



PHONO-1 MC | MM Preamplifier MkII

At the heart of your Music



USER MANUAL



INTRODUCTION

Thank you for your purchase of the award winning Vertere PHONO-1 MM/MC Preamplifier MkII. Please study these instructions carefully. Your phono preamplifier is designed and manufactured to the highest standards and its correct installation will greatly enhance the sound quality of your record playing system rewarding you with many years of listening pleasure.

This manual is divided into the following sections:

- Safety Instructions (Accompanying card)
- Introduction
- Cautions
- Installation
- Setup
- Operation
- PHONO-1 Gain, Input Impedance & Grounding Setup
- Guarantee
- Specifications
- Records & Notes

Unpacking

Included in the packing of your PHONO-1 you will find:

- One mains lead fitted with the correct mains power plug for your country
- One information pack and warranty card

After removing these items please retain all packing materials. Correct packing is necessary for safe transportation of your Vertere PHONO-1.

Maintenance & Cautions

IMPORTANT

After disconnecting PHONO-1 from the mains supply, it may be cleaned with a lightly dampened soft cloth or chamois leather. **Avoid using abrasives or solvents.**

Important Note:

Disconnect the unit from the mains supply before cleaning. **DO NOT** use fluids to clean the unit. Especially when cleaning the underside where there are setup switch access cutouts.

It is important that at no time any fluid gets inside the unit.

Take extreme care not to damage the setup switches or drop any item inside the unit when carrying out this procedure.

All access to the internal of the unit should be carried out by qualified personnel only.

EU Directives

This product is designed to comply with the legal provisions of EU Directives 89/3336/EC and 72/23/EC. The standards which have been applied are those which were in force at the time of the introduction of this product.

This product bears the CE mark.



This product is compliant to EN 60065.

This product must be earthed.

Please ensure that other equipment connected to it is earthed according to the manufacturer's instructions.

AC MAINS SUPPLY

Your PHONO-1 is set to operate from a fixed supply voltage which is marked on a label next to the mains input plug/switch. Before connecting the mains lead please check that your mains supply corresponds to this label as below:

230V Products	Voltage Range: 220V – 240V
115V Products	Voltage Range: 100V – 120V

The mains lead supplied with this product has an IEC mains socket which plugs into the IEC connector on the unit's rear panel. The other end is normally attached to the appropriate mains plug for your country. In the UK this is the standard UK10A plug.

This plug should ordinarily not be removed from the lead. If you do remove it, please dispose of it safely so that it cannot be plugged into a mains socket whilst in a potentially dangerous condition. We suggest that you obtain from your dealer a complete replacement lead.

Should you move to another area where either the mains voltage or the mains plug are different from those as supplied with your PHONO-1, please contact the appointed Vertere distributor for assistance.

Please observe correct mains polarity at all times.

The PHONO-1 mains fuses are located on the rear panel next to the IEC mains connector. They must only be replaced by the fuse of the type and rating as described on the voltage and fuse rating marking on the bottom panel of the chassis.

This product requires connection to earth (ground). The earth wire (in the UK this is colour coded green/yellow) of the mains cable supplied with your PHONO-1 must be connected to a suitable earthing point established for this purpose by your electricity supply company. If you are in any doubt, consult a qualified electrician.

If the equipment is likely to be unused for some time, unplug it from the mains supply.

GENERAL CAUTIONS

FCC WARNING

This equipment may generate or use Radio Frequency energy. The user may lose the right to operate this equipment if unauthorised modifications are made.

INTERFERENCE

Properly installed, this unit should not cause harmful interference to radio communications, There is, however, no guarantee that such interference will not occur in a specific installation. If interference arises (which you can determine by switching the unit off and on) you could try to remedy matters by the following

- Re-orient or re-locate the receiving antenna
- Increase the distance between the PHONO-1 and receiver
- Connect the unit to a different mains circuit from that of the receiver
- Consult your Vertere appointed dealer or an experienced Radio/TV technician for help and advice

LOCATION

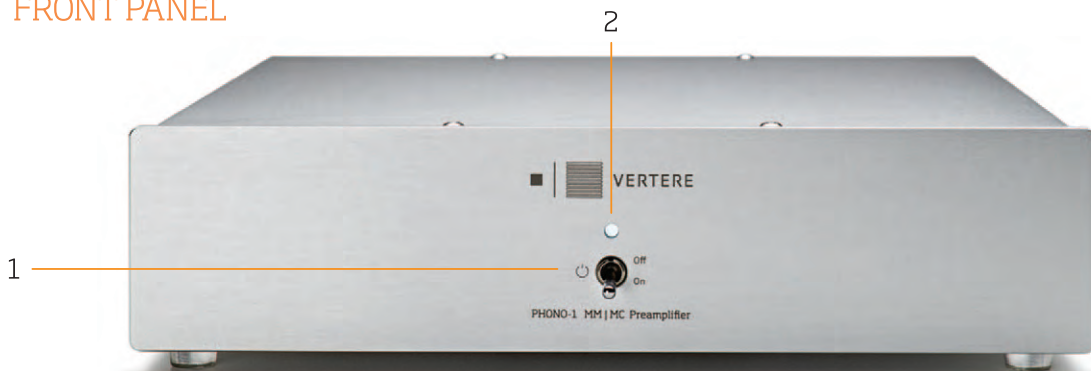
Your Vertere PHONO-1 should be located in a well ventilated area and kept away from sources of heat, dust and humidity and direct sunlight.

The PHONO-1 may be positioned either as a free standing unit or alongside another audio/video product. Never place the PHONO-1 on carpet or any surface likely to hinder normal ventilation.

This unit contains no user serviceable parts. Do Not remove any panels or attempt to service it yourself. Unauthorised servicing will void the warranty.

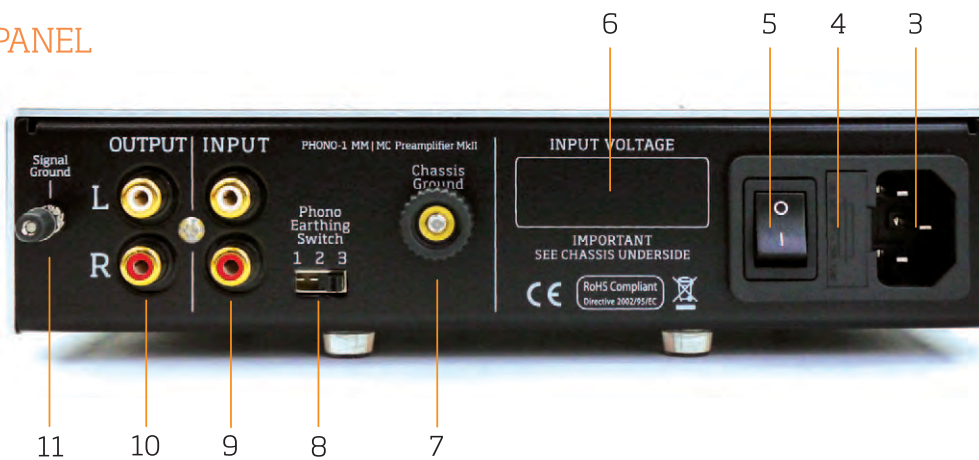
INSTALLATION

FRONT PANEL



1. Front Panel On/Off Switch
2. On/Off LED Indicator

BACK PANEL



3. AC Mains IEC Inlet
4. Mains Inlet Fuse Holder
5. Mains On/Off Switch
6. Mains Voltage Label
7. Chassis Ground Terminal
8. Phono Ground Management Switch - Position: (1) 'Hard' Ground, (2) No Ground, (3) 'Soft' Ground
9. L&R RCA Input Sockets
10. L&R RCA Output Sockets
11. Signal Ground Terminal

IMPORTANT NOTE

The Gain and Input Impedance switches must be set correctly for your phono cartridge. Please refer to Installation and Setup sections.

If there are any issues, please contact your Vertere Distributor, Retailer or contact Vertere directly.

OPERATION

Please refer to the front & back panel views on Installation page.

CONNECTING MAINS POWER

The moulded IEC connector of the supplied mains lead should be plugged into the socket (3) on the back of the unit first and then plugged into the mains supply. The Mains power switch (5) is next to the mains socket. This switch is normally left on. If the unit is likely to be unattended for a long period, switch it off and unplug the mains lead from the wall. (As with all electronic components)

INPUT | OUTPUT CONNECTIONS

Connect the tonearm cable L & R RCA plugs to the L & R input (9) and securely attach the 'Ground' lead to the 'Ground' terminal (7) of the Phono preamplifier. Then connect the L & R output (10) sockets of the Phono preamplifier to the L & R (Line level) input of your pre or integrated amplifier.

IMPORTANT NOTE:

For optimum performance, it is recommended to use high quality Vertere Pulse Inter-connect and Mains cables.

SWITCHING ON

The Front Panel On/Off switch (1) located on the front will switch the unit to operation mode when pushed down - the front On/Off LED Indicator will illuminate.

When switched ON, your Phono Preamplifier is ready for use.

DO NOT switch the PHONO-1 ON from the back or the front while the amplifier's volume is turned up.

PHONO-1 Gain, Input Impedance & Grounding Setup

Gain Setup

It is important to select and set the gain on your PHONO-1 to allow maximum headroom while providing sufficient volume for normal use. Generally its best to utilise most of the main amplifier's volume control while listening to music. This way not only you can set the volume closest to your desired level it will also maximise dynamics due to increased headroom.

Setting the main volume control approximately in the middle (12 O'clock) and then selecting the gain that provides a normal listening level is a good place to start.

NOTE:

PHONO-1 is set to 56.4 dB gain as default for the Vertere Mystic Moving Coil cartridge output. (0.5mV @ 5cm/s) For Moving Magnet cartridges, begin by setting the gain to the lowest value, 40.2dB (All switches OFF),

Optional High Gain version of the PHONO-1 will add another 6.4dB to all available settings. With this version when all gain switches are set to OFF, the gain will start from 46.6dB and can go up to 69.2dB. ONLY use this version if the cartridge has less than 0.2mV output (Ref. 1kHz @ 5cm/sec).

Input Impedance Setup

Always refer to cartridge manufacturer's instructions for correct input impedance setup of your phono cartridge.

Please note your PHONO-1 has been set to **1.45K Ohms** and **430pF** as default for the Vertere Mystic Moving Coil cartridge.

Input Capacitance

Most moving coil cartridges exhibit a frequency response lift above 10kHz which is generally a mechanical resonance of the cantilever/coil assembly. This lift in frequency response can be controlled by adding adequate capacitance on the input. The amount of capacitance required depends on the extent of the frequency lift. Generally inadequate capacitance can cause some harshness, 'shouting' and loss of fine detail particularly in human voice region.

It is also important to avoid adding capacitance when using Moving Magnet cartridges. High coil impedance of moving magnets combined with added capacitance will result in sharp and early roll off of the high frequencies.

Maximum recommended capacitance for MM cartridges is **430pF**.

Input Resistance

For MM cartridges, this should be set at 47k Ohms - all resistance switches OFF.

In case of MC cartridges, the input resistance should be adequately low and yet sufficiently high to avoid over damping of the cartridge coil. As a rule, the input resistance value should be at least 15 times the coil resistance - **preferably 20 times or more**. Of course you must listen and adjust the input resistance for optimum performance and the final setting may end up being lower or higher.

Default setting of input resistance of PHONO-1 is for the Vertere Mystic MC cartridge - **1.45K Ohms**.

When the input resistance and capacitance are correctly set the performance is optimised and much more life-like.

Gain and Input Impedance settings should be carried out ideally by your Vertere retailer, distributor or qualified personnel.

Grounding Setup

Please refer to the front & back panel views on Installation page.

Most tonearm cables have an earthing wire which should be attached to the PHONO-1 Chassis Ground Terminal (7) on the back panel. Also on the back panel is the Phono Ground Management Switch (8) which provides 3 settings - **'Hard' Ground, No Ground & 'Soft' Ground**. With the PHONO-1 connected and the system on, listen to the background hum and noise while switching between the 3 positions. Set this switch to the position where hum and noise are at the lowest level or inaudible.

There is also a Signal Ground Terminal (11) that can be utilised if none of the 3 positions on the Ground Management Switch eliminate or sufficiently reduce the hum.

Note: Earthing wire connection to Signal Ground Terminal is **not** usually required.

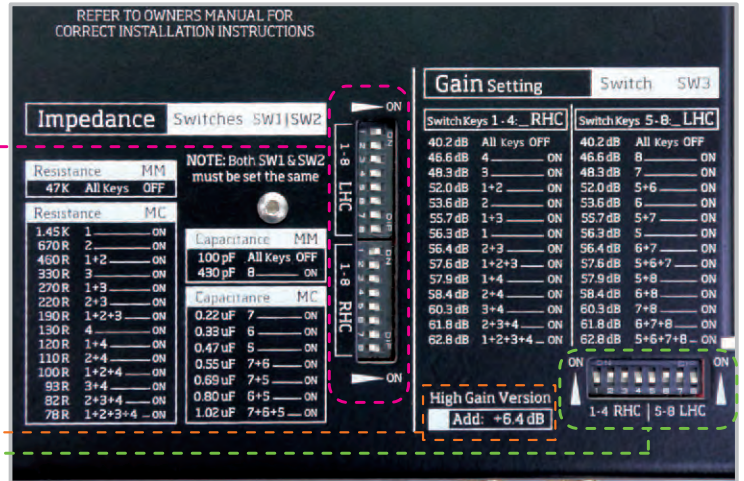
Please consult your Vertere distributor, retailer or Vertere if there is still excessive hum and noise in any of the 3 positions.

PHONO-1 Underside

Input Impedance Setting Switches

Optional Higher Gain Version

Gain Setting Switch



Input Impedance Setting



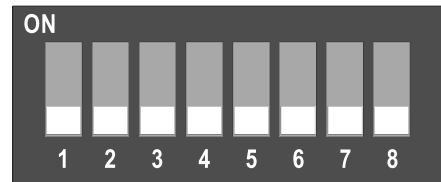
Resistance Capacitance

SW1 **LHC**



Resistance Capacitance

RHC SW2



Resistance Capacitance

Capacitance	For MM
100pF _____	All Keys OFF
430pF _____	8 (ON)

Resistance	For MM
47K _____	All Keys OFF

Capacitance	For MC
0.22uF _____	7 (ON)
0.33uF _____	6 (ON)
0.47uF _____	5 (ON)
0.55uF _____	7+6 (ON)
0.69uF _____	7+5 (ON)
0.80uF _____	6+5 (ON)
1.02uF _____	7+6+5 (ON)

Resistance	For MC
1.45K _____	1 (ON)
670R _____	2 (ON)
460R _____	1+2 (ON)
330R _____	3 (ON)
270R _____	1+3 (ON)
220R _____	2+3 (ON)
190R _____	1+2+3 (ON)
130R _____	4 (ON)
120R _____	1+4 (ON)
110R _____	2+4 (ON)
100R _____	1+2+4 (ON)
93R _____	3+4 (ON)
82R _____	2+3+4 (ON)
78R _____	1+2+3+4 (ON)

IMPORTANT

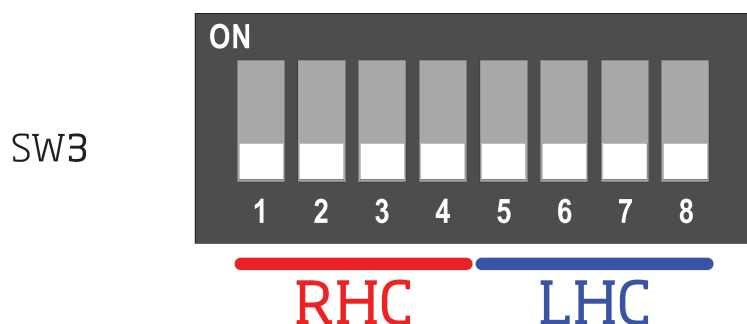
Before shipping, PHONO-1 Input Impedance switches are set for Vertere *Mystic* MC;

SW2: 430pF ___ 8 (ON) & 1.45K ___ 1 (ON)

SW1: 430pF ___ 8 (ON) & 1.45K ___ 1 (ON)

NOTE: Both SW1 & SW2 must be set the same.

Gain Setting



IMPORTANT

It is important to set both Left & Right Channels to the same gain setting.

Switch Keys 1 - 4: RHC			Switch Keys 5 - 8: LHC		
40.2dB	All Keys	OFF	40.2dB	All Keys	OFF
46.6dB	4_____ (ON)		46.6dB	8_____ (ON)	
48.3dB	3_____ (ON)		48.3dB	7_____ (ON)	
52.0dB	1+2_____ (ON)		52.0dB	5+6_____ (ON)	
53.6dB	2_____ (ON)		53.6dB	6_____ (ON)	
55.7dB	1+3_____ (ON)		55.7dB	5+7_____ (ON)	
56.3dB	1_____ (ON)		56.3dB	5_____ (ON)	
56.4dB	2+3_____ (ON)		56.4dB	6+7_____ (ON)	
57.6dB	1+2+3_____ (ON)		57.6dB	5+6+7_____ (ON)	
57.9dB	1+4_____ (ON)		57.9dB	5+8_____ (ON)	
58.4dB	2+4_____ (ON)		58.4dB	6+8_____ (ON)	
60.3dB	3+4_____ (ON)		60.3dB	7+8_____ (ON)	
61.8dB	2+3+4_____ (ON)		61.8dB	6+7+8_____ (ON)	
62.8dB	1+2+3+4_____ (ON)		62.8dB	5+6+7+8_____ (ON)	

NOTE

Before shipping, PHONO-1 Gain switch is set for Vertere Mystic MC cartridge

SW3: **56.4dB (2+3) ON**
& **56.4dB (6+7) ON**



Phono Ground Switch

Minimise Hum and Noise by correctly setting the Ground Lift Switch on the back panel of the PHONO-1.

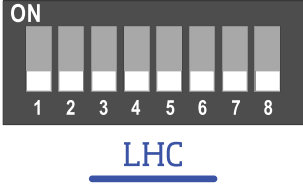
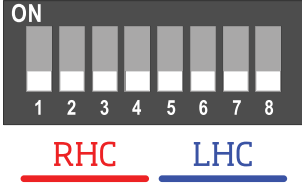
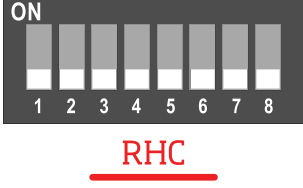
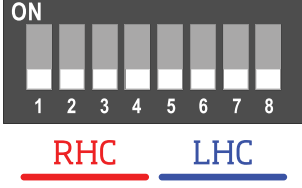
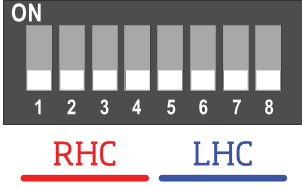
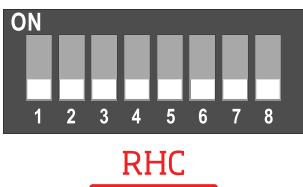
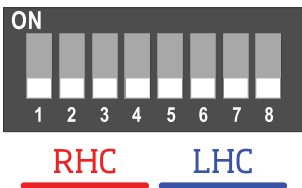
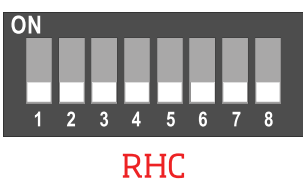
- * Set the volume to low average listening level.
- * Switch between 1, 2 or 3 setting positions while listening to the background noise.
- * Select the setting which provides the lowest noise and hum.

If there is still excessive hum/noise then contact your Vertere retailer, distributor or Vertere for further instructions.



NOTE: PHONO-1 is set on position **3** as default when shipped.

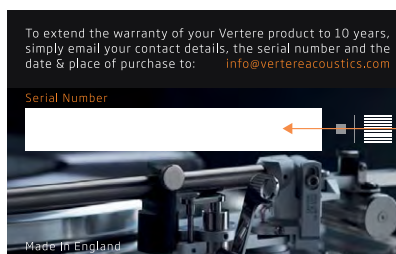
Record Of Tested Cartridges Impedance & Gain Settings

Cartridge	Resistance/Capacitance		Gain
1. :			
2. :			
3. :			
4. :			
5. :			
6. :			
7. :			
8. :			

GUARANTEE

Your Vertere Phono Preamp is guaranteed against any defect in materials and workmanship for a period of two years from the date of purchase. You can extend this period to **ten years** by registering your warranty on Vertere Acoustics website - vertereacoustics.com

Make a note of the serial number(s) on your warranty card for future reference - please retain the card



Serial Number(s)

This guarantee excludes:

1. Damage caused due to accident, misuse, neglect and incorrect installation, adjustment or repair.
2. General wear & tear.
3. Liability for damage or loss during transit from the retailer or purchaser to Vertere or its authorised distributor for the purposes of repair or inspection.

Carriage costs to Vertere shall be borne by the consignor.

All claims under this guarantee must be made through an authorised Vertere retailer.

If equipment returned for repair to Vertere is found on inspection to comply with the product specification Vertere reserves the right to make a charge for examination and return carriage.

There are no user serviceable parts inside the Phono Preamp.

Unauthorised servicing will void this guarantee.



SPECIFICATIONS

Type	MC/MM Preamp Main Phono Circuit on Separate Gold Plated PCB
Power Supply	Linear, Int. Switchable Transformer on Separate Gold Plated PCB
Gain Settings	40.2dB to 62.8dB In 12 Steps - See Manual High Gain version - Add 6.4dB to all settings
Input Impedance Settings;	
Resistance	47k for MM 78R to 47K for MC - In 14 Steps - See Manual
Capacitance	100pF & 430pF for MM 100pF to 1.02uF for MC - In 9 Steps - See Manual
Frequency Response	20Hz - 20kHz +/- 0.2dB
Noise	< -78dB - AWD
THD+N	0.03%
Finish	Front Panel Options Vertere Orange, Silver or Black
Dimensions	210 x 235 x 55mm W x D x H (Incl. Switches & Feet)
Weight	2.00 Kg





VERTERE™

RECORD PLAYING SYSTEMS

RG-1 Reference Groove Record Player
SG-1 Super Groove Record Player
MG-1 Magic Groove Record Player
DG-1 Dynamic Groove Record Player

MOTOR DRIVES

RG-1 Reference Motor Drive
SG-1 MkIII Super Groove Motor Drive

TONEARMS

Vertere Reference Tonearm New Gen.
SG-1 MkII Tonearm PULSE-HB Internal Wiring
SG-1 MkII Tonearm Standard PULSE Internal Wiring

PHONO CARTRIDGES

Mystic Moving Coil Cartridge
Magneto Moving Magnet Cartridge

PHONO PREAMPLIFIER

PHONO-1 MkII

ANALOGUE INTERCONNECT CABLES

PULSE-HB
PULSE-R
PULSE-Redline
D-Fi
RCA, XLR Balanced, DIN & 5-Pin Tonearm

SPEAKER CABLES

PULSE-HB
PULSE-XS Reference
PULSE-XS
PULSE-Redline
7mm, 4mm Banana & Spade - Single Ended Or Bridged Balanced

DIGITAL INTERCONNECT CABLES

PULSE-HB
PULSE-R
D-Fi
USB TypeA, TypeB, Mini, Micro, Ethernet RJ45
COAX-75 Ohm RCA & BNC, AES/EBU Balanced XLR

MAINS POWER CABLES & DISTRIBUTION

PULSE-HB & HB MAINS DISTRIBUTION BLOCK
PULSE-Redline
UK, EU, US: IEC & IEC 20A

RECORD PLAYER SUPPORT

STAGE-1 REFERENCE ISOLATION PLATFORM

EQUIPMENT SUPPORT

STAND-1 REFERENCE EQUIPMENT SUPPORT

