

**ROTEL**<sup>®</sup>

# COMPACT DISC PLAYERS

■ The arrival of digital audio in the early 1980's offered music enthusiasts the biggest potential for sonic improvement since the development of the "modern" loudspeaker in 1923. Perfect sound? Not quite. But, digital audio did hold great promise for durability, wide dynamic range, and signal to noise ratios capable of embarrassing even the best analog systems. ■

The early CD players were by no means the last word in music reproduction, but they did mark a new beginning for audio designers with a passion for music. Now a decade later, Rotel introduces four new CD players that deliver the musical performance long promised for digital components. ■ The Rotel design team's success could only be achieved by a most unusual audio company. Unlike the corporate giants of the audio industry, Rotel is a family-owned business dedicated to one goal—the accurate reproduction of music.

For thirty years, we have produced components offering exceptional value and musicality—the result of designers who reject the notion that conventional circuitry and off-the-shelf parts are good enough. ■ At Rotel, the design process starts with innovative consideration of *total* circuit topology, continues with the selection of premium grade parts, and ends with thorough listening evaluations. Production begins only when we are thrilled with the musical performance of a new component. Just take a listen to one of the new Rotel CD players—the results of our painstaking efforts will be clearly audible. ■

Oversize, fully-regulated high-current power supply

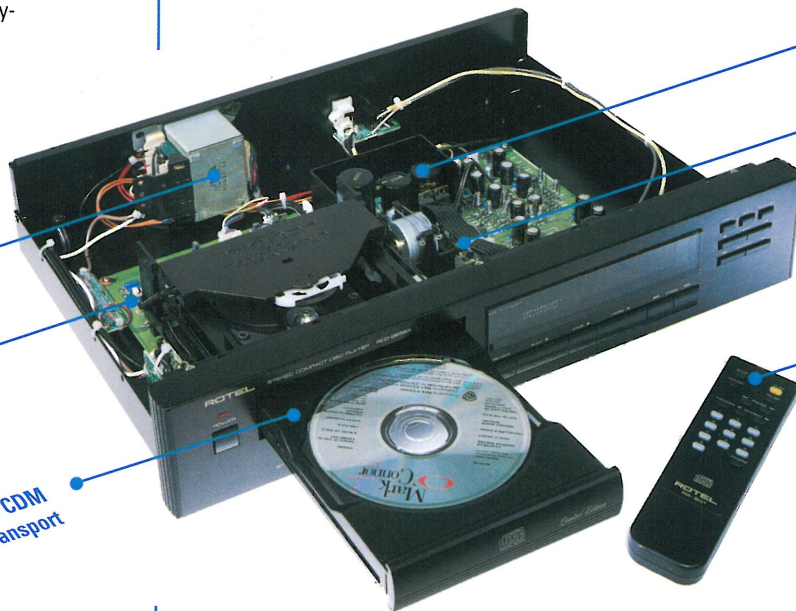
Dual-sided, ground plane printed circuit board

Ultra-stable CDM precision disc transport

Rotel's British high-current "slit-foil" filter capacitors

One-bit bitstream D/A convertor

Full remote control capability



**FOR  
MUSIC  
LOVERS**

No other specialty audio company has received such consistent acclaim for its digital products. In England, where audiophiles are known to be particularly demanding, Rotel has won nearly 70 awards from the audio press during the last four years.



**RCD945AX.** With Rotel's digital design expertise, the **RCD945AX** provides superb sound quality at an affordable price. Much of the technology from Rotel's more expensive CD players appears in the **RCD945AX** including the CDM4 transport for stable operation and our top-plane grounding for noise-free performance. A true one-bit machine, the **RCD945AX** features 192 times oversampling, two-stage digital filtering, and dual bitstream digital-to-analog converters for superb musicality. A coaxial digital output provides direct connection to a digital amplifier or digital audio processor.

Despite its low price, the **RCD945AX** offers a full array of controls as well as several features for added convenience. Its repeat functions allow you to continuously repeat the entire disc, a selected program, or just a single track. The introscan feature plays the first five seconds of each track on the disc or in a selected program. The A-B repeat function lets you repeat a selected passage. And the 'time' button lets you view your choice of elapsed track time, program elapsed time, or remaining disc time. All in all, the **RCD945AX**'s impressive sound quality, versatile control functions, and price make it today's best bargain in affordable high end CD players.



RCD 945AX disc player



RCD 955AX disc player

**RCD955AX.** The **RCD955AX** has received consistently lavish praise for its musical neutrality and its uncanny ability to recreate a convincing three-dimensional soundstage. The respected **International Audio Review** said, "You can get slightly better CD sound elsewhere, but only by spending a lot more money. At its price, nothing else we've heard even comes close."



RCD 965LE disc player





**Stereophile Magazine** remarked that the Rotel "has a degree of transparency and neutrality usually found only with the expensive stuff."

**Stereo Buyers Guide** commented that "the **RCD955AX** revealed a rich and lustrous musical nature that was quite charming . . . Rotel has done it again with the **RCD955AX**. It offers a degree of musicality that usually costs much more."

With Rotel's **Balanced Design Concept**, all aspects of this classic CD player received careful design scrutiny. The **RCD955AX** starts with a 16 bit, 4 times oversampling D/A convertor that offers both great sound quality and long-term reliability. A large, regulated power supply features separate supply voltage and regulation for the analog circuitry. High quality, close-tolerance components and good grounding techniques ensure low noise. A coaxial digital output allows the use of outboard D/A convertors. And, a remote control provides full convenience including direct track selection. In short, the Rotel **RCD955AX** sets *the* standard for compact disc players in its price range and makes a worthy addition to any high quality music system.

**RCC940AX**. The convenience of a CD changer doesn't have to mean a sacrifice

in sound quality.

With the

**RCC940AX** five-disc carousel changer, Rotel offers the best of both worlds—convenience and musical performance. Drawing on

the wealth of expertise gained from the development of Rotel's highly acclaimed single-disc players, the

**RCC940AX** might best be described as the world's first high-end changer.

Highlighted by a sweet and detailed sound stage from its bitstream dual digital-to-analog convertors, the Rotel **RCC940AX**'s performance makes it the clear sonic leader among multi-disc players.

The **RCC940AX** provides the ease of operation that is crucial to the long term enjoyment of any CD changer. A carousel transport allows two of the five discs to be changed without interrupting

From affordable CD players, to convenient disc changers, to esoteric high end players, Rotel offers high performance digital components that capture the essence of the original musical performance.



**RCC 940AX Disc Changer**

playback. For an uncluttered, user-friendly look, only essential operation buttons and a fluorescent display appear on the extruded aluminum front panel. All of the advanced functions are available from the supplied remote control—including direct disc and track access, random play, scan, repeat and time. The bright, legible, multi-function display gives comprehensive information on the number of tracks on the current disc, disc playing time, play status, and all activated functions.

**RCD965LE**. The top-of-the-line Rotel CD player takes digital technology to a higher level. Incorporating a true 'one-bit' D/A convertor with 256 times oversampling, the **RCD965LE** samples 11 million times a second. Any undesirable signals created by the sampling process fall well above the audible range so that a high quality digital filter can convert the signal to an analog output without the phase shift and distortion of conventional analog filtering.

The physics are certainly impressive, but just how well does this system perform? **Hi Fi Choice** magazine praised the **RCD965LE** as "a shrewdly balanced player, equipped with a sensible range of facilities,

solidly built and engineered to produce the sort of sound that many high-end products wouldn't have a hope of achieving. This is a **Best Buy** with knobs on."

Another British audio magazine,

**What Hi-Fi?**, summed

up the **RCD965LE**'s appeal by stating,

"More than just the pick of the best in its category, it represents a benchmark to which other products should aspire."

The **RCD965LE** epitomizes intelligent engineering and seductive sound. Philips bitstream technology, coupled with Rotel's meticulous attention to power supply design, component selection, and circuit layout, provide unsurpassed performance in a single-chassis player.

# Compact Disc Player Specifications

	RCD945AX	RCD955AX	RCD965LE	RCC940AX
Disc Capacity	1	1	1	5
Frequency Range	20 - 20,000 Hz	20 - 20,000 Hz	20 - 20,000 Hz	20 - 20,000 Hz
Amplitude Linearity	±0.05dB	±0.05dB	±0.05dB	±0.05dB
Channel Unbalance	±0.5dB	±0.5dB	±0.5dB	±0.5dB
Phase Linearity	±0.5°	±0.5°	±0.5°	±0.5°
Signal / Noise Ratio	100dB	100dB	100dB	100dB
Dynamic Range	96dB	96dB	96dB	93dB
Channel Separation (at 1kHz)	100dB	100dB	100dB	100dB
THD + Noise (at 1kHz)	0.0025%	0.0025%	0.0025%	0.004%
IM Distortion	0.0025%	0.0025%	0.0025%	0.004%
Outband Rejection	Greater than 60dB above 24.1 kHz	Greater than 60dB above 24.1 kHz	Greater than 60dB above 24.1 kHz	Greater than 60dB above 24.1 kHz
Wow & Flutter	Quartz Crystal Precision	Quartz Crystal Precision	Quartz Crystal Precision	Quartz Crystal Precision
Audio Line Output				
Maximum Line Output	2VRMS	2VRMS	2VRMS	2VRMS
Output Impedance	200 ohms	200 ohms	200 ohms	200 ohms
Minimum Load Impedance	10k ohms	10k ohms	10k ohms	10k ohms
Digital Output				
Output Level	0.5Vpp	0.5Vpp	0.5Vpp	TOSLINK
Load Impedance	75 ohms	75 ohms	75 ohms	photo optic
Power Consumption	30 Watts	30 Watts	30 Watts	20 Watts
Dimensions (W x H x D)	440 x 92 x 316mm 17 <sup>3</sup> / <sub>8</sub> x 3 <sup>5</sup> / <sub>8</sub> x 12 <sup>2</sup> / <sub>16</sub> "	440 x 92 x 316mm 17 <sup>3</sup> / <sub>8</sub> x 3 <sup>5</sup> / <sub>8</sub> x 12 <sup>2</sup> / <sub>16</sub> "	440 x 92 x 316mm 17 <sup>3</sup> / <sub>8</sub> x 3 <sup>5</sup> / <sub>8</sub> x 12 <sup>2</sup> / <sub>16</sub> "	440 x 115 x 394mm 17 <sup>3</sup> / <sub>8</sub> x 4 <sup>1</sup> / <sub>2</sub> x 15 <sup>1</sup> / <sub>2</sub> "
Weight	5.8kg / 12.76lbs.	5.8kg / 12.76lbs.	5.8kg / 12.76lbs.	6.3kg / 13.9lbs.

## Glossary of Terms

**D/A convertor.** Digital recording stores the musical signal in binary form—a string of 0's and 1's. The digital-to-analog convertor is an electronic circuit that converts the digital signal to a conventional analog waveform.

**Bitstream.** A one-bit D/A conversion method. Rotel uses a type of bitstream decoding in which the audio signal is represented by PDM (Pulse Density Modulation). In this type of decoding, the waveform is described by electrical pulses of a fixed amplitude. Conventional decoding generates a series of pulses that vary in amplitude.

**Oversampling.** The digital process can generate very high frequency artifacts that must be filtered from the resulting audio signal. By oversampling, or sampling the digital signal more frequently than the nominal 44kHz rate, these spurious signals can be moved well above the audible frequency range where they can be filtered without loss of fidelity.

**Digital Filter.** All digital players require filtering of digital artifacts. A digital filter removes these spurious artifacts before the musical signal is decoded from the digital domain to an

analog waveform. Digital filtering does not produce the phase distortion of analog filtering.

**Digital Coaxial Output.** An electrical output for the raw digital data stream. For use with digital preamps and outboard D/A convertors.

**Optical Output.** An optical connection for the digital data stream on the **RCC940AX**. For connecting Rotel CD players to other components using an optical fiber cabling system.

### ROTEL OF AMERICA

P.O. BOX 8 ■ NORTH READING, MA ■ 01864-0008  
PHONE: 800-370-3741 ■ FAX: 508-664-4109



*Products of Experience*