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Focal-JMLab

Alto Be

Replacement for the Mezzo Utopia uses Focal's new beryllium tweeter

Focal-JMLab Alto Be

PRICE	£11,000/pair
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One of the loudspeaker highlights of the last few years was the Focal-JMLab Mezzo Utopia, a large three-way loudspeaker that cost around £8000, and was derived from the flagship Grande Utopia. The Grande Utopia itself has now been replaced by the Beryllium or Be model, a root-and-branch redesign of which the beryllium dome tweeter is only a part, and in which none of the original components have been carried across. All models based on the original

Grande Utopia have been or are in the process of being replaced by new designs which are only loosely related to the Utopia range, but which are closely modelled on the new Grande Utopia Be flagship, scaled to fit particular price points.

The nominal replacement for the Mezzo Utopia is the Alto Be, the subject of this review. It has broadly the same configuration as the Mezzo, that is to say, it is a three-way floorstanding model, but it is wider, taller and deeper than its predecessor. It's also more expensive, but this is easily accounted for by the Alto's improved build-quality and better drivers. The Mezzo was well made by any normal standards, but the Alto is beefier and better specified throughout. There has been no stinting on the cabinetwork, which is simply

temperature-sensitive 'focus ring' outside the main magnet structure.

Bass and midrange units on the Alto Be are similar to their counterparts on the Grande Utopia Be. The 165mm midrange driver uses a novel 'Power Flower' magnet structure, which consists of six small-diameter ferrite magnets arranged hexagonally around a central core, with pole pieces arranged in the shape of the petals of a flower. The advantages claimed are a high magnetic flux density, geometric accuracy and minimum flux leakage. Both this unit and the 280mm bass driver use versions of Focal's W-cone structure. Here, two fine layers of woven glass sandwich a foam core, which is structurally rigid, extremely light and well damped, with

The unusually smooth treble means it is remarkably difficult to coax the Alto Be into sounding oppressive even when loud

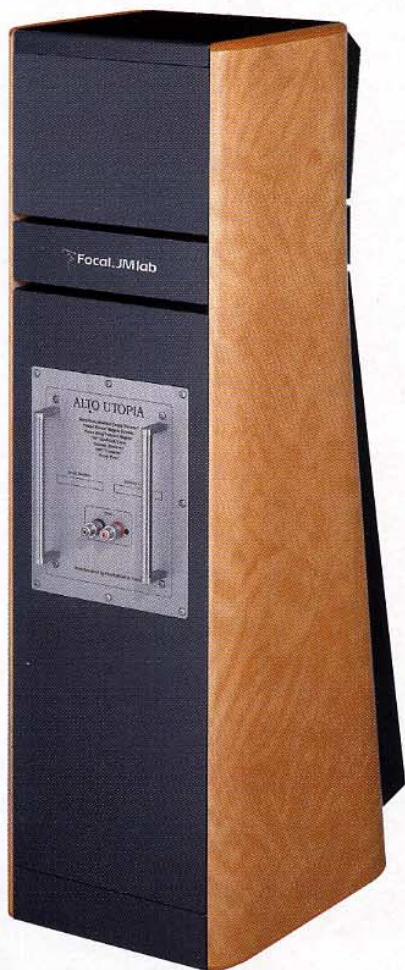
stunning in terms of build and finish quality. The Alto Be weighs in at 75kg, which is nearly 20% more than its predecessor.

There are several key technology highlights, of which the inverted beryllium dome tweeter was covered in some detail in the Grande Utopia Be review [*HFN*, July '03]. The main points are that beryllium is stiffer, lighter and offers superior damping to other materials. Its impulse and its frequency response are superior (up to nearly 40kHz), but it is the much superior damping that is probably the dominant factor; that and the new tweeter's ability to mimic the qualities of a wideband (or super) tweeter without needing a separate drive unit. This brings benefits to phase distortion and coherence.

The inverted dome has allowed Focal to use a smaller diameter (19mm) voice coil, fixed inside the edge of the dome, which reduces moving mass further, but the trade-off is a smaller, hotter-running magnet structure. Focal-JMLab says that the ability to withstand heat without demagnetising is a key factor with compact, high flux magnet systems. This is addressed by using samarium cobalt magnets which can withstand much higher operating temperatures than the alternative neodymium-iron, which is however used to help focus the magnetic flux in a less

properties that have been fine-tuned by adjusting the thickness of the core. The three drivers are knitted together at 250Hz and 2.5kHz with fourth order (24dB/octave) networks, by a well-specified high-power crossover housed in the bottom part of the enclosure, which is fitted with a single pair of WBT input terminals. The enclosure is almost as radical as the rest of the design, and is discussed in detail in the Technology box. Suffice to say here that the dimensions are 1208 x 370 x 530mm (hwd) and finishes available include the Classic (gold bird's-eye ash), Signature (burgundy bird's-eye ash) and Avant-garde (natural bird's-eye ash), all with slate-grey metallic lacquer.

From the outset, the nuts and bolts of the sound slotted together better than they had with the Grande Utopia Be. No surprise there. Using a speaker like the Grande Utopia in my 10 x 4m listening room was always going to be a fire-fighting exercise, and the fact that it worked satisfactorily at all was little short of miraculous. The smaller size and more limited (but still impressive) LF bandwidth of the Alto means that the room's main eigentones are not being driven as hard, and the bass is consequently more even and tuneful. There was still a dominant room peak around 50Hz, but below this the speaker output ramps down a little, which was only recognised as



Unmistakably JMLab, the Alto Utopia Be stands 1208mm tall compared to the 'corpulent' Grande Utopia's height of 1740mm; [below left] connection to an amplifier is via a single pair of binding posts

a room issue when the output of the Alto and some other speakers were measured at the same position in the room using the Infinity RABOS system, which is purpose designed for this task. Sorting the bass out was achieved by simply fine-tweaking their position.

The Alto is a demanding loudspeaker, but not perhaps in the ways you might expect. The 90dB sensitivity figure and 8 ohm impedance mean that you don't need a lot of horsepower. On the other hand, the Alto can be driven hard with little audible indications of distress. Put it this way, if you happen to have a powerful amplifier, it won't go wasted, not least because the unusually smooth treble output from the beryllium tweeter means it is remarkably difficult to coax the Alto Be into sounding oppressive even when it is loud.

However, because the Alto sound has almost no character of its own, it is extremely responsive to the differences in the equipment that is used to drive it. It makes the differences between disc players – in this case a Mark Levinson 390S, a Krell SACD Standard and a BAT VK-D5 valve player – very plain, and it is just the same with amplifiers. I found a near ideal soulmate for the Alto Be in a Hovland pre-/power combination, consisting of an HP-100 valve pre-amp and a RADIA 125W/ch solid-state power amp. This is a combination with the same kind of consistency, transparency and refinement as the Alto Be itself, and which does a good job of controlling a slight tendency for the bass to spread.

Another area to watch is the exact orientation of the speaker, which arises due to the 'Focus Time' alignment. The speakers should be toed in towards the listener, and if one is level with the tweeter as recommended, it should be possible to see through the gaps that separate the tweeter enclosure from the other two.

There is more to positioning the Alto Be than simply listening on the tweeter axis. It is intrinsic to the design that the midrange unit points down from a little above a seated listener, so listening range becomes a factor as well. It turns out that the large midrange unit is surprisingly directional. Listened to from even quite mildly off-axis, the Alto Be takes on a slightly boxy feel. With a speaker of this resolving power, slight is all it takes to be very obvious indeed.

In fact, listening to the tweeter from slightly off-axis is not a problem. Although the highest frequencies dip slightly, the speaker still sounds



smooth, sweet and detailed. With the speakers standing level on the floor, the optimum listening distance in the test room was about 3m from the speakers, but it is perfectly possible to move further away without degradation by tilting the speakers slightly on their adjustable spikes, even where this means that the tweeters end up being heard from slightly off axis. In principle, there is a similar Focus Time-mediated effect with the bass unit too, but in this case the wavelengths involved are so long that there is no discernible effect with small changes of listening axis.

It's no surprise that a sensible system to partner the Alto is going to involve a comparatively expensive amplifier and source, and it may involve some careful and subtle positioning and angling too. The obvious question then is this: is it worth the candle?

The answer is an emphatic yes. Everything that follows is based on the assumption that the speaker orientation has been fully tweaked and the speaker is fully run-in. As the second user of the review pair, I have no idea how long the Alto Be takes to come on song. The manufacturer suggests several weeks, and the test speakers didn't drift noticeably in the two months or so allotted to this review.

The Alto has several immediately obvious properties. Based on experience with the flagship model, it almost goes without saying that some of them are due to that remarkable beryllium tweeter. Although the tweeter is exactly the same unit used in the Grande Utopia Be, it appeared to perform even better, sounding even more focused and alive. This may be because its contribution is more exposed in the smaller loudspeaker, but another equally credible explanation is that the baffle on which it is mounted is significantly narrower than with the senior model. Either way, it remains what it always was, an exquisitely refined transducer blessed with a pellucid purity and an almost diaphanous transparency. Nothing is perfect, and no doubt there will be better tweeters in the future, but for now this one surely sets the benchmark by which others must be measured, and most are found wanting.

Another very obvious quality of this speaker which was noticeable quite early in the test was the Alto's extraordinary ability to reproduce image depth. Given an appropriately well-engineered recording, the Alto can place an image with



Midrange driver uses 165mm single glass-fibre/foam laminate, now with seven magnets



Rear view of beryllium-domed tweeter, showing two neodymium magnets enclosing the pole-piece, augmenting the main samarium cobalt magnet hidden within

precision well in front of the plane of the loudspeakers, or a million miles behind. The shape of an orchestral layout, and of the space in which it is performed, is reproduced more faithfully and effectively by this speaker than by any other stereo speaker known to the author, though it is only fair to note that it can be beaten in a well-configured multichannel audio system. The sense of depth and scale however in recordings like the Benjamin Zander/Philharmonia Mahler 6 on Telarc (from stereo SACD) was truly extraordinary. Lateral imagery by contrast is good rather than outstanding. The narrow enclosure may be more suitable for precise lateral image focusing than the corpulent Grande Utopia Be, but the Alto remains wider than most, and speakers like the B&W Nautilus 800 (which is a direct competitor) maintains better lateral image focus and consistency across the frequency band,

Which leads to another observation: while the mid and the treble tend to focus precisely, with lead instruments and voices generally forward of the speaker plane, the bass registers appear to come from a slight less well-defined, more distant vantage point. The effect is attractive in the sense that it adds a slight glow of warmth and space to the sound, though it is not fully justified by the music. But like other criticisms of the Alto, this is a mild effect, one that other speakers usually don't have the resolving power to show.

Other qualities of this remarkable speaker include its ability to instil a sense of occasion. The way that musical dynamics are handled is surprisingly muscular and physical. For all its subtlety in other areas, difficult to reproduce recordings such as Joanna MacGregor's excellent *Play* album, an eclectic compilation of short piano pieces, lost its customary brittle tonality and was transformed into a real, fire-breathing event. By the same token, the Alto Be was unusually adept at showing differences between,

for example, the CD and the SACD layers of a range of hybrid discs, in a manner that allowed no room for equivocation about which was better.

Most of all, the Alto Be is simply a superb all-round loudspeaker. It has the transparency of a high-grade electrostatic, with the physicality and presence of a moving-coil design. It is fast, highly detailed, yet as smooth as silk, and offers the expansive imaging and an overall refinement that is simply not bettered at or near the price. Finally, it is as near tonally neutral as it is possible to achieve with today's technology. It has faults, as we have seen, and it also costs a great deal of money, though it offers as much as any other in material terms for a loudspeaker at this price level. In its way, the Alto Be is a genuine stunner, a *tour de force*, and it is worth every last penny. ■

Alvin Gold

Technology

Each drive unit is housed in its own separate enclosure to minimise intermodulation. The bass enclosure is front vented, the only mechanical link between the three areas being the two full-height side cheeks that strap them together. The three individual enclosures are extensively braced and damped, the baffles staggered and angled to provide time alignment ('Focus Time') at the designed listening position. Overall, the Alto Be is built to very high standards of mechanical integrity, and the surface finish is of a standard appropriate at this price level, with a fine wood veneers on the side cheeks, and piano lacquer on the other box sections.

Features

- Exceptional transparency of sound
- Standard-setting beryllium dome tweeter
- Three-way bass reflex system