



**Combining our unique CD design technology with blue print design improvements to the digital section and an innovative analogue section we bring you the 7th generation Rega CD player, the ISIS.**

### Technology behind the solid state Isis

One important design goal was to take the current output, with no internal amplification within the converter, and convert this to an analogue voltage, using discrete class A operational amplifiers and filters. This circuit can then be optimised for sonic exactness, the use of standard operational integrated circuits locks you into the sound of those particular integrated circuits, thus narrowing the scope for improvement. Interestingly, the class A current to voltage conversion amplifier evolved out of the development of the first stage of the **Rega IOS MC amplifier**. It shares identical demands of low noise, high drive capability and gain bandwidth required of the voltage to current amplifier.

### ISIS Analogue section

The analogue section employs two **Burr Brown PCM1794** digital to analogue converters, running in a parallel dual mono mode, driving a high performance discrete class A current to voltage amplifier. This combination generates an exceptionally wide dynamic range, low distortion, and linear signal. This drives an enhanced version of the discrete class A output amplifier developed for our Saturn CD player. The circuit is fully balanced from the digital to analogue converters to the balanced analogue XLR outputs. The analogue stage has its own dedicated 50VA mains transformer (twice the capacity of the Saturn), which ensures galvanic isolation (where two or more electric circuits must communicate) between the digital and analogue sections of the player. You will find 10 separate power supply regulators are used in the analogue circuit and each individual amplifier stage has its own dedicated low noise voltage reference.

### ISIS Digital section

The digital section is a blue print version of the Saturn circuit, with major improvements to the mechanism, optical amplifier, DSP core, PLL, master clock & motor power supplies. Another 10 separate power supply regulators are used in the digital circuit. The motor, user interface processor & display also have their own power supply. The digital stage also has its own 50VA transformer again ensuring galvanic isolation. The mechanism is graded and matched to the servo circuits, to ensure the servo and optical amplifiers are working at their optimum point, thus improving error correction and playability. The headroom of the optical amplifier has also been improved by 10% by increasing the voltage in the power supply.

### USB Input

The USB input uses an isolated double-clocked USB interface, which permits the digital to analogue stage to be used with a computer USB interface and it's own regulated power supply. The USB benefits once again from galvanic isolation from the main circuitry of the ISIS player which eliminates the flow of earth currents between the CD and host computer, and keeps the THD+Noise levels to that obtained using the CD player section of the ISIS.

### Matched laser Archiving

During manufacture we will match 3 identical laser units. One will be fitted in the player the other two will have the product serial number marked on them and will be archived here at the Rega factory offering guaranteed product longevity and peace of mind for every customer.

### Interconnects, mains lead and remote control & packing.

Each Isis will be supplied with a REGA Couple Interconnect, a high spec mains lead and aluminium cased CD remote. The product will be presented in a custom wooden crate offering maximum protection and carry handles for ease of transportation.

### Technical Specifications

**Laser** Semiconductor laser  
**Wavelength** 780nm  
**Digital sampling frequency** 44.1kHz  
**Power Consumption** 23w  
**Phono Unbalanced** 2.2V source impedance 560Ω  
**XLR Balanced** 4.4V source impedances 560Ω  
**Co-Axial SPDIF** 0.5V source impedance 75Ω  
**Toslink** Toslink compatible output  
**USB** 16bit 44.1/48kHz  
**THD+Noise** < 0.0013%  
**Frequency Response** 17Hz - 20kHz +/- 0.1dB  
**Dimensions cm H x W x D** 43.4 x 35 x 11.2  
**Weight** 18kg

