Two-way hybrid electrostatic floorstanding loudspeaker
Made by: MartinLogan, Lawrence, KS, US
Supplied by: Absolute Sounds Ltd
Telephone: 0208 971 3909
Web: www.martinlogan.com; www.absolutesounds.com
Price: £24,998

MartinLogan Renaissance ESL 15A

With its ingenious hybrid of electrostatic mid/treble and moving-coil bass units and built-in room correction, the ESL 15A is a loudspeaker icon in the making
Review: **Nick Tate** Lab: **Keith Howard**

Never let anyone tell you that it's easy to design good loudspeakers. This particular genus of hi-fi wears its compromises on its sleeve – cast your eyes at one and it's instantly apparent what choices the designer has made, and how they're likely to play out.

A conventional box design, with traditional moving-coil drivers inside, is perhaps the most troublesome – that nicely finished cabinet may neatly house the bits that make the sound, but it indelibly stamps its own character on the music. Move to a panel – such as the classic Quad electrostatic – and you've solved that problem but created another, because they just can't move enough air to go really loud. And that's why MartinLogan makes hybrids, aiming for the best of both worlds. At £25k, the Renaissance ESL 15A is the company's most expensive hybrid to date, short of the £80k Neolith [*HFN* Jul '16].

A POOL OF LIGHT

Hybrids have their issues too, of course. Poorly done, you get the sense that you've bought one loudspeaker and got another free. It's hard to match a moving-coil woofer encased in a wooden box to an electrostatic panel mounted on a metal frame. But as I've auditioned each successive generation of MartinLogans over the years, I've heard how this has become ever less of a problem. This speaker's sizeable 'Curvilinear Line Source XStat' electrostatic panel (1170x380mm) is the speaker's *pièce de résistance*, ML claiming it yields almost twice the exposed diaphragm surface as a traditional panel of the same size. This is carefully tensioned and held in place by its 'AirFrame Blade' construction, which locks the frame to the big woofer box below.

This low frequency section is actively aspirated by dual 500W Class D amplifiers, which are in turn controlled by a 24-bit Vojtko DSP engine, with Anthem Room Correction built in. One of the reasons the ESL 15A has such a big bass box is that it runs not one but two 305mm aluminium-coned woofers in independently enclosed chambers – although MartinLogan says these are specially aligned to interact with one another.

Build quality is superlative, as you would expect at the price. The highly rigid, aerospace-grade extruded aluminium alloy frame makes most other electrostatic loudspeakers seem positively wobbly. Furthermore, real attention has been paid to the electronics inside the bass box with high quality polypropylene capacitors and air-cored inductors in the crossover, plus a huge linear PSU for the amplification.

The five-way WBT binding posts are about as good as you'll get for your speaker cables, with a pure copper connection plate that's damped and shock-protected. Overall finish is excellent, although if you want the sexier metallic high gloss option, it will set you back an additional £3000.

Interesting finishing touches include a 'downlighter' that casts a gentle pool of light under each loudspeaker, and automatic standby which is activated after a period of non-use – bringing its claimed power consumption down to a mere 0.5W.

A CONSUMMATE ACT

Set up for auditioning in editor PM's listening room, the ESL 15A worked extremely well out of the box, showing consummately good manners with the back of its deep bass enclosure sitting about one metre from the rear wall. Those rear-firing woofers are carefully configured so as not to provoke boundary walls, and it shows.

But when fine-tuning is desired, the loudspeaker's Anthem Room Correction (ARC) system uses a USB microphone to configure itself to the listening space. This hardware is part of the supplied Perfect Bass Kit that's also used for configuring optional MartinLogan subwoofers,

RIGHT: ML's CLS XStat panel offers an effective radiating area of 690in². Below 300Hz it is augmented by front- and rear-facing 12in aluminium-coned bass drivers [see p43] driven by internal 500W/4ohm Class D power amplifiers

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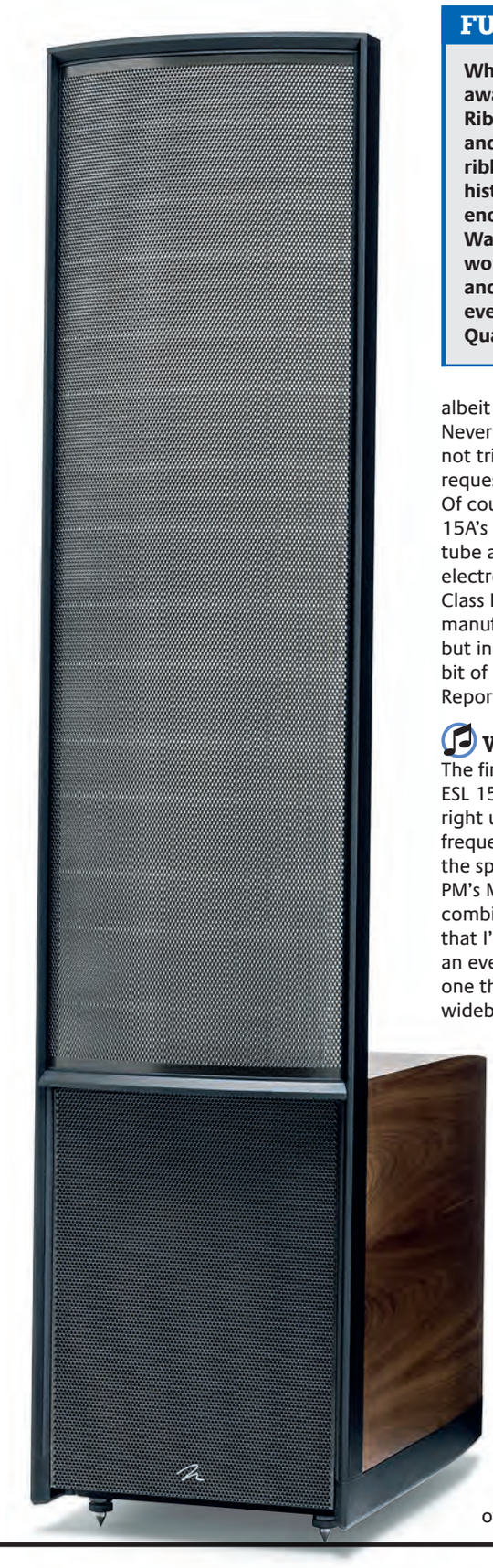

FULL-RANGE OR HYBRID?

When Quad's Peter Walker turned his attention to loudspeakers, he was well aware that bass and treble were competing interests. His 1950 Quad CR Corner Ribbon was defined by this – the ribbon tweeter went down to about 1.5kHz and then handed over to a 12in bass unit. Unhappy with the limitations of the ribbon, he came up with the ESL-57 loudspeaker a decade later, and changed history. Trouble is, it too had problems – the main one being it couldn't move enough air to produce strong bass at higher listening levels. Mindful of this, Walker advocated stacking the Quad, giving twice as much panel area, and it worked but was impractical for customers. This inspired Gayle Martin Sanders and Ron Logan Sutherland to begin work on a hybrid electrostatic, which eventually become the Monolith in 1983. With its curved panel, it refined the Quad approach while its moving-coil bass unit vastly improved power handling.

albeit with an alternate software regime. Nevertheless, the configuration process is not trivial and purchasers should probably request their dealer do the final set-up. Of course, another benefit of the ESL 15A's active bass drivers is that a modest tube amp might be entertained for the electrostatic panel, leaving the onboard Class D amps to do the heavy lifting. The manufacturer quotes a sensitivity of 92dB, but in truth the speaker still liked a good bit of power going through it [see KH's Lab Report, p43].

WONDERFUL INTEGRATION

The first thing any new listener hears is the ESL 15A's wonderfully integrated sound, right up and down the frequency scale. With the speakers driven via PM's Melco/Devialet combination, I was sure that I'd never heard such an even-sounding hybrid, one that is breathtakingly wideband – stretching from almost subterranean lows to bat-bothering highs and with every part in between sounding detailed, delicate and dynamic.

AIR's 'All I Need' [*Moon Safari*; Virgin CDV 2848] is a delicate piece of modern pop with gentle synthesiser backing set behind a plaintive acoustic guitar and vocal line. The track succeeds largely by the subtlety and nuance of its arrangement, and the ESL 15As gave a touchingly poignant rendition with just the right amount of detail for the listener to delve into the mix, rather than having it thrown at him. These hybrids delivered a vibrant texture to the music, with a strong and firm yet beautifully restrained bass, never overpowering the listener.

> 'Treble was silky smooth in a way that no dome tweeter ever is'

At the other end of the spectrum, this speaker served up the best treble I've heard from an electrostatic – highly atmospheric and dripping with detail, it was silky smooth in a way that no dome tweeter ever is. The same went for the midband, letting me enjoy the beautifully balanced and meticulously proportioned female vocals, hovering way above and forward of the plane of the loudspeakers.

Upping the pace somewhat, I turned to the early '90s house classic single by Felix, 'Don't You Want Me?' [Deconstruction 74321 10983 2]. This is emphatically not a hi-fi recording, probably having been produced in a cheap studio and mastered on DAT back in the day. However, the ESL 15As were not bothered at all by its iffy provenance, and instead dived straight into the heart of the music. They set up a magnificently wide soundstage, underpinned by a wonderful bass line that delivered vast tracts of low frequencies into the room without boom.

The hi-hat cymbal sound of the drum machine told me how smooth and sweet this speaker is up top, never grating or sounding harsh. Indeed, if anything there's just a slight softness to the high frequencies – it doesn't have the metallic 'zing' of your average metal dome tweeter, for example. Again, bass was excellent, demonstrating its ability to move serious amounts of air around the room in a controlled yet tuneful way. This type of music wouldn't be the automatic choice for a high-end MartinLogan loudspeaker, yet it proved itself perfectly able to get into the spirit of things.

We moved from the ridiculous to the sublime, and the opening movement of Mahler's Symphony No 4 with the Budapest Festival Orchestra/Iván Fischer ⇨

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LEFT: NextGen WBT speaker terminals are joined by ±10dB bass and ±2dB mid-bass level adjustments and USB input for the ARC bass/room compensation feature (used with a PBK microphone kit)

[Channel Classics CCS SA 26109]. This is a great recording and the ESL 15A wasted no time in showing it, and was finally able to run free. It makes orchestral music sound magnificent, with all the rich timbre and atmosphere that you could ever want. Spatially sublime, the cathedral-like soundstage it conjured up certainly isn't something one hears every day. Images were located with laser-like precision, and the result was a vividly focused, highly immersive performance. With a recording such as this, the music assumes a tangible presence while the loudspeaker performs a vanishing act, fading out of the room in a ghostly way.

One especially clever facet of its sound is that way it is both supremely detailed yet never particularly forensic sounding. Often, high-end speakers give you a choice of ultra analytical or sweet and sumptuous, with the former tending to deconstruct the music and the latter basically obscuring it. The MartinLogan ESL 15A simply goes about unlocking what's on the disc – or in the byte – in a natural, organic and flowing manner.

A PANORAMIC VIEW

Whether it was the axe-wielding rock histrionics of Bill Nelson, on Be Bop Deluxe's live rendition of 'Modern Music' [*At The BBC*; Parlophone SHTW 803], or the moving cover of Neil Young's 'Don't Let it Bring You Down' by Annie Lennox [*Medusa*; RCA 74321257172], this loudspeaker takes you straight to the scene of the recording.

It's hard to criticise the ESL 15A, which always gives a measured view of things, allowing the subtleties of the music to issue forth gracefully rather than assaulting the ear. Nor does it sound euphonic, offering up a sweet, cosseting coloration that makes everything sound 'nice', regardless. Instead, the ESL 15A is highly neutral, articulate and dynamic, a loudspeaker that doesn't sugar the pill in any way, but opens up a panoramic vista onto your music.

HI-FI NEWS VERDICT

Those seeking a sepia-tinted sound should look elsewhere, as should headbangers and disco divas too. Instead, the ML ESL 15A serves up an intricate and engaging sound with serious power. It will astound most who are lucky enough to hear it, especially fans of classical music. It's not for everyone – no speaker ever is – but seekers of the musical truth will probably think it one of the best things they've heard.

Sound Quality: 88%

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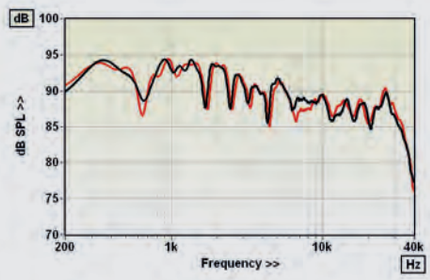
LAB REPORT

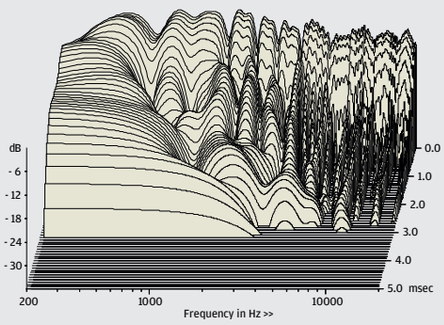
MARTINLOGAN RENAISSANCE 15A

Large panel loudspeakers present measurement challenges because of the need to get sufficiently far away from them to be acoustically in the far-field. Here the panel height is 117cm, so the measurement distance ought to be 6m or more – very difficult to achieve in a domestic space. In the event I measured the forward frequency responses at panel centre height, 2m away, and thereafter raised the responses by 6dB to make them comparable with our usual response tests, conducted at 1m. Some of the unevenness of the response and its treble decline is probably accounted for by not being in the far-field, but the overall response trend is similar to that of the Neolith [*HFN* Jul '16]: high sensitivity at lower frequencies before a tailing-off in response above, here, 2kHz [Graph 1, below]. Despite this, the response errors are not excessive at ±4.4dB and ±4.7dB, although pair matching is slightly off at ±3.2dB, due principally to slight displacement of the two speakers' response ripples.

Pink noise sensitivity, corrected to 1m, was a high 91.4dB – close to ML's specified 92dB. As is typical of electrostatics, impedance varies markedly with frequency. ML specifies a 4ohm nominal and a scary 0.52ohm at 20kHz; we measured a minimum of 0.57ohm at 18.9kHz. EPDR (equivalent peak dissipation resistance) falls to a low of 0.3ohm at 14.1kHz. On source material with energetic treble this may cause all but the hardiest amplifiers difficulty. Diffraction-corrected nearfield measurement showed the bass extension to reach below 20Hz (–6dB re. 200Hz). As we've become used to seeing with MartinLogan ESLs, the CSD waterfall [Graph 2, below] is cluttered with resonances above 1kHz. **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]

HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	89.1dB/91.4dB/91.3dB
Impedance modulus min/max (20Hz–20kHz)	0.57ohm @ 18.9kHz 239ohm @ 20Hz
Impedance phase min/max (20Hz–20kHz)	–89° @ 68Hz 12° @ 20kHz
Pair matching/Response Error (200Hz–20kHz)	±3.2dB / ±4.4dB/±4.7dB
LF/HF extension (–6dB re. 200Hz/10kHz)	<20Hz/35.1kHz/35.4kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.1% / see text
Dimensions (HWD)	1173x400x633mm

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