Ovation High Fidelity User Manual

Model 1501 Stereo Preamplifier

Engineered for Art™

OVATION©
HIGH FIDELITY

Engineered for Art™

Model 1501 Stereo Preamplifier User Manual

June 2016 rev 2.0

Welcome to Ovation High Fidelity.

Thank you for purchasing this Ovation High Fidelity product. Every effort has been taken during the design, engineering and manufacture of this product to ensure the highest levels of craftsmanship and quality so that you will have many years of trouble free operation and musical enjoyment.

Proof of Purchase

Should the item be returned under warranty, proof of purchase will be required. Therefore, you must retain the original purchase invoice and receipt. We suggest you staple this into the rear inside cover of this user manual and retain it in a safe place after reading it

Product Usage Declaration

This product is designed for use in a domestic hi-fi system

Warranty: -

- This product is warranted free of manufacturing defects for a period of five years from date of purchase.
- This warranty excludes cases where the product is abused, or used for purposes other than which it was intended, or modified in anyway whatsoever
- The warranty is not transferable
- Remote controls are warranted for a period of one year from date of purchase. The warranty does not cover damage due to battery leakage
- The costs of sending the product back to the company under warranty, and its subsequent return, are for the account of the purchaser

Returns Policy/30 Day Money Back Guarantee

Should you not be 100% satisfied with your product for any reason, you may return it within 30 days from date of purchase for a full refund provided

- The product is returned packed in the original packaging
- The product is not damaged in anyway whatsoever either electrically or cosmetically
- The company reserves the right to deduct from the refund any costs required to make good any damage to products returned by customers.
- The costs of returning the product back to the company under the 30 day money back guarantee are for the account of the purchaser.

The Ovation High Fidelity Company reserves the right to modify and/or make technical and/or design changes to the design of its products without obligation to prior purchasers

Unpacking Your New Product

Do not damage the carton or the packaging.

Retain all packaging (outer box, internal polystyrene buffers, polythene anti-scratch bags, documentation) in a safe, dry place until after your 30 day Money Back Guarantee has expired.

Check that you have the following items in the shipping carton:-

- Model 1501 Preamplifier Unit
- Model 100 Remote control
- IEC mains lead with appropriate mains plug for your region*
- User manual (this document)
- Registration warranty card

Where to Locate Your New Model 1501 Preamplifier

Your model 1501 Preamplifier must be located in a well ventilated area away from sources of heat, dust and humidity and direct sunlight. You should position the product alongside your power amplifier. We do not recommend that you stack high fidelity components directly on top of one another as this could interfere with ventilation.

You may not place any Ovation High Fidelity product on a carpet as this will obstruct airflow and can lead to overheating.

Make sure that where the product is located, no liquids or any other foreign objects can enter the unit through the ventilation holes.

Keep this equipment out of the reach of children.

*The IEC Mains cable is provided as a convenience so that you can get your amplifier up and running immediately. Please see your dealer who can assist you in selecting suitable high-quality cables for long term use in your system

Warning!

Ovation High Fidelity products contain no user serviceable parts.

There are lethal mains voltages inside the unit.

DO NOT open the product under any circumstances - If faulty, refer it back to Ovation High Fidelity if still within the warranty period or to a qualified, authorized service engineer if not.

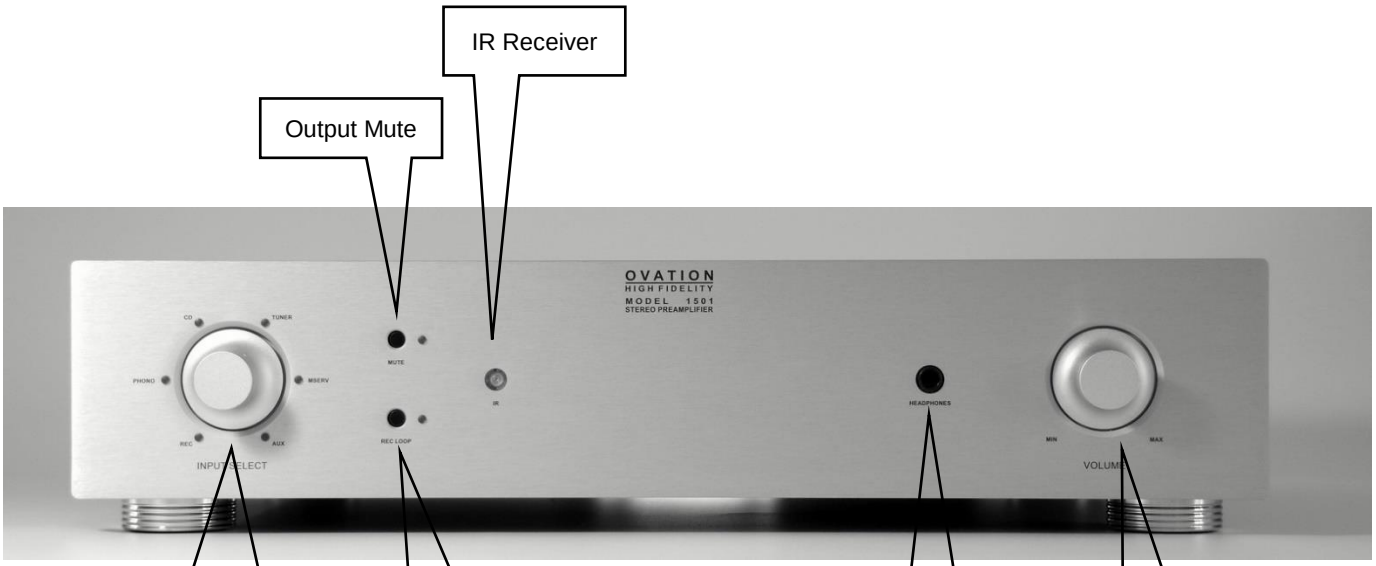
This product must be Earthed when in use. Use the supplied mains cable to ensure this.

If you are not going to be using your equipment for any length of time – e.g. going away on vacation - it is advisable to unplug it from the mains.

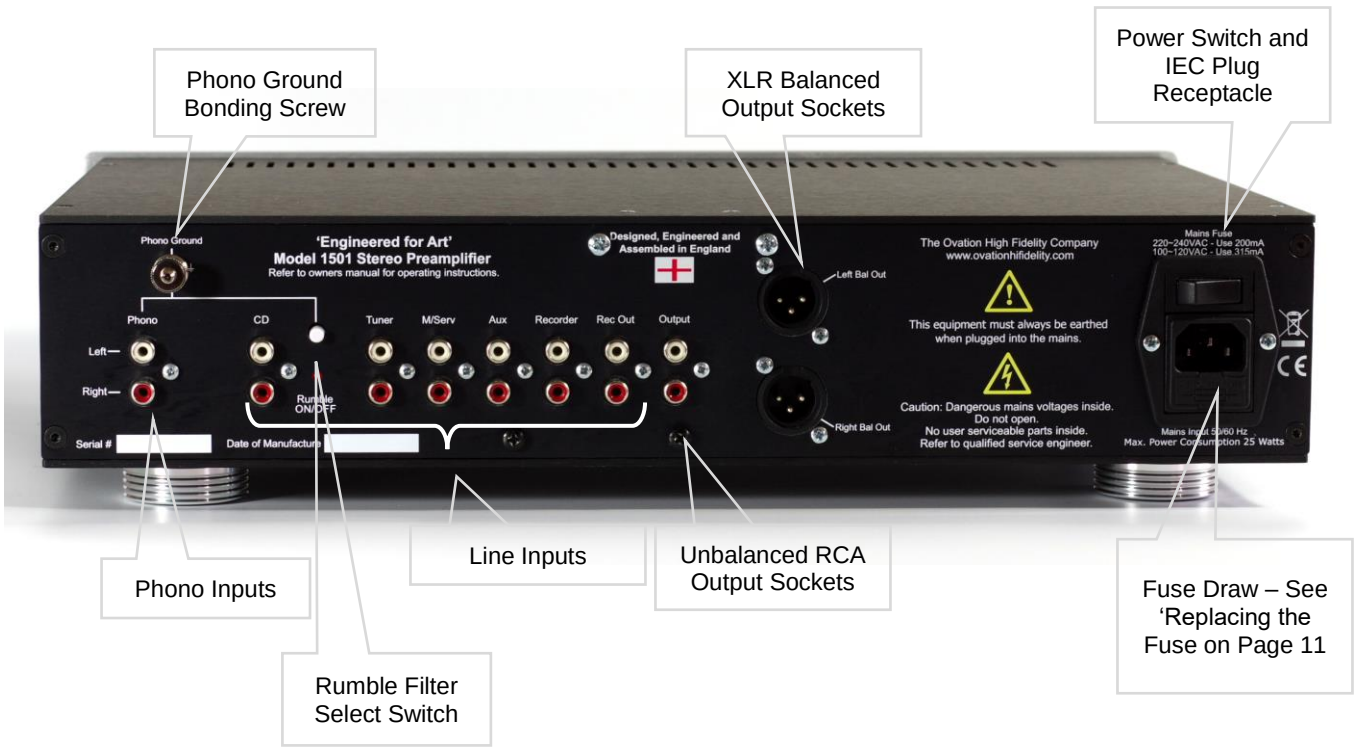
Cleaning your Ovation High Fidelity Product

1. Unplug the unit from the mains supply
2. Use a soft, slightly damp cloth or chamois leather wipe to clean the unit.
3. Use a soft, dry, lint free cloth to wipe the unit down after step 2 is completed
4. Never use any abrasive agent to clean the unit – e.g. Cif, Vim, CLR or Softscrub
5. Never use furniture polish or similar oil based agents to clean your unit
6. Never use any solvent based cleaner like petroleum (i.e. gasoline), turpentine, benzene, paraffin, methylated spirits or similar

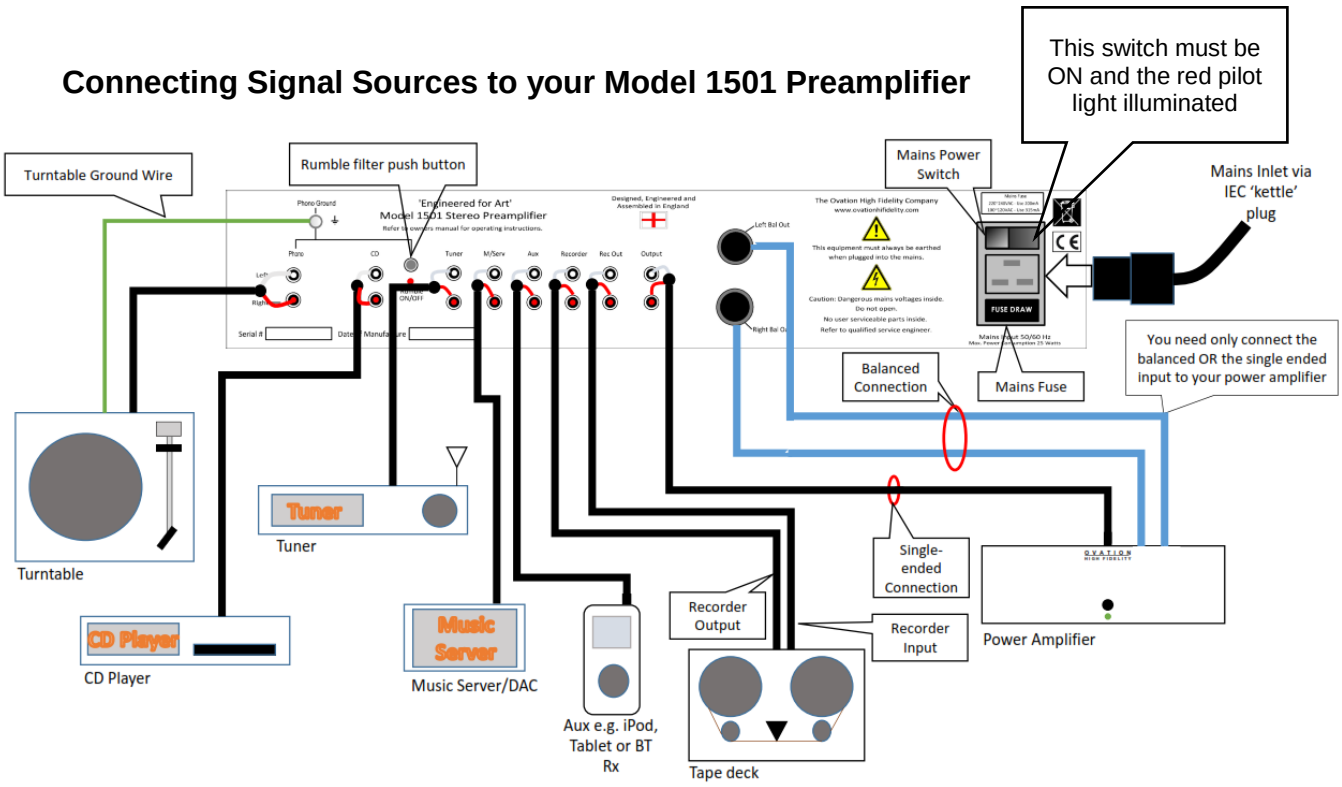
Front Panel Controls



Rear Panel



Connecting Signal Sources to your Model 1501 Preamplifier



Model 1501 Stereo Preamplifier Connection Diagram

The figure above shows how to connect the model 1501 Preamplifier to source equipment and your power amplifier

We recommend any of Ovation High Fidelity's Power Amplifiers for use with the Model 1501 – e.g. Model 1701 or 1721.

Switching ON and OFF

Firstly, make sure the MAINS POWER SWITCH on the *rear panel* (see rear panel view above for location) is in the ON position. When turning the mains power ON via the rear panel power switch, the red MUTE LED on the front panel will illuminate for 3 seconds. <u>You must leave this switch in the ON position permanently.</u>

Gently depress and then release the select dial on the left hand side of the front panel. The red MUTE LED will illuminate along with the green input selection LED made during the last power-up cycle. The default input is CD which is selected when the unit is powered up after the mains has first been applied. The MUTE LED will extinguish a few seconds later, after which the output is active.

To turn your Model 1501 OFF, depress and then release the SELECT dial again. The red MUTE LED will illuminate for a few seconds and then extinguish along with the selected input LED, after which the output is muted and the preamplifier in standby.

Selecting a Source

To select a source, simply rotate the SELECT dial either clockwise or anti-clockwise. The green LED associated with the selected source will illuminate.

Adjusting the Volume

The VOLUME control is located on the RHS of the front panel. Rotate it clockwise to increase the volume and anti-clockwise to decrease the volume. When you power up for the first time, set the volume to the 10 o'clock position so the volume is initially low.

Muting the output

To mute both pairs of outputs (balanced and unbalanced) and the headphones, depress then release the mute pushbutton. Depress and release the button again to restore signal to the outputs. When the preamplifier is muted, the red MUTE LED on the front panel will illuminate.

Using the Record Loop (also known as the 'Tape Monitor') Function

Depress the REC LOOP button to activate the record loop function. This works by sending a buffered version of the selected input signal out to your recording device (e.g. a legacy tape deck or DAT recorder) before the preamplifier volume control. After the signal has been recorded, a replica is fed back to preamplifier via the 'Record IN' connectors on the rear panel and through to the volume control so that you can confirm that the recording is taking place and is distortion free.

Note carefully the following points with respect to REC LOOP operation: -

1. If you have selected the 'Recorder' input signal source, the 'REC LOOP' function is DISABLED by the preamplifier's microprocessor and will not engage
2. You can only select the REC LOOP function if either one of the Phono, CD, Tuner, Music Server or Aux signal sources are selected
3. For the function to work correctly, you must connect both the REC OUT to your recorder input and recorder output to the REC IN on the preamplifier so that the audio signal loop is completed.

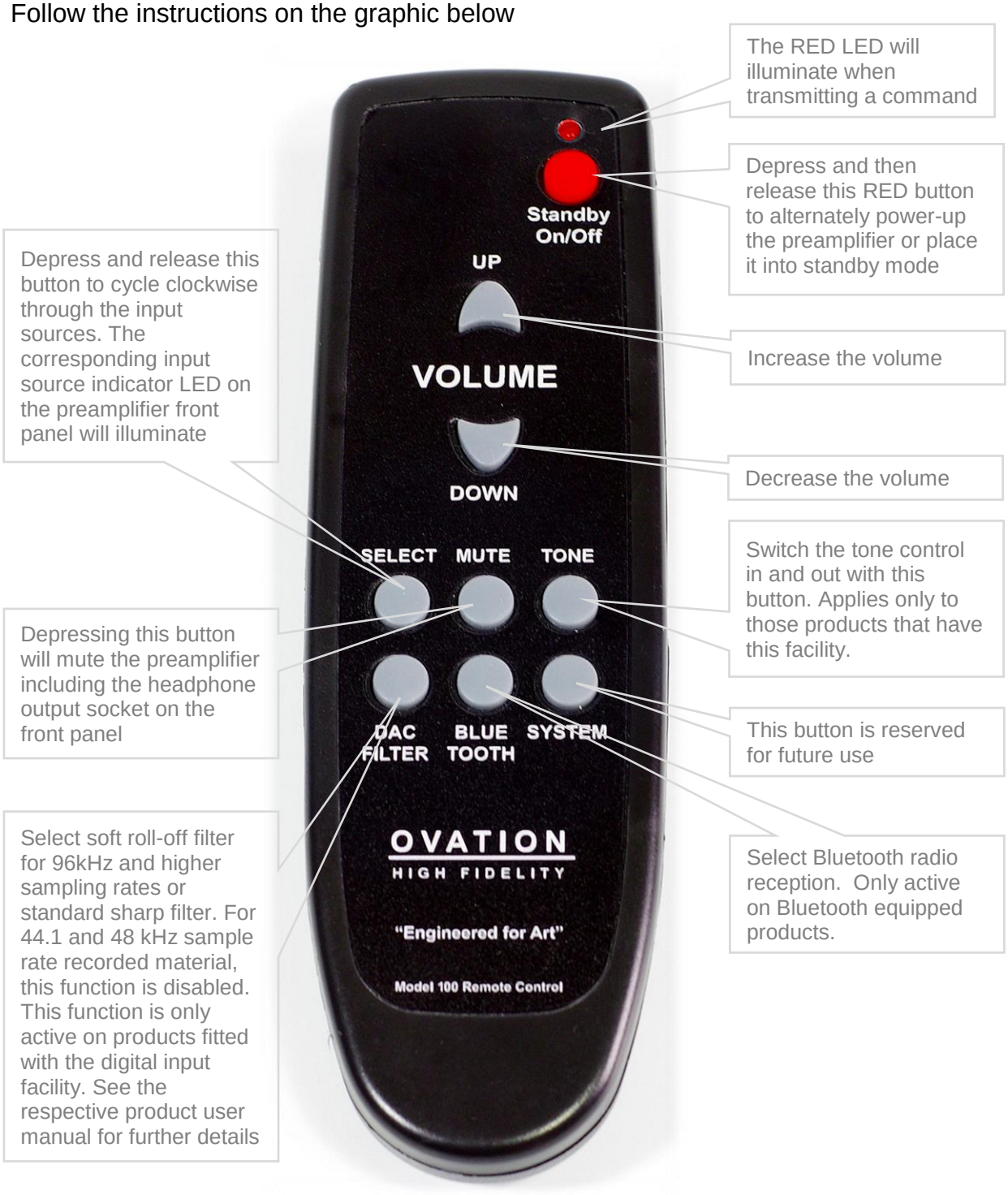
Using the Phono Rumble Filter

When selected, the phono rumble filter sharply reduces the output below 20 Hz, thereby attenuating disc warp, turntable motor noise and other extraneous low frequency sounds that are not part of the program material. To engage the rumble filter, depress the white button on the rear left hand side of the preamplifier (see Figure 1 above for exact location). When the rumble filter is active, the red LED located below the pushbutton switch will be illuminated. We recommend that if you need to use it, you should leave it permanently ON – i.e. LED illuminated. The rumble filter will also prevent large unwanted low frequency cone excursions on your loudspeaker bass units that arise from record warp.

Note that the rumble filter only works on the phono input and no others.

Using the Model 100 Remote Control

Follow the instructions on the graphic below



Changing the batteries on the Model 100 Remote Control

The batteries in the Model 100 Remote control will typically last from between 6 and 12 months, depending upon usage. When your preamplifier no longer responds to the remote control, or the functions operate erratically, the batteries must be replaced.

1. Slide the battery compartment cover off on the underside of the remote control
2. Remove the old batteries
3. Insert 2 off new AAA batteries, carefully noting the polarity orientation
4. Replace the battery compartment cover after which the remote should function correctly again.

Important Note: if you are not going to be using your system for some weeks or months, we recommend you *remove* the batteries from your remote to avoid battery leakage, which will damage the internal connections and is not covered by the warranty. Store the batteries in a dry, cool location. Further, we recommend that you use good quality non-leak batteries like Duracell, Energizer or Rayovac.

Important Notice:

Batteries contain harmful chemicals and can damage the environment. Always dispose of batteries safely and in compliance with your local environmental regulations.

Replacing the Fuses on your Model 1501 Preamplifier

In the unlikely event that the mains fuse on your unit should blow, you should check the following carefully before replacing it:-

1. You are using the correct mains voltage. The mains voltage for your product is set at the factory at the time of shipping and shown on the rear panel bottom left hand side of the unit.

2. The power switch located on the rear panel just above the IEC plug receptacle is turned ON. In the ON position, the rocker switch will illuminate RED

3. The mains power plug at the wall socket is turned on

4. If your unit does still does not operate, you need to replace the fuse as detailed below

Important! Always unplug the unit from the mains before attempting to replace the fuse!

Use a flat bladed screw driver to lever open the fuse drawer

Replace the Model 1501 fuse with the ratings as indicated below

Mains Voltage	Fuse Rating	Fuse Type
110-130 VAC	315mA T	'T'
220 – 250 VAC	200mA T	'T'

Firmly push the drawer closed, after which you can reconnect the unit to the mains and then apply power.

Do not use fuses marked FF, F or M as these are fast/medium acting and will likely blow when you power the preamplifier up. Only use 'T' fuses.

If the fuse immediately blows again, refer your unit to a qualified repair technician, or if still under warranty, contact the factory via the 'Contact' page at www.ovationhifidelity.com

Never use fuses rated higher than shown in the table above on your Model 1501. Equipment fuses are designed and rated to prevent fire hazard and are a legal requirement in all countries.

Trouble Shooting – Model 1501 Preamplifier

Problem	Likely Cause	Action
Unit will not power up when depressing SELECT dial	Power switch on rear IEC mains receptacle is not ON	See Page 8 – Is the RED pilot light ON?
	Rear Power Switch is on, but unit still does not power up	Make sure the wall socket mains switch is ON
	Rear Power Switch is on, but unit still does not power up	If the wall socket is ON and power is available and the rear power switch is on, check the model 1501 mains fuse – see Page 13
There is no sound coming from the system	The mute function has been selected	Depress the MUTE pushbutton on the front panel. The associated MUTE LED should extinguish
	Incorrect source is selected	Make sure the input SELECT dial is turned to select the source you have plugged into the rear panel of the unit
	Tape Loop selected accidently (red LED on front panel is illuminated	Depress tape loop button to turn this function OFF – the associated LED on the front panel will extinguish
	Interconnect cable between the Model 1501 and the power amplifier is not present	Connect an output cable to your amplifier. Make sure if your amplifier takes RCA cables or XLR cables, that you have selected the correct input on your power amplifier
Hum and a 'shhhh' sound comes out of the speakers when Phono is selected	No source is connected to the Phono input	Without a turntable connected to the Phono input on the rear panel, you will get hum and hiss from the loudspeakers when you turn the volume up. Once you connect a turntable, this noise will disappear
	A turntable is connected, but there is still hum coming from the speakers	Make sure that the turntable earth bond wire is firmly attached to the Phono Ground Bonding Screw located in the top left hand corner on the rear panel. See Page 8 for details
The sound coming from the loudspeakers unit and through the headphones has no bass and is not a proper stereo sound	The input and/or output interconnects on the unit's rear panel are not pushed completely into their associated receptacles	Make sure all interconnect plugs are fully seated into their respective sockets. This problem could also arise if the ground connection in the cable was broken when using unbalanced interconnects, or if either the HOT or COLD connection in the XLR cable is faulty
The remote control is not working	The remote control batteries are flat	Replace the remote control batteries – See Page 12
The remote control range is low and/or control of the Model 1501 using the Remote is erratic	The remote control batteries are flat	Replace the remote control batteries – See Page 12
The remote control is not working despite replacing the batteries	Hang-up of the microprocessor controller within the Model 1501 - highly unlikely but possible	Turn the power switch on the rear of the unit OFF. Wait 20 seconds. Turn the switch ON and then retry the remote control

If your unit is still not working correctly, kindly contact your dealer or Ovation High Fidelity via the 'Contact' page at www.ovationhifidelity.com

Glossary – Some General Terms

AC	Alternating Current – the type of supply used in normal house wiring and to power consumer appliances like TV's, washing machines and high fidelity systems
A-D or A/D	Analog to Digital – an electronic technique whereby an analog signal is sampled at short, regular intervals and the sampled value converted into a representative numeric value that is stored in computer memory, CD or some other mass storage media
Analog Signal	A voltage or current signal that varies continuously with time. Examples are the pickup signal from a turntable, or the output signal from a microphone. All natural world signals are analog.
Balanced Audio Signals	A method whereby audio is transferred between equipment using two connections without reference to ground, making it highly immune to ground loop induced hum and extraneous noise pickup. Uses XLR connectors. See Unbalanced or single-ended audio signals
Bipolar Transistor	A three-terminal semiconductor amplifying device
CMT	Current Mode Topology – a type of audio amplifier wherein the peak current into the main amplifier stage is determined directly by the output voltage and the gain setting resistor. Also known as CFA (Current Feedback Amplifier)
D-A or D/A	Digital to Analog – the technique of converting digitally stored samples into a continuous analog signal
Damping factor	A measure of an amplifiers load impedance divided by its output impedance. The higher the figure the better. In a modern amplifier, any figure above 50 should be considered adequate and above 100 excellent
DC	Direct Current. Examples would be the type of current supplied by a battery
Decibel or dB	A logarithmic measure of an analog signal with respect to a reference, or expressed as the difference between two signals. 20 dB = 10x and 40 dB = 100x while 100 dB = 100 000x. By way of an example, if the S/N of a preamplifier is -100 dBV, it means that the noise is 100 000 times lower than 1V – i.e. 10 millionths of a Volt. The 'V' in dBV refers to the reference which is 1V and is an industry standard of measure
Digital Audio Signal	An audio analog signal is sampled at discrete time intervals and the resultant samples converted to a numerically representative value. An example is a CD, where the original analog signal (e.g. the voice of a singer) is sampled 41000 times a second and each sample converted to a 16 bit digital representation using an A-D which is then written to the CD
Digital signal	A binary coded numerical value represented by 0's and 1's where the '0' value corresponds to 0V and the '1' corresponds to 3.3V, 5V or some other non-zero voltage. Digital signals are either parallel or serial format. Examples of digital signals would be the co-ax output from a CD drive (serial digital signal), or the data on an Ethernet cable used in communications (also a serial digital signal)
Distortion and Noise	The presence in any electrical signal of unintended harmonics and/or noise. Reducing distortion and noise are key goals in any equipment that reproduces audio signals
EMI or Electro-Magnetic Interference	Noise and/or extraneous signal introduced into a system through magnetic or capacitive coupling mechanisms. Filtering, bandwidth limiting and careful design and equipment layout can reduce the effects orders of magnitude below human hearing threshold
EQ	Equalization
Frequency Response or Bandwidth	The extent of frequencies an amplifier can reproduce to within a specified range. Human hearing covers 20Hz to 20 kHz. Audio amplifiers should cover at least 2 Hz to 100 kHz (-3 dB) to ensure a flat response within the human hearing range of 20 Hz to 20 kHz
Input Sensitivity	The level of input signal required to produce a given output from a preamplifier or a power amplifier.
IR Remote	Infra-red Remote control
JFET	Junction Field Effect Transistor – a three terminal semiconductor amplifying device that somewhat emulates vacuum tube triodes in its performance characteristics.
Ohm	Unit of electrical resistance. Most loudspeakers are rated at 8 Ohms
Output Power	Measured in Watts, the amount of electrical power that can be delivered into a loudspeaker load by an amplifier. Always quoted into a known resistive load – usually 4 or 8 Ohms
Phono socket	The small round sockets – usually grouped in Left (WHITE) and Right (RED) pairs on the rear side of audio equipment. Also referred to as 'RCA Phono' sockets
RC5 IR	The protocol by which commands from the remote are encoded and transmitted via infra-red to the receiving equipment which then executes them. Invented by Philips in the 1970's and now one amongst 4 or 5 industry standards
RIAA	Recording Industry Association of America – The association that standardized the LP/vinyl playback equalization curve in the early 1960's that is still the standard for LP/vinyl today
Signal to noise ratio (SNR)	A measure of the amount of noise in a system against the nominal output signal of that system. In modern equipment, any figure lower than -90 dBV should be considered very good, and lower than -100 dBV excellent
Slew Rate or S/R	The fastest rate of output voltage change that an amplifier can sustain. For consumer audio amplifiers, any figure above 100 Volts per microsecond (100 V/us) should be considered excellent
Small signal rise time	A measure of the speed (i.e. rate of change) of an amplifier or preamplifier when dealing with low level signals in the 1-2 Volt range. Small signal rise time and slew rate (S/R) are *not* equivalent
Unbalanced or single-ended audio signals	With this type of interconnection, the audio signal is transferred between equipment using a ground connection and a signal connection. It is more common than balanced audio signals due to its lower implementation cost, but much more susceptible to noise pick-up
VMT	Voltage Mode Topology – a type of amplifier wherein the peak current into the main gain stage is limited to that of the input stage 'Long Tail Pair' (LTP) current source. Also known as VFA (Voltage Feedback Amplifier)
XLR	The standard interconnect format for balanced audio signals

Specifications

Model 1501 Stereo Line Preamplifier

General Description
Microprocessor controlled ultra-low distortion, low noise, solid state stereo preamplifier featuring 6 selectable inputs, including an RIAA phono stage and integrated headphone amplifier. Balanced and single ended outputs. Microprocessor controlled relays for input selection, power up/down and mute control. Buffered record loop facility. All functions, except Record Loop (aka Tape Monitor) are also available using the supplied Model 100 remote control. All signal switching accomplished using hermetically sealed precision small signal relays.

Inputs	6 off for CD, Tuner, Music Server, Aux, Recorder, Phono; Phono equipped with switchable rumble filter located on rear panel LHS.
Input sensitivity	Phono: 5mV at 1kHz for 1 V output (measured at unbalanced output of preamplifier) or 2 V output (measured at the balanced outputs of the preamplifier); Aux and Recorder Inputs 350 mV; CD, Tuner and Music Server 2V
Input Impedance	Phono Inputs 47k in parallel with 100pF; all other inputs 10k Ohms
Record Loop	Selected via front panel push button. Buffered with Zout = 100 Ω (Ohms)
Frequency Response	Line Level inputs: 20Hz to 20 kHz +0dB -0.1dB; 2Hz to 200 kHz +0dB -3dB Phono: RIAA conformance 20 Hz to 20 kHz +-0.15dB typical Phono Rumble Filter: -0.2dB at 20 Hz, -18 dB at 12 Hz, -36 dB at 6 Hz
Distortion	Typically 0.0003% at 2 V out into 10 kΩ; line inputs at 10 V out into 10 k Ω: Better than 10ppm (0.001%) Phono –better than 0.01%; typically, 0.005% at 5mV input
Signal to Noise Ratio 'A Weighted'	Line: ≥110 dB ref 2V Output; ≥ 104 dB ref 1V output; ≥ 120 dB at 9 VRMS out Phono: ~79 dB ref 5 mV input at 1 kHz
Output Drive	1k Ω or higher on single or balanced output; Output load capacitance in balanced mode should not exceed 300 pF; Tape Loop output: 350mV 10 k Ω for rated input sensitivities on all inputs.
	Output Impedance 50 Ω Single ended; < 1 Ω in Balanced mode
Headphone Output	6 VRMS into 32 Ω; distortion < 0.002% 20Hz to 20kHz; peak output current ~350mA
Operating voltages	100-130 VAC or 200 to 260 VAC factory set at time of order
Power consumption	25 VA Max; ~5W in standby mode
Weight	10 Kgs
Operating Temperature	-10 deg C to +45 deg C non-condensing

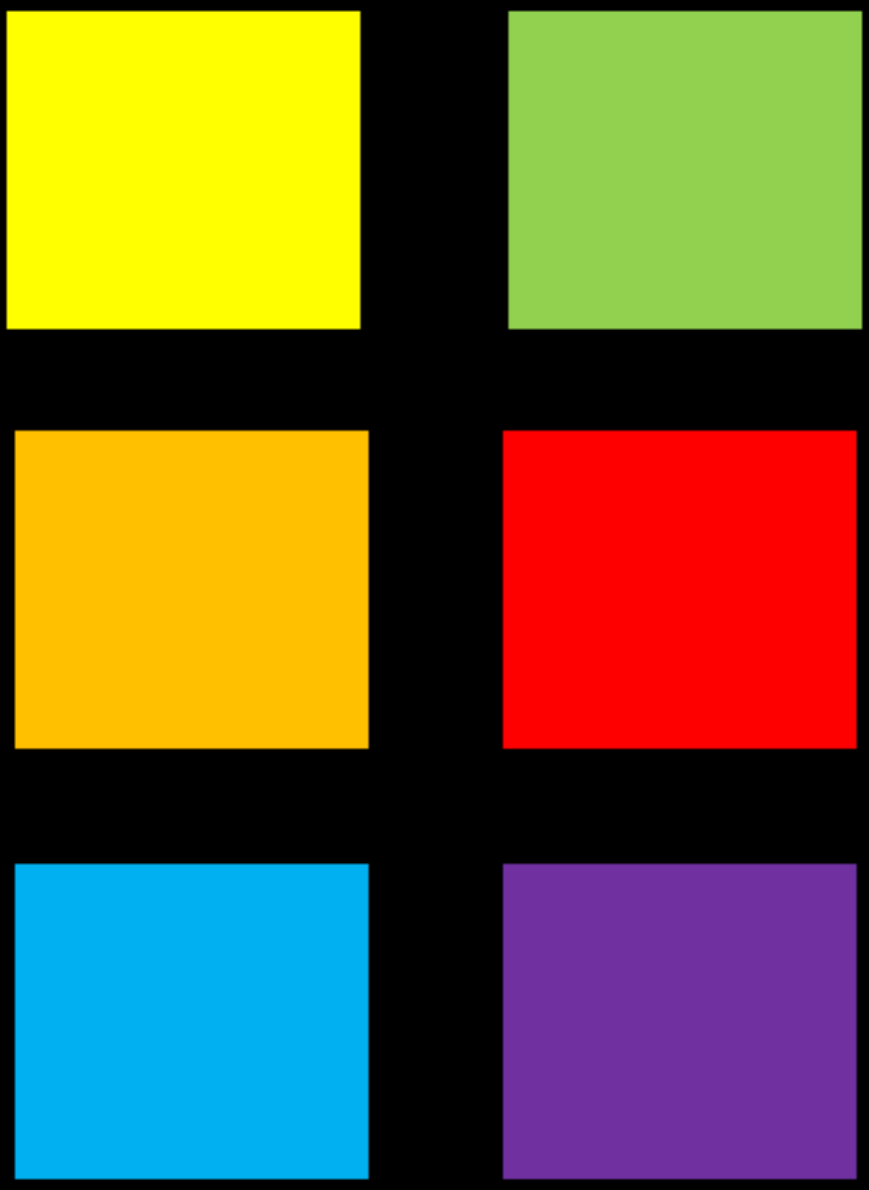
The Ovation High Fidelity Company Limited
Norfolk, England
www.ovationhifidelity.com

Notes

Owners Information

Date of Purchase	
Date of Warranty Registration	
Dealer	
Serial Number	

We recommend you staple your purchase invoice to the inside back page of this manual for safekeeping as proof of purchase.



The Ovation High Fidelity Company
Norfolk, England

www.ovationhifidelity.com

Office: +44(0) 1362 853 635
Mobile: +44(0) 7496230 414
Email: contact@ovationhifidelity.com