

SOUND & VISION

from test report on the Sony DVP-NC685V DVD/SACD changer in the July/August 2004 **S&V**. Copyright © 2004 by Hachette Filipacchi Media U.S., Inc. All rights reserved.

in the lab

DVD-VIDEO PERFORMANCE

Measurements were made from a variety of DVD test discs. Data are for the composite-video output.

Maximum-white level error+10 IRE

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

Horizontal luminance response

(re level at 1 MHz)

3/4/5 MHz.....+0.08/+0.08/-0.18 dB

6/6.75 MHz.....-1.01/-1.94 dB

Onscreen horizontal resolution540 lines

In-player letterboxinggood

DOLBY DIGITAL PERFORMANCE

All tests were made with a custom DVD-R containing Dolby Digital signals encoded from 24-bit PCM data. All signals contained dither, which sets limits on measured distortion and noise. Dialogue normalization for all signals was 27 (the same setting used by movie soundtracks), which leads to maximum output levels and noise reference levels 4 dB lower than for other media. All speakers were set to "large," subwoofer on. Data are for the left front channel but are typical of all channels.

Maximum output level1.32 volts

Distortion (THD+N, 1 kHz)

at -20 dBFS.....0.032%

Noise level (re -20 dBFS, A-wtd).....-84.9 dB

Frequency response

20 Hz to 20 kHz +0.014, -0.19 dB

SACD PERFORMANCE

All tests were made with the Philips DAC-test multichannel SACD.

Maximum output level2.1 volts

Noise level (re -20 dBFS).....-89.1 dB

On the whole, we got excellent lab results from the Sony DVP-NC665. The high maximum-white level error merely reflects a composite-video output signal that was too high overall. A TV will normally compensate for this automatically. Progressive-scan performance was excellent, with no smearing from the color-upsampling processing.

The audio emerged in near pristine condition. Noise levels for Dolby Digital, CD, and SACD were extremely low (right at the theoretical limit for CDs) and some of the best we've ever measured at any price level. The figure for excess noise from quasi-20-bit CDs is notable, as single-digit performance here is still rare.

Frequency response

20 Hz to 45.4 kHz +0.01, -3 dB

BASS-MANAGEMENT PERFORMANCE

Subwoofer-overload tests were performed using worst-case Dolby Digital signals on a custom DVD-RW. All speakers were set to "small," subwoofer on, subwoofer level trim set to -5 dB and all other channel-level trim controls to 0 dB.

Subwoofer low-pass frequency response

Dolby Digital, DTS, and CD: -12 dB/octave rolloff above 80 Hz

SACD: -12 dB/octave rolloff above 123 Hz

Main-channel high-pass frequency response

Dolby Digital, DTS, and CD: -12 dB/octave rolloff below 80 Hz

SACD: -6 dB/octave rolloff below 117 Hz

Maximum subwoofer output

0.49 volts, 1.34% THD+N

CD AUDIO PERFORMANCE

All tests were made with a custom CD-R using computer-generated 16-bit signals containing dither.

Maximum output level2.1 volts

Distortion (THD+N, 1 kHz)

at 0 dBFS.....0.003%

at -20 dBFS.....0.017%

Noise level (re -20 dBFS, A-wtd).....-75.6 dB

Excess noise (without/with sine tone)

16-bit (EN16)±0/±0 dB

quasi-20-bit (EN20)+6.2/+6.2 dB

Noise modulation<0.5 dB

Frequency response

20 Hz to 20 kHz +0.012, -0.37 dB

A few anomalies did surface, however. The subwoofer output went into limiting over the top 7 dB of its potential dynamic range, at least with worst-case Dolby Digital signals, and this result was not affected by changing the output's level-trim control. This effect may be audible during soundtrack action sequences in comparison with a player without this problem. As usual, there was no distance compensation for SACD playback, and SACD bass management had different crossover frequencies and filter slopes than for Dolby Digital. The frequency gap, around two-thirds of an octave, might make an audible difference when you switch between SACDs and DVDs. — *David Ranada*