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Focal's super-detailed Electra 1027 Be speaker leads the charge for 2006



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Budget beryllium

Can the new Focal Electra 1000 Be speakers from Focal-JMLab bring Utopia at half the cost?

PRODUCT Focal Electra 1027 Be

TYPE Floorstanding loudspeaker

PRICE £4,000 per pair

KEY FEATURES Size (WxHxD): 26.5x111x35cm

⊙ Weight: 33kg ⊙ Three-way design ⊙ 25mm inverted beryllium dome tweeter ⊙ 165mm 'W-Sandwich' mid and bass cones ⊙ Sensitivity/impedance: 89dB/3 ohms (min)

CONTACT ☎ 08456 602680 🌐 www.focal-fr.com

Just over a year ago, in *HFC 260*, we reviewed this model's immediate predecessor. The Focal Electra 927 Be (Focal-JMLab recently dropped the 'JMLab' part of its name on its products) was a strictly limited edition variation on the already well established Electra 900-series theme. This made the company's innovative beryllium inverted dome tweeter available at a much lower cost than had previously been possible in the very costly Utopia series.

Although the Electra 927 Be was an undoubtedly successful design, it was also very much a stop-gap. It was based on taking the existing Electra 927 model and bolting in a beryllium dome tweeter borrowed from the Utopia range, with appropriate adjustments to the crossover network. In fact, the TCE-type tweeter used in the Electra 927 Be shares the same diaphragm as the Utopias' TBU-type, but has a less costly magnetic motor. That was 2004, and the limited production run of Electra 927 Bes sold out very quickly. The reason became apparent in the autumn of 2005, as Focal-JMLab introduced the first examples of an all-new Electra 1000 series.

“These new Electra 1000 Be speakers are altogether more assertive in appearance than their predecessors.”

These new models build on the fundamentals established by their predecessors, essentially sharing the same bass and midrange drivers. But they also feature additional refinements, such as a completely fresh approach to enclosure design and construction, and a completely new beryllium dome tweeter, quite different from that used in the Utopia range. Whether the Electra 1000 series can really offer something approaching the striking Utopia performance on the cheap is hard to say, but the prospects look promising since each costs roughly half the price of its Utopia equivalent.

The initial Electra 1000 Be launch consisted of just two models: a two-way 1007 Be standmount selling at £2,300 per pair, and this three-way, £4,000 per pair floorstanding 1027 Be – significantly more than the £2,800 price of its Electra 927 Be predecessor. These are joined by a CC 1000 Be centre speaker and SW 1000 Be subwoofer, while a SR 1000 Be surround speaker is also in the pipeline.

The styling of these new Electra 1000 Be speakers is altogether more assertive in appearance than their predecessors – indeed, more assertive than any other Focal models, partly because of the way they emphasise the engineering content by highlighting the shiny full-width cast alloy tweeter front plate. Furthermore, whereas the Electra 900 and Utopia models featured vertically concave front panels, with the tweeter set back a little behind the bass and midband drivers, the new Electra 1000s have continuously vertical front panels with a strongly convex horizontal profile. The front, top, back and plinth are all finished in high gloss black – the top is actually a piece of glass – while the shaped sides are real wood veneered. Our sample panels had an attractive deep red finish, code-named Signature; a much lighter Classic alternative is also available.

This front baffle is ultra-thick and heavy, made up from as much as 50mm thickness of MDF for maximum strength and stiffness. It's shaped internally to avoid creating reflections

and cavities, and externally to create smooth and wide lateral distribution. Inside, the structure is further reinforced by plenty of additional bracing, while the enclosure as a whole is tapered front-to-rear to spread out any internal standing waves and improve the overall stiffness. Confirmation of the very solid build is seen in the total weight of 33kg.

The three-way driver line-up consists of twin 165mm bass drivers, port loaded and operating in parallel, plus a

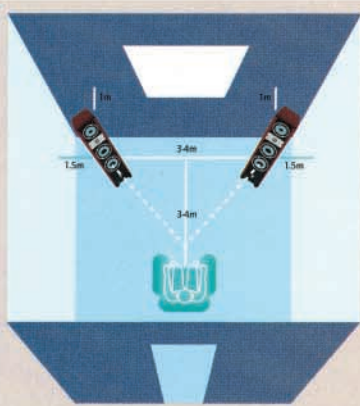
single, somewhat different 165mm midrange unit, the latter mounted above the 25mm beryllium inverted dome tweeter. Since introducing W-Sandwich cone technology, combining layers of structural foam and woven glassfibre, Focal-JMLab has been exploring various recipes to achieve the best compromises between stiffness, mass and damping for any particular application. While a conventional sandwich cone is used to give the high stiffness desirable for the bass drivers, the midrange cone used here has an 'open sandwich' construction, with just one layer each of woven glass fibres and structural foam, for better damping and transient behaviour. ▣



EDITOR'S CHOICE

HI-FI CHOICE
magazine

SET-UP



POSITIONING

The bass alignment of this speaker was well-judged for free-space siting in our listening room, thanks in part to a relatively low port-tuning frequency centred on 35Hz. That in turn means that port blocking won't be effective in countering the effects of close-to-wall siting, as the latter tends to boost the 50-100Hz octave, whereas the port will be most active in the octave below that, 25-50Hz.

Add in the very good lateral dispersion that is provided by the convex front panel used here, and there's further good reason to keep these speakers well clear of walls, to avoid the colorations that are caused by near-reflection cancellations.

The tweeter output indicates that listening directly on axis is neither necessary nor perhaps desirable. That wide lateral dispersion will allow the speakers to be positioned facing straight ahead if preferred, but for best imaging across the widest listening arc, it may well be better to position the speakers so that their forward axes cross a metre or so in front of the listening position. This is even more true if the speakers are quite close to side walls, again in order to reduce the effects of nearby reflective surfaces.

SYSTEM MATCHING

Like its predecessor, the Electra 1027 Be doesn't make life easy for the driving amp. Sensitivity is a decent 88-89dB (somewhat shy of the 91dB claimed by the manufacturer), while the load is both complex and demanding through the low frequency half of the spectrum (below 500Hz), reaching a minimum of around three ohms close to 115Hz. Above 600Hz, the impedance rises steadily and stays reassuringly high at all frequencies above 1kHz.

This impedance characteristic won't pose any significant problems for most solid state amplification, but it does mean that trickier single-ended valve amps are best avoided. That said, a push-pull valve power amp with decent power delivery would probably suit this speaker rather well, as its inherent top end sweetness would make the most of that fine beryllium tweeter.



◀ Focal-JMlab naturally enough extols the virtues of its pure beryllium tweeters. There will doubtless be much debate about the relative merits and demerits of beryllium versus diamond tweeter diaphragms: suffice it to say that both materials are clearly capable of very high performance, with the undoubted benefit of extending responses and break-up points well into the ultrasonic region and above the limits of human hearing. And it's good to see that Focal-JMlab has made a major investment in machinery to increase production, and this is bringing down the beryllium entry price.

Built into a substantial cast alloy chassis, the new Electra tweeter, dubbed IAL (for Infinite Acoustic Loading), has a generous obstruction-free cavity, located behind a slightly smaller inverted dome than that used by the Utopias (beryllium is a very costly metal). A stable and tough new foam called Poron now forms the tweeter surround, and this lowers the fundamental resonance to 680Hz. Focal-JMlab is using this drop in resonant frequency in order to lower the crossover point, and hence reduce the dispersion discontinuity that inevitably occurs at the handover from a 165mm midrange cone to a much smaller tweeter.

Although there is a plinth of sorts here, with a front-centre cut-out to accommodate the port exit, it follows the line of the enclosure and doesn't increase the footprint in any way. That said, the

speaker feels reassuringly stable on its substantial spikes. Focal-JMlab remains unconvinced that bi-wiring offers any benefits, so the Electra 1027 Be comes with just a single pair of high quality WBT terminals.

SOUND QUALITY

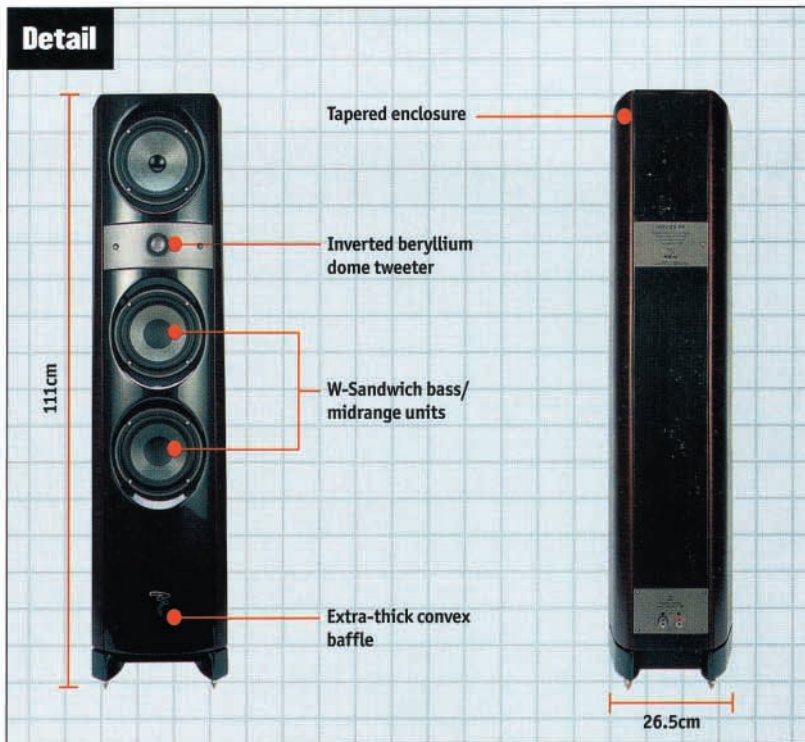
Given the size and driver complement, it's no surprise to discover that the Electra 1027 Be works best when located well clear of walls, an observation confirmed by the in-room measurements. The basic performance envelope looks satisfactory here, with a good overall frequency balance, decent sensitivity (albeit 2-3dB shy of the claimed 91dB), and solid extension well down into the deep bass.

However, under far field conditions, measurement shows some loss of output around both crossover points. The presence depression between midrange and tweeter (1.3-3kHz) is quite normal and perfectly acceptable, but the dip between bass and midrange section (300-450Hz) is less common and also less desirable. Furthermore, the impedance stays low throughout the bass region, so this isn't an easy load from the driving amplifier's perspective.

Comparing the Electra 1027 Be's lab results with those taken for its 927 Be predecessor is interesting. At low frequencies, the impedance traces are virtually identical, though the new model shows slightly more low bass and slightly less in the upper reaches. While that is positive, the down side is a dip around the bass-to-mid crossover point. At the top end of the band, the tweeter is smoother than its predecessor, and is also set a little stronger, relatively speaking.

Hooked up on the end of a very serious hi-fi system, consisting mainly of Naim electronics (CDS-3, NAC 552, NAP 500), supported and





linked by ancillaries from Vertex AQ and others, the Electra 1027 Be has a sound that is bright and light in character, with a beautifully sweet and sparkling top end, suffused with the finest and most delicate detail.

This was highlighted by spinning Nitin Sawhney's brilliant *Beyond Skin* CD. The track *Tides* features piano and bass decorated by beautiful percussion – mostly cymbal work – from Marque Gilmour, and a recording of breaking waves. Not only did the 1027 Be reproduce the brushwork with exceptional delicacy and realism, it also made it easy to distinguish the cymbals from the surf.

The top end here is entirely seductive, showing that the new IAL tweeter development is very successful. Like its predecessor, however – and

no shortage of deep bass weight or gravitas here, and the bottom end as a whole is both even and pretty well extended. But it also sounds just a little understated, with a slight lack of ultimate grip, authority and punch.

'Clinical' is one adjective that springs to mind. Tonally speaking, more warmth and richness would have been appreciated, rather than the slightly cool overall effect that is evident when playing the sort of discs where the bass end is the prime mover. Massive Attack's *Blue Lines*, for example, seemed undernourished, attention tending to focus on the vocals instead of the driving bass lines that are the very essence of this group's sound.

One obvious reason behind the dry bass is that box coloration is exceptionally well

of the drivers on the front panel, with the tweeter placed immediately beneath the midrange drive unit. Such an arrangement will somewhat restrict the vertical radiation of the tweeter, assisting the stereo image focus at some expense in terms of in-the-room 'airiness'.

The most critical part of the spectrum is in the upper midband and lower treble, where human hearing is most sensitive, and where perversely (but for good practical reasons) most designs place the mid-to-treble crossover point. There's usually a compromise to be drawn between maintaining vocal openness and avoiding aggressiveness, and the Electra 1027 Be handles this trade-off particularly well. It displays sufficient restraint to allow the system to be played loudly, yet remains well able to maintain good voice diction when playing at whisper quiet levels. In this respect, it's a remarkable speaker for the money. **HFC**

Paul Messenger

“The Electra 1027 Be has a sound that is bright and light in character, with a beautifully sweet and sparkling top end.”

indeed if anything a little more so – it does tend to draw attention to itself, rendering background FM radio hiss a little more audible than usual, for example. Sometimes, provided the material is well-recorded, this is both very acceptable and a positive boon; on other occasions, the experience can be less happy. Music from Radio 3 is usually delicious, whereas the horrors that regularly emanate from the Radio 1 studios are much less palatable.

This slightly bright character is rendered that much more obvious because the bass end is rather dry. The track *Anthem Without Nation* (again from *Beyond Skin*) confirms that there's

controlled – the slight 'thickening' noted when reviewing the Electra 927 Be is entirely absent with this new model, and touching the enclosure whilst playing heavy music loudly makes it quite clear that the box is making very little contribution to the whole.

The fine cabinet control confers an impressive freedom from boxiness that is reflected in very low midband coloration, refreshingly free from nasal effects on voices, and superior stereo imaging. It's impossible to pin-point the precise locations of the two speakers, partly because the central image is so well focused. That in turn may well be a function of the disposition

VERDICT	
SOUND >> 92% [Progress bar]	PRO Inverted beryllium dome tweeter gives great delicacy in reproducing vital fine detail and texture. Fine enclosure ensures low box coloration. CON Top end can be bright, and the bass lightweight and lacking in grip and propulsive drive. A cool, dry overall character that might benefit from a little more warmth.
EASE OF DRIVE >> 68% [Progress bar]	
BUILD >> 93% [Progress bar]	
VALUE >> 84% [Progress bar]	
CONCLUSION 'Utopia light' is a fair description of this attractively assertive looking floorstander. It has an outstanding midrange and top end, with fine delicacy and freedom from coloration, but lacks a little grip and drive through the lower registers.	
HI-FI CHOICE OVERALL SCORE >> 88%	