Installation Manual
and Operating Instructions

7 Channel - 3 Zone - Dual VOX -
Dual Mute - MOH - Vox Relay -
Module Port - Phone Interface

DMS 3040 - 40 Watt RMS
DMS 3080 - 80 Watt RMS
DMS 3120 - 120 Watt RMS

IMPORTANT NOTE: THIS OPERATING MANUAL IS PROVIDED AS AN INSTALLATION AND
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RESPONSIBILITY AS TO ITS ACCURACY AND SHALL NOT BE LIABLE IN TORT OR CON-
TRACT 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
### DESCRIPTION AND APPLICATIONS

- High Performance - High Reliability Design
- Wide Frequency Response - Very Low Distortion
- 7 Channel Inputs - 3 Zone Outputs
- 5 Balanced Microphone Inputs
- Phantom Power on all MIC Inputs
- MIC 4/AUX 1 and MIC 5/AUX 2 Inputs
- With Stereo Summing
- AUX 1 and AUX 2 Inputs Attenuator
- 600 ohm Transformer Balanced
- Telephone Paging Input
- MIX Buss and 600 ohm Line Output
- Independent Input Controls
- Rear Panel Port: Accepts Standard Module
- Independent Module Level Control
- AUX 1 and Master Remote Volume Controls
- External EQ Link
- Tone by-pass and EQ Link switches
- Pre-EQ Subwoofer Output
- Post-EQ Subwoofer Output
- Addressable Dual VOX Buss
- Voice Activated Muting
- VOX Variable Time Delay Function
- Addressable Dual MUTE Buss
- Direct Mutting and Unmutting
- 600 ohm and 8 ohm 1 Watt
- Music on Hold Amplifier
- MOH Amplifier Source Selector
- Zone 2 and 3, 1 Watt - 8 ohm Output with Separate Control
- NO/NC VOX Operated Relay
- 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

<table>
<thead>
<tr>
<th>Power Output:</th>
<th>DMS3040</th>
<th>40 Watt RMS</th>
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<tbody>
<tr>
<td>DMS3080</td>
<td>80 Watt RMS</td>
<td></td>
</tr>
<tr>
<td>DMS3120</td>
<td>120 Watt RMS</td>
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</tr>
<tr>
<td>Distortion:</td>
<td>Less than 0.5% THD</td>
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</tr>
<tr>
<td>Frequency Response:</td>
<td>20 - 20,000 Hz ± 1 db</td>
<td></td>
</tr>
<tr>
<td>Inputs:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input 1</td>
<td>Microphone 1 Balanced</td>
<td></td>
</tr>
<tr>
<td>Input 2</td>
<td>Microphone 2 Balanced</td>
<td></td>
</tr>
<tr>
<td>Input 3</td>
<td>Microphone 3 Balanced</td>
<td></td>
</tr>
<tr>
<td>Input 4</td>
<td>Microphone 4 Balanced - AUX 1 (Stereo Summing)</td>
<td></td>
</tr>
<tr>
<td>Input 5</td>
<td>Microphone 5 Balanced - AUX 2 (Stereo Summing)</td>
<td></td>
</tr>
<tr>
<td>Input 6</td>
<td>Telephone Interface - Transformer Balanced</td>
<td></td>
</tr>
<tr>
<td>Input 7</td>
<td>Module Port</td>
<td></td>
</tr>
<tr>
<td>Sensitivity &amp; Z:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input 1</td>
<td>Mic 1 = 1.5 Mv - 250 ohm</td>
<td></td>
</tr>
<tr>
<td>Input 2</td>
<td>Mic 2 = 1.5 Mv - 250 ohm</td>
<td></td>
</tr>
<tr>
<td>Input 3</td>
<td>Mic 3 = 1.5 Mv - 250 ohm</td>
<td></td>
</tr>
<tr>
<td>Input 4</td>
<td>Mic 4 = 1.5 Mv - 250 ohm - AUX 1 = 100 Mv - 47K ohm</td>
<td></td>
</tr>
<tr>
<td>Input 5</td>
<td>Mic 5 = 1.5 Mv - 250 ohm - AUX 2 = 100 Mv - 47K ohm</td>
<td></td>
</tr>
<tr>
<td>Input 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attenuator:</td>
<td>Module = 1 V - 47k ohm</td>
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<tr>
<td>Attenuator:</td>
<td>Variable (rear panel control)</td>
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<tr>
<td>Power Supply Output:</td>
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<td></td>
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<tr>
<td>Auto VOX Relay:</td>
<td>NO/NC Contacts - VOX activated - Contacts Rating = 30 VDC - 7 A</td>
<td></td>
</tr>
<tr>
<td>Rack Mounting:</td>
<td>Optional Model 27/3501 - 19” Rack Kit</td>
<td></td>
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<tr>
<td>Internal Cooling Fan:</td>
<td>3’ Thermally Controlled - Model DMS3120 only</td>
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<tr>
<td>Power Requirement:</td>
<td>117 Volt, 50-60 Hz</td>
<td></td>
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<tr>
<td>Power Consumption:</td>
<td>DMS3040 = 630 VA - DMS3080 = 750 VA - DMS3120 = 850VA Max.</td>
<td></td>
</tr>
<tr>
<td>AC Accessory Outlet:</td>
<td>500 W Max. Unswitched</td>
<td></td>
</tr>
<tr>
<td>Power:</td>
<td>Screw Terminals, RCA Jacks</td>
<td></td>
</tr>
<tr>
<td>Housing Finish:</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>Output Power Indicator:</td>
<td>Multi-color LED (front panel)</td>
<td></td>
</tr>
<tr>
<td>Dimensions:</td>
<td>19” W., 12” D., 4” H. with feet (482X305X102 mm) 3.5” H (89 mm). less feet</td>
<td></td>
</tr>
<tr>
<td>Net Weight:</td>
<td>DMS3040 = 16 Lbs (8 Kg)</td>
<td></td>
</tr>
<tr>
<td>DMS3080 = 19 Lbs (8.5 Kg)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DMS3120 = 22 Lbs (11 Kg)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
RACK MOUNTING

A) Procure the optional accessory Rack Mount Kit Model 27/3501.
B) Turn amplifier up side down and remove the four rubber feet by unscrewing the four holding screws.
C) Remove two 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

1) INPUT 1 Volume Control
2) INPUT 2 Volume Control
3) INPUT 3 Volume Control
4) INPUT 4/AUX 1 Volume Control
5) INPUT 5/AUX 2 Volume Control
6) Input Module Level Control
7) BASS Control
8) TREBLE Control
9) On-Off Power Switch
10) Output Level Meter
ATTENTION: AFIN DE REDUIRE LE RISQUE D'INCENDIE REMPLACER SEUL PAR UN FUSIBLE DE MEME TYPE.

CLASS 2 WIRING ACCEPTABLE

COM 8 25V 70V

SPEAKER OUTPUT

GROUND

LINE FUSE

5A 250V

117V 500W MAX

117V 60HZ

LEVEL LEVEL

ATTENUATOR ATTENUATOR

EQ LINK

VOX-1

UNSWITCHED

0 600

ZONE 2 ZONE 1

24V DC 250 mA

VOX-2 MUTE-2

SENS DELAY IN OUT

TELEPHONE Paging Output Level Control

G COM HOT NC C NO +- MIC1 G M2 M1 RVC

VOX RELAY GROUND UNMUTE MUTE 1 MUTE 2

47kohm 100mV (AUX1) (AUX2)

LEVEL

TEL OUTPUT ZONE 2 ZONE 1

INPUT-4 (AUX1) BALANCED

PRE OUT POWER IN

SUB OUT PRE EQ SUB OUT POST EQ TONE BYPASS

POWER RATING

SUPPLY VOLTAGE 120 W RMS

POWER CONSUMPTION 117V 60 HZ 850 VA

DMS3040/3080/3120 LISTED COMMERCIAL AUDIO EQUIPMENT 30TJ CU S

MIX BUSS LINE OUT 600

PRE OUT POWER IN

SUB OUT PRE EQ SUB OUT POST EQ TONE BYPASS

POWER RATING

SUPPLY VOLTAGE 120 W RMS

POWER CONSUMPTION 117V 60 HZ 850 VA

DMS3040/3080/3120 LISTED COMMERCIAL AUDIO EQUIPMENT 30TJ CU S

MIX BUSS LINE OUT 600
Fig. 6 - MAIN PCB AND MOH BOARD TOP VIEW

FUNCTION SWITCHES AND JUMPERS LOCATION

- **SW215**
  - INPUT 1
  - V2 V1 OFF

- **SW220**
  - INPUT 1
  - M2 M1 OFF

- **SW201 (MIC1)**
  - ON    OFF
  - V2 V1 OFF

- **SW210**
  - INPUT 2
  - SW219
    - INPUT 2
    - M2 M1 OFF
  - V2 V1 OFF

- **SW211**
  - INPUT 3
  - SW218
    - INPUT 3
    - M2 M1 OFF
  - V2 V1 OFF

- **T204**
  - IT - 5000

- **SW203 (MIC3)**
  - ON    OFF

- **SW202 (MIC2)**
  - ON    OFF

- **SW204 (MIC4)**
  - ON    OFF

- **SW207 (MIC5)**
  - ON    OFF

- **SW212**
  - SW217
    - (INPUT4/AUX1)
    - M2 M1 OFF
  - V2 V1 OFF

- **SW213 (INPUT5/AUX2)**
  - SW223
    - INPUT5/AUX2
    - M2 M1 OFF

- **SW214**
  - TEL
  - V2 V1 OFF

- **SW216**
  - TEL
  - M2 M1 OFF

- **SW206**
  - (VOX RELAY)
  - M2    M1

- **SW205**
  - (UNMUTE)
  - ON    OFF

- **SW227**
  - (CHIME TRIGER)
  - M2    M1

- **SW208**
  - INPUT 5
  - AUX 2    MIC

- **SW229**
  - AUX 2    MIC5 (INPUT5)

- **SW228**
  - AUX 1    MIC4

- **SW209**
  - (MODULE)
  - AUX 2    AUX 1

- **ZONE 1**
  - SW702
    - MUTE1  MUTE2
    - JUMPER
  - V1  V2  OFF

- **ZONE 2**
  - SW701
    - AUX 2    AUX 1    MODULE
    - JUMPER

- **DMS3120 - 7**
  - M.O.H. BOARD

- **OPTIONAL CHIME CARD SOCKET CN 213**

- **REV - 0**

- **DMS3120 - 1**
  - MAIN BOARD

- **DIGITAL MUSIC AMPLIFIERS**
  - PROFESSIONAL AUDIO & SOUND
  - DIGITAL MUSIC SERIES(TM)
### Function Switches and Jumpers Default Setting Table

<table>
<thead>
<tr>
<th>Jumper and Switch ID No.</th>
<th>Jumper Reference</th>
<th>Function Description</th>
<th>Factory Setting</th>
<th>Factory Setting</th>
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<tr>
<td><strong>Main PCB Jumpers</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>SW201</td>
<td>INPUT 1</td>
<td>PHANTOM POWER ON - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW202</td>
<td>INPUT 2</td>
<td>PHANTOM POWER ON - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW203</td>
<td>INPUT 3</td>
<td>PHANTOM POWER ON - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW204</td>
<td>INPUT 4</td>
<td>PHANTOM POWER ON - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW205</td>
<td>INPUT 1 (MIC 1)</td>
<td>UNMUTE ON - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW206</td>
<td>VOX RELAY</td>
<td></td>
<td>M1</td>
<td>M1</td>
</tr>
<tr>
<td>SW207</td>
<td>INPUT 5</td>
<td>PHANTOM POWER ON - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW210</td>
<td>INPUT 2</td>
<td>VOX 1 - VOX 2 - OFF</td>
<td>OFF</td>
<td></td>
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<tr>
<td>SW211</td>
<td>INPUT 3</td>
<td>VOX 1 - VOX 2 - OFF</td>
<td>OFF</td>
<td></td>
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<tr>
<td>SW212</td>
<td>INPUT 4</td>
<td>VOX 1 - VOX 2 - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW213</td>
<td>INPUT 5</td>
<td>VOX 1 - VOX 2 - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW214</td>
<td>TEL IN</td>
<td>VOX 1 - VOX 2 - OFF</td>
<td>V1</td>
<td>V1</td>
</tr>
<tr>
<td>SW215</td>
<td>INPUT 1</td>
<td>VOX 1 - VOX 2 - OFF</td>
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<td></td>
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<tr>
<td>SW216</td>
<td>TEL IN</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
<td>OFF</td>
<td></td>
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<tr>
<td>SW217</td>
<td>INPUT 4/AUX 1</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
<td>OFF</td>
<td>M1</td>
</tr>
<tr>
<td>SW218</td>
<td>INPUT 3</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
<td>OFF</td>
<td></td>
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<tr>
<td>SW219</td>
<td>INPUT 2</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
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<tr>
<td>SW220</td>
<td>INPUT 1</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
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<tr>
<td>SW221</td>
<td>MODULE</td>
<td>VOX 1 - VOX 2 - OFF</td>
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<tr>
<td>SW222</td>
<td>MODULE</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
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<td>SW223</td>
<td>INPUT 5/AUX 2</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
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<td>M1</td>
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<td>SW227</td>
<td>CHIME TRIGGER</td>
<td>MUTE 1 - MUTE 2</td>
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<td><strong>Switches</strong></td>
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<td>SW208</td>
<td>INPUT 5</td>
<td>MIC 5 OR AUX 2</td>
<td>SWITCH AUX 2</td>
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<tr>
<td>SW209</td>
<td>MODULE IN SOURCE</td>
<td>AUX 1 OR AUX 2</td>
<td>SWITCH AUX 1</td>
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<tr>
<td>SW228</td>
<td>INPUT 4</td>
<td>MIC 4 OR AUX 1</td>
<td>SWITCH AUX 1</td>
<td></td>
</tr>
<tr>
<td>SW229</td>
<td>INPUT 5</td>
<td>MIC 5 OR AUX 2</td>
<td>SWITCH AUX 2</td>
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<td><strong>MOH Board Jumpers</strong></td>
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<tr>
<td>SW701</td>
<td>ZONE 2 INPUT SOURCE</td>
<td>AUX 1 - AUX 2 - MODULE</td>
<td>AUX 1</td>
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<tr>
<td>SW702</td>
<td>ZONE 1 INPUT SOURCE</td>
<td>AUX 1 - AUX 2 - MODULE</td>
<td>AUX 1</td>
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<td><strong>Rear Panel Switches</strong></td>
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<tr>
<td>SW301</td>
<td>TONE BYPASS</td>
<td>Defeats Front Panel Bass &amp; Treble</td>
<td>SWITCH OFF</td>
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<tr>
<td>SW302</td>
<td>EQ LINK</td>
<td>Inserts External EQ between Preamp out and Power Amp Input</td>
<td>SWITCH OUT</td>
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</table>
UNDERSTANDING THE INPUT FUNCTIONS

DUAL VOX AND DUAL MUTE - The Amplifier provides two independent VOX (V1 & V2) and two MUTE (M1 & M2) SYSTEMS.

FUNCTION SOCKETS - EACH INPUT IS PROVIDED WITH A VOX (V1 & V2) AND A MUTE (M1 & M2) SOCKET.

INPUTS VOX AND MUTE FUNCTION - All Inputs including the Module provide 2 - VOX SEND and 2 MUTE RECEIVE functions. The VOX and MUTE functions are SWITCHED-ON, on each Input, by Internal Jumpers provided for each Input. Two VOX BUSS SEND (V1 & V2) and two MUTE BUSS RECEIVE (M1 & M2) can be independently or simultaneously SWITCHED-ON to suit the application requirement.

Setting the VOX and MUTE Jumpers

JUMPER SETTINGS - The VOX and MUTE Functions are SWITCHED-ON or OFF by setting the JUMPERS on the VOX (A) and MUTE (B) SOCKET. See Fig. 8A.

The SOCKETS are located on the Main PCB inside the Amplifier as shown on the SWITCHES and JUMPERS LOCATION DIAGRAM in this Manual. Each Socket is identified by an ID NUMBER and the FUNCTION and DEFAULT settings are listed on the FUNCTION SWITCHES and JUMPERS DEFAULT SETTING TABLE in this Manual.

TO SET: Lift the Jumper and reset as required. making sure that the JUMPER is properly positioned over the two shorting pins.

The VOX JUMPER has three positions: OFF, V1 and V2
The MUTE JUMPER has three positions: OFF, M1 and M2

Fig. 8A - VOX and MUTE Sockets

Setting More Than One Function

More than one JUMPER may be used on a VOX SOCKET as shown below. In this example both the VOX 1 and VOX 2 functions are SWITCHED-ON when the Input is activated. For this purpose additional JUMPERS are packed with each Amplifier.

Fig. 8B - Any Input VOX 1 and MUTE 2 Activated

NOTE: BE SURE NOT TO SET BOTH THE VOX AND CORRESPONDING MUTE ON THE SAME INPUT OR THE INPUT WILL MUTE ITSELF WHEN ACTIVATED.

EXAMPLE: INPUT 1 - V 1 and M 1 BOTH ON.
EXAMPLE 9

EXAMPLE 9A

EXAMPLE 9B

EXAMPLE 9 - INPUT 1 (MIC 1) mutes INPUT 4/AUX 1. When the Microphone is activated the Music on AUX 1 is muted.

EXAMPLE 9A - INPUT 1 (MIC 1) and TEL IN (Phone Paging) both mute INPUT 4/AUX 1. When the Microphone or the Phone Paging are activated the Music on AUX 1 is muted. The Microphone has priority over the Phone Paging. When MIC 1 is activated both the Phone Paging and the Music on AUX 1 are muted.

EXAMPLE 9B - INPUT 1 (MIC 1) mutes INPUT 4/AUX 1 and INPUT 5/AUX 2. INPUT 4 (Jukebox) mutes INPUT 5 (Sat. Rcvr). When the Jukebox is turned-On the Background Music on AUX 2 is muted. MUTE 2 DELAY (Reference 31) Control is provided. The Microphone Paging has priority over the Background Music and the Jukebox.
INPUT 1 SETTING AS A MICROPHONE INPUT

MICROPHONE TYPE
The Microphone Input accepts Low Impedance (250-600 ohm) Dynamic Microphones. The Microphone may be a balanced output type (three wire) or an unbalanced output type (two wire).

PASO MICROPHONES
All PASO low impedance Microphones have a balanced output for best performance. Connect the RED lead to terminal HOT, the WHITE lead to terminal COM and the SHIELD to terminal G.

INPUT 1 - Default Jumper Settings
The Diagram at Left shows the Default Settings for INPUT 1. VOX 1 is SWITCHED ON, VOX 2 is SWITCHED OFF, MUTE 1 is SWITCHED OFF, MUTE 2 is SWITCHED OFF. When the INPUT 1 (MIC 1) is activated the VOX 1 BUSS is ON and it will MUTE any Input with the MUTE 1 Setting SWITCHED ON.

NOTE: To change the INPUT Default Settings refer to the appropriate section in this Manual.

CAUTION: TO PREVENT POSSIBLE DAMAGE TO SPEAKERS OR THE AMPLIFIER ALL INPUT CONNECTIONS MUST BE MADE WITH THE AMPLIFIER POWER OFF.

INPUT 1 - Default Jumper Settings

MICROPHONE INPUT
Attach the microphone leads to the terminal strip as per diagrams at left.

DO NOT GROUND THE MICROPHONE CABLE SHIELD TO THE CHASSIS OF THE AMPLIFIER

BALANCED MICROPHONE
IMPORTANT NOTE: The use of an unbalanced Microphone (two leads) is not recommended. For best results in a PA Application always use a Unidirectional Dynamic, Low Impedance, Balanced Microphone (three leads).

UNBALANCED MICROPHONE
Attach the Microphone leads to the terminal strip as per diagram in Fig 8A. The cable length should not exceed: 15 Ft. (4.5 m).

CABLE

CABLE LENGTH - If the distance between the Microphone and the Amplifier Input is greater than 15 ft (4.5 m) a Balanced Microphone must be used. Use a two conductor shielded wire and connect Microphone to Amplifier as per diagram in Fig. 10.

MICROPHONE CABLE ROUTING - The Microphone Cable should be carefully routed. Improper Cable routing will cause spurious oscillations, regenerative noises, hum, etc. that may permanently damage the Amplifier.

- Do not route cable next to power lines.
- Do not route cable near or over Fluorescent Fixtures.
- Do not route cable next to Speaker Wires.
- Do not install cable inside Power Line Conduits.
- Avoid the use of staples that may penetrate the cable.
INPUT 1 - USING A DESK BASE MICROPHONE

USING A PUSH-TO-TALK DESK BASE MICROPHONE
Microphone paging and precedence over AUX 1 or AUX 2 channels may be accomplished by using a Desk Base or a Gooseneck Microphone. Wire the Microphone output leads to the MIC input terminals as per Fig. 11A.

MUTING: The Amplifier is equipped with two independent Muting Circuits:
- Direct Muting by shorting the MUTE Terminals
- Automatic Muting with VOX - Voice Activated Muting

For additional information on the Muting operation refer to the Muting Functions section of this Manual.

Fig. 11 - Desk Base Microphone

WIRING
Wire the Desk Base Microphone leads to the Microphone Input terminal strip as per diagram in Fig 11A. Check Microphone instructions and connect HOT LEAD (B) to Terminal HOT, COMMON LEAD (A) to Terminal COM and SHIELD LEAD to Terminal G. Connect Muting Switch to Terminals MUTE 1 or MUTE 2 and G as shown.

DO NOT GROUND THE MICROPHONE CABLE SHIELD TO THE CHASSIS OF THE AMPLIFIER

MUTING - PRIORITY SETTINGS

Direct Muting is provided by the Desk Base Muting Switch wired as per diagram in Fig. 11A. If Auto-Mute (VOX) is desired follow instructions below. The Desk Base Muting Switch can be omitted.

MUTING INPUT 4/AUX 1 (MUSIC INPUT)
To mute Input 4/AUX 1 (Music Input) when Paging from MIC 1, set INPUT 4/AUX 1 MUTE 1 JUMPER to ON Position. Each time MIC 1 is activated the Program on Input 4/AUX 1 is automatically muted by the VOX.

INPUT 1 - Default Jumper Settings
The Diagram at Left shows the Default Settings for INPUT 1. VOX 1 is SWITCHED ON VOX 2 is SWITCHED OFF MUTE 1 is SWITCHED OFF MUTE 2 is SWITCHED OFF

When the INPUT 1 (MIC 1) is activated the VOX 1 BUSS is ON and it will MUTE any Input with the MUTE 1 Setting SWITCHED ON.

CAUTION: TO PREVENT POSSIBLE DAMAGE TO SPEAKERS OR THE AMPLIFIER ALL INPUT CONNECTIONS MUST BE MADE WITH THE AMPLIFIER POWER OFF.

NOTE: To change the INPUT Default Settings refer to the appropriate section in this Manual

Fig. 11A - Input 1 and Muting Terminals
CONDENSER AND ELECTRET MICROPHONES

Condenser and Electret Microphones require a DC Operating Voltage. The Amplifier provides this operating voltage or Phantom Power selectively on Inputs 1-2-3-4-5.

Prior to selecting the Condenser or Electret Microphone be sure that the Operating Voltage and Output Impedance of the device match the Input characteristics of the Amplifier listed below.

- **Phantom Power** = 18 Volt DC
- **Input Impedance** = 250 to 600 ohm

ACCESS TO PHANTOM POWER SELECTORS

1. Remove Power Cord from AC Outlet.
2. Remove the three screws on each side of the Amplifier.
3. Lift Cover and carefully slide Cover out towards the rear.
4. Jumpers are located on the Main Printed Circuit Board.

PHANTOM POWER SELECTOR JUMPER

By following the Main Printed Board Layout locate the Selector Jumpers with the ID No. as indicated on the Table below.

Reset the Phantom Power Jumpers for INPUT 1 - 2 or 3 to the ON position as desired. Lift the Mini Jumper out of the socket pins and re-position to the ON position. Make sure the Jumper is lined up with the socket pins.

INPUT 4 and 5 CONFIGURED AS MIC INPUTS

If INPUT 4 and INPUT 5 need to be configured as Microphone Inputs, reset the Phantom Power Jumpers as well as the Switches provided for the two Inputs as indicated in the Table below.

WIRING

CONNECTION TABLES

- **MIC INPUTS PHANTOM POWER JUMPER SETTING**
- **WHEN USING ELECTRET MICROPHONES**

<table>
<thead>
<tr>
<th>INPUT</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW201</td>
<td>On</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>SW202</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>SW203</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
</tr>
<tr>
<td>SW204</td>
<td>Off</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>SW207</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>On</td>
</tr>
</tbody>
</table>

**INPUT 4 - 5 SWITCH SETTINGS WHEN CONFIGURING AS MICROPHONE INPUT**

<table>
<thead>
<tr>
<th>Input</th>
<th>Switch No.</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>INPUT 4</td>
<td>SW228</td>
<td>MIC 4</td>
</tr>
<tr>
<td>INPUT 5</td>
<td>SW208</td>
<td>MIC 5</td>
</tr>
<tr>
<td>INPUT 5</td>
<td>SW229</td>
<td>MIC 5</td>
</tr>
</tbody>
</table>

**INPUT 4 - 5 DEFAULT SWITCH SETTINGS**

<table>
<thead>
<tr>
<th>Input</th>
<th>Switch No.</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>INPUT 4</td>
<td>SW228</td>
<td>AUX 1</td>
</tr>
<tr>
<td>INPUT 5</td>
<td>SW208</td>
<td>AUX 2</td>
</tr>
<tr>
<td>INPUT 5</td>
<td>SW229</td>
<td>AUX 2</td>
</tr>
</tbody>
</table>

**INPUT 1-2-3-4-5 DEFAULT JUMPER SETTINGS**

<table>
<thead>
<tr>
<th>Input</th>
<th>Jumper No.</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>INPUT 1</td>
<td>SW201</td>
<td>OFF</td>
</tr>
<tr>
<td>INPUT 2</td>
<td>SW202</td>
<td>OFF</td>
</tr>
<tr>
<td>INPUT 3</td>
<td>SW203</td>
<td>OFF</td>
</tr>
<tr>
<td>INPUT 4</td>
<td>SW204</td>
<td>OFF</td>
</tr>
<tr>
<td>INPUT 5</td>
<td>SW207</td>
<td>OFF</td>
</tr>
</tbody>
</table>

**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.

**Fig. 12 - Balanced Condenser/Electret Microphone Wiring - Configuration Tables**
CAUTION: TO PREVENT POSSIBLE DAMAGE TO SPEAKERS OR THE AMPLIFIER ALL INPUT CONNECTIONS MUST BE MADE WITH THE AMPLIFIER OFF (POWER OFF).

**WIRING** - The Amplifier is interface ready for the Telephone line in applications requiring paging from the telephone system. The Telephone line Paging Output (Tip and Ring) can be directly connected to the TEL input and to the HOT and COM as shown in the wiring diagram Fig. 12A.

**CABLE** - Use a two conductor twisted wire.

**NOTE:** The Telephone Paging Input is a Transformer Balanced 600 ohm input.

**DO NOT GROUND THE TIP OR RING WIRE TO THE CHASSIS OF THE AMPLIFIER**

**TELEPHONE SYSTEM PAGING WIRING**

**WIRING**
- The Amplifier is interface ready for the Telephone line in applications requiring paging from the telephone system. The Telephone line Paging Output (Tip and Ring) can be directly connected to the TEL input and to the HOT and COM as shown in the wiring diagram Fig. 12A.

**CABLE**
- Use a two conductor twisted wire.

**NOTE:** The Telephone Paging Input is a Transformer Balanced 600 ohm input.

**DO NOT GROUND THE TIP OR RING WIRE TO THE CHASSIS OF THE AMPLIFIER**

**OUTPUT LEVEL CONTROL**
- Use TEL OUTPUT LEVEL Control located on the Rear panel. After wiring adjust control for the desired output level.

**VOICE ACTIVATED MUTING (VOX)**
- Muting of the AUX 1 channel (music muting) during Paging is automatic via the Voice Activated Muting System. No contact closure for the Muting Circuit is required from the Telephone system. For additional information on the Muting operation refer to the Muting Functions section of this Manual.

**PHONE PAGING PRIORITY OVER MICROPHONES**
- Priority over any Microphone Input may be accomplished by setting the MIC Inputs MUTE Jumpers.

**TELEPHONE SYSTEM PAGING WIRING**

**BALANCED TELEPHONE PAGING WIRING**

- **VOX - MUTE JUMPERS SETTING**
  - VOX SEND
  - VOX 1 BUSS ACTIVATED
  - VOX 2 BUSS OFF

- **TEL INPUT**
  - Default Jumper Settings
  - The Diagram at Left shows the Default Settings for TEL INPUT.
  - VOX 1 is SWITCHED ON
  - VOX 2 is SWITCHED OFF
  - MUTE 1 is SWITCHED OFF
  - MUTE 2 is SWITCHED OFF

  When the TEL INPUT (PHONE) is activated the VOX 1 BUSS is ON and it will MUTE any input with the MUTE 1 Setting SWITCHED ON.

**NOTE:** To change the INPUT Default Settings refer to the appropriate section in this Manual.

**Fig. 13A - Balanced Telephone Input Wiring**
The AUX 1 input is provided for high level program source. The output from a Satellite Receiver, Tuner, Tape Cassette Deck, CD Player or other high level program source may be directly connected to this input.

AUX 1 SENSITIVITY ATTENUATOR (Reference. 18)
The AUX 1 Input is equipped with a Sensitivity Attenuator that allows the interface of the Input with Devices having a wide range of Output Levels.

TYPICAL OUTPUT LEVEL OF MUSIC DEVICES:
- Satellite Receivers = 1 to 5 Volt
- Digital Tuners/Receivers = 100 to 300 mV
- CD Players/Changers = 2 to 3 Volt
- Tape Decks = 500 to 700 mV

By adjusting the Input Sensitivity to the level that matches the device used the correct interface with the Amplifier is achieved resulting in lower overall distortion and better frequency response characteristics.

SETTING THE AUX 1 INPUT ATTENUATOR
Connect a Music Source to the Amplifier.
Turn Attenuator (rear panel) fully counterclockwise.
Turn INPUT 4 Front Panel Control to midway.
Switch Amplifier and Music Source ON.
Turn Attenuator Control (rear panel) until desired Output Level is achieved.
Adjust INPUT 4 Front Panel Level Control Up-Down as desired.

STEREO SUMMING
Most Music Source Devices provide a Stereo Output. Accordingly the Amplifier is equipped with two Jacks for the AUX 1 Input (L and R). The two Inputs are internally buffered and electronically mixed to Mono. This system ensures that the Music Device is properly loaded and that the Stereo Signals are correctly summed (L+R) to Mono without distortion.

CABLE
To connect the music source devices to the AUX 1 Input use two single conductor shielded audio cable terminated in a single prong phono plug on both ends.

AUX 1 INPUT MUTING
MUTING - WHEN MIC 1 OR THE TEL IN ARE ACTIVATED THE VOX 1 BUSS IS SWITCHED-ON AND THE SIGNAL PRESENT ON THE MUTE 1 BUSS WILL MUTE THE MUSIC FROM AUX 1.
INPUT 5/AUX 2 DEFAULT SETTING

JUMPERS/SWITCH NO. FACTORY SETTING
SW213 - VOX JUMPER = OFF
SW223 - MUTE JUMPER = M 1
SW208 - AUX 2-MIC 5 SWITCH = AUX 2
SW229 - AUX 2-MIC 5 SWITCH = AUX 2

AUX 2

INPUT 5 SET AS AUX 2 (Reference. 20)
The AUX 2 input is provided for high level program source. The output from a Jukebox, Tuner, Tape Cassette Deck, CD Player or other high level program source may be directly connected to this input.

AUX 2 SENSITIVITY ATTENUATOR (Reference. 21)
The AUX 2 Input is equipped with a Sensitivity Attenuator that allows the interface of the Input with Devices having a wide range of Output Levels.

TYPICAL OUTPUT LEVEL OF MUSIC DEVICES:
- Satellite Receivers = 1 to 5 Volt
- Digital Tuners/Receivers = 100 to 300 Mv
- CD Players/Changers = 2 to 3 Volt
- Tape Decks = 500 to 700 Mv

By adjusting the Input Sensitivity to the level that matches the device used the correct interface with the Amplifier is achieved resulting in lower overall distortion and better frequency response characteristics.

SETTING THE AUX 2 INPUT ATTENUATOR
Connect a Music Source to the Amplifier. Turn Attenuator (rear panel) fully counterclockwise. Turn INPUT 5 Front Panel Control to midway. Switch Amplifier and Music Source ON. Turn Attenuator Control (rear panel) until desired Output Level is achieved. Adjust INPUT 5 Front Panel Level Control Up-Down as desired.

STEREO SUMMING
Most Music Source Devices provide a Stereo Output. Accordingly the Amplifier is equipped with two Jacks for the AUX 1 Input (L and R). The two Inputs are internally buffered and electronically mixed to Mono. This system ensures that the Music Device is properly loaded and that the Stereo Signals are correctly summed (L+R) to Mono without distortion.

CABLE
To connect the music source devices to the AUX 1 Input use two single conductor shielded audio cable terminated in a single prong phono plug on both ends.

AUX 2 INPUT MUTING
MUTING - WHEN MIC 1 OR THE TEL IN ARE ACTIVATED THE VOX 1 BUSS IS SWITCHED-ON AND THE SIGNAL PRESENT ON THE MUTE 1 BUSS WILL MUTE THE MUSIC FROM AUX 2.
ADDRESSABLE DUAL VOX SYSTEM

VOX - VOICE ACTIVATED MUTING

DUAL VOX - VOICE ACTIVATED MUTING - The Amplifier is equipped with a DUAL noiseless, fast acting Logic VOX Switching System. When any of the INPUTS are activated and a Signal is present on a given INPUT and either VOX 1 or VOX 2 or BOTH are Switched-ON (using internal Jumpers) then the MUTE 1 or MUTE 2 BUSS or BOTH are ACTIVE. If any of the INPUTS have the MUTE 1 or MUTE 2 Switched-ON (by Internal Jumpers) then the INPUT (or INPUTS) will be MUTED according to the Jumpers Setting. Once the SIGNAL-ON on the ACTIVE INPUT is terminated the normal functions are automatically restored on all muted inputs.

ACCESS TO VOX AND MUTE JUMPERS REFER TO JUMPERS AND SWITCHES INTERNAL ACCESS.

CAUTION: PRIOR TO PERFORMING THE ABOVE OPERATION BE SURE TO FOLLOW THE SAFETY NOTES REFERING TO THE REMOVAL OF THE AMPLIFIER COVER.

VOX SENSITIVITY CONTROLS

VOX 1 AND VOX 2 SENSITIVITY CONTROLS
The VOX 1 and VOX 2 Sensitivity Controls set the sensitivity level at which point the VOX 1 and VOX 2 are respectively engaged during INPUT ACTIVATION. The VOX Sensitivity Controls are located on the Amplifier Rear Panel.

VOX 1 SENSITIVITY CONTROL = Reference 33
VOX 2 SENSITIVITY CONTROL = Reference 32

VOX SENSITIVITY ADJUSTMENT

1) Turn all Front Panel Input Level Controls to 0.
2) Turn VOX Sensitivity Control counterclockwise until it stops.
3) Connect a Signal Source (Microphone, Telephone or Music) to the respective Input Terminals (For connection details refer to the appropriate section in this Manual).
4) While talking from a Paging Source (Microphone or Telephone) or Playing Music rotate the INPUT LEVEL CONTROLS (Front Panel) until the desired output level is achieved.
5) While talking from a Paging Source (Microphone or Telephone) or Playing Music, turn the Sensitivity Control (VOX 1 or VOX 2) slowly clockwise until the Muting (MUTE 1 or MUTE 2) is activated.

VOX JUMPERS DEFAULT SETTING TABLE

<table>
<thead>
<tr>
<th>JUMPER ID NO.</th>
<th>JUMPER REFERENCE</th>
<th>FUNCTION DESCRIPTION</th>
<th>FACTORY SETTING</th>
<th>FACTORY SETTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW210</td>
<td>INPUT 2 -</td>
<td>VOX1 - VOX2 - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW211</td>
<td>INPUT 3 -</td>
<td>VOX1 - VOX2 - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW212</td>
<td>INPUT 4 -</td>
<td>VOX1 - VOX2 - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW213</td>
<td>INPUT 5 -</td>
<td>VOX1 - VOX2 - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW214</td>
<td>TEL IN -</td>
<td>VOX1 - VOX2 - OFF</td>
<td></td>
<td>V1</td>
</tr>
<tr>
<td>SW215</td>
<td>INPUT 1 -</td>
<td>VOX1 - VOX2 - OFF</td>
<td></td>
<td>V1</td>
</tr>
<tr>
<td>SW221</td>
<td>MODULE -</td>
<td>VOX1 - VOX2 - OFF</td>
<td>OFF</td>
<td></td>
</tr>
</tbody>
</table>
**ADDRESSABLE DUAL MUTING SYSTEM**

**DUAL MUTING SYSTEM** - The Amplifier is equipped with a DUAL noiseless, fast acting Logic MUTING Switching System. When any of the INPUTS are activated and a Signal is present on a given INPUT and either VOX 1 or VOX 2 or BOTH are Switched-ON (using internal Jumpers) then the MUTE 1 or MUTE 2 BUSS or BOTH are ACTIVE. If any of the INPUTS have the MUTE 1 or MUTE 2 Switched-ON (by Internal Jumpers) then the INPUT (or INPUTS) will be MUTED according to the Jumpers Setting. Once the SIGNAL-ON on the ACTIVE INPUT is terminated the normal functions are automatically restored on all muted inputs.

**ACCESS TO MUTE JUMPERS**

REFER TO JUMPERS AND SWITCHES INTERNAL ACCESS.

CAUTION: PRIOR TO PERFORMING THE ABOVE OPERATION BE SURE TO FOLLOW THE SAFETY NOTES REFERRING TO THE REMOVAL OF THE AMPLIFIER COVER.

**MUTING TIMING** - The MUTING is preset for -60 db Attenuation. When MUTE 1 or 2 are activated the MUTE BUSS is instantaneously Switched-ON. When the Mutings are deactivated the program source is gradually restored.

MUTE 1 (M1) = TIMING PRESET 2-3 SECONDS
MUTE 2 (M2) = TIMING ADJUSTABLE 3-30 SECONDS
MUTE 2 DELAY = USE REAR PANEL CONTROL Reference 31

**DIRECT MUTING**

**DIRECT MUTING** - Direct Muting may be accomplished by shorting the MUTE 1 and MUTE 2 Terminals to the G Terminal through an external switch. Each time the Muting Switch is closed the corresponding MUTE BUSS is activated.

**WIRING**

**WIRING**

**MUTE JUMPERS DEFAULT SETTING TABLE**

<table>
<thead>
<tr>
<th>JUMPER ID NO.</th>
<th>JUMPER REFERENCE</th>
<th>FUNCTION DESCRIPTION</th>
<th>FACTORY SETTING</th>
<th>FACTORY SETTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW206</td>
<td>VOX RELAY -</td>
<td>MUTE 1 - MUTE 2</td>
<td>M1</td>
<td></td>
</tr>
<tr>
<td>SW216</td>
<td>TEL IN -</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
<td>OFF</td>
<td>M1</td>
</tr>
<tr>
<td>SW217</td>
<td>INPUT 4/AUX 1 -</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW218</td>
<td>INPUT 3 -</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW219</td>
<td>INPUT 2 -</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW220</td>
<td>INPUT 1 -</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW221</td>
<td>MODULE -</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>SW222</td>
<td>INPUT 5/AUX 2 -</td>
<td>MUTE 1 - MUTE 2 - OFF</td>
<td>M1</td>
<td></td>
</tr>
<tr>
<td>SW223</td>
<td>CHIME TRIGGER -</td>
<td>MUTE 1 - MUTE 2</td>
<td>M1</td>
<td></td>
</tr>
</tbody>
</table>

**MAIN PCB JUMPERS**

**Fig. 17** - Direct Muting Terminals and Diagram

**Fig. 17B** - M 1 Function Timing Diagram

**Fig. 17C** - M 2 Function Timing Diagram

**Fig. 17D** - M 2 Function Timing Diagram
INPUT 1 (MIC 1) UNMUTING FUNCTION

INPUT 1 (MIC 1) UNMUTING FUNCTION
The Input 1 (MIC 1) can be preset to be normally Muted (INPUT OFF) when the JUMPER SW205 - MIC 1 UNMUTE - IS SET TO THE ON POSITION. The MIC 1 is SWITCHED-ON when the UNMUTE and G Terminals are shorted by a Switch Contact Closure. This function allows for a multi zone installation using two or more Amplifiers and a single Microphone and Zone Switches. When the Jumper SW205 is set to the ON Position the Microphone Input is OFF and it is turned ON when the UNMUTE and the G terminals are closed by a switch.

JUMPER NO. FUNCTION POSITION SET

SW205 MIC 1 Muted ON

If the Jumper requires resetting follow the instruction below.

ACCESS TO UNMUTING JUMPER
1) Remove Power Cord from AC Outlet.
2) Remove the three screws on each side of the Amplifier securing the Top Cover to the Chassis.
3) Lift Cover and carefully and slide Cover out towards the rear.
4) On the Main Amplifier Printed Board locate the SW205 - MIC 1 UNMUTE Jumper Set.
5) Set Jumper to the ON position.

Fig. 18A - 2 - Zone System Jumper Settings

The Fig. at right shows a typical 2 Zone Switching Panel. Use SPST Momentary Contact Switches. See complete 2 - Zone Wiring Diagram provided in this Manual.

Fig. 18B - 2 - Zone Switching Panel
Two Independent SPST Switches are provided for the Paging Zone Selection. When one or more Zone Switches are activated, the UNMUTE Function OPENs the Microphone Channel on the Amplifier selected and the MUSIC MICROPHONE is connected in parallel to all the Microphone Inputs. Two independent MUSIC SOURCES (Satellite Receivers) are cascade connected to the two Amplifiers. When one or more Zone Switches are activated, the MUSIC SOURCE selected is available on the Amplifier selected and the MUSIC ON HOLD, if required, is available from each of the Amplifiers used. The MOH source may be selected from either the AUX 1, AUX 2 or the MODULE Input and is immune to Paging or the MUTE/UNMUTE Function.

OPERATION:

- Two Zone Paging Wiring Diagram Application is provided. The Paging Microphone is connected in parallel to all the Microphone Inputs. Two independent MUSIC SOURCES (Satellite Receivers) are cascade connected to the two Amplifiers. When one or more Zone Switches are activated, the UNMUTE Function OPENs the Microphone Channel on the Amplifier selected and the MUSIC MICROPHONE is connected in parallel to all the Microphone Inputs. Two independent MUSIC SOURCES (Satellite Receivers) are cascade connected to the two Amplifiers. When one or more Zone Switches are activated, the MUSIC SOURCE selected is available on the Amplifier selected and the MUSIC ON HOLD, if required, is available from each of the Amplifiers used. The MOH source may be selected from either the AUX 1, AUX 2 or the MODULE Input and is immune to Paging or the MUTE/UNMUTE Function.

Fig. 19 - 2 Zone Paging and Music System

ATTENTION: AFIN DE REDUIRE LE RISQUE D'INCENDIE REMPLACER SEUL PAR UNFUSIBLE DE MEME TYPE.

RISK OF FIRE, REPLACE ONLY WITH SAME TYPE FUSE.
Connecting to an External Equalizer

The Amplifier is equipped with an External Equalizer Link to allow the use of an External Equalizer for applications requiring Frequency Selective Acoustic Correction. The Amplifier is furnished with the two jacks of the Link bridged by a SELECTOR SWITCH. When the EQ LINK Switch (Reference 12) is the IN position, the internal Preamplifier to Amplifier Link (Reference 13) is broken allowing the insertion of an External Equalizer.

Installation Tips
1) Use high-quality, short-length audio cables and position the Equalizer in close proximity to the Amplifier. Avoid mounting the EQ on top of the Amplifier unless it is rack-mounted.
2) Be sure that the Amplifier input controls and the EQ level control are set at zero prior to turning the system on.
3) The Amplifier TONE BY PASS SWITCH (Reference 17) should be set to ON (linear response position).
4) Carefully adjust the EQ Level Control to avoid distortion caused by excessive signal boost.
5) Follow the instructions supplied with the Equalizer.

Wiring
To connect to an External Equalizer, use two (2) single-conductor shielded audio cables terminated in a single-prong phono plug on both ends.

Mix Buss Bridging

Bridging Two Amplifiers
The MIX BUSS (Reference 15) allows two Amplifiers to be bridged and share all inputs.

All signal sources connected to all the inputs are common to the output of both amplifiers. Muting and level controls operate in exactly the same way as if only one amplifier was used.

Wiring
To bridge two amplifiers or to connect to an external Mixer, use a single-conductor shielded audio cable terminated in a single-prong phono plug on both ends.
REMOTE VOLUME CONTROLS
The Amplifier features two independent Remote Volume Control Capability: The INPUT 4 (AUX 1) Remote Volume (Reference 26) and the MASTER REMOTE VOLUME CONTROL (Reference 11). A 10 K ohm Potentiometer is required for either control. Mount the 10 K Pot on a suitable Wall Plate or any other convenient surface and connect to the Amplifier RVC Terminals as shown in the Diagram. The Paso Model RVC10W Decora Style Remote Volume Control may be used.

INPUT 4 (AUX 1) OPERATION
When connected the Remote Volume adjusts the INPUT 4 (AUX 1) Level only. Usually this input is utilized for the Music Source (Satellite Receiver, CD Player, etc.).

MASTER VOLUME OPERATION
The Control is a Master Volume and controls all the Inputs of the Amplifier with the exception of the MOH and ZONE 1 and ZONE 2 Outputs.

CABLE
To connect the Remote Control to the Amplifier use a two conductor wire not less than AWG 24. While the Remote Volume System uses DC rather than audio caution should be exercised in the layout of the wire. Always avoid routing next to power lines. If the total wire resistance exceeds 3 K ohm the Volume may not go down to zero.

MODEL RVC10W REMOTE VOLUME CONTROL

SPECIFICATIONS
INSTALLATION AND WIRING

INSTALLING A MODULE

**MODULE TYPE**
The Amplifier accepts Audio Modules having a 6 Contact PCB Derivation. Module mounting panel should be 3” H., 1-3/8” W. (78 X 35 mm).

**INSTALLATION**

**CAUTION:** REMOVE POWER CORD FROM AC OUTLET PRIOR TO INSTALLING A MODULE. BE SURE THAT THE MODULE OUTPUT LEVEL CONTROL IS SET AT “0” PRIOR TO THE INSTALLATION.

1) Locate Rear Panel Module Port (Reference 22) and unscrew the two crosshead screws holding the cover and set aside.
2) Reach inside the Amplifier and gently pull-out the Module Blue Ribbon Connector. If the Connector is tied to the chassis remove the Amplifier Top Cover and with a cutter cut the Nylon Tie holding the connector.

**NOTE:** BE CAREFUL NOT TO CUT THE CONNECTOR WIRE HARNESS.

3) Pull-out the blue-ribbon connector through the port opening (do not pull-out wire harness excessively).
4) By keeping the connector gold contacts on the left insert the Module PCB contacts into the socket.
5) Push Module through port opening and secure to rear panel by using the two screws removed with the Module cover.

**Fig. 22 - Rear Panel Module Installation Diagram**
**MODULE CONNECTOR DIAGRAM**

**Connector Contacts**

- 6 = + 24V DC
- 5 = Module Input
- 4 = Module Output
- 3 = Ground
- 2 = Mute Buss 1
- 1 = Mute Buss 2

**MODULE DEFAULT SETTINGS**

**MODULE FUNCTIONS** - The Module Port accepts a standard audio Module. When a Module is utilized several functions can be activated by the Jumpers and Switch provided for this Input.

**VOX SEND** - The SW221 Jumpers Set activates the VOX 1 - VOX 2 SEND or both. When a Signal is present at the Module Output (Contact 4) then the VOX BUSS selected will be active.

**MUTE RECEIVE** - The SW222 Jumpers Set activates the MUTE 1 - MUTE 2 RECEIVE or both. When a Signal is present at the MUTE BUSS 1 or MUTE BUSS 2 the MODULE will be MUTED accordingly.

**INPUT SOURCE** - The SW209 Switch selectes the Input Source for the Module either AUX 1 or AUX 2. The Signal present at either Input will be sent to the MODULE INPUT (Contact 5).

By selecting the proper Setting several functions can be derived from the Module.
Fig. 24 - Rear Panel View - ZONE 1 - ZONE 2 - MOH Outputs - Source Selectors and Controls

ZONE 1 MOH AND 8 OHM OUTPUTS

ZONE 1 OUTPUTS
The DMS Amplifier is equipped with two 1 Watt, 8 ohm Amplifiers and a separate 600 ohm MUSIC ON HOLD AMPLIFIER.

600 Ohm MOH - The MOH Output provides a 600 ohm, 1 Volt Transformer Balanced Output (Reference 3).

1 WATT, 8 Ohm - Simultaneously a Second Zone 8 ohm, 1 Watt Output may be utilized to drive up to 4 Speakers (Reference 4).

OUTPUT LEVEL CONTROL - A Level Control for both the 600 ohm Output and the 1 Watt Output is provided (Reference 2)

MOH AND 8 Ohm AMPLIFIER INPUT SOURCE SELECTION
The program source for the Input of the 600 ohm MOH Output and the 8 ohm Output can be selected from either AUX 1 - AUX 2 or the MODULE source. Set the Jumpers Set No. SW 702 to desired position. Default setting is AUX 1.

ZONE 2 OUTPUT
1 WATT, 8 Ohm - A Second Zone 8 ohm, 1 Watt Output may be utilized to drive up to 4 Speakers (Reference 5).

OUTPUT LEVEL CONTROL - A Level Control for the 1 Watt Output is provided (Reference 6)

ZONE 2 - 8 Ohm AMPLIFIER INPUT SOURCE SELECTION
The program source for the Input the 8 ohm Output can be selected from either AUX 1 - AUX 2 or the MODULE source. Set the Jumpers Set No. SW 701 to desired position. Default setting is AUX 1.

MOH - ZONE 1 & 2 AMPLIFIER FUNCTIONS

MOH AMPLIFIER
a) The MOH Amplifier can receive programs from AUX 1 - AUX 2 and the MODULE.
b) Selection of the input source is by Internal Jumper.
c) The ZONE 1 independent 600 Ohm and 8 Ohm Outputs may be used simultaneously.
d) The MOH 600 ohm Output is Transformer Balanced.
e) The Rear Panel ZONE 1 Level Control operates both the 600 Ohm and 8 Ohm Outputs simultaneously.

MOH AND ZONE 1-2 OPERATION ISSUES
1) Paging from the Microphone Inputs or the Telephone Input does not effect the MOH/ZONE 1-2 Amplifier.
2) Position of the INPUTS Level Control does not affect the MOH/ZONE 1-2 Amplifier Output Level.
3) Position of the AUX 1 and AUX 2 ATTENUATOR does not affect the MOH/ZONE 1-2 Amplifier Output Level.
4) Muting activation of M1 or M2 Buss (from Microphones or Telephone) does not effect the Output of the MOH/ZONE 1-2 Amplifier except if the INPUT SOURCE is set to MODULE and the Module Output is Muted. See Module Settings.
**MOH CONNECTIONS**

**MOH AMPLIFIER**
An independent 600 ohm, 1 Volt Output, Transformer Balanced MUSIC-ON-HOLD Amplifier is provided. The Input SOURCE of the MOH Amplifier can be selected from either the AUX 1 - AUX 2 or MODULE.

**MOH - 600 OHM SYSTEM**
Most Phone systems operate on a 600 ohm Input Impedance, if the Impedance required is 600 ohm connect the Amplifier to the Phone System MOH by using the diagram above (Reference 3).

**MOH - 8 OHM, 1 WATT SYSTEM**
Some older Key Phone systems require a 1 watt Power Output having an Output Impedance of 8 ohm to drive the Music on Hold feature. If the Impedance required is 8 ohm connect the Phone system MOH to the 8 ohm, 1 Watt MOH Output of the Amplifier (Reference 4).

**CABLE**
Use a cable consisting of a twisted pair of at least AWG 18. Use care in extending the cable and avoid routing near power lines, fluorescent lights and other systems that may generate a disturbing electric field.

**SOURCE SELECTOR**
Select the Input Source desired by following the instructions at right. **CAUTION: REMOVAL OF THE COVER PRESENTS AN ELECTRICAL SHOCK HAZARD!**

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**LEVEL CONTROL**
After the wiring is completed adjust the MOH/ZONE 1 Amplifier Level Control on the rear panel to the desired output level (Reference 2).

**MOH/ZONE 1 AMPLIFIER SOURCE SELECTOR**
The Source for the MOH/ZONE 1 Amplifier can be selected from either the AUX 1 - AUX 2 or MODULE by setting the JUMPER SET No. SW702 provided for this purpose. Default Setting for this Jumper Set is AUX 1. To change the setting do the following:

**ACCESS TO THE MOH/ZONE 1 INPUT SOURCE SETTING**
1) Remove Power Cord from AC Outlet.
2) Remove the three screws on each side of the amplifier holding the amplifier cover.
3) Lift Cover and locate the Jumpers Set No SW702 on the MOH Amplifier Board (see Function Switches Jumpers Location Diagram).
4) Set Jumper as required (AUX 1 - AUX 2 or MODULE)
5) Replace protective cover.
**ZONE 1 AND 2 OPERATION**

The Amplifier is equipped with two independent 1 Watt, 8 ohm Outputs designated ZONE 1 (Reference 4) and ZONE 2 (Reference 5). The Outputs may be utilized to power up to 4 speakers in various combinations as described in the diagrams on the next page. This feature will provide a SECOND and THIRD ZONE (in addition to the main output) with up to 1 Watt of output power and will amplify only the Source from either AUX 1 - AUX 2 or MODULE (see input source selection) and will not be affected by the Paging (from MIC or TEL), VOX or MUTING.

It can be used in any area (up to 1 Watt) where only a Program Source is desired uninterrupted by Paging.

**CABLE**

Use an AWG 18 jacketed, twisted pair cable.

**ZONE 1 AND 2 SETTINGS**

**INPUT SOURCE SELECTOR**

Independent JUMPER SETS for ZONE 1 (SW702) and ZONE 2 (SW701) are available to select the Input Source for the two 1 Watt Amplifiers.

**DUAL PROGRAM SOURCE CAPABILITY**

If desired separate program Sources may be used for ZONE 1 and ZONE 2.

EXAMPLE: Use the program source from AUX 1 for ZONE 2 and the program source from AUX 2 for ZONE 2.

Select the Input Source desired by following the instructions in the MOH Amplifier Source Selection section.

**LEVEL CONTROL**

After the wiring is completed adjust the ZONE 1 (Reference 2) and ZONE 2 (Reference 6) Level Controls on the rear panel to the desired output level.
**ZONE 1 - ZONE 2 CONNECTING SPEAKERS**

**USING A SINGLE 8 OHM SPEAKER WIRING**

**USING A SINGLE 8 OHM SPEAKER PER ZONE**
A single 8 ohm Speaker may be used connected to the ZONE 1 and ZONE 2 1 Watt Output. In this configuration up to 1 Watt of Power will be available on each Speaker.

Independent Level Controls are provided.

**USING TWO 4 OR 8 OHM SPEAKERS WIRING**

**USING TWO 4 OR 8 OHM SPEAKERS**
The Figure at left shows:
ZONE 1 with two 4 ohm speakers connected in series, each speaker provides ¼ Watt power output (½ Watt Total).

ZONE 2 with two 8 ohm speakers connected in series, each speaker provides ¼ Watt power output (½ Watt Total).

Independent Level Controls are provided.

**USING FOUR 8 OHM SPEAKERS WIRING**

**USING FOUR 8 OHM SPEAKERS PER ZONE**
Four 8 ohm Speakers are used and connected to the 1 Watt Output. In this configuration up to 1/4 Watt of Power will be available on each Speaker (1 Watt Total).

Independent Level Controls are provided.
The Amplifier provides a 24 Volt - 250 mA DC Regulated Auxiliary Power Supply Output (Reference 8).

To connect the Power Supply Output to accessories use a two conductor wire not less than AWG 18. This minimum wire gauge is necessary to minimize potential Voltage Drops in long wire connection applications. For wire resistance refer to Table below.

### WIRE GAUGE - RESISTANCE TABLE

<table>
<thead>
<tr>
<th>WIRE AWG</th>
<th>RESISTANCE IN OHMS per 1000 Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>4.016</td>
</tr>
<tr>
<td>18</td>
<td>6.385</td>
</tr>
<tr>
<td>20</td>
<td>10.15</td>
</tr>
<tr>
<td>22</td>
<td>16.14</td>
</tr>
<tr>
<td>24</td>
<td>25.67</td>
</tr>
<tr>
<td>26</td>
<td>40.81</td>
</tr>
</tbody>
</table>

**NOTE:**
When calculating the Wire Resistance for each run using a two conductor Wire the wire Resistance should be doubled.

**EXAMPLE:** The Total Resistance of a 1000 Ft. run of a AWG 24 two conductor Wire is:

\[25.67 \times 2 = 51.34 \text{ Ohm}\]

The Amplifier provides a VOX RELAY (Reference 7) with a single pole dual throw set of contacts. **Figure A** at left shows the contacts when the Relay is not activated. **Figure B** shows the contacts when the Relay is activated.

The Relay can be configured to activate when either VOX 1 (M1) or VOX 2 (M2) or both (VOX 1 and VOX 2) are activated.

The VOX RELAY will remain engaged for as long as the VOX is active.

**SWITCHSET SW206** - The SW206 is defaulted to M1. When VOX 1 is activated the Relay is switched ON. The factory setting can be changed to set the Relay to activate with either VOX 1 - VOX 2 or both.

Both Jumpers (M1 - M2) may be installed.

**RELAY CONTACTS RATING**

**7 AMPERE AT 30 VDC MAXIMUM RATING.**
INSTALLING AND USING A BOSE® EQUALIZER MODULE

CAUTION: PRIOR TO INSTALLING THE BOSE® MODULE IN THE AMPLIFIER FOLLOW THE INSTRUCTIONS SUPPLIED WITH THE MODULE AND THEN READ THE INSTRUCTIONS IN THIS MANUAL’S “INSTALLING A MODULE” SECTION

**METHOD 1**

**EQUALIZING THE PROGRAM ONLY**

BY USING THIS METHOD THE MUSIC PROGRAM ONLY IS EQUALIZED BY THE MODULE.

BE SURE THAT THE TONE BYPASS SWITCH IS IN THE ON POSITION

1) Connect the Output of the PROGRAM SOURCE unit to the Module IN Jack.
2) Connect the EQ. OUT Jack of the Module to INPUT 4/AUX 1 of the Amplifier.

**LEVEL CONTROLS** - Adjust INPUT 4/AUX 1 Front Panel Control to 1 o'clock. Turn Rear Panel ATTENUATOR Control slowly clockwise until the desired Output Level is achieved. After above adjustments are completed use the INPUT 4/AUX 1 Front Panel Control to increase or decrease the Music Level as desired.

**METHOD 2**

**USING THE EQ LINK**

BY USING THIS METHOD ALL THE AMPLIFIER INPUTS ARE EQUALIZED BY THE MODULE.

BE SURE THAT THE TONE BYPASS SWITCH IS IN THE ON POSITION

1) Connect the Output of the PROGRAM SOURCE unit to the INPUT 4 (or INPUT 2) L and R Jacks.
2) Connect the EQ. OUT Jack of the Module to the POWER IN Jack of the Amplifier.
3) Connect the EQ. IN Jack of the Module to the PREAMP. OUT Jack of the Amplifier.
4) Set EQ LINK Switch on the Amplifier to IN.

**LEVEL CONTROLS** - Adjust INPUT 4/AUX 1 Front Panel Control to 1 o'clock. Turn Rear Panel ATTENUATOR Control slowly clockwise until the desired Output Level is achieved. After above adjustments are completed use the INPUT 4/AUX 1 Front Panel Control to increase or decrease the Music Level as desired.

---

**METHOD 1**

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**METHOD 2**

**USING THE EQ LINK**

BY USING THIS METHOD ALL THE AMPLIFIER INPUTS ARE EQUALIZED BY THE MODULE.

BE SURE THAT THE TONE BYPASS SWITCH IS IN THE ON POSITION

1) Connect the Output of the PROGRAM SOURCE unit to the INPUT 4 (or INPUT 2) L and R Jacks.
2) Connect the EQ. OUT Jack of the Module to the POWER IN Jack of the Amplifier.
3) Connect the EQ. IN Jack of the Module to the PREAMP. OUT Jack of the Amplifier.
4) Set EQ LINK Switch on the Amplifier to IN.

**LEVEL CONTROLS** - Adjust INPUT 4/AUX 1 Front Panel Control to 1 o'clock. Turn Rear Panel ATTENUATOR Control slowly clockwise until the desired Output Level is achieved. After above adjustments are completed use the INPUT 4/AUX 1 Front Panel Control to increase or decrease the Music Level as desired.
APPLICATION
This Note illustrates a typical installation in a Restaurant/Diner/Lounge using Background Music and a Jukebox. The Background Music can be automatically interrupted when the Jukebox is activated. The Background Music is then automatically restored once the Jukebox stops playing. This built-in feature of the DMS Amplifier eliminates the need of any external device.

PAGING MICROPHONE
PRIORITY PAGING MICROPHONE - A Low Impedance Dynamic Microphone can be connected to the Amplifier INPUT 1. The Microphone Input can be set to provide Priority Paging over both the Music Program and the Jukebox if activated. Optionally Paging may be generated from the Phone system if desired.

PAGING FROM THE PHONE SYSTEM
PRIORITY PAGING FROM THE PHONE SYSTEM: Paging may be generated from a Phone system by using the TEL INPUT of the Amplifier. The TEL INPUT can be set to provide Priority Paging over both the Music Program and the Jukebox if activated. The TEL INPUT provides a 600 ohm Transformer balanced Phone interface.

MUTE 2 DELAY
The Jukebox Configuration utilizes the VOX/MUTE 2 Buss. In order to prevent the premature JUKEBOX/MUSIC SOURCE switching (the Music Source cuts-in while the Jukebox is active) a MUTE 2 DELAY TRIMMER is available on the Rear panel to increase the MUTE 2 DELAY as necessary. The MUTE 2 DELAY can be adjusted from 3 to 30 Seconds.

EXAMPLE: If the Jukebox is playing and the Tune has a long pause or the long pause while the Jukebox is cycling between CD’s it is possible that the Music Source (Background Music) may cut-in causing annoying and unwanted chatter while the Jukebox is still active. To prevent this problem the MUTE 2 TIME DELAY should be adjusted accordingly.

JUKEBOX REMOTE VOLUME CONTROL
A Jukebox Remote Volume Control may be provided to adjust the Output Level independently from the Background Music Source. The Jukebox Music Level should be set in accordance to the ambient noise which may change during peak business hours. The AUX Input (used for the Jukebox) is equipped with a Remote Volume Control Feature. Use the optional PASO Model RVC10W (10K) Volume Control mounted on a single gang plate.

MUSIC ON HOLD
The Zone 1 Amplifier provides a separate 600 ohm Transformer Balanced Music on Hold Output for the Telephone system. If the Zone 1 Input Selector Switch is set to Input 3, the MOH Output receives only the PROGRAM from the MUSIC SOURCE without Paging or the Jukebox interruptions.

ZONE 1 & 2 ONE WATT - 8 OHM OUTPUT
The ZONE1 and ZONE 2 Outputs may be used to cover small area with MUSIC ONLY without interruption from the Microphone or Phone Paging or the music from the Jukebox. The Program Source for both 1 Watt Amplifiers may be independently selected through Internal Jumpers (see Diagram). Output Level may be also independently adjusted by the separate Level Controls.

ZONE 1 AND 2 SPEAKERS
The Wiring Diagram shows the connection of up to 4 (8 ohm) Speakers for the Zone 1 & 2 - 1 Watt Amplifiers. When 4 Speakers are used each Speaker Output will be a 1/4 Watt.

INPUT JUMPERS - SWITCHES SETTING
The Diagram indicates the various Input Settings for this application. Some settings may be already “Defaulted” when the Amplifier is shipped and do not need re-setting.
APPLICATION

This Note illustrates a typical Auto Service Station C-Store application. The size of the Service Station and the number of Gas Pump Islands to cover will determine the amount of outdoor Waterproof Speakers required and the Power Output of the Amplifier.

GAS PUMP OUTDOOR SPEAKERS

40 WATT SYSTEM EXAMPLE - The PASO Model C55DMST Waterproof Music Speaker is recommended. Typically each Speaker should be tapped at 5 Watt. In this configuration up to 8 Speaker may be used with the Model DMS3040 40 Watt Amplifier for distribution of Music and Messages at the Gas Pumps.

For larger systems use a higher power Amplifier and the additional quantity of speakers required.

C-STORE INDOOR SPEAKERS

The Amplifier is equipped with two independent 1 Watt, 8 Ohm Amplifiers - ZONE 1 and ZONE 2. C-STORE - Up to 4+4 Ceiling Speakers may be utilized indoors in the Store area, Rest Rooms or other area such as a separate concession. By utilizing the separate (2) 1 Watt Amplifiers as a first and second zone, only the Music program will be distributed inside the Store. This avoids the continuous and annoying repeating of the messages in the indoor areas. The output level may be adjusted by the 1st and 2nd Zone Level Control.

ZONE 1 - ZONE 2 PROGRAM SOURCE SELECTOR

The program Source for each Zone Output may be selected by setting the Zone 1 and 2 Jumper Set to either AUX 1 - AUX 2 or Module Source.

MUSIC ON HOLD

The Zone 1 Amplifier provides a separate 600 ohm Transformer Balanced Music on Hold Output for the Telephone system. If the Zone 1 Input Select Jumper Set is set to AUX 1, the MOH Output receives the Music from the Satellite Receiver without Paging or Messages interruptions.

PAGING MICROPHONE

PRIORITY PAGING MICROPHONE - A Low Impedance Dynamic Microphone can be connected to the Amplifier INPUT 1. The Microphone can be set to provide Priority Paging over both the Music Program and the Message Repeater. Optionally Paging may be generated from the Phone system if desired. The TEL INPUT provides a 600 ohm Transformer balanced Phone interface.

MESSAGE REPEATER

The Message Repeater provides pre-recorded Messages at the Gas Pumps Only. Each time a message is initiated by the Repeater (AUX 1) the Music (AUX 2) is automatically muted for the duration of the message.

REPEATER REMOTE VOLUME

A Master Remote Volume Control PASO Model RVC10W may be provided to adjust the Output Level of the Message Repeater in accordance to the outdoors noise.
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 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 any 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.