

ALEX X™



WILSON®
AUDIO



I have basically one goal: the facsimile reproduction of the emotionally charged sound I hear in real, acoustic music.

David A. Wilson

ALEXX™

At Wilson Audio, the germ of an idea for a breakthrough in technology doesn't come out of a business school curriculum or from comprehensive market research. It is invariably born in the laboratory of the concert hall. It is the outcome of the relentless pursuit of this question: why is it that some equipment not only believably recreates the musical event, but also communicates the artist's feelings, which influence their musical interpretation?

It is the search for the source of the phenomena that distinguishes a live musical performance from one played through a loudspeaker that is the organizing passion of Wilson's research and development team. The exploration of those specific technologies that allow the listener to suspend disbelief. It is the understanding that a great loudspeaker is never just about reproduced sound. It's about a connection to the numinous and healing power of music.

For the first time in Wilson's storied history, the engineering team developed two major products concurrently.



For the first time, Alexx was developed alongside another major project: the WAMM—Dave Wilson's up-and-coming Magnum Opus. The WAMM will be Dave's greatest expression of his idealism. When he began developing the first WAMM over three decades ago, Dave Wilson had one goal: to make the reproduction of music sound as much like the real thing as possible. Daryl Wilson spent his formative years in this environment, and inherited his father's idealism and drive to push the proverbial envelope.

When it came time to start the Alexx project, it was decided that Daryl would lead the development of Alexx while Dave continued work on the WAMM.

The concurrent development of Alexx with WAMM gave Dave and Daryl the opportunity to listen together to each other's designs, the two loudspeakers and their designers side-by-side. They were able to compare notes, make suggestions, collaborate ideas—and then listen again. As it turns out, this was highly fruitful for the Alexx.

Alexx's MTM (Midrange/Tweeter/Midrange), which, for the first time, employs concentrically sized drivers was drawn from the WAMM project. Alexx's all-new woofers are identical to the WAMM units. And Wilson's latest most advanced composite enclosure material, dubbed "W" for WAMM, finds strategic application in the Alexx.

“MTM” driver configuration inspired by the new WAMM



An “MTM” (Midrange/Tweeter/Midrange) geometry generally refers to a driver arrangement where two midrange drivers flank a tweeter vertically. This arrangement has several advantages, among which is greater dynamic range in the midrange portion of the spectrum.

However, Wilson’s MTM configurations have always been far more sophisticated and complex than competing designs. Rather than mounting the three drivers that make up the MTM in a flat baffle, each driver is mounted in its own module, which allows the driver to be adjusted in the time domain within the loudspeaker array. This unique approach also allows the engineers to optimize the construction of each module, with the specific combinations of composites best suited to the driver.

For the Alexx, Wilson’s engineering team has once again re-imagined the MTM geometry. Drawn from technology developed in conjunction with the upcoming WAMM, the Alexx’s midrange is divided between two different drivers, each covering a portion of the mid-band area. The seven-inch is the celebrated Wilson mid, first introduced in the Alexandria Series -2. The 5.75-inch is an eminently musical midrange driver—most recently utilized in the Sabrina. The frequencies covered by the two drivers are therefore both expanded upward and downward in frequency, the two together covering a broader portion of the midrange. Furthermore, each driver is optimized for the portion of the mid-band best suited to its unique strength. The engineers at Wilson have blended the two drivers masterfully, ensuring that the two perform seamlessly and coherently together.



Wilson’s ongoing research into driver technology



The Alexx tweeter is Wilson’s Convergent Synergy Tweeter. Ongoing and recent research into tweeter technology, including those using exotic materials such as diamond and beryllium, reveals that the Convergent Synergy remains state of the current art, particularly in the areas of dynamic contrast, high power handling capacity, and the unique ability to reveal musical nuance in the source material. Extremely low distortion is another hallmark of the design. This most recent version features the latest implementation of Wilson’s proprietary rear wave chamber design.



The strategic advantage of developing Alexx alongside WAMM is perhaps best exemplified with new technology surrounding the all-important midrange. For the first time, two concentrically sized drivers are spec’d in the MTM array, each optimized to cover a specific portion of the midrange. Wilson’s venerable seven-inch unit, first introduced in the Alexandria Series-2, covers the lower midrange. The upper-mid driver is an exceptionally musical driver optimized for the upper portion of the midrange.



Alexx’s all-new ten- and twelve-inch woofers were originally developed in conjunction with the WAMM project. These two new units were designed from the ground up to complement each other, and are individually optimized for both speed and authority. Alexx’s woofers incorporate all of Wilson’s latest thinking on accurate and musical low-frequency music reproduction. Alexx’s ultra-low resonance woofer enclosure is the perfect home for these state of the art bass drivers, the holistic totality of which significantly raises the bar for bottom octave musicality and accuracy.

Watch Dave and Daryl Wilson talk about the unique provenance of Alexx on Wilson's Youtube Channel



New Cutting-edge Composite shared with the WAMM



Wilson Audio is the industry leader in the area of ultra-low resonance enclosure materials. We learned long ago that non-composite products, such as aluminum, MDF, and plywood laminates, could not provide the combination of rigidity, hardness, and damping necessary to Wilson's demanding design goals. Furthermore, years of empirical listening trials and materials testing, most recently with Wilson's Laser Vibrometer, have shown no single material is ideally suited to all applications. Wilson's use of Laser Vibrometry Analysis, long used in automotive and aerospace applications, allows the team of engineers to measure mechanical vibrations in our cabinets at the microscopic level of nanometers (billionths of a meter). Wilson's proprietary X-material, now in its third generation, is the ideal "launch pad" for woofers and tweeters. S-material has been optimized for the unique demands of the critical midrange.

Alexx's enclosure is constructed primarily from the latest version of X-material, and also uses S-material in the midrange baffles. For the first time, Alexx uses yet a third material—W-material, named for the WAMM for which it was developed. W-material features extraordinary rigidity and damping characteristics, and works extremely well at silencing unwanted energy. It is used in the midrange module transfer point in the Alexx array superstructure to optimize the upper midrange module's coupling to the cabinet. It is painted a special silver to designate its role as Wilson's latest foray into cutting-edge composites.

The Cross Load Firing (XLF) Port System



Alexx joins the Alexandria XLF with its ability to move the port to either the front or rear of the bass enclosure. While this does not change the anechoic behavior of Alexx in the deep bass, it does enable it to interface more seamlessly with a larger number of rooms. Typically, in bass-losy rooms, the port will be located on the rear; within bass-heavy rooms, the port moves to the front of the enclosure.

It's relatively easy to achieve flat frequency response in an anechoic chamber. But, in the real world, the sound of loudspeakers is highly dependent on the room they're in. Room-induced bass nonlinearity is a problem that has generated many solutions. One of the most common is active equalization, often processed in the digital domain. The downside is that insertion of an electronic equalizer into the audio signal produces deleterious audible effects in the rest of the frequency spectrum.

Wilson has always taken a purist approach to bass management, focusing on designs that inherently sound right in a wide range of rooms. Critical room placement by Wilson-trained installers has proved to be the most successful and efficient way to overcome most room-induced colorations.

Dave Wilson conceived the Cross Load Firing Port as an effective remedy for room-induced bass artifacts. An elegantly simple idea, the (patent pending) Cross Load system allows the user to choose either a front or rear firing port configuration.



On the front of the Alexx, just below the woofers, is a distinctive plate. In rooms where the rear-firing option will tend to produce heavy bass, it is simply a matter of removing the front plate and port plug, switching those items to the rear, and attaching the low-turbulence trim to the front, moving the port exit to the front of the Alexx.

Aspherical Propagation Delay

At Wilson Audio, the ultimate measure of a successful loudspeaker is its verisimilitude to live, unamplified music. Two terms to describe the essential character of live music are Dynamic Contrast and Harmonic Expression.

Resolution of Dynamic Contrast is critical to how we hear clarity and speed of transients, and both the macro- and micro-dynamics that we experience in live music. The pluck of a guitar string, the attack of a snare drum, the majestic swell of an orchestral crescendo are all expressions of dynamics. Harmonic Expression describes the ability to accurately reproduce the structure and propagation of overtones that reveal the distinct character of an instrument or a voice.

When Dave Wilson was developing the original WAMM, he discovered that proper alignment of each of the drivers in relationship to the listener is critical to dynamic and harmonic expression. Since that time, extensive listening and in-depth research has confirmed that in order to reproduce Dynamic Contrast and Harmonic Expression accurately, the leading edge of waveforms produced by the woofer, midrange and tweeter must arrive at the listener's ear at precisely the same time. Propagation Delay, the process used to correctly align the drivers, is one of the least understood concepts in loudspeaker design. Recent research has confirmed that the ear/brain mechanism is more sensitive to timing errors than even frequency response anomalies. Most people can hear timing errors between drivers on the order of less than 20 millionths of a second.

Aspherical Propagation Delay describes the unique adjustability of Alexx's modules to precisely align all the drivers in the time domain, in conjunction with the ability to optimize driver dispersion for literally hundreds of potential listening positions. With Alexx, the upper-midrange module features its own alignment block, which, in conjunction with the Alexia-style mid/tweeter array below, provides unprecedented levels of time-domain accuracy.



A holistic engineering approach completely unique to Wilson Audio

Another core value Daryl inherited from his father was the understanding that everything matters. If the design goal is to believably reproduce acoustic music, each design choice, no matter how seemingly small, can enhance or detract from a loudspeaker's ability to sound real. Dave and Daryl, along with their formidable engineering team, are always looking for new technologies in all areas of loudspeaker

performance—whether it is searching for the latest enclosure materials, or drivers possessing musical virtuosity, or pioneering crossover configurations and components, or wire technology, or even the way a type of solder used to connect it all together affects the sound.

It's no surprise, then, while other designers are content to use composites, or carbon fiber, or aircraft grade aluminum in the construction of their loudspeakers—the Wilson Alexx utilizes all of these. Or that an all new state of the art composite straight from the upcoming WAMM project finds its way into Alexx's enclosure, which in turn augments the strategic use of two additional composites: X-and S-materi-

al. Nor should it be surprising that a new cable technology and strategy was used in the crossover, which pushes bass performance to even higher levels. Or that the Alexx features a new



MTM strategy, which it will share with the WAMM, and which pushes the boundaries of midrange beauty and dynamic expression to new levels. Wilson's latest technology in the area of bass drivers—the all-new, proprietary Wilson woofers which

were developed for the WAMM project—debuts in Alexx. These are but a small sample of the factors that make up the new advancements in loudspeaker technology present in Alexx.

Wilson's design culture is intricately holistic.

At Wilson, it's the music that matters. We exist for the sole purpose of designing and building loudspeakers that have the unique ability to convey the ineffable sense of rightness that momentarily suspends disbelief. Wilson believes that as long as you follow a course that honors the music by integrating the best technologies together with the sole idea of looking at the musical result, the more profound the resulting product will be.



Specifications

Enclosure Type Woofer: XLF port, adjustable rear or front firing

Enclosure Type Midrange: Lower: bottom-vented. Upper: Rear Vented

Enclosure Type Tweeter: Sealed

Woofers: One—10.5 inch, (26.67 cm)

One—12.5 inch, (31.75 cm)

Midrange: Two—(1ea.)7 inch (17.78 cm) & (1ea.)5.75 (14.61)

Tweeter: One—1 inch silk dome (2.54 cm)

Sensitivity: 91 dB@ 1 watt at 1 meter @1kHz

Nominal Impedance: 4 ohms, 1.5 ohms minimal @ 2850 Hz

Minimum Amplifier Power: 50 Watts per channel

Frequency Response: +/- 3 dB 20 Hz - 31 kHz

Overall Dimensions: Height—62 9/32 inches, (158.23 cm)

Width—15 3/4 inches, (40.01 cm)

Depth—26 25/32 inches, (68.01 cm)

System Weight Per Channel: 452 lbs each (205.02 kg)

Total System Shipping Weight (approx.): 1300 lbs pair (589.67 kg)



