

XONO PHONO PREAMPLIFIER



The Xono is a high performance phono preamplifier for use with moving magnet and moving coil cartridges. It features extremely low noise and distortion, very high output swing, variable cartridge loading, variable gain, and balanced output.

The main gain stage uses a combination of active and passive equalization to achieve the RIAA characteristic. The active equalization works in the mid-band of the audio range and the passive equalization determines the characteristic and the highest and lowest frequencies. The stage has a fixed gain value of 40 dB at 1 KHz.

Cartridge loading of the Xono is very flexible. Moving Magnet cartridges can be loaded with capacitance from 0 to 650 pF in increments of about 100 pF. There is provision for two load positions for any additional value that the user may choose to insert. Moving Coil cartridge loading ranges from 5 to 1000 ohms to 47 Kohms using eight switches with binary weighting and providing 256 different values.

The Xono has a very accurate RIAA equalization characteristic, varying plus or minus 1/10 of a decibel from 10 to 20 KHz. This accuracy does not vary with gain or loading.

The preamplifier has extremely low noise. The Moving Magnet noise floor at more than -100 dB below a 10 millivolt input, which gives it an unweighted total noise of -90 dB. The Moving Coil noise floor is better than -90 dB

referenced to 1 millivolt input, giving a -81 dB unweighted audio band noise figure.

The Xono is adjustable to very high gain, 76 dB @ 1 KHz, which makes it capable of delivering .5 V line level output for cartridges with 80 microvolts output. This appears to be the best figure in the audio industry.

The power supply for the Xono is contained in a separate chassis and consists of an oversized, shielded toroidal power transformer delivering an unregulated 85 volts peak to peak DC through separate rectifiers and capacitors for each channel which is then passively RC filtered before being sent to the main Xono chassis. A custom manufactured shielded cable carries the DC power from the supply to the main Xono chassis. The main chassis of the Xono has separate stages of active regulation for each channel followed by passive filtering and then feeding the constant current sources which bias the various gain stages. There is a total of 120,000 mfd of filter capacitance and five stages of filtering and regulation.

The Xono is based on the design pioneered in the Aleph Ono. The basic Ono design has not changed but been extended and refined. The separate power supply combined with the additional filtering and dual mono power supply design contribute to the lower noise floor and sonic improvements. The main circuit board layout has been completely revised to reduce noise, shorten the signal path and reduce the length of connecting wires. Sonically critical parts have been optimized and upgraded through continued extensive listening tests.

The Xono like the Ono design was based on listening and not measurements. Considering this, it is perhaps remarkable that the final product displays such spectacular objective qualities. However, we view the specifications as a secondary source of pride in this product.