

JBL

L SERIES





BALANCING INNOVATION AND TRADITION.

NARROW BAFFLE. WIDE DISPERSION.

Loudspeaker engineers face a dilemma: To get high output bass, you need large diaphragm area, large enclosure volume, and large baffle. But to get wide horizontal dispersion, essential for an accurate stereo image, you must restrict baffle width and diaphragm diameter.

Consequently, loudspeakers typically fall into two basic groups: Large high output varieties and small wide dispersion types. JBL sought to break through and deliver both wide dispersion and dynamic bass.

L series is the answer. Baffle width is restricted by utilizing multiple high-performance drivers and developing enclosure volume in height and depth. This way, both wide dispersion and excellent low frequency response are achieved.

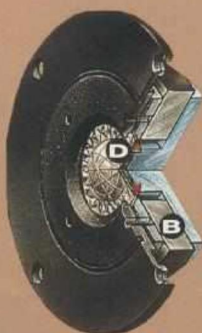
NEW DRIVERS WITH A PROUD HERITAGE.

The drivers in the L Series are all new direct descendants of the JBL compact studio monitors that for decades have been the standard of recording professionals. These new drivers retain advanced exclusive JBL technologies, and deliver even greater accuracy, lower distortion and higher dynamic range than their predecessors.

TRUE MUSICAL REALISM.

The combination of JBL studio monitor lineage, highly refined driver technology, and breakthrough enclosure design results in amazing sonic performance. Clarity from the highs, articulation from the midrange, and the solid foundation from the bass combine with the wide dispersion and time-coincident driver alignment to deliver a musical sound stage that is truly remarkable. And freedom from power compression — a traditional JBL studio monitor characteristic — means that not only will the L Series deliver correct timbre and balance, but the dynamics of a live performance, too.

HIGH FREQUENCY DRIVER



L7 LOW FREQUENCY DRIVER

FEATURE

DRIVERS

- A Cast Aluminum Frames
- Symmetrical Field Geometry™ (SFG)
- B Precision-machined magnetic parts
- C Vented pole-piece
- D 25 mm (1 in) Pure titanium high frequency dome
- 125 mm (5 in) Mineral-filled polypropylene midrange driver cone
- Composite bass and mid-bass cones
- E 300 mm (12 in) Aquaplas™ bass cone (L7)
- Microcell Laminate™
- F surrounds and
- G dust domes

ENCLOSURES

- Slanted baffle
- Narrow, floor-standing towers (L3, L5, L7)
- Tuned port enclosure
- Structural augmentation
- High-Density Fiberboard (HDF) baffle

ELECTRONICS

- High definition dividing networks

L SERIES PERFORMANCE INDEX

PURPOSE	BENEFIT
Provides strength and rigidity for precise driver operation; will not disturb magnetic fields like steel frames do.	Hold their shape better and longer than stamped parts; preserve driver accuracy and efficiency by preventing magnetic leakage.
A proprietary JBL design that creates a uniform magnetic field around the voice coil, assuring linear cone motion.	Reduces harmonic distortion by as much as 90 percent compared to conventional drivers, so you hear tight, clean bass.
JBL's own manufacturing operations machine these parts to the tightest tolerances in the industry.	JBL precision drivers operate efficiently, accurately and free from distortion.
Dissipates heat generated in the voice coil; equalizes pressure behind diaphragm at all signal levels.	Increases power handling, prolongs driver life, maintains linear excursion of driver at all loudness levels.
Forms both dome and diamond-pattern surround from a single piece of titanium, taking advantage of this exotic metal's strength and rigidity for flat frequency response to beyond 27 kHz.	Reproduces well beyond the range of human hearing with accuracy and freedom from distortion, because these delicate sounds that you don't hear add harmonic character to the sounds you do.
Combines polypropylene, minerals and other materials to form a strong, low-mass cone with high internal damping for excellent transient response and low distortion.	Delivers the highly important mid frequencies accurately and well-articulated, revealing all the details and nuances of vocals and solo instruments.
Combines fiberglass, felt and special stiffening agents to produce highly rigid, lightweight cones that also have high internal damping, with performance optimized for the frequency range of each driver.	Provides highly-accurate bass with fast transient response for solid punch, clarity and depth that you can feel.
Impregnates felt and fiber with a space-age coating that couples with the material to form an advanced composite material with very high stiffness-to-mass ratio.	Delivers high-level, intense bass response without break-up or distortion, even at high listening levels.
The first drivers to utilize a new JBL compound superior in its ability to dampen internal energy.	Dampens internal energy at diaphragm terminations, lowering distortion and preserving musical clarity.
Aligns planes where sound originates in each driver, coordinating the arrival of low and high frequency sounds to the listening position.	Produces accurate sound stage, properly positioning the musicians.
Creates non-parallel walls that break up internal standing waves.	Prevents low frequency distortion caused when frequencies corresponding to the internal dimensions of the enclosure resonate inside the enclosure.
Combines the advantages of a narrow baffle with drivers at ideal height.	Opens horizontal dispersion and puts drivers at ear level for natural sonic balance and open, three-dimensional sound stage.
Improves efficiency of bass driver in the low bass region through a vent precisely tuned to the cabinet and driver.	Extends low frequency response, increases overall efficiency of the bass driver, improves transient response.
Lock-mitre edges and internal bracing increase cabinet's rigidity.	Prevents cabinet from generating unwanted energy caused by internal forces produced by the drivers; results in lower distortion.
Provides baffle material that absorbs internal vibration.	Provides a stable platform for the drivers, preventing energy internally generated by the drivers from reaching the rest of the cabinet; results in lower distortion.
Prevents distortion while preserving sound's spatial characteristics through use of advanced, high-quality components such as polypropylene bypass capacitors, heavy-gauge pure copper wire, five-way binding posts, and low-distortion inductors.	Directs specific frequencies to each driver while maintaining an easy-to-drive, consistent load for the amplifier.

The roots of JBL are intertwined with the beginnings of the audio industry.

For it was in the 1920's that James B. Lansing, innovator, engineer, entrepreneur, and founder of JBL, developed the revolutionary speakers that made "talking movies" a reality.

Nearly seven decades later, JBL remains one of the few audio firms anywhere in the world that does it all: JBL designs, engineers, builds, and tests essentially every part of its speakers, from drivers to cabinets. And it does so for virtually every loudspeaker application: professional music, commercial sound, home and mobile entertainment.

Musicians, recording engineers, sound editors and acoustical architects around the world rely upon JBL. That's because JBL precision loudspeakers consistently deliver clarity, punch, and accuracy with the headroom to assure that the sound they reproduce is absolutely faithful to the artist's intent, without adding any coloration, or subtracting any detail.

Overwhelmingly, there is one brand of speakers audio professionals prefer and use: JBL.

The L7 (on the cover) uniquely utilizes multiple small drivers on an elevated narrow baffle coupled to a low bass driver mounted on the side of the enclosure for a truly spectacular combination of wide dynamic range, excellent sound stage, and extended frequency response.

L SERIES SPECIFICATIONS

	L1	L3	L5	L7
RECOMMENDED POWER				
The ideal amplifier power range (RMS per channel) for this loudspeaker.	35-200 watts	35-250 watts	35-300 watts	35-450 watts
IMPEDANCE				
Nominal value of a speaker's resistance to the electrical current produced by an amplifier.	8 ohms	8 ohms	6 ohms	6 ohms
SENSITIVITY				
How efficiently a speaker converts input power into sound. The higher the number, the louder the speaker will play.	87 dB 1 watt at 1 meter	89 dB 1 watt at 1 meter	90 dB 1 watt at 1 meter	91 dB 1 watt at 1 meter
FREQUENCY RESPONSE				
The range between the lowest and highest frequencies a speaker is capable of reproducing with uniformity.	47 Hz - 27 kHz ± 6 dB	35 Hz - 27 kHz ± 6 dB	30 Hz - 27 kHz ± 6 dB	30 Hz - 27 kHz ± 6 dB
CONFIGURATION				
	2-way	2-way	4-way	4-way
LOW FREQUENCY DRIVER	165 mm (6½ in)	200 mm (8 in)	200 mm (8 in)	300 mm (12 in)
MID-BASS DRIVER	-	-	165 mm (6½ in)	200 mm (8 in)
MIDRANGE DRIVER	-	-	125 mm (5 in)	125 mm (5 in)
HIGH FREQUENCY DRIVER	25 mm (1 in) pure titanium dome	25 mm (1 in) pure titanium dome	25 mm (1 in) pure titanium dome	25 mm (1 in) pure titanium dome
CROSSOVER POINTS	3 kHz	3 kHz	170 Hz/900 Hz/ 4 kHz	180 Hz/900 Hz/ 4 kHz
ENCLOSURE				
	Tuned port	Tuned port	Tuned port	Tuned port
STYLE	Bookshelf	Floor-standing	Floor-standing	Floor-standing
FINISH	Black lacquer on ash veneer	Black lacquer on ash veneer	Black lacquer on ash veneer	Black lacquer on ash veneer
H x W x D	Millimeters	401 x 209 x 254	860 x 244 x 304	953 x 244 x 330
	Inches	15 7/8 x 8 1/4 x 10	33 7/8 x 9 5/8 x 12	37 1/2 x 9 5/8 x 13
WEIGHT	9.1 kg (20 lb)	13.6 kg (30 lb)	24.5 kg (54 lb)	34.1 kg (75 lb)

JBL continually engages in research related to product development and improvement. Because of this, new materials, production methods and design refinements may be introduced into existing products without notice. For this reason, any current JBL product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise stated.



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