



Clean Fun!

A sophisticated active electrostatic loudspeaker for just £2,390, Noel Keywood found MartinLogan's Purity a most enjoyable listen...

My Quad ESL-63 electrostatic loudspeakers departed this planet long ago, life in the review lane having taken its toll. Also, truth be told, they needed a bigger room - so I could get in as well! A 17x14ft urban lounge isn't enough for big Quads sitting atop Celestion SL6000 subwoofers. I'm a diehard electrostatic fan though, a condition I developed after owning Braun electrostatics, so I was happy to review MartinLogan's new Purity. It comprises an electrostatic panel atop a pair of conventional woofers, both driven by a 200 Watt internal amplifier. This is a loudspeaker that would fit my lounge and it's probably just as well they never made it there as it's likely they never would have made it back! I ended up listening to the Purities at *Hi-Fi World* towers, in a 28ft square room easily able to accommodate them.

Measuring 135cms high but only 24.5cms wide and 37cms deep, the Purities are compact as electrostatics go. That's because the open panel you can see at the top reaches down to 450Hz and does not handle bass, where longer wavelengths demand a bigger panel. Below this frequency they cross over to an active bass unit, where the amplifier is housed in the cabinet. That means each loudspeaker needs mains power, but then electrostatics always do.

It also means that loudspeaker cables are not needed; we ran signal cables from a Creek OBH22 passive preamplifier, fed by a Yamaha CD-S2000 CD/SACD player, a near perfect drive system for a loudspeaker like this as the smooth sophistication of SACD could be enjoyed on electrostatics, something that gets a big thumbs up from me. This is real high fidelity at relatively affordable prices, since the Purities cost £2,390, an unusually low price for any electrostatic, let alone one with its own amplifier.

MartinLogan also fit loudspeaker inputs, allowing them to be connected into a system as it stands. However, contrary to comments I saw on the 'net, these do not give direct connection to the drive units, but attenuate the input to suit the internal amplifier that then feeds both drivers through a passive crossover on its output, MartinLogan in the U.S.A. told us.

The Purities were designed to be sensitive enough to run from an iPod, generating a high 95dB SPL from



Beneath the bass cabinet grille lie two 6 inch bass units, working in parallel and driven by an inbuilt 200W amplifier.

just 100mV in (CD players produce twenty times more than this). Indeed, importer Absolute Sounds is even offering them as part of a high end iPod based system - the ElectroKID [see box]. The internal amplifier drives two bass units in a reflex enclosure with a rear port. A three position switch gives bass boost, bass cut or flat options.

At 22.3kgs (51lbs) each, the Puritys are weighty. We set them up as supplied for running in, where the panel is angled backwards. Within 2ft of the walls bass had to be set to -3dB (cut) to achieve reasonable balance and the panel sounded smooth but dull, due to lack of treble. Electrostatic panels that radiate over a broad area suffer destructive interference that results in hot spots and, standing up slowly, it was apparent that these panels sounded most balanced listened to on-axis, not from below. Their base can be unscrewed and swivelled around to bring them upright and this made a big difference. They were then angled in progressively and were best listened to one-third off axis, as the handbook suggests.

Moving the Puritys away from the walls then gave better bass balance and quality, allowing the bass switch to be set to flat. I then stood some absorptive panels a few feet behind the open panels to soak up rear radiation, a trick I used with my Quads. Electrostatics always need fine tuning like this so there's nothing unusual here.

Optional spikes provide an extra measure of adjustment. The lower

cabinets have an artificial veneer which isn't especially lovely, but that was no surprise considering price and what's on offer.

SOUND QUALITY

The Puritys exhibit all the strengths of electrostatics in spades, if some of their weaknesses too. They set up a fabulously wide sound stage, in the plane of the loudspeakers, that has ethereal height and on which images have a hard-etched outline. This gave a full scale canvas on which the choir and soloists of the Berliner Philharmonica filled the end of the room singing Beethoven's *Missa Solemnis*, towering in an arc before me as if I had a seat at the concert hall.

Also lifted to a seat with the gods was Hugh Cornwell, singing 'Always the Sun', as sustained organ chords whirled around slightly below and an opening drum roll from Jet Black dived from hard left to far right with breathtaking clarity. The Puritys' huge sound stage worked as well with the Stranglers as it did with a choir and here the MartinLogans took me back to my days with Quad ESL63s and their celestial imaging. With rock recordings, where images are placed with pan pot precision in the final edit, positioning was perfectly revealed in an explicit manner conventional loudspeakers can only mimic.

Accompanying vocals in Spanish appeared just over Toni Braxton's right shoulder as she sang 'Spanish Guitar'. Her voice had a liquid clarity that you only get from a film-like electrostatic panel, completely free from colour and also the deadness of the image that comes from lost subtleties, absorbed by the heavy materials in conventional cones. The Puritys made clearly apparent how hard Toni Braxton was working at her vocal intonation, with their breathtaking portrayal of her voice, that hung clearly in front of me. I could easily make out echo from the studio microphone too.

Spinning Amy Winehouse's 'You Know I'm No Good' had kick drum sounding large and solid, centre stage. Ride cymbals were picked out with pinpoint precision and had real bite, but there was some spitch behind their delivery. Ms. Winehouse sang with a clarity that was unrivalled by conventional loudspeakers: the

Puritys again showing their masterful way with vocals.

Electrostatics not only image and reproduce vocals well, they give fantastic results at low levels, due to lack of mass and stiction. This was very obvious in the chiming purity of each key of Lang Lang's piano as he worked with restraint through the quieter parts of Rachmaninov's Piano Concerto No2. Often I find myself gently increasing volume on the remote control to better discern pianissimos, but each note sprang clearly from a perfectly silent back drop (because there's no reflected energy), causing me to hold my breath so as not to disturb the perfection of the playing and its delivery into the room from the Puritys. As strings of the orchestra

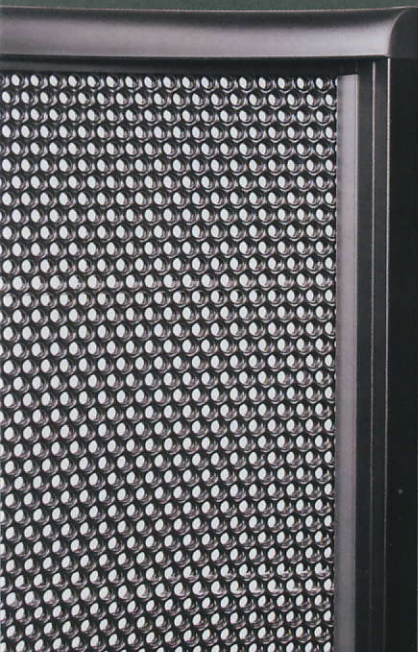
"these loudspeakers played The Eagles in glorious technicolour, and I loved what they did..."

interjected, gently swelling in a broad swathe across the room, although there was superb differentiation between instruments, equally there was also a little coarseness, the same effect that brought a 'spitch' to sibilance I believe.

Whilst this was also evident with the vigorous strings that embellish the Overture of Wagner's *Reinzi*,

The rear panel carries loudspeaker and line inputs. Both feed a 200W internal amplifier, so it's best to use the line input. A switch provides bass flat, boost and cut options.





Between the two perforated steel stator panels, front and back, lies a very fine, clear plastic film, a bit like Clingfilm. In Martin Logan's words it is a "low-mass PET (polyethylene terephthalate) diaphragm on which there is a thin-film conductive coating". The large holes in the stators "expose more of the diaphragm surface, dramatically expanding effective radiating area without increasing panel size, while spacers help maintain their stiffness without impairing the signature transparent look of Martin Logan electrostats".

It takes thousands of volts of audio on the stators to produce electrostatic forces strong enough to drive the light diaphragm backward and forward, achieved by using a step-up transformer. Martin Logan apply an insulator coating to the steel stators to make them safe. This removes much of the obstruction to sound transmission presented by electrostatic stators and protective covers.

What's special about electrostatics? The diaphragm is super light and driven over its entire surface, so it can follow musical subtleties better than a heavy cone. There is no box too; the rear wave is "lost" into the room. The result is a super clear and highly insightful sound free from colouration. Electrostatics have very low distortion too, but they tend to beam sound to a sweet spot.

horns rang out with a lovely metallic blare, whilst kettle drums rolled ominously. All in all, this was another thoroughly enjoyable performance, especially during the quieter episodes as strings hum excitedly like busy bees, something the Puritys capture beautifully.

But I do play Rock, and its heavier forms (ahem!) exposed some of the loudspeaker's weaker areas. Whilst bass was strong and deep it wasn't especially lithe or expressive, although I can't say this worried me too much in view of all else the loudspeakers did well.

Cymbals, tambourines and sometimes steel string guitar sounded a little hard and edgy. The Eagles 'Somebody' opened so forcefully, with a glittering display from guitars and vividly explicit enunciation in the choral line that I hardly noticed the powerful kick drum was perhaps a little lacking attack. You cannot listen to the Puritys away from the hot spot, where bass disconnects from all else (because the bass bin is a

monopole and the panel a dipole), and I am not so wedded to bass quality that all else is subservient. In a nutshell, the Puritys played the Eagles in technicolour and I loved what they

did. I did suspect that the Puritys would go so loud, and then not much louder, but it was loud enough for me.

CONCLUSION

Martin Logan's Purity active electrostatics are a rare, and for many fantastic, experience. Of course they're not perfect, but you can say that of any loudspeaker. But what they do is show how cone drivers in boxes can produce a dull, bleak, slow and contrived sound. One listen the sparkling clarity, glorious sound staging and immersive low level dynamics and detail of these electrostatics will make you depressed with your existing boxes! Factor in their small footprint and room friendliness and you have a very special active loudspeaker.

There's little at the price to match these loudspeakers, I feel - they're a glorious experience, so much so that they have me hankering for much more. There's nothing to match a good electrostatic and £2,390 in this instance offers a unique experience, one well worth listening closely to.

ELECTROKID

Martin Logan's UK distributor Absolute Sounds is offering the superb Krell KID high end iPod dock with a pair of Martin Logan Purity floorstanding electrostatic loudspeakers as the ElectroKID system for £3,740. See www.absolutesounds.com.

MEASURED PERFORMANCE

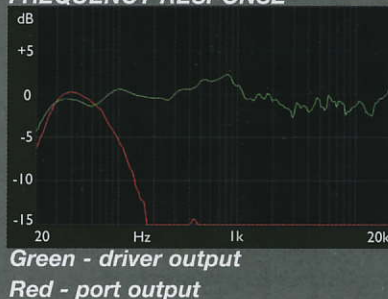
Frequency response of loudspeakers like these depends very much upon microphone position. The result published here is quite complementary, being what you get at the one-third off-axis position with the bass units well away from walls. Generally, over many sensible positions (i.e. not from below) we measured a wide midrange plateau in output of +3dB or so, that will push vocals and instruments forward. Above 1.5kHz the electrostatic panel runs up to 20kHz, our analysis shows, listened to perpendicularly to the centre, one third off axis.

The bass unit runs down to 26Hz (-3dB) or so, which is very low, but then it is an active system and so can be 'forced' downward using equalisation. The port contributes quite substantially to output, the red trace shows.

Sensitivity is very high, quoted as 95dB SPL (loud) at 1 metre from 100mV input, which is what a battery driven MP3 player will produce.

The Purity is a very wide range loudspeaker. Its electrostatic panel runs from 450Hz up to and past 20kHz our measurements show. The bass unit goes deep. Results varied substantially with microphone position and, at low frequencies, room position - rather more so than a Quad ESL-63 for example. In use placement, orientation and listening position will substantially affect results. NK

FREQUENCY RESPONSE



VERDICT ●●●●●

A dramatic sound possessing the airy lucidity of a good electrostatic allied to the bass weight of a box loudspeaker.

MARTINLOGAN
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- FOR**
- transparent midband
 - panoramic imaging
 - low level dynamics

- AGAINST**
- position-sensitive
 - spitch with sibilance
 - soft bass