

Bowers & Wilkins 805 Diamond Speaker System

PRICE: \$14,500 **AT A GLANCE:** Diamond-domed tweeter in tapered Nautilus tube housing • Center well matched to other speakers • Focused highs, controlled bass

The 800 Dynasty Continues

The world is full of B&Ws. Former and current users of the acronym include Bra & Wessels, the Swedish department store chain; Burmeister & Wain, the Danish shipyard; Boeing & Westervelt, the predecessor of Boeing; and the Black & White Audiovisual Festival of Portugal. The most notorious B&W would be Brown & Williamson, depraved tobacco pushers. So perhaps we shouldn't be surprised that B&W, the formidable British loudspeaker maker, has reverted to its original name—Bowers & Wilkins—even though John Bowers and Roy Wilkins are no longer in the picture.

The company takes its name from two men who met in the British military during World War II and opened an electronics shop after the war. Wilkins' son Paul still runs the shop. B&W Loudspeakers Ltd. launched its first model from the back of the shop in 1966. The company then established its own R&D and production facilities, and the famous 801 arrived in 1979.

After the 801 became a worldwide audiophile hit, B&W built several iterations of the 800 Series. The 800 Matrix Series morphed into different shapes and greatly expanded the audiophile fan base. The Nautilus Series was famous for the snail-shaped enclosure of its still-surviving flagship, which banished all straight lines and flat surfaces. The Nautilus 800 followed, reviving some flat surfaces for the sake of practicality. Its successor is the current 800 Diamond

Series.

Today, the 801's progeny are the recording monitors of choice at Abbey Road, Skywalker Sound, and Sony Music NYC. B&W's innovations include the use of Kevlar fibers in woofer cones, tweeters in separate tapered enclosures, the golf-ball dimpling of the flares on their ports, and the synthetic diamond-domed tweeter—all of which enrich the 800 Diamond Series speakers reviewed here.

Diamond Setting

The 805 Diamond (or 805D) is the best-selling member of its line

as well as the smallest and the only stand-mount design. It has four floorstanding sisters. The line also includes two horizontal center models, of which the HTM4 Diamond is the closest match to the 805D's driver sizes. There is a Diamond Series subwoofer, but this review substitutes a CM Series sub, the ASW 12CM. The B&W folks explained that "the price/performance was in line with the 805Ds."

There are only two flat surfaces on the 805D's enclosure: the baffle and the bottom. The sides curve inward toward the rounded back, all formed from a single piece of 1.38-inch-thick pressed plywood. The absence of parallel flat surfaces reduces internal standing waves, helped by a honeycomb Matrix structure inside the

enclosure. A 6.5-inch Kevlar-coned woofer dominates the baffle, with a phase plug in the middle to control its response. Below the woofer is a flared port with dimpling that the company claims reduces air turbulence. You can plug the port with a supplied foam bung to tailor bass response. I chose not to use it. The grille attaches magnetically, although I didn't use that, either. The main fabric grille doesn't cover the tweeter, which has its own tiny nondetachable mesh grille.

The 1-inch tweeter dome is made of synthetic diamond that's grown with a chemical vapor deposition process that B&W likens to "ice crystals forming on a window." Remarkably, although a substrate is used to form the dome, it is eliminated once the deposition is complete. What's left

• Mark's review samples sported Bower & Wilkins' stylish Gloss Black finish.

• The ASW 12CM subwoofer uses a 12-inch Kevlar-paper front-firing woofer.



SPECS

| SPEAKER: | 805 DIAMOND | HTM4 DIAMOND |
|--|------------------------------|------------------------------|
| TYPE: | Two-way, monitor | Two-way, center |
| TWEETER (SIZE IN INCHES, TYPE): | 1, diamond dome | 1, diamond dome |
| WOOFER (SIZE IN INCHES, TYPE): | 6.5, Kevlar cone | 6.5, Kevlar cone |
| NOMINAL IMPEDANCE (OHMS): | 8 (min. 4.7) | 8 (min. 4.7) |
| RECOMMENDED AMP POWER (WATTS): | 50-120 | 50-120 |
| AVAILABLE FINISHES: | Gloss Black, Rosenut, Cherry | Gloss Black, Rosenut, Cherry |
| DIMENSIONS (W X H X D, INCHES): | 9.4 x 16.5 x 13.8 | 19.1 x 11 x 11.3 |
| WEIGHT (POUNDS): | 26 | 27 |
| PRICE: | \$2,500/each | \$2,500 |

behind is a dome of pure crystalline carbon (synthetic diamond) that has a higher (and therefore less objectionable) breakup frequency than any other dome material in regular production. The tweeter connects to a synthetic rubber surround that serves as part of its radiating surface.

The tweeter is not mounted onto the baffle with its backside emitting sound into the motor structure or internal rear chamber, as it would be in a more conventional box speaker. Instead, it sits on top attached to a separate hollow tube that tapers toward the rear. This dissipates extraneous output from the back of the driver. The metal tube also acts as a heat sink, preventing the quad magnet motor structure from overheating. To decouple the tweeter from the larger enclosure's bass vibrations, the driver is cushioned in gel. The first-order crossover revels in its simplicity.

On the curved back panel are

two pairs of biwire-capable speaker terminals. They are unique, with a knobby shape and oxygen-free copper innards. Unlike most biwire-capable speakers, these don't ship with stamped metal bridges installed. B&W provides banana-plug-terminated jumpers with the speakers.

The HTM4 Diamond center-channel speaker came as a pleasant surprise. Normally, I am suspicious of horizontal center speakers. Even when their drivers and crossovers match those in the other speakers, the use of parallel double woofers can cause off-axis lobing (summation and cancellation effects). But this particular center uses exactly the same vertical driver configuration as the 805D, just in a wide, horizontal cabinet with two ports on the front. As I found out later, the result is consistent timbre matching across the three front channels. The rated frequency response of the HTM4 and 805

are exactly the same: 49 hertz to 28 kilohertz +/-3 decibels. Would the extra port or different enclosure shape show up in our measurements? Read them and see.

In addition to the rich Gloss Black of our review samples, the 800 Diamond Series is also available in Rosenut and Cherry veneers. Aluminum trim rings provide decorative accents. The cabinets are manufactured at a B&W-owned factory in Denmark.

Finally, the ASW 12CM subwoofer packs a 12-inch front-firing driver into a sealed Gloss Black enclosure that's only a little bigger than the driver itself. It offers some relatively rare features. The Bass Extension switch offers three tradeoffs between bass extension and bass output. The A position provides the most extension, B is a compromise, and C offers the most output. I opted for the most extension. There's also a Bass EQ switch with two settings. One is



• The 805D and HTM4 center use the same 6.5-inch Kevlar woofer with a center phase plug.



• The Diamond Series' front ports use Bower & Wilkins' signature dimpled texture.

• The horizontally aligned HTM4 center-channel speaker has two front ports.



HT Labs Measures

BOWERS & WILKINS 805 DIAMOND SPEAKER SYSTEM

Satellite Sensitivity:
88 dB from 500 Hz to 2 kHz

Center Sensitivity:
89 dB from 500 Hz to 2 kHz

This graph shows the quasi-anechoic (employing close-miking of all woofers) frequency response of the 805D satellite (purple trace), HTM4 center channel (green trace), and ASW 12CM subwoofer (blue trace). All passive loudspeakers were measured with grilles at a distance of 1 meter with a 2.83-volt input and scaled for display purposes.

The 805D's listening-window response (a five-point average of axial and +/-15-degree horizontal and vertical responses) measures

+4.84/-2.06 decibels from 200 hertz to 10 kilohertz. The -3-dB point is at 46 Hz, and the -6-dB point is at 41 Hz. Impedance reaches a minimum of 5.54 ohms at 203 Hz and a phase angle of -55.94 degrees at 93 Hz.

The HTM4's listening-window response measures +3.43/-3.40 dB

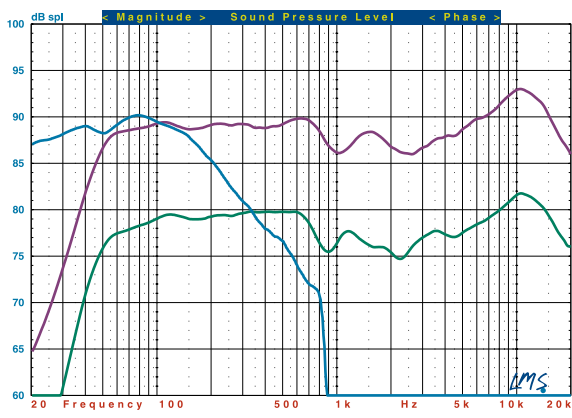
from 200 Hz to 10 kHz. An average of axial and +/-15-degree horizontal responses measures +3.39/-3.12 dB from 200 Hz to 10 kHz. The -3-dB point is at 47 Hz, and the -6-dB point is at 42 Hz. Impedance reaches a minimum of 5.44 ohms at 203 Hz and a phase angle of -65.79 degrees at 93 Hz.

The ASW 12CM's close-miked response, normalized to the level at 80 Hz, indicates that the lower -3-dB point is at 21 Hz and the -6-dB point is at 16 Hz. The upper -3-dB point is at 164 Hz with the Bass Extension switch set to A, the EQ switch set to A, and the Low-Pass switch set to Out.—MJP

Visit our Website for a detailed explanation of our testing regimen, plus a list of our reference gear.

on the web

BOWERS & WILKINS 805 DIAMOND SPEAKER SYSTEM



what the manual calls a “drier alignment” that’s suitable for corner sub placement or rooms with an objectionable resonant frequency. The other is suitable for non-corner placement or rooms with less of a bass hump. Although I don’t use corner placement, my room has a notable resonant frequency, so I opted for the first setting. The sub also has a 12-volt trigger and a crossover bypass, which lets you set the crossover in your A/V receiver or surround processor.

Associated equipment included

a Rotel RSX-1550 A/V receiver (distributed by B&W’s parent company), OPPO BDP-83SE universal disc player, Rega Planar 25 turntable, Shure M97xE cartridge, and Bellari VP530 phono preamp. All movie selections were Blu-ray Discs with DTS-HD Master Audio soundtracks.

Book of Revelations

If I say the 805D (and friends) was immensely source dependent, I don’t mean ruthlessly revealing, that coded critic-speak that refers

SPECS

ASW 12CM SUBWOOFER

ENCLOSURE TYPE: Sealed **WOOFER (SIZE IN INCHES, TYPE):** 12, Kevlar-paper cone **RATED POWER (WATTS):** 500 RMS **CONNECTIONS:** Speaker- and line-level RCA in, 12-volt trigger **CROSSOVER BYPASS:** Switchable **AVAILABLE FINISHES:** Gloss Black **DIMENSIONS (W X H X D, INCHES):** 15.5 x 15.5 x 17 **WEIGHT (POUNDS):** 54 **PRICE:** \$2,000

to a product that makes a majority of things feel fatiguing and a few things sound great. The word *revelatory* serves the purpose better. Given a movie soundtrack of complexity and subtlety, the Diamond speakers are complex and subtle—not to mention powerful, sensuous, and pleasing. They could convey abrasiveness, vagueness, and other below-par elements—but without obscuring elements that were at or above par. They are adroit jugglers.

The Book of Eli is a post-apocalyptic Western civilized by the presence of Denzel Washington as a contemplative but action-ready traveler who must convey a mysterious book from the badlands to civilization. The Diamond Series had a lot to do, peeling back the layers of music and effects without denying them their cumulative impact. With matched tweeters-on-top all around, the speakers effortlessly tracked the placement and movement of every element. It did so with no unevenness across the front or between front and back. The aural landscape was given to sudden dynamic and tonal transformations, with mellow music succeeded by chain-saw assaults. In this case, chain saws were literally involved, and the 805D system didn’t soft-pedal their vicious buzz. Gunshots had a distinctive and not unpleasant crack that varied from scene to scene. Quieter moments were equally striking in terms of both resolution and dynamic subtlety, especially when Washington exercises his voice in a low murmur. The score signifies meaningful moments by suddenly stepping up the percentage of orchestral instruments. The Diamonds seemed to relish these transitions, as though they’d spent a lot of time in concert halls. I noticed that I was actually identifying with the hardware: It seemed to have become a part of me, a strange merger of reviewer

and review subject.

You probably won’t be shocked that a movie called *Zombieland* would become a victim of the loudness wars. It was mastered about 20 percent louder than the previous selection and doesn’t contain nearly as much dynamic information (or any other kind). Even with this much thinner material, the Diamonds maintained a natural and lifelike approach to voices, especially the voiceover of Jessie Eisenberg, who accompanies Woody Harrelson and other characters as they fight their way through a cannibalistic zombie landscape. Eisenberg’s nerdy voice reminds me disturbingly of my own.

It’s Complicated is actually quite simple. The Latin-tinged acoustic



● The compact 805D is the only stand-mount speaker in B&W’s Diamond Series.



● The HTM4 Diamond center uses exactly the same vertical driver configuration as the 805D.

guitar music that serenades the first few minutes gives way to the familiar voices of Meryl Streep, Alec Baldwin, and Steve Martin. If *Zombieland* was a missed opportunity, this bedroom comedy's soundtrack was more about restraint. In the presence of first-rate comic acting, the Diamonds had no need to show off. They were capable of intimacy.

Teddy Bears and Mad Romantics

For Steely Dan's *Katy Lied*, I had a choice between original vinyl or original CD. I chose the vinyl. My tube phono preamp rolled off the cymbals a bit (no fault of the Diamond's tweeter). The tradeoff was an opening up of the midrange, home to Donald Fagen's neurotic teddy-bear vocals and a lush chorus topped off by Michael McDonald. The voices moved forward in the soundstage, just slightly ahead of the other instruments. This was a perfect approach to an album that was firmly rooted in 1970s pop-rock but foreshadowed the timeless jazz-funk style of *The Royal Scam* and *Aja*. The ingratiating hooks were still dominant, but the chords were starting to thicken. Matched speakers made the Dolby Pro Logic II Music mode the logical choice, expanding from two speakers to 5.1. It

offered more of everything without paying the price in any loss of cohesiveness. Each channel in the soundfield meshed with the others with the precision and perfection you'd associate with a Swiss watch.

Hideyo Harada's SACD of piano works by Robert Schumann includes the Fantasia in C Major, a minor Arabesque, and "Kreisleriana." Audite's multichannel disc was recorded in 24-bit/44.1-kHz PCM, mastered in DSD for the SACD, and converted back to high-resolution PCM on playback. All channels had significant content, although the center was just slightly lower in level compared with the others. Each note sounded with a hard, glassy attack, followed by an extraordinarily well-developed and sensuous decay. Whether the hardness of the initial attack resulted from all of those digital conversions, the stone walls of the church venue, or the preferences of the recording engineer, I can't say—but recalling the previous demos, I thought it was out of character for the 805D. Where the content and diamond-domed tweeters really collaborated was in the decay that swam from the front of the room to the back, perfectly complementing Harada's poetic interpretations of Schumann's mad Romanticism. I've rarely heard such quantity

and quality of surround information in a solo piano recording. The spaces between the speakers were as strongly present as the speakers themselves, creating a seamless, convincing, and potently dreamlike soundfield.

The John Pizzarelli Trio *Live at Birdland* SACD is a true DSD recording circa 2003, compliments of Telarc. Its soundfield is well thought out, with the guitar in all three front channels, the bass toward the right, the piano toward the left, and the audience mostly in the surrounds. All of these decisions made sense, but what I really loved was that the bandleader's vocal was an almost pure mono image in the center channel with barely a trace of subtle reverb. The HTM4 center speaker was again a perfect soul mate for the 805D monitors—I couldn't imagine a mismatched, lobing, horizontal center speaker doing justice to Pizzarelli's suave, swinging, velvet vocals.

The Bowers & Wilkins 805 Diamond provides the high-end sophistication of the Diamond Series in a stand-mount package that's especially well suited to home theater (and that certainly includes music). This speaker's top-to-bottom confidence is the product of a good ear, first-class engineering resources, and top-flight materials. It also has an artistic prowess, an ability to juggle disparate elements that made each new listening experience unique, often surprising, and as

pleasurable as the source material could support. The HTM4 Diamond center is equally worthy, and it's not often that I can say that about a center speaker. The ASW 12CM sub complemented the Diamonds with an ideal mix of power, restraint, and adjustability. No question about it: This is an expensive system. But worth it.

* Audio editor Mark Fleischmann is also the author of the annually updated book *Practical Home Theater* (quietriverpress.com).

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