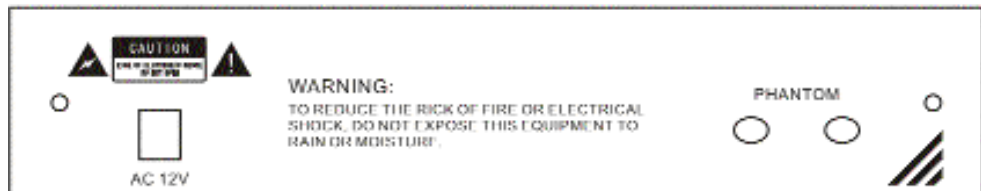
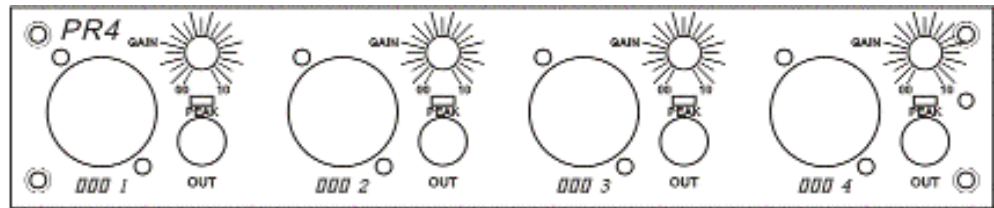


SM Pro Audio

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Operating Manual - SM PR4

Version 1.0 November 2002



SAFETY INSTRUCTIONS

CAUTION: To reduce the risk of electrical shock, do not remove the cover or rear panel of this unit. No user serviceable parts inside. Please refer servicing to qualified personnel only.

WARNING: To reduce the risk of fire or electrical shock do not expose this appliance to rain or moisture.

DETAILED SAFETY INSTRUCTIONS:

All safety and operation instructions of this manual should be read and adhered to before operation.

Retain Instructions:

Please retain all safety and operating instructions for future reference.

Follow instructions:

All operation and user instructions should be followed.

Water, liquid and Moisture:

The appliance should not be used near water, rain or other liquids. Make sure that no liquid can leak, spill or otherwise seep into the appliance.

Ventilation:

Please place the appliance so no obstacles interfere or impede the flow of air through the ventilation openings.

Heat:

The appliance should be situated away from other heat sources such as heaters, radiators, ovens, or other appliances that produce heat.

Power Source:

Make sure your appliance is set to the correct voltage for the country in which it will be used.

Grounding and Polarization:

Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

Power-Cord Protection:

Power supply cords should be routed so that they are not likely to be walked on, pinched, damaged, worn, or rubbed by any other device or obstacle.

Cleaning:

The appliance should be cleaned only with a light soft cloth. Do not use any damaging or corrosive products on the unit.

Periods of inactivity:

The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

Damage Requiring Service:

The appliance should be serviced by qualified service personnel when:

- The power supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped, or the enclosure damaged.

Servicing:

The user should not attempt to service the appliance beyond that is described in the Operating Instructions.

All other servicing should be referred to qualified service personnel.

SM PR4 Main Features

Professional, multi-purpose multi-channel pre-amplifier system for studio applications

- Four totally independent pre-amplifiers in 1 RU package
- High quality audio
- 4 x balanced inputs
- 4 x unbalanced outputs
- Phantom On/Off per 2 channels
- 4 x peak Light indicators
- Individual gain control on each channel
- High-quality components and rugged construction

FOREWORD

Dear Customer,

Thank you very much for expressing your confidence in SM ProAudio products by purchasing this unit. The SM PR4 has been designed to be used as a standard tool for home/pro studios. With much experience in the audio industry over a long period of time, and along with valuable suggestions from our customers, our engineers have developed a product we know you will be satisfied with. We guarantee you uncompromising quality (manufactured under ISO9000 certified management system) as well as excellent technical and audio properties at an extremely affordable price.

Regards,

SM ProAudio

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1. INTRODUCTION

In purchasing the new SM PR4, you have acquired a multi-channel pre-amplifier of high class that meets many of the demands of the home/pro studio.

The market size for digital audio interfaces and computer based digital editing has increased in a massive way. With systems available at very low prices, more and more users are utilizing this technology. One of the main problems with many of these systems is the input stage only consisting of unbalanced line inputs or very low (or no mic pre) gain structure for the balanced input stage and the unavailability of Phantom power.

The PR4 comes to the rescue with 4 channels of balanced input, with a full range of gain control from -20dB to +40dB and Phantom power for every channel. This half rack unit can now solve many of the connectivity issues which are raised in a large range of situations, whether in the Studio, home, club installation or other live sound applications.

2. THE DESIGN CONCEPT

2.1 High quality components and design

The philosophy behind SM ProAudio products guarantees a no-compromise circuit design and employs the best choice of components. The operational amplifiers NJM4558D which are used in the SM PR4, are exceptional. They boast extreme linearity and very low distortion characteristics.

2.2 Inputs and outputs

All inputs and controls are secured firmly to the exterior chassis housing. This ensures robust quality and confidence in performance under all conditions.

3. INSTALLATION

Your SM ProAudio SM PR4 was carefully packed in the factory and the packaging was designed to protect the unit from rough handling. Nevertheless, we recommend that you carefully examine the packaging and its contents for any signs of physical damage, which may have occurred in transit.

+ If the unit is damaged, please do not return it to us, but notify your dealer and the shipping company immediately, otherwise claims for damage or replacement may not be granted. Shipping claims must be made by the consignee.

3.1 Rack Mounting

The SM ProAudio SM PR4 fits into one half standard 19" rack unit of space (1 3/4"). Be sure that there is enough air space around the unit for cooling. As to avoid overheating, please do not place the SM PR4 on high temperature devices such as power amplifiers.

3.2 Mains voltage

The SM PR4 has a professional external 16v AC power supply. Before you connect your SM PR4 to the mains, please make sure that your local voltage matches the voltage required by the unit!

3.3 Audio connections

Analog inputs - On the front of the SM PR4 there are 4 x balanced XLR audio connections.

Analog outputs - On the front of the SM PR4 there are 4 x TRS unbalanced output jacks

4. CONTROLS

SM PR8 front panel

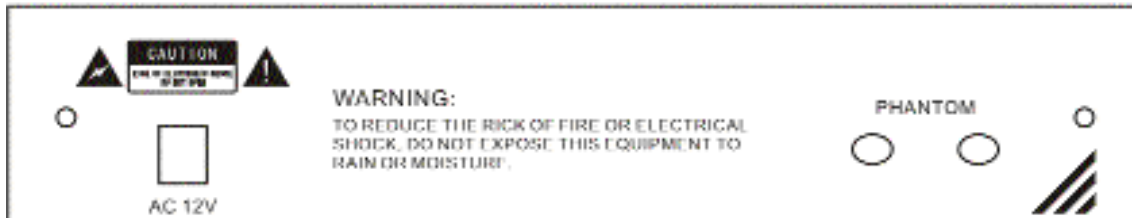
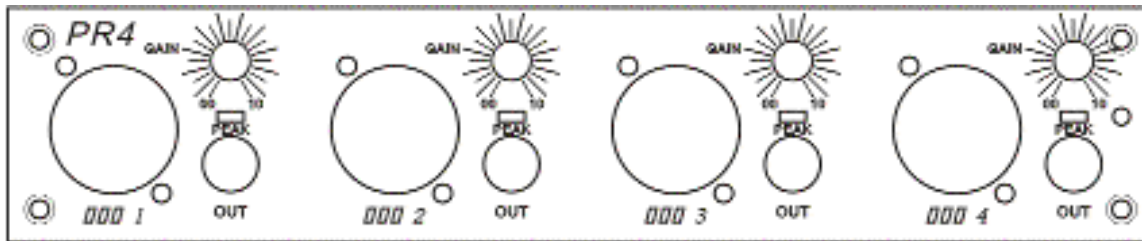
The SM PR4 has four independent pre-amplifiers channels. The unit provides variable rotary gain controls, phantom power and peak indicator lights per channel.

4.1 The front panel rotary gain controls

Each channel features a rotary gain control for variable adjustment of the desired pre-amplifier level.

4.2 The Back panel phantom power switches

Each channel features a phantom power supply for enabling the supply of 48v through the XLR input connector to power condenser microphones. Each Switch controls 2 channels.



5. APPLICATION

5.1 Using the SM PR4

It could not be simpler to use and operate the SM PR4. Each of the four pre-amplifier channels has its own input and output and variable gain control.

Three steps:

1. Simply connect a signal for processing to one of the XLR balanced inputs on the front of the SM PR4.
2. Make a connection from the corresponding channel output on the front of the SM PR4 to your desired destination (Mixer, recorder, etc).
3. Adjust the variable gain control to the desired pre-amplified level. To ensure sure you do not over pre-amplify your signal a peak clip indicator light has been provided on the front panel of the SM PR4 for each channel. When illuminated, this light indicates that the pre-amplifier is overloaded and that distortion will occur. Please turn down the variable gain control for the currently selected channel until the peak clip light is no longer illuminated.

Always trust your ears, the Peak LED is after the gain control so you could actually distort the input with a very high level.

6. SPECIFICATIONS

AUDIO INPUTS & PRE AMPS

Connectors	XLR
Type	balanced
Impedance	2k Ohms
Min Sensitivity	-40dB
Peak input level	+5dB
Gain control range	50dB
Peak amplification	74dB
Phantom power	+48V, switchable

AUDIO OUTPUTS

Connectors	1/4" jack
Type	TRS Unbalanced
Impedance	-10dB 47K
Peak output level	+18.5dB

DIST, FREQ, S/N RATIO & CROSSTALK

Frequency response	20Hz~20kHz, 0dB~-2B
Distortion	0.02%
S/N Ratio	better than 80dB
Crosstalk rejection	>70dB@1kHz;-20dBinput

POWER SUPPLY

Mains voltages	USA/Canada ~ 120 V AC, 60 Hz U.K./Australia ~ 240 V AC, 50 Hz Europe ~ 230 V AC, 50 Hz General export model ~ 100-120 V AC, ~ 200-240 V AC, 50-60 Hz
Power consumption	8.5VA
Fuse	100-120 V AC: 630 mA (slow-blow) 200-240 V AC: 315 mA (slow-blow)
Mains connection	External power supply connector

PHYSICAL

Dimension	1 3/4" (44.5 mm) * 19" (482.6 mm) * 8 1/2" (217 mm)
Net weight	approx. 3.4 kg

SM ProAudio is constantly striving to maintain the highest professional standards. As a result of these efforts, modifications may be made from time to time to existing products without prior notice. Specifications and appearance may differ from those listed or shown.

7. WARRANTY

1 WARRANTY CARD

To be protected by this warranty, the buyer must complete and return the enclosed warranty card (signed/stamped by retail dealer) within 14 days of the date of purchase to SM ProAudio (see address below 3). Failure to return the card in due time (date as per postmark) will void any extended warranty claims.

2 WARRANTY

1. SM ProAudio warrants the mechanical and electronic components of this product to be free of defects in material and workmanship for a period of one (3) years from the original date of purchase, in accordance with the warranty regulations described below. If any defects occur within the specified warranty period that are not caused by normal wear or inappropriate use, SM ProAudio shall, at its sole discretion, either repair or replace the product.
2. If the warranty claim proves to be justified, the product will be returned freight prepaid by SM ProAudio within Australia. Outside of Australia, the product will be returned at the buyer's expense.
3. Warranty claims other than those indicated above are expressly excluded.

3 RETURN AUTHORIZATION NUMBER

1. To obtain warranty service, the buyer must call SM ProAudio during normal business hours BEFORE returning the product (Tel.: +61 3 9528 5744). All inquiries must be accompanied by a description of the problem. SM ProAudio will then issue a return authorization number.
2. The product must be returned in its original shipping carton, together with the return authorization number, to the following address:

SM Pro Audio
Service Department
720 Glenhuntly Rd
Caulfield South
Melbourne, Victoria
Australia 3162

4 WARRANTY REGULATIONS

1. Warranty services will be furnished only if the product is accompanied by an original retail dealer's invoice. Any product deemed eligible for repair or replacement by SM ProAudio under the terms of this warranty will be repaired or replaced within 30 days of receipt of the product at SM ProAudio.

2. If the product needs to be modified or adapted in order to comply with applicable technical or safety standards on a national or local level, in any country which is not the country for which the product was originally developed and manufactured, this modification/adaptation shall not be considered a defect in materials or workmanship.

The warranty does not cover any such modification/adaptation, irrespective of whether it was carried out properly or not. Under the terms of this warranty, SM ProAudio shall not be held responsible for any cost resulting from such a modification/adaptation.

3. Free inspections, maintenance/repair work and replacement of parts are expressly excluded from this warranty, in particular if caused by inappropriate use. Likewise, the warranty does not cover defects of expendable parts caused by normal wear of the product. Expendable parts are typically pots, potentiometers, switches and similar components.

4. Damages/defects caused by the following conditions are not covered by this warranty:

- Misuse, neglect or failure to operate the unit in compliance with the instructions given in the user or service manuals.
- Connection or operation of the unit in any way that does not comply with the technical or safety regulations applicable in the country where the product is used.
- Damages/defects that are caused by any other condition beyond the control of SM ProAudio.

5. Any repair carried out by unauthorized personnel will void the warranty.

6. Products which do not meet the terms of this warranty will be repaired exclusively at the buyer's expense. SM ProAudio will inform the buyer of any such circumstance. If the buyer fails to submit a written repair order within 4 weeks after notification, SM ProAudio will return the unit C.O.D. with a separate invoice for freight and packing. Such cost will also be invoiced separately when the buyer has sent in a written repair order.

5 WARRANTY TRANSFERABILITY

This warranty is extended exclusively to the original buyer (customer of retail dealer) and is not transferable to anyone who may subsequently purchase this product. No other person (retail dealer, etc.) shall be entitled to give any warranty promise on behalf of SM ProAudio.

6 CLAIM FOR DAMAGES

Failure of SM ProAudio to provide proper warranty service shall not entitle the buyer to claim (consequential) damages. In no event shall the liability of SM ProAudio exceed the invoiced value of the product.

7 OTHER WARRANTY RIGHTS

This warranty does not exclude or limit the buyer's statutory rights provided by national law, in particular, any such rights against the seller that arise from a legally effective purchase contract.

The information contained in this manual is subject to change without notice. No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording of any kind, for any purpose, without the express written permission of SM ProAudio.

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