

# PLINIUS

## CD·LAD

Audio Preamplifier



# *INSTRUCTION MANUAL*

REFINED AUDIO EQUIPMENT



MANUFACTURED WITH PRIDE IN NEW ZEALAND



**CONGRATULATIONS** on your decision to become the proud owner of this  
Plinius CD-LAD Preamplifier.

This manual has been prepared to help you understand the operation of your amplifier, and to provide information about its design and the variety of ways it may be used.

We have designed and manufactured this preamplifier to reproduce faithfully and accurately, your favourite music. With a little care and a full understanding of the operating recommendations in this manual, your Plinius CD-LAD Preamplifier will provide years of high-quality, trouble-free performance.

Serial Number: .....

Date of Manufacture: .....

Final Test Certified By: .....

**IMPORTANT: PLEASE TAKE THE TIME TO READ THIS MANUAL  
THOROUGHLY BEFORE USING YOUR PREAMPLIFIER.**

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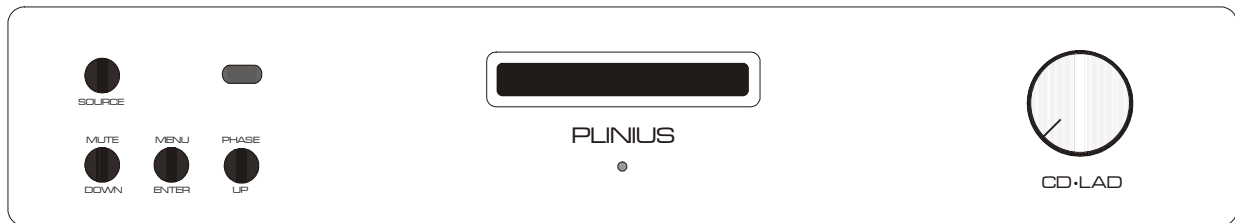
# PRECAUTIONS

Please take special note of the following precautions before operating your new preamplifier:

- This preamplifier operates at hazardous voltage levels. We recommend that any work requiring removal of the lid be referred to a suitably qualified and experienced service technician.
- DO NOT attempt to connect any input of this preamplifier to its own outputs.
- DO NOT earth any output terminal or connect any of these terminals together without following the instructions in this manual or seeking qualified assistance.
- DO NOT place this preamplifier in any position where liquids or any foreign material may accidentally enter it.
- DO NOT connect any voltage source, short circuit, earth/ground or appliance (other than suitable audio power amplifiers) to the preamplifier output terminals.
- DO NOT connect any voltage source, short circuit, earth/ground or appliance (other than suitable audio source components) to the preamplifier input terminals.

# PREAMPLIFIER FEATURES – FRONT PANEL

The front of the Plinius CD-LAD Preamplifier incorporates all the facilities you will require on a daily basis.



## ***FRONT PANEL LAYOUT SHOWING VOLUME KNOB, VACUUM FLUORESCENT DISPLAY, MENU BUTTONS AND DISPLAY LED***

### ***DISPLAY LED***

An LED below 'PLINIUS' indicates when the preamplifier is in standby mode. This LED also lights to show whenever the remote control is being used to change the volume level.

### ***FRONT PANEL BUTTONS***

These four buttons are used to change source selection, phase, mute, or access the menu system of the CD-LAD (for adjustment of display brightness, CD input mode, balance etc). The functions Down, Enter, and Up are only active whilst the menu system is enabled (See Settings Menu Structure section later).

### ***VACUUM FLUORESCENT DISPLAY***

Whenever a modification is made to the CD-LAD settings (via the remote control or the front panel buttons) these changes will be viewable on the display.

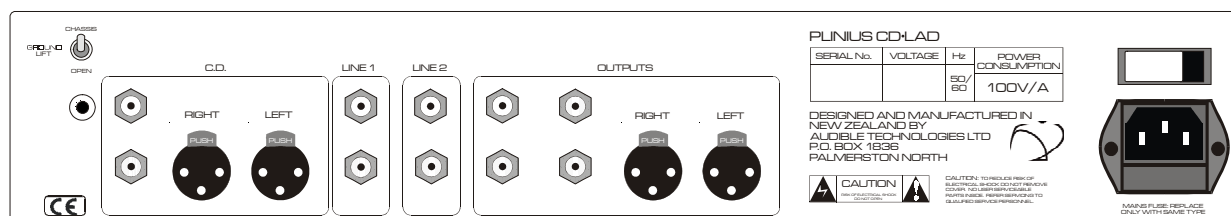
### ***VOLUME CONTROL KNOB***

The volume control is an ALPS motorised unit that will accurately convey the selected source signal to the line stage of the Plinius CD-LAD. When using the remote control to alter the volume level, stab the button to make small adjustments, or hold the button down to continuously adjust the volume.

# PREAMPLIFIER FEATURES – REAR PANEL

This panel incorporates all the terminals for connecting the input signals from your CD player, tuner, etc, and the outputs to the power amp and mains supply.

Please remember that your Plinius CD-LAD Preamplifier is a high quality electronic instrument capable of an exceptional level of performance. Be sure that you understand your system's requirements fully before you make any connection to this preamplifier.



***REAR PANEL SHOWING INPUT AND OUTPUT TERMINALS, GROUND LIFT SWITCH, MAINS SWITCH AND MAINS SOCKET.***

## ***INPUT TERMINALS***

The input terminals of your Plinius CD-LAD Preamplifier are easily accessible along the rear panel. These standard RCA terminals are for use with single ended signals from line level audio components such as CD, tuner, video, etc. Also included is one pair of balanced XLR inputs for use with XLR type cables. Consult your **PLINIUS** dealer for further advice if required.

## ***OUTPUT TERMINALS***

Connections for power amplifiers are provided in the centre of the rear panel. Connections are available for both single ended (RCA type) and balanced (XLR type) cables. Note that the only time the outputs aren't 'live' is when the preamplifier is in mute or standby.

### ***GROUND LIFT SWITCH***

This switch allows the signal ground to be disconnected from the chassis. In some installations a hum loop may exist due to duplicate ground paths from different equipment. Use this switch to remove the connection from 0V to ground thus allowing some flexibility in your particular set-up.

### ***MAINS SWITCH***

The heavy-duty rocker switch to the right of the panel turns the Mains/Line Power to the amplifier ON or OFF. Depress the right hand side of the switch to turn the amplifier on. The amplifier draws a moderately high current when switched on, so it is not good practice to rapidly turn the Mains switch on and off repeatedly.

### ***MAINS POWER CORD IEC SOCKET***

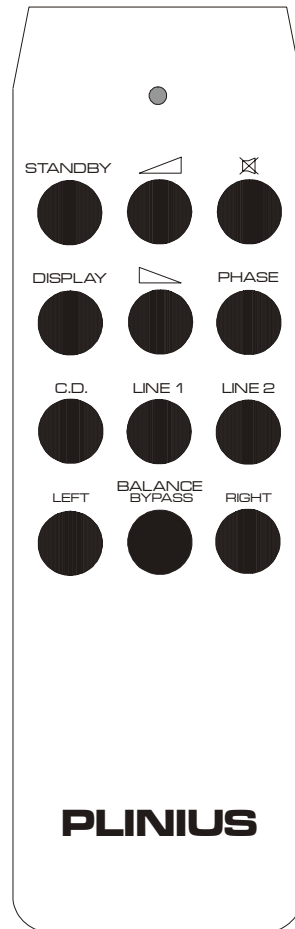
This connector is where the mains supply cable from your wall connects to the preamplifier. You will notice that a fuse holder is mounted within this connection, and it holds a mains fuse to provide surge and overload protection for your preamplifier.

### ***EARTH POST***

This is a chassis connected gold-plated earth post for use with certain phono turntables.

# PREAMPLIFIER FEATURES – REMOTE

The Plinius CD-LAD Remote provides access to most of the controls you will require on a daily basis.



***REMOTE CONTROL SHOWING FUNCTION BUTTONS.***

## ***VOLUME CONTROL***

Use these two buttons to control the volume level of the preamplifier. The middle top button increases volume, while the button directly below it decreases the volume. Stab either button to make fine adjustments to the volume level. Hold down either button to continually adjust the volume level.

## ***MUTE***

Use this button when you require the preamplifier to mute the output from the preamplifier. Pressing the button again brings the preamplifier back out of mute.

## ***PHASE***

The phase of the input signal to the preamplifier is switched from absolute to inverted 180° with each press of this button.

## ***STANDBY***

Standby disconnects the outputs of the preamplifier and turns off the vacuum fluorescent display tube. It is recommended that whenever the Plinius CD-LAD is left switched on but not in use, the standby function be implemented to increase the life of the display tube.

## ***DISPLAY***

The display button on the remote enables you to quickly adjust the display brightness to one of three levels. Depressed once and the display brightness falls to zero. Another press and full brightness is set - once more and the display reverts to the current user preset level. This user level is set using the menu buttons on the front panel as described later in the 'Settings Menu Structure' section. Note that if the brightness is set to zero, any button press will bring the brightness back to the current user setting so the screen can be read.

## ***SOURCE SELECTION***

The Source button toggles the input selected between CD, Line 1 and Line 2.

## ***BALANCE CONTROL***

These three buttons control the signal level between left and right channel. Use the buttons labelled left and right to set the channel balance where you require it. Depress the middle button to enable your preset balance setting (balance enabled). Depress the middle button again to disconnect the balance control circuit (balance bypassed) and centre both channels.

# INSTALLATION AND OPERATION

## ***PLACEMENT AND VENTILATION***

Ventilation through and around your Plinius CD-LAD Preamplifier should be kept unimpeded, so ensure that the heat vents (slots in the lid and base) are not covered or restricted in any way.

The Plinius CD-LAD design incorporates a very high level of mechanical de-coupling of the input and output. However, it can still be influenced by acoustical feedback in the operating environment. The use of acoustic cones or a suitably spiked preamplifier stand or table, may further enhance the performance of this preamplifier. Consult your **PLINIUS** dealer for further advice if required.

## ***MAINS VOLTAGE CONNECTION***

Firstly, check that the mains supply voltage printed on the rear of this preamplifier is similar to the mains supply voltage in your area. If in doubt, please consult your **PLINIUS** dealer.

Mains supply power connection is via the supplied plug-in lead. A standard IEC socket connects the mains power at the preamplifier end, while a local mains plug is required at the wall end.

The wiring code used inside all Plinius product is:

**Green to Earth/Ground**

**Blue to Neutral**

**Brown to Phase/Live**

Should a 'local' plug need fitting to the wall end of the lead, ensure that a suitably qualified service technician wires the plug correctly.

**IMPORTANT: DO NOT POWER UP YOUR PREAMPLIFIER UNTIL YOU HAVE CONNECTED YOUR INPUT/OUTPUTS CORRECTLY FOR YOUR SYSTEM, (AS EXPLAINED IN THE NEXT SECTION).**

# INPUT / OUTPUT CONNECTION

It is important that you connect your power amplifier/s (outputs) and source components (inputs) to your Plinius CD-LAD Preamplifier correctly to ensure the preamplifier is not damaged, and sounds its best within your system. Now that you have read and familiarised yourself with the various connections on the preamplifier, as covered in previous sections, we will describe in detail the way in which you can connect the preamplifier to your system.

Connect your CD player, tuner, tape deck, etc, to the CD, Line1, and Line 2 RCA inputs on the back of the Plinius CD-LAD. Make sure you connect the red coded cable to the red RIGHT RCA input, and the black (or white) cable to the black LEFT RCA input. Also make sure the RCA connectors are a snug fit and are inserted all the way in. If you are using balanced XLR cables note that only the CD input caters for this type of connection. You will also need to use the settings menu and set the CD input to balanced (see Settings Menu Structure following).

Next, connect your power amplifier/s cables to the output sockets. Ensure that you observe polarity on all cables (red is right, black is left) to ensure correct channel phasing.

## ***TERMINATION QUALITY***

Quality of the connections must be examined to ensure that high-performance, trouble-free operation is enjoyed. Check that all interconnection cables are snug fitting and inserted all the way in. In the case of balanced XLR sockets, ensure that they click in positively.

## ***PHASING (OR POLARITY)***

It is important to achieve good stereo imaging in your listening room. By observing the wiring instructions above, each preamplifier/power amplifier/loudspeaker combination should be in phase. If you experience poor stereo image and/or a lack of bass, check that all interconnection cables and loudspeaker wires have been connected correctly. We recommend that you use one of the easily obtainable 'test discs' to help you ensure both phasing and channel orientation are correct. If in doubt, consult your **PLINIUS** dealer for advice.

To achieve a sound performance that is correctly aligned to your room, make sure all of the leads carrying signals for the RIGHT channel loudspeaker are connected to the RIGHT input/outputs on your power amplifier/preamplifier/CD player etc. Signals for the LEFT channel should be wired in a similar fashion.

## ***CONNECTING THE MAINS SUPPLY***

Now that your Plinius CD-LAD Preamplifier is configured to your system correctly, the mains cable can be plugged into the IEC socket on the back of the preamplifier. Re-check all interconnection cables are fitted correctly. Flick the power switch on the back panel to the right. The vacuum fluorescent display will now display the messages 'PLINIUS', 'CD-LAD', 'SERIAL NO XXXX', while the internal circuitry stabilises. The preamplifier will then close the mute circuit and set the active input to CD.

## ***ENABLING THE INPUTS/OUTPUTS***

Use the Source button to select the input you want to listen to. Press the Mute button, then alter the volume to achieve the sound level you require. The Phase button can be used to select absolute or inverted 180° phase. Note that either the remote or the buttons/volume knob on the front panel can be used to perform these functions. If you wish to alter other settings such as CD input type, balance, or display brightness, see the following section. You can now enjoy your new Plinius CD-LAD Preamplifier.

## ***WARM-UP PERIOD***

You will find that the Plinius CD-LAD will become noticeably 'warmer' in sound after being on for a period of time. We usually recommend waiting at least 24 hours before expecting the best quality of sound reproduction from your preamplifier. Also, as the Plinius CD-LAD uses very little power while on, we suggest leaving the unit turned on (but in standby mode while not being used) so that it will always be at it's sonic best.

# SETTINGS MENU STRUCTURE

A major feature of your Plinius CD-LAD Preamplifier is the settings menu. Options such as balance, display brightness and CD input type are all configured via this menu.

## ***FRONT PANEL BUTTONS***

The buttons on the front panel concerned with the settings menu are the three along the bottom left labelled Mute/Down, Menu/Enter, and Phase/Up. The bottom three functions (Down, Enter, Up) are only active after pressing Menu (to access the settings menu). Also, remember that the Source button that is used to toggle between the three inputs on the CD-LAD is not active when the settings menu is being adjusted.

## ***USING THE SETTINGS MENU***

After pressing the Menu button, the settings menu can be accessed. The Down and Up buttons can then be used to scroll through the following sub-menus:

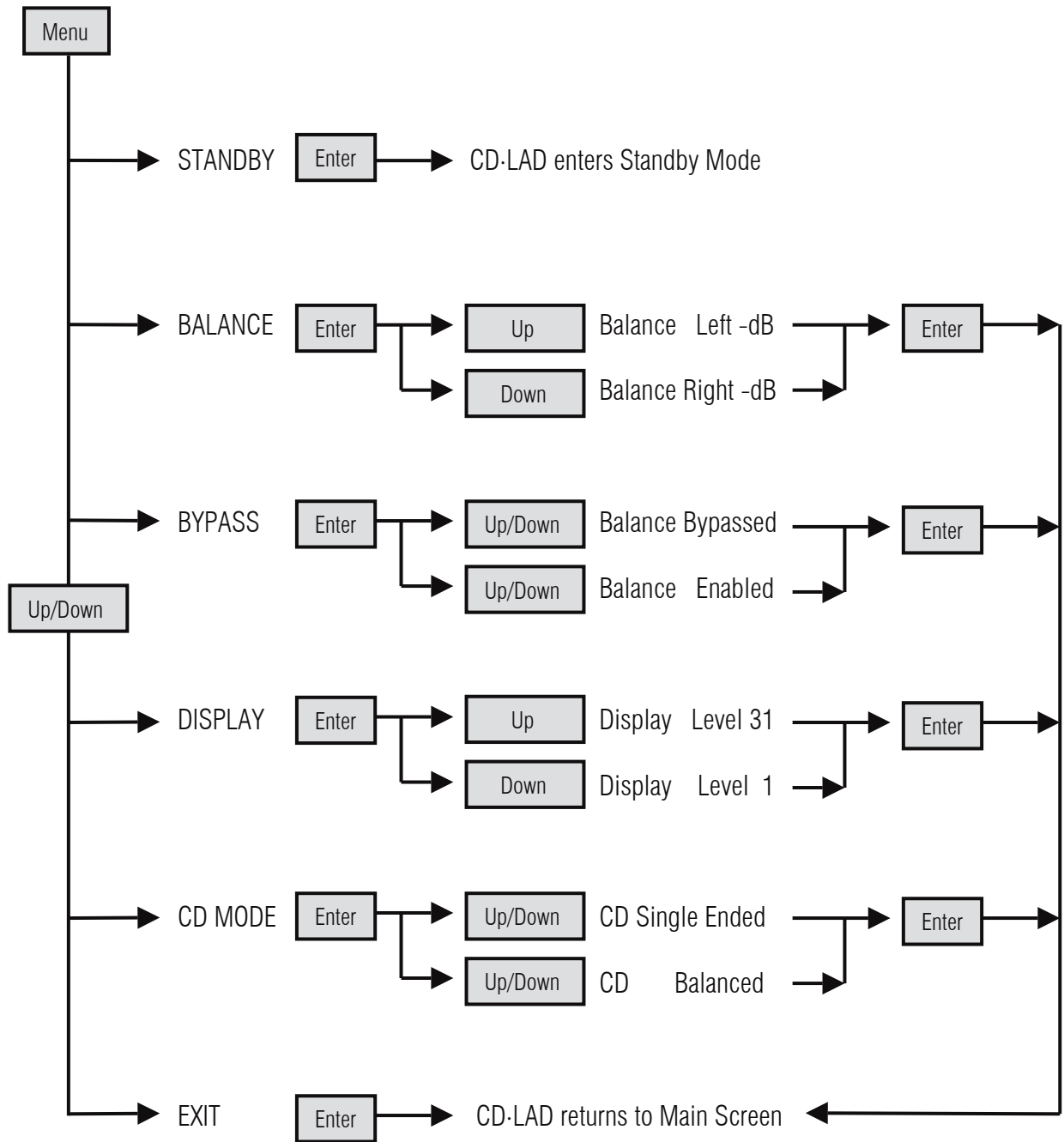
- Display Off
- Standby
- Balance
- Bypass
- Display
- CD Mode
- Exit


To enter any sub-menu listed above, press the Enter button. Adjust the settings of the sub-menu chosen using the Down and Up buttons and when finished press Enter to return to the main display. The diagram following is a visual reference of this system, and each sub-menu is described in detail below.

## ***MEMORY STORAGE OF SETTINGS***

The settings that you access below are all stored in the memory of the CD-LAD microcontroller. Next time you turn on the preamplifier, any settings you have changed (balance level, CD input type, display brightness etc.) will be enabled in that same configuration.

## SETTINGS MENU DIAGRAM



 Denotes a button press

Up or Down can be held to perform repetitive key presses  
 Press and hold Up and Down together within Balance sub-menu to return to centre position  
 Press any button to bring preamplifier out of Standby

### ***STANDBY SUB-MENU***

If Enter is pressed whilst in the standby menu, the preamplifier will mute, then fade the display slowly and turn off power to the vacuum fluorescent display. To bring the preamplifier out of standby, press any button on the front panel or the Standby button on the remote control.

### ***BALANCE SUB-MENU***

Press Enter and you can now use the Down and Up buttons to vary the signal between the right and left channels. Note that if you depress the Up button the signal to the left channel is reduced as denoted by the screen message. The opposite applies when using the Down button. Pressing and holding both Down and Up buttons will return the balance level to centre. Holding either Down or Up will enable fast scrolling through the balance levels. Use Enter to exit this sub-menu. You can also remove the balance control circuitry from the signal path by using the Bypass sub-menu explained below.

### ***BYPASS SUB-MENU***

To remove the balance control press Enter and use Down or Up to toggle the balance circuitry on or off. Press Enter once your selection has been made to exit the sub-menu.

### ***DISPLAY SUB-MENU***

Press Enter and the display sub-menu will allow you to vary the display brightness to suit the lighting in your room. Use Down or Up to vary the brightness from 1 to 31 (31 being the brightest). Once a suitable brightness level has been achieved, press Enter to return to the main display. Note that as with the balance control you may hold Up or Down to quickly scroll through the brightness levels. Should you choose a brightness level below 5 and turn off the CD-LAD, the preamplifier will power up again at 5 to ensure you can always restart your preamplifier and change settings should you accidentally set the brightness too low to read.

### ***CD MODE SUB-MENU***

If you wish to change CD input from single ended (RCA) to balanced (XLR) press Enter to access the CD mode sub-menu, then Down or Up to toggle between the two options. Press Enter once your selection has been made to exit the sub-menu.

### ***EXIT SUB-MENU***

When 'Exit' appears on the display, press Enter to return the preamplifier to the main screen from the settings menu.

# CD·LAD FEATURES

## ***REMOTE CONTROL***

Your Plinius CD·LAD preamplifier is supplied with an extruded aluminium 12-button remote control. Use of this remote is described in the 'Preamplifier Features – Remote' section. Two AAA batteries power the remote, and these are replaced by removing the four button head screws holding the base in position. Replace the two batteries, taking care to refit the new ones with correct polarity.

## ***FUSE PROTECTION***

Two internal fuses are fitted before the power regulation of the preamplifier. If either of these fuses need to be replaced, do so only with 200 milliamp normal blow fuses.

**IMPORTANT: DO NOT FIT A FUSE WITH A HIGHER RATING.**

Note that fuse failure may indicate a severe problem. Should the preamplifier continue to demonstrate internal fuse failure, contact your **PLINIUS** dealer.

## ***MAINS/LINE FUSE***

A Mains/Line fuse is fitted within the IEC socket on the rear of the preamplifier. A small drawer at the bottom of this socket may be removed (after the IEC plug is removed) by levering it out with a flat blade screwdriver. The fuse fitted should be rated at no greater than 5 amps normal blow.

**IMPORTANT: DO NOT FIT A FUSE WITH A HIGHER RATING.**

In the unusual event that this fuse should blow, you must first establish the cause of this failure (such as power surges, damaged mains cable, etc.) before replacing the fuse with one of the same rating and type. Should the preamplifier continue to demonstrate mains fuse failure, contact your **PLINIUS** dealer.

## ***CHANGING THE MAINS/LINE VOLTAGE CONFIGURATION***

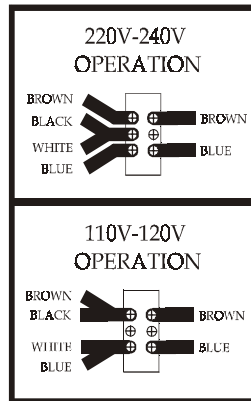
Should your mains supply voltage vary to that printed on the back of your Plinius CD·LAD, a suitably qualified service technician may alter it.

The two options are:

**110V - 120V** (USA/Japanese Markets)

**220V - 240V** (European/Pacific Rim Markets)

Disconnect the lead from the IEC socket on your Plinius CD-LAD and make sure the Mains switch is OFF. Carefully remove the lid by undoing the 4 posi-drive screws underside. Locate the mains terminal block with a clear perspex guard to the left rear of the preamplifier. Remove the guard by undoing the M3 nuts.



***VOLTAGE CONFIGURATION  
WIRING LABEL***

With reference to the voltage configuration wiring label, attached next to the connector block, remove the ring terminals on the transformer side of the connector block. Take care to ensure correct orientation of the wires. Now re-assemble your Plinius CD-LAD. If you experience any problems consult your **PLINIUS** Dealer.

**IMPORTANT:    DOUBLE CHECK THE WIRE ORIENTATION BEFORE  
REFITTING THE PREAMPLIFIER LID.**

# SPECIFICATIONS

- **FREQUENCY RESPONSE:** 20Hz to 20kHz  $\pm 0.2$ dB.
- **DISTORTION:** Typically  $< 0.05\%$  THD at rated input level.
- **HUM & NOISE:** -80dB at rated input level, A Weighted.
- **INPUT SENSITIVITY FOR RATED OUTPUT:** 125mV RMS unbalanced inputs. 62mV RMS balanced input.
- **INPUT IMPEDANCE:** 50k $\Omega$ .
- **RATED OUTPUT LEVEL:** 500mV RMS into 10k $\Omega$  or higher.
- **OUTPUT SOURCE IMPEDANCE:** Typically 1k $\Omega$ .
- **HEIGHT:** 90mm (3 1/2")
- **WIDTH:** 450mm (17 3/4")
- **DEPTH:** 380mm (15")
- **WEIGHT:** 5.5kg (12lbs)

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# CONTACT DETAILS

All operational, technical and descriptive material published here is subject to change at any time without notice. For further product information or queries, please contact us at the address below.

**PLINIUS** products are designed and manufactured by:

**Audible Technologies Ltd.  
P.O. Box 1836  
Palmerston North  
New Zealand**

**Phone:** 64 6 358 8583  
**Facsimile:** 64 6 359 3829  
**Email:** [info@pliniusaudio.com](mailto:info@pliniusaudio.com)  
**Internet:** [www.pliniusaudio.com](http://www.pliniusaudio.com)

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