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MartinLogan Motion 35XT

A new addition to MartinLogan's Motion range of planar driver hybrids, the 35XT adds body and scale to the already-brilliant but smaller sibling, the Motion 15

Review: **Ken Kessler** Lab: **Keith Howard**

As a long-term user of MartinLogan electrostatics, I was baffled by the company's decision to make small box-type speakers. Wasn't the exquisite 'see-through' styling the brand's hottest selling point after sound quality? But, as with Quad, Apogee and other panel makers, the company was able to adapt to this dissimilar discipline. So I went out and bought a pair of the Motion range's entry-level speaker.

Yes, a pair of Motion 15s (£898) sits on my desk as my all-day-while-working speaker. By the time the next model up, the Motion 35XT (£1298), arrived for this review, I'd had many hundreds of hours' listening time with the near-identical driver combination in its enclosure made of wooden-veneered 19mm MDF, just a few centimetres smaller each way.

DIFFERENT DRIVERS

This accounts for three other changes, as both share identical looks, including mesh grilles, a downward-sloping top panel to prevent internal reflections and rear ports at the back. For the two driver changes, the '15's 26x36mm Folded Motion XT tweeter is replaced with a 32x61mm version, which also changes its dispersion from 80°x80° to 80°x30° [see KH's boxout, p57]. The smaller speaker's 133mm woofer is replaced with a 165mm version, both employing aluminium cones with cast baskets, though the 35XT's is cast polymer rather than metal. Both also use a 'structured dust cap to reduce cone break-up modes'. The third change was to add bi-wiring capability.

When I saw the '15 for the first time, after getting over the gorgeous looks allied to a low price for such luxury, I was immediately captivated. When the grille was removed, I was hooked – as much by curiosity and nostalgia as any techno-lust –

RIGHT: Cabinet is a gorgeous veneered MDF in cherry, or gloss black or white, with removable metal grille protecting the Folded Motion XT tweeter and 6.5in woofer; the baffle is black-anodised aluminium

and there is a historical precedent for this, dating back to my university days. Long before I became a reviewer – way back in 1973/4 – my flatmate and I used a system with his ESS AMT-4 towers at the front, fitted with Heil AMT tweeters. They were one of the hot technologies of the day, competing with other oddities like the conical Walsh driver used by Ohm, and they were utterly spectacular. The set-up was a four-channel array with a Marantz 'quadraphonic' receiver, with my ESS (non-Heil) Tempests at the back.

When I learned that the little Motion 15 was so equipped, having already fallen in love with the look and the sound, I committed to them. I have been overjoyed with them without reservation. The 35XT, to my great delight, is 'the same, only more so'.

As with any small, ported two-way, positioning is critical. Here in the UK, the audiophile prefers stand mounting. While the '15 actually had a pre-fitted screw-socket for a wall-mounting bracket, the 35XT does not. This has nothing to do with the weight difference, which is only 8.4kg apiece opposed to the '15's 5.4kg. It's MartinLogan's way of telling us the 35XT is less in need of proximity to walls. But it *is* critical, depending on your own preferences or requirements for bass extension and quality, relative to openness.

Not that the smaller '15 doesn't sacrifice some low frequency heft when used in

free space, as on my desk; for most, they need the near-wall placement (within reason, of course) to augment their bass.

'There's a notion of space to delight any who worship 3D playback'

If factory specifications mean anything – and in this case, the 35XT is hungrier than its alleged 92dB/1W sensitivity and 4ohm impedance suggest – the larger model's

bass extension should be 10Hz deeper, at 50Hz versus 60Hz [see Lab Report, p59]. If you are of a bi-amping, rather



than bi-wiring disposition, the crossover operates at 2.2kHz. The network includes polypropylene and low-DF electrolytic capacitors and custom-wound inductors while the speaker also offers 'thermal and current protection'.

Whether those factory specs mean anything or not is irrelevant – side by side the 35XT is instantly much more imposing than the '15. It certainly demands the correct standmounting and the amounts of attention to toe-in that one applies to other fine, small two-way speakers, ported or not. But the effort is worth it, because MartinLogan has undeniably used the transparency (sonic, not visual) of its ESLs as the yardstick. And emulating a panel with a box structure is a bitch...

It was mandatory, then, that I would use the 35XT against its natural references: both the Summits in my A/V installation and the '15s used daily... on my desk. I undertook this before firing up the main reviewing system, consisting of Audio Research REF5 SE preamp, D'Agostino Momentum Stereo [HFN Aug '12], and Marantz CD-12. Wiring was Crystal, while

A LITTLE SQUEEZE

Conventional loudspeaker diaphragms move back and forth along the axis that they radiate sound. The air motion transformer (AMT), patented by German engineer Dr Oskar Heil in 1973, is quite different: pleated like an accordion (and bathed in a magnetic field), it displaces air by squeezing it out from its crevasses. Thin aluminium strips bonded to the diaphragm carry the signal current and control the squeezing motion. Precide, the successor to Jecklin, famously used a full-range AMT unit in its top headphone, and Oscar Heil conceived AMTs that worked at bass frequencies. (Ideas exploited in Tymphany's compact LAT subwoofer.) But most AMT drivers today are tweeters, where a resurgence of interest in the technology is evident, for example, in Elac's JET tweeter and the extensive range of AMT tweeters – including dipole models – now sold by Mundorf. KH

the stands were Cliff Stone's venerable Foundations. Because MartinLogan recommends amplifiers rated at 20W-200W, the system was overkill only in terms of relative cost.

HEAVENLY HYBRID

Band On The Run is arguably Paul McCartney's best post-Beatles solo, and the box set [Concord Music 88072 32565] is fabulous-sounding, so 'Let Me Roll It' was an effective way of throwing all sorts of textures at the

35XT. McCartney's voice is familiar to a level beyond discussion. As for the array of instruments in this track, they range from nasty fuzz guitar to fluid organ and prominent bass.

Imagine an artwork made not with one form of colour, eg, just oils or pastels, but a mix – think Klimt, using oils and gold leaf. The desired effect is achieved through both contrast and harmony, but it is a challenge to achieve a successful portrayal. The demands belaboured both drivers, and I was overjoyed to hear what the company's hybrids have

been demonstrating for years: that their disparate driver types can work together.

I recall, when MartinLogan first issued ESLs with cone-based subwoofers, that certain purists argued it could never work. Certainly, MartinLogan founder Gale Sanders' hero, Peter Walker, would never have countenanced it, despite once producing a ribbon hybrid. Just as hybrids like the Summit challenge you to identify a disparity in the sound, so does *this* small hybrid manage to achieve a near-perfect driver blend that flummoxes the listener.

No, it is not as tight as some might like, and Kodo's *Heartbeat: Drummers of Japan* [Sheffield Lab CD-KODO] readily reminds you that the 35XT is no floorstanding behemoth. And yet it was satisfying enough to convey scale and mass – there are few other words that describe the nature of Kodo – with little sense of loss. The soundstage was impeccably large and 'real'-feeling, a notion of space to delight any who worship 3D playback. It was nearly identical to that of the '15 in shape and accuracy, only bigger and more effortless.

But my fetish is midband neutrality, especially with vocals, and detail retrieval, the latter aided and abetted by transparency. Now I am not going to claim that I remember precisely the sound of a system I lived with for nine months over 40 years ago, but I do recall loving the way the top-end via AMTs was ever sibilance-free – and back then we were messing around with edgy CD-4 LPs!

With Lou Rawls' *At Last* [Blue Note CDP 7 91937 2] it was clearly the interplay between this possessor of a sublimely rich, deep and velvety voice and the soaring, crystalline pipes of Dianne Reeves that mattered most. True, it's a quasi-repeat of the challenge in the McCartney track – fuzz guitar versus organ – but the nuances of the voices are subtler than the more fundamental tones of the two instruments, however disparate Lou Rawls' and ↻



MARTINLOGAN MOTION 35XT

MartinLogan claims 92dB sensitivity for the Motion 35XT, which would be a remarkable figure for such a compact loudspeaker. In fact our measured pink noise figure of 87.7dB suggests that 88dB would be nearer the mark – still a good figure for the size of box. The specified 4ohm nominal impedance, by contrast, is right on the money, according well with our measured minimum modulus of 4.2ohm. Impedance phase angles are such that the EPDR (equivalent peak dissipation resistance) dips to a minimum of half that figure, 2.1ohm at 136Hz, but this is more amplifier friendly than the 1.7ohm typical of many modern designs.

The forward frequency responses [Graph 1] were measured at 1m on the axis of the Folded Motion Technology (for which read Air Motion Transformer – see boxout, p57) tweeter, with the grille removed. The overall response trend is flat with errors limited to ± 3.2 dB for both speakers but pair matching error was disappointing at ± 1.7 dB over the same 200Hz–20kHz range. This would have been better except for tweeter disparities above 7kHz. Diffraction-corrected near-field measurement showed a mild peaking of about +1dB at 100Hz and a –6dB low frequency extension of 60Hz (re. 200Hz). Careful placement of the 35XT with respect to room boundaries will improve this. While the vaunted FMT tweeter doesn't excel in respect of ultrasonic extension it does at least lack the high-Q breakup typical of metal dome tweeters. The cumulative spectral decay waterfall [Graph 2] evinces fast initial energy decay spoilt only by a resonance at around 2kHz which is likely to be a breakup mode in the bass-mid driver cone. KH



LEFT: Unlike the '15, the 35XT offers bi-wiring via the same proprietary 'tool-less' multi-way binding posts, which provide easy tightening thanks to size and shape; note large port

during the ascent of digital, it was proof that chillingly natural-sounding recordings hadn't gone away. 'Fine Brown Frame', though fundamentally an R&B track, had a swing that wouldn't have alienated the most white-bread of big bands. It shimmied through the '35s.

Rolling piano, brushes on drums, Reeves' voice climbing to new altitudes, a little screech that suggests sexual

tension – I cannot rave enough about this track. If it doesn't make you move, tushy gyrations, feet tapping, then either your system sucks or you are dead. And the MartinLogans sucketh not.

I should have seen all this coming, having lived with the smaller version as a prelude. The 35XT starts with an already-sublime speaker and makes it even more impressive. It's like adding horsepower to an already-accomplished car, aerating a wine that extra half-hour, finding a hint more truffle in your omelette. Oh, mama, this MartinLogan speaker deserves far more than to languish in a catalogue of massive, costlier floorstanders. It is a baby brother of which to be inordinately proud. ☺

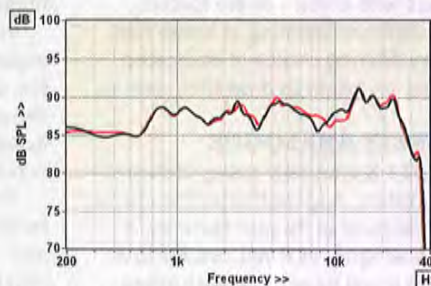
Dianne Reeves' voices may be. As Rawls' recording was so natural, and the instrumentation so tastefully played, there's a relaxing, lulling quality to the album.

THROWBACK TO THE '50s

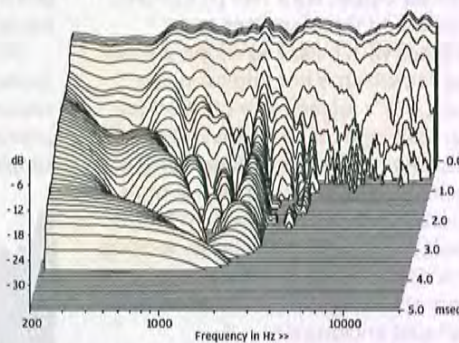
I enjoyed the frenetic pace and power of the Macca tracks, and the 35XT showed itself to be no slouch with rock. This was further illustrated by The Wonders' 'That Thing You Do' [Play-Tone Records 664055 2], Tom Hanks' treble-biased pop recreation of 1960s wannabe British Invaders. The 35XT delivered all the power, attack and extension it needed, emulating the excitement of AM radio, but with real bandwidth despite the balance leaning toward the top end.

Glossy power pop, then, was a doddle. Back to Rawls, and it was about finesse. With the title track on *At Last*, its piano opener, which is followed by a bass slide and super-crisp percussion, and augmented by a strings section, makes a sweeping, majestic performance seem as intimate as an unplugged solo. Tasteful brass joins in, and it's an orchestral masterpiece minus any display of bombast – and that has to be as tricky a juggling act as it gets.

This 1989 recording was a throwback to the lush Capitol recordings – viz, Sinatra, Cole, Martin – of the valve era, especially the late-1950s. Despite it emerging



ABOVE: Frequency response is creditably flat but not especially extended in extreme treble or low bass



ABOVE: Cabinet resonances are very well controlled but there's a breakup in the bass/mid cone at 2kHz

HI-FI NEWS VERDICT

Ok, so I was predisposed toward the 35XT, as an owner of its little sibling. But rather than pander to the idea that I was raving about a speaker in 'the desperate need for reassurance mode' all audiophiles suffer, it simply attested to the sheer listenability – after decades – of the Heil AMT, as well as MartinLogan's deft segue into box-style speaker building. This is a seriously classy compact design and I adore it!

Sound Quality: 85%



HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	88.7dB/87.7dB/87.9dB
Impedance modulus min/max (20Hz–20kHz)	4.2ohm @ 201Hz 15.8ohm @ 87Hz
Impedance phase min/max (20Hz–20kHz)	-50° @ 107Hz 37° @ 23Hz
Pair matching (200Hz–20kHz)	± 1.7 dB
LF/HF extension (-6dB ref 200Hz/10kHz)	60Hz / 32.4kHz/33.3kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.6% / 0.5% / 0.1%
Dimensions (HWD)	343x192x300mm