

EQUIPMENT REVIEW

Abbingdon Music Research LS-77 standmount loudspeaker

by Paul Messenger



Not before time, the standmounted loudspeaker seems to be undergoing something of a revival. Up until the mid-1980s floorstanding speakers were relative rarities, but over the last two decades they've come to almost completely dominate the scene.

For a time, the serious standmount seemed endangered, but happily that scenario seems to be changing, and speakers like this LS-77 Reference Class Professional Monitor from AMR (Abbingdon Music Research) will add fuel to the flames. At 35kg each and £10,995/pair, this stand-mount is a lot heavier and more costly than the vast majority of floorstanders, implying that AMR must have some pretty good reasons for adopting the format.

AMR is a relatively new kid on the block, agreed. Although development work apparently started back in 2001, the company has only been formally in existence since 2006. It made its first appearance in HiFi+ in early 2008, when Roy Gregory reviewed its flagship CD-77 CD player. Despite understandable initial scepticism over any new company, RG was very impressed by what he found in this very sophisticated and substantial machine, and the brand has also been receiving plenty of plaudits from elsewhere.

Under the direction of designer Thorsten Loesch and CEO Vincent Luke, the company's modus operandum is to design and engineer its components in Britain, source components from everywhere, and then carry out manufacture in China to keep costs and prices under control. Although the UK operation is based in Notting Hill Gate, North London, the name Abbingdon was apparently chosen in tribute to the Mini automobile that the principals consider a design icon. Since Abingdon (spelt with one 'b') was the home of MG, and the Mini was designed at Longbridge near Birmingham, AMR should maybe stick to designing hi-fi, which it seems to do rather well.

The four 'type 77' Reference Series components – a CD-77 CD player, AM-77 integrated amplifier, PH-77 phono stage and this LS-77 loudspeaker – represent the company's current top range. All have massively hefty build and the electronics in particular include some pretty unusual features. Being an essentially passive device at the tail end of the hi-fi chain, there's arguably less opportunity to be creatively different, but that certainly hasn't stopped AMR from trying. While it might be argued that none of its numerous features are entirely original, they're certainly unusual and interesting.

The first (and probably the last) thing I noticed was the massive weight. Not only do the beasts ▶

▶ themselves weigh 35kg each, but each also comes in its own snug-fitting, very tough flight case, which probably adds a further 20kg or so. (It was just bad luck that the carrier arrived early, when I was still in my dressing gown!)

The main reason for the unusual weight is that the enclosure is fabricated from metal throughout, specifically from a magnesium/aluminium alloy. The carefully shaped front baffle is hewn from a 25mm slab, while the other five panels are a still healthy 10mm thick. The result is exceptionally stiff as well as heavy, ensuring an unusually stable mechanical platform for the driver diaphragms, and vanishingly low cabinet coloration. Though sometimes overlooked, it's worth emphasising the point that by definition the enclosure has a much greater surface area than either of the drive units. Any enclosure movement is effectively a form of distortion that will tend to muddle up the low level information and limit the effective size (or depth) of the dynamic 'window'.

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So the enclosure matters a great deal, from a performance as well as an aesthetic perspective, though AMR has certainly not ignored the latter. Available in 'titanium' or 'champagne' finish, the dull all-over sheen gives a very attractive 'hi-tech' appearance, especially as the fit and finish is as good as anything found in high-end electronics.

The advantages of the stand-mount approach is that it approaches a point source ideal much more closely than a floorstander, and (perhaps more significantly) it allows the omnidirectional bass frequencies to be propagated without hindrance in every direction, including beneath the speaker.

This two-way design is not unduly large – the front panel is 25x49cm, just large enough to accommodate the drivers – but it is quite deep and therefore somewhat bigger than most stand-mounts. I'd estimate that the internal volume is around 28 litres, and the rear panel includes a good size port, again in Mg/Al alloy. AMR describes the bass loading as combining the best features of a reflex port and a transmission line, which might or might not be the case. Since both approaches (and indeed tuned column loading) show broadly similar impedance characteristics, the distinction between these allegedly distinct bass loading techniques has long been a topic of debate. However it's actually handled, the impedance trace indicates that the port reinforcement here will be centred around a low 32Hz.

The drivers are both fairly unusual. The main bass/mid driver is a nominal '10-incher', a 240mm frame unit with a wide surround and a 160mm diameter cone/dome diaphragm. The latter, probably moulded plastic, has half a dozen small damping pads arranged around its periphery, just in from the surround, and is driven from a large diameter (100mm) voice coil, which will ensure prodigious power handling capabilities. The motor magnets are mounted within the voice coil.

This driver crosses over to an equally unusual treble unit, using very steep slope (60dB/octave) filters operating at a relatively low 1.6kHz. The

unit is a relatively large isoplanar variation on the ribbon theme. The 120x22mm diaphragm is somewhat recessed, and its sound radiated is modified by two stages of waveguide.

Partly to compensate for different listening distances, and the different radiating behaviour of the 'point source' main driver and 'line source' tweeter, the relative treble level may be adjusted. This is done underneath an inspection hatch in the rear panel by replacing resistors with alternatives supplied, though the factory-set alignment seemed about right for our conditions. Bungs are also supplied to modify the relative bass output, either reducing its Q or blocking the port entirely. Twin terminal pairs are fitted, paralleled with SpeakOn sockets, and an ▶



► exceedingly comprehensive, detailed and useful manual is also supplied.

The specification conservatively claims a sensitivity of 87dB – I'd have gone for 88dB. Impedance is rated at 8ohm with a 6ohm minimum, an easy-to-drive impedance characteristic that's comfortably confirmed. Bass extension is impressive, especially by standmount standards: the spec quotes -3dB at 26Hz under IEC room conditions, and this correlates well with my own findings.

My far-field averaged in-room responses were really rather impressive, holding within +/-3dB right across the band above 100Hz (below which room modes dominate). The only significant departure from measured neutrality was a mild upper midband prominence (500Hz-1.3kHz)

Perhaps because the latter is more of a plateau than a peak, it never seemed intrusive, and one was much more – indeed constantly – aware of this speaker's extraordinarily wide dynamic range, and remarkably low enclosure contribution.

The longer I spent listening to this pair of speakers, the more I came to appreciate their virtues, and the more difficult it became to come up with worthwhile criticisms. It might not have the bottom end muscularity of some larger three-way designs, but the bass alignment still worked rather well in my listening room, with the additional dexterity and agility that seems to be an inherent property of a high class stand-mount.

Room modes tend to dominate the output at low frequencies, and also introduce significant 'room gain'. With their ports left open, and the speakers placed on 600mm stands well clear of walls, the two LS-77s gave just a little too much bass output – which is no problem subjectively because the bottom end is crisp and very clean. With the ports blocked completely, and under the same conditions, the bass end is just a shade too dry. With a little care and experiment, it should therefore be easy to adjust the relative bass balance to suit personal taste and conditions.

It's important to sit down when listening, in order to listen 'on axis', because that 120mm isoplanar tweeter does act as a line-source, delivering the highest frequencies as a horizontal beam of sound. Combine this with the waveguides and room reflections are reduced, so image focusing is tight. And since the radiating area is about five times that of a normal tweeter, headroom is substantially greater than usual. Most importantly, the top end is smooth, beautifully balanced and essentially very sweet too – lovely stuff.

Both the bass and treble extremes work very well, but the midband is the most important bit. Here the LS-77 demonstrates seamless transition from one driver to the other, exceptional overall coherence, and very superior stereo imaging, so much so that the steep slope filters used in the crossover seem to be entirely positive, while their inevitable complexity didn't seem to be any impediment to the sound quality.

The net result is a totally impressive loudspeaker that really does make the most of the simple two-way stand-mount approach, and gives very little performance advantage away to much larger floorstanders. It's essentially neutral, arguably a little understated perhaps, with good bandwidth, exceptional stereo imaging and dynamic range, and fine dynamic expression.

Though certainly costly, it's also quite discreet and very elegant. Good set-up flexibility and a fine ability to distinguish between the various components and accessories with which it is used suggests its Reference Class Professional Monitor tag is entirely appropriate. +

TECHNICAL SPECIFICATIONS

Sensitivity (2.83V/1m in room): 87 dB

Long Term Power Handling (AES/RMS): 150 watt

Peak Program Power Handling: 600 watt

Impedance, nominal: 8 ohm

Impedance, minimal: 6 ohm

Frequency Response (in IEC Standard Room): 26Hz - 40kHz (+/-3dB)

Directivity Index (DI) 500-10KHz : 6dB (+/-3dB)

Low Frequency Driver: 24.3cm/10in diameter, 10cm/4in diameter voice coil
High Frequency Driver: 12cm/5in long isoplanar ribbon

Crossover: AMR OptiSlope® design (60 dB/octave)

Bass Enclosure Principle: Transmission Line Port ®

Colour: Champagne or Titanium

Dimensions (WxHxD): 25 x 49 x 31 cm

Weight: 35 kg (each)

Price: £10,995/pair

Reference Class Professional Monitor

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Select Audio

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