

# VANDERSTEEN

*redefining technology for the love of music*



**MODEL 7** | 5a CARBON | QUATRO WOOD

**VANDERSTEEN** ...where only the music matters



**let's start here...**

There was no grand plan, birthright, or alignment of the cosmos – simply a man expecting a level of musical reproduction, well beyond what was available. So, relying upon the values instilled in his youth in the small centrally located town of Hanford, California, he decided to do something about it – and build them himself. From that day in 1977, Richard Vandersteen continues to refine the technology allowing him to capture the sound he's heard in his head. It's his passion – his life's work.

Richard Vandersteen, and Vandersteen Audio proudly present to you the top three models in the Vandersteen speaker lineup... the Quatro Woods, Model 5a Carbon and the flagship Model 7. Each achieving levels of performance previously unheard.

# MODEL 7



*Richard Vandersteen*

## **why Vandersteens...**

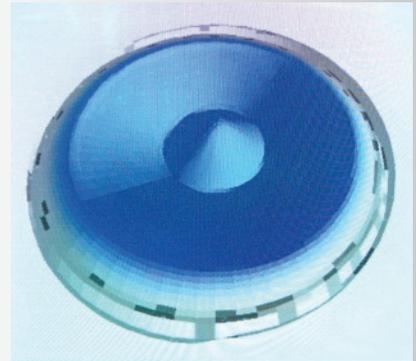
Simple, because we demand and you expect, unparalleled performance and the emotional satisfaction from Vandersteen products.

Our current advances are rooted in our 30 year-old cornerstone concept... full-range, time- and phase-accurate, minimum baffle, vertical array speaker system – introduced in the original Vandersteen Model 2 loudspeakers in the mid 1970s. The fact that narrow speakers with vertically arrayed drivers are ubiquitous today further demonstrates both the influence and validity of this speaker design.

VANDERSTEEN ...speaking the language of music



# MODEL 7



Laser interferometry of a perfect-piston™ driver

## Vandersteen drivers...

**Perfect-Piston™ driver diaphragms.** Vandersteen has revolutionized loudspeaker design by combining structural engineering and material



technology to create diaphragms that act as perfect pistons throughout their operating ranges and beyond. The unique diaphragm material used to make *Vandersteen Perfect Piston™ Drivers* marries carbon fiber and balsa wood in a unique 3-layer configuration with the highest stiffness-to-weight ratio available and allows all direct-radiating drivers to utilize diaphragms made from the same materials.

**Fusion™ Subwoofers.** The unique dual-motor, push-pull subwoofers *two curvilinear aluminum cones sandwiched together with an exotic honeycomb material* built-in to Vandersteen Model 7 loudspeakers are unlike



anything else on the market. They don't simply "augment" bass. They extend the low frequency response of the speakers while reducing distortion in the mid-range. Bass response and harmonic response are fused together in a seamless blend maintaining full-range amplitude linearity and time- and phase-response.

VANDERSTEEN ...handmade, not just assembled



**a bit of the art...**

everything we do at Vandersteen Audio revolves around one simple precept... *serve the source*. That is to say – we're all about the music. We develop and blend both engineering and technology to act as conduit between you the listener and heightened satisfaction from your music collection.

# MODEL 7



*“...the Model 7 granted unprecedented access to the other side of the mixing board.” ...The 7 behaved equally well at low and high sound-pressure levels, sounding involving, detailed, and evenly balanced regardless of volume. ... With a pair of Model 7s, I could live happily ever after.”*

*—Michael Fremer  
Stereophile, March, 2010*

**Stealth™ Enclosures.** The structure or body of a musical instrument, like a piano, violin or guitar, is designed to add rich and pleasing resonances to the sound of the strings. Any sound created by the structure of a loudspeaker is distortion so all resonances should be eliminated. *Vandersteen Stealth™* enclosures eliminate these distortions by virtually eliminating resonances, minimizing baffle dimensions and covering the remaining surfaces with non-reflective materials, and carefully contouring all edges. Vandersteen speaker enclosures are acoustically inert. All structural panels are made from proprietary constrained-layer-damped materials and heavily braced. Vandersteen Model 7 speakers have additional carbon fiber layers applied inside and out with a high-pressure, high-temperature autoclave.



*Model 5a Carbon paint & Model 7 bracing*

VANDERSTEEN ...engineered for balance, without compromise



### cohesive by design...

Creating and integrating the finest components is a start, but not good enough. Equally important is the ability for those components to perform as designed in the presence of other elements – Vandersteen loudspeakers have established the ability to perform with an organic ease and pace, with natural timbre and tonality, without compromise.

*The custom laser tool shown above is part of the dealer installation kit used to precisely adjust speaker tilt and toe-in, along with bass equalization.*

# MODEL 7



*“The Vandersteen 7 is a stunning achievement that must be regarded as one of the world’s great loudspeakers, regardless of price... If I had to choose, right now, a single loudspeaker to spend the rest of my life with, it would be the Vandersteen Model 7.”*

*—Robert Harley,  
Absolute Sound, October, 2010*

## 400-watt amplifier

In each Model 7, Vandersteen integrates an ultra-high-current 400-watt amplifier with power-factor-corrected, regulated power supply. The Eleven-band bass equalization, plus master level control, along with Adjustable “Q”™ allow bass response to be perfectly tailored to a myriad of speaker positions in a variety of rooms. Vandersteen’s phase coherent bass EQ is unique because it affects low frequencies only; there is no processing in the signal path above bass frequencies all within the analog domain.



*Model 7 setup & sub amp*

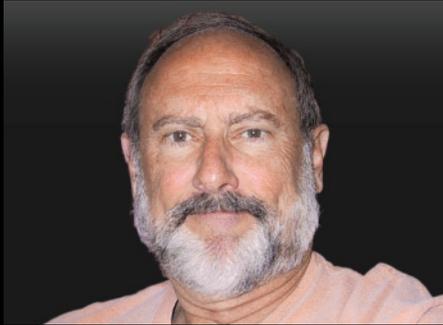
VANDERSTEEN *...the art of sound engineering*



**the high-water mark is elevated . . .**

Design breakthroughs advance at a measured pace at Vandersteen Audio. The Model 5A speaker system was developed over a period of nearly thirty years and evolved from previous Vandersteen systems that had been refined to their performance limits. Part of this evolution includes: the Perfect Piston™ carbon diaphragm, aerodynamic midrange driver, and the Fusion™ subwoofer system.

# 5a CARBON



*“I’ve spent a lot of time explaining the engineering features and the performance potential of the Vandersteen Model 5a speaker system. Let me assure readers that it all works just like it’s supposed to. This is the most sophisticated design that I’ve ever examined and it provides the best sound I’ve ever heard – by a substantial margin.”*

*—Dick Hardesty, Publisher  
Audio Perfectionist Journal*

## upgradeable modules

To fully protect your investment, the Model 5 is a totally modular design. The drivers, crossover, baffles, and amplifier modules can be changed at the factory.



As we incorporate better materials or new technologies evolve, reasonably priced updates will be made available to incorporate the improvements into your existing loudspeakers.



 VANDERSTEEN ...connecting you to the source



**slim and trim...**

Responding to your demands, Vandersteen Audio created the Quatro. With its smaller footprint, ability to be placed close to the wall and overall reduction in size and weight, the Quatros have become very popular and we believe the highest value-per-performance loudspeaker in our entire lineup of products. From a company known for value to performance, we think Quatro's speak volumes.

# QUATRO



*“As an editor and active reviewer for a leading A/V publication, I need an accurate, high-performance loudspeaker system that faithfully resolves every nuance and detail from every source and source component I review. Vandersteen speakers have been the foundation of my reference music/home theater system for years. They offer detail, purity, coherence and realism that remains unexcelled in my experience.”*

*—Shane Buettner, Editor-in-Chief  
Home Theater Magazine*

## playing with its siblings

Sharing much of the technology of its siblings (the Model 7 and 5a Carbon), the Quatro woods place a balance upon even-handed performance, wrapped in a beautiful choice of wood options.

Like all Vandersteen speakers, Quatros are completely time- and phase-accurate. They set new standards for speakers at this price point with wide bandwidth and linearity, exceptional resolution and imaging, and outstanding naturalness and musicality.





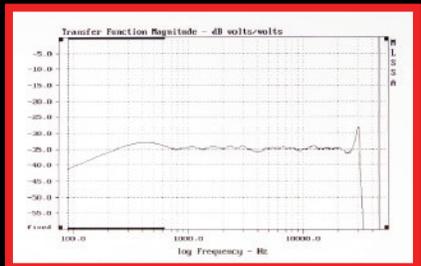
**MODEL 7**



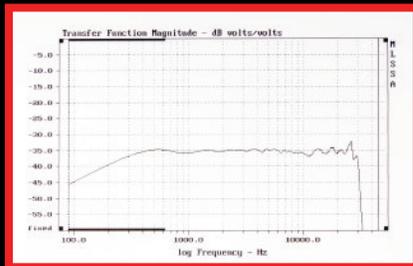
**MODEL 5a CARBON**



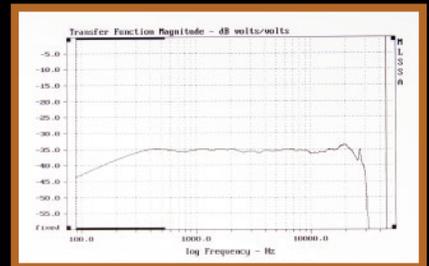
**QUATRO WOOD**



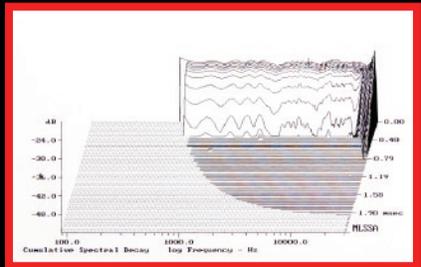
Frequency Response



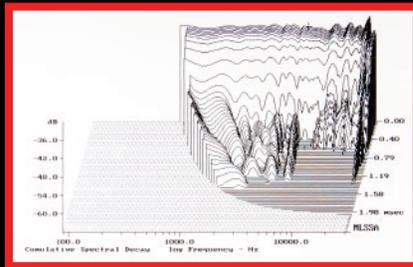
Frequency Response



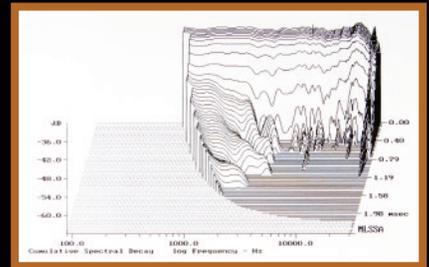
Frequency Response



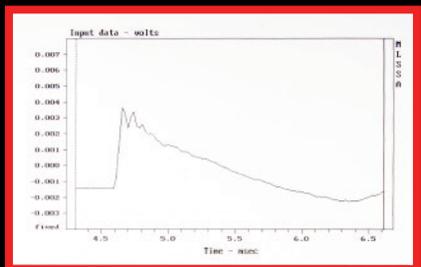
Waterfall



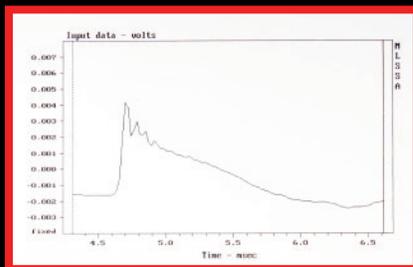
Waterfall



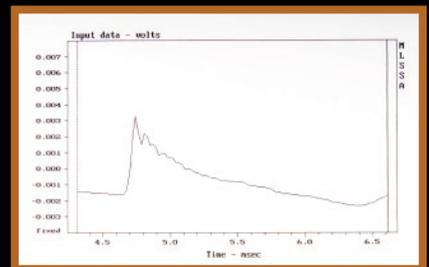
Waterfall



Step-Response

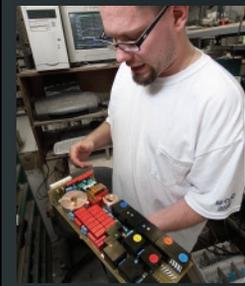


Step-Response



Step-Response

# DETAILS



## fine-tuned by hand

Making an impedance compensated speaker with first-order acoustic transitions requires that each and every Vandersteen speaker is measured in our anechoic chamber and crossover component values are hand-tweaked to ensure that drivers and crossover networks perform together precisely as designed. This individual hand tweaking insures that you are enjoying every bit of the performance for which you've invested.

### MODEL 7

### MODEL 5a CARBON

### QUATRO WOOD

	MODEL 7	MODEL 5a CARBON	QUATRO WOOD
FREQUENCY RESP	22Hz to 40kHz + or - 2dB	22Hz to 30kHz + or - 2dB	24Hz-30kHz + 2dB
SENSITIVITY	83.5dB with 2.83 volts of pink noise input at 1 meter on axis	87dB at 1 meter with a 2.83 volt input	87dB @ 1 meter with 2.83-volt input
COMPONENTS	<p><b>Tweeter:</b> 1-inch Perfect Piston™ high modulus dome using Carbon Fiber/Balsa Patent Pending diaphragm, AirCirc 6 Neo aerodynamic magnet system.</p> <p><b>Rear firing tweeter:</b> .75-inch ceramic coated alloy dome.</p> <p><b>Midrange:</b> 4.5-inch Perfect Piston™ cone using Carbon Fiber/Balsa Patent Pending diaphragm, proprietary die-cast aerodynamic basket and neo magnet assembly. Copper Faraday ring pole piece. Ferrofluid cooled voice coil.</p> <p><b>Mid-woofer:</b> 7-inch die-cast basket, long excursion woofer, Perfect Piston™ cone. using Carbon Fiber/Balsa Patent Pending diaphragm, Die-cast aerodynamic basket and Neo magnet assembly with copper faraday rings.</p> <p><b>Sub-woofer:</b> 12-inch dual-motor, push-pull with die-cast aerodynamic basket and trussed aluminum cone. Precision machined opposing magnet assemblies with copper faraday rings. Over 1-inch linear excursion.</p>	<p><b>Tweeter:</b> 1-inch critically damped, aerodynamic dual rear chamber, ceramic-coated alloy dome tweeter. Die-cast alloy faceplate with precision phase plug. Ferrofluid cooled voice coil. Transmission-line loading.</p> <p><b>Rear firing tweeter:</b> .same as Model 7")</p> <p><b>Midrange:</b> same as Model 7</p> <p><b>Mid-woofer:</b> 7-inch die-cast basket, long excursion woofer with curvilinear poly/Kevlar composite cone and a precision formed magnet assembly with copper Faraday ring.</p> <p><b>Sub-woofer:</b> same as 7</p>	<p><b>Tweeter:</b> same as 5a Carbon</p> <p><b>Midrange:</b> 4.5-inch tri-woven fiber curvilinear cone. Proprietary die-cast aerodynamic basket with neo magnet assembly. Copper Faraday ring on pole piece. Ferrofluid cooled voice coil.</p> <p><b>Mid-woofer:</b> 6.5 inch tri-woven fiber curvilinear cone. Die-cast basket with precision formed magnet assembly with copper Faraday ring.</p> <p><b>Sub-woofer:</b> (2) 8 inch carbon loaded cellulose cone drivers with long throw motor assembly.</p>
RECOMMENDED AMPLIFICATION	40 to 300 watts per channel into 8 ohms for the upper section, 400-watt subwoofer amplifier built in	40 to 200 watts per channel into 8 ohms for the upper section, 400-watt subwoofer amplifier built in	
IMPEDANCE	4 ohms nominal, + 4 -5 ohms minimum	6 ohms nominal, 4 ohms minimum	8 ohms + 3 ohms
CROSSOVER	100Hz, 600Hz, 5000Hz and adjustable H.F., 6dB per octave	100Hz, 600Hz, 5000Hz and adjustable H.F., 6dB per octave	100Hz, 900Hz, 5kHz, first-order slopes
PHASE	All the drivers are connected in positive absolute phase and pistonic in pass-band	All the drivers are connected in positive absolute phase	
DIMENSION	42.5"H x 14"W x 20"D 170lbs. each, 215lbs. shipping/ea.	44"H x 14"W x 20"D 182lbs. each, 225lbs. shipping/ea.	43"H x 10"W bottom taper to 5"top, 19"D bottom taper to 14"top 110lbs. each, 260lbs. shipping/pair

## personal note

I started Vandersteen Audio in 1977 because I loved music and desired a deeper connection with recordings than I was able to achieve with state-of-the-art speakers of that period.

Realize, I didn't set out to make time- and phase-accurate speakers – this was a result of my extensive live-versus-recorded experiments proving that when all the details of the recorded waveform were preserved, the sound was simply better – more accurate. Whether it's our latest, no compromise Model 7's with minimum diffraction stealth™ enclosures, Perfect Piston™ diaphragms, or Fusion™ subwoofers, all the way back to our Models 1,2,3 and 4, preserving the waveform with time- and phase-accurate design remains, surviving over 30 years of constant refinements.

In all this, my focus has been to share with you the culmination of all these years of collected experience the finest loudspeaker I'm capable of building with no limitations whatsoever – including expense – in order to deliver to you what reviewers describe as today's state-of-the-art product.

–Richard Vandersteen

## Vandersteen pedigree

**1970's** Vandersteen delivered the first full-range, time- and phase-accurate, minimum baffle, vertical array speaker system with the introduction of the original Vandersteen Model 2 loudspeakers in the mid 1970s. The late **1970's** saw the introduction of the Active Acoustic Coupler™ bass system Vandersteen pioneered the concept of bi-wiring in **1981**. In **1982** the Vandersteen 2W subwoofer introduced the concept of Aperiodic™ operation. In the **mid 1980's** Vandersteen introduced a true, Push-Pull™, dual-motor, subwoofer driver. In **1984** Vandersteen designed and patented a unique reflection-free midrange driver with an aerodynamic chassis and magnet assembly. In **1997** the Vandersteen 2Wq subwoofer added Adjustable“Q”™ control to allow users to tailor bass response. In **1997** Vandersteen introduced Battery-Biased™ film capacitors in internal and external passive high-pass filters. The Vandersteen Model 5 loudspeakers saw the introduction of multi-band bass equalization, which, along with Adjustable“Q”™ and level, allowed bass response to be perfectly tailored. Vandersteen Model 5 loudspeakers saw the introduction of a unique, constrained-layer damped enclosure material that is virtually resonance free. This concept is currently used in the Vandersteen Quatro and Models 5 and 7 series loudspeakers. The Vandersteen Model 5 loudspeakers saw the introduction of a unique molded, epoxy composite material used for baffles and plinths. This concept is currently used in the Vandersteen Quatro and Models 5 and 7 series loudspeakers. In **2009** Vandersteen developed Perfect-Piston™ driver diaphragms hand-made from a unique, balsa-cored carbon fiber material. In **2009** Vandersteen developed Carbon-Clad™ enclosure panels made from a sandwich of carbon fiber, wood fiber and elastomeric materials, bonded together in a proprietary process. This unique material allows Vandersteen to deliver one of the world's most rigid and silent loudspeaker enclosures in an affordable product. This concept is currently used in the Vandersteen Model 7 loudspeakers.

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