*Above: **Wharfedale Aura Series** in lacquered walnut finish*

Wharfedale's Aura radiates irresistible musical energy

The third loudspeaker range to emanate from Wharfedale's Elysian development project, the Aura Series delivers flagship-level engineering at prices that won't require you to remortgage your home

Cambridgeshire, England – In 2016, Wharfedale – Britain's best-known loudspeaker brand – embarked on a new R&D project to create upscale designs that would sit above the classic entry-level Diamond speakers in the company's range. Many innovative and uncompromising concepts were explored, with several key technologies emerging that would form the basis of Wharfedale's flagship Elysian Series and mid-level EVO4 Series, both of which launched some three years after the project began.

The Elysian and EVO4 speakers have several distinctive technical elements in common: AMT treble drivers, three-way configurations (with unusual domed midrange units in the case of EVO4), and exceptional cabinet engineering incorporating Wharfedale's Slot-Loaded Profiled Port. Such features are unique at the retail prices charged for the EVO4 Series models, and in the Elysian Series the engineering of these elements is pushed to the limit to deliver a truly remarkable performance.

Now, a third loudspeaker range developed from the Elysian project has arrived, offering various models at prices above the EVO4 Series and below the flagship Elysian speakers. The Aura Series is like the EVO4 range in that it consists of two standmount models (Aura 1 and Aura 2) and two floorstanders (Aura 3 and Aura 4), plus two centre speakers for home cinema systems (Aura C and Aura CS). The driver configurations are similar too – the smaller standmount is a two-way model, while the larger standmount and both floorstanders are three-way designs, with dedicated midrange units accompanying the AMT treble driver that features throughout.

The speakers are also comparable in size to the EVO4 designs – a little larger, but more compact than the equivalent Elysian models. But when it comes to the technical elements – the drivers, the cabinets, the crossover networks – the Aura Series takes its cues directly from Elysian.

Feel the high

Above: The AMT treble driver delivers fast, detailed and sweetly extended high frequencies, seamlessly matched with the main drivers' woven glass fibre cones

Unlike conventional dome tweeters, or other forms of ribbon and planar diaphragms, the Wharfedale AMT (Air Motion Transformer) high-frequency transducer does not move forwards and backwards like a piston. This means it is not constrained by the mass of its diaphragm, with the attendant blurring of transient response. Instead, the diaphragm is folded and carries conductive elements immersed in an immensely strong magnetic field. When the music signal from the amplifier traverses the diaphragm, the folds constrict and expand – this has the effect of squeezing the air between the folds, rapidly altering its pressure to accurately transmit the equivalent pressure wave received by the microphones in the recording studio.

The AMT diaphragm operates over a large area, delivering high efficiency, and can generate transient acoustic power with ease. Wharfedale's design team has improved the AMT unit in the Aura loudspeakers to extend the response to 36kHz (-6dB), allowing a smooth and linear response to 22kHz (+-3dB). The result is exceptional clarity of treble detail allied to realistic transient response, smoothly enhancing the harmonic overtones of voices and instruments whilst providing shimmering realism to percussion such as cymbals.

Bass instinct

For the Elysian Series, Wharfedale developed bass and midrange diaphragms formed from a proprietary woven glass fibre matrix to match the transient accuracy and efficiency of the AMT treble unit. These cones provide low mass and high strength, with the addition of a high-plasticity coating to control acoustic behaviour.

The Aura Series drive units are descended directly from the Elysian drivers, with cones made from a coated woven glass fibre material terminated by high flexibility rubber surrounds. The voice coils driving the cones are immersed in high-flux magnetic fields, with eddy currents and inductance controlled by copper-clad pole pieces.

These low-distortion motor systems are mounted on die-cast aluminium chassis, each fixed to the cabinet by six high-tensile bolts to maintain the rigidity of structure and provide accurate transient response. The rubber trim rings surrounding each chassis are not just a cosmetic feature but also control any resonance occurring at the junction of the aluminium chassis and wood cabinet.

The smaller of the two standmount speakers, the two-way Aura 1, combines the AMT treble driver with a 130m mid/bass unit, while the larger three-way Aura 2 separates bass and midrange with 150mm and 100mm drivers respectively. The two floorstanders use the same 100mm midrange unit as the Aura 2, coupling this with twin bass drivers – 130mm units in the Aura 3 and 150mm units in the Aura 4.

Above: The Aura 4 floorstanders combine with the Aura C centre speaker to form a wonderfully immersive front array in a home cinema system

The two home cinema centre speakers are two-way designs with twin mid/bass drivers – 150mm units in the Aura C and 130mm units in the smaller Aura CS. That makes the Aura C a perfect match for the Aura 2 and Aura 4 speakers, while the Aura CS is ideal to use with the Aura 1 and Aura 3.

Musical crossover

In many ways, the crossover is the 'heart' of any high-quality loudspeaker. As the originator of two-way loudspeaker systems for domestic use, Wharfedale was the first such manufacturer to utilise an electrical crossover network to divide the audio signal between drive units optimised to handle upper and lower parts of the frequency range.

Today's crossovers must do more than simply divide up the musical input to the loudspeaker and distribute it to the relevant drive units. They need to be matched accurately to the acoustic performance of each drive unit to achieve a blend between the drivers that is acoustically seamless. Although this process is aided by sophisticated computer analysis, the fine-tuning is done by ear using a variety of musical sources and styles. Additionally, each individual crossover component is rigorously tested and evaluated for acoustic transparency.

This extensive fine-tuning requires hundreds of hours of listening tests to balance the fundamental and harmonic overtones of voices and instruments and ensure a perfect blend. In the three-way Aura models, the bass/midrange and midrange/treble crossover networks are laid out on separate PCBs to reduce electromagnetic interference, each network coupled to its respective terminals to facilitate bi-wiring. All this painstaking attention to detail allows the Aura speakers to 'disappear' acoustically as the listener is enfolded into a seamless musical experience.

Box clever

The Aura speakers' cabinets are designed to appeal to the eye whilst delivering acoustic excellence that captivates the ear. Available in black, white and a feature-grained walnut wood veneer, each cabinet is lacquered and polished to present a piece of furniture of which the owner can be justly proud. The cabinets' smooth curves are more than just eye catching; they help to disperse the acoustic output of the drive units smoothly into the room without undesirable reflections.

Above: Cleverly constructed and handsomely finished, the Aura speakers' cabinets are designed to appeal to the eye and captivate the ear

Beneath the lacquered veneer is a sandwich of woods of differing density, designed to reduce panel resonance to below audibility. Named PROS (Panel Resonance Optimisation System), this multi-layer construction also inhibits the leakage of unwanted sound energy from inside the cabinet, which would otherwise interfere with the forward output of the drive units.

Within the cabinet, multiple layers of matted long hair fibre is strategically placed to absorb internal energy, its damping factor specifically calculated to avoid rear reflection back out through the drive unit cones whilst still allowing unrestricted airflow to the SLPP reflex port system.

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Slot machine

Utilised by the Elysian Series, the EVO4 Series and now the Aura Series, Wharfedale's SLPP (Slot Loaded Profiled Port) bass reflex design was developed from an original idea of Gilbert Briggs, the entrepreneur who set up and ran Wharfedale from 1932 to 1964. In the latest version developed for the Aura Series, the high-pressure, high-velocity airflow from the downward-facing port is appropriately matched to the low air pressure in the room by distributing the airflow through a series of slot ports in the plinth. This both reduces unwanted turbulence from the port and improves the efficiency of the bass reflex system.

In conjunction with the low resonance of the bass units, the SLPP system provides bass extension well down into and below the 30Hz region for the Aura 2, Aura 3 and Aura 4, revealing the fundamentals of musical instruments with excellent articulation, clarity and power. This enables the listener to feel as well as hear the true acoustic impact of the musical performance.

Stand and deliver

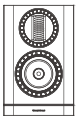
The Wharfedale Aura Series is available from next week (w/c 9 October) in a choice of piano-lacquered black, white or walnut wood veneer. Optional speaker stands are available for the Aura 1 and Aura 2, designed to position the speakers at the ideal listening height and made from acoustically damped MDF and high-carbon steel to manage the unwanted effects of vibrations and sound reflections.

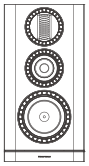
RRPs are as follows:

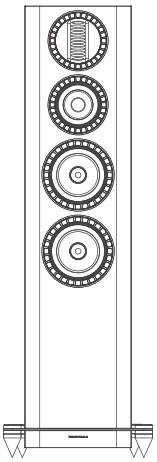
Aura 1: £1,499 per pair
Aura 2: £1,999 per pair
Aura 3: £2,999 per pair
Aura 4: £3,999 per pair
Aura CS: £1,099
Aura C: £1,299
Stand for Aura 1: £899 per pair
Stand for Aura 2: £999 per pair

Above: Aura Series speakers are available in luxuriously lacquered black, walnut and white, with optional stands for the Aura 1 and Aura 2

SPECIFICATIONS







Model	AURA 1	AURA 2	AURA 3
General description	2-way bookshelf speaker	3-way bookshelf speaker	3-way floorstanding speaker
Enclosure type	bass reflex	bass reflex	bass reflex
Transducer complement	2-way	3-way	3-way
ABR			
Bass driver	5"(130mm) Black Glass Fibre Matrix Cone	6.5"(150mm) Black Glass Fibre Matrix Cone	5"(130mm) Black Glass Fibre Matrix Cone x2
Midrange driver		4"(100mm) Black Glass Fibre Matrix Cone	4"(100mm) Black Glass Fibre Matrix Cone
High Frequency Driver	27*90mm AMT	27*90mm AMT	27*90mm AMT
AV shield	No	No	No
Sensitivity (2.83V @ 1m)	86dB	88dB	88dB
Recommended amplifier power	25-100W	25-150W	25-150W
Peak SPL	103dB	103dB	104dB
Nominal impedance	6Ω (8Ω compatible)	6Ω (8Ω compatible)	6Ω (8Ω compatible)
Minimum impedance	4.1Ω	3.5Ω	3.1Ω
Frequency response (+/-3dB)	48Hz, 22kHz	42Hz, 22kHz	39Hz, 22kHz
Bass extension (-6dB)	44Hz	33Hz	28Hz
Crossover frequency	2.9kHz	520Hz, 4.5kHz	460Hz, 3.3kHz
Dimensions (mm)			
Height (on plinth)	386mm	560mm	1037mm
Width	246mm	286mm	246mm
Depth (with terminals)	(300+52)mm	(350+52)mm	(300+52)mm
Carton size	640 x 425 x 510mm	505 x 425 x 730mm	455 x 395 x 1155mm
Net weight	12.5kg/pcs	20.5kg/pcs	23.0kg/pcs
Gross weight	26.5kg/ctn	22.5kg/ctn	25.0kg/ctn
Finish	Walnut/White/Black hi-gloss	Walnut/White/Black hi-gloss	Walnut/White/Black hi-gloss

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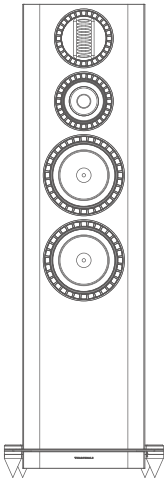

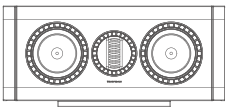

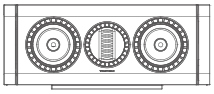

Model	AURA 4	AURA C	AURA CS
General description	3-way floorstanding speaker	2-way centre speaker	2-way centre speaker
Enclosure type	bass reflex	bass reflex	bass reflex
Transducer complement	3-way	2-way	2-way
ABR			
Bass driver	6.5"(150mm) Black Glass Fibre Matrix Cone x2	6.5"(150mm) Black Glass Fibre Matrix Cone x2	5"(130mm) Black Glass Fibre Matrix Cone x2
Midrange driver	4"(100mm) Black Glass Fibre Matrix Cone		
High Frequency Driver	27"90mm AMT	27"90mm AMT	27"90mm AMT
AV shield	No	No	No
Sensitivity (2.83V @ 1m)	89dB	89dB	88dB
Recommended amplifier power	30-200W	25-200W	25-150W
Peak SPL	107dB	107dB	105dB
Nominal impedance	4Ω (8Ω compatible)	4Ω (8Ω compatible)	6Ω (8Ω compatible)
Minimum impedance	3.1Ω	3.6Ω	3.8Ω
Frequency response (+/-3dB)	37Hz, 22kHz	48Hz, 22kHz	56Hz, 22kHz
Bass extension (-6dB)	26Hz	40Hz	45Hz
Crossover frequency	475Hz, 3.3kHz	1.9kHz	2.4kHz
Dimensions (mm)			
Height (on plinth)	1107mm	303mm	252mm
Width	286mm	668mm	615mm
Depth (with terminals)	(350+52)mm	(350+52)mm	(300+52)mm
Carton size	505 x 425 x 1255mm	820 x 505 x 430mm	725 x 420 x 345mm
Net weight	24.5kg/pcs	25.5kg/pcs	18.6kg/pcs
Gross weight	26.5kg/ctn	27.5kg/ctn	20.0kg/ctn
Finish	Walnut/White/Black hi-gloss	Walnut/White/Black hi-gloss	Walnut/White/Black hi-gloss

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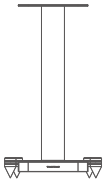

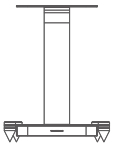

Model	AURA 1 Stand	AURA 2 Stand
General description	speaker stand	speaker stand
Measurements:		
Height:	615mm	485mm
Top Plate (W x D):	246 x 300mm	286 x 350mm
Base (W x D):	342 x 300mm	372 x 350mm
Materials:		
Columns	MDF spray paint	MDF spray paint
Top Plate	High Carbon Steel	High Carbon Steel
Base Plate	High Carbon Steel+MDF paint	High Carbon Steel+MDF paint
Base Spikes	Hardened High Carbon Steel	Hardened High Carbon Steel
Package Quantity:	Pair	Pair
Optional for:	AURA 1	AURA 2
Dimensions (mm)		
Height (on plinth)	615mm	485mm
Width	342mm	372mm
Depth (with badge)	300mm	350mm
Carton size	690 x 460 x 245mm	860 x 570 x 235mm
Net weight	11kg/pcs	12kg/pcs
Gross weight	23.6kg/ctn	25.2kg/ctn
Finish	Black Paint	Black Paint

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