

Chapter Disc player (Due Jan 2005)

Chapter is currently hard at work designing what we would consider the last word in Red Book CD players.

At the heart of the player lies a discrete fully balanced Emitter Coupled Logic (ECL) digital to analogue converter.

It is well known that discrete designs should be able to outperform conventional 'on chip' and our implementation is no exception. In fact it takes performance of discrete designs as far as we have been able to measure with the latest test equipment from Rohde and Schwartz and Audio Precision.

The ECL DAC as used in the Chapter disc player is capable of dynamic ranges of at least 125dB, with 0.00005% THD at 0dB 1KHz.

A good indication of the performance of any piece of audio equipment is to stimulate the device with two high level tones that are close in frequency. A common test is to use 19Khz and 20KHz in an aim to measure the inter-modulation level (difference frequency). In the case of the ECL DAC, it has not been possible to measure the 1KHz component with any of the latest test equipment.

As the performance of the DAC section is beyond reproach, attention has been turned to the Clock generator. A discrete ECL ultra low phase noise (jitter) clock has been designed and works in harmony with the DAC section.

Peak to Peak jitter can be measured at under 10ps when operating in CD mode.

To take advantage of the astonishing DAC, multiple digital inputs have been incorporated into the player. These inputs are selectable and will receive inputs from 32KHz to 192 KHz. We have taken extreme and expensive measures to ensure that the digital receiver does not compromise the external digital signals that enter the player so that maximum musical enjoyment can be obtained from each and every source that is connected to the Chapter Player.

The player itself uses a Discrete Mosfet Class A nested feedback output stage to ensure maximum minimum distortion and maximum drive current at the output.

These circuits are all fed by individual point of load shunt regulators to ensure interference between circuits is zero.

Initial spec (subject to change)

Digital Inputs	Analogue outputs
AES / EBU x 2	RCA single ended pair x 1
RCA x 2	XLR balanced pair x 1
BNC x 2	
Toslink x 1	Word Clock
Glass x 1	
Digital outputs	BNC Input x 1
	BNC output x 1
BNC x 1	USB
Toslink x 1	USB1.1