

Design Brief - DD35 Compact Disc Transport



DD35 is a CD transport, designed to partner any high performance digital to analog converter, and in particular the Primare I25 DAC, I25 Prisma, I35 DAC, I35 Prisma, PRE35 DAC, and PRE35 Prisma models of integrated amplifiers and preamplifiers.

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Design philosophy

All of Primare designs are a result of our Practical Design Approach, resulting in a focus on two fundamental design elements:

1. Thoroughly implemented power supply designs – so that all elements of any design to operate effortlessly at their fullest effectiveness. Every product and sub-circuit demands unique power supply solutions - a more conventional linear supply or advanced switch mode main supply may work best dependent upon the application, and carefully crafted individual discrete power supplies are strategically inserted into the circuit to deliver power exactly where and how much is needed.
2. Artfully crafted ultra-short signal paths - so that each individual component and sub circuit operates sympathetically to achieve a cohesive whole. Elegant and simple electrical designs are used in even the most complex product, utilizing ultra-short signal paths with all gain in one device whenever possible. Ultimately, this results in fewer, higher quality parts for a reduction in associated distortions and an increase in overall electrical efficiency.

To that end, basic technologies have been selected to realize those benefits:

- 2 and 4-layer double-sided circuit board construction allows for the most direct and efficient layout of circuit components not only for the shortest signal



path, but also to more easily achieve a sympathetic layout of circuit and sub-circuit components for best performance.

- Surface mount components are used whenever possible as this allows for direct connection of the circuit device or component to the circuit board trace with the solder being used solely to mechanically hold the part in place. The elimination of the small metal lead or wire at each connection point in a more conventional large scale circuit device or component cumulatively shortens the signal path. Additionally, conventional large scale components demand through hole or “eyelet” construction, limiting direct contact of the component’s lead to the circuit board trace and resulting in the solder providing electrical connection as well as mechanical connection for the device. Neither solder nor the metal used in the leads of most large scale devices provide the best signal transmission, therefore limiting potential performance of even the best designed circuits.

Drive Technology

The TEAC CD 5020A-AT is an isolated transport that is adjustable for precise, smooth tray loading, and low clamp noise. An internal interphase I2S and SPDIF digital audio interface combined with buffered memory is utilized for improved performance.

Digital Output Technology

Key to assuring that the digital signal from the drive is delivered to any DAC connected to DD35 as precisely as possible, a dedicated isolated power supply feed is provided to the digital output stage to allow for extremely low noise output.

Power Supply Technology

A custom linear power supply, with an isolated dedicated direct supply for the digital output section, is combined with a switch mode standby supply (turned off when in playback mode to minimize noise) to deliver on demand the precise power needed.

System Building

DD35 is designed to provide the lowest noise digital signal from compact discs so any high performance digital to analog converters, like those found in the Primare I25 DAC, I25 Prisma, I35 DAC, I35 Prisma, PRE35 DAC, and PRE35 Prisma models of integrated amplifiers and preamplifiers.

DD35 Rear Panel



DD35 Compact Disc Player Specifications

Compact Disc Player

Mechanism: TEAC CD 5020A-AT

Digital outputs:

- 1 x RCA
- 1 x TOSLINK

General

Control

- C25 system remote control
- RS232
- IR in/out
- Trigger in/out

Power consumption:

- Standby 0.5W
- Operation 25W

Dimensions: (wxdxh)

- 430 x 385 x 106 mm with buttons and connectors
- 430 x 382 x 106 mm without buttons and connectors

Weight: 10 kg

Color options: Black or Titanium

