Project Everest

DD66000

Celebrating JBL’s 60th anniversary, the Project Everest DD66000 is a joyous celebration of music itself.

Project Everest DD66000 Rosewood

The most exquisite musical instrument ever created by JBL expresses the very soul of any musical performance.

Project Everest DD66000 Rosewood

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DD66000

Philosophy

JBL® Milestones on the Road to Audio Perfection

On several momentous occasions in the 60-year history of JBL, our engineers have been given the freedom to pursue pure sonic excellence, wholly unconstrained by cost considerations and other inhibiting factors. Each of the resulting Project systems makes unique contributions to the company's insight into every aspect of the art and science of loudspeaker design. From the influential Hartsfield monaural loudspeaker of 1954 to the most recent of the acclaimed Project K2® systems in 2001, each JBL Project has been a milestone on the road to audio perfection, achieving ever-higher levels of performance. The Project Everest DD66000 loudspeaker system reasserts JBL's technological leadership, design aesthetic and manufacturing prowess for a new generation of music lovers, while literally embodying our passion for music. Project Everest is quite simply the most exquisite musical instrument JBL has ever constructed. The exceptional level of musical fidelity that the system offers is sure to make it an object of intense desire among audiophiles across the globe.

Project Everest DD66000 Cherry

Project Everest DD66000 Rosewood

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Industrial Design

An Aesthetic and Technological Tour de Force

Project Everest DD66000 joins the long line of masterpieces from JBL, extending back to the Hartsfield and the Paragon. Like its legendary predecessors, it will provide inspiration for years to come as a new paradigm for musical realism and groundbreaking design. The distinctive curved surfaces are emblematic of JBL's technical mastery in all areas of loudspeaker construction – innovative styling in the service of superb audio performance. The seamless integration of horn and baffle is a striking design statement and a key element in the system's stunning musicality. The DD66000 reaffirms the goal of JBL founder James B. Lansing "to create the most beautiful home speakers." Merging technology and art, it is both a worthy heir to JBL's 60-year legacy and a harbinger of things to come.

Project Everest DD66000 Industrial Designer

Daniel Ashcraft

(President and Creative Director, Ashcraft Design)

Project Everest DD66000 is the latest achievement in the highly productive 20-year collaboration of Greg Timbers, JBL's chief engineer, and Daniel Ashcraft, chief creative officer of Ashcraft Design. Timbers, who had been tinkering with homemade loudspeaker designs since the age of 13, joined JBL in 1972 with a master's degree in acoustics from UCLA. Ashcraft, a graduate of the Art Center College of Design, founded his own product and interior design firm in 1985. The two first joined forces to produce the JBL Project Everest DD55000 system of 1985. A hallmark in design, engineering and performance, the DD55000 set the stage for the team's Project K2 S9500 in 1990 and its successor, the K2 S9800, in 2001.

"With Project Everest DD66000, we were seeking the perfect balance between the enclosure design and the acoustical vision." Daniel Ashcraft

Project Everest DD66000 Cherry

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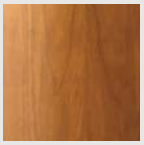
DD66000

Exterior

Handcrafted in Your Choice of the Finest Veneers



Project Everest DD66000 RW Rosewood

- Real Wood Veneer
- Cabinet: Rosewood
- Woofer Baffle: Black Leather
- Grille Cloth: Grey

Project Everest DD66000 CH Cherry

- Real Wood Veneer
- Cabinet: Cherry
- Woofer Baffle: Black Leather
- Grille Cloth: Grey

Project Everest DD66000 EB Ebony

• Real Wood Veneer
• Cabinet: Ebony
• Woofer Baffle: Black Leather
• Grille Cloth: Grey

Project Everest DD66000 MA Maple

• Real Wood Veneer
• Cabinet: Maple
• Woofer Baffle: Cashmere Leather
• Grille Cloth: Light Grey

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System Design

An Augmented Two-Way System – Because Integration Is Everything

"A properly designed two-way speaker is the ideal loudspeaker." – Project Everest DD66000 was developed by JBL Chief Engineer Greg Timbers to demonstrate the truth of this simple statement. A bass driver and a high-frequency compression driver cover the entire audible range. An additional woofer handles the extreme low end and a second compression driver acts as a super-tweeter. As a result, the DD66000 is most accurately described as an augmented two-way system. All components are carefully integrated to achieve an imperceptible transition from the deepest notes to ethereal highs with incredibly flat response. At any frequency and volume level, linearity is maintained to deliver all musical information in a consistent timbre. Music floats freely, as technology and loudspeakers seem to disappear.

Project Everest DD66000 Chief Engineer
Greg Timbers
(Chief Engineer, JBL)

"The DD66000 system, like many before it, is comprised of the finest components, a truly stunning visual design and top-notch craftsmanship. All the system knows how to do is make beautiful music. While it delivers every bit of content and detail incorporated in the original recording, it does so with passion. Never before in my history in the hi-fi industry have I come across a system that is so competent at being a conduit for music as opposed to being just a loudspeaker." Greg Timbers

Project Everest DD66000 Rosewood

Basic Configuration

Project Everest DD66000 is an augmented two-way speaker system, a classic JBL design. One 380mm (15") woofer crosses over to a horn-loaded compression driver at 700Hz, the midpoint of the audio spectrum. A second 380mm woofer reinforces bass from below 30Hz to 150Hz, while an ultrahigh-frequency driver operates exclusively in the supersonic realm above 20kHz.

The choice of crossover points minimizes the sonic degradation that can be caused by even a high-quality dividing network. The woofers are phased to achieve uniform directivity across their entire operating range, greatly enhancing low-end realism. With unparalleled dynamic linearity and harmonic distortion levels approaching those of a fine amplifier, we know of no loudspeaker system better able to realistically reproduce the subtlest nuances of any musical source.

Enclosure Construction

Project Everest's exquisite and flawlessly finished enclosure, designed by Daniel Ashcraft, is itself an integral system component, playing a key role in overall performance.

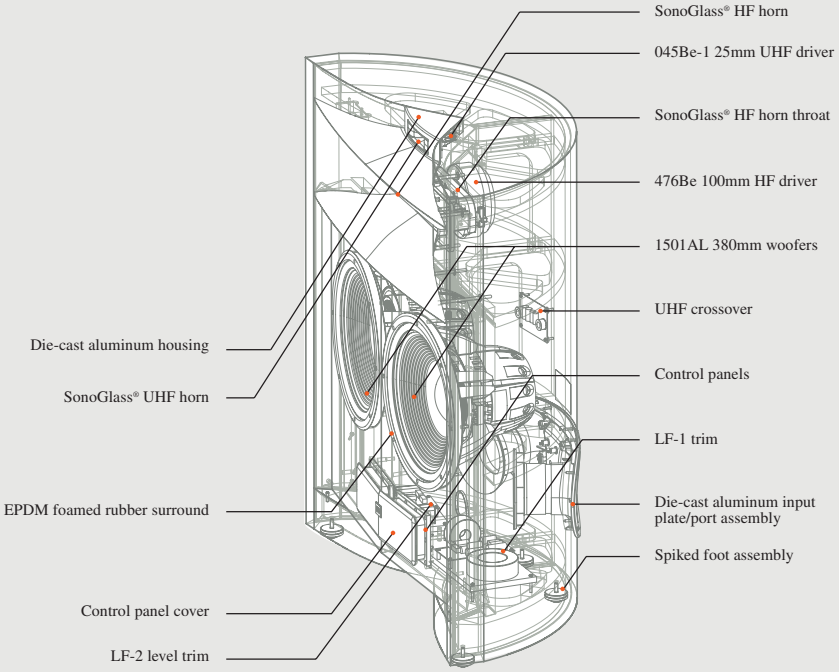
The elegant curves of the front baffle, which recall the legendary design of JBL's Hartsfield and Paragon speakers, form the side walls of a large high-frequency horn, along with top and bottom flares molded of high-impact SonoGlass®.

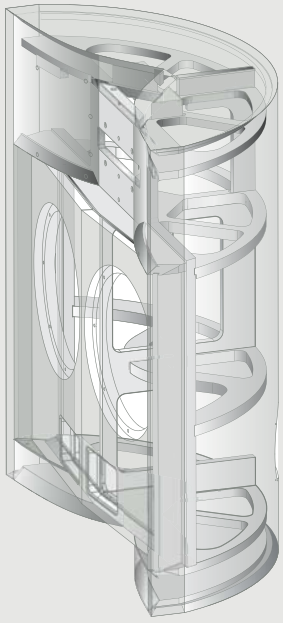
The woofer baffle is a separately braced six-sided assembly, incorporating two MDF panels with a total thickness of 45mm in order to support the dual 380mm woofers. The curved panels, created in a proprietary manufacturing process, are joined to the flat MDF panels with a complex internal bracing system.

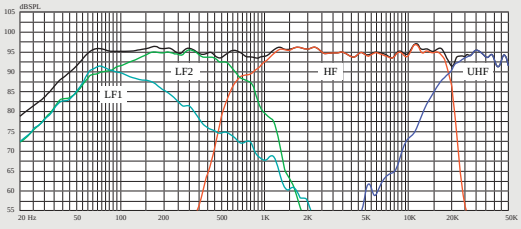
The genuine leather that is applied to the baffle lends a luxurious look, while also absorbing/dispersing unwanted sound reflections from the surface.

SonoGlass®

SonoGlass® is an extremely dense and mechanically inert compound that is made using high-temperature and pressure-molding technology. The extreme heat resistance, low resonance, inertness and rigidity of the substance are properties that have been optimized for acoustic applications. Its thermal stability and imperviousness to chemical reaction make it possible to produce durable, high-precision horns with optimal manufacturing control of the horn flare, for a smooth energy transmission path. The high sensitivity, low distortion and high resolution of JBL compression drivers are enhanced further in combination with the SonoGlass horns. In the Everest DD66000, SonoGlass is used in the upper and lower lips of the HF horn, the HF horn throat, and the UHF horn to produce clear, detailed sound without resonance or coloration.







On-axis response of the DD66000 system and each of the transducers through its crossover network (2.83V @ 1 m)

Custom-developed drivers, designed exclusively for Project Everest DD66000

Project Everest

DD66000

Transducers

1501AL Low-Frequency Driver

Featuring a 380mm (15") pulp-cone woofer, alnico 5DG magnet and 100mm (4") voice coil in a thick-wall cast-aluminum frame, the 1501AL driver delivers impressively deep, visceral bass and open, lively mid-bass sound that will not degrade at any volume level.

Alnico was chosen because of its stable operating point. This material is insensitive to temperature changes and back-EMF from the coil. JBL has overcome the tendency of alnico to demagnetize at high power levels by utilizing a massive shorting ring at the base of the motor assembly.

The 41mm gap provides a uniform flux field for the voice coil, causing inductance to remain essentially constant over the entire operating range of the driver. This effectively eliminates inductance modulation, a common source of distortion.

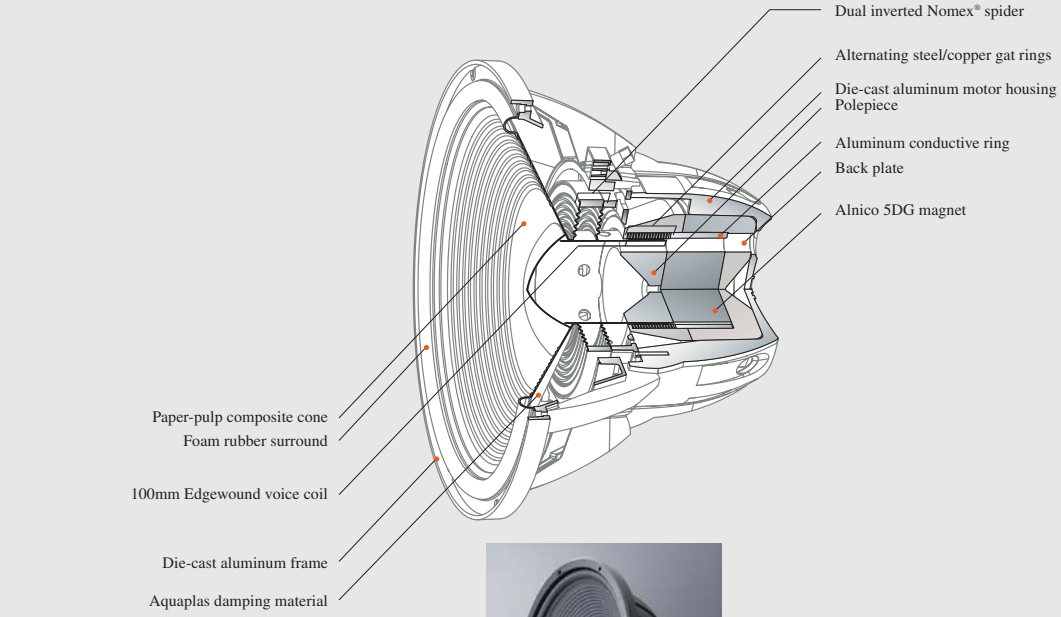
The 1501AL woofer cone is a layered paper-pulp matrix with proprietary Aquaplas damping, which delivers improved pistonic motion across the woofer's operating bandwidth, and controlled cone breakup beyond it.

The outer suspension is made of EPDM foamed rubber, which has the longevity and frequency response characteristics of traditional rubber surrounds, but with a low density that is very close to that of foam surrounds. Low-loss EPDM material was chosen to preserve the crucial transient detail of musical signals.

Dual Nomex® spiders help to cancel out even-order distortion. All suspension elements are tailored for maximum mechanical displacement linearity.

The forced convection cooling of JBL's proprietary Vented Gap Cooling™ technology helps lower the operating temperature of the coil during program peaks, while additional vents enable the pumping action of the spiders to create even greater air circulation. This fully vented frame and motor design also serves to minimize the back pressure under the dome and spider, helping to reduce harmonic distortion to even lower levels.

Taken together, the cutting-edge technologies of the 1501AL reduce harmonic distortions at both high and low acoustic outputs, reduce power compression and deliver a more consistent spectral balance, regardless of input levels. Perhaps most important for people who prefer their music at concert-level volumes, power handling is improved by as much as 25% over earlier low-frequency drivers.



1501 AL Low-Frequency Driver

476Be High-Frequency Driver

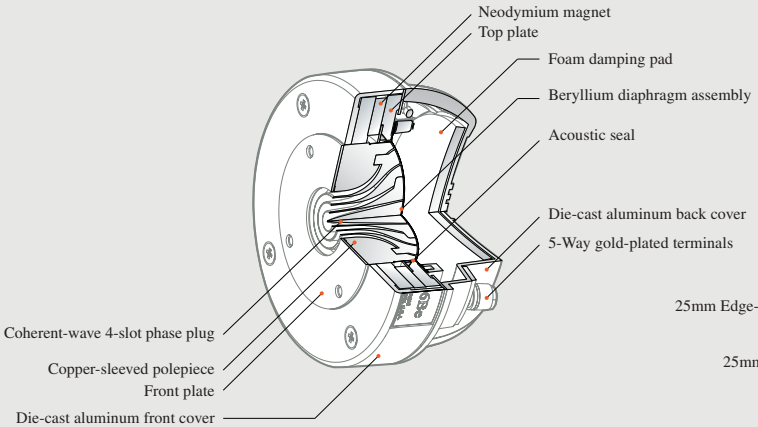
With a 100mm (4") pure-beryllium diaphragm, a 100mm (4") aluminum edge-wound voice coil and a rapid-flare, coherent-wave phase plug, the 476Be high-frequency driver delivers astonishing high-end performance with minimal distortion and power compression, even at the highest output levels.

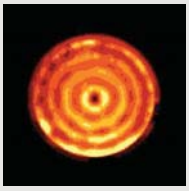
The diaphragm is formed of pure beryllium foil, manufactured with a proprietary high-temperature, pressure-forming process. This process enables the integrated JBL diamond-pattern surround to be formed as one piece with the dome. Compared to other methods, forming the diaphragm out of sheets of beryllium foil yields greater reliability and resistance to failure due to fatigue.

Pure beryllium has proven to be superior to aluminum, magnesium, titanium and other premium diaphragm materials. Because of its far greater stiffness-to-density ratio, it responds to the highest frequencies with more precise and consistent pistonic action and resists modal breakup better than any other widely used material.

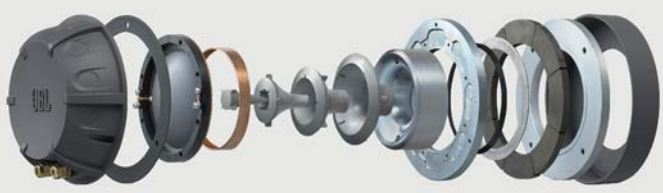
In place of a conventional copper-plated polepiece, the 476Be combines a powerful neodymium rare-earth motor structure with an innovative, high-purity copper-sleeved polepiece to maintain gap flux and significantly enhance electrical conductivity without compromising on size and weight. Better conductivity directly translates into lower coil inductance, more effective heat dissipation, reduced dynamic power compression and greater output at frequencies of 15kHz and above.

The 476Be's unique coherent-wave phasing plug is precision-die-cast of zinc to ensure dimensional and structural stability under high heat and acoustic pressure. The four-slot coherent-wave design shapes the wave output to deliver a true coincident wave front to the Bi-Radial® horn, producing exceptionally smooth frequency response and reducing secondary harmonic distortion by up to 6dB, relative to earlier designs.





The neodymium magnet assembly maintains a minimum gap-flux density of approximately 18,000 gauss



476BE High-Frequency Driver and Horn

045Be-1 Ultrahigh-Frequency Driver

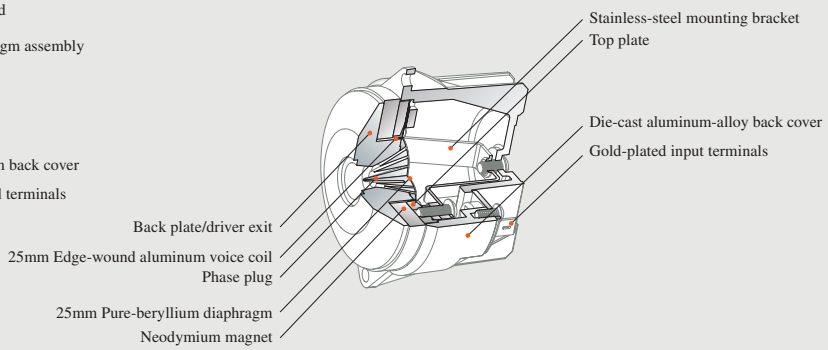
With a 25mm (1") pure-beryllium diaphragm and 50mm (2") neodymium magnet structure, the ultrahigh-frequency 045Be-1 is considerably smaller than the high-frequency 476Be.

The pure-beryllium diaphragm is less than 0.04mm thick and has a mass of only 0.1 gram. The single-layer aluminum-ribbon voice coil is wound without a former and is attached directly to the diaphragm. The driver employs the smallest annular-slit phasing plug that JBL has ever designed.

The ribbed structure of the die-cast aluminum back cover contributes to the driver's high rigidity and efficient heat dissipation. Back pressure from the diaphragm is effectively absorbed and controlled to prevent subtle internal vibration, ensuring pure resonance-free reproduction of supersonic frequencies.

The moving system's extremely low mass and high magnetic-flux density combine with the high rigidity of beryllium to produce superb response that is very smooth from above 8kHz to beyond 50kHz.

The SonoGlass Bi-Radial horn is scaled to achieve constant directivity, maintaining a coverage angle of 60 degrees in the horizontal plane and 30 degrees in the vertical plane over the frequency range from 10kHz to 50kHz.



045BE-1 Ultrahigh-Frequency Driver and Horn

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DD66000

Component Integration

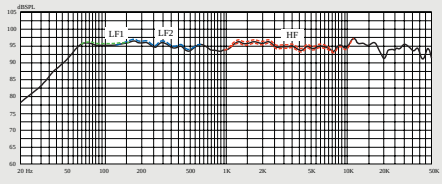
The crossover network produces a 24dB-per-octave transition at 700Hz between one 1501AL low-frequency driver and the 476Be high-frequency driver, allowing more precise control over the system's directivity pattern. With two woofers assigned to the bass frequencies, the system's speed, control and power from the lowest to the highest frequencies are unmatched.

Project Everest's crossover network consists of four high-quality low-loss boards – one optimized for each transducer – separately mounted within the enclosure, to minimize potential crosstalk. Together, they deliver exceptionally smooth system impedance to the driving amplifier and permit the DD66000 to create an accurate, unencumbered three-dimensional sound field with consistent acoustic characteristics at every listening level.

Terminals and System Controls

The DD66000 system features separate low- and high-frequency rear input terminals for bi-wiring/bi-amping and front-mounted controls for low- and high-frequency trim, woofer orientation and bi-amplification.

- The low-frequency level trim enables fine-tuning of mid-bass and midrange output levels with no series loss, to compensate for varying room characteristics.
- The high-frequency level trim adjusts attenuation to the 476Be driver in three steps from –0.5dB to +0.5dB.
- The woofer orientation switch configures system pairs to operate as either left or right speakers for proper imaging.

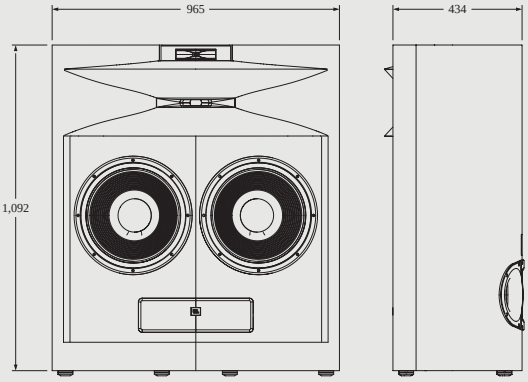


System response showing adjustment range of controls

Specifications

Transducers	
LF/LLF	380mm pulp-cone woofer (1501AL) x 2
HF	100mm beryllium compression driver (476Be)
UHF	25mm beryllium compression driver (045Be-1) + SonoGlass® Bi-Radial® horn
Max. Recommended Amplifier Power	500W (RMS)
Frequency Response	45Hz – 50kHz (–6dB)
Low-Frequency Extension	32Hz (–10dB)
Nominal Impedance	8 Ohms
Sensitivity	96dB (2.83V@1m)
Horn Directivity (Horizontal x Vertical)	HF 100º x 60º UHF 60º x 30º
Crossover Frequency	150Hz (LF1/LP only), 700Hz, 20kHz (UHF/HP only)
Control Function	HF Level Control (–0.5dB/0dB/+0.5dB) LF Damping Control (Low/High) LF/HF Drive Mode Switch (Normal/Bi-Amp) System Orientation Switch (Left/Right)
Dimensions	965 (W) x 1,109 (H) x 469 (D) mm, including feet but not including spikes
Weight	137kg (without grille)/142kg (with grille)

Dimensions in mm



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