

## PUBLIC ADDRESS MIXER POWER AMPLIFIER

# PL-260A

# 260 WATT RMS

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK, DO NOT OPEN!	
	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT OPEN COVER. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.	

	WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE UNITS NOT SPECIFICALLY DESIGNED FOR OUTDOOR USE TO RAIN OR MOISTURE.
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	WARNING: REMOVAL OF THE COVER SHOULD ONLY BE PERFORMED BY QUALIFIED SERVICE PERSONNEL - NOT USER SERVICEABLE. THE UNIT SHOULD ALWAYS BE UNPLUGGED BEFORE REMOVING THE COVER, AND REMAIN UNPLUGGED WHILE THE COVER IS REMOVED.
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## PRECAUTIONS

### 1. Unpacking

After removing the amplifier from the carton, inspect for any exterior damage to the unit. If damage is noted, notify the carrier at once so that a claim can be justified. Save all packing material. This is important when the claim is processed.

### 2. Ventilation

To offset heat generated by the unit, it is necessary to provide ample ventilation around the unit. Avoid blocking or impeding the ventilation holes on the unit. To prevent unnecessary problems, install the unit in a place free from any vibrations, direct sunlight, humidity or dust circulation.

### 3. Avoid spilling liquids or allowing materials to enter the cabinet

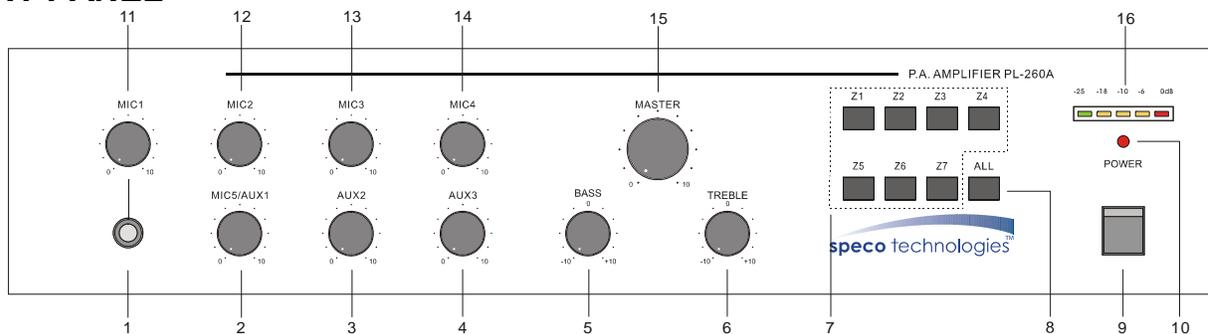
If the unit gets wet or any foreign material enters the cabinet, immediately disconnect the A.C. line cord and consult your dealer or qualified technician.

# IMPORTANT SAFETY INSTRUCTIONS

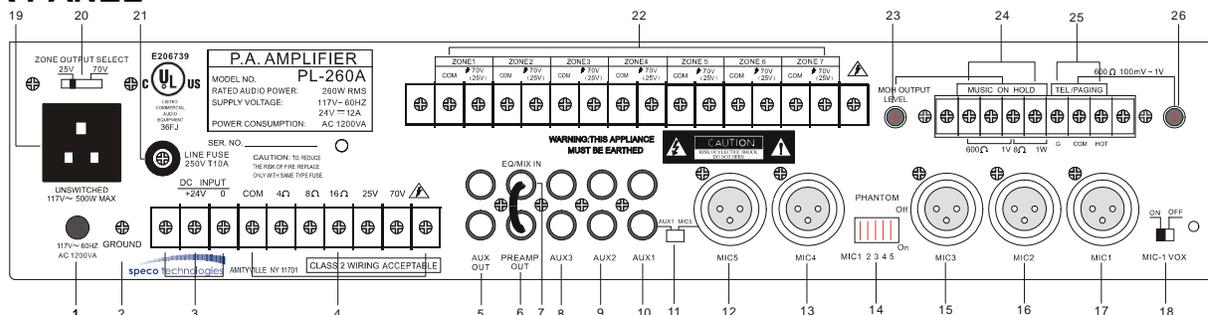
1. Read Instructions - All the safety and operating instructions should be read before the unit is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the unit and in the operating instructions should be adhered to.
4. Follow Instructions - All operating instructions should be followed.
5. Do not use this unit near water-for example, near a bath tub, wash basin, kitchen sink, in a laundry room, in a wet basement, near a swimming pool, in an unprotected outdoor installation, or any area which is classified as a wet location.
6. Unplug unit from AC outlet, use a damp cloth for cleaning. Do not use liquid cleaners or aerosol cleaners.
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 in an enclosure 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 an electrician for replacement of the obsolete outlet.
12. Protect the power cord from being walked on or pinched particularly at plugs, convenience outlets, and the point where they exit from the apparatus.
13. Use only the attachments and accessories specified in this manual.
14. If a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
15. Unplug this apparatus during lightning storms or when not used for long periods of time.
16. 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 damage, 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.
17. Do not replace fuse unless power cord is disconnected from the AC wall outlet.
18. Do not install accessories unless the power cord has been removed from the AC wall outlet.
19. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
20. Warning . To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
21. Caution . Use of any controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

# Controls and Connections for the PL-260A P.A. Amplifier

## FRONT PANEL



## REAR PANEL



## FRONT PANEL

- 1) MIC-1 input jack (1/4" phone jack).
- 2) MIC-5/AUX-1 Volume control.
- 3) AUX-2 Volume control.
- 4) AUX-3 Volume control.
- 5) Bass Control.
- 6) Treble Control.
- 7) Zone 1-7 selector switches.
- 8) All zone selector switch.
- 9) Power on/off switch.
- 10) Power on indicator.
- 11) MIC-1 Volume control.
- 12) MIC-2 Volume control.
- 13) MIC-3 Volume control.
- 14) MIC-4 Volume control.
- 15) Master Volume control.
- 16) Output level indicator.

## REAR PANEL

- 1) AC power cord.
- 2) Ground.
- 3) DC input terminals for battery backup.
- 4) Speaker output terminals.
- 5) AUX output RCA jacks.
- 6) Preamp output RCA jacks.
- 7) EQ / MIX input RCA jacks.
- 8) AUX-3 input RCA jacks.
- 9) AUX-2 input RCA jacks.
- 10) AUX-1 input RCA jacks.
- 11) AUX1/MIC5 input select switch.
- 12) MIC-5 (XLR connector) input.
- 13) MIC-4 (XLR connector) input.
- 14) Individual Phantom Power on/off switches.
- 15) MIC-3 (XLR connector) input.
- 16) MIC-2 (XLR connector) input.
- 17) MIC-1 (XLR connector) input.
- 18) MIC-1 VOX voice override on/off switch.
- 19) AC accessory outlet (Unswitched).
- 20) Zone output 25V/70V select switch.
- 21) AC fuse holder.
- 22) Zone 1~7 output terminals.
- 23) MOH output level control.\*
- 24) MOH output terminals.\*
- 25) TEL / PAGING input terminals. (Balanced)\*\*
- 26) TEL / PAGING input level control.\*\*

\*MOH = Music on hold

\*\*TEL/PAGING= Connection input terminals for general or emergency paging.

\*\*TEL/PAGING is not to be connected directly to a telephone circuit or TNV circuit.

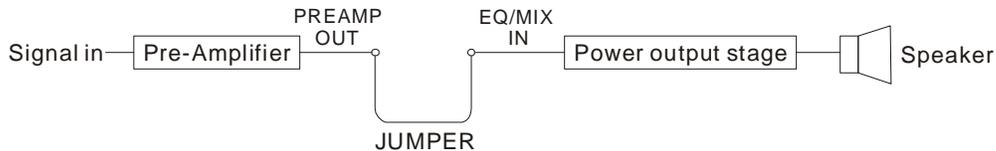
## FRONT PANEL

- 1) **MIC-1 input jack (1/4" phone jack).** Accepts a balanced low impedance microphone with a standard 1/4" phone plug.
- 2) **MIC-5/AUX-1 Volume control.** Adjusts audio level of MIC-5/AUX-1.
- 3) **AUX-2 Volume control.** Adjusts audio level of AUX-2.
- 4) **AUX-3 Volume control.** Adjusts audio level of AUX-3.
- 5) **Bass Control.** Low frequency tone control.
- 6) **Treble Control.** High frequency tone control.
- 7) **Zone 1-7 selector switches.** Allows for selection of individual zone paging with 70V or 25V line output.
- 8) **All zone selector switch.** Allows for selection the All zone paging simultaneously with 70V or 25V line output.
- 9) **Power on/off switch.** Turns amplifier power on and off.
- 10) **Power "on" indicator.** Indicates power is on when lit.
- 11) **MIC-1 Volume control.** Adjusts audio level of MIC-1.
- 12) **MIC-2 Volume control.** Adjusts audio level of MIC-2.
- 13) **MIC-3 Volume control.** Adjusts audio level of MIC-3.
- 14) **MIC-4 Volume control.** Adjusts audio level of MIC-4.
- 15) **Master Volume control.** Controls all volume levels simultaneously.
- 16) **Output level indicator.** Indicates power output. Do not overload amp.

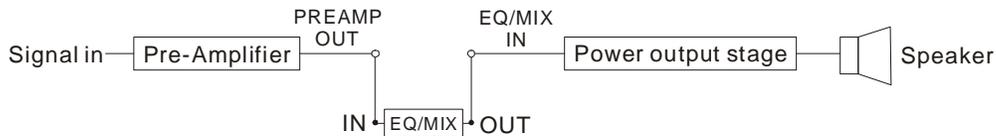
## REAR PANEL

- 1) **AC power cord.** AC power cord with three pin plug for a 120VAC 50/60 Hz, power source. Do not defeat the ground pin.
- 2) **Ground.** Cabinet enclosure unit ground.
- 3) **DC input terminals for battery backup.** Provides DC 24V input for battery backup paging during power failure.
- 4) **Speaker output terminals.** Speaker lines must be connected to COM+ and one (and only one) of the remaining screw terminals.
- 5) **AUX output RCA jacks.** This booster output supplies the input signal to an additional power amplifier. This signal is after tone control and master volume control. In this fashion, very large systems requiring more power can be accommodated.
- 6) and 7) **EQ / MIX input and preamp output RCA jacks.** Connects the mixer / preamplifier stage to the power amplifier stage. The connecting link must remain inserted for normal operation as a mixer / amplifier. If a sound compressor / limiter, equalizer, or an external signal processor is used in the sound system, connect the PREAMP OUT+ to the input of the external processor and the output of the processor to EQ / MIX IN. The PREAMP OUT+ is after the tone controls and the master volume control.

## STANDARD OPERATION



## OPERATION WITH MIXER ,EQUALIZER SOUND COMPRESSOR / LIMITER ETC.



- 8) AUX-3 input RCA jacks.** High impedance input available with parallel RCA jacks (for combining stereo output accessories).
- 9) AUX-2 input RCA jacks.** High impedance input available with parallel RCA jacks (for combining stereo output accessories).
- 10) AUX-1 input RCA jacks.** High impedance input available with parallel RCA jacks (for combining stereo output accessories).
- 11) AUX1/MIC5 input selector switch.** Allows for selection of either low impedance MIC5 input or high impedance AUX1 input.
- 12) MIC-5 (XLR connector) input.** Accepts a balanced low impedance microphone signal with an XLR connector.
- 13) MIC-4 (XLR connector) input.** Accepts a balanced low impedance microphone signal with an XLR connector.
- 14) Individual Phantom Power on/off switches.** Allows for selection phantom power on or off from MIC1 to MIC5.
- 15) MIC-3 (XLR connector) input.** Accepts a balanced low impedance microphone signal with an XLR connector.
- 16) MIC-2 (XLR connector) input.** Accepts a balanced low impedance microphone signal with an XLR connector.
- 17) MIC-1 (XLR connector) input.** Accepts a balanced low impedance microphone signal with an XLR connector.
- 18) MIC-1 VOX voice override on/off switch.** MIC-1 inputs include VOX muting switch of the MIC-2~5 and AUX-1~3 input during paging.
- 19) AC accessory outlet (Unswitched).** Unswitched AC Auxiliary outlet for a 120VAC 50/60Hz power source.
- 20) Zone output 25V/70V select switch.** Allows for selection of either 25V or 70V for Zone1~7.

**21) AC fuse holder.**

**22) Zone 1~7 output terminals.** In addition to the normal 70V and 25V line outputs, there are seven groups of 70V or 25V, line terminals for 7 zones which can be selected using the push buttons on the front panel.

**23) MOH output level control.** Controls volume of MOH output. (Music on hold)

**24) MOH output terminals.** Provided two MOH outputs 600 Ohm, 1 Volt and 8 Ohm, 1 Watt.

**25) TEL / PAGING balanced input terminals.** Accepts a balanced telephone paging signal.

**26) TEL / PAGING input level control.** Controls audio level of telephone input.

**Note:** MOH output features an internal selector jumper (factory set on AUX-1) AUX-1~3 when background music is provided at the AUX inputs. MOH output function depends on the jumper location or locations that are selected, see illustration on page 8.

Screw terminal designations: G-GND, HOT-Signal positive, COM-Signal negative/common.

**Overcoming Ground Loop Problems**

If the amplifier is mounted in a rack unit (Use rack mount part # PBM-RK2), or is used with equipment having its own ground, it is necessary to ensure that ground loops and the associated problems of hum on the output signal are not introduced by the ground wiring. (see warning)

**Warning**

To overcome this problem if it occurs, the electrical and the mechanical ground on the amplifier may be separated by completely removing the wire connecting the power source to ground.

**CONSULT AN ELECTRONICS TECHNICIAN TO ACCOMPLISH THIS TO AVOID POTENTIAL PERSONAL INJURY OR A HAZARDOUS CONDITION.**

**SPEAKER CONNECTION**

The rear panel of the amplifier contains a 7 screw terminal strip for connection of speakers. BE CAREFUL TO CONNECT SPEAKERS PROPERLY, see impedance and line voltage instructions below.

The speaker lines are to be connected directly between the appropriate COM terminal on the 7 screw terminal strip and the terminal corresponding to the impedance of the speaker(s) or of the line voltage selected. (70V or 25V)

4, 8 and 16 OHM CONNECTIONS (refer to figure 3).

Connect the cables to the terminals on the 7 screw terminal strip provided. Use the screw terminals which correspond to the impedance of the speaker(s). One lead must always be connected to the COM. This is just an example. If in doubt consult a qualified technician.

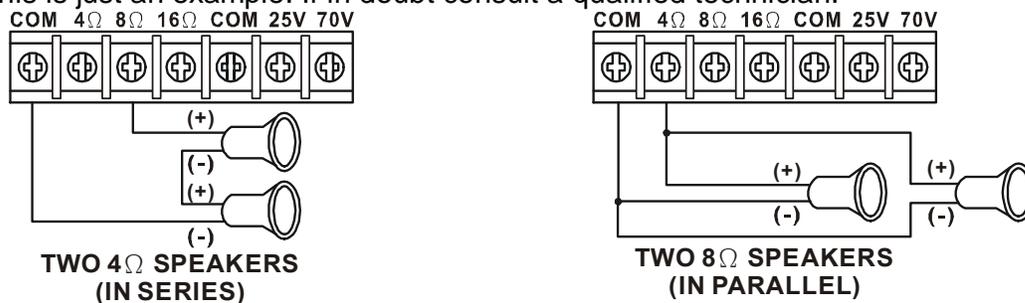


FIGURE 3

25V and 70V CONSTANT LINE VOLTAGE CONNECTIONS

(refer to figure 4).

**IMPORTANT NOTICE:** When the 25V and 70V constant line voltages are used, a line matching transformer must be used with each speaker. All transformers must be connected in parallel.

**HOW TO CONNECT LINE MATCHING TRANSFORMERS IN PARALLEL**

(25 VOLT LINE OR 70 VOLT LINE)

ALWAYS CONNECT LINE TRANSFORMERS IN PARALLEL

NEVER CONNECT LINE TRANSFORMERS IN SERIES

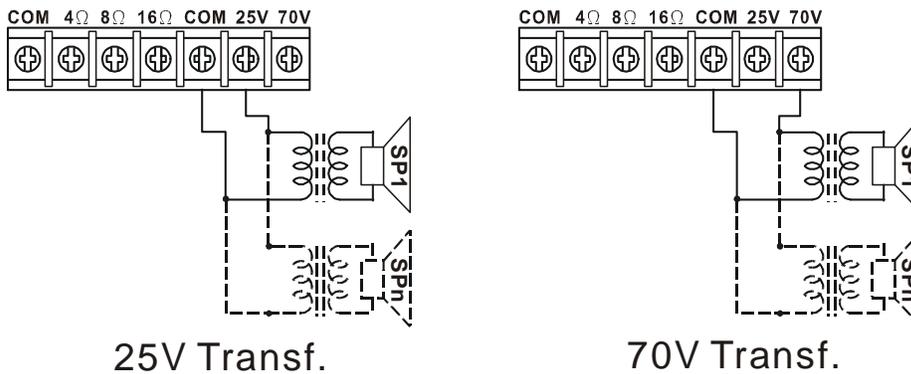


FIGURE 4

**SPEAKER IMPEDANCES:**

Speaker impedance taps for 4, 8 and 16 Ohm speakers are provided on a terminal strip on the rear panel of the unit. Also, outputs for 25V and 70V constant line voltage are provided. To connect the power output directly to a speaker or PA horn or a combination of speakers and/or PA horns which have a resulting voice coil impedance of 4,8 or 16 Ohm, connect to the COM and the proper impedance tap on the terminal strip. Be sure the speaker(s) or PA horn(s) is capable of handling a reasonable power output from the amplifier or permanent damage to the speaker(s) or PA horn(s) may result. Also, be careful not to overload the amplifier with too many speakers or PA horns. If it is desired to use a number and variety of speakers, the speakers must be arranged in various series or parallel arrays to provide proper impedance matching or the 25V or 70V constant line voltage must be used (parallel connection only). If you are not familiar with impedance matching, consult a professional installer or technician for advice. If the 25V or 70V constant line voltages are used, a line matching transformer must be used with each speaker. Again do not overload or use incompatible speakers. Line transformers are the preferred method for multi-speaker installation.

## CABLE REQUIREMENTS

Output cabling need not be shielded in most cases and should be of sufficient gauge to minimize losses due to the resistance of the wire over long runs (insertion loss). Cable thinner than 18 gauge is not recommended. Long runs require 16 gauge or heavier.

In some cases, where the output cable is run in close proximity to unshielded intercom cables, electrical cables, radio transmission antennas or other sources of interference or when the amplifier is being used for paging from a telephone system, the amplifier may require shielded output cabling to prevent audio feedback or interference.

PRIORITY PAGE:THE AMPLIFIER FEATURES A VOICE ACTIVATED PRIORITY PAGE CIRCUIT AND AUTOMATICALLY MUTES ALL PROGRAM MATERIAL (TUNER/TAPE/CD,ETC.) FROM THE AMPLIFIERS OUTPUT AND PERMITS MICROPHONE # 1 AND THE TELEPHONE INPUT TO

OVERRIDE FOR PAGING ANNOUNCEMENTS.

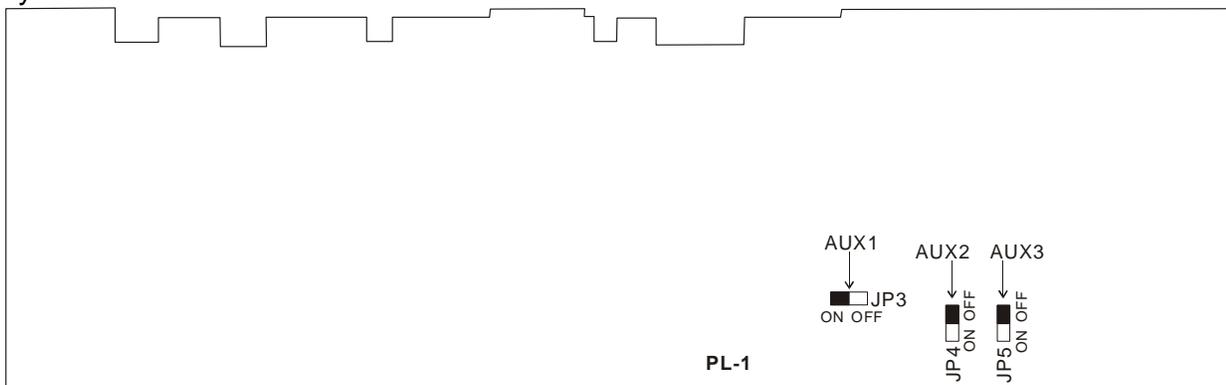
TELEPHONE LINE: A TELEPHONE LINE INPUT OF 600 OHM IS PROVIDED.

THERE ARE MANY OTHER FEATURES OFFERED. PLEASE READ MANUAL COMPLETELY.

**WHENEVER IN DOUBT ABOUT INSTALLATION, CONSULT WITH A PROFESSIONAL INSTALLER OR TECHNICIAN OR PERSONAL INJURY, DAMAGE TO THIS AMPLIFIER AND/OR SPEAKERS MAY RESULT AND YOUR WARRANTY MAY BE VOIDED.**

## MUSIC ON HOLD JUMPER POSITIONING

These adjustments are to be made by qualified technical personnel . Be certain unit is disconnected from A/C power source prior to removing unit's cover or electrical shock or injury may result.



Jumper location ( on or off ) to select AUX input for music on hold output. (MOH on above diagram)

Note: Units come with jumper set AUX-1(on), AUX-2(off), AUX-3(off).

# SPECIFICATIONS

Type	Public Address Mixer Power Amplifier
Model No.	<b>PL-260A</b>
Power supply	AC 117V, 60Hz DC 24V, 12A
Rated output power	260W RMS
Frequency response	50~15 KHz $\pm$ 3dB
Total harmonic distortion	1% or less at 1 KHz at rated output
Input sensitivity and impedance	TEL :100mV/600 Ohm, Balanced MIC-1~5 : 1.0mV/600 Ohm, Balanced AUX-1~3 : 200mV/50K Ohm, Unbalanced EQ/MIX IN : 1V/50K Ohm, Unbalanced
S/N Ratio	MIC-1~5 Better than 60 dB TEL Better than 60 dB AUX-1~3 Better than 70 dB
Speaker outputs	4 Ohm, 8 Ohm, 16 Ohm 25V, 70V line outputs
Output sensitivity and impedance	AUX out : 350mV/4.7K Ohm PREAMP out : 1V/600 Ohm
*MOH output	600 Ohm @ 1V and 8 Ohm - 1Watt
**VOX level	MIC-1/TEL 0~40 dB Adjustable**
Phantom Power MIC-1~5	15 V DC
Tone control	Bass: $\pm$ 10 dB at 100Hz Treble: $\pm$ 10 dB at 10KHz
Dimensions	430mm(W)x88mm(H)x300mm(D) 16.9*(W)x3.5*(H)x11.8*(D)
Weight	Approx 26.4 lbs (12.0 kgs)
Finish	Black
Mounting options	Table top or 19+rack mountable (Use # PBM . RK2 rack mount bracket)

\*MOH = Music on hold      \*\*Factory set : -40dB