

# Dynaudio Evidence Platinum

Dynaudio's flagship series has a new Platinum model which showcases the company's latest drivers and fine-tuning  
 Review: **John Bamford** Lab: **Keith Howard**

Introduced as a high-end statement at around the millennium year, the Evidence models from Danish loudspeaker specialist Dynaudio enjoys a fine reputation all over the globe. The granddaddy of them all, the humongous Evidence Master, standing over 2m tall with its 106litre modular enclosure, remains on the company's price list at £78,400, as does the slimmer Evidence Temptation (£34,500). However this new Evidence Platinum model (£58,500), introduced a few months ago, supersedes both of them as the company's latest design statement.

It's been a considerable time in the making: Dynaudio previewed a 'concept' prototype of the Platinum at Munich's High End exhibition as long ago as May 2012. The company has been introducing many refinements to its designs throughout its less expensive speaker ranges – such as its wireless Xeo and stylish Excite series – and its high-end Evidence models have long been due for a serious makeover. Two years after its tentative preview at Munich, the Evidence Platinum is finally shipping.

## TURBOCHARGED

In essence it's a heavily tweaked and turbocharged Evidence Temptation, the new Platinum incorporating Dynaudio's latest drive unit and accompanying crossover designs. Its form factor is almost the same as the 64litre Temptation, the Platinum standing just under a centimetre taller (at 194cm) and 20mm deeper. Meanwhile it features the same narrow-profile front baffle – consequently it remains a statuesque 'totem pole' of a monitor that doesn't in fact overly dominate a room, given its exceptionally modest footprint.

Its enclosure is immaculately finished in piano lacquered real wood veneers – as you'd expect from a high-end speaker

costing as much as an executive car – with a choice of black, mocca, rosewood and Bordeaux finishes.

## OPTIMISED DISPERSION

On the sculpted baffle (just 390mm at its widest point) all the drivers are laid out vertically as symmetrical pairs. At the centre are two tweeters, flanked on either side by a midrange driver, with a pair of woofers top and bottom. Dynaudio endeavours to control vertical dispersion in order to maximise direct sound to the listener and make its speakers less influenced by the room and also less critical of positioning – holding great store in its 'DDC' design methodology [see boxout, facing page].

Says Dynaudio: 'DDC isn't simply arranging the drivers in a symmetrical array.

For DDC to succeed, every single detail – from each drive unit to the crossover – must be individually tailored and optimised. With two tweeters, two midrange drivers and, depending on the model, two or four woofers, each drive unit

complements its identical counterpart in frequency response and phase relationship such that a carefully defined dispersion characteristic is achieved. This intricate matching is repeated once again for each speaker pair to work together in tandem.'

For the first time in the Evidence series the Platinum employs Dynaudio's latest Esotar<sup>2</sup> tweeters. These are 28mm silk domed units treated with a proprietary coating, employing aluminium voice coils suspended in magnetic oil (ferrofluid) to maximise power handling and improve the

**RIGHT:** Standing almost two metres tall, Dynaudio's latest flagship model has two 28mm silk-domed tweeters with two 150mm midrange drivers and four 180mm woofers featuring the company's 'MSP' composite diaphragms

"Every single detail must be individually tailored"





## DYNAUDIO DIRECTIVITY CONTROL

Although the classic view, perpetuated in many acoustics textbooks, is that room reflections are deleterious to sound quality, today's loudspeaker manufacturers take a more nuanced view. As some of us have been saying for decades, reflections *can* be beneficial – but they need to be the right ones and their spectral content must be sufficiently similar to that of the sound reaching the listener's ears directly from the loudspeaker. The 'good' reflections are from the room's side walls: ensuring that these have a similar spectrum to the on-axis sound is relatively easily achieved by using at least a three-way design with vertically aligned drive units on a narrow front baffle – a recipe seen in many modern floorstanders. Of course, hard, reflective side walls are needed too (no absorbent there, please). Ceiling and floor reflections, by contrast, are 'bad' but controlling them is more difficult. Dynaudio's research has suggested that they are a significant factor in a speaker sounding different in different room environments, so DDC deploys twin drive units in each frequency range so as to narrow the speaker's vertical directivity and thereby reduce the intensity of floor and ceiling reflections, by a claimed 75% (12dB). KH

dome's excursion capability. A damping chamber integrated into the rear of the assembly acts as an acoustic absorber, deadening back-wave energy, while the soft domes are protected from prying fingers by 'acoustically neutral' small titanium bars.

### IN-HOUSE DESIGNS

The two midrange drivers flanking the two tweeters are 150mm units featuring Dynaudio's latest 'MSP' diaphragms manufactured from magnesium silicate polymer, a proprietary composite that boasts low mass/high rigidity and 'ideal internal damping properties' according to the company. Terminated with supple rubber surrounds, the cones' one-piece moulding has been geometrically optimised so that its dispersion pattern gradually adapts in a controlled manner as the frequency and amplitude increases.

Their motor assemblies feature neodymium magnets and large voice coils made of lightweight aluminium wire rather than copper, which allows for more windings and a larger coil diameter, while minimising mass. By positioning twin magnets inside its voice coils Dynaudio says a larger and more homogenous magnetic field can be utilised, with less magnetic radiation. Using two magnet rings above each other creates a more symmetrical pole piece design and aims to make the coil conduction constant regardless of voice coil position.

The Evidence Platinum's four bass drivers similarly are Dynaudio's MSP designs – made entirely in-house (as are Dynaudio's cabinets) – with 180mm diaphragms. The woofers are housed in heavily braced and damped reflex enclosures with large ports venting at the rear. Meanwhile, the

sculpted centre section of the Platinum containing the tweeters and midrange drivers is formed of CNC-machined aluminium with a 40mm-thick baffle.

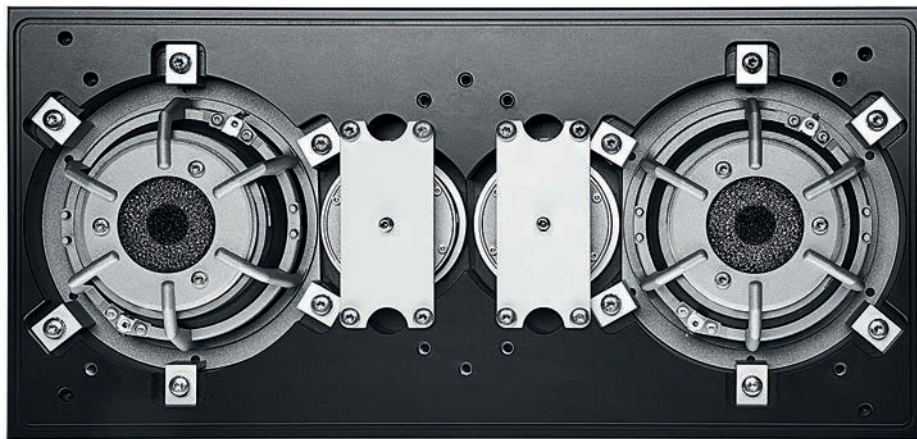
It's within this rigid aluminium structure that the Platinum's dividing network sits, in an isolated chamber at the rear with ventilation slots to keep the crossover components within a safe operating temperature range, even at continuously high volume levels and during extreme transients. However the input terminals are at the bottom of the speaker's rear panel, as you surely wouldn't want your cables trailing midway up the enclosure!

Throughout its loudspeaker designs Dynaudio employs first order (6dB/octave) crossovers, using carefully selected capacitors, ceramic resistors and oxygen-free copper air-coils. The company eschews split crossovers for bi- or tri-wiring, as Dynaudio's product manager Roland Hoffmann told us when we reviewed the Excite X38 [*HFN* Mar '14], 'Separating such a design, bridging across its sections with metal strips, for those who will use single lengths of speaker cable, is really not the right way to go.'

### AN EXPLICIT PICTURE

From the opening bars of Dire Straits' evergreen 'Private Investigations' from *Love Over Gold* [Mercury 8000882] I was immediately struck by the Dynaudio's uncommonly vivid and subjectively 'clean' and uncoloured presentation. Bass is taut and explicit, the midrange clear, and high frequencies crisp and open, with little evidence of any tiring sizzle.

We drove the Evidence Platitudes with a top-of-the-line Devialiet 800 dual-mono amplifier setup in the editor's media room [[www.hifinews.co.uk/news/article/](http://www.hifinews.co.uk/news/article/)] ↪



**ABOVE:** The Evidence Platinum's dual Esotar<sup>2</sup> tweeters and two 150mm midrange drivers are mounted behind a thick aluminium front baffle in the centre portion of the speaker's enclosure

*meet-the-team;-paul-miller/9952*] hooked up with Absolute Dream cables from Crystal Cable. A wide selection of CD rips and downloaded hi-res files were played out from a carefully-configured Sony Vaio laptop running foobar2000 music player software. Presenting the speaker with dramatic and challenging programme material like Chris Jones 'God Moves On The Water' and 'No Sanctuary Here' from his album *Roadhouses And Automobiles* [Stockfisch SFR 357 6027 2] revealed how well the Platinum deals with hyped-up, pumping bass lines. Where so many speakers deliver a bloated, exaggerated rendition of the bass guitar figures in these demanding tracks, the Evidence Platinum kept everything under tight control.

You might think the speaker rather dry and matter-of-fact. Initially I was slightly underwhelmed, in particular when I played the title theme from the soundtrack from the 1999 sci-fi thriller *The Day After Tomorrow* [Varèse Sarabande 302 066 572 2] in which the sweeping orchestral score contains truly thunderous bass that is felt as well as heard. Sure, the Platitudes were moving plenty of air... but they weren't pressuring the room anything like as much as I expected to witness from such statuesque monitors.

'For many listeners this will prove a boon,' I wrote in my notes as I enjoyed composer Harald Kloser's achingly beautiful melody. 'This is a huge speaker that delivers a commensurately mammoth sound image without over-loading a modestly-proportioned listening space with too much low frequency mayhem...'

But the longer I listened, the more I began to appreciate the Platinum's

three-dimensional imaging capability and its complete lack of coloration.

### EERILY LIFELIKE

The speaker is wonderful at reproducing the sound of a piano – with life-like scale and dynamics, the attack and decay of notes reproduced with fabulous clarity and precision. 'Natsushaki' by the Helge Lien Trio, recorded in Oslo's Rainbow Studios [96kHz/24-bit download from highresaudio.com] sounded tremendous, the speaker providing a panoramic and crystal clear window through which to observe the musicians performing in a believable space. The upright acoustic bass appeared eerily lifelike and the large, loose-skinned bass

drum wholly convincing in scale, timbre and dynamic power.

By way of a slight contrast I played Wesseltoft and Schwarz's 'Dreaming' from their 2011 album *Duo* [Jazzland

060252770419] in which experimental jazz pianist Bugge Wesseltoft's ivory keys combine exquisitely with the pumping electronic sound effects derived from Henrik Schwartz's computer. I don't believe I've had as much fun since partying with JBL's mighty Everest DD67000s a few months back [*HFN* Aug '14] as I cranked up the volume to eleven. The clarity was extraordinary, the music's dynamic shifts and vibrant sonic textures depicted in explicit fashion.

Okay, so the Platinum's LF extension appears a tad curtailed given the speaker's monolithic proportions. But even a bass lush such as me has to admit that there can be such a thing as *too much* bass.

What this speaker delivers is strong, accurate, authoritative bass, not boomy ☺

*'It was wholly convincing in scale, timbre and dynamic power'*

## WILFRIED EHRENHOLZ

Dynaudio's entrepreneurial CEO Wilfried Ehrenholz was an electronics engineer aged just 22 when he founded Dynaudio in 1976 in Skanderborg, Denmark. As a music-loving teenager he became passionate about sound reproduction, taking on extra paper delivery rounds in order to afford an SME tonearm and Shure V15 pick-up. Four decades on and he's managing a company with over 250 employees and an annual turnover more than twice that of successful British manufacturing firms such as Linn Products or Naim Audio. Dynaudio's R&D and manufacturing base remains in Skanderborg with its own cabinet works close by, while the company's administrative headquarters is 200 miles south in Rosengarten near Hamburg. Dynaudio recently appointed Jan Abildgaard Pedersen as its new Chief Technical Officer. Pedersen is a specialist in digital signal processing and acoustics with an impressive CV, having been a senior manager at B&O and a past AES president.

Says Ehrenholz: 'We're living in a new world today and must embrace the latest technologies' – referring to his company's wireless and DSP-driven speakers such as the Xeo range and soon-to-be-launched Focus HD models.

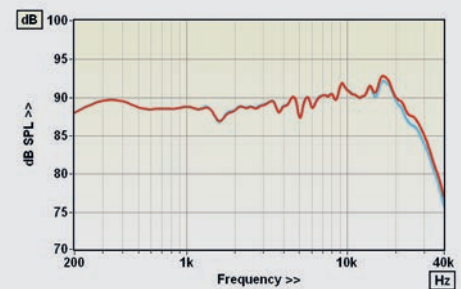
'DSP allows us to offer astonishing performance from compact speakers at real-world prices – while the design of our flagship Evidence Platinum confirms we will never leave our audiophile heritage.'



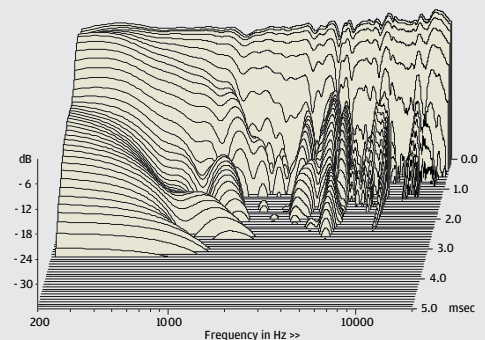
## DYNAUDIO EVIDENCE PLATINUM

Dynaudio claims an 89dB sensitivity for the Evidence Platinum which accords well with our pink noise and 'music' figures of 89.5dB and 89.1dB. This is slightly on the low side for a large reflex-loaded speaker but Dynaudio has clearly been at pains not to make the Evidence Premium difficult to drive. Although it has a claimed nominal impedance of 4ohm – consistent with our measured minimum modulus of 3.2ohm – the key here is impedance phase angle. This is so well controlled that the minimum EPDR (equivalent peak dissipation resistance) dips to a low of 2.2ohm at 75Hz, so the large Dynaudio is easier to drive than many less ambitious modern floorstanders.

Frequency response [Graph 1, below], measured with the grilles removed and the microphone height half-way between the twin tweeters, displays a mildly rising trend above 5kHz but this can easily be countered by listening slightly off-axis. Even with this rise, frequency response errors of  $\pm 3.0$ dB and  $\pm 2.7$ dB for the review pair (300Hz-20kHz) are excellent for a passive speaker. Even more outstanding is a pair matching error of just  $\pm 0.5$ dB over the same frequency range, but even this exceptional figure doesn't do the Evidence Platinum full justice because up to 13kHz the pair matching was a barely credible  $\pm 0.2$ dB – simply amazing. Diffraction-corrected near-field measurement showed the bass extension to be 42Hz (-6dB re. 200Hz) but with the outputs of six drivers and two ports to be combined to obtain this figure it has to be regarded as tentative. The CSD waterfall [Graph 2] shows what are presumably midrange driver breakup modes, poorly suppressed because of the first-order crossover. KH



ABOVE: Pair matching is superb and the forward response is very flat if you listen slightly off-axis



ABOVE: Cumulative decay waterfall shows some mid driver modes, exposed by the shallow 1st-order roll-off

**LEFT:** Woofer enclosures top and bottom are reflex loaded with large ports. Aluminium centre section contains the speaker's network in a chamber behind the tweeters and midrange units

seem to combine just the right amount of vibrancy and sparkle while avoiding any tiring, chromium-plated hardness to the reproduction of high frequencies.

### TELLING THE TRUTH

What you *don't* get with a speaker that's as vivid and insightful as this is any sense of romance. I was surprised to discover that Johnny Cash's evocative interpretation of Nine Inch Nails' 'Hurt' from his album *American IV: The Man Comes Around* [UMG/American Recordings 063 339-2] sounds disappointingly ragged and 'clanky', the Evidence Platinum revealing candidly that only the acoustic guitars were captured wholly authentically in this much-cherished recording. The speaker might remain civil and easy to listen to for most of the time, nevertheless it's not afraid to portray the unvarnished truth.

I've recently been rediscovering some of the pioneering jazz-rock band Chicago's finer moments, but the Platinum couldn't help telling me that Chicago's recordings are what they are. The rousing up-tempo 'Listen' from their 1969 debut album *Chicago Transit Authority* [Rhino 8122 79801 3] sounded compressed and 'thin', the song's stirring brass section rather brittle and lacking substance. Still, you can't blame a high fidelity transducer for telling the truth. ☺

### HI-FI NEWS VERDICT

This is an extraordinarily fine speaker that sounds simply right with all manner of music. The Evidence Platinum doesn't flatter to deceive, yet nor does it sound too dry and antiseptic. Its designers have tuned it beautifully, its analytical matter-of-factness skilfully combined with an enjoyable musicality that obviates listening fatigue. It's a world-class design of which Dynaudio can be mightily proud.

Sound Quality: 88%



dance-club bass. And it packs a muscular wallop when the music warrants it, have no fear. There's always plenty of headroom as well.

Press hard on the loud pedal and the Evidence Platinum remains wholly unflustered, taking everything in its stride. I spent hours admiring natural, unsullied hi-res recordings of large-scale orchestral works, listening at realistic sound pressure levels without suffering any fatigue. The speaker's insightful midband and its excellent tweeters

### HI-FI NEWS SPECIFICATIONS

|  |                                 |
|--|---------------------------------|
| Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music) | 90.5dB/89.5dB/89.1dB            |
| Impedance modulus min/max (20Hz–20kHz)         | 3.2ohm @ 99Hz<br>7.4ohm @ 20kHz |
| Impedance phase min/max (20Hz–20kHz)           | -30° @ 21Hz<br>21° @ 310Hz      |
| Pair matching (300Hz–20kHz)                    | $\pm 0.5$ dB                    |
| LF/HF extension (-6dB ref 150Hz/10kHz)         | 42Hz / 29.9kHz/28.1kHz          |
| THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)         | 0.3% / 0.2% / 0.1%              |
| Dimensions (HWD)                               | 1940x210x510mm                  |