



User Manual

General Use

Issue 1.0



VERTERE
C A L N



Introduction

Thank you for your purchase of CALON Dual Mono Phono Preamplifier. Please study these instructions carefully. Your CALON Phono Preamp 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.

Guarantee

Your Vertere CALON Dual Mono Phono Preamplifier 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 the Vertere 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 consignee.

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 your Super Groove II Pathfinder Tonearm.

Unauthorised servicing will void this guarantee.

10
YEAR
WARRANTY

This product is designed to comply with:

Electromagnetic Compatibility Directive 2004/108/EC

Restriction of Hazardous Substances (RoHS2) Directive 2011/65/EU

Waste of Electrical and Electronic Equipment Directive 2012/19/EC

This product bears the CE & UKCA mark



Standards applied are those which were in force at the time of the introduction of this product.

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

Products that display the crossed-out wheeled bin logo cannot be disposed of as domestic waste.

These products must be disposed of at facilities capable of re-cycling them and appropriately handling any waste by-products.

Contact your local authority for details of the nearest such facility. Appropriate recycling and waste disposal helps conserve resources and protects the environment from contamination.

Maintenance

After disconnecting the unit from the mains or its dedicated power supply, the unit may be cleaned with a lightly dampened soft cloth or chamois leather.

Avoid use of abrasives or solvents.

AC MAINS SUPPLY

Your CALON Phono Preamp 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 PULSE-HB mains lead supplied with this product has an IEC mains connector which plugs into the IEC mains socket 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 UK13A 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 plugs are different from those as supplied with your CALON Phono Preamp, please contact the appointed Vertere distributor or Vertere for assistance.

Please observe correct mains polarity at all times.

CALON Phono Preamp's 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 back of the unit.

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 CALON Phono Preamp must be connected to a suitable earth/grounding 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 CALON Phono Preamp 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 CALON Phono Preamp should be located in a well ventilated area and kept away from sources of heat, dust and humidity and direct sunlight.

Your CALON Phono Preamp may be positioned either as a free standing unit or alongside another audio/video product.

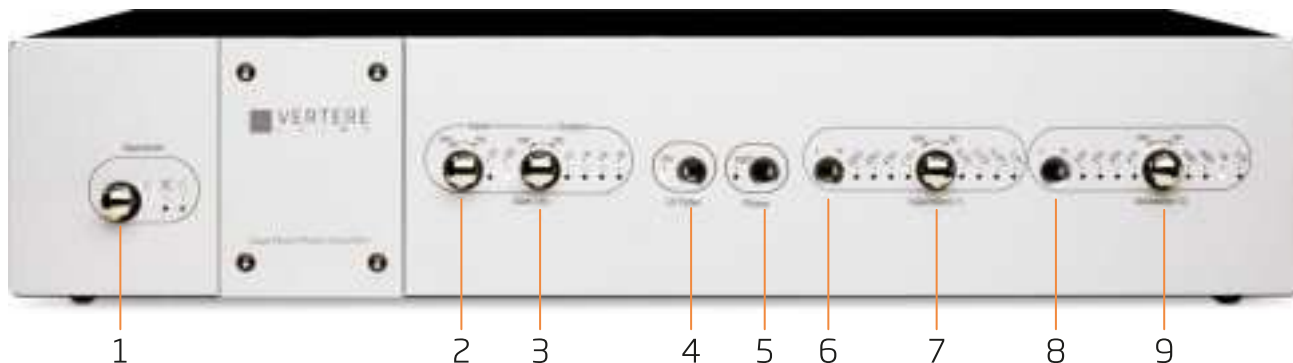
Never place your CALON Phono Preamp on carpet or any surface likely to hinder normal ventilation.

This unit contains no user serviceable parts. Do Not remove any panels or attempt to service it yourself.

Unauthorised servicing will void the warranty

CONTROLS AND CONNECTIONS

FRONT PANEL



- | | |
|--|----------------------------------|
| 1 Operation Selector (Sleep, Mute & On) | 6 Input Capacitance Range Switch |
| 2 Input Gain Selector (Default 10dB, +10 & +20 dB) | 7 Input Capacitance Selector |
| 3 Output Gain Selector (Default 0dB, +2, +4, +6 & +8 dB) | 8 Input Resistance Range Switch |
| 4 LF Filter Switch (Sub-sonic) | 9 Input Resistance Selector |
| 5 Phase Switch (0° & 180°) | |

BACK PANEL



- | | |
|---|---|
| 1 AC Mains IEC Inlet Socket | 7 Balanced XLR Outputs (L & R) |
| 2 Mains Voltage Label | 8 Phono RCA Outputs (L & R) |
| 3 Mains Inlet Fuse Holder (Includes Spare Fuse) | 9 L & R Channel Ground Management Switches
(1) 'Hard' Ground, (2) No Ground, (3) 'Soft' Ground |
| 4 Mains On/Off Switch | 10 L & R Channel Phono RCA Inputs |
| 5 Spare Chassis Ground Terminal | 11 Chassis Ground Terminals
Connect To Tonearm Earth Wire |
| 6 Serial Number Label | |

INSTALLATION

PLACEMENT

Place your CALON phono preamplifier on its designated shelf or support with easy access to the back panel for the connecting cables and clear front panel access for setting up and operation. Your CALON is fitted with specially designed support feet to isolate the chassis and internal circuitry for optimum performance.

NOTE:

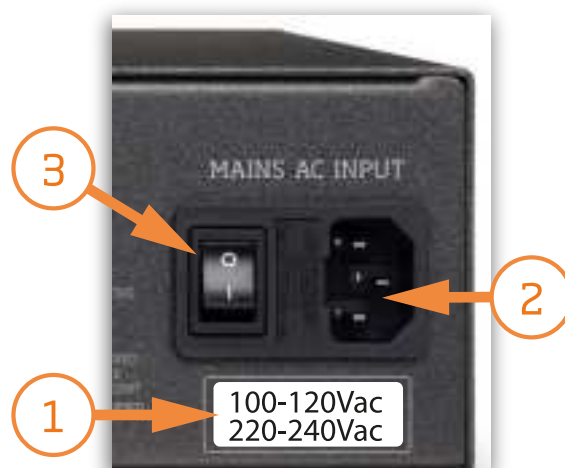
For maximum isolation and enhanced performance you can utilise a set of VERTERE SilenceR Coupler/De-coupler Equipment Support Pod.

CONNECTING MAINS POWER

The PULSE-HB supplied mains lead should be already fitted with the correct mains plug for your country.

1. Check the Voltage label to ensure it indicates the correct voltage for the country you are using it in
2. Plug the HB mains lead into the socket at the back of CALON and then into the wall mains socket
3. Switch on the CALON at the back

This switch is normally left on, however if the unit is likely to be unattended for a long period, switch it off and unplug the mains lead from the wall. (As should be with all electronic components)

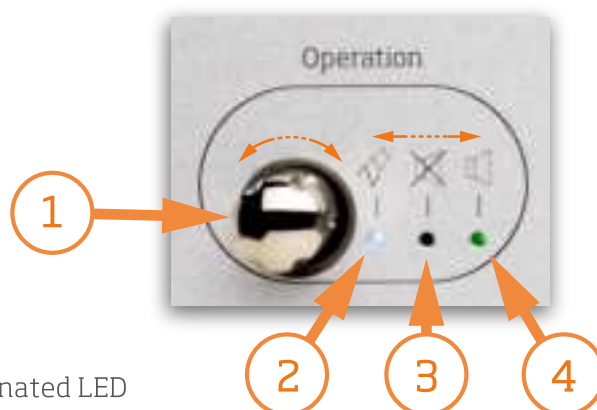


With the power switch **ON** at the back the unit will revert to the last settings selected

OPERATION

SWITCHING ON

1. Turning the Operation Selector as shown will put the CALON in the indicated modes;
2. Sleep Mode (Zzz) - Indicates the Mains Power is ON at the back - White illuminated LED
3. Mute - Indicates that All internal circuits are ON but the Output is Muted - Red illuminated LED
4. ON - Indicates the Output is now Unmuted and the CALON is fully operational - Green illuminated LED



CAUTION: Always turn the Operation Selector fully anti-clockwise into Sleep Mode before switching ON the AC Mains from the back panel.

CALON PHONO PREAMP SETTINGS

GAIN SETTINGS

CALON's unique 3x **INPUT GAIN** settings plus 5x **OUTPUT GAIN** settings allow perfect matching with your cartridge.

Selecting the correct **INPUT GAIN** will unleash your CALON's breathtaking performance by maximising headroom while providing unparalleled resolution of low level detail.

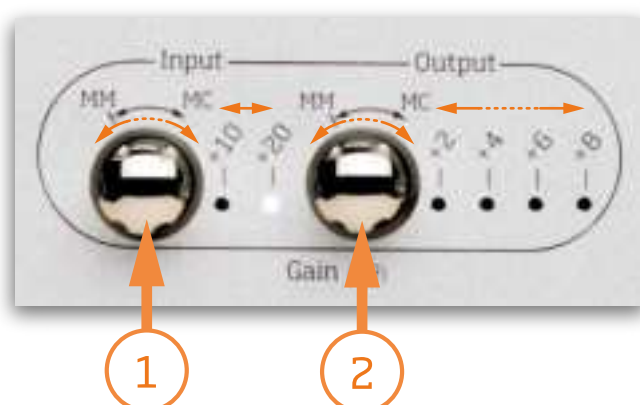
The Input Gain circuit is designed to realise the true dynamics and resolution of the audio signal that is cut into the record before any signal processing is carried out in the IRAA section.

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

Input & Output Gain Selectors

First set Output Gain to minimum (MM) and select the desired Input gain; (MM), +10, +20 - See below

1. **INPUT GAIN** Selector
 (MM) = 10dB - Fully Anticlockwise, No LED
 (+10) = 20dB - One Click Clockwise
 (+20) = 30dB - Last Click Clockwise
2. **OUTPUT GAIN** Selector
 (MM) = 0dB - Fully Anticlockwise
 In 4 steps - Every Click Clockwise
 +2dB, +4dB, +6dB, +8dB



INPUT + OUTPUT Gain range; 10dB to 38dB (In 15 steps)

Note: The IRAA section gain remains constant at 30dB

Turning either of the Gain Selectors fully anticlockwise to (MM), default gain values are selected and **none** of the LEDs illuminated - **Input Gain** of 10dB & **Output Gain** of 0dB

NOTE

Whenever a setting is selected its corresponding **LED** indicator will illuminate **White**.

IMPORTANT

First set the **INPUT** Gain to match your CALON to the output of the cartridge you are using.

OUTPUT Gain should only be used if you require a bit more gain;

For example say +10dB on Input Gain seems correct but a little low and +20dB is just too high. Then select +2 or +4 or ... on the Output Gain to Top Up.

For optimum performance, **maximise** the **INPUT** Gain before adding any **OUTPUT** Gain.

CALON PHONO PREAMP SETTINGS

INPUT IMPEDANCE SETTINGS

CALON has a comprehensive range of Input Impedance settings to ensure perfect matching with your cartridge.

Selecting the correct **Input Impedance** will ensure breathtaking performance by allowing the cartridge to 'breathe' maximising dynamics, speed with unparalleled resolution of low level detail.

The **Input impedance** is set by choosing the correct **Capacitance & Resistance**. The Capacitance is to make sure if there is any high frequency rise (property of many cartridges - not all...) is kept at bay without 'shutting down' the cartridge by having to use too low an input resistance.

Unwanted high frequency rise of a MC cartridge is best reduced/flattened by using **suitable capacitance** rather than reducing input resistance at the expense of 'airiness' and 'agility'.
[See Higher Range Input Capacitance Section](#)

Input Capacitance Selector

Input Capacitance has two ranges, **Low & High** (MM) setting is the default value of 100pF
 (L) Low range - Increase by 220pF to 1.0nF
 (H) High range - Increase by 0.22uF to 1.0uF

1. **RANGE** Switch
Set to Low - Switch to the left
2. **CAPACITANCE** Selector
(MM) = 100pF - Fully Anticlockwise
In 4 steps - Every Click Clockwise
+220pF, +330pF, +470pF, +1.0nF

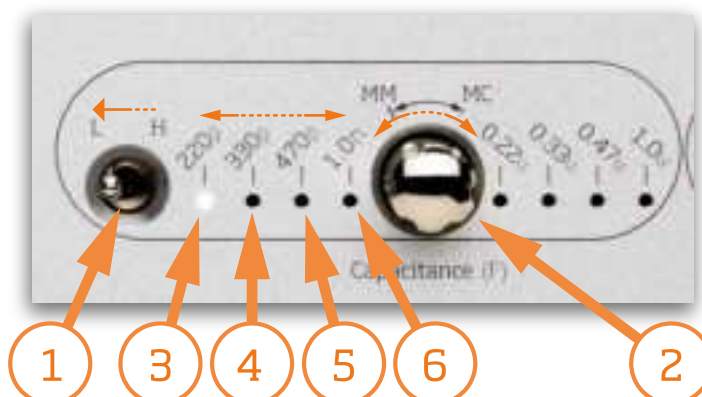
3

4

5

6

Input Capacitance Low Range



Note: For most Moving Magnet cartridges the Capacitance selector should be fully anticlockwise - MM

Turning Capacitance Selector fully anticlockwise to (MM), the default value is selected and none of the LEDs illuminated - **Input Capacitance** of 100pF

NOTE

Whenever a setting is selected its corresponding **LED** indicator will illuminate **White**.

IMPORTANT

Some Moving Magnet cartridges may benefit from slightly higher than 100pF input capacitance.

You can experiment by utilising +220pF up to +470pF. Above this value could reduce high frequency response by quite a bit and is not recommended unless the cartridge manufacturer advises otherwise. **Always check the manufacturer's recommended settings**

Input Capacitance Selector

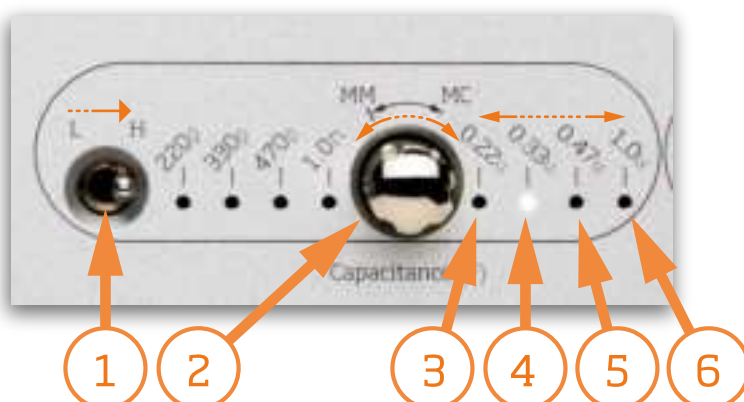
Input Capacitance **Higher** range selection;

(H) High range - Increase by 0.22uF to 1.0uF

1. **RANGE** Switch
Set to High - Switch to the right
2. **CAPACITANCE** Selector
(MM) = 100pF - Fully Anticlockwise
In 4 steps - Every Click Clockwise
+0.22uF, +0.33uF, +0.47uF, +1.0uF

3 4 5 6

Input Capacitance High Range



Note:

Even with the **Range** Switch on (H), when the Capacitance selector is turned fully anticlockwise - MM default value of 100pF would be selected.

Turning Capacitance Selector fully anticlockwise to (MM), the default value is selected and none of the LEDs illuminated - **Input Capacitance** of 100pF

NOTE

Whenever a setting is selected its corresponding **LED** indicator will illuminate **White**.

IMPORTANT

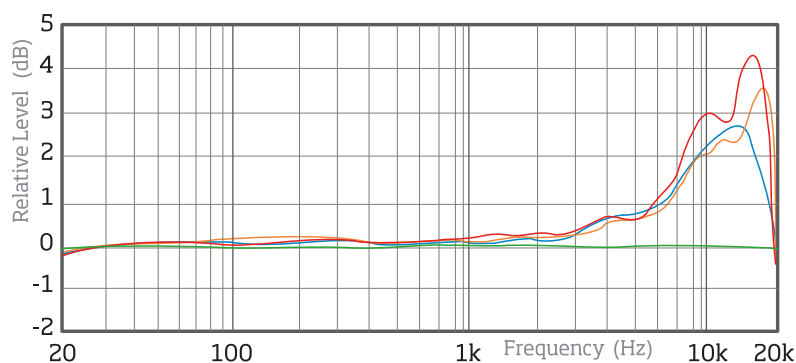
Some Moving Coil cartridges exhibit non-linear frequency response, with a high frequency rise of about 2dB, sometimes even up to 6dB with the rise normally starting from 1-2kHz.

In these cases the cartridge would benefit from higher input capacitance;

0.22uF, 0.33uF, 0.47uF even 1.0uF.

You can experiment by utilising 0.22uF up to 0.47uF. In cases where the high frequency rise is quite high then even up to 1.0uF.

Selecting the correct **Input Capacitance** will ensure the cartridge's rising high frequency is kept at bay without the need to 'shut down' the cartridge by having to use too low an input resistance. With better matching Input Resistance, the cartridge is allowed to 'breathe' maximising dynamics, speed with higher resolution of low level detail.



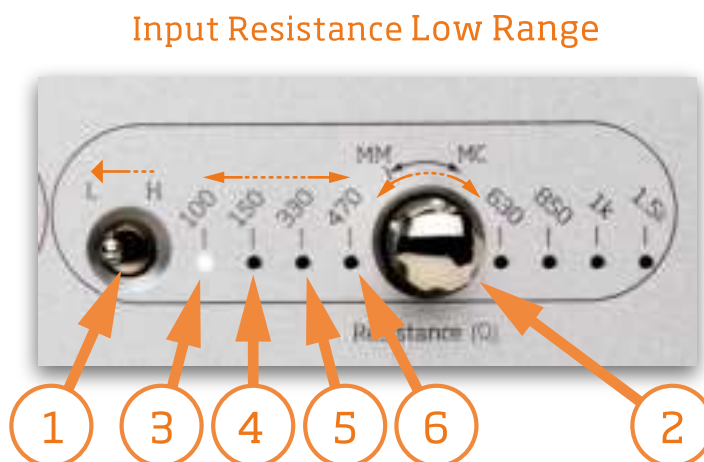
- : Linear MC cartridge (Like XtraX & Mystic) No High Value Capacitance required
- : Non-linear MC cartridges with slightly uneven rise of 2.0 - 2.5dB could benefit from 0.22uF/0.33uF
- : Non-linear MC cartridges with slightly uneven rise of 3.0 - 3.5dB could benefit from 0.33uF/0.47uF
- : Non-linear MC cartridges with quite uneven rise of over 4.0dB could benefit from 0.47uF/1.0uF

Input Resistance Selector

Input Resistance has two ranges, **Low** & **High** plus the default setting for MM of 47k Ω

(L) Low range - Set to: 100 Ω to 470 Ω

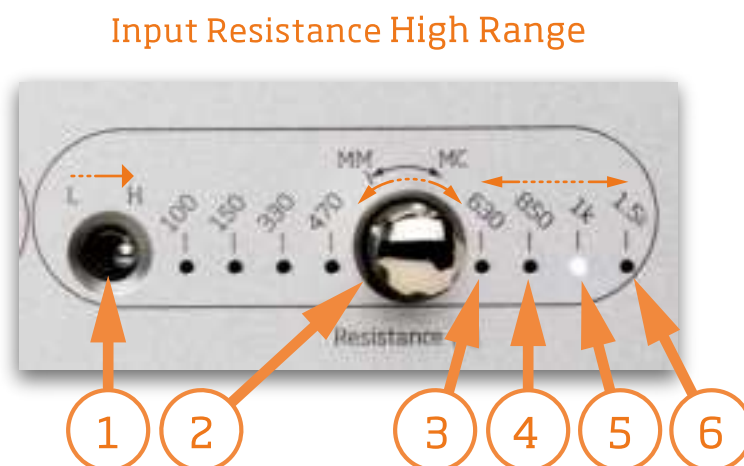
1. **RANGE** Switch
Set to Low - Switch to the Left
2. **RESISTANCE** Selector
(MM) = 47k Ω - Fully Anticlockwise
In 4 steps - Every Click Clockwise
100 Ω , 150 Ω , 330 Ω , 470 Ω



Input Resistance **Higher** range selection;

(H) High range - Set to: 630 Ω to 1.5k Ω

1. **RANGE** Switch
Set to High - Switch to the Right
2. **RESISTANCE** Selector
(MM) = 47k Ω - Fully Anticlockwise
In 4 steps - Every Click Clockwise
630 Ω , 850 Ω , 1.0k Ω , 1.5k Ω



General Rule Of Thumb:

For most Moving Coil cartridges the Input Resistance for optimum openness and agility could range between; **20 x to 40x** Cartridge Coil's DC Resistance

For example an MC cartridge with 40 Ω DC Coil Resistance - Input Resistance from 800 Ω to 1.6k Ω

It is generally not recommended to select a value lower than 10 x Cartridge Coil's DC Resistance unless specifically stated by the cartridge manufacturer.

Check manufacturer's recommended settings

Turning Resistance Selector fully anticlockwise to (MM), the default value is selected and none of the LEDs illuminate - Input Resistance of 47k Ω

NOTE

Whenever a setting is selected its corresponding LED indicator will illuminate White.

Low Frequency, Sub-sonic Filter - Woofer Cone Flutter Eliminator

Your CALON is equipped with an effective sub-sonic filter that eliminates any woofer cone flutter without compromising the music's low frequency notes.

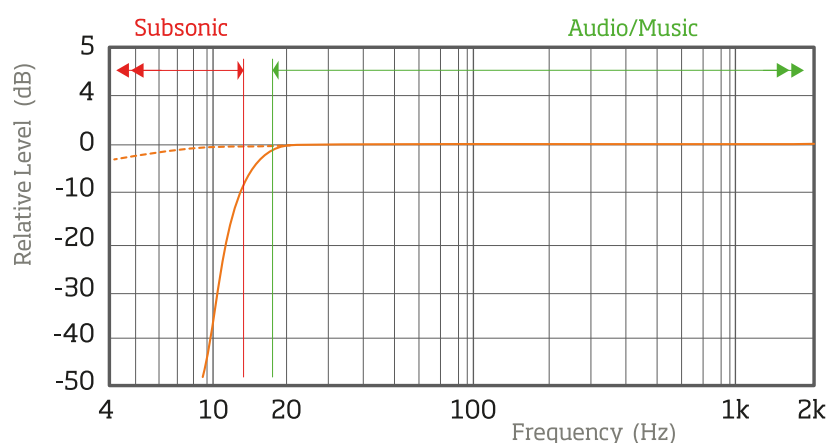
Cartridge/tonarm sub-sonic movement due to the record's uneven surface, however small, causes the woofer cone to oscillate at sub-sonic frequencies reducing headroom, causing non-linearity and waste amplifier power moving the woofer at these unwanted signal frequencies.

Thanks to CALON's LF Filter you can eliminate this and allow the music to flow unrestricted with even better low bass frequency definition.

LF (Sub-sonic) Filter

1. LF Filter Switch

Click towards **On**, the LED will illuminate and after a short mute the filter will be activated.



----- : No LF Filter - All unwanted Subsonic frequencies let through
 ————— : With LF Filter - No Subsonic frequency let through only Audio/Music



Phase Inversion - 180°

Your CALON is also equipped with Phase Inversion to correct the absolute phase of a record where in the process the master has been made 'out of phase'.

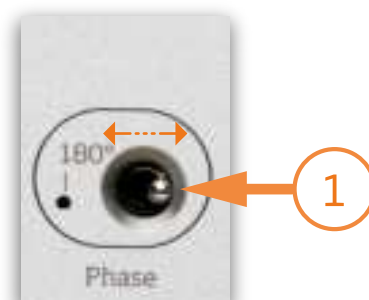
Although this is extremely rare but it can happen.

In this situation you simply use the Phase Switch to correct the absolute phase.

Phase Inverstion (180°)

1. Phase Switch

Click towards **180°**, the LED will illuminate and 180° phase inversion will be activated.



CALON PHONO PREAMP INPUT | OUTPUT

Your CALON is equipped with 1x INPUT & 2x Outputs

The Input of your CALON utilises a pair of Gold Plated, RCA Phono sockets while the Output utilises a pair of Gold Plated, RCA Phono sockets plus a pair of Gold Plated, balanced XLR sockets for Left & Right channels.

Input - Phono RCA & Earth/Ground Terminal

Connect the RCA plugs of your Tonearm Cable to CALON's L & R RCA Inputs - observe channel identifications.

Inputs & Ground/Earth Terminals

1. L & R RCA Inputs
2. Chassis Ground - Earth Wire Terminals
There are two terminals, either can be used - both connect to chassis Ground.
Use any of the two and connect your tonearm cable's Earth Wire to it.

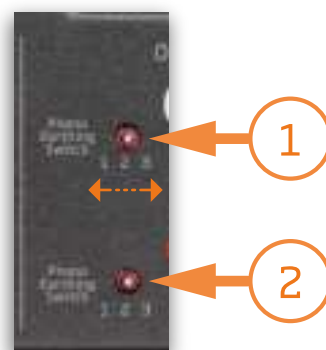


Phono Earth - Phono Earth/Ground Switch

Both Mono Audio circuits of CALON have switchable connection to the Chassis Ground. There are two switches - one for each channel (L & R). There are 3 selectable positions - see below

Phono Earth Switches

1. Phono Earth Switch - Left Channel
Position 1: Low Resistance Connection - 'Hard' Ground
Position 2: Ground Lift - No Connection
Position 3: High Resistance Connection - 'Soft' Ground
2. Phono Earth Switch - Right Channel
Position 1: Low Resistance Connection - 'Hard' Ground
Position 2: Ground Lift - No Connection
Position 3: High Resistance Connection - 'Soft' Ground



IMPORTANT: Both Channels **MUST** have the same setting - Both on 1, Both on 2 or Both on 3

General Rule Of Thumb:

For most situations position 3 provides the best performance and lowest background noise. This however may not be the case in every installation. If there is a hum or a buzzing sound position 1 or 2 may eliminate it.

NOTE: There are of course other issues that can cause hum or buzz if this switch does not solve the issue contact your Vertere retailer, distributor or Vertere for further advice.

CALON PHONO PREAMP INPUT | OUTPUT

Your CALON is equipped with 2x Outputs, RCA Phono and balanced XLR.

The Outputs of your CALON for Left & Right channels are continuously active unless the unit is set in **Mute** mode when both outputs would be muted.

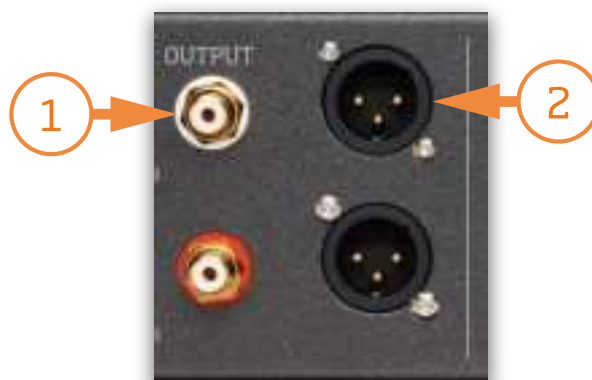
Note all internal circuits are On in Mute mode only the Outputs are deactivated.

Outputs - Phono RCA & Balanced XLR

Connect your interconnect Cable to CALON's L & R RCA Outputs - observe channel identification and cable direction if indicated.

Outputs - RCA & XLR

1. L & R RCA Outputs
For phono RCA terminated interconnect cables.
2. L & R Blanced XLR Outputs
For balanced XLR terminated interconnect cables.



IMPORTANT

For best performance only connect and use one set of the outputs at a time.

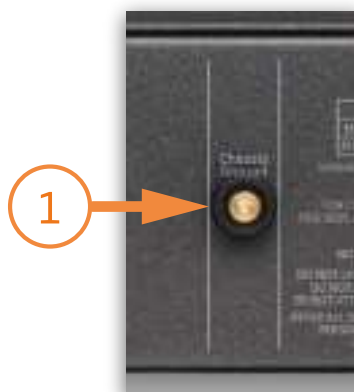
Connecting **both** RCA & XLR outputs to the **same** amplifier would create an earth loop which could have an adverse impact on the performance.

Chassis Ground Terminal

Chassis Ground Terminals

Two for Phono RCA input & one Spare

1. Chassis Ground Terminal
There is a third Chassis Ground terminal on the back. This is a spare terminal and generally is unused.*



* This terminal could be used for another equipment which may benefit from being connected to Ground/Earth. Simply use a grounding wire and connect the chassis of the other equipment to this terminal.

INPUT IMPEDANCE SETTINGS RECORD

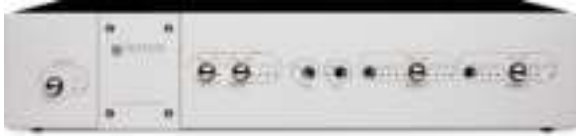
You can use this chart to keep a record of your cartridge settings once you have established them for optimum performance.

Phono Cartridge	Resistance (Ω)	Capacitance (pF, nF, uF)
1 XtraX & Mystic	1.5k or 1k	None
2 DARK & Sabre	MM (47k)	None
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		

NOTE
All impedance settings are recommendations and may vary in an specific installation.
Consult your Vertere retailer, distributor or Vertere if you have any queries.

Welsh
calon

English
heart *n.f. (calonnau)*
nerve-centre *n.m. (calonau)*



Every Beating Heart Has a **PULSE**



Image shown is an optional upgrade to PULSE-HBS



Get the best from your CALON - upgrade connecting cables to PULSE-HB



VERTERE™

RECORD PLAYING SYSTEMS

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

MOTOR DRIVES

RG-1 Reference Motor Drive
imperium Precision Motor Drive
Tempo Precision Motor Drive

TONEARMS

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

PHONO CARTRIDGES

X T R A X Moving Coil Cartridge
M y s t i c Moving Coil Cartridge
D A R K HD Moving Magnet Cartridge
s a b r e HD Moving Magnet Cartridge
M a g n e t o Moving Magnet Cartridge

PHONO PREAMPLIFIER

PHONO-1 MkII L

ANALOGUE INTERCONNECT CABLES

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

MAINS POWER CABLES & DISTRIBUTION

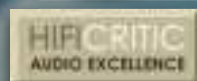
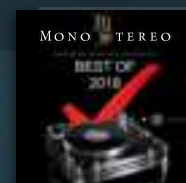
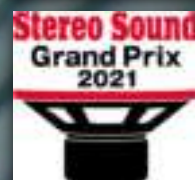
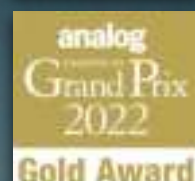
PULSE-HB, PULSE-HBS
HB MAINS DISTRIBUTION BLOCK & PULSE-Redline
UK, EU, US: IEC & IEC 20A

RECORD PLAYER SUPPORT

STAGE-1 REFERENCE ISOLATION PLATFORM

EQUIPMENT SUPPORT

STAND-1 REFERENCE EQUIPMENT SUPPORT



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