

SOUND & VISION

Full lab results on the Denon AVR-5805 digital surround receiver, tested for the May 2005 S&V. © 2005 by Hachette Filipacchi Media, U.S., Inc. All rights reserved.

in the lab for Web

DOLBY DIGITAL PERFORMANCE

All data were obtained from various test DVDs using 16-bit test signals containing dither, which sets limits on measured distortion and noise performance. Reference input level is -20 dBFS, and reference output is 1 watt into 8 ohms. Volume setting for reference level was -7.5. All level trims at zero except for subwoofer-related tests, all speakers set to "large," subwoofer on. All are worst-case figures where applicable.

Output at clipping (1 kHz into 8/4 ohms)
1 channel driven 205/344 W (23.1/25.4 dBW)
5 channels driven (8 ohms) ... 121 W (20.8 dBW)

Distortion at 1 watt (THD+N, 1 kHz)
8/4 ohms 0.02/0.03%

Noise level (A-wtd) -75.5 dB

Excess noise (with sine tone)
16-bit (EN16) +0.1 dB

Frequency response
20 Hz to 20 kHz +0, -0.12 dB

MULTICHANNEL PERFORMANCE, ANALOG INPUT

Reference input and output level is 200 mV; volume setting for reference output level was -3.

Distortion
(THD+N, 1 kHz, 8/4 ohms) 0.004/0.006%

Noise level (A-wtd) -101.3 dB

Frequency response
<10 Hz to 124 kHz +0, -3 dB

PCM STEREO PERFORMANCE

Reference level is -20 dBFS; all level trims at zero. Volume setting for reference level was -3.

Output at clipping (1 kHz, 8/4 ohms, both channels driven) 185/310 W (22.7/24.9 dBW)

Distortion at reference level 0.02%

Linearity error (at -90 dBFS) 0.02 dB

Noise level (A-wtd) -75.7 dB
(with 96-kHz/24-bit signals, -90.5 dB)

Excess noise (with/without sine tone)
16-bit (EN16) +0.1/+0.1 dB
quasi-20-bit (EN20) +5.6/+5.4 dB

Noise modulation 0.2 dB

Frequency response (see notes)
20 Hz to 20 kHz +0, -0.12 dB (with 96-kHz/24-bit signals, 5 Hz to 42 kHz +0, -3 dB)

BASS-MANAGEMENT PERFORMANCE

Measured results obtained with Dolby Digital, PCM stereo, and analog test signals.

Subwoofer-output frequency response
(crossover set to 80 Hz)
24 dB/octave above -6-dB rolloff point of 81 Hz

High-pass-filter frequency response
(crossover set to 80 Hz)
12 dB/octave below -3-dB rolloff point of 80 Hz

Maximum unclipped subwoofer output
(trim at 0) 9.9 volts

Subwoofer distortion
(from 6-channel, 30-Hz, 0-dBFS signal; subwoofer trim set to 0) 0.05%

With one important anomaly, the Denon AVR-5805 performed at or near historic levels for A/V receivers: power, noise, and distortion measurements were all record-setters on my test bench. The anomaly was frequency response, which on first measurement rolled off by 6 dB per octave below roughly 100 Hz in all modes and on all digital inputs. Analog inputs were only affected when a DSP surround mode was engaged, suggesting a DSP error as the culprit. Denon later confirmed an operating-software glitch that failed to defeat the THX Boundary Compensation curve

even for "large" speaker channels unless you manually "uncheck" it on the setup menu. Doing so returned response to within 0.1 dB at 20 Hz. Denon assured us that the corrected software will be carried by all subsequent production units.

Bass management was provided for all inputs, including multichannel analog, and for all media, both multichannel and stereo. The performance was consistent for all media. All speaker channels can be set to "small," and speaker-distance compensation is available for all main channels, including Zone 2. — D.K.