

Vivid Audio B1 loudspeaker

By [John Atkinson](#) • Posted: Oct 10, 2011



When John Marks wrote about the Vivid B1 in his column, "[The Fifth Element](#)," in February 2011, he was so excited about the sound he was getting that he asked me to drive up to Rhode Island to give a listen for myself. Not only was I impressed by what I heard at John's, I decided to do a full review of the speaker.

I first heard the B1 (\$14,990/pair), Vivid's first product, when it was demmed at the 2004 London Heathrow show, but it didn't reach the US until the [2006 Consumer Electronics Show](#). The B1 is made in South Africa and engineered by ex-B&W designer Laurence "Dic" Dickie, who was responsible for B&W's original Nautilus loudspeaker.

I admit that I was put off by the Vivid B1's appearance. Some have compared it to a Zulu shield, others to a creation by H.R. "Alien" Giger. Perhaps it says something about my psyche that I found it reminiscent of something a little more, er, intimate. But after Vivid raised the weird-speaker stakes with the Smurf-styled G1 Giya, which Wes Phillips [enthusiastically reviewed](#) for *Stereophile* in July 2010, I started to like the look of the B1. And like the G1 Giya, its appearance is a case of form following function.

Drive-units get smaller as the range they handle rises in frequency, due to the fact that the wavelengths of those sounds also become smaller. Similarly, the optimal size of the baffle on which that drive-unit is mounted also decreases with increasing frequency. So while a nice wide baffle is ideal for mounting woofers, it is suboptimal for the midrange unit, and even less optimal for a tweeter. The B1's baffle therefore decreases in size as the drive-unit ranges increase in frequency, and this profile is echoed below the woofer to produce a vertically symmetrical shape. While it looks like a stand-mounted speaker, the B1's stand and base are integral parts of the enclosure. The enclosure material is polyester loaded with carbon fiber.

The B1 uses a 6.25" aluminum-cone woofer operating below 900Hz and loaded by a flared port below it on the baffle, a 2" aluminum-dome midrange unit to cover the range from 900Hz to 4kHz, and a 1" aluminum-dome tweeter. Though it therefore appears to be a three-way design, there is a second 6.25" woofer on the B1's rear panel, along with a second port. (The front and rear ports are in-line—you can see right through the speaker.) The rear woofer increases the B1's dynamic range capability in the low end, but is rolled off above 100Hz, to minimize interference between the spaced drive-units in the midrange. The opposed woofers are driven in phase, and their chassis are connected to each other with a screw-tensioning bar so that any vibrational excitation of the enclosure is canceled. The tweeter and midrange unit are mounted on rubber O-rings, again to isolate them from the enclosure. The drive-units used in the B1 were all developed by Vivid and are manufactured in-house. In their design, Laurence Dickie paid particular attention to the sound emitted from the rear of the diaphragms. The tweeter and midrange domes use radially polarized rare-earth ring magnets that present very little acoustic obstruction behind the dome. The dome's backwave fires into a large-diameter tapered hole in the pole piece, this attached to a fiber-damped, exponentially tapered tube—in effect, an inverted horn—that runs the speaker's entire depth. As in a transmission line, the backwave from the tweeter and midrange domes is absorbed without reradiating back through the diaphragms. The woofer also uses a radially polarized rare-earth magnet assembly, this time with a diameter not much greater than that of the voice-coil, and the 12 struts connecting the cast frame to the magnet assembly are profiled to present the smallest possible surface area to the backwave.



The crossover filters are fourth-order and are connected to the two pairs of WBT binding posts in the base via wires that run through the struts of the integral stand. The base is fitted around its periphery with five removable spikes that can be adjusted for maximum vibrational coupling to the floor. There is no grille; the domes are protected by a skeletal crosspiece. Once you get used to its idiosyncratic looks, the B1 is a stunningly beautifully finished speaker that incorporates engineering of equally stunning beauty.

Listening My review samples of the B1 were the ones I had heard at JM's, finished in a smart Graphite (dark gray) gloss metallic paint. This much-traveled pair had been used at the 2010 SSI Show in Montreal, and had visited another reviewer on their way to JM—and by the time they arrived here, the 50mm midrange dome of one speaker had been destroyed in shipping. Vivid shipped me a replacement assembly of dome, voice-coil, and magnet, with which I replaced the damaged one. The entire assembly screws into the tapered transmission-line tube, which is then securely fastened to the enclosure's rear with a crosshead bolt. I took before-and-after measurements

of the damaged speaker, as well of its undamaged sibling, so that I could be sure that my repair job hadn't compromised the B1's sound. After the repair, the two samples matched extremely closely: within 0.5dB throughout the region covered by the replaced unit.

Setting up the speakers was more difficult than usual, in terms of getting smooth integration of the mid- and upper-bass regions and the midrange. At first I was getting rather "puddingy" low frequencies that sounded a little isolated from the speakers' upper ranges. Moving each speaker half an inch at a time, from side to side or forward and backward, I ended up with a balance that sounded smoothly blended from the midbass up. Each speaker's front woofer, which is 32" from the ground, ended up 80" from the wall behind it and 48" from the nearest sidewall, though the first 15" of that wall comprises record cabinets and bookcases. I toed in the speakers to my listening seat and, once I'd optimized those positions, fitted each base with the five carpet-piercing spikes.

The Vivid's low-frequency character was vulnerable to cable changes, added to which was the fact that the two pairs of speaker terminals are under a lip at the rear of the base, which complicates the use of stiff cables fitted with spade lugs: There just wasn't enough clearance for the AudioQuest Wild cables that I'd been using up to the B1s' arrival. I tried Audience's Au24 e cables, which [Brian Damkroger highly recommends](#), and which have 4mm connections rather than spades and are thin enough to be easily dressed. However, even with the [Classé CT-M600](#) monoblocks, which have superb bass control, these sounded too warm. I ended up using a single pair of Cardas Neutral Reference speaker cables, which John Marks recommended a few issues back. These have terminating pigtails flexible enough to fit into the limited space that was available, and I connected the two pairs of terminals with the shorting straps provided by Vivid.

It seems odd to use the word "generous" to describe the B1's low frequencies, given its fairly small footprint and small-diameter woofers. But generous those lows were indeed. The bass guitar on the "Channel Identification" and "Channel Phasing" tracks on my [Editor's Choice](#) CD (Stereophile STPH016-2) had excellent weight, and the speakers had superb articulation with this signal, which can often sound soggy with reflex designs. Jerome Harris's solo bass-guitar introduction to Duke Ellington's "The Mooche," from the Jerome Harris Quintet's [Rendezvous](#) (CD, Stereophile STPH013-2), sounded even, with, again, superb articulation. The B1 dealt similarly well with classical organ recordings; the pedal lines in Bach's Prelude and Fugue in D, performed by Michael Murray on the organs at Los Angeles's First Congregational Church (CD, Telarc CD-80088), had surprising weight and depth without sounding boomy. The low-frequency warble tones on [Editor's Choice](#) were reproduced in full measure down to the

32Hz 1/3-octave band. Though there was still some output at 25Hz, the 20Hz band was silent—not even any port wind noise was audible. The half-step-spaced toneburst track on the same CD spoke cleanly, with no undue emphasis.

At the other end of the spectrum, the B1's high frequencies were clean, clear, and free from grain, although it's also fair to say that they were far from reticent. The speaker didn't sound bright or tipped up, but the B1 was by no means a mellow speaker. The Vivid's treble balance was not a problem with naturally balanced recordings, like the St. Louis Symphony under Leonard Slatkin performing Vaughan Williams' *Fantasia on a Theme by Thomas Tallis* (SACD, Telarc SACD-60641). But it was a little too revealing of the rather "shouty" orchestral balance in the 1970 recording of Oistrakh, Rostropovich, and Richter performing the Beethoven Triple Concerto with von Karajan conducting the Berlin Philharmonic (CD, EMI Great Recordings of the Century 5 6655954 2). This treble balance also made the B1 more suitable for use with sweet-toned amplifiers, like the Musical Fidelity AMS100 I [reviewed last month](#), rather than the [MBL Reference 9007](#) monoblocks, which adhere more to the cleaner-but-leaner school of sound. But with well-matched amplification, even recordings that I was not expecting much from—such as Phish performing an empathetic live version of Little Feat's "Time Loves a Hero" that I'd [downloaded as a FLAC file](#), following a recommendation from a Facebook friend—had impressive presence without sounding too, er, *vivid*.



Dynamics were impressive for a relatively small speaker. With the Classé CTM-600s providing the muscle, the explosive beginning of "Speed," from Dean Peer's *Airborne* (24/96 AIFF file, Cardas), was suitably explosive. The drum samples on Cornelius's "Fit Song," from *Sensuous* (CD, Warner Japan EVE016), had superb "jump factor." John Marks enthused about the coherence of the B1's midrange, and I, too, was impressed by its combination of clarity and purity in that region. I heard no colorations; both the sound of Vladimir Ashkenazy's piano and the space around the instrument, in his 1970 performance of Rachmaninoff's *Rhapsody on a Theme of Paganini*

with André Previn and the LSO (CD, Decca Jubilee 417 702-2), were

naturally presented. Decca's engineering team was at the top of their game with this Kingsway Hall recording, though the B1's clarity and generous lows allowed me too easily to hear the subway train pulling away from the station at the start of the big, inverted tune in the famous slow variation.

The complex layering of the vocal parts in "Dawn," from Meredith Monk's *Book of Days* (CD, ECM 1399), which Jon Iverson recommended to me, was laid bare but without any sense that the speaker was, in the infamous phrase, "ruthlessly revealing." The B1 was simply stepping out the way of the information on the recording. It also produced a palpably real feeling with voices. Peter Gabriel's tortured baritone in Paul Simon's "Boy in the Bubble," from Gabriel's *Scratch My Back* (ALAC file ripped from CD, Real World 1), had a sense of presence I have rarely heard from a speaker. I remember Meridian's Bob Stuart conjecturing, decades ago, that there was something special about the reproduction of human voices by a loudspeaker whose baffle was about as wide as a human head. The head-width B1 certainly worked some special magic with the sound of voices.

And the B1's way with imaging in general was simply superb. The combination of imaging stability and precision, coupled with the B1's high resolution, allowed me to hear miking anomalies, such as the way the violin and cello sections each clumped into a single location in the 1974 performances by Stephen Kovacevich, with the BBC SO under Sir Colin Davis, of Beethoven's Piano Concertos 2 and 4 (SACD, Pentatone PTC5186 101). And the too-close miking of the solo instruments in the recording of Beethoven's Triple Concerto mentioned earlier was made clear enough that it got in the way of my enjoyment of the performance.

At the New York AXPONA Show in June, when I was preparing this review, I was fortunate to have heard Arturo Delmoni give a dazzling performance of the *Chaconne* from Bach's Partita 2 in d for solo violin. So when I got home from the show, I cued up his recording of the same work (ALAC file ripped from gold CD, John Marks JMR 14). Captured by Kavi Alexander with a pair of EAR/Milab microphones, the image of Delmoni's violin hung between the Vivid B1s, uncolored, solid, and stable. No, it wasn't live, but the sympathetic acoustics of the Santa Barbara chapel, lit up by the violin and occupying the width and depth of the soundstage, were infinitely preferable to Delmoni performing the *Chaconne* in a dry hotel suite at AXPONA. It doesn't get any better than this synergy between performance, recording, and playback system.

Summing Up In his column, John Marks summed up the Vivid B1 as having a "near-perfect balance of warmth and information." After all the work that has gone into this review, I don't actually have much to add to that statement. At close to its price of \$14,990/pair, the Vivid B1 comes under pressure from: the Wilson Audio Sophia Series 3 (\$17,600/pair), which Art Dudley reviewed in February 2011; the Thiel CS3.7 (\$13,900/pair), reviewed by Wes Phillips in

December 2008; and the Revel Ultima Studio2 (\$15,999/pair), which Kalman Rubinson reviewed in March 2008. For not too much more, there are the KEF Reference 207/2 (\$20,000/pair), which I reviewed in February 2008; and the Revel Ultima Salon2 (\$21,999/pair), reviewed by Larry Greenhill in June 2008. These are all first-class loudspeakers, with any of which I could live happily ever after.

But if your room is of small to medium size, and you want a less obtrusive speaker (though its idiosyncratic looks do come into the equation), and you value clarity and overall musical communication over gut-busting dynamics, the Vivid B1 is one of the best choices around. I loved what it did!

Description: Three-and-a-half-way, reflex-loaded, floorstanding loudspeaker. Drive-units (all aluminum): D26 1" (26mm) dome tweeter, D50 2" (50mm) dome midrange driver, two C125 6.25" (158mm) cone woofers. Crossover frequencies: 100Hz, 900Hz, 4kHz. Frequency response: 39Hz–41kHz, ±2dB, 35Hz–44kHz, ±6dB. Sensitivity: 89dB/2.83V/m. Nominal impedance: 4 ohms. Distortion: second- and third-order harmonics <0.5% over the operating range. Maximum input power: 300W.

Dimensions: 43" (1095mm) H by 10.4" (265mm) W by 14.75" (375mm) D. Internal volume: 44 liters. Weight: 84 lbs (38.2kg).

Finish: Metallic automotive gloss paints: Graphite, Oyster, Sahara, Pearl, Copper.

source: <http://www.stereophile.com/content/vivid-audio-b1-loudspeaker>