

DATA-PACKS

In light of the recent trend towards high-quality DACs for all types of bit suppliers, the demand for pure CD drives has been on the rise again. STEREO has checked purist drives of the compact sort from Cyrus and Pro-Ject.



THE SMALL DIFFERENCE

Of the two Cyrus drives, the manufacturer has „signed“ one.

What difference does it make?

On the first glance, they look like perfect twins. On the front panel of one of the two CD drives, kept in Cyrus' typical brick design, there is, however, a "Signature" badge in the upper right corner, and the price tag shows easily twice the amount of the smaller model, competing without this decoration.

That's all the external differences there are. Both "Transports", as pure disc drives without integrated D/A converters are often called, offer a series of flat buttons and a yellow-green display. Below it is the slot-in drive, which automatically retracts the CD as soon as you insert it slightly beyond the edge. Though a few buzzing noises are audible from the drive while reading in, it behaves quietly during playback. That's the way it's supposed to be!

On the rear side there is one coaxial and one optical digital output as well as two additional sockets for the looping through of control signals in case a set of several Cyrus components is operated. Included upon delivery is an illuminated remote control including a useful numeric keypad for direct selection of titles, while it can also do much more than just direct the CDt or CD Xt signature.

Only equal in the lab

According to the British company, for the Signature the effort for data selection and processing were considerably higher. While both drives supposedly generate their data particularly precisely and unaffected from background interference as part of a process called "Servo Evolution", Cyrus wanted this to be driven to its peak in the Signature, using comprehensive measures for re-clocking. This should ensure the precise chronological sequence of the bits, which are, after all, read out in real time during CD playback, thus reliably avoiding the dreaded data jitter.

A technical hint is given by the toroidal transformer, which is installed in addition to the switching power supply unit and exclusively feeds the clock generator that

is in charge of the re-clocking. Cyrus was one of the first manufacturers to recognize the sound-beneficial effects of a stable and naturally oversized energy source, dedicated to a specific task. The optional "PSX" power supplies for the players and amplifiers have been legendary for decades. In this case the developers have implemented their energy-strategy within the CD Xt Signature.

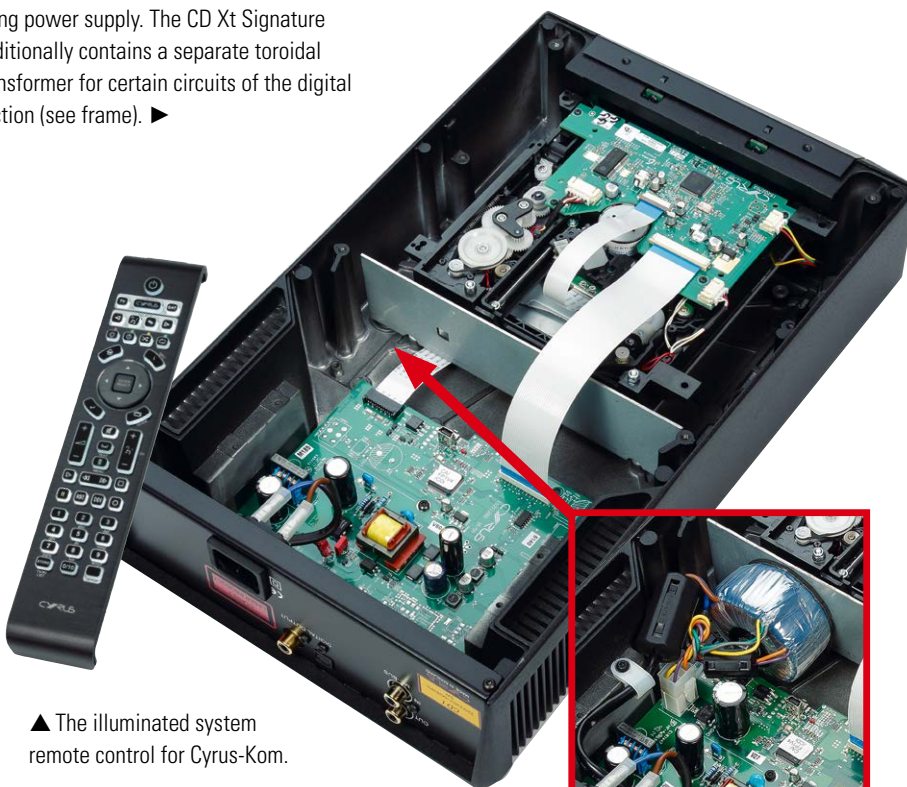
The advantages obviously lie in the optimized internal processes, as in our measurements on the coaxial digital output, both drives performed practically equal, with the bigger model outperforming the, just as excellent, little brother in terms of jitter only on the tiniest scale. The CDt was even slightly ahead in terms of speed deviation, although one to seven "parts per million" deviation from the set speed truly are peanuts!

Cyrus' CDt gets its energy from a small switching power supply. The CD Xt Signature additionally contains a separate toroidal transformer for certain circuits of the digital section (see frame). ►



▲ On the outside, the CD Xt Signature can only be recognized by its emblem in the upper right-hand corner – and by the price tag of course.

So that was getting us nowhere. The showdown had to take place in the listening room, where our warmed-up reference DAC Brinkmann Nyquist was waiting for the confusingly similar test objects. On this, but also on less high-class DACs, the distinction was no problem at all, as the signature easily stood out. It was, however, rather interesting how it managed to do that. In fact, the difference is only incompletely described with the term "increased resolution", because the CDt sounded almost as spacious and detailed as the CD Xt



▲ The illuminated system remote control for Cyrus-Kom.

Signature. However, there were two significant differences, as the latter defined voices and instruments more precisely from their acoustic environment, sharpened the edges around them and also provided a more precise front/back relation within orchestras. Thus the CD Xt Signature achieved more clarity and conciseness, while the CDt, in direct comparison, was hardly narrower, but somewhat more diffusely depicted, while e.g. guitars were not quite as physically and three-dimensionally outlined. In the high-frequency range, the signature offered a more precise definition, and the CDt almost seemed a bit over-polished.

The "Signature"-statement

However, the most striking advantage of the high-priced Signature was its more pronounced tonal intensity and denseness, which was expressed in more opulent colors and a sturdier fundamental tone, which thus more effectively supported the upper frequencies. Whereas the CDt painted with watercolors, the larger drive, though not quiet using oil, at least paints with opaque gouache pens. In "Secret O' Life" James Taylor, therefore, not only had the more sonorous but also a more intimate touch and an emotionally superior appeal to it.

Liza Minelli's lively, attacking "Old Friends", which tends to be slightly squeaky and intrusive, moved away further from the "danger zone" if read by the Signature, while also offering more substance. Having heard it for an extended period of time and then changing to the CDt under otherwise identical conditions, one misses some expression, energy and subliminal "feeling".

Of course Cyrus' CDt is a really good CD drive that works brilliantly in many systems, but the Xt Signature goes beyond that, sounds more high-end and more mature - for a big extra charge, of course.



▲ The identical looking back of the Cyrus drives offers only a few connections.

CAMBRIDGE AUDIO BUILDS A WIDE ONE

In order to have a quality reference device for our four CD drives, the almost 530 Euro costing CXC from Cambridge Audio was included. The CD drive with a 43 width features the S3 servo control system, which has been optimized for audio purposes by the manufacturer. Cyrus' equivalent is called "Servo Evolution Technology" and Pro-Ject called it "Blue Tiger".

Available in black or silver, the CXC impresses with its spaciousness, lightness and transparency. With its rather soft bass it doesn't quiet reach the contouring quality of other devices, which are, however, also often much more expensive. The offered tenderness in voices makes it a surprisingly musical recommendation.



CYRUS CD T



around 1100 €
 Dimensions: 22 x8 x36 cm (WxHxD)
 Warranty: 2 years
 Contact: Cyrus audio
 +44 1480 410 900
 www.cyrusaudio.com

Owners of a high-quality D/A converter or a good DAC in the amplifier can confidently entrust the „CD data collection“ to the smaller of the two Cyrus „transports“. The CDt makes the music sound three-dimensionally and homogeneously. We recommend not to save on the digital cable.

MEASUREMENT RESULTS

Jitter	2.5 ns
Deviation from fs	-1 ppm
Amplitude of the data stream	420 mV
Read-in time	7 s
Information track disturbances	0.5 mm
Surface disturbances	0.6 mm
Power Consumption Stby./idle (with)	<2 W/3.3 W

LAB COMMENT

The Cyrus CD t provides best values for sampling rate and jitter at the digital output. The scanning reliability could be better. The error correction seems to be designed weakly.

FEATURES

One coaxial and one optical digital output each; automatic repeat, program functions and switchable time displays via the illuminated remote control

STEREO-TEST

SOUND QUALITY **75%**

PRICE/PERFORMANCE

★★★★☆
VERY GOOD

CYRUS CD T SIGNATURE



around 2100 €
 Dimensions: 22 x8 x36 cm (WxHxD)
 Warranty: 2 years
 Contact: Cyrus audio
 +44 1480 410 900
 www.cyrusaudio.com

A CD drive made with expertise and finesse in all digital matters. Thanks to the efforts, the „Signature“ version of the simpler Cyrus drive is, although the measurements could lead to a different conclusion, clearly superior in sound quality which justifies the extra charge.

MEASUREMENT RESULTS

Jitter	1.8 ns
Deviation from fs	-7.7 ppm
Amplitude of the data stream	410 mV
Read-in time	7 s
Information track disturbances	0.5 mm
Surface disturbances	0.6 mm
Power Consumption Stby./idle (with)	<2 W/3.7 W

LAB COMMENT

The „target speed“ is maintained exactly, resulting in a very small deviation from the specified scanning frequency. Pleasingly low jitter.

FEATURES

One coaxial and one optical digital output each; automatic repeat, program functions and switchable time displays via the illuminated remote control

STEREO-TEST

SOUND QUALITY **82%**

PRICE/PERFORMANCE

★★★★☆
VERY GOOD

ONE PUTS A LID ON TOP

The two CD drives offered by Pro-Ject are entirely different on all levels: technically, in price and also in sound.

The Austrian manufacturer Pro-Ject is known for its unique and clever components in compact design. Convincing sound like from high-quality technology, but without expansive cabinets is the goal. The trend towards central D/A converters, either as stand-alone devices or as part of pre- or integrated amplifiers, is being pursued very consistently. Consequently, Pro-ject makes, additionally to “streaming”, “media” and “Bluetooth boxes”, two purist CD drives for all the silver disc fans out there – and they could hardly be any more different.

The entry is the new CD-Drive DS2T, which costs nearly 580 Euro in black or silver. If you wish, you can give the “data package” a more homely appearance by means of wooden side panels available in three versions (walnut, eucalyptus, rosewood), costing 100 euros each. The DS2T pulls the discs through a narrow gap into its slot-in drive and displays the number of titles as well as the running times in large, illuminated dot matrix letters, which are easy to read, even from a distance.

“Trigger” inputs and outputs for the transmission of control signals are



▲ Pro-Ject’s CD-Drive DS2T is also available without wooden side panels, then costing 580 Euro.

available for seamless integration into complete Pro-Ject chains. With regard to the digital outputs, the DS2T offers, additionally to the usual coaxial and optical ones, an AES/EBU socket for balanced data transmission, which is rare in this price range.

This socket is of course also part of the interface-arsenal of the larger CD Box RS.



◀ After inserting the disc into the CD Box RS, it is fixed with a puck. Then the heavy lid comes on top.

For connection to Pro-Ject components having the corresponding feature, there is also a high-precision I2S interface built via LAN cable. The CD Box RS also has a text display that can be switched in the background color and repeat and shuffle functions that the smaller model lacks. The highlight, however, is the CD port of the top loader which is closed by a solid metal lid. After inserting and fixing the disc with a small, magnetically held puck, the CD Box RS, which is btw. also available in black, is closed like a pot.

The Austrians are particularly proud to point out that in their CD Box RS they have used a thoroughbred CD drive from the specialist Stream Unlimited to additionally promote its performance, instead of a multimedia/DVD drive, which is often used at this point.

Different in character

To achieve the best possible sound, it is absolutely necessary to connect the out-sourced power supply of the CD Box RS to the power outlet in the correct phase. This fact also plays a minor role for the DS2T, but a decisive one for the larger model. If the Euro plug is placed the wrong way round, it lacks some of the finesse and serenity that the CD Box RS is capable of.

TEST-COMPONENTS

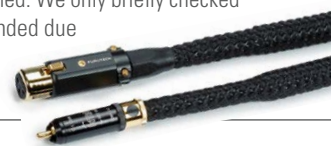
MULTIPLAYER/DAC: T+A MP3100HV
D/A CONVERTER: Brinkmann Nyquist,
MBL 1511F, T+A DAC 8 DSD
INTEGRATED AMPLIFIER: NAD D3020
PRE-/POWER STAGE: Accuphase C-2450/A-47
SPEAKERS: B&W 800D3, DALI Epicon 6, Dynaudio Special Forty
CABLE: HMS Suprema (Coaxial & AES/EBU)

And that would be a pity, because Pro-Ject's "big" mini-drive pleases itself in the role of the precision worker, conveying tiny details, while at the same time keeping an eye on the big picture. In doing so, it relies on a calm, orderly and clear presentation of the musical events. While the DS2T e.g. with DelaDap's "Crazy Swing" bubbles up and spreads a party mood, the CD Box RS shows a more clarified character despite all the joy of playing. It allows the musical events to take a step back, expands the stage of the performances in

RCA OR XLR?

In order to experience the CD drives in top form during the listening tests, we mainly used the new „Suprema“ digital cables from the German specialist HMS, which are sinfully expensive but also devilishly good. We used them as coaxial cinch and XLR versions, the latter leading the data stream symmetrically (1 meter around 990/1090 Euro).

This proofed again what we had already learned from identical cable types from other manufacturers, namely that it is above all the quality of the cable that determines the result and not the type of connection. At least as far as „electrical“ processes are concerned. We only briefly checked the connection with optical cables, as they are less recommended due to their limited bandwidth. In any case, even a high-quality optical strip was clearly inferior to the HMS cables.



PRO-JECT CD BOX DS2T



from 580 €
(available in silver and black, wooden side panels in three veneers plus 100 €)
Dimensions: 21 x7 x19,5 cm (WxHxD)
Warranty: 2 years
Contact: Pro-Ject Audio Systems
+43 1 544 858 0400
www.project-audio.com

Pro-Ject's small CD-Drive has a very quiet, reliably working drive and lets the music sound agile, crisp and homogeneous. A great partner for dedicated separate DACs or DACs integrated into amplifiers for those who value good CD sound.

MEASUREMENT RESULTS

Jitter	1.8 ns
Deviation from fs	-38 ppm
amplitude of the data stream	650 mV
Read-in time	6 s
Interference in the information track	>0.9 mm
Surface interference	>0.9 mm
Power Consumption Stby./idle (at)	<2 W/2.6 W

LAB COMMENT

Very low jitter at the digital output and a negligible deviation from the nominal frequency are accompanied by good sampling capability in the event of interference.

FEATURES

Three digital outputs - coaxial, balanced, optical, high-resolution dot-matrix display, external power supply, remote control with numeric keypad.

STEREO-TEST

SOUND QUALITY	68%
PRICE/PERFORMANCE	
★ ★ ★ ☆ ☆	
VERY GOOD	

PRO-JECT CD BOX RS



around 1050 €
(available in silver or black)
Dimensions: 21 x8 x21 cm (WxHxD)
Warranty: 2 years
Contact: Pro-Ject Audio Systems
+43 1 544 858 0400
www.project-audio.com

Thanks to its proper CD drive and precise data preparation, the top loader makes the music sound spatial, detailed and structured. The fourth star has been given for the rich equipment including a great display and the elaborate workmanship..

MEASUREMENT RESULTS

Jitter	1.5 ns
Deviation from the fs	+49 ppm
Amplitude of the data stream	674 mV
Read-in time	6 s
Interference in the information track	>0.9 mm
Surface interference	>0.9 mm
Power Consumption Stby./idle (with)	<2 W/4.5 W

LAB COMMENT

Very low jitter at the digital output and a negligible deviation from the nominal frequency are accompanied by good sampling capability in the event of interference.

FEATURES

Three digital outputs in coaxial, balanced and optical technology, bright, color-switchable and CD-text-compatible display, external power supply, mini remote control, repeat and shuffle functions .

STEREO-TEST

SOUND QUALITY	75%
PRICE/PERFORMANCE	
★ ★ ★ ★ ☆	
EXCELLENT	

every direction and makes music with a much more structured and minimally cooler diction. The DS2T's gripping attack, on the other hand, was highly appealing, but at the same time a little immature. It rendered Brian Flanagan's soulful "Flowers In The Window" pleasantly full-bodied, but after the change to the CD Box RS the stage opened up and there was considerably more air in the performance, which, not least for this reason, appeared more diversified.

Upsampling makes it perfect

And the more expensive data transmitter still has an ace up its sleeve in the form of its switchable sampling rate. Pressing the "Mode" button on the flat remote control, whose numeric keypad means that the toggle switches on the thick metal front panel are rarely going to be used, the Pro-Ject, made as solid a small safe, doubles the 44.1 kilohertz specified by the CD standard, then indicating "88.2 kHz" at the top of the display. Promptly, our D/A converters confirmed the upsampling by also synchronizing to this frequency.

The tonal advantages of this method, in which intermediate values are formed and phase errors are avoided due to later applied filters, were particularly evident in a more relaxed, more homogeneous midrange. Without upsampling, Flanagan's Irish bagpipe sounded overly whiny, indeed having a "pressed" note. This, however, dissolved into pure pleasure by switching to "88.2 kHz", which can even be done while playing.

Give it a try, a push of a button is all it takes. You will, then, certainly also be using the CD Box RS in upsampling mode, which adds the finishing touches

CD DRIVES - DATA PACKS WITH EUREKA-EFFECT



MATTHIAS BOEDE
special tasks

Why buy a complete CD player with integrated D/A-converter and output stage when you are already operating an external DAC for the many bit-providers of the modern media world? Then, all you need is a pure drive that reads the data from the silver discs, which many listeners don't want to miss, even in times of downloads and streaming. There aren't a lot of them out there, but STEREO has found four highly interesting CD drives from Cyrus and Pro-Ject, whose characteristics were sometimes really astonishing.

During the listening tests it was easy to forget that we were not hearing complete players, but pure data suppliers. First of all, every drive revealed its individual audiophile fingerprint, similar to a normal CD player. And secondly, it left its mark on the entire chain of devices that followed. Such results would not necessarily be expected from devices that „only“ read out bits from the CD, process and forward them, i.e. neither are entrusted with digital/analog conversion nor equipped with an analog output stage.

It was beneficial for the comparison that the

music from each drive was always at exactly the same volume, as the connected D/A converter determines the level.

What then came to our attention was definitely worth hearing. And exciting! Who believed that the contest would be fought somewhere in the depths of audiophile perfectionism, as digital data, after all, remains digital data, saw themselves pleasantly disappointed and surprised. While the inexpensive Pro-Ject drive already delivered very good results, that is convincing sound, both its big brother, designed as a top loader, and the simpler of the two Cyrus drives clearly set themselves apart from it. These two fought a battle at eye level, whereby the Pro-Ject was always one step ahead in terms of the offered lightness and fanning out of the sound images. The performances of the Cyrus CDt, on the other hand, always offered a pinch more warmth and emotionality in its expression. This certainly touches on individual taste preferences.

The most expensive CD drive, however, outperformed the others by far. When after a short, slightly faded piano intro in Brian Flanagan's „Whole Lot Of Livin“ the singer suddenly stands strikingly and crystal-clearly outlined between the loudspeakers, no other drive could achieve the stupendous immediacy and physical three-dimensionality with which Cyrus' CD Xt Signature made the bard appear abruptly before the diffuse background.

So the subject of CD drives is not a boring one, but one that captivates the listener. This is also possible without internal DAC and analog stage.

to its already skillful performance. Simpler equipment may react even more gratefully to the higher-frequency dataflow than our sophisticated reference devices.

The CD Box DS2T thus qualified as an absolutely capable data supplier for small

to medium sized hi-fi systems. The more elaborate "RS" version, however, gets audibly more information from the CDs, and is therefore recommended for higher purposes and finishes off the concept sonically.



◀ As a special feature, both CD drives offer a balanced digital output in addition to the standard optical and coaxial ones.



▲ These flat mini remote controls belong to the DS2T (l.) and RS CD boxes.