories unless the power cord is removed from the AC wall outlet.

WARNING

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

FRONT PANEL CONTROLS

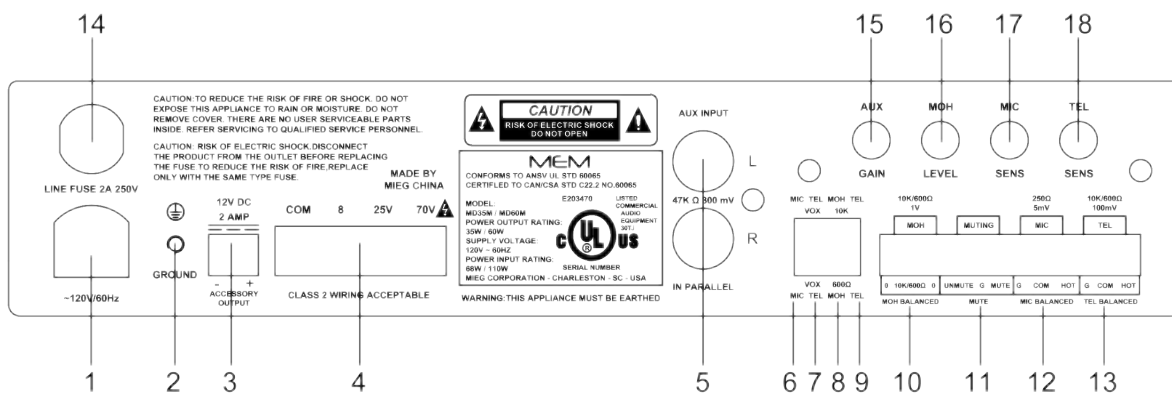
Fig. 4 - Front Panel Controls



- | | | | |
|------------------------------|--------------------------|---------------------------|---------------------|
| 1) AUXILIARY Volume Control | 4) BASS Control | 7) POWER Switch | 10) POWER Indicator |
| 2) MICROPHONE Volume Control | 5) TREBLE Control | 8) SIGNAL LEVEL Indicator | |
| 3) TELEPHONE Volume Control | 6) MASTER Volume Control | 9) PROTECT Indicator | |

REAR PANEL INPUTS - OUTPUTS

Fig. 4A - Rear Panel Inputs and Outputs

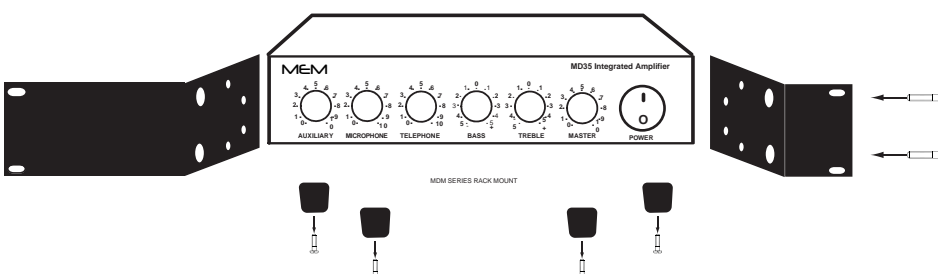


- | | | |
|--------------------------------|----------------------------------|-------------------------|
| 1) AC Power Cord | 8) MOH 10K/ 600 Ohm (VoIP) | 15) AUX Input Gain |
| 2) Chassis Ground Screw | 9) Tel Input 10K/ 600 Ohm (VoIP) | 16) MOH Output Level |
| 3) 12 Volt Accessory Power Tap | 10) MOH Balanced Output | 17) MIC Vox Sensitivity |
| 4) Speaker Output | 11) Unmute/ Mute Terminal | 18) TEL Vox Sensitivity |
| 5) AUX Input | 12) Microphone Balanced Input | |
| 6) Mic Vox Circuit Off/On | 13) Telephone Balanced Input | |
| 7) Tel Vox Circuit Off/On | 14) AC Line Fuse | |

RACK MOUNTING

Fig. 4B - MRK2 SXS Rack Kit Mounting

- Procure the optional accessory MRK1 Rack Mount Kit. Fig. 4B Optional MRK2 side by side kit.
- Turn amplifier up side down and remove the four rubber feet by removing the four center pins.
- Remove three screws on each side of the amplifier holding the amplifier cover.
- Install the rack kit brackets by using the self-tapping screws provided.



INSTALLATION AND WIRING

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

THE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED PERSONNEL ONLY. TO AVOID ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.

TROUBLESHOOTING CHART

This Troubleshooting Chart is provided to the installer as an aid in locating and correcting possible problems that may arise during installation or after use. This chart should only be used by qualified personnel trained in repair and maintenance of electrical apparatus.

PROBLEM SYMPTOMS	PROBABLE CAUSE
AMPLIFIER IS COMPLETELY DEAD. POWER INDICATOR DOES NOT GLOW.	<ol style="list-style-type: none"> 1) NO VOLTAGE PRESENT AT AC OUTLET. 2) AC LINE FUSE OPEN. 3) DEFECTIVE OR OPEN POWER CORD. 4) POWER SWITCH INOPERATIVE. 5) POWER TRANSFORMER WINDING OPEN. 6) POWER INDICATOR DEFECTIVE OR DISCONNECTED.
POWER INDICATOR GLOWS BUT THERE IS NO OUTPUT FROM THE AMPLIFIER.	<ol style="list-style-type: none"> 1) INPUT CONTROLS SETTING NOT ADJUSTED PROPERLY. 2) SPEAKER WIRES SHORTED. 3) SPEAKER(S) LINE INTERRUPTED. 4) MICROPHONE OR PROGRAM SOURCE INTERRUPTED.
LOUD HUM OR CRACKLING SOUND FROM THE SPEAKERS.	<ol style="list-style-type: none"> 1) MICROPHONE INPUTS INCORRECTLY WIRED. 2) OPEN GROUND OR SHIELD IN INPUT CABLES. 3) SPEAKER TERMINALS SHORTED TO CHASSIS GROUND.
OUTPUT LEVEL CHANGES CYCLICALLY SOUND IS INTERMITTENT. SOUND IS DISTORTED AND OVERDRIVEN.	<ol style="list-style-type: none"> 1) SPEAKER LINE SHORTED. 2) ONE OR MORE SPEAKER OR LINE TRANSFORMER SHORTED. 3) OUTPUT IMPEDANCE LOAD MISMATCHED WITH AMPLIFIER OUTPUT IMPEDANCE SETTING (OVERLOAD). 4) IN CONSTANT VOLTAGE SYSTEMS (25-70 V) THE TOTAL LOAD POWER REQUIREMENT EXCEEDS THE AMPLIFIER POWER RATING (OVERLOAD). 5) EXCESSIVELY HIGH SETTING OF ONE OR MORE VOLUME CONTROLS.
ACOUSTIC FEEDBACK OR LOUD SQUEAL OCCURS WHEN AMPLIFIER IS TURNED ON.	<ol style="list-style-type: none"> 1) MICROPHONE IS LOCATED TOO CLOSE OR IS FACING SPEAKERS. 2) VOLUME CONTROL SETTING TOO HIGH. 3) TONE CONTROLS SHOULD BE SET IN THE CUT RANGE.

AC LINE FUSE REPLACEMENT

CAUTION: TO REDUCE THE RISK OF FIRE REPLACE ONLY WITH THE SAME TYPE OF FUSE.

Procure a Fuse Type: GMA UL

Turn amplifier power switch to the Off position. Remove power cord from AC outlet. Insert the tip of a cross screwdriver inside the Fuse Holder Cross screw, turn screw counterclockwise and remove the fuse by pulling outwardly. Replace Fuse in fuse holder.

CUSTOMER SERVICE

REPLACEMENT PARTS

REPLACEMENT PARTS

Please provide complete information when you request replacement parts from either the Factory or a MEM 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 MEM 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:
MIEG CORPORATION
2300 CLEMENTS FERRY ROAD, SUITE 202
CHARLESTON, SC 29492

Be sure to include the following:

- MEM 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 MEM Authorized Distributors and Dealers nation wide. Obtain a location list directly from the Factory or your regional MEM 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 problem
- All you have done in attempting to correct the problem

REPAIR SERVICE

REPAIR SERVICE

Repair service for out of warranty MEM products may be obtained from your local MEM 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 Department.

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 MEM 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 via UPS, FedEx, DHL or USPS to:

MIEG CORPORATION
2300 CLEMENTS FERRY ROAD, SUITE 202
CHARLESTON, SC 29492
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 problem
- 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.