

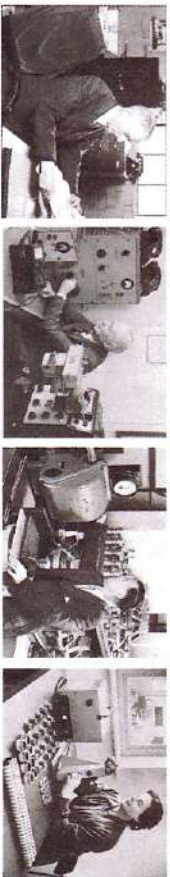
DIAMOND 11
S e r i e s

 **WHARFEDALE**

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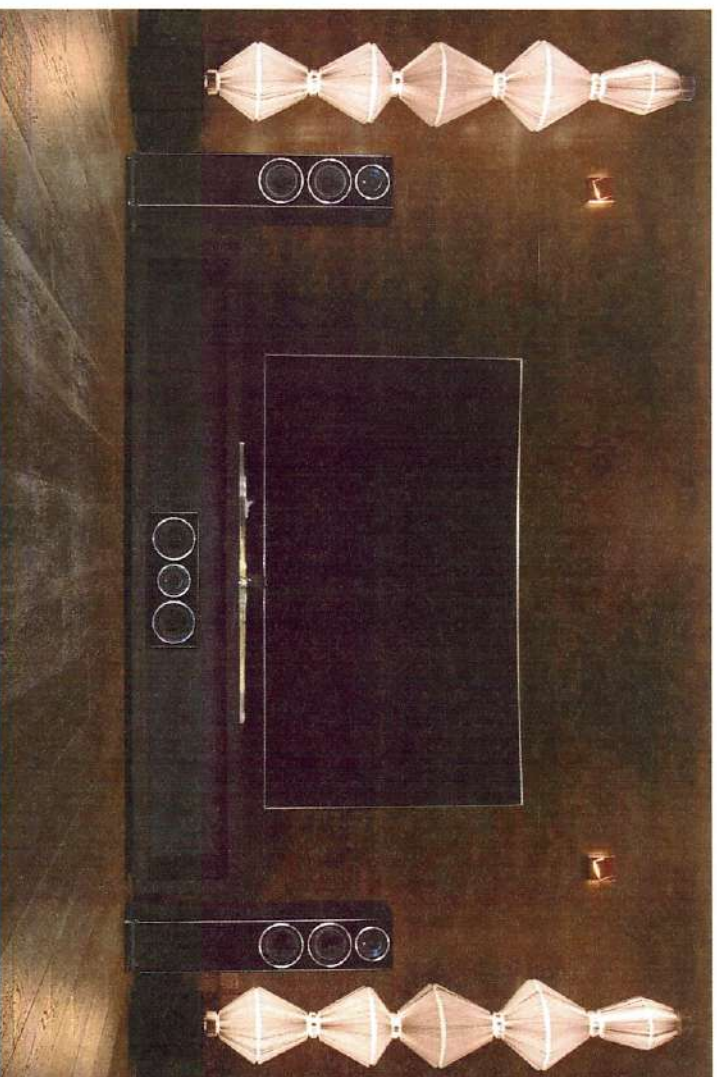


Heritage

Britain has long been recognised as being the home of loudspeaker technology in terms of innovation and quality. Gilbert Briggs' first loudspeaker was manufactured in 1922 through a passion for music and an ear for detail - in a sleepy little market town of Yorkshire. Wharfedale was born. Alica winning multiple awards, his work is still much admired and respected throughout the hi-fi world today and our speakers are still driven by the same passion for music.

Wharfedale's Diamond series has a long history of achievement. The first Diamond was born in 1982 in the form of a rear ported hi-fi speaker. A combination of a 3gmm dome tweeter, 20mm long throw polypropylene bass/mid driver and a simple yet highly effective crossover in a compact hi-fi speaker look, the industry by storm. The speaker produced an impeccable stereo image, quickly becoming a best-seller and a permanent fixture in the Wharfedale product range. Since then, every Wharfedale Diamond Series has been a best-seller.

From 1982 Wharfedale Diamond has meant one thing - impeccable performance at an affordable price. Today we are pleased to bring you the latest of loudspeakers from Wharfedale that aspires to this tradition - Diamond 11.



Advanced Driver Systems

Diamond 11 features massive magnet designs to both raise sensitivity and ensure absolute control of cone movement over lower bass frequencies. In addition the use of a specially shaped top plate with copper cap controls the magnetic flux and ensures low distortion through the critical midrange area.

Then there is the suspension which features a lightweight progressive foamed surround, in conjunction with a super-long-throw voice coil motor system, to achieve unparalleled linearity and accuracy in the sector of the motor.

Not have we forgotten the high frequency performance. A smaller over-size ceramic magnet system is used for the HF unit, again featuring a copper cap for flux control. And here, the pole piece is vented through to a specially shaped rear chamber. This provides a low resonant frequency ensuring wonderful linearity throughout the operating system and allowing the textile dome to provide lucid midrange performance in addition to precise high frequency detailing.



Oversized Magnet



Copper Cap



Foam Surround



Vented Pole Plate



Cabinet Construction

While the cabinet, to the owner, is often just a piece of furniture, at Wharfedale we have long realised that it is the final piece of the design process that marks a loudspeaker out of the ordinary.

For Diamond 11 our engineers have refined the multi-layer sandwich of differing woods to subdue the identifiable characteristics of the cabinet sound and so let the drive units speak for themselves.

Critical bracing of the cabinet panels and, of course, the curving of the cabinet walls to provide a non-boxy shape, have reduced resonances more than 25dB below the driver outputs. In addition we use a specially developed internal fibre to line the cabinet walls which has been chosen because of its outstanding absorbent qualities across a wide bandwidth.



Sandwich Board



Curved Cabinet



Internal Bracing



Internal Fibre

The result is that the listener hears the drive unit output unaltered by unwanted vibrations caused by panel vibration or internal resonances, revealing more of the detail of the musical performance.

WFR Vented System

The Diamond 11 utilizes a new Wide Frequency Response (WFR) vented HF design. By utilizing a custom machined vented pole plate exiting into the large sealed rear chamber, the WFR design can extend down to frequencies below 0.5kHz before rolling off. This results in cleaner more detailed vocal presentation and smoother transitions into the MFLF.



Wide Dispersion Wave Guide

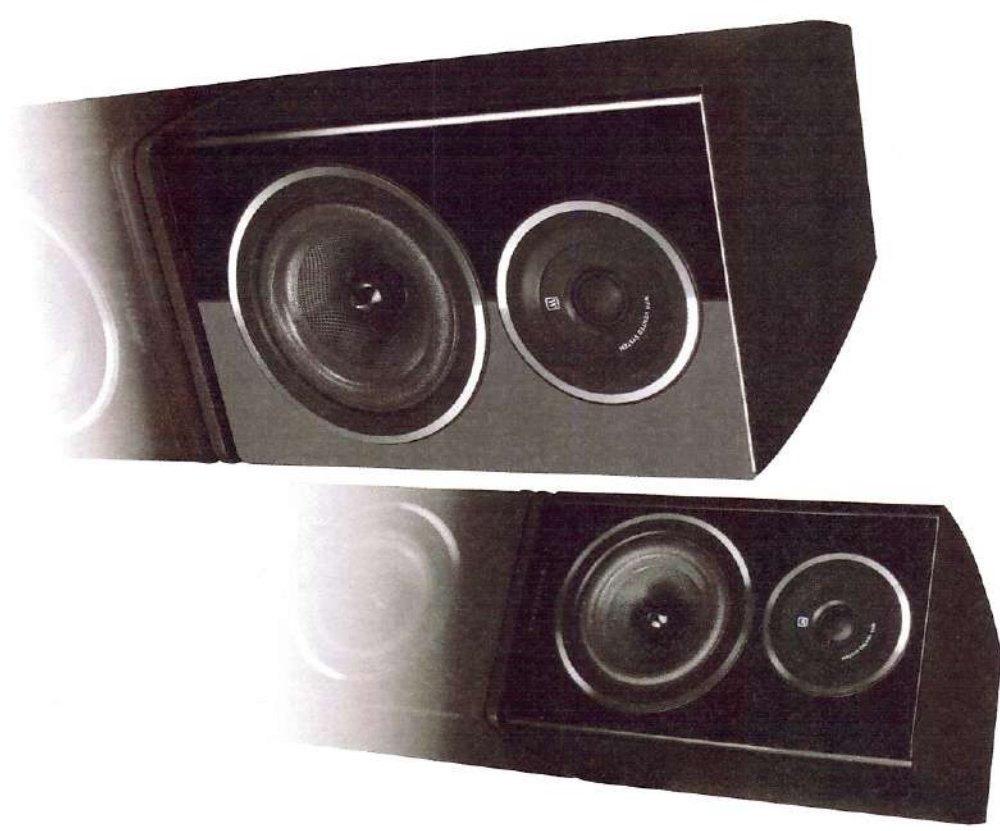
Custom design of two parts
two part Wave-Guide for
increased dispersion.

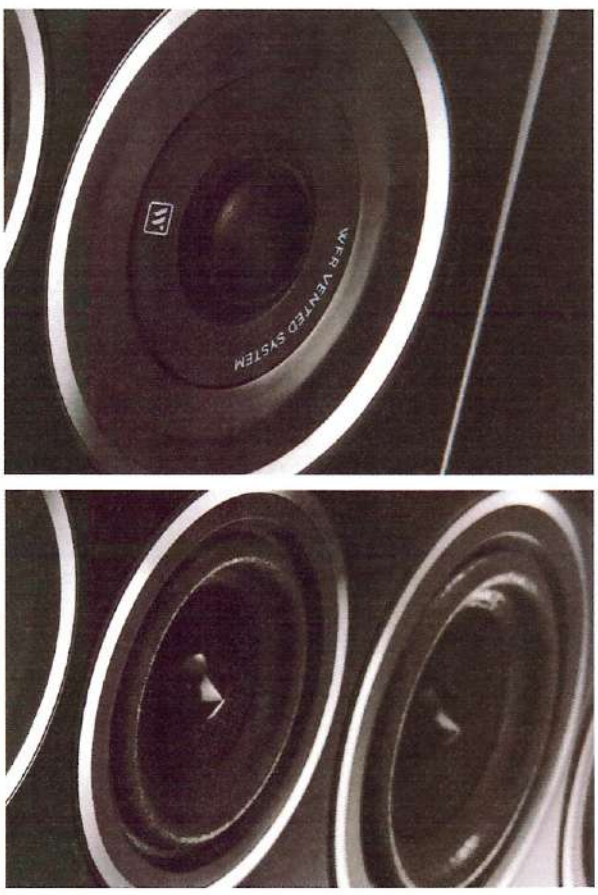
Vented Pole Plate

The air and live dispersion is vented
through the pole plate into a large rear
chamber creating more air movement,
deeper excursion and higher SPL.

Copper Cap and CAW

The use of Copper Clad Aluminum Wire
(CCAW) increases the conductivity of
copper while retaining the overall mass,
creating a lighter design and assembly.
Pinned with the copper sleeve over the
top of the pole plate to reduce magnetic
distortion.





Slot-loaded distributed port

The slot-loaded distributed port is a recent Diamond innovation where the internal port tube opens into a slot formed between the cabinet and the baffle. This not only reduces the turbulence caused by the sudden outrush of high pressure air into the low pressure in the room, suffered by conventional ported systems, but also increases the efficiency of transfer of energy from the bass reflex tuning to the room.

For Diamond 11 we have taken this one stage further, profiling both ends of the port with a semi-parabolic exit curve that linearises airflow through the port tube. This has allowed us to increase the volume of air in the slot loaded system and further improve the performance of the low frequency output.

The result is an entirely natural and low distortion recreation of the fundamental notes of bass instruments, matching the realistic sound of the midrange and treble characteristics. The low Q nature of this ported system also allows the listener to position Diamond 11 speakers close to a rear wall, helping to make the speakers less obtrusive in a room setting.



Slot Loaded Port



Semi-Parabolic Exit



Balanced Air Pressure