ACOUSTIC PRECISION

puresound

L10

STEREO Line Preamplifier

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a high-end design at a low-end price

DESCRIPTION

Following the positive response to our flagship L300 pre-amplifier, pure sound has developed the L10, a new, more affordable design which incorporates much of the thinking that makes the L300 so highly regarded.

The L10 has 4 inputs, a separate passive Record In Record Out loop and two pairs of single ended outputs. The circuit uses output transformers and a sophisticated full valve rectified, twin choke smoothed power supply. It also offers **remote control of the volume** via a separate handset.

The L10 preserves the verve, color and energy in recordings that almost all pre-amplifiers and passive volume controls otherwise lose. It achieves this without sacrificing transparency or introducing euphonic coloration to the sound.

When partnered with appropriate ancillary equipment the L10 is capable of delivering a sumptuous and enriching listening experience.

TECHNICAL FEATURES

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Volume control

A Line Stage pre-amplifier needs to offer the facility to select between different sources, to provide some means of attenuating the chosen source and then deliver it in an uncorrupted form to the power amplifier.

In recent times, with the prevalence of digital source components, many audio enthusiasts have adopted the use of passive volume controls incorporating resistive potential dividers and even transformer based attenuators. These are volume controls where attenuation is achieved through the use of tapped transformer windings. On the face of it either of these might appear to offer the purest approach. However, it's not so simple. Resistive attenuators are generally of quite a high impedance so as not to load the source driving them but in turn confer little drive capability themselves. In some circumstances they can sound quite transparent but it's a commonly experienced subjective impression, that such attenuators leave the music with a lack of purpose and grip. Long connecting cables may also blunt the high frequency response, a situation which may be worsened by using a following amplifier with low input impedance.

Transformer volume controls seem to address the issue of drive capability to some extent, but they have their own problems. A wide bandwidth transformer can be made such that, when using both windings in full, i.e. with no attenuation, it transfers a pretty good facsimile of the source signal. However, as attenuation is applied and the transformer has to transform more and more, difficulties start to arise. By the time significant attenuation is applied, the performance of the transformer no longer looks quite as impressive with differing patterns of resonance being visible at each step. The reproduction of timbre suffers and the sound quality realized alters slightly with each change in level. Auto-formers which attenuate by tapping off a single sided winding have actually proved to be the most transparent passive controls we have tested and yet even they seem to lack a certain something.

The other issue with volume controls based on a multi position switch is a sense that the right level for listening to a piece of music can never quite be reached. If the steps of the attenuator are made close enough to suit a source with a given output or a following amplifier with a particular sensitivity, it will be wrong with another source or another amplifier. A conventional potentiometer gives a much finer range of adjustment.

In the L10, source selection is via a high quality switch located near to the input sockets. The chosen source is routed to a high quality motorized, film potentiometer and from there on to the audio circuit.
This consists of a single ended triode stage loaded by a custom wound wideband output transformer which steps down the amplified signal allowing it to be coupled to the power amplifier at a manageable level and as a low impedance source.

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Output stage

The output stage of the L10 is impervious to long interconnecting cables or lower impedance power amplifier input stages. A low gain, low output impedance line stage is in itself nothing new. Many transistor pre-amplifiers are similarly specified. However, they usually achieve it by means of excessive negative feedback which is highly detrimental to the subjective reproduction of music.

Power Supply

The L10 also incorporates an extremely sophisticated power supply to maintain constant operating conditions for the audio circuitry. It includes a valve rectifier, and a twin choke filtered LCLC stage which provides a stiff, voltage rail allowing the audio circuit to operate in a calm and orderly way regardless of the demands the music makes on the amplifying stage. Filament supplies are fully regulated to further reduce the potential for noise.

SPECIFICATIONS

Inputs	4 pairs (Line Level) 1 Pair (Record In)
Input impedance	100Kohms
Outputs	2 pairs Single Ended, 1 pair (Record Out)
Frequency Response	7Hz - 50KHz (-3dB)
Signal/Noise	>90 dB
Input Sensitivity	640 mV for 0dB output
Power Consumption	25W
Dimensions	420 W x 380 D x 180 H mm
Valve Complement	6П6 (ECC99) x 1, 6U4П x 1
Weight	17 Kg