

Vandersteen 2CE Signature Loudspeaker

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Would you believe me if I said you could buy a full-range, three-way loudspeaker with proprietary technology from top to bottom for under \$1,700? Vandersteen's Model 2 has been in production since 1977 as a time-and-phase accurate loudspeaker, upgraded incrementally over time. The latest Model 2 is the 2CE Signature, which sells for \$1,549 plus \$125 for the stands. The 2CE Signature is an unbelievable performer in a price range in which you'll often see magazines referring to bookshelf speakers as benchmarks for value

and performance. Want a little more for your money? Keep reading.

The first important aspect of the 2CE Signature's design is that it is time-and-phase accurate. This means that the drivers are staggered for physical time-alignment and are in absolute phase with one another (i.e., they move in and out in unison), and crossovers use phase-correct "transient perfect" first-order slopes. The results of this design choice are myriad. Drivers must be designed to operate in a linear fashion over a much broader frequency range. Users will have to be more careful during setup to ensure proper tilt-back of the speaker, and pay more attention to ear height

at the listening position. You must be within the prescribed vertical listening window for the speaker to perform its best. To listeners accustomed to non-time-aligned designs, where the tweeter's sound hits them first, a Vandersteen will at first sound "laid-back." And speakers with first-order slopes will not play as loudly or with as much dynamic contrast as speakers with steep-slope, phase-shifting crossovers.

But Vandersteen's time-and-phase accurate design ensures one thing that steep-slope crossovers designs cannot deliver—waveform integrity. The phase shift that results from using steep-slope

crossover filters means that the musical waveform fed to the speakers is not replicated at the speaker's output. Many engineers do not believe this phase shift is audible, or that the tradeoffs in loudness and dynamics are worth it. I use Vandersteen 3A Signature loudspeakers as my reference because of their striking timbral accuracy on vocals and instruments, their spatial focus and precision, and their resolution. I believe that time-and-phase accuracy has a lot to do with these perceptions.

The 2CE Signature employs four active drive elements: a 1" tweeter, a 4.5" midrange, and 8" woofer, and a 10" "acoustic coupler." Vandersteen chose an alloy tweeter for its frequency extension and resistance to break-up. Its resonance is beyond the audible frequency range (above 25kHz), and it's damped to eliminate any ringing or related artifacts within audibility. The midrange and woofer are made of a mineral-filled polymer material that offers better rigidity, resolution, and resistance to break-up than paper-cone drivers, without the colorations of metal materials. The long-fiber paper acoustic coupler fires out the back of the speaker and interacts with the 8-inch woofer much the way a driver/passive radiator combination operates—below 35Hz, the woofer and coupler are active to increase low-frequency extension. The drivers and crossovers are hand-matched in an anechoic chamber to a reference within 0.1dB at six frequencies, and each pair of speakers is matched to one another within 0.1dB. Many speakers costing exponentially more don't conform to such strict tolerances.

The enclosure features Vandersteen's trademark "baffle-less" design, which is just wide enough to house each driver. Four dowels surround the head module that houses the woofer, midrange, and

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tweeter, supporting a wood-veneered end cap. This significantly diminishes the colorations and time smear caused by the front-baffle reflections of conventional enclosures and gives the 2CE a more open, transparent sound. The entire speaker is wrapped in an acoustically transparent black sock; the bulk of construction costs are in the active components—drivers and crossovers—not in a furniture-grade cabinet.

The 2CE Signatures can (and should) be bi-wired, and the terminals are screw-down barrier strips that form a tight connection. Installing the 2CE Signatures involves mounting the speakers to stands, placing the speakers in the room, and adjusting the back tilt, via spikes, based on the distance from the speakers to the listening position and ear height at the listening position. It's critical to adjust the vertical listening window correctly to hear all this speaker is capable of.

The speakers sounded exceptionally good right out of the box. An initial leanness was the only factor that benefited from hours of break-in. As the woofer and acoustic coupler loosened up, deep bass became more forceful and tuneful. I've heard every speaker in Vandersteen's current line, and the 2CE Signature's family resemblance is obvious. They have the same warm and naturally detailed sound I admire in the other models. Some listeners perceive Vandersteen's sound as too warm or laid-back, but with my 3A Signatures, I found myself listening to the 2CE Signatures at lower volumes than most conventional designs I've had in my room. I just don't need the extra SPL to hear the detail.


Tonally, these speakers are exceptionally well-integrated from top to bottom. I find it amusing how many loudspeakers are lauded for a "magical" midrange, bone-snapping bass, or upper-octave "air" when the other components of the sonic presentation are either missing or in your face. When you listen to music, you never listen to any of these attributes by themselves, and when a loudspeaker accentuates one of these areas, it's usually to the detriment of the rest. The 2CE Signature presents

music as a balanced, cohesive whole without unnaturally spotlighting any area of the frequency spectrum. And it is a full-range speaker. I was impressed not only with the depth of bass, but also the level of expression. The 2CE Signature is quick and articulate, with surprising weight. This speaker is not going to reproduce 16Hz pipe-organ notes loud enough to rattle your teeth, but you'll hear the lower registers of the piano and acoustic bass rendered with veracity.

It's best to delve into the 2CE Signature's spatial acumen along with its midrange and treble performance. Its sound is clean, extended, and more transparent than any speaker I've heard near its price. Instruments sound natural and liquid, and immensely satisfying rhythmically. The baffle-less design lends it an openness that reminds me of planars or electrostats. The 2CEs don't reveal their position in the room, they simply give way to a deep soundstage that extends laterally beyond the speaker positions to an impressive degree. No, it won't pierce your eardrums, but this speaker will leave no doubt in your mind about which are the good recordings and which are not.

Before I began this review, Richard Vandersteen told me these speakers would remind me of my 3A Signatures, and they do. While the 2CE gets nearly all of the music, it doesn't take you as far into the recording space as its big (and twice as costly) brother. The 3A Signature has a bit more of everything—bass, soundstage (front to back and at the sides), resolution, dynamic contrast. The 2CE is less sensitive than the 3A Signature, and it definitely doesn't go as loud. Indeed, neither of these speakers is going to play as loudly as steep-sloped competitors. They play as loudly as I want to listen, but you'll have to decide for yourself if the natural timbres, image focus, and freedom from box sound are worth what you'll give up in volume and dynamics. And make sure your dealer demonstrates the 2CE with

high-end electronics—this speaker sounds far better than its price indicates, and only the best electronics will reveal its true potential.

Before you buy a speaker that just costs more, check out the Vandersteen 2CE Signature. Many of the stratospherically priced loudspeakers offer only fancy paint jobs to substantiate the hype. Here you can buy a speaker with proprietary technology incorporated into every aspect of its design and tighter performance tolerances and better sound—for about \$1,500. If you want to pay thousands more for exotic paint, knock yourself out. But the Vandersteen 2CE Signature is *my* idea of hi-fi—it's a high-performance speaker that might just be the best value in the industry. 

SPECIFICATIONS

Drivers: 1" alloy dome tweeter, 4.5" midrange, 8" woofer, and 10" "acoustic coupler"
 Frequency response: 29–29,000Hz ±3dB
 Sensitivity: 86dB
 Impedance: 7 ohms nominal, 4 ohms minimum
 Recommended amplifier power: 40–160 watts per channel
 Dimensions: 16 x 39.75 x 10.25 inches
 Weight: 60 lbs. each

ASSOCIATED EQUIPMENT

Theta Dreadnaught amps; BAT VK-51SE line-stage; Linn Sondek LP12 turntable and Linto phono stage; Arcam FMJ DV27 CD/DVD player; Sony XA-777ES SACD player; WireWorld Eclipse III+ speaker cables and interconnects, and Silver Electra III+ power cords

MANUFACTURER INFORMATION

Vandersteen Audio

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 Price: \$1,549/pair; \$125 for stands