

ISONOE[®]

www.isonoe.com

PHONOGRAPHIC PREAMPLIFIER



Isonoe were approached by a maker of high-end phono cartridges, for the purpose of designing a preamp in order to demonstrate their products to clients. Custom-machined enclosures were fabricated from 6mm alloy, offering exemplary shielding and build quality.

The design criteria were as follows:

- **RIAA conformity must be better than 0.2dB at any frequency.** Precision-tolerance 0.1% resistors and 1% polypropylene foil capacitors ensured this. Many different capacitor types were auditioned, from polypropylene film to polystyrene foil. The OEM's listening panel settled on a particular polypropylene film / foil hybrid cap (the same we use as a replacement for UREi 1620 and Bozak CMA 10-2-D-series preamplifiers).
- **All circuitry must be Single-Ended, discrete transistor throughout, with no Push / Pull stages.** Low-noise epitaxial transistors, originally developed for moving-coil preamplifier stages, were used.
- **Moving Coil stage option.** Various active and passive (transformer) options were explored. Eventually a transformer with an amorphous core and Gardas pure silver wire was settled upon. Measured distortion from this particular transformer almost rivals the best active stages, with the added benefit of adding virtually no noise. The result gave an overall signal-to-

noise ratio of above 94dB – a figure unachievable with any active step up stage – many dB below the noise floor of any vinyl record

