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Quiet PCs With No Compromise

New generation of fanless systems prove both powerful and easy on the ears.**Mike Chin**

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When the PC's primary home was in the office, noise wasn't a real factor. But no one wants a noisy computer in their living room. And as PCs make a serious play for a spot in your den or as part of your home theater setup, users and vendors have started paying more attention to this annoyance.

Here's the problem: To handle media-heavy functions, PCs need lots of processing power. Power means heat, and that typically means more buzzsaw-like fans. But two companies, Hush Technologies and Voodoo PC, offer PCs that boast multimedia power, bold style, and very low noise level, thanks to fanless cases.

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Each company uses the same basic method to cool its PCs: custom-designed heat pipes and a case that acts like a big heat sink. With fans gone, hard drives are the main source of noise. But that's where similarities end. Aimed at both the digital home and the executive office, the \$2230 Hush ATX-Business PC is a tightly integrated machine in a sleek, low-profile case with the minimalist appeal of high-end audio gear. The \$3750 Voodoo Rage F-50 is a server-like system well suited for networked gaming, with broad expansion capabilities, easy access to the interior, and a macho, industrial look. (Prices do not include a monitor.)

We tested the units with *PC WorldBench 4* and performed sound tests both with the PCs on idle and with intense hard-drive activity (see [chart](#)).

Sound Check



Unlike many prior quiet PCs, the two we saw used mainstream, fairly powerful CPUs. The Hush, with a 2.8-GHz Pentium 4 and 512MB of RAM, earned a *PC WorldBench 4* score of 122; the Voodoo had a 2-GHz Athlon 64 3200+ and 1GB of RAM, and scored 138. Both were on a par with PCs in their processor class, so you won't have to compromise performance for quiet.

Both units also deliver on that promise of muted operation. The Hush at idle measures 27 decibels adjusted for a human ear's sensitivity (dBA). With the drive cranking, that figure rises about 6 dBA. The Voodoo has a noticeably quieter idle state at 23 to 24 dBA, but that goes up to 38 dBA with its two 120GB RAID-configured drives at work. The Voodoo's thick-walled aluminum case helped keep noise down at idle. But unlike the Hush's rubber-cushioned drives, the Voodoo's drives are hard mounted, and the noise with drives at work seemed to echo in the undampened interior.

Though neither system is completely silent, both yield far better results than typical PCs, which measure up to 60 dBA--a level few users would tolerate in their living rooms.

Whether either of these PCs is right for you depends partly on the level of low noise you require, and whether their unusual styling is worth the cost. Specialists such as Arm Systems and even PC market leader Dell offer fairly quiet PCs using optimized fans and case designs at better prices.

--Mike Chin

Test Report: Silent Running

Both the Hush and Voodoo units fit well into the living room, with noise levels below those of a normal conversation (60 dBA).

SYSTEM	Sound level at idle, in dBA	Sound level with hard disk active, in dBA	Processor	RAM	Dimensions	Price	Hard disk	Graphics	Optical drives	Additional optical drive	Sound	Drive bays (total)	Ports	Operating system
Hush ATX-Business PC	27	33	2.8-GHz Pentium 4	512MB DDR400	17.3 (w), 15 (d), 4 (h), 33 lbs.	Price when tested: \$2230	120GB hard disk	128MB ATI 9800-based graphics card with TV tuner	Teac 8X DVD, 24X/24X/24X CD-RW	none	Integrated 3 Realter AC97 Audio	3	2 FireWire, 2 USB 2.0	Windows XP Professional
Voodoo Rage F-50	24	37	2-GHz Athlon 64 3200+	1GB DDR400	11.25 (w), 16 (d), 22.5 (h), 70 lbs.	Price when tested: \$3750	two 120GB striped RAID hard drives	256MB ATI 9800-based graphics card	Plextor 8X/4X DVD+R/RW, 4X/2X DVD-R/RW, 40X/24X/40X CD-RW	Plextor 52X/32X/52X CD-RW	Creative Labs Sound Blaster Audigy 2 ZS	7	2 FireWire, 6 USB 2.0	Windows XP Professional
Average desktop ¹	35-50	40-60	na	na	na	na	na	na	na	na	na	na	na	na
Quietest desktop ¹	17	19	na	na	na	na	na	na	na	na	na	na	na	na

¹ As tested by SilentPCReview.com.

HOW WE TEST: Noise was measured at 0.6 meters, per the ISO 9296 standard for noise measurement for PCs on a tabletop.

CHART NOTES: dBA = decibels adjusted for the sensitivity of the human ear. na = not available. Tests conducted by Mike Chin, editor of [SilentPCReview.com](#).

Photograph by: Marc Simon; Photograph by: Marc Simon

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