

SOUND & VISION

Lab results on the Panasonic SA-XR70 digital surround receiver, tested for the April 2005 S&V. © 2005 by Hachette Filipacchi Media, U.S., Inc. All rights reserved.

Panasonic SA-XR70 lab for Web

DOLBY DIGITAL PERFORMANCE

Output at clipping (1 kHz into 8 ohms)
 1 channel driven 91.2 W (19.6 dBW)
 6 channels driven 77.4 W (18.9 dBW)

Distortion at 1 watt output
 (THD+N, 1 kHz, 8 ohms)..... 0.03%

Noise level (16-bit signal, A-wtd) -72.2 dB

Excess noise (with sine tone)
 16-bit (EN16) +2.1 dB

Frequency response (20 Hz to 20 kHz)
 +0.1, -0.1 dB

MULTICHANNEL PERFORMANCE, ANALOG INPUTS

Distortion at 1 watt output
 (THD+N, 1 kHz, 8 ohms)..... 0.04%

Noise level (A-wtd) -87.2%

Frequency response
 (below 10 Hz to 60.0 kHz) +0.1, -3.1 dB

BASS-MANAGEMENT PERFORMANCE

Subwoofer-output frequency response
 (crossover set at 100 Hz)

18 dB/octave above -6-dB rolloff point of 103 Hz

High-pass-filter frequency response
 (crossover set at 100 Hz)
 18 dB/octave below -3-dB rolloff point of 125 Hz

Maximum unclipped subwoofer output
 5.2 volts

Subwoofer-output distortion (from 6-channel, 30-Hz, 0-dBFS signal, trim at 0)..... 0.08%

PCM STEREO PERFORMANCE

Output at clipping (1 kHz, 8 ohms, both channels driven) 87.8 W (19.4 dBW)

Distortion at reference level..... 0.03%

Linearity error (at -90 dBFS)..... +0.8 dB

Noise level (A-wtd) -72.0 dB

Excess noise (with/without sine tone)
 16-bit (EN16) 2.0/2.0 dB
 quasi-20-bit (EN20) 9.2/9.2 dB

Noise modulation 0.5 dB

Frequency response
 20 Hz to 20 kHz +0.1, -0.1 dB

The Panasonic SA-XR70 provided good results on the test bench. Power output of 77.4 watts in surround mode (and 87.8 watts in stereo) was modest by boat-anchor standards, but a veritable gale-force wind from such a small receiver. (Although it met the manufacturer's 6-ohm power spec in my tests, it didn't perform to spec into 4 ohms and shouldn't be used with low-impedance speakers.) Even better,

frequency response was essentially ruler-flat, and there was no penalty in terms of distortion or noise. Bass management was consistent for all inputs. In particular, the 18-dB-per octave crossover slopes across the board are steep enough to isolate the satellite speakers from the sub. Each speaker gets the frequency band it was optimally designed to reproduce.

— K.C.P.