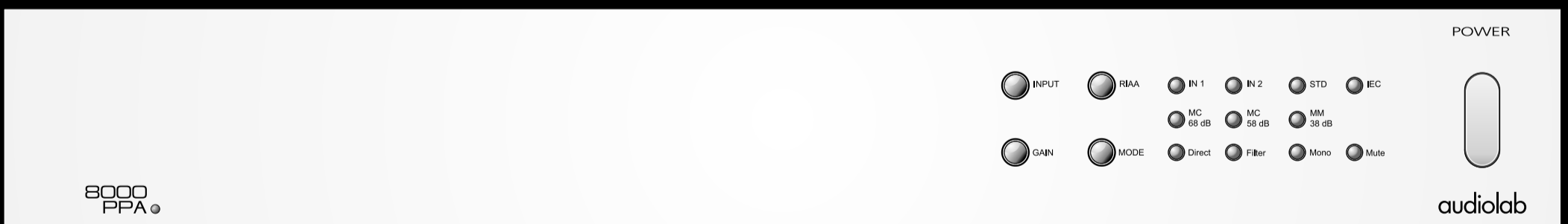


Audiolab  
1AG House,  
Sovereign Court,  
Ermine Business Park,  
Huntingdon  
Cambs PE29 8XU  
England  
Tel: +44 (0)1480 447700  
Fax: +44 (0)1480 431767

# 8000PPA

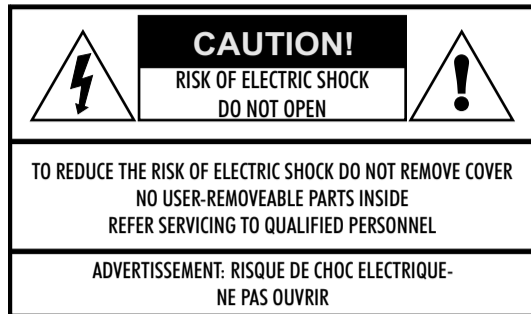
# Phono Cartridge Preamplifier



## User Instructions

# audiolab

# 1: Statutory & Safety Information



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

Read these instructions.

Keep these instructions. In the event that you pass the product to a third party this instruction manual should be provided along with the product.

Heed all warnings.

Follow all instructions.

Do not use this apparatus near water.

Clean only with dry cloth.

Do not block any ventilation openings.

Install in accordance with the manufacturer's instructions.

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

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 wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Use only attachments/accessories specified by the manufacturer.



Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

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

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 is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

**Warning:** To reduce the risk of fire or electrical shock, do not expose this product to rain or moisture. The product must not be exposed to dripping and splashing and no object filled with liquids, such as a vase of flowers should be placed on the product.

No naked flame sources - such as candles - should be placed on the product.

**Caution:** Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this device.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Re-orientate or re-locate the receiving antenna. Increase the separation between the equipment and the receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

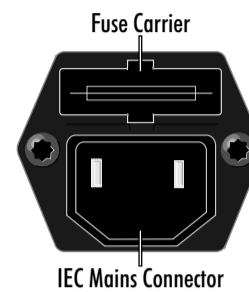
**Important Note:** The batteries supplied with this unit should be treated with care and not punctured or damaged. Used batteries should be disposed of in full conformity with recycling regulations in your area. NEVER dispose of batteries in a fire or in the general rubbish.

## Mains supply and safety

**Mains Supply:** The mains operating voltage of all Audiolab units is shown on the rear panel. If this does not match the voltage in your area, consult your dealer.

The mains supply fuse is located on the rear panel of the unit. If it has broken, check for any obvious cause before replacing the fuse with one of the correct rating and type. The fuse values are:

220 - 240V (UK, Korea, etc.) T1.0AL 20mm Slow Blow  
100 - 120V (USA, Japan, etc) T1.0AL 20mm Slow Blow



The fuse is located in a slide-in carrier which also contains a spare fuse. The fuse carrier can only be pulled out after the IEC power cord is unplugged. When the carrier is opened the first fuse to be seen is the spare fuse. Remove and safely dispose of the fuse with the blown link before replacing it.



Class II construction double insulated. This product must not be connected to earth.

**Power Cord:** An AC power cord is normally supplied with a mains plug suitable for your area. If you have any doubts, consult your dealer about obtaining a suitable power cord.

### Important notice to UK users

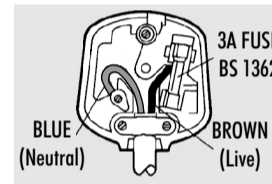
The appliance cord is terminated with a UK approved mains plug fitted with a 3A fuse. If the fuse needs to be replaced, an ASTA or BSI approved BS1362 fuse rated at 3A must be used. If you need to change the mains plug, remove the fuse and dispose of this plug safely immediately after cutting it from the cord.

### Connecting a Mains Plug

The wires in the mains lead are coloured in accordance with the code: Blue: NEUTRAL; Brown: LIVE.

As these colours may not correspond to the coloured markings identifying the terminals in your plug, proceed as follows:

The BLUE wire must be connected to the terminal marked with the letter N or coloured BLUE or BLACK. The BROWN wire must be connected to the terminal marked with the letter L or coloured BROWN or RED.



# 6: Specifications 800PPA

<b>Input Level (at 1 KHz)</b>	mm mc 58 mc 68	2.2 mV (rel. 175 mV rms output) 220 $\mu$ V (rel. to 175 mV rms output) 75 $\mu$ V (rel. to 175 mV rms output)	<b>Total Harmonic and Intermodulation Distortion + Noise</b>	mm mc	Less than 0.003% Less than 0.006%
<b>Input Impedance (at 1 kHz)</b>	mm mc 58 mc 68	47 k $\Omega$ , 100 pF nominal 470 $\Omega$ , 3.3 nF nominal 470 $\Omega$ , 3.3 nF nominal	<b>Channel Separation</b>	mm mc	> 98 dB at 1 kHz > 100 dB at 1 kHz
<b>Gain (at 1 kHz) (Rear switch set to 0dB)</b>	mm mc 58 mc 68	38 dB 58 dB 68 dB	<b>Channel Balance</b>		$\pm$ 1 dB (1.5 dB with bandpass filter)
<b>Max. Input Level (at 1 kHz)</b>	mm mc 58 mc 68	140 mV (+29 dB rel. to 5.0 mV) 14 mV (+29 dB rel. to 0.5 mV) 4.7 mV (+33 dB rel. to 0.1 mV)	<b>Low Frequency IEC Filter</b>		-3 dB at 20 Hz, 6 dB / octave slope
<b>Audio Output Impedance</b>		50 $\Omega$ nominal	<b>Bandpass Filter</b>		-3 dB at 40 Hz and 20 kHz; 12 dB / octave slope
<b>Maximum Audio Output Level</b>		11 V rms at 1 kHz	<b>Operating Temperature Range</b>		10 - 35 $^{\circ}$ C
<b>Signal to Noise Ratio</b>		greater than 75 dB (relative to 0.5 V rms output)	<b>AC Supply Voltage</b>		110 - 120 V or 220 - 240 V The voltage is marked on the rear of the unit
<b>Frequency Response (-3db)</b>	mm mc 58 mc 68	0.1 Hz - 60 kHz 0.3 Hz - 60 kHz 1 Hz - 60 kHz	<b>Power Consumption</b>		less than 25 W
<b>Frequency Response (10 Hz - 20 kHz)</b>		$\pm$ 0.2 dB	<b>Dimensions Overall (WxHxD)</b>		445x74x335 mm - inc. feet, terminals and controls

Audiolab reserves the right to alter design and specification without notice. Specification may vary for different countries. Audiolab is a member of the International Audio Group.

# 5: Service and Warranty

## Servicing

Servicing of Audiolab products should only be carried out by authorised service agents. If service is required the equipment should be returned, securely packaged, preferably using original packaging, to your dealer.

In the UK equipment may be returned to the IAG Service Centre. In the USA equipment may be returned to the Service address shown on this page.

Always telephone before returning any equipment.

A note should be enclosed giving your name, address, telephone number, and a brief description of the reason for return.

If you require Service outside the Warranty period, do not hesitate to contact your dealer.

While cleaning is in progress the AC power cord must be unplugged from the AC power supply socket.

Any grease or dirt on the equipment may be removed with a soft, lint-free cloth slightly moistened with a mild solution of warm water and detergent or washing-up liquid. Do not use any other solutions or solvents.

Retain original packaging for transporting equipment.

If you have any queries regarding the use of Audiolab equipment, consult your dealer.

## Service Addresses, UK & USA

IAG Service Centre

Unit 4

St Margaret's Way

Stukeley Meadows Industrial Estate

Huntingdon

Cambs

PE29 6EB

England

Tel: +44 (0)1480 452561

Fax: +44 (0)1480 13403

IAG America, Inc.

8440 154th Avenue NE

Redmond, Washington

98052

USA

Tel: +1 425 861 3909

Fax: +1 425 861 3906

## Audiolab limited warranty

Audiolab Ltd. warrants this product, subject to the terms and conditions below, to be free from defects in materials and workmanship. During the warranty period Audiolab will repair or replace (at Audiolab's option) this product, or any defective part in this product, if it is found to be defective due to faulty materials, workmanship or function. The warranty period may vary from country to country.

### Terms and conditions:

The warranty starts on the date of purchase (or the date of delivery if this is later).

You must provide proof of purchase / delivery before work can be carried out. Without this proof, any work carried out will be chargeable to you.

All work will be carried out by Audiolab or its authorised agents or distributors. Any unauthorised repair or modification will void this warranty.

If any part is no longer available it will be replaced with a functional replacement part.

Any parts that are replaced will become the property of Audiolab.

Any repair or replacement under this warranty will not extend the period of warranty.

This warranty is valid only in the country of purchase, applies only to the first purchaser and is not transferable.

### The following are not covered:

- Products on which the serial number has been removed, altered or otherwise made illegible.
- Normal wear and tear and cosmetic damage.
- Transportation or installation of the product.
- Accidental damage, faults caused by commercial use, acts of God, incorrect installation, connection or packaging, misuse, neglect or careless operation or handling of the product which is not in accordance with Audiolab's user instructions.
- Equipment that has been operated in conjunction with unsuitable, inappropriate or faulty apparatus.
- Repairs or alterations carried out by parties other than

Audiolab or its authorised agents or distributors.

- Products not purchased from an Audiolab authorised dealer.
- Products that were not new at the time of original purchase.
- Products sold 'as is', 'as seen' or 'with all faults'.

Repairs or replacements as provided under this warranty are the exclusive remedy of the consumer. Audiolab shall not be liable for any incidental or consequential damages for breach of any express or implied warranty in this product. Except to the extent prohibited by law, this warranty is exclusive and in lieu of all other warranties whatsoever, both express and implied, including, but not limited to, the warranty of merchantability and fitness for a practical purpose.

This warranty provides benefits that are additional to and do not affect your statutory rights as a consumer.

Some countries and US states do not allow the exclusion or limitation of incidental or consequential damages or implied warranties so the exclusions in the paragraph above may not apply to you. This warranty gives you specific legal rights, and you may have other statutory rights, which vary from state to state or country to country.

### How to claim:

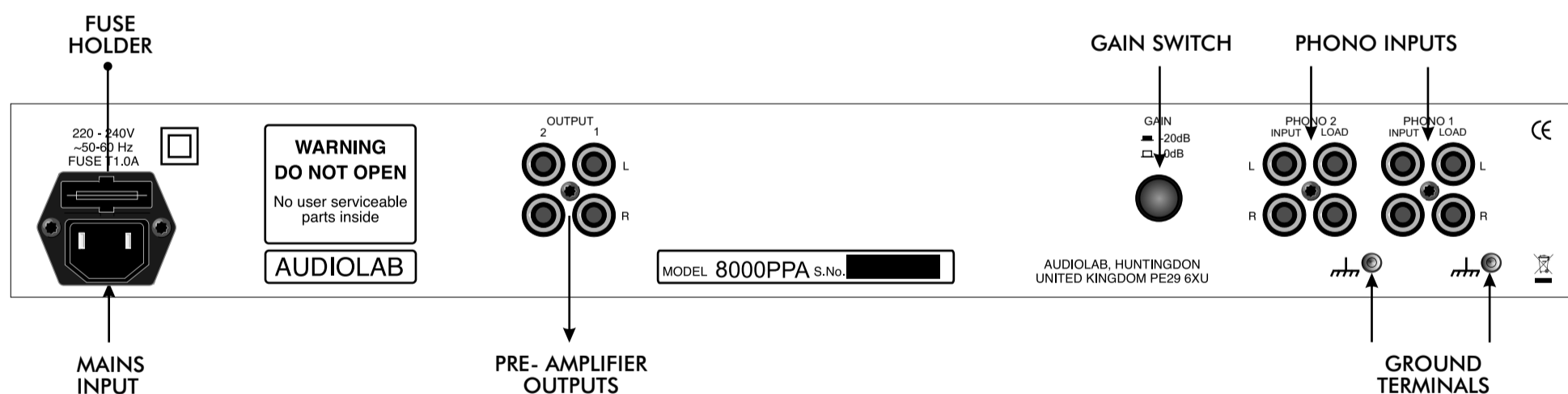
To obtain warranty service contact the Audiolab authorised dealer from which you purchased this product. Do not despatch goods without the prior agreement of the dealer, Audiolab or their authorised distributors.

If asked to return products for inspection and/or repair, pack carefully, preferably in the original cartons or packaging affording an equal degree of protection, and return prepaid. If unsuitable packaging is used, Audiolab may make a charge for the supply of new packaging.

Insurance is recommended as goods are returned at owner's risk. Audiolab or their authorised distributors cannot be held liable for loss or damage in transit.

Packing, insurance and freight on the return journey will be paid by Audiolab or their authorised agents or distributor if corrective work proves to be necessary.

# 2: Preliminaries



## Introduction

The 8000PPA can accept the output of two turntables and includes the capability to fine tune the signals of both independently. The inputs have the standard loading for moving magnet and moving coil cartridges and also feature special load terminals which allow you to tailor the input to match any cartridge. Gain control is provided so that you can select the right amount of amplification for your cartridge. Loading and gain settings for each input are retained in the memory of the 8000PPA.

The frequency response of the 8000PPA meets both the RIAA specification and the later IEC (1973) specification. A switchable bandpass filter allows you to remove noise at both low and high frequencies. A facility is also provided to select mono reproduction.

## Unpacking

The packing contains the 8000PPA, a power cord suitable for your area and this handbook. Unpack the product fully.

Retain the packaging. If you dispose of the packing do so having full regard to any recycling provisions in your area.

## Signal and mains connections

Before connecting your units please read the instructions that came with your pickup cartridge, turntable and tonearm. Ensure all active units in your system are switched off and unplugged.

### Signal connections:

Most turntable/tonearms come with captive RCA phono cables. If your turntable has phono sockets you will need a stereo RCA cable. Connect the turntable phono outputs to one of the Phono Signal Inputs. Push the plugs firmly in to ensure good contact.

### Ground Connections

Most tonearms use a ground wire; some use a ground wire for both turntable and tonearm. If your turntable has phono socket outputs with a ground terminal you may need as a ground wire a single length of stranded wire the same length as the signal cables.

Connect the ground wire/s to the Ground terminal associated with the input to which the pickup is connected. Unscrew the terminal and insert the spade connector under the terminal. If the cable does not have a spade connector, bare a short length of wire and insert under the left side of the terminal. Tighten firmly.

**Note 1:** Some integrated turntables (e.g early Thorens) do not use a ground wire but have one phono return lead connected internally to the turntable/tonearm chassis.

**Note 2:** Some cartridges have a negative signal pin linked to a metal cartridge body. If the cartridge body contacts the tone arm metalwork via the connecting hardware this may cause a hum loop. Disconnecting the ground wire may solve the problem.

DO NOT use the ground terminals as a safety earth.

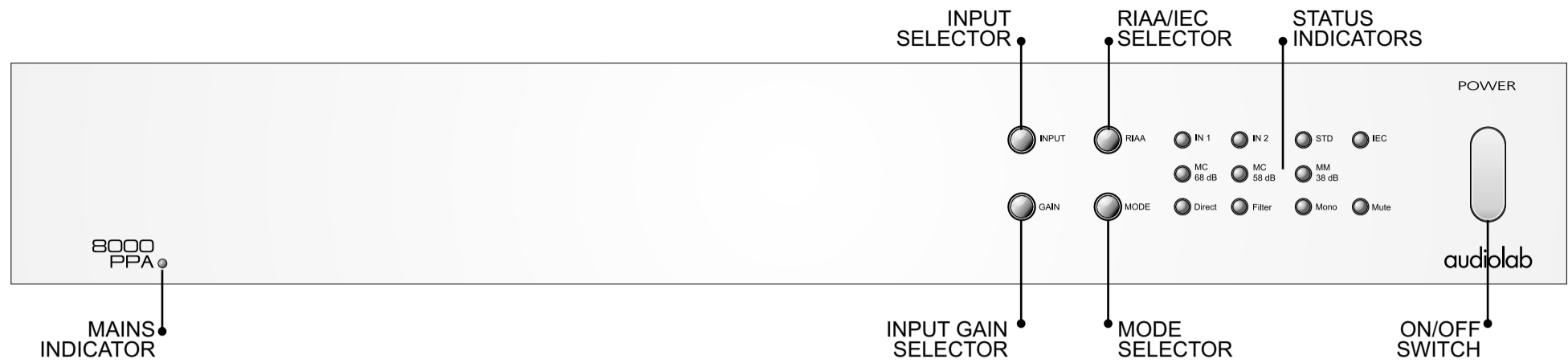
### Connecting to an amplifier

Connect a high quality screened RCA phono interconnect from one pair of output sockets to a suitable Line (Aux) input of the amplifier or preamplifier.

### Mains Connections

Verify that your mains voltage matches the voltage marked on the rear of the unit. Connect the supplied power cord between the mains input of the 8000PPA and the mains supply. Do not switch on the mains supply at this time.

## 3: Setting Up



### Switching on

Switch on the power to the 8000PPA. Do not switch the rest of the system on at this time.

Press the ON/OFF switch on the 8000PPA. The mains light will illuminate indicating the unit is operational.

### Input selection



Press the INPUT button to select Input 1 or 2. The appropriate indicator will light up on the front panel.

### Setting the sensitivity

**The Moving Magnet (MM) setting should be used for:**

- Standard Moving Magnet (MM) cartridges
- High output Moving Coil (MC) cartridges (higher than 0.4mV)
- Standard or low output moving coil cartridges connected via step up transformers or their own head amplifiers.

**The Moving Coil (MC) setting should be used for:**

- Standard or low output moving coil cartridges only.



Press the GAIN control to cycle the selection between MM and the two MC settings. The chosen selection is illuminated.

**If your cartridge output is:**

- less than 100  $\mu\text{V}$  (0.1 mV), use MC 68dB
- between 100  $\mu\text{V}$  and 400  $\mu\text{V}$  (0.1 - 0.4 mV), use MC 38dB
- more than 400  $\mu\text{V}$  (0.4 mV), use MM.

Setting too low a sensitivity will increase the level of background noise. Too high a sensitivity will lower the overload threshold of the 8000PPA and impair dynamics and transparency.

### Input loading

The standard settings on the 8000PPA will suit the majority of modern cartridges, but may be fine-tuned if required. Follow the instructions supplied with your cartridge for guidance.

### Making up load plugs

Use the instructions below to calculate the value of the load resistor and capacitor. Solder the components to a phono plug, connecting one lead of each component to the signal pin and the other lead to the metal body. Make two identical plugs and insert one into each load socket. If you are uncertain consult your dealer for assistance.

### Calculating the resistor value

Determine the recommended load from the cartridge instructions. Calculate the load resistance using the formula:

$$R_{LOAD} = \frac{R_{PPA} - R_{TERM}}{R_{PPA} \times R_{TERM}}$$

- $R_{LOAD}$  is the load resistor in  $\Omega$  that you need in the plug.
- $R_{TERM}$  is the load resistance in  $\Omega$  that the cartridge needs.
- $R_{PPA}$  is the factory-fitted input resistance of the 8000PPA 47 k $\Omega$  when set to MM and 470  $\Omega$  when set to MC.

### Calculating the capacitor value

Calculate the load capacitor using the following formula:

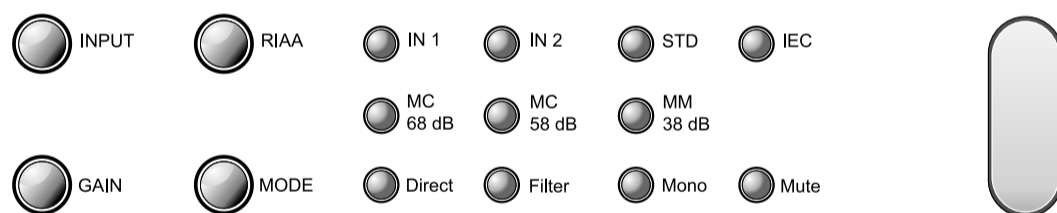
$$C_{LOAD} = C_{TERM} - C_{LEAD} - C_{PPA}$$

- $C_{LOAD}$  is the load capacitor (in pF\*) you need in the plug.
- $C_{TERM}$  is the capacitance (in pF) that the cartridge needs.
- $C_{LEAD}$  is the capacitance of the leads between the cartridge and the 8000PPA (tonearm lead capacitance) in pF.
- $C_{PPA}$  is the factory-fitted input capacitance of the 8000PPA - 100 pF when set to MM and 3300 pF when set to MC.

Switch the 8000PPA off before inserting or removing load plugs

\*1pF (pico farad) =  $10^{-12}$  farad; 1000pF = 1nF (nano farad)

## 4: Operation



### Operating your 8000PPA

Set the system volume control at minimum and switch on all connected units. Select the line level input to which the 8000PPA is connected and turn the volume level up slowly. If you have turned off the 8000PPA you will find that when you turn it on again the last input used and all the associated settings will be restored.

#### Input Selection

Press INPUT to select Input 1 or Input 2. The 8000PPA memorises all the settings and restores them when the input is selected.

#### Cartridge set-up

Press GAIN to select the appropriate sensitivity. If you do not have the information you need to set the cartridge up, you can find the best setting by experiment. With the volume on your amplifier set low, play a recording of average dynamics. Try different cartridge settings until you find the one which has the best transparency and least distortion. You may have to adjust the volume on your amplifier as you change settings.

Some cartridges have such a high output that the amplified output from the PPA20 will be higher than the usual line level. This will result in a higher volume when playing records compared with other inputs. The 8000PPA has a button on the rear panel, labelled GAIN, to reduce the output level.



Press the button in to reduce the output by 20 dB. Press the button again to return to the full output level. Always turn down the volume on your amplifier before increasing the output level.

#### RIAA/IEC equalisation

Prior to 1973, vinyl records (barring some pre 1954 ones) were recorded

with RIAA equalisation. In 1973 the IEC introduced a curve with extra filtering below 20Hz. The two curves are virtually the same above 50Hz and above 550Hz they are identical. In effect the IEC curve acts as an LF rumble filter. Most records cut outside Europe (and many in Europe) still use the older RIAA curve.

Press RIAA to toggle between STD ( RIAA ) and IEC characteristics.

#### The Mode button

Pressing the mode button steps through **direct**, **filter**, **mono**, and back to **direct**. The selected setting is shown by one (or two) of three LEDs on the front panel marked direct, filter and mono.

**Direct:** In this setting the bandpass filter and mono are off. This setting takes full advantage of the extremely wide bandwidth of the 8000PPA.

**Filter:** When Filter is selected the bandpass filter is switched on.

**Mono:** This connects the stereo channels together to give the same signal on both channels. The Mono setting can only be selected when the bandpass filter is on.

The bandpass filter cuts down both high- and low-frequency noise and is useful for listening to older records. In particular, the bandpass filter can be used to remove the high-frequency carrier signal from old quadraphonic recordings. You can use the bandpass filter and the low-frequency (IEC) filter at the same time to enhance the rejection of low frequencies.

#### Mute

Muting is automatic. The 8000PPA turns off the output for a short time whenever you change any settings. The LED on the front panel labelled Mute will light when the output is muted.

If all the filters are off, the automatic muting may be triggered by the low-frequency pulse generated when you lift the tone arm. The output will

switch itself back on after a short period (about 2.5 seconds when the cartridge type is set to MM, and 10 seconds when it is set to MC).

### Best Performance Guide

The PHONO 1 and 2 inputs, including the ground terminals and the signal grounds, are electrically isolated from each other. This means that two turntables may be connected without interfering with each other. Ensure that the ground wires do not get mixed up.

#### To minimise mains hum in your system:

Do not link the ground terminals of separate audio units together. Use screened cable for your signal connections and keep the left and right channel cables close together.

Keep signal and mains cables far apart. Do not run them parallel to each other. If they *must* cross, keep this as close to 90° as you can.

All the above precautions also apply to your turntable.

There is a large amount of gain in the 8000PPA, especially the MC settings. If there are noisy appliances on the same mains power circuit, the 'switch on thump' as they switch on and off may trigger the Mute protection. If this happens, fit a mains filter on the appliance - seek professional advice first.

The high gain of the 8000PPA can make it sensitive to interference from nearby equipment. You may need to move your 8000PPA, your turntable or the interfering equipment to remove the problem.

#### If the Mute light on the 8000PPA comes on and stays on:

The 8000PPA is protecting itself and any amplifier/loudspeakers connected to it. This could be caused by strong interference from a domestic or other appliance. It could also be caused by a fault in the tonearm or turntable or in the interconnecting cables.