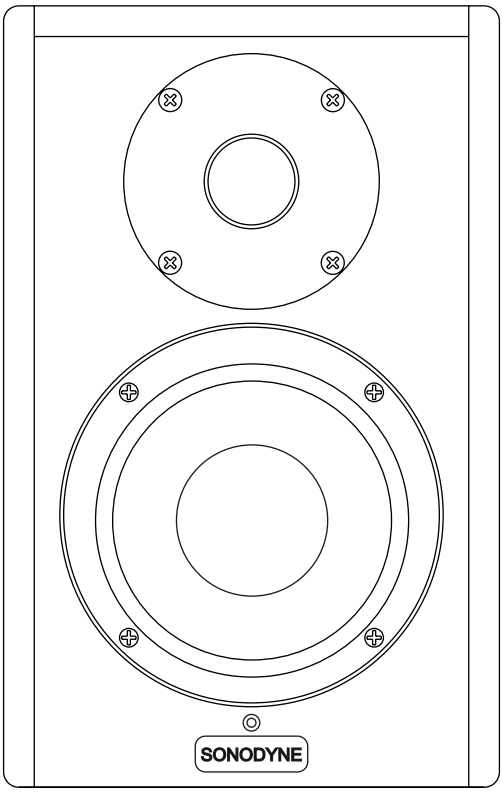
SONODYNE®

PM SERIES V2

2 way active monitor I owners manual



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INTRODUCTION

Congratulations on your purchase of the PM V2 near field active studio monitor. The PM V2 has all the makings of a truthful reference device. The high grade transducers, the heavily-braced MDF rigid enclosure, the active amplification, result in sound that is neutral and transparent. You may thus depend on the PM V2 to accurately meet your professional monitoring needs.

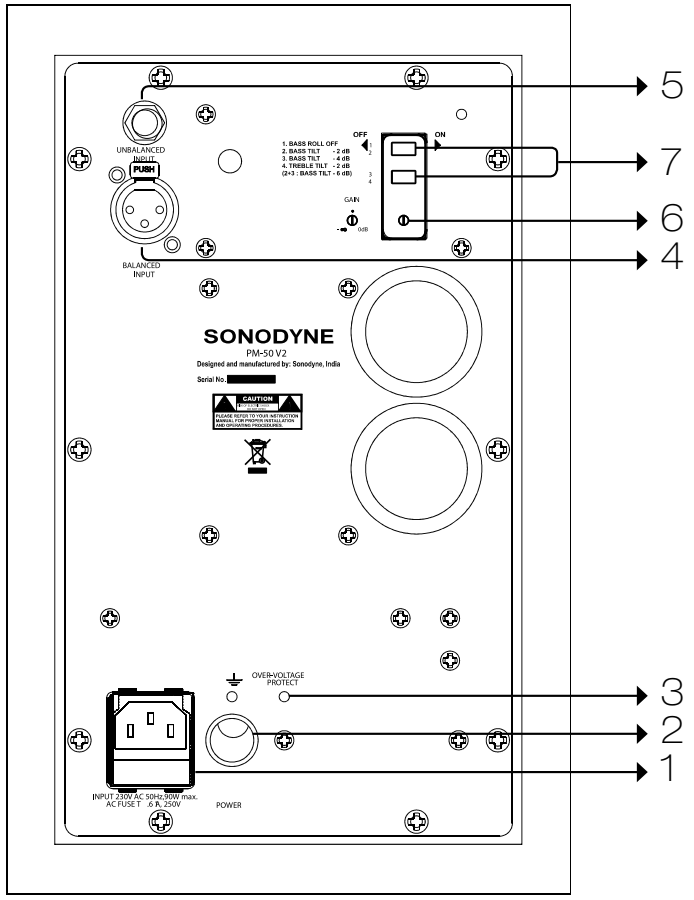
SAFETY

- Please ensure proper earthing.
- Please keep away from moisture.
- The equipment is capable of producing SPL in excess of 100dB. Long term exposure may cause permanent hearing damage.
- Ensure that the speakers are not covered while in use. Restricted airflow at the rear of the unit will cause it to heat up.

UNPACKING

While removing the units from the carton, please do not hold the speaker's front. The high frequency transducer is located near the top of the cabinet, on the front baffle; you may accidentally damage the transducer.

The best way to safely unpack the monitors is to open the top of the carton, keep the EP filler piece on, turn the entire carton upside down and pull off the carton. Then remove the filler pieces and the protective cloth.



FRONT PANEL

Power Indicator: This lights up when power is ON

REAR PANEL (refer to Fig. 1 on page 2)

1. AC SOCKET

   This is a fused 3-pin IEC AC receptacle for connecting to a wall outlet with the cable supplied. Ensure that the wall outlet is properly earthed, that is, the earth must be connected to a earth bus-bar which connects to other audio equipment and is not shared by noisy equipment like computers, air-conditioners, lighting appliances etc. The earth connection is also required in the interests of your own safety, should any fault occur. Please check that the wall outlet is capable of providing the current requirement of the product, printed on the back panel near the IEC AC socket.

2. POWER SWITCH

   This switch is used to turn power on or off

3. OVER-VOLTAGE PROTECT LED

   The PM V2 has a protection feature which automatically shuts off the power when the mains voltage crosses an upper limit. In such case, this LED will glow. Normal operation will resume when the over-voltage condition is removed.

4. BALANCED INPUT

   This is a fully balanced XLR input socket.
   Pin connections are 1: ground, 2: hot or positive, 3: cold or negative.

5. UNBALANCED INPUT

   This is an RCA unbalanced type input. Connect your source to this socket if it has an unbalanced input

6. GAIN -

   The PM V2 has a variable gain cum volume control. The gain is factory set to center position. The variable gain setting allows the user to get a good sensitivity match when using either professional or semi-professional equipment. Turned down from its center position, it acts as an attenuator.

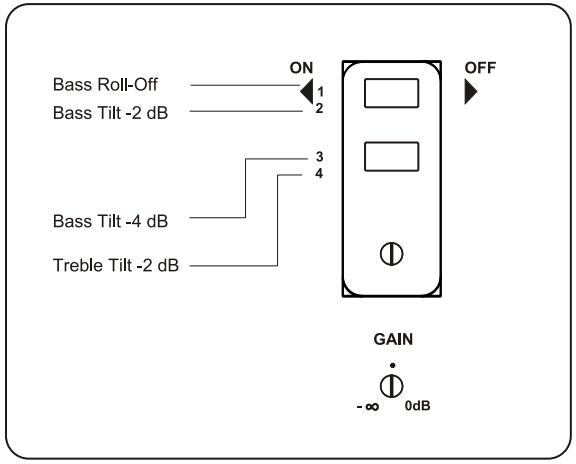
7. ROOM COMPENSATION SWITCHES

   BASS ROLL-OFF: Switch 1 when ON introduces a low frequency roll-off into the response curve. For many applications, removal of deep bass content allows you to raise the overall output level, permitting LOUD mixing. But, keep in mind that removing deep bass content from monitors may actually result in an inaccurate bass reproduction.
   BASS TILTS: Switches 2 & 3 when ON activate a filter @ 80Hz, to reduce the low frequency output by 2dB & 4dB respectively. Engaging both switches produces a 6dB roll-off. These functions can be used to compensate for the build-up of low frequencies that occur when the speakers are placed near walls or corners, or on the workbench surfaces. When the monitors are at a free-standing position, away from walls and workbenches turn these switches OFF.

   ROOM COMPENSATION (HF) HF TILTS

   Switch 4 introduces a high frequency response shelf cut of 2dB above 4kHz. This feature can be used if the testing room is 'fairly live' or the listening position is close to the speakers. But it is generally not used for applications in 'dead' rooms.

   After you've studied the PM's rear panel switches, do not hesitate to experiment with the settings and also monitor placement to get the best results.



The effects of the plots are

PM 50 V2:	Bass tilt	Fig 3
	Bass Roll off	Fig 4
	Treble tilt	Fig 4
PM 100 V2	Bass tilt	Fig 6
	Bass Roll off	Fig 5
	Treble tilt	Fig 5

FIG. 3

PM 50 V2

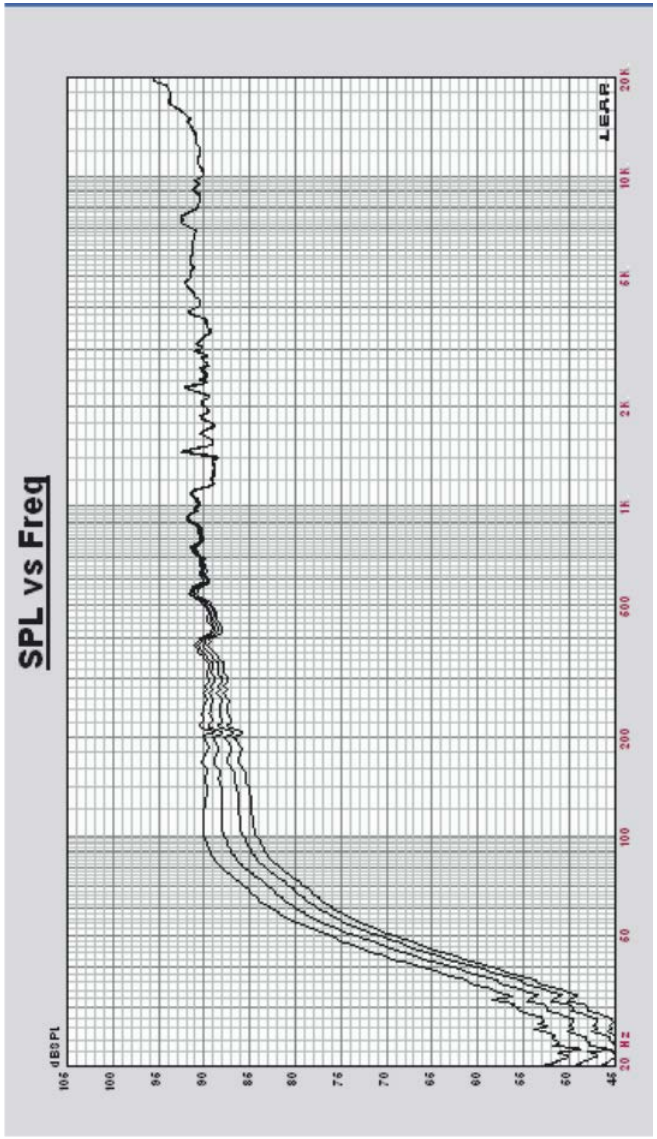


FIG. 4

PM 50 V2

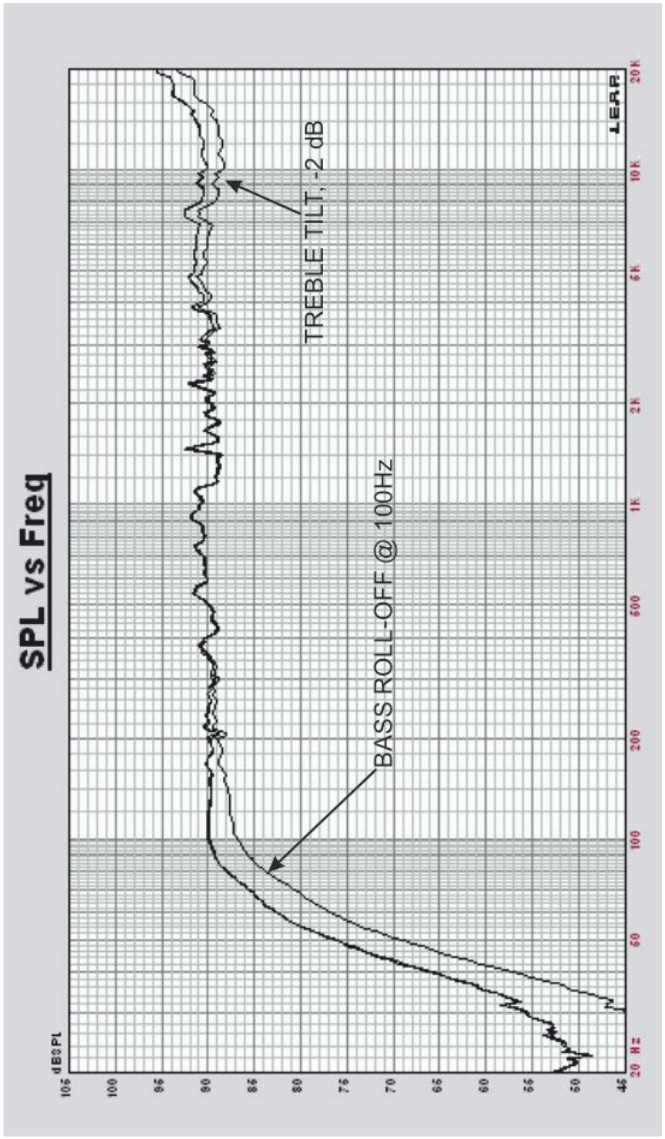


FIG. 5

PM 100 V2

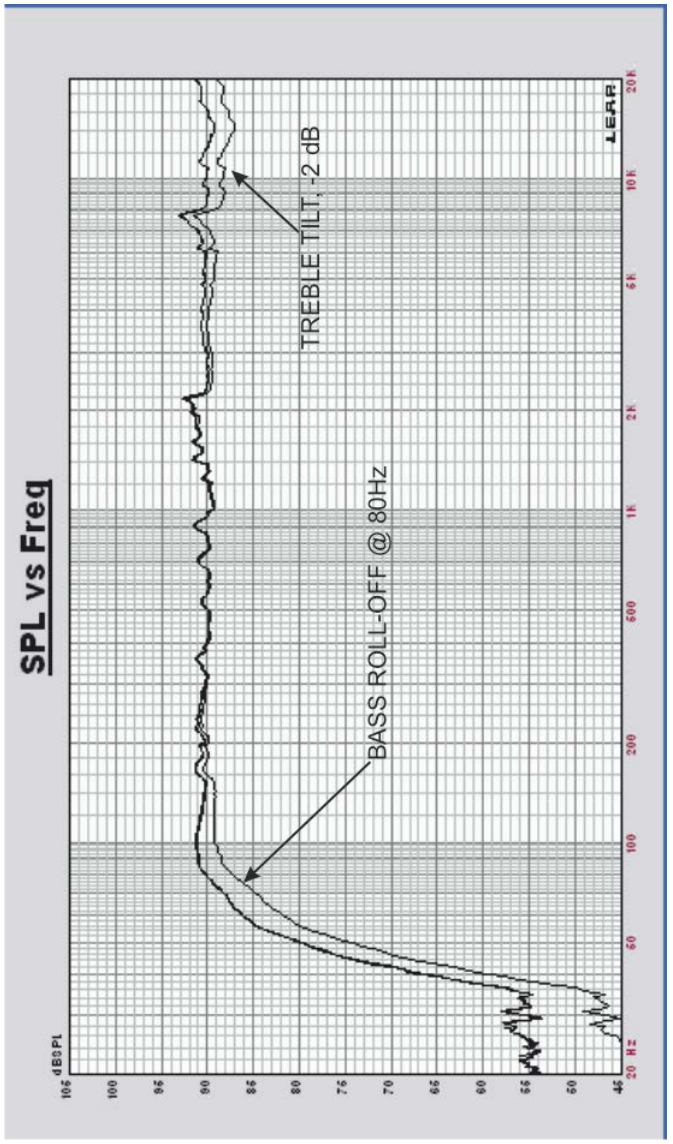
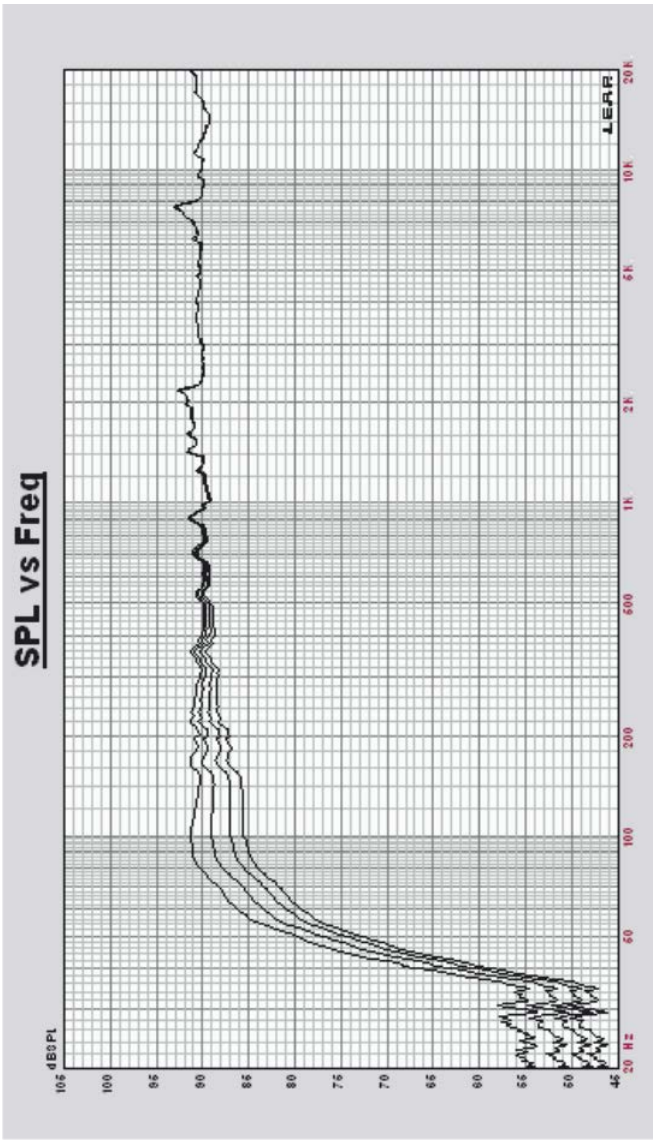


FIG. 6

PM 100 V2



INSTALLATION

ROOM PLACEMENT

The PM V2 has a wide variety of placement options. Shown in Fig. 8 is a typical stereo setup for near field monitoring. Shown in Fig. 7 is a typical 5 channel setup.
The monitors should be angled to directly face the listener. The center of the high frequency transducer should be on-axis with the ear level of the listener.
The low frequency compensation settings can be used when speakers are placed in close proximity to walls, corners and work surfaces.

LISTENING DISTANCE

The common listening position at mixing positions is generally 1 to 1.5m for near field applications. The stereo listening angle is more a matter of personal preference, but we recommend the angle should be around 60° as shown in Fig. 8

MOUNTING OPTIONS

For mounting the speaker on a wall 4 inserts are provided on the base as shown in Fig. 9

FIG. 7

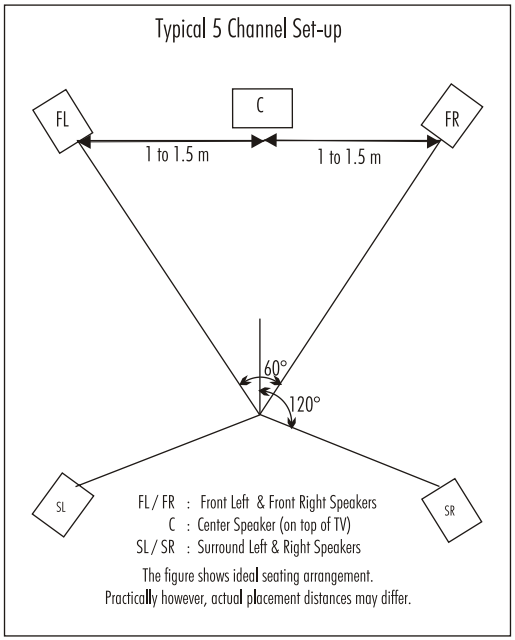


FIG. 8

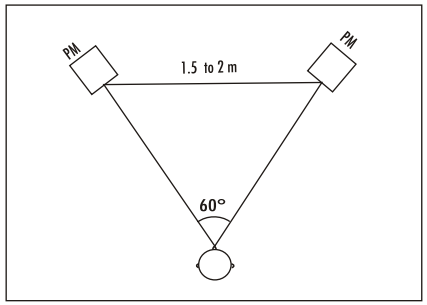
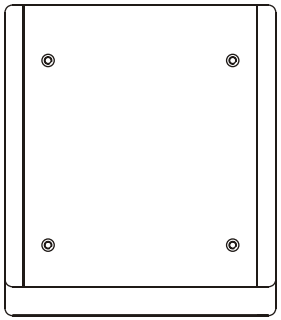


FIG. 9



BOTTOM VIEW

OPERATION

Connect the line level monitor signal from your mixer (or any other source) to the signal input on the PM studio monitor using balanced cables (3 pin XLR).
Connect the supplied AC power cord to the IEC socket at rear panel.
Keep the power switch at OFF position.
Switch on your mixer, but keep the master level control at minimum.
Switch on PM V2. The blue power LED will light up. Ensure that the Input Sensitivity (Gain control at the rear panel) is set to 0dB
Adjust the master volume on your mixer to get the desired listening level.

NOTE

Your PM V2s' achieve their best bass response in a room that is optimized for bass reproduction. Factors such as room shape and volume, absence of acoustical treatment can prove to be a bane for optimal sound reproduction from the PM V2. Therefore we have provided some compensation controls which you can use to optimize the frequency response of the speakers for any particular room. For the effect of these 'tilts' please refer to Fig: 3-6.

MAINTENANCE

No user serviceable parts inside the unit. All maintenance and repair work to be undertaken by qualified personnel only.

PM 50V2 SPECIFICATIONS

SYSTEM	
DESCRIPTION	2-way active monitor
TRANSDUCER COMPLEMENTS	LF: 5" injection-moulded PP cone woofer HF: 26mm silk-dome neodymium magnet tweeter
ENCLOSURE TYPE	Vented, through rear-firing aerodynamic port
ENCLOSURE MATERIAL	MDF
OVERALL FREQUENCY RESPONSE	75Hz ~ 20kHz, (±3dB)
USABLE FREQUENCY RESPONSE	65Hz ~ 22kHz, (±10dB)
MAX SPL, HALF SPACE	104dB
CROSSOVER FREQUENCY	2.5kHz
AMPLIFIER POWER BEFORE CLIPPING	LF: 45W HF: 45W
TYPE	Class D
S/N RATIO (AT UNITY GAIN)	>90 dB, referred to full output
THD AT RATED POWER	<0.04 %
CMRR	>65dB
INPUT LEVEL FOR 90dB SPL AT 1M	0dBU
INPUT IMPEDANCE	22KΩ
CONTROLS, I/O	
INPUT	One fully balanced XLR socket one unbalanced RCA socket
GAIN CONTROL RANGE	-70dB to +6dB
BASS TILT	-2dB , -4dB , -6dB @ 80Hz
TREBLE TILT	-2dB @ 15kHz
BASS ROLL-OFF	100Hz, 6dB/ octave
CONTROLS & SWITCHES	
REAR	Power switch, volume control, 4 DIP switches for bass/ treble tilts & bass roll-off
INDICATORS	Power ON /OFF, Overvoltage protect
GENERAL	
POWER REQUIREMENT	230VAC, ±10%, 50Hz
POWER CONSUMPTION	100VA Max.
PROTECTION	Over current, Overheat, RFI, Switch on/ off, Mains overvoltage
FINISH	Black PVC with black painted front
MECHANICAL DIM. (HxWxD) mm	306 x 194 x 210
NET WEIGHT	6.3kg

NOTE: Due to continuous improvements, all specifications are subject to change

PM 100V2 SPECIFICATIONS

SYSTEM	
DESCRIPTION	2-way active monitor
TRANSDUCER COMPLEMENTS	LF: 6" injection-moulded PP cone woofer HF: 26mm silk-dome neodymium magnet tweeter
ENCLOSURE TYPE	Vented, through rear-firing aerodynamic port
ENCLOSURE MATERIAL	MDF
OVERALL FREQUENCY RESPONSE	65Hz ~ 20kHz, (±3dB)
USABLE FREQUENCY RESPONSE	55Hz ~ 22kHz, (±10dB)
MAX SPL, HALF SPACE	107dB
CROSSOVER FREQUENCY	2.5kHz
AMPLIFIER POWER BEFORE CLIPPING	LF: 80W HF: 50W
TYPE	Class D
S/N RATIO (AT UNITY GAIN)	>90 dB, referred to full output
THD AT RATED POWER	<0.04 %
CMRR	>65dB
INPUT LEVEL FOR 90dB SPL AT 1M	0dBU
INPUT IMPEDANCE	22KΩ
CONTROLS, I/O	
INPUT	One fully balanced XLR socket one unbalanced RCA socket
GAIN CONTROL RANGE	-70dB to +6dB
BASS TILT	-2dB , -4dB , -6dB @ 80Hz
TREBLE TILT	-2dB @ 15kHz
BASS ROLL-OFF	80Hz, 6dB/ octave
CONTROLS & SWITCHES	
REAR	Power switch, volume control, 4 DIP switches for bass/ treble tilts & bass roll-off
INDICATORS	Power ON /OFF, Overvoltage protect
GENERAL	
POWER REQUIREMENT	230VAC, ±10%, 50Hz
POWER CONSUMPTION	200VA Max.
PROTECTION	Over current, Overheat, RFI, Switch on/ off, Mains overvoltage
FINISH	Black PVC with black painted front
MECHANICAL DIM. (HxWxD) mm	332 x 220 x 240
NET WEIGHT	10.0kg

NOTE: Due to continuous improvements, all specifications are subject to change

TROUBLESHOOTING

SYMPTOM Device remains 'OFF'

Make sure that the power cord is securely seated in the IEC socket and plugged all the way into the AC outlet.
Make sure that the AC outlet is live (check with tester).
Remove power cord and check the Fuse. If blown, then replace with exact type and rating.

SYMPTOM Device is 'ON' but no audio output

Is the gain control on the rear panel turned up?
Is the signal source turned up? Make sure that the signal level from the device preceding the PM V2 is high enough to match the Input sensitivity (Gain control on rear panel).
If either stereo pair is not producing sound, then switch the signal around. If the problem also switches sides, the problem is not the monitor. It could be a bad signal cable, or no signal from the mixer.

SYMPTOM Distorted sound

Ensure secure connectivity of the XLR.
Reduce signal level at mixer or reduce gain control of PM at rear panel.
Monitor the signal with headphones. Distorted sound in headphones indicate that the problem lies in the signal source.

SYMPTOM Noise / Hum / Line interference

Proper signal wiring between the mixer and the monitor eliminates the hum, buzz and all sorts of crackling noises. Make sure all connections are secure.
If unbalanced sources are used, make sure the cable run is not too long resulting in hum pick-up problems. Improper cabling will result in unsatisfactory audio reproduction. (please refer to XLR pin connections under Controls and Features on page 3)
If a CATV cable is connected to the system, and a persistent mains hum occurs, disconnect it. If the hum goes away call the cable operator to check for proper cable grounding methods. Using BALUN transformers (1:1, isolated type) might solve the problem.
Make sure that the signal cable is not routed near AC cables.
If a light dimmer or triac-based device exists on the same AC circuit as the monitor, buzzing noises may occur. AC Line filters may eliminate the problem.

NOTES

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