

Apollo CD player - The Story

As far as we know there have only been five large multinational companies with the technology and know how to produce the incredibly complex operating software for CD players.

The development of operating software and chipsets to operate CD transports was generally curtailed around eight to ten years ago as all new development effort went into the design of DVD players and other newer consumer products. Therefore, Rega and other specialist Hi Fi manufacturers have been reliant on companies like Sony or Phillips to supply transports and their operating chipsets.

About two years ago Sony stopped their supply in the UK and sent the specialist Hi Fi industry into a flurry of activity. Most manufacturers had to resource their supply from other major manufacturers.

Rega however, has been incredibly fortunate and located a small British software company who was finalising the development of a totally new CD operating system. We believe we are now 10 years ahead of the design of other CD operational software and it has been possible to build in a massive increase in memory capacity and up-to-date computer techniques, thus meeting the original CD 'Red Book' specifications without compromise. All previous chipsets had to make compromises to musical performance and error correction because of their limited memory capacity.

Rega's new, British designed chip-set contains over 20Mb of RAM and operates in a totally different way of giving the potential of a far greater musical performance.

Initialising/disc setup

When a disc is loaded into the player the display will read 'initialising'. This revolutionary new player analyses the disc to be played and adjusts itself to the disc in order to give optimal, trouble free reading and great sound quality. This is rather like the engine management system on a modern car, optimising engine settings to ambient temperature, engine temperature, fuel quality etc. This process takes a few short seconds and the resultant musical improvements are well worth the wait.

Mechanism

A new high quality mechanism has been used which is an industry standard for reliability. It uses a high quality three point mounting ball chuck. This type of design has several advantages over the magnetic puck type design. Firstly, and most importantly it presents the disc as horizontally as possible to the laser spot, directly resulting in improved reading of the information on the disc. Secondly, there is no wear and tear to the disc from a puck magnet. Thirdly, the mass of the puck is lost completely giving the mech itself less stress and better acceleration and braking performance.

Digital, for the more technically minded!

Apollo has been three years in design and is nothing like any player in specialist Hi Fi today. Rega, together with its design partners have pioneered something new and very special; a highly advanced servo controller which uses the very latest signal processing techniques to ensure that the raw data that is recovered from the disc is of the very highest quality. Because our fully digital servo can use highly advanced algorithms the

laser spot is kept in the optimum position for data recovery in terms of focus spot size and tracking position.

Extra error correction

Previous chip sets always made compromises on error correction. Likewise it was possible to have good jog resistance if the music was compromised or better musical performance at the expense of jog resistance. Rega's new chip-set allows optimum musical performance and optimised jog or vibration resistance.

Super-stable phase lock loop

Our entire IC is clocked via a very special PLL of our own design. This allows better CD data recovery as well as a big improvement in the quality of the data delivered to the DAC.

Low noise digital design

In the design of our CPU IC we went to very great lengths to ensure that the data and address bus noise was kept at an absolute minimum, this ensures that the ground and signal connections to the DAC are as 'clean' as possible.

DAC design

We have used the very latest highest performance DAC from our previous partners Wolfson. This is a highly sonically regarded Sigma Delta 24bit DAC with differential outputs.

Output

Apollo utilises a brand new design of output amplifier. This amplifier is of discrete design and uses the very highest quality audio components; this represents a big step up in performance from our previous players.

Remote Control

The player comes as standard with a dedicated CD remote control handset.

MP3!

Not only does Apollo set new standards for sound quality but it also has the capability of playing MP3 discs. As a fully operational MP3 player a customer can play discs which they have created on their computers. It offers up to 100 albums playback capability from one disc and, as you would expect from Rega, the sound quality from MP3 is excellent as well.

We hope you enjoy this very special new player, we have spent a very long time creating it, drawing on all of our 32 years in specialist Hi Fi manufacturing.