

THETA DATA BASIC CD TRANSPORT

Robert Harley

CD transport with remote control. Drive mechanism: Philips CDM9 Pro. Outputs: one coaxial on RCA jack, one AES/EBU; ST and Theta's Single Mode optical output are optional. Dimensions: 17" W by 3.25" H by 15" D. Weight: 18.5 lbs. Warranty: 3 years parts and labor, 1 year on drive mechanism. Price: \$1750; ST-type optical

adds \$300. Theta's Single Mode optical output adds \$800. Approximate number of dealers: 65. Manufacturer: Theta Digital Corporation, 5330 Derry Ave., Suite R, Agoura Hills, CA 91301. Tel: (818) 597-9195. Fax: (818) 597-1079.

It seems to me that it's possible to make a perfectly jitter-free CD transport without resorting to elaborate, expensive mechanical structures. This idealized transport would ignore all mechanical considerations of disc playback—vibration damping and isolation, for example—and simply put a jitter-free electrical driver at the transport output. If such a circuit could be made, it wouldn't care about how bad the signal recovered from the disc was (provided the recovered data were error-free). The circuit would just output a perfect, jitter-free S/PDIF signal. The result would be the sound quality of the \$8500 Mark Levinson No.31 Reference CD transport in \$200 machines. Such a scheme would provide an electrical solution to what has been considered largely a mechanical problem.

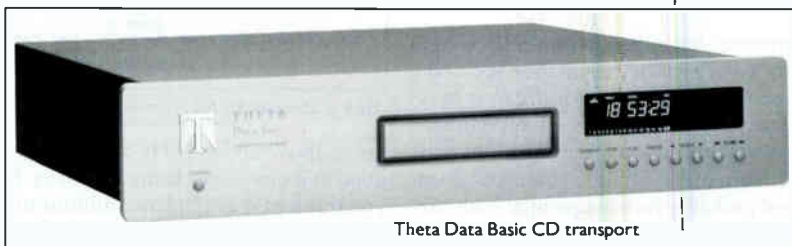
But back in the real world there's no doubt that attention to mechanical aspects of transport design affects sound quality. Examples abound: listening to Nakamichi's 1000 CD transport with its Acoustic Isolation door open and closed; playing the Mark Levinson No.31 with the top open; and putting any transport on isolation platforms or feet are only a few of the dozens of experiences I have had that suggest that mechanical design is of utmost importance.

But do these examples prove that elaborate mechanical design is a fundamental prerequisite for good transport sound—or only that the currently used electrical output driver circuits are less than perfect?

I suspect we may one day see great-sounding transports at bare-bones prices. But until that day—if it arrives—the stunning new Theta Data Basic transport may be the next best thing.

TECHNICAL DESCRIPTION

From the outside, the Data Basic looks very similar to the PS Audio Lambda I reviewed in last October's *Stereophile* (Vol. 16 No. 10, p.203). The display, functions, and even the front-panel button layout are identical. The main difference is that Theta's disc-loading drawer is in the center of the front panel rather than



Theta Data Basic CD transport

on the left-hand side.

The Data Basic's front panel is made from 3/8"-thick aluminum. A row of transport control buttons runs underneath the green display. The rear panel holds the standard RCA output jack and a balanced AES/EBU jack; ST-type optical adds \$300 to the price, and Theta's Single Mode optical-fiber output costs \$800 more. Note that the Single Mode output option requires a Theta processor with Single Mode input! Also note the price change: the Data Basic was first offered for \$1500 without AES/EBU output as standard.

The Data Basic and Lambda are even more alike inside. Both use the same display, decoder, transport control, and power-supply boards. The transport mechanisms are also identical. Even the same four chips painted over to obscure their identities in the Lambda have been similarly painted in the Data Basic. It's obvious both are made in the same factory.

There are, however, a few differences. The three power transformers aren't the same, and the Data Basic uses a different brand of filter capacitor on the power-supply board. Other distributed electrolytic caps are different between the two units, and Theta says the other parts are also different. In addition, the board material looks different: the Basic has blue boards, the Lambda's are green. The output timing circuit isn't identical, and the Data Basic uses Theta's custom wire between the pcb and the output jack. Finally, I've been told that the two products are voiced differently.

The main story inside the Data Basic is the huge power supply. It uses three

1 I'll be reviewing Theta's Single Mode transmission system along with the new DS Pro Generation V processor in an upcoming issue.

transformers, about 20,000 μ F of supply capacitance, and 13 regulation stages. Almost every chip has its own power-supply regulation stage to prevent interaction between circuit sections through the power supply. Even the front-panel display has its own transformer. Each transport servo (tracking, focus, rotational) is supplied from a separate regulation stage. The incoming AC is also filtered.

The transport mechanism is the popular Philips CDM9 Pro controlled by a Philips chipset. The CDM9 Pro is an expensive mechanism for a \$1750 transport. As with the Lambda, the Data Basic is fitted with the ASM spatial filter—the tiny, doughnut-shaped ring that fits over the objective lens to narrow the aperture. Theta says the spatial filter improves the sound slightly, but meaningfully.²

Build quality, overall appearance, and fit'n'finish are outstanding. I like the Data Basic's look more than the Lambda's, although the Lambda's top cover fits its chassis better.

SYSTEM

I listened to the Data Basic driving the PS Audio UltraLink, Adcom GDA-600, Meridian 263, and Mark Levinson No. 35 processors. The processor's fed an Audio Research LS5 preamp, which drove Audio Research's VT-150 tubed monoblocks. Loudspeakers were Thiel CS3.6es, connected by 8' runs of Audio-Quest Sterling. Interconnects included

2 ASM's Armando Martinez explained that this is partly due to less back-scattered light making its way through the detector to the laser diode. (This device's output is sensitive to light of the same wavelength falling on it.) The result is said to be a higher carrier:noise ratio and a correspondingly cleaner eye pattern in the data signal.

—JA

AudioQuest Diamond, Monster Cable Sigma, and Expressive Technologies IC-1.

LISTENING & COMPARISONS

A natural point of comparison for the Data Basic was the similarly priced PS Audio Lambda transport. For an absolute reference, I had on hand the Mark Levinson No.31 Reference CD transport. Digital interconnects included Aural Symphonics Digital Standard (coaxial) and McCormack's new Wonder Link AES/EBU cable. Although the Data Basic review sample was fitted with Theta's Single Mode optical system, I didn't have a processor equipped with a Single Mode receiver. Consequently, the auditioning was restricted to coaxial and AES/EBU.

I wondered just how similar—or different—the Data Basic would sound compared with the nearly identical Lambda. In my review of the Lambda last October, I concluded that it offered terrific performance for the money. From the listening, it was clear that the Lambda and Data Basic resembled each other in their musical presentations yet were decidedly different in other areas. First, the similarities.

The Data Basic had a clean, open, and very dynamic character. The transport's clarity, excellent bass, and transparent soundstage were very much like that of the Lambda. Starting with the bass, the Data Basic had a full, robust, and well-defined bass presentation. Bass drum had a nice solidity, acoustic bass was warm and round, and the presentation had a good sense of weight. The Data Basic's bass tended to be a little leaner, tighter, and better defined than the Lambda's, although both were similarly impressive. The Lambda seemed to have a little more extension at the very bottom end, giving more heft to bass drum. The Basic, however, sounded quicker and had better pitch definition in the midbass. Overall, the Lambda had a slightly stronger sense of pace, but not by much. Both transports were superb in conveying the music's rhythmic elements.

Dynamics were equally impressive from both the Data Basic and the Lambda—this is one area in which both transports are hard to beat. Music had a powerful, dynamic expression that was extremely compelling. Bass drum had plenty of slam and weight, and musical climaxes were reproduced with a sense of effortlessness.

Despite these similarities with the Lambda, the Data Basic had its own sound. First, the Data Basic had a more laid-back perspective. The Lambda tended

to be drier and more forward by comparison. I heard a greater sense of ease to the music through the Data Basic as a result of its more relaxed presentation. Instrumental images were more set back in the soundstage through the Data Basic, a quality that I found greatly appealing.

The Data Basic's less aggressive perspective was enhanced by its wonderful resolution of space and air. The Data Basic was superb at revealing space, depth, and subtle spatial cues. Moreover, a beautiful bloom surrounded instrumental outlines. In comparison with the Lambda, the Data Basic was more spacious, three-dimensional, and had greater resolution of spatial information. Reverberation decay was well portrayed, with the impression of hanging in space longer. The wealth of spatial detail on the *Three Way Mirror* disc (Reference RR-24CD) was conveyed without the music losing its immediacy. The Data Basic was among the best I've heard from any transport in its ability to portray bloom, space, depth, and air around instrumental outlines.

Treble information was presented with smoothness and a high degree of refinement. The top octaves were noticeably cleaner through the Data Basic than through the Lambda. Sibilance was less

pronounced, cymbals were smoother, and strings had less grain when reproduced by the Data Basic. This treble purity greatly added to the Data Basic's sense of ease and smoothness. Although the Data Basic's treble was more incisive and forward than the C.E.C. TL 1's (reviewed in Vol.16 No.7, p.91), it was decidedly less up-front than the Lambda's. In comparison to the reference Mark Levinson No.31, the Data Basic's musical perspective was closer than the Lambda's to that of the remarkable '31.

The Data Basic's resolution of recorded detail was exceptional by any measure. The music was infused with a wealth of information and low-level detail—this is one area in which the No.31 has yet to be approached. Remarkably, however, the Data Basic closely approached the No.31's high-resolution presentation. I thought the Data Basic revealed more information than the Lambda did, with more nuance, subtlety, and finely filigreed treble detail, despite the Data Basic's softer treble. When I switched to the Data Basic I felt as if I was hearing more of what was going on in the music. The Theta transport's combination of a high-resolution presentation and clean treble allowed the Data Basic to be highly revealing of musical information, yet still sound smooth and engaging.

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I ended up preferring the Data Basic over the Lambda with each processor I auditioned it with and over a wide range of music. The Data Basic's softer, more refined treble, less forward perspective, and greater resolution of spatial detail made it the more musical product.

Taking a broader perspective, the Data Basic was extraordinarily musical by any measure. In fact, the Data Basic is among the four or five best transports I've heard. The fact that it costs significantly less than the other contenders makes the Data Basic a tremendous bargain.

MEASUREMENTS

The Data Basic's S/PDIF jitter measured from the RCA jack was very low, measuring 30 picoseconds with an input signal of all zeros, 36ps with a full-scale 1kHz sinewave, and 123ps when outputting a -90dB, 1kHz sinewave.³ Fig.1 shows the jitter spectrum with these three test signals. With music (fig.2), the Data Basic's jitter was 71ps (a very quiet passage—the first 30 seconds from Sheffield's recording of *The Firebird Suite*) and 42ps (with full-scale music).

Overall, the Data Basic's jitter performance was excellent, and nearly identical to—but slightly higher than—that of the PS Audio Lambda. Incidentally, the Data Basic's AES/EBU output had slightly higher jitter, measuring 44ps with a full-scale 1kHz sinewave, 165ps with a -90dB, 1kHz sinewave, and 32ps with digital silence.

The Data Basic's tracking ability, as revealed by the dropout tracks on the Pierre Verany Test CD, was better than average. The transport played track 36 (barely), but faltered on track 37.

CONCLUSION

The Data Basic's treble purity, somewhat laid-back mids, terrific dynamics, and wonderful resolution of spatial information made for a very involving musical experience. The transport had many of the qualities I value in the Mark Levinson No.31. Although the Data Basic didn't have the resolution of fine detail, soundstaging, or musicality of the No.31, it was not embarrassed by this \$8500 reference transport. In comparison with the similarly priced and nearly identical PS Audio Lambda, I found the Data Basic more musical-sounding.

The Data Basic is very attractive, well made, and friendly to use. It is an outstanding transport, with a sound quality far above what I would expect at this price range. Although I haven't listened

³ See last November's *Stereophile* for the full transport jitter testing methodology and results of these tests on other transports.

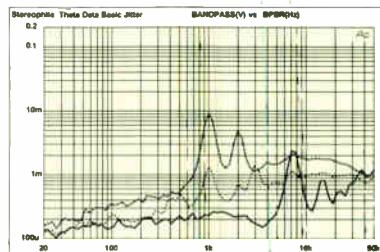


Fig.1 Theta Data Basic, jitter in coaxial S/PDIF data signal, 20Hz–50kHz, when transmitting digital silence (bottom solid trace), a 1kHz sinewave at -90dB (top, dashed trace), and a 1kHz sinewave at 0dBFS (middle, light dotted trace) (vertical scale, 1ps–2ns, 100μV = 1ps).

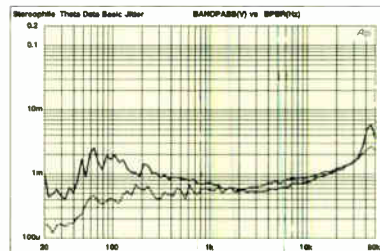


Fig.2 Theta Data Basic, jitter in coaxial S/PDIF data signal, 20Hz–50kHz, when transmitting Sheffield Lab *Firebird* (solid) and Steve Morse (dashed) (vertical scale, 1ps–2ns, 100μV = 1ps).

to Theta's Data transport (the videodisc-based machine) for some time, I would venture to say that the Data Basic is at least as good as the \$2800 Data transport—and is much more convenient to use.

The Data Basic was a particularly good match for the \$750 Adcom GDA-600 (reviewed this issue), making the pair a very satisfying digital front end for \$2500. I spent many enjoyable hours with this combination, never feeling musically shortchanged.

If you're in the market for a CD transport, don't buy until you've auditioned Theta's Data Basic—one of the great bargains in high-end audio. **S**



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