MATRIX 800 SERIES

MATRIX 801 MATRIX 802

MATRIX 803 MATRIX 804

MATRIX 805

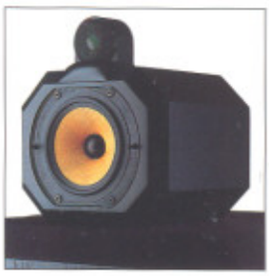
MATRIX 800 ASW

MATRIX HTM

B&W

LISTEN AND YOU'LL SEE

MATRIX 800 SERIES



When a tweeter is positioned on the front of a cabinet it will cause a blurring of the time sensitive stereo image. However, if the tweeter is set back in line with the acoustic centre of the driver, as shown in the above two photographs, both units will be time-aligned and create a solid 3-dimensional stereo image.

Through its entire history, the B&W commitment has been singular; to aim for absolute perfection in sound reproduction.

This quest was inspired by one man. John Bowers. His inspiration was simple. Music. Music played as it was intended.

Inevitably, such commitment has made B&W a frontier company. B&W's research centre in Steyning is the most advanced loudspeaker research facility in the world. It is often referred to as 'The University of Sound' and has only one purpose; to achieve absolute perfection in loudspeaker technology.

The fruits have been some of the most notable achievements in the history of recorded sound.

The Matrix 801 for instance.

Launched back in 1979, it is still generally regarded as the finest loudspeaker in the world.

The recent and simply breathtaking Nautilus is a celebration of all that B&W strive for - a triumph of form and function. It is the world's first 'cabinetless' speaker.

It was B&W who patented the use of Kevlar® as a cone material when others were still content with paper. And it was B&W who invented Matrix™, the unique bracing system which virtually eliminates panel resonance and dramatically enhances the definition of stereo images.

Such achievements have of course brought their share of awards. More recently, B&W have made an impact in Home Cinema. Already B&W monitors have been voted 'Best Home Theater Speaker 1994' by Video Magazine in the USA and 'European Home Theatre Loudspeaker 1994/5' by the European Imaging and Sound Association.

The awards for B&W have been great. The rewards for the listener are greater still.

Like the Matrix 800 Series.

Built to the most exacting standards demanded by

recording studios, it will find no fault even amongst the most critical of audiophiles.

Not surprisingly, the Matrix 800 Series features Matrix™ construction in every monitor. The tweeter on top is employed to minimise the effects of sound diffraction from the cabinet edges. The ferrofluid cooled aluminium dome tweeters permit dynamics to be maintained to very high sound levels.

All the monitors - except the Matrix 800 ASW - feature Kevlar® cone mid-range and bass/mid-range drivers. The woven nature of Kevlar® has a dramatic effect on resonance.

Separate crossover boards for bass and mid/high-range frequencies eliminate any interaction between different frequency components.

B&W's own custom made crossover capacitors are also employed. These are built to a specific value in line with the exact tolerances of the drive units. To achieve a 'clean' bass sound, pure iron dust core inductors are featured on all monitors except the mains powered Matrix 800 ASW. Because of their high saturation point, these inductors ensure low distortion and improved definition in the bass frequencies.

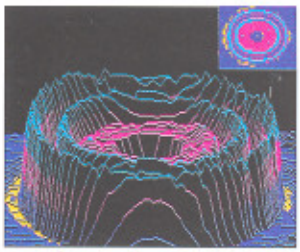
Every monitor is wired with Van Den Hul cable. Every strand is silver plated oxygen free copper and is sheathed in non-polar dielectric material for perfect insulation. Gold plated terminals, which resist corrosion and preserve contact integrity, are fitted and permit bi-wiring or bi-amplification.

In the case of the Matrix 800 ASW, the terminals allow for input from either a pre-amp, integrated amp or Home Cinema Processor.

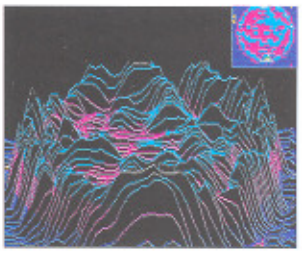
Every monitor has bevelled edges on the cabinet grille and a specially designed rounded profile drive unit trim ring to further reduce any effects of sound diffraction.

It is details such as these that set the Matrix 800 Series above all others.

Listen and you'll see.



The difference with Kevlar® is clear. The plastic cone (above) shows concentric outgoing and reflected waves, causing the build-up of unwanted standing waves.



The Kevlar® cone has reflected a random pattern of waves back into the cone. This randomness ensures they do not produce unwanted resonances simply because they are self cancelling.

Fig. 1

MATRIX

For many years, B&W had recognised the significant influence that loudspeaker cabinet design and construction has on the perfect reproduction of recorded sound.

Both the level and rate of decay of cabinet vibrations are important, controlled by the panel mass, stiffness and damping.

The vibrations of the panels are small in amplitude, but, spread over an area 30 times that of the driver cone, they can generate obtrusive sound levels.

The basic construction of nearly all loudspeakers is exactly the same - panels of wood-based materials, bonded to form a rectangular box.

Some manufacturers have turned to alternative materials for improvement. Aerolam,® for example, has been employed by some because of its relatively high stiffness. And concrete has been used in others because of its high mass and stiffness.

B&W began a detailed study to ascertain how each aspect of cabinet behaviour affected the sound and evaluate the efficiency of various materials and construction methods.

Test apparatus was devised that would isolate the sound radiated by the cabinet on its own.

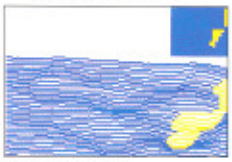
Whilst experiments were in progress, Laurence Dickie, B&W's Chief Electronics Engineer, was busy inventing the B&W Matrix enclosure which, like all great inventions, was a combination of original thinking and sheer inspiration.

It consists of high density particle board panels braced by a cellular structure comprising a series of interlocking perforated membranes (Fig 1).

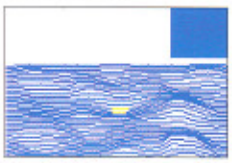
The material used has relatively high mechanical damping qualities and, when fully assembled, provides a high level of stiffness.

Each individual cell created by the structure is filled with acoustic foam to effectively kill internal standing waves.

MATRIX CABINET



Time Period 14

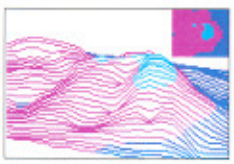


Time Period 74

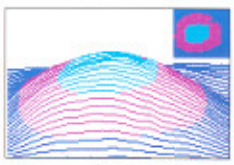
Time Period 222

NON MATRIX CABINET

Time Period 14



Time Period 74



Time Period 222

These diagrams illustrate vibration in non-Matrix, and Matrix cabinets. Coloured areas, and distorted "shape" indicate significant vibration.

In the Matrix cabinet any small vibration dies away very quickly.

In the non-Matrix cabinet significant "fundamental mode" and "first harmonic" vibrations are seen, which continue for much longer - even beyond the time limits shown. This will heavily colour the resulting sound.

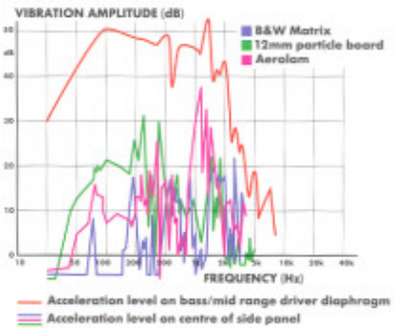
In the Matrix box the barely visible, much smaller panel resonance occurs at 8KHz approximately.

Since the cabinet will only be used for the bass unit which will crossover to the mid-range unit below 1KHz we can see that any small vibration in the Matrix cabinet simply isn't a problem.

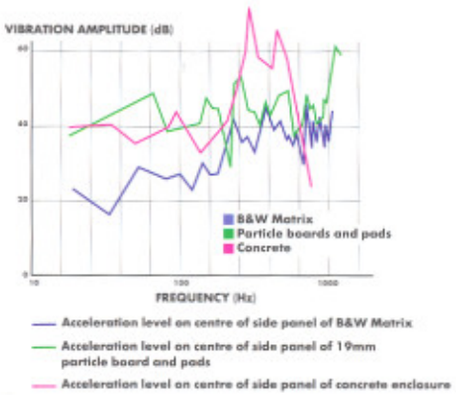
The Matrix box is therefore utterly faithful to the "intention" of the music.

Listen and you'll see what a huge difference this makes.

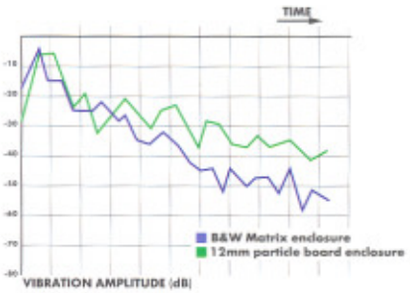
Fig. 2



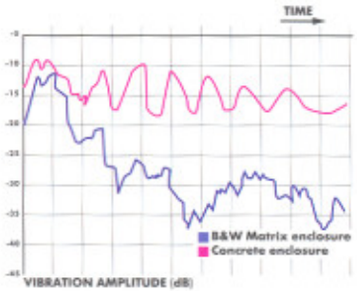
This graph clearly demonstrates the significantly reduced panel vibrations within the B&W Matrix enclosure. This corresponds to a greatly reduced level of sound coloration.



Again, graphic demonstration of the significantly reduced panel vibrations within the B&W matrix in a larger enclosure where panel stiffness was a critical factor.



It can be seen that following an impulse signal fed to the bass drive unit, the B&W Matrix enclosure shows a more rapid decay of transient sounds.



In the same test using large enclosures, the B&W Matrix performed well. Whereas, the concrete enclosure, with its high mass, demonstrated unacceptable slow decay times.

Now that the B&W Matrix enclosure was realised, a series of tests was undertaken to compare it to other construction methods. For the tests, two enclosure sizes of 17 and 70 litres were used.

For the small size, the B&W Matrix was tested against a standard enclosure - made from 12mm particle board panels with 6mm bitumen-loaded damping pads attached - and one constructed of Aerolam® - thin skins of aluminium separated by a 10mm honeycomb structure.

The larger enclosure tests compared the B&W Matrix with a standard enclosure - this time made from 19mm particle board - and one cast in concrete.

Early results found that the decay time of resonances in enclosure panels is at least as important as the level of their vibration.

The concrete enclosure especially had poor performance in the time domain as was immediately obvious from the tendency of transient sounds to 'hang on' after the signal had stopped.

The graphs (fig 2) show the findings from a number of tests on the two sizes of enclosure of different construction.

This series of tests proved conclusively that B&W Matrix was the most effective solution to the problem of optimising mass, stiffness and damping. It also proved to be economical in manufacture - a third of the cost of Aerolam.

In addition, there were design considerations. Unlike the other materials, B&W's Matrix did not overly influence the design or finish of the end product.

And like so many of B&W's innovations, the inspiration was simply the perfect reproduction of recorded sound.

Listen and you'll see.

MATRIX '801

The Matrix 801 is a monitor with a very distinguished pedigree.

Launched in 1979, it quickly established itself as the definitive studio reference monitor.

EMI employed the Matrix 801 when it re-mastered the Beatles back catalogue at Abbey Road's Studio 2 for release on CD.

You will find Matrix 801 monitors in studios owned by Decca, Deutsche-Grammophon and CBS Masterworks.

More than 80% of the classical recordings made today are monitored through the Matrix 801.

As a home Hi-Fi monitor it is surely without equal.

The Matrix 801 features a separate midrange enclosure or 'head', mounted on top of the main bass enclosure.

This enables each speaker housing to be of optimum construction to suit the individual demands of each drive unit.

The Matrix™ construction of the bass enclosure gives incredible rigidity to the cabinet walls, reducing the amplitude of any panel vibrations that may radiate sound to colour the pure sound of the drive unit. The special anti-vibration mounting of the drive unit further reduces the effect of panel vibration.

This 'double protection' is repeated in the midrange enclosure, but with a fibrecrete lining to the inside wall of the enclosure instead of Matrix™. The mid-range enclosure's small frontal dimension ensures low diffraction and wide dispersion in exactly the same way as the tweeter housing.

The 300mm high power Cobex® bass driver features a powerful magnet which has been specifically formulated to allow the critical moving mass to be accurately controlled.

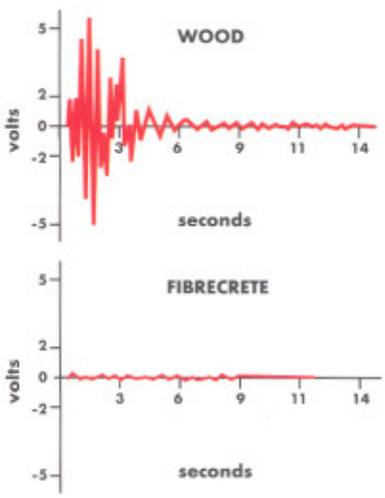
Separating the drive unit enclosures also allows the acoustic centre of each unit to be time-aligned.

The result is greater clarity of detail and stereo imaging of amazing coherence and perspective.

Listen and you'll see.

The Matrix 801 features a system that delivers the demanding range of frequency and dynamic responses required in a studio environment. To deliver low frequency acoustic output, the bass driver must disperse a significant amount of air. The Matrix 801 has a highly linear, high efficiency motor system which delivers the long throw and symmetrical field required to produce an outstanding low-frequency response.

MATRIX '802



The distinctive mid-range enclosure of both the Matrix 801 and Matrix 802 hosts a unique combination of features pioneered by B&W; the Kevlar® drive unit, fibrecrete coating and long-haired wool.
The fibrecrete coating makes the enclosure acoustically dead, whilst the long-haired wool dampens and absorbs any remaining cabinet resonances.
Both these features are to ensure that the extremely low level detail of the Kevlar® drive unit is not masked by unwanted cabinet resonance.
In the two graphs, the resonant effects of both wood and fibrecrete are clearly illustrated.

The original Matrix 801 monitor was designed by Kenneth Grange of the famous Pentagram design studio.

The Matrix 802 shares many of the key attributes of the Matrix 801. Its only real difference is size. The Matrix 802, although slightly taller than the Matrix 801, occupies less than half the floor space.

The Matrix 802 is the natural choice where floorspace is limited but the demand is still for a superb studio quality 3-way monitor.

It still boasts the same 126mm Kevlar® cone mid-range drive unit in a separate fibrecrete enclosure as for the Matrix 801, creating richly detailed mid-range with a wide sound field and superb depth.

The tweeter on top is a 26mm ferrofluid cooled aluminium dome tweeter, from which specific resonance modes have been damped out. This more than doubles the power handling and ensures that definition is retained beyond human audibility.

Two 180mm Cobex® polymer cones are employed as high powered bass drivers.

Separate crossover boards for the bass and mid/high-range drive units eliminate any interaction between these components. This effectively reduces crossover coloration so that all transmitted information is pure and unhindered.

Cabinet shape is an important feature on all the Matrix 800 Series.

When sound waves radiating from a driver reach any physical discontinuity, some sound energy will re-radiate back from the sharp edges and cause unwanted sound diffraction.

If the edges are bevelled or rounded, this effect is avoided and no diffraction is caused.

The Matrix 800 Series' grilles all have bevelled edges and the drive unit trim rings have a rounded profile to specifically counter the problem of sound diffraction.

MATRIX *803 & *804

When the demands of the listening environment require a more 'manageable' monitor, the choice is the Matrix 803 and Matrix 804.

Conceding little to the sound reproduction characteristics of the larger monitors, these two monitors demand less floor space.

Graceful lines, sleek good looks and a choice of finishes ensure that these monitors are at home in any listening environment.

The Matrix 803 and Matrix 804 are designed around a more conventional drive unit configuration.

The tweeter on top is retained to ensure high definition from the ferrofluid cooled aluminium dome tweeter.

The Matrix 803 mid-range driver is a 165mm Kevlar® cone. This is combined with two 165mm Cobex® cone bass drive units. The Matrix 804 possesses the same mid-range driver but features only one 165mm Cobex® cone bass drive unit.

In both cases, the cabinet construction houses the next generation Matrix™ enclosure.

Despite their smaller size, these monitors deliver exceptional sound performance.

The 'clean' bass handling characteristics of these monitors is preserved by using only pure iron dust core inductors. Inductors of this type ensure much lower distortion and greatly improved definition because of their higher saturation point.

The two pairs of gold plated terminals are fitted to permit bi-wiring or bi-amplification.

As Hi-Fi monitors, the Matrix 803 and Matrix 804 are exceptional.

They will also feature in a Home Cinema system without any hint of compromise.

Listen, and you really will see.

The mid-range and bass cavities of the Matrix 803 enclosure are separated by a sloping shelf. Within the mid-range cavity, a high cell density Matrix™ is used to control resonances in the shorter wavelength mid-range band.
The two way direction of the Matrix™ cell walls reduce unwanted cabinet resonances to negligible levels and because the two drive units are separated, the mid-range drive unit is unaffected by bass cone movement.

MATRIX 805

In conventional cabinet construction, sound from the tweeter radiates not only towards the listener but also along the baffle surface towards the cabinet edges. Where the sound waves meet these edges, they re-radiate and, due to time delay, interfere with sound coming directly from the tweeter. If the enclosure is very small, the effects of time delay are correspondingly very small and are confined to frequencies beyond human audibility.

All the clarity, power and performance of the Matrix 800 Series really can be transmitted into a speaker standing only 407mm high.

The Matrix 805 is the smallest of the Matrix 800 Series but it has all the technology and characteristics of the bigger monitors.

The tweeter on top is ferrofluid cooled.

The 165mm bass/midrange driver has a Kevlar® cone.

And as with all the Matrix 800 Series, the drive units use the minimum number of crossover components and the high and low-pass sections are physically separated to minimise component crosstalk.

The difference is in application.

The Matrix 805 is a compact, highly sensitive 87dB shelf or stand-mounted monitor.

As a home Hi-Fi monitor, it is ideal when space is at a premium.

As a front or rear channel monitor in a Home Cinema system, the Matrix 805 excels.

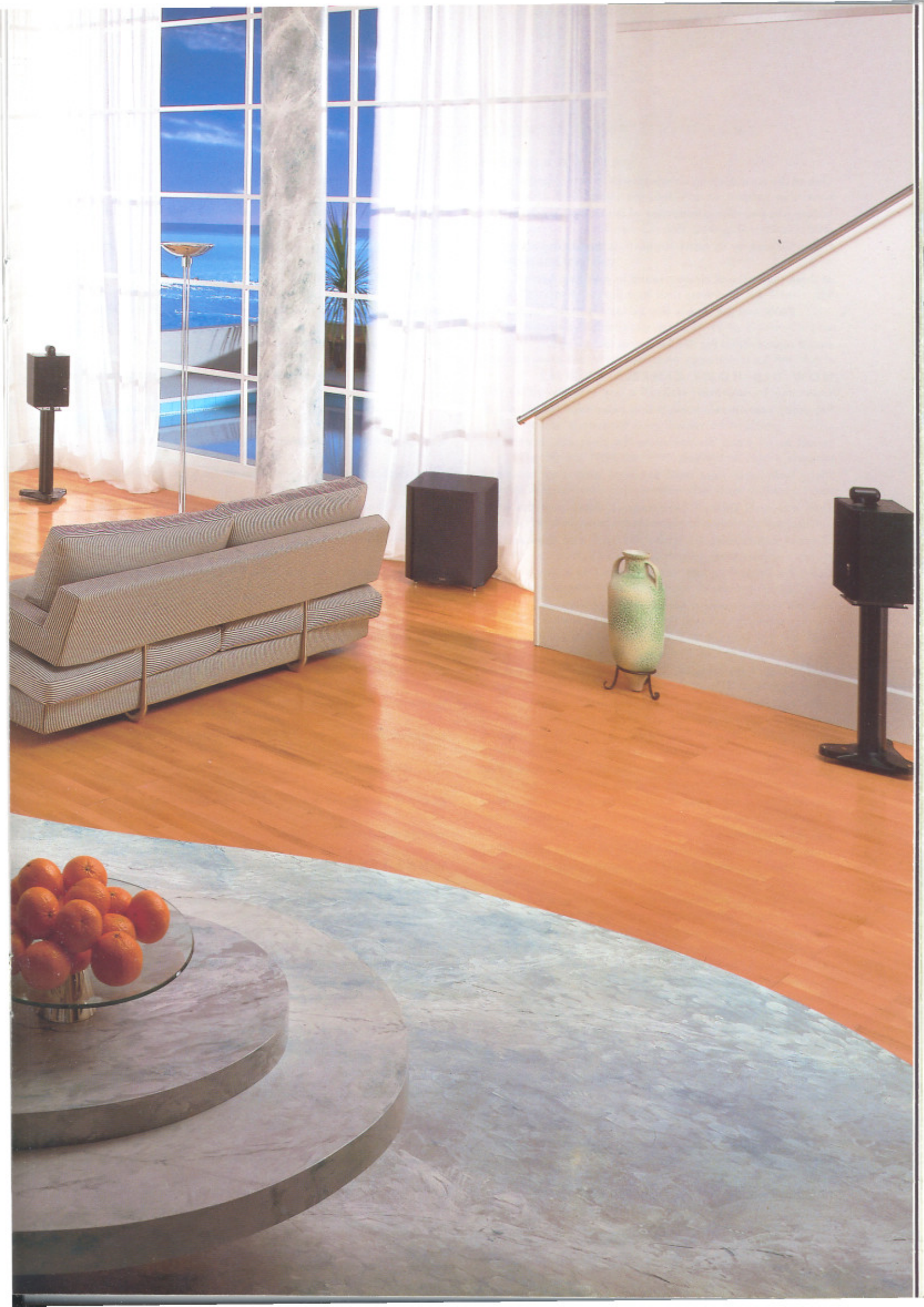
B&W have made a dramatic impact on the flourishing Home Cinema market. The thinking behind Hi-Fi sound reproduction has been stringently applied to Home Cinema and has earned B&W numerous awards.

The entire Matrix 800 Series is Acoustically Voice Matched to deliver the same tonal balance.

The Matrix 805, used in conjunction with the Matrix 800 ASW and the Matrix HTM will deliver seamless surround sound with depth, power and accuracy.

Flawless Hi-Fi and Home Cinema performance does not have to be compromised in a monitor as compact as the Matrix 805.

Listen and you will see.



HOME CINEMA

One of the most exciting developments in recent audio/visual history has been the introduction of the Home Cinema system. Home Cinema, as its name suggests, is the faithful recreation of three dimensional cinema sound in your own home.

B&W and the Matrix 800 Series are at the forefront of sound reproduction for this emerging technology.

HOW DID HOME CINEMA BEGIN?

For many years movie makers had been experimenting with sound as an extra dimension to the cinematic experience. Many techniques were tried but none were very successful. That was until Dolby® Laboratories developed the multi-channel capabilities of Dolby Stereo® and then latterly Dolby Pro-Logic.® At last movie makers had a way to record multiple channels onto a normal stereo soundtrack.

WHAT IS DOLBY PRO-LOGIC®?

The Pro-Logic® system takes an encoded stereo soundtrack and splits it into left, right, centre and surround channels.

What Pro-Logic® created was the all-important centre channel which could carry dialogue and other sound that was localised to the screen. It instantly gave a more convincing and involving effect.

Speech emanated from this central location regardless of the viewer's position. After this development, Dolby Pro-Logic® decoders capable of taking this information from the soundtrack, became available for home use and Home Cinema systems really took off.

WHAT EQUIPMENT DO I NEED?

The hardware required for a Home Cinema System is all readily available. Obviously you need to begin with a stereo TV and to this you can add a stereo VCR or Laserdisc player. Then you will need either a Pro-Logic® decoder and separate Hi-Fi amplifiers to drive your speakers or a combined Pro-Logic® decoder/amplifier.

The final requirement is for speakers. In an ideal system you would employ six speakers to recreate really effective sound.

ARE THE SPEAKERS ANY DIFFERENT?

You can, in a modest system, employ ordinary Hi-Fi speakers. However, there are limitations in such an arrangement.

The centre channel is the critical additional speaker.

It must, for instance, be magnetically shielded due to its close proximity to the television. For this reason it is essential that a dedicated centre channel speaker is used. For the front and rear channels, you will be able to use standard Hi-Fi speakers although it is beneficial to use speakers from a single manufacturer to maintain a consistent tonal balance throughout the system.

For more advanced systems, specialist speakers can be employed. Dipole Surround speakers are more sophisticated than standard rear channel speakers and will create the sensation of placing you right in the middle of the action.

Then there is the subwoofer, a speaker dedicated purely to bass sound and capable of producing bass of truly seismic proportions.

WHAT LAYOUT WORKS BEST?

In the photograph you will see a typical home cinema installation. The centre channel speaker is placed on or below the television for localised sound and dialogue.

The front channels are placed either side of the television. Standard rear channel speakers are best placed behind and to the sides of the viewing position.

Positioning the subwoofer is not so critical as its broadcast sound is non-directional. Ideally, place the front speakers as near centre screen height as possible.

Surround speakers are best placed 600mm (2ft) or more above head height.

THE MATRIX 800 SERIES HOME CINEMA SYSTEM

The Matrix 800 Series enables you to employ reference quality monitors in a Home Cinema setting. The effect is both dramatic and involving.

The clarity, detail and bass power of the Matrix 800 Series transmits effortlessly from Hi-Fi to Home Cinema. The awesome sound reproduction capabilities of the Matrix 800 Series will give you a flawless recreation of film sound with seamless 'movement' from monitor to monitor.

The Matrix HTM, being a dedicated centre channel monitor, is specifically designed for crisp, clear dialogue. It has a further application as a front or rear channel monitor, together with the compact, dynamic Matrix 805. Both monitors should be considered where restricted floor space is a factor.

For enhanced front channel monitoring where space is not a consideration, the Matrix 803 and Matrix 804 are an excellent choice. But for the ultimate front channel application, the Matrix 801 and Matrix 802 are unbeatable. Their sheer power, range and dynamism is simply breathtaking.

The Matrix 800 ASW is an active subwoofer that can recreate astonishing low frequency sound that is seismic in its intensity. All the Matrix 800 Series are Acoustically Voice Matched. Each monitor delivers the same tonal balance. For Hi-Fi, it means outstanding performance. For Home Cinema it means a seamless, truly awesome, surround sound effect.

B&W's philosophy for perfect sound reproduction in Home Cinema has earned worldwide recognition through the award winning THX® Home Cinema system. In fact, the THX® SCM8 Dipole Surround speakers from this system can be easily integrated with the Matrix 800 Series. They are Acoustically Voice Matched and will further enhance the quality of surround sound as only a Dipole speaker can.

Listen and you will see.

MATRIX 800 ASW

The Matrix 800 Active Subwoofer, which is THX® approved, is an essential component for the definitive Home Cinema system.

It delivers a full bass sound of true intensity.

If there's an earthquake on the screen, there's one in your living room.

The Matrix 800 ASW is Acoustically Voice Matched to be an integral part of the Matrix 800 Series.

Its single 800mm long throw Cobex® driver first appeared in the multi-award winning B&W THX® Home Cinema system.

The 'active' part of the Matrix 800 ASW is a purpose built 200W amplifier.

It features 'soft limiting' to prevent 'hard clipping' which permits much higher volume levels without any audible overload. Separate volume control, an active low-pass filter and active/passive high-pass filter permit an optimum blend to be achieved between differing speaker sensitivities and listening conditions.

Two sets of gold plated terminals allow for input in two different ways; either from a pre-amplifier or from an integrated amplifier.

Magnetic shielding enables the Matrix 800 ASW to be positioned close to a television or video monitor without interference.

An Auto On/Standby facility makes it possible to 'install it and forget it'.

The cabinet construction is Matrix™ and is finished in Black Ash real wood veneer.

For Home Cinema it is the ultimate choice.

In a home Hi-Fi system, it is eminently desirable delivering full bass in great depth and dramatically improving, impact, presence and detail in the whole system.

A stand-alone amplifier, in either a Hi-Fi or Home Cinema system, must be able to withstand the demands placed upon it - particularly in a Home Cinema system where the demands are unusual and varied.

The built in 200W amplifier of the Matrix 800 ASW is optimised to match the drive unit perfectly to improve sound quality and boost bass response at lower frequencies. This dramatically reduces the strain on a system's amplifier because it is the bass drive unit that places the most demands upon it.

VIDEO BEST OF THE YEAR


B&W
THX
MANUFACTURED UNDER LICENCE FROM LUCASFILM LTD.
SUITABLE FOR USE IN ROOMS UP TO 85m³ (3000 CU FT)
WHEN 2 SUBWOOFERS ARE USED. LUCASFILM THX IS A
REGISTERED TRADEMARK OF LUCASFILM LTD.
800 ASW
ACTIVE SUBWOOFER
WARNINGS:
TO PREVENT FIRE OR SHOCK HAZARD
DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE
NO USER SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED PERSONNEL
CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
AVIS: RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR
ATTENTION:
POUR EVITER TOUS RISQUES DE FEU OU DE CHOC ELECTRIQUE
N'EXPOSEZ PAS CET APPAREIL A L'HUMIDITE
AUCUN COMPOSANT NE PEUT ETRE REMPLACE PAR L'UTILISATEUR
VEUILLEZ CONTACTER LE SERVICE APRES VENTE AGREE
LINE LEVEL
LINK OUT
LINE IN
LINE OUT
MODE
LOW-PASS
VOLUME
PHASE
POWER
AUD.
230V AC 50/60Hz ~
1.25A Fuse T2.5A
THIS APPLIANCE MUST BE EARTHED
CET APPAREIL DOIT AVOIR UNE PRISE TERRE
TO SPEAKERS
SPEAKER LEVEL
FROM AMPLIFIER
RIGHT
LEFT
REPLACE FUSE WITH SAME TYPE AND RATING ONLY
UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE

MATRIX HTM

In any Home Cinema system, monitor compatibility is vital. The Matrix HTM uses a Kevlar® bass/mid-range drive unit that bears the same cone profile and tweeter configuration as the rest of the Matrix 800 Series. This ensures that the Matrix HTM has the same acoustic characteristics as the other monitors in the Series. This Acoustic Voice Matching ensures seamless sound and a truly three-dimensional listening experience as sound moves from one monitor to another without any loss of depth, power or clarity.

One of the most important advances in Home Cinema was the advent of the multi-channel capabilities of Dolby Pro-Logic.®

It encoded the normal two stereo channels, enabling them to carry that all-important three-dimensional sound information.

This advancement brought about the need for a new generation of dedicated centre channel monitors.

In a serious Home Cinema system, it is the centre channel monitor that takes the system beyond the realms of purely stereo television.

It is the centre channel monitor that localises dialogue to the screen, the effect of which is most notable with off-centre viewing.

The Matrix Home Theatre Monitor is a dedicated centre channel, specifically designed to deliver crisp, clear dialogue.

The 165mm Kevlar® cone bass/mid-range drive unit has exactly the same acoustic characteristics as the rest of the Matrix 800 Series.

This Acoustic Voice Matching is vital for seamless three-dimensional Home Cinema sound.

The low-profile unit is designed to be as unobtrusive as possible. It can be positioned above or below the viewing screen and is magnetically shielded to prevent picture distortion.

The Matrix HTM can also be used as a front left and right channel or rear channel surround monitor.

N A U T I L U S

If you're interested in B&W Loudspeakers you're obviously interested in great Hi-Fi. You're almost certainly a music enthusiast, perhaps a loudspeaker enthusiast.

B&W have always been at the forefront of audio technology with innovations such as Matrix,™ the tweeter on top and Kevlar® cone technology. This is the latest B&W development, Nautilus, which will influence Hi-Fi technology well into the next millennium.

Nautilus takes sound into the 'fourth' dimension.

Its sound fully occupies the space you're in and makes it the most absorbing loudspeaker ever produced.

It is the first 'cabinetless' loudspeaker. From the very beginning B&W has been interested in the idea of getting rid of 'the box'.

Cabinets suffer resonances of their own and so cabinet construction has always been designed to damp down unwanted 'colour'. In Nautilus the objective was to remove the possibility of any 'colour'.

Its key technological principle sounds simple but was years in development.

The idea was to put the drive unit right out at the front and then experiment in taking resonance away at the back- through a tube to infinity. The breakthrough was the use of an exponentially tapered tube.

The result is flawless music reproduction.

Nautilus is a classic case of form following function and this is what gives its design integrity and timeless beauty.

Nautilus technology will influence loudspeakers of the future for years to come. Its 'fourth' dimensional quality means that we will 'see' the music better than ever before.

Nautilus reduces undesirable enclosure resonances to a level below audibility through a tube at the rear of each drive unit. For the high frequencies the tube is narrow. At mid-range frequencies, a longer, wider tube is needed.

At the bass end a 340mm tube extending 3 metres from the back would be required to achieve the same effect.
However, an exponentially tapered coiled tube behaves in exactly the same way - and occupies a smaller volume. The tubes are filled with damping wool which is gradually compressed - removing all pipe resonances in the process.

"I am stunned. I listened to my music through the finest loudspeaker in the world and I could not tell the difference. It is the same, exactly the same as performed and I did not think that this would ever be possible."

RICARDO CHAILLY. CONDUCTOR, KONINKLIJK CONCERTGEBOUW ORKEST, AMSTERDAM.

	MATRIX '801	MATRIX '802	MATRIX '803
DESCRIPTION:	3-way vented-box system.	3-way vented-box system.	2-way vented-box system.
DRIVE UNITS:	1x300mm (12in) Cobex® cone bass 1x126mm (5in) Kevlar® cone mid-range 1x 26mm (1in) metal dome high frequency	2x 180mm (7in) Cobex® cone bass 1x126mm (5in) Kevlar® cone mid-range 1x 26mm (1in) metal dome high frequency	2x 165mm (6.5in) Cobex® cone bass 1x 165mm (6.5in) Kevlar® cone bass/mid-range 1x 26mm (1in) metal dome high frequency
FREQUENCY RANGE:	-6dB at 23Hz and 30kHz	-6dB at 28Hz and 30kHz	-6dB at 28Hz and 30kHz
FREQUENCY RESPONSE:	32Hz - 20kHz ±3dB on reference axis	42Hz - 20kHz ±3dB on reference axis	35Hz - 20kHz ±3dB on reference axis
DISPERSION:	Within 2dB of response on axis Horizontal: over 60° arc Vertical: over 10° arc	Within 2dB of response on axis Horizontal: over 60° arc Vertical: over 10° arc	Within 2dB of response on axis Horizontal: over 40° arc Vertical: over 10° arc
SENSITIVITY:	87dB spl	90dB spl	90dB spl
HARMONIC DISTORTION:	2nd & 3rd harmonics <1% 20Hz - 20kHz (90dB spl, 1m)	2nd & 3rd harmonics <1% 20Hz - 20kHz (90dB spl, 1m)	2nd & 3rd harmonics <1% 40Hz - 20kHz (90dB spl, 1m)
NOMINAL IMPEDANCE:	8Ω (minimum 4Ω)	8Ω (minimum 3.4Ω)	8Ω (minimum 3.7Ω)
CROSSOVER FREQUENCY:	380Hz and 3kHz	400Hz and 3kHz	3kHz (lower bass units rolled off above 300Hz)
RECOMMENDED AMPLIFIER REQUIREMENTS:	50W-300W into 8Ω on unclipped programme.	50W-250W into 8Ω on unclipped programme.	50W-250W into 8Ω on unclipped programme.
MAX RECOMMENDED CABLE IMPEDANCE:	0.2Ω	0.2Ω	0.2Ω
DIMENSIONS:			
HEIGHT:	1008mm (39.7in)	1040mm (41in)	1017mm (40in)
WIDTH:	432mm (17in)	300mm (11.8in)	258mm (10.2in)
DEPTH:	560mm (22in)	370mm (14.6in)	334mm (13.2in)
NET WEIGHT:	54kg (119lb)	32kg (70.5lb)	27kg (59.5lb)
FINISHES: CABINET:	Black Ash, Walnut, Rosewood	Black Ash, Walnut, Rosewood	Black Ash, Walnut, Rosewood
TWEETER/HEAD ASSEMBLY:	Black	Black	Black
GRILLE:	Black cloth	Black cloth	Black cloth

MATRIX 804	MATRIX 805	MATRIX HTM	800 ASW
2-way vented-box system.	2-way vented-box system.	2-way magnetically shielded vented-box system.	Magnetically shielded active vented-box subwoofer
1x 165mm (6.5in) Cobex® cone bass 1x 165mm (6.5in) Kevlar® cone bass/mid-range 1x 26mm (1in) metal dome high frequency	1x 165mm (6.5in) Kevlar® cone bass/mid-range 1x 26mm (1in) metal dome high frequency	1x 165mm (6.5in) Kevlar® cone bass/mid-range 1x 26mm (1in) metal dome high frequency	1x 300mm (12in) Cobex® cone bass
-6dB at 31Hz and 30kHz	-6dB at 42Hz and 30kHz	-6dB at 42Hz and 30kHz	-6dB at 15Hz and 53/177Hz variable
39Hz - 20kHz ±3dB on reference axis	52Hz - 20kHz ±3dB on reference axis.	52Hz - 20kHz ±3dB on reference axis.	17Hz - 40/135kHz variable +0 -3dB on reference axis.
Within 2dB of response on axis Horizontal: over 40° arc Vertical: over 10° arc	Within 2dB of response on axis Horizontal: over 40° arc Vertical: over 10° arc	Within 2dB of response on axis Horizontal: over 40° arc Vertical: over 10° arc	Within 2dB of response on axis Horizontal: over 120° arc Vertical: over 120° arc
89dB spl	89dB spl	89dB spl	N/A
2nd & 3rd harmonics <1% 45Hz - 20kHz (90dB spl, 1m)	2nd & 3rd harmonics <1% 90Hz - 20kHz (90dB spl, 1m)	2nd & 3rd harmonics <1% 90Hz - 20kHz (90dB spl, 1m)	2nd & 3rd harmonics <1% 20Hz - 500kHz (90dB spl, 1m)
8Ω (minimum 4Ω)	8Ω (minimum 4Ω)	8Ω (minimum 4Ω)	22kΩ
3kHz (lower bass unit rolled off above 300Hz)	3kHz	3kHz	40Hz - 135Hz variable
50W-200W into 8Ω on unclipped programme.	50W-120W into 8Ω on unclipped programme.	50W-120W into 8Ω on unclipped programme.	Internal 200W amplifier
0.2Ω	0.2Ω	0.2Ω	N/A
920mm (36.2in) 258mm (10.2in) 258mm (10.2in)	407mm (16in) 260mm (10.2in) 210mm (8.3in)	267mm (10.5in) 438mm (17.3in) 227mm (9in)	508mm (20in) 432mm (17in) 580mm (22.8in)
19.5kg (42.8lb)	8.5kg (18.7lb)	8.6kg (19lb)	33kg (73lb)
Black Ash, Walnut, Rosewood	Black Ash, Walnut, Rosewood	Black Ash, Walnut	Black Ash
Black	Black	Black	N/A
Black cloth	Black cloth	Black cloth	Black cloth

PLEASE NOTE: The speaker stands featured in this brochure are not supplied with the Matrix 805. Matrix is a registered trademark of B&W Loudspeakers Ltd. Kevlar is a registered trademark of Dupont.Cobex is a registered trademark of Wardle Storeys Ltd. Dolby and Pro-Logic are registered trademarks of Dolby Licensing Corporation. Lucasfilm and THX are registered trademarks of Lucasfilm Ltd. Aerolam is a registered trademark of Ciba Geigy. B&W Loudspeakers Ltd reserves the right to amend details of the specification without notice in line with technical developments. Printed in England on paper which is Totally Chlorine Free (TCF). PXBR2070 JPH1108/50K/0296.