JBL

250Ti CLASSIC LOUDSPEAKER SYSTEM



Since the beginning of high fidelity reproduction, some 1400 manufacturers have introduced nearly 38,000 different audio products (source: *Orion Blue Book Audio 1990* trade-in guide, page 6, published by the Orion Research Corporation). Out of that total, only a few elite products have gone from component to audio classic. Nowhere is there a more conspicuous lack of classics than in the loudspeaker category, partly because speaker design resembles fashion in many respects. Fads come and go, form dictates function, and logic takes a back seat to ego.

For a speaker to be considered a classic, it must be as least as desireable today as it was when it was introduced. That desireability will often be reflected in the real value of the product. Its original design must be forward thinking to become timeless. It should be built by people who are nothing less than artisans. And above all, it should be able to compete with or outperform current designs - even with source materials and electronics that were nonexistent when the speaker was introduced.

"...take any musical performance I know of play it through this speaker at a natural level, and get a musically accurate result"

-AUDIO, 1985, JBL25on

The ideal classic speaker has still one more quality: acquirability. Benefiting from ongoing progress in manufacturing as well as technology, it should be a better speaker for the same money, rather than the same speaker for more money. It should not be inflated far beyond its original value simply because it has been around for a while.

All things considered, loudspeakers qualifying as true classics are a rare breed. That an inordinate number of them bear the name JBL narrows the field of contenders even further. All this places the JBL 250Ti Classic in a very singular class, bringing new proof to the old adage - it is always lonely at the top

Like most legends, the JBL 250 didn't start as one. The original design brief simply called for "a loudspeaker which combines, with minimal compromise, the attributes of tonal accuracy, transient accuracy, high dynamic range, low distortion and accurate, stable imaging".

But this unassuming engineering specification raised a critical issue. When juggling the intricate mix of transducers, networks and enclosures that form the finished product, the phrase "there will always be tradeoffs" served as a ground rule for the speaker designers. No existing loudspeaker could satisfy more than a few of these critical parameters.

With over 40 years experience in loudspeaker engineering and manufacturing, and an unprecedented list of achievements in professional audio, JBL was eminently qualified to overcome the limitations of present state-of-the-art design in order to reinvent the speaker. The 250 class of loudspeakers is testimony to the success of the project.



"The speaker's power-handling capabilities are superb...the 250Ti can provide excellent detail during very soft passages and does not change in sonic character as loudness increases. Few speakers at any price provide similar dynamic coherence or a similar ability to "cut loose" to full, mass-orchestral levels without strain and with a single amplifier."

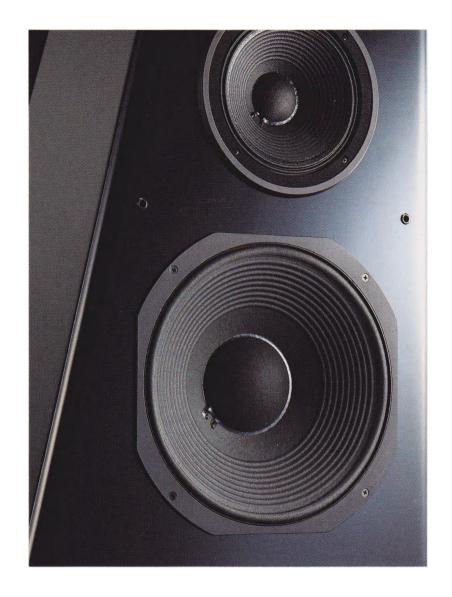
-AUDIO, 1985, JBL 250Ti

In returning to the drawing board, the JBL engineering team took nothing for granted. JBL transducers are renowned for their unusually wide bandwidth, capable of outstanding performance beyond the upper limits of standard low, mid and high frequency drivers. A loudspeaker system with two or three JBL transducers would be able to produce seamless response even with little network interaction. The 250Ti Classic utilizes four dedicated drivers, each of them operating only in the region where they exhibit their optimum on-axis and power response.

As the first array of this type incorporating JBL transducers, the 250 driver complement is possibly the most spectrally correct, lowest distortion acoustical assembly ever conceived. The network is equally advanced, with crossover slopes carefully selected for minimum delay error between drivers and ideal power output summation at crossover points. Capacitors in series with midrange and high frequency drivers are the best possible with polypropylene dielectric. Further, these already outstanding capacitors are bypassed with smaller polystyrene capacitors to make them more linear and distortion free. Together, the 250Ti Classic network and transducer subsystems achieve most of the tonal, transient and dynamic performance characteristics originally established as the parameters of the ideal loudspeaker system.

The 250 enclosure is designed around its drivers to create a platform that potentially brings the loudspeaker even closer to perfection. The physical form minimizes diffraction effect and at the same time provides the correct amount of acoustical loading to each driver. Its shape and internal construction ensures that it remains acoustically inert and mirror-imaged pairing stabilizes the stereo image.

The orientation of the baffle of the 250 (combined with the high frequency mounting platform) substantially reduces timing error. With the acoustical centers of all drivers aligned, ideal phase relationships and hence imaging characteristics are maintained over a comfortable listening area. Coupled with the vertical, mirror-imaged driver arrays, the end result is a stereo image that many listeners will not have heard with recorded music - regardless of their prior loudspeaker evaluation experience.



Intact low frequency information can draw the listener into the recording experience itself and few systems can muster the depth and authority along with the necessary accuracy. The 250 is one of them. The primary low frequency system, tuned to the main enclosure, is far more potent than much of what is called subwoofers today. The midbass transition region are handled by a dedicated smaller low frequency transducer in its own isolated enclosure.

"They sound as good at background levels as when attempting to re-create the sound of an orchestral concert...there can be no doubt about the great dynamic capabilities of these speakers..."

-Stereo Review, ms, jbl 25<m

To protect it from interference, the midrange is also isolated in a subenclosure. The most developed version of the 125 mm (5V4 in) device proven in recording studios around the world, the 250 midrange driver provides the decisive voicing that has become a JBL trademark. Its remarkably linear frequency characteristics allow for a perfectly neutral transition down to the low frequency drivers and up to the 25 mm (1 in) dome high frequency driver, which extends system response smoothly beyond the limits of human hearing. Over the years, the dome tweeter has been improved several times. In the latest incarnation the single-piece dome/surround is made from extremely hard nitrite-treated titanium. As a result it behaves like an ultra-light sandwich-dome without the inherent drawbacks known to traditional sandwich-type high frequency drivers.

Since its introduction more than a decade ago, the JBL 250 has gone through numerous modifications and improvements. In this way the 250 series has served both as a working laboratory and a proving ground for new JBL engineering achievements. Advances that demonstrate the ability to improve performance - no matter how great or slight - are duly incorporated in the latest iteration of the 250 concept.

The most tangible proof of the overall validity of this concept comes from two sources: the audio reviewers who enthusiastically embrace each new 250 series development and the audiophiles who just as enthusiastically continue to invest in them. For JBL this is a gratifying confirmation of its long-standing development philosophy: when a product is perfect, make it better.

"Rated absolutely first class, a reference."

-Stereoplay, 1989, jbl250t%

The JBL 250Ti Classic is the finest version of the series yet produced, making it one of the most remarkable speakers of all time. The myriad of JBL technical advances incorporated into it are well known to audio enthusiasts and endorsed by audio reviewers.

Suffice to say the 250Ti Classic is a much different speaker than the original 250 and a very meaningful upgrade from the first acclaimed 250Ti and the subsequent 250Ti Limited Edition. The visual and aural impact of this outstanding creation escapes mere description. The many attributes of the JBL 250Ti Classic can only be fully appreciated by a visit to the nearest authorized JBL dealer. There you will be able to judge for yourself why so many people around the world consider this speaker to be one of the very few ever to become a Classic. And why the craftsmen at JBL are proud to continue to build Classics.

SPECIFICATIONS

Maximum recommended amplifier power:

400 watts per channel

Nominal impedance: 6 ohms

Crossover Frequencies: 400 Hz, 1.4 kHz, 5.2 kHz

Sensitivity SPL, 2.83 V @ 1 meter: 90 dB

Low frequency driver:

360 mm (14 in) Symmetrical Field Geometry (SFG) transducer with 100 mm (4 in) edgewound copper voice coil and aquaplas laminate cone

Midbass driver:

200 mm (8 in) SFG transducer with 50 mm (2 in) edgewound copper voice coil and aquaplas laminate cone

Midrange driver:

130 mm ($\overline{5}$ in) transducer with 25 mm (1 in) edgewound copper voice coil and filled polypropylene cone

High frequency driver:

25 mm (1 in) edge-driven titanium nitrite diaphragm 25 mm (1 in) aluminium voice coil and built-in cooling assembly

Dividing network:

Bi-wirable; switchable upper frequency attenuation

Wiring: Internally wired with Monster Cable®

Dimensions:

Height: 1321 mm (52 in)
Width: 572 mm (22.5 in)
Depth: 362 mm (14.25 in)
Weight: 68 kg (150 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.

JBL AND HARMAN INTERNATIONAL

JBL is part of the Harman International audio companies, a group with a common purpose: combining technology with a love of music to manufacture audio products that provide new levels of satisfaction, performance and value.

To promote diversity and creativity, JBL operates independently in research and development. When it comes to translating the results of these efforts into actual consumer and professional products, JBL draws on the full combined strength of the Harman companies, which includes one of the world's most advanced manufacturing facilities. The result of this teamwork is that JBL's renowned excellence in engineering is successfully carried through to each individual product, regardless of its application or price range.

As new audio concepts and technologies are pioneered, the partnership of JBL and Harman International guarantees that consumer and professional audio users everywhere will be able to enjoy their full benefits.

IBL

250 Ti
CLASSIC

Serial Number: 20001 R
Custom crafted in the U.S.A. at

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Northridge, California
91329



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HA Harman International Company

