AUDIO FILE

Floorstanding three-way loudspeaker
Made by: JBL Inc/Harman Luxury Audio Group, Northridge, CA
Supplied by: Karma-AV, UK
Telephone: 01423 358846
Web: www.jblsynthesis.com; www.karma-av.co.uk
Price: £70,000

JBL Project Everest DD67000

JBL's flagship monitor has been upgraded with new bass drivers, improved crossover parts and a beefed-up enclosure. Strap yourself down and be prepared to be thrilled… Review: **John Bamford** Lab: **Keith Howard**

At the pinnacle of JBL's loudspeaker range, the Everest is where Harman International's top design engineers showcase their latest driver technologies. It's a monster of a speaker weighing 142kg and priced at a whopping £35k *each*, its 250 litre enclosure 1110mm wide to accommodate two 15in drivers side by side. The cabinet is unusually shallow, however: just 470mm front-to-back. So while it doesn't require an enormous listening space, a room does need to be adequately wide in order to space a pair apart satisfactorily.

The Everest has been JBL's flagship 'Project' speaker for nearly three decades [see boxout], this recent DD67000 model superseding the DD66000 of 2006. It might be considered the 'big daddy' of JBL's K2 S9900, whose affecting sound quality has stayed with me ever since we reviewed it [*HFN* Aug '10].

TWIN BASS DRIVERS

Carried over from the out-going Everest model are the speaker's two horn-loaded beryllium compression drivers: the 100mm diameter 476Be high frequency unit which operates from 850Hz to 20kHz and the 25mm 045Be-1 'UHF' supertweeter, working up to a claimed 60kHz. The K2 features the same beryllium UHF driver, married with JBL's slightly less costly 476Mg high frequency driver, which employs a 100mm magnesium diaphragm.

The speaker's curved baffle provides the side-walls for the main high-frequency horn. Top and bottom horn flares are accomplished by the attachment of precision moulded Sonoglass horn 'lips' to the enclosure's upper surface. The UHF driver is in a separate Sonoglass horn which is mounted to a diecast aluminium housing.

What makes the Everest significantly different from a K2, of course, is the inclusion of *two* rather than one 15in woofer. And JBL's 1500AL-1 – featured in the K2 and the previous Everest – has been substantially re-engineered here.

The new 1500AL-2 is housed in a cast aluminium frame and features a three-layer laminated cone comprising an inner and outer layer of pure pulp with an inner foam core. Claimed to give a more taut and articulate LF response down to 29Hz (–6dB in half space), it also features a newly designed accordion-pleated poly/cotton surround for 'a more consistent tonal balance at any volume'. Its 4in voice coil is immersed in an Alnico 5DG magnet, while a copper and steel laminated top plate contributes to a more linear motor function, says JBL, along with inherently lower distortion [see Lab Report, p23] and greater immunity to temperature changes.

> 'The timbre and transient attack of instruments is *shockingly* real'



RIGHT: The 250 litre enclosure has two 380mm drivers, one operating below 150Hz, the second crossing over to a horn-loaded compression driver augmented by a supertweeter

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To exploit the new bass drivers, the Everest's 45mm-thick hybrid baffle, made from layers of birch plywood and MDF, has been strengthened with a covering of carbon fibre cloth.

FINE ADJUSTMENT PROVISION

The basic configuration, then, is what JBL historically has referred to as an 'augmented two-way'. In the 1950s and '60s, JBL primarily built two-way systems with a 12in or 15in woofer crossed over to a large-format compression driver/horn combination. Some of the systems would be augmented by a UHF driver: in days past, JBL's 075 ring radiator operating above 8kHz. Such systems would have only a single crossover point in the middle of the audio range, to minimise sonic degradation caused by the dividing network. In the DD67000 this occurs at 850Hz, as one of the woofers is blended to the 476Be compression unit. Both woofers operate below 150Hz, but only one of them extends up to the midrange crossover point. The second woofer operates solely at LF to around 150Hz, where it is rolled off at 6dB/octave.

The cabinet is ported at the rear with a tuning frequency of 32Hz. Two 100mm-diameter flared ports are combined with the input connections on a three-piece diecast aluminium structure. Take off the grille and you'll find a removable panel behind which are linking bars to determine which of the woofers operates up to the 850Hz crossover point (this should be set to be the innermost driver) and further links to disable the network for active drive with an external electronic crossover.

An HF switch is provided to tweak the 476Be transducer by approximately ±0.4dB over the 1-8kHz range. A second switch cuts or boosts the output level of the low-range woofer by 0.5dB in the 40-120Hz range, for in-room tuning.



SCALING EVEREST

The lineage of JBL's high-end 'Project' loudspeakers – such as the K2 and this mighty Everest – dates back to the Lancing Hartsfield of 1954. Designed to out-perform the hugely successful Klipschorn of that era by featuring better drivers and a more rigid enclosure, the corner horn Lancing Hartsfield had an impact on the luxury audio market which cannot be overstated. Thanks to *Life* magazine declaring it 'the ultimate dream loudspeaker', it immediately gave the JBL brand national recognition in the USA. It was followed in 1957 by the Paragon, a stereo speaker system fitted into a 2.7m wide enclosure resembling a 'kitsch' sideboard. The first Everest model, the DD55000, appeared in '86, since when it has undergone continuous refinement. For those who can't quite stretch to today's DD67000 there *is* a less costly Everest variant available: the £28k DD65000 which has a magnesium diaphragm rather than beryllium compression drivers. You'll find that two Everests are used for the front channels in JBL's no-holds-barred Synthesis home theatre systems!

REALISM!

Almost every night became a party night during the time I played host to the Everests. And such was their astonishing resolution of fine detail, rediscovering gems each day in my music collection was like delving into new chapters from the Book Of Revelations. I invited several audiophile friends to hear them, most of whom went home gob-smacked, having experienced something of a hi-fi epiphany.

I didn't just like them: I absolutely *loved* them. In the same way that the smaller K2 had me captivated by its remarkable clarity, the Everest similarly puts you in the hot seat of a studio control room – but with additional scale and effortless bass power and dynamics. Treble, in particular, is fabulously lifelike.

Play easy-on-the-ear recordings like 'No Sanctuary Here' from Chris Jones' *Roadhouses & Automobiles* [Stockfisch Records SFR 357.6027.2] and you'll certainly consider the sound 'nice' – as you wallow in rich, deep and thickly-textured bass, a warm midrange and appealingly delicate, sparkling highs. But there's nothing sweet or delicate about the manner in which the Everest recreates the blast of a trumpet, the wail of a soprano sax, or the sound of wooden sticks striking percussion. The timbre and transient attack of instruments is shockingly *real*.

There is a downside: hearing the *true* nature of a recording can often result in disappointment. Stevie Wonder's 'Superstition' from 1972's *Talking Book* [Motown 157 354-2] was torn apart layer by layer by the Everest. Wanna hear how low-fidelity, tinny, and coarse the recording of the brass is? How about those biscuit-tin-lid drums? Admittedly the bass walloped away agreeably and the track boogied, but it sure sounded of its age, the Everest proving that 'Superstition' really isn't a track with which one should judge the fidelity of a playback system.

But I soon lost count of the number of occasions the Everest had me transfixed

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ABOVE: Cover plate on the baffle conceals switches for tweaking HF/LF levels, and links to hand the speaker and disable the network for active drive

by its honesty, as recordings I thought I knew intimately were exposed in a new light. My collection of hi-res audiophile recordings had me spellbound as the speaker divulged the true-to-life sounds of instruments and voices, and the acoustic settings in which they had been captured.

ALL THE SLAM YOU'LL NEED

As for rock-for-the-boys, Metallica's eponymous black album sounded cosmic at 96kHz/24-bit ripped from DVD-Audio [Elektra 61113-9], as did innumerable prog-rock and jazz-rock masterpieces from the early 1970s. And playing Steely Dan's classic *Royal Scam* [Japanese SHM-CD Geffen UICY-93519] while pressing hard on the loud pedal during the title track resulted in yet another of those countless 'OMG' moments as the Everest's breathtaking clarity caused our jaws to drop into our laps. The myriad backing tracks in this studio concoction were laid out explicitly, the depiction of piano and trumpet spookily lifelike.

The Everest doesn't require a brute of an amp to deliver deafening SPLs, but it *is* ruthlessly revealing of amplifier quality. It sounded great with my Levinson No.383 100W integrated, even more open and clear with Ayre's beautiful AX-5 [*HFN* Jun '14], and sublime with Levinson's flagship No53 monoblocks [*HFN* Jan '11] which were supplied during the review period to show the Everest at its best. The improvement the No53s wrought was particularly noticeable in the bass, with increased articulation. Curiously, the Everest's low frequencies can appear 'detached' from the music. It took a while to realise that this is because of the speaker's superlative bass control and no matter what mayhem is occurring at LF the rest of the range remains entirely unaffected.

If you want bone-crushing dynamics this speaker delivers in spades. If you're chasing electrostatic panel-type soundstage depth and imaging, it provides that too. And if you've a penchant for enjoying rock/pop/dub/electronica at, ahem, *realistic* SPLs, the Everest supplies sufficient slam to be considered an offensive weapon. Seriously: a pair of Everests will fill a community hall with hi-fi sound without breaking into a sweat, never mind an audiophile's listening room.

If you want music to sound 'live', this is where you'll find it.

HI-FI NEWS VERDICT

Given sufficient room to allow them fully to give of their best, JBL's flagship Everest DD67000s won't fail to blow you away. They allow forensic inspection of recordings and deliver revelatory detail, as if you were sitting at the mixing desk in a studio control room, yet without any of that brittle treble, or 'matter-of-fact-ness', often experienced from studio monitors. These Everests sound simply awesome.

Sound Quality: 90%

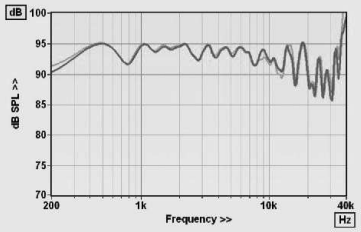
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LAB REPORT

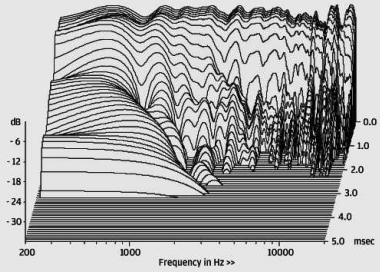
JBL PROJECT EVEREST DD67000

JBL claims a high 96dB sensitivity for the DD67000 but that's not a figure our measurements support. We recorded 93.6dB on pink noise, 93.8dB using the IEC 60268-1 simulated programme spectrum, so 94dB is justifiable – but still well above average. And this is achieved without recourse to low impedance. We measured a minimum modulus of 4.5ohm at 20kHz – too low to justify JBL's 8ohm nominal impedance but high enough that you couldn't really argue with a 6ohm figure. Impedance phase angles are large at low frequencies, though, so the EPDR (equivalent peak dissipation resistance) drops to a minimum of 2.0ohm at 72Hz, and at the other end of the audible spectrum to 2.1ohm at 18.6kHz. So the DD67000 is far from being a testing amplifier load, but it isn't a pussy cat.

The forward frequency response [Graph 1, below], measured on the axis of the main tweeter, is flat in trend up to about 7kHz after which it begins to decline, albeit with large ripples almost certainly due to mouth reflections in the horn. (Ignore the dip at 760Hz which would almost certainly have filled in had we been able to measure at 2m rather than 1m distance.) Despite this treble unevenness response errors were restricted to ±3.6dB and ±3.5dB respectively for the pair, 300Hz-20kHz. Matching over the same frequency range was less impressive at ±1.9dB but below 8kHz fell to a remarkable ±0.3dB. The diffraction-corrected near-field bass response indicated a fast roll-off below 70Hz, reaching –6dB/43Hz (re. 200Hz), so some sacrifice of bass extension has been made to achieve the high sensitivity. But bass distortion was extremely low at 0.02% for 90dB SPL at 1m at 100Hz – amazing! **KH**



ABOVE: Flat bass/midrange response but HF ripples are due to reflections across the mouth of the horn



ABOVE: Fast decay and no obvious bold resonance modes, but some mild peaks in the presence/treble

HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	93.2dB/93.6dB/93.8dB
Impedance modulus min/max (20Hz–20kHz)	4.5ohm @ 20kHz 24.5ohm @ 52Hz
Impedance phase min/max (20Hz–20kHz)	–60° @ 62Hz 23° @ 43Hz
Pair matching (300Hz–20kHz)	±1.9dB
LF/HF extension (–6dB ref 200Hz/10kHz)	43Hz / >40kHz/>40kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	<0.1% / 0.1% / 0.1%
Dimensions (HWD)	1109x965x469mm

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