

SOUND & VISION®

from test report on the Toshiba SD-4800 DVD-Audio/Video player in the January 2003 **S&V**. Copyright © 2002 by Hachette Filipacchi Media U.S.; all rights reserved.

in the lab

DVD-VIDEO PERFORMANCE

Measurements were made from a variety of DVD test discs, all through the player's composite-video output except as noted.

Maximum-white level error.....0 IRE

Setup level.....+7.5/0 IRE (switchable)

Differential gain.....1%

Differential phase.....1°

Luminance frequency response

(re level at 1 MHz)

at 4 MHz.....±0 dB

at 5 MHz.....±0 dB

at 6 MHz.....±0 dB

at 6.75 MHz (DVD limit).....-0.45 dB

Onscreen horizontal resolution.....540 lines

In-player letterboxing.....poor

Component-output level error (interlaced)

(Y/P_r/P_b).....+0.39/+3.2/+3.2%

Component-output timing error (interlaced)

(P_r/P_b).....+25/+24 nanoseconds

DVD-AUDIO PLAYBACK

All tests were done using a custom-made DVD-R containing computer-generated signals with dither, which sets limits on measured distortion and noise performance. Tests were performed with all speakers set to "large," subwoofer on. All data are for the left front channel.

Maximum output.....2.2 volts

Noise level (re -20-dBFS, A-wtd, 24-bit signals)

all sampling rates.....-86.0 dB

Frequency response (96-kHz sampling rate)

20 Hz to 42 kHz +0, -0.61 dB

Excess noise (re perfect 24-bit performance)

all sampling rates.....+39.2 dB

Noise modulation

all sampling rates.....<0.5 dB

A couple of items stood out in our lab results for the Toshiba SD-4800. First was its unusually flat luminance response, which means that this player will produce the finest picture detail very accurately. Second was its excellent CD performance (figures omitted above for space), especially the measurements of low-level accuracy: noise level of -75.4 dB, 16-bit excess noise at +0.3 dB, 0 dB linearity error, and noise modulation less than 0.25 dB. Most of these numbers represent performance approaching theoretical perfection for a 16-bit format.

In DVD-Audio playback, the SD-4800 was better than many others in its noise and excess-noise performance. All its noise levels were about 10 dB quieter than perfect CD playback, a substantial improvement in dynamic range and approximately equal to 17½ bits of resolution. Less encouraging was the inability to set the front left/right speakers for "small" operation

and the lack of bass management for DVD-Audio playback, although those discs *did* receive speaker-distance compensation (if you have to leave one of these two features out, it should be bass management, which can be performed by external analog processing). As we've seen with other players, the subwoofer output went into distortion-free limiting over the top 6.75 dB of its dynamic range with worst-case Dolby Digital test signals, but this is unlikely to be a problem with real program material. The typically poor in-player letterboxing performance is irrelevant if you are watching over a widescreen TV.

The SD-4800 played DVD+R/RW as well as DVD-R/RW discs recorded in DVD-Video mode, but not DVD-R/RW discs in VR-mode nor DVD-RAM discs. It did *not* introduce short mutes between contiguous DVD-Audio tracks, a rampant problem with early players. — D.R.