

MartinLogan Expression 13A

Part of the Masterpiece series, this hybrid electrostatic with room correction promises a taste of the range-topping Neolith at a more wallet-friendly price
 Review: José Victor Henriques Lab: Keith Howard

If you thought *The Fantastic Four* dwelled solely in the Marvel Comics universe then prepare to be surprised. While the MartinLogan Masterpiece Series consists of eight loudspeakers topped by the mighty Neolith [*HFN* Jul '16], the Expression is one of four models created by the company to give more than just a taste of Neolith performance at different levels of size and affordability.

These 'Fantastic Four' comprise the Renaissance ESL 15A [*HFN* Jan '17], Expression ESL 13A and Impression 11A – all hybrid designs – and the Classic ESL, which is passive only. The numbers in the names refer to the size in inches of the electrostatic panel used, while the names themselves, well... these are simply marketing choices.

The Expression ESL 13A reviewed here is a good example of the latest evolution in MartinLogan design and technology. It features a 13in CLS XStat electrostatic panel, allied to dual 10in 'PoweredForce Forward' woofers driven by twin on-board Class D amplifiers rated at 300W into 4ohm. The amps are controlled by a 24-bit Vojtko DSP Engine while Anthem Room Correction comes built in.

PANDORA'S BOX

Electrostatic transducers and dynamic drivers are two very different species and in pairing such a delicate and visually transparent membrane to a heavy dynamic woofer, MartinLogan created something of a Pandora's box. The first ML hybrids suffered not simply from a mismatch of speed and radiation pattern, but had a distinct sonic fingerprint of their own.

The Aerius, SL3 and Quest followed, which left me with mixed feelings. By the time the company produced the Prodigy and Odyssey, fuelled by the success of the Statement E2 project, it had things almost right, but not quite, and performance improved still further with the unveiling

of the Summit X [*HFN* Nov '09] – the first speaker to use dual-powered woofers and an XStat panel. Finally, the Expression 13A reveals the secret of a happy marriage: active bass, DSP and room correction. The blending of electrostatic tradition and modern digital technology.

One might describe the new MicroPerf stator technology as being as transparent as a bride's veil. The profusion of smaller holes 'allows for almost twice the exposed electrostatic diaphragm surface,' says ML, while protecting it further from prying fingers. Meanwhile, the visually transparent 112x33cm curvilinear mylar panel is reinforced with rigid 'ClearSpar' spacers, said to keep the same level of tension over all of its surface 'without obscuring the beautiful see-through design'.

The stators are Teflon insulated and, to continue the marriage metaphor, although charged with 5kV, you may safely kiss them. The panel comes mounted on the new leaner 'AirFrame Blade', which continues down to embrace the bass cabinet in a full metal jacket.

Though flat, the holes in the metal grille covering the woofer mimic the curves of the stators and in doing so promote an aesthetic continuity.

The full structure stands 156cm tall and weighs in at

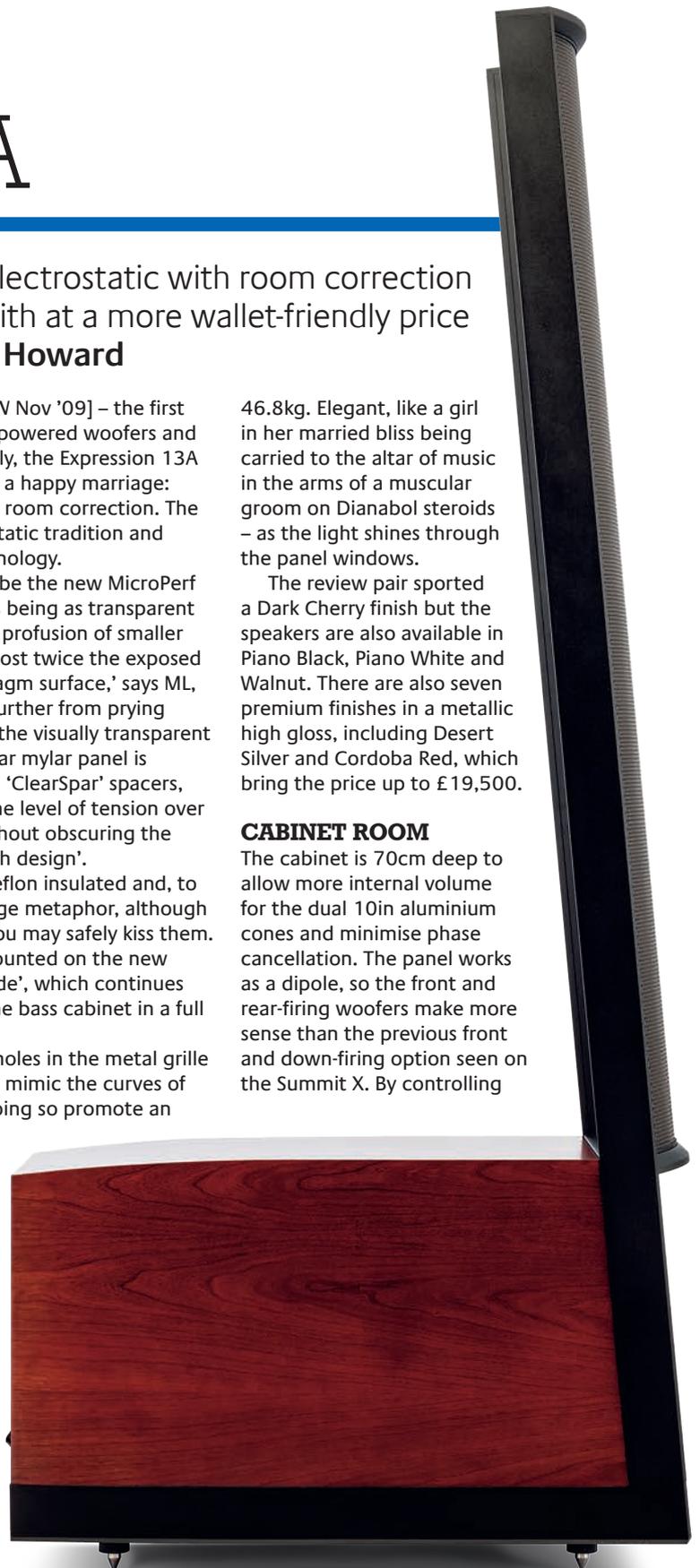
RIGHT: ML's CLS XStat panel offers an effective radiating area of 572in². Below 300Hz it is augmented by front- and rear-facing 10in aluminium-coned bass drivers driven by internal 300W/4ohm Class D power amplifiers

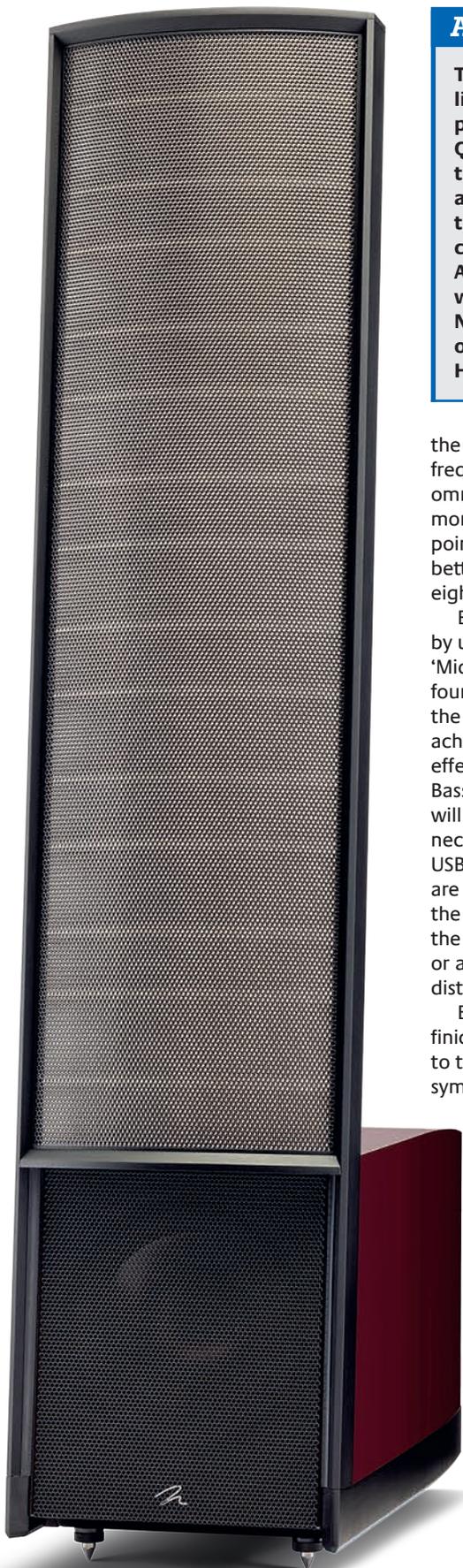
46.8kg. Elegant, like a girl in her married bliss being carried to the altar of music in the arms of a muscular groom on Dianabol steroids – as the light shines through the panel windows.

The review pair sported a Dark Cherry finish but the speakers are also available in Piano Black, Piano White and Walnut. There are also seven premium finishes in a metallic high gloss, including Desert Silver and Cordoba Red, which bring the price up to £19,500.

CABINET ROOM

The cabinet is 70cm deep to allow more internal volume for the dual 10in aluminium cones and minimise phase cancellation. The panel works as a dipole, so the front and rear-firing woofers make more sense than the previous front and down-firing option seen on the Summit X. By controlling





A SPACE ODYSSEY

The electrostatic transducer principle is simple: a very thin and extremely lightweight conductive membrane is stretched between two highly charged perforated steel stators and vibrates in sympathy with the applied audio signal. Quad aficionados may argue that the 1957 ESL is still the best realisation of this technique so far and 'the closest approach to the original sound', but I would add the caveat 'until it gets hit by a drum'. MartinLogan presented a solution to the issue of deep bass reproduction in 1982 with its hybrid electrostatic/moving-coil Monolith, and the name was to prove prophetic. In *2001: A Space Odyssey*, Arthur C. Clarke wrote 'the monolith was a tool created by an alien race that went through many stages of evolution until it achieved a state of pure energy'. No wonder the first reaction to MartinLogans from many non-audiophiles is other-worldly: 'They are playing music, and yet you can see right through them! How on earth is that even possible?..'

the rear output and shifting the phase as frequency rises, the woofers will radiate omnidirectionally at lower frequencies and more like dipoles near the 300Hz crossover point and above. The aim here is to give better blending with the panel's figure-of-eight polar response.

Bass can be manually controlled further by using the 'Bass' (-10dB to +10dB) and 'Mid-Bass' (-2 to +2dB) level controls found on the rear panel, to the right of the WBT binding posts. This can also be achieved automatically using the very effective ARC software and PBK (Perfect Bass Kit) with microphone, although this will set you back an extra £100 or so. The necessary Ethernet and USB Mini-B connections are also to be found on the rear panel. But read the operating manual first or ask your MartinLogan distributor for help.

Electrostatics can be finicky to set up: distance to the front wall, toe-in, rake angle and sympathetic amplification are paramount.

Like all dipoles, the XStat panel doesn't like to be placed against a wall. Neither does the rear woofer, so allow for the speaker to be situated at a distance from the back wall that's at least twice the depth of the cabinet. Toe-in improves focus but affects high frequency response. Too much and things may become 'shrilly' with bright recordings. Place the speakers nine to ten feet away from each other, point them straight ahead, then toe them in slowly until you get the best balance between centre focus and sweetness.

Horizontal dispersion is better than vertical thanks to the curved panel, as you'll soon find out by standing and sitting down while

listening. So, depending on the height of your seat, experiment with the 5° rake at which the speakers are angled by default. In my case, by adjusting the back spikes, I found just two degrees made quite a difference when it came to soundstage depth and height. Leaning them back like a tango dancer will upset the image.

PANEL GAMES

I kicked off my listening using a Krell Phantom III solid-state preamp hooked up to an Audio Research VT80 power amp [HFN Oct '17] with KT120s valves. Source was an Audio Research CD9 CD player/DAC [HFN May '13] and all cabling was

by Transparent Audio. The 13A's punishing low impedance above 14kHz set the VT80 gasping for air. So after swapping the Krell for an Audio Research LS28 preamp [HFN Jan '17] it was time to partner it

'Every molecule of "smoke and whiskey" was heard in his voice'

with my Audio Research GS150 power amp [HFN Jan '15] with KT150 valves. And boy, was I right about the GS150 back in 2015!

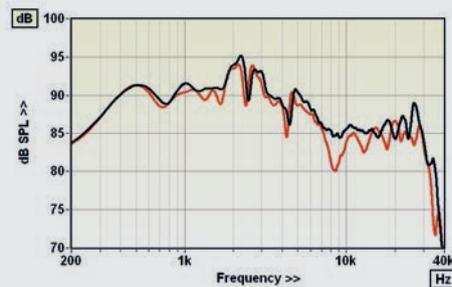
The Anthem Room Correction software was installed by the distributor. All that was needed to compare its effect on the fly was to switch it on and off using the ARC toggles at the back of the speaker. With ARC enabled the Expression 13A sounded bigger and louder, but not always better.

Bass, for example, was tighter and had greater impact, yet was not necessarily more tuneful or extended – as was clear when listening to the synthesised telluric sounds that make up the track 'Beneath Alrischa', from Hans Zimmer's soundtrack to *The Da Vinci Code* [Decca 985 4041]. With ARC, the upper bass revealed more of its dynamic character, having thicker textures that conveyed male voice with some 'chestiness' while also ➔

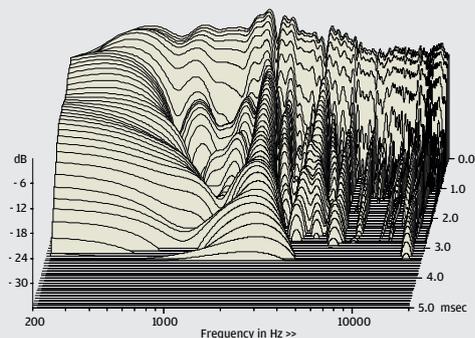
MARTIN LOGAN EXPRESSION 13A

As described before in our lab reports [HFN Jan '17], large electrostatic panel speakers pose difficulties because path length differences between different areas of the panel disrupt frequency response measurement when the microphone is placed at the standard 1m distance. Increasing the microphone distance helps obtain a more representative response but also reduces the time window before the arrival of the first floor/wall reflection, compromising the measurement's frequency resolution. Measured at 2m on the axis of the panel centre, the frequency responses of the Expression ESL 13A still show some characteristic unevenness, particularly between 1.5kHz and 5kHz, and the distinct step down in output, by around 6dB, between 3kHz and 10kHz [see Graph 1, below, raised by 6dB to make them 1m equivalent].

The treble suppression is partly the result of the path length disparities and will be lessened at larger measurement and listening distances. The response unevenness is due to multiple resonances in the thin, curved diaphragm of the electrostatic section which are clearly visible in the CSD waterfall [see Graph 2]. Together these result in high response errors of ± 5.4 dB and ± 7.0 dB, respectively, with pair matching slightly poorer still at ± 3.9 dB (all 300Hz-20kHz). In practice the worst disparities are narrowband, and so of reduced subjective impact, while diffraction-corrected nearfield measurement revealed excellent sub-20Hz bass extension (-6dB re. 200Hz). No distortion results were recorded at 1kHz and 10kHz because, just like frequency response, these measurements are highly dependent on the microphone position relative to the electrostatic panel. KH



ABOVE: Forward response is broadly shelved-down in trend below 2kHz, even at 2m measurement distance



ABOVE: Highly complex panel modes are indicated in this cumulative decay and the response plots [above]

LEFT: NextGen WBT speaker terminals are joined by ± 10 dB bass and ± 2 dB mid-bass level adjustments and RJ45/mini-USB inputs for the ARC bass/room compensation feature

As the listening progressed, it was not without some surprise that I realised ARC did not appear to impair the speaker's forensic abilities. It detected every molecule of 'smoke and whiskey' in Dean Martin's guttural voice, which sounded uncannily real and present in 'Everybody Loves Somebody' from *Dream With Dean* [Reprise; R-6123], while the orchestra played in the background as if trying not to disturb his romantic teasing mood. Or in the abused vocal cords of Ina Forsman singing 'I Want A Little Sugar In My Bowl' [Ruf Records RUF12123] with 'Joplinesque' gut, grunt and gusto.

UNDER ARREST

The more muscular ARC approach was also most welcome with electronic music. Ed Sheeran's 'The Shape Of You' from *Divide* [Asylum Records, Atlantic 0190295859022] and 'So Young' from Portugal. The Man [Woodstock; Atlantic 561633] sounded particularly arresting.

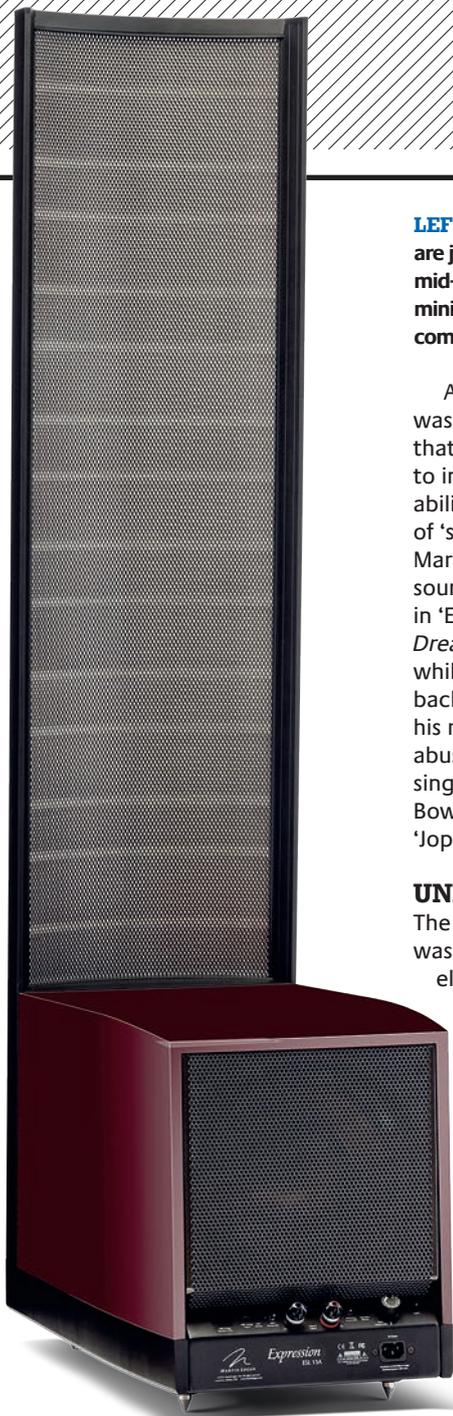
Large scale orchestras, such as The Russian National Orchestra playing Rachmaninov's *Symphonic Dances* under the baton of Mikhail Pletnev [Deutsche Grammophon 457 598-2], also profited from ARC's more authoritative delivery.

So I have to declare the ARC versus non-ARC presentation tie. ☺

HI-FI NEWS VERDICT

As with all dipole speakers, care needs to be taken with room placement, but with Martin Logan's Expression ESL 13A you can have your cake and eat it at the flip of a toggle switch. The lightness of being, transparency and presence of an electrostatic panel coupled with the power 'down under' of a DSP/ARC-controlled dual subwoofer gives you the best of two worlds (make it three!) for the price of one.

Sound Quality: 85%



affecting lower female registers. Saxophones seemed to have less reed and more horn and I could detect a haziness, albeit slight, in the atmosphere of live recordings such as Mary Stallings' *Live At The Village Vanguard* [Maxjazz Vocal Series - MXJ112] and Eric Clapton's *Unplugged* [Reprise Records - 9362-45024-1]. This contrasted with an improved transparency when the room correction was disengaged.

For 'live' and small-scale classical music like Haydn violin concertos with Isabelle Faust and the Munich CO [Pan Classics PC10353] I relied on the manual settings of -2dB for the 'Bass' and flat for 'Mid-Bass'. The sound was more relaxed, fluid and natural with better pacing.

HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms - Mean/IEC/Music)	87.5dB/89.7dB/90.3dB
Impedance modulus min/max (20Hz-20kHz)	0.6ohm @ 20kHz 243ohm @ 20Hz
Impedance phase min/max (20Hz-20kHz)	-89° @ 50Hz -5° @ 20kHz
Pair matching/Response Error (300Hz-20kHz)	± 3.9 dB/ ± 5.4 dB/ ± 7.0 dB
LF/HF extension (-6dB ref 200Hz/10kHz)	<20Hz / 34.6kHz/33.6kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	1.0% / see text / see text
Dimensions (HWD)	1561x339x699mm