

The
quest
for
perfection

B&W news

The DM17 Limited

Several recognisable B&W characteristics show up in THE DM17 LIMITED. For example: cabinet dimensions are the same as for the DM12 miniature monitor; the top-mounted high frequency unit resembles the one on the DM7Mk2 in appearance and that of the 801 in component design; the bass/midrange driver is based on the much-praised unit originally developed for the DM12; the crossover network is directly related to sophisticated design first seen in the 801.

So THE DM17 LIMITED comes into the B&W range equipped to occupy top position among compact two-unit monitors. Despite its miniature dimensions, its performance may be judged by standards as exacting as those applied to full size monitor systems. For those whose ear demands such standards, but whose listening room is of limiting size, THE DM17 LIMITED now clearly becomes the loudspeaker of choice.

High-frequency Driver. The dome-shaped 26mm diaphragm is of woven polyester filaments and is basically the same unit as used in the 801. It is extremely linear and extends frequency response beyond audibility. Dispersion is excellent and distortion very low.

Bass/midrange Driver. This unit is the one so successfully developed for the DM12, with some visual refinements to the exterior design. It uses a Bextrene thermoplastic cone, heavily damped with polyvinyl acetate compounds. (During development, three different drivers were built, but each failed to equal, let alone surpass, the extended frequency response of the chosen unit.)

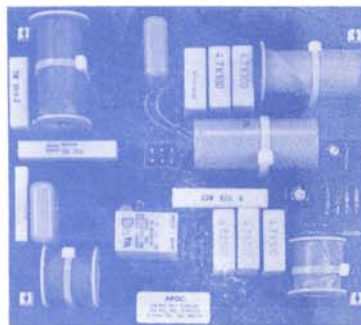
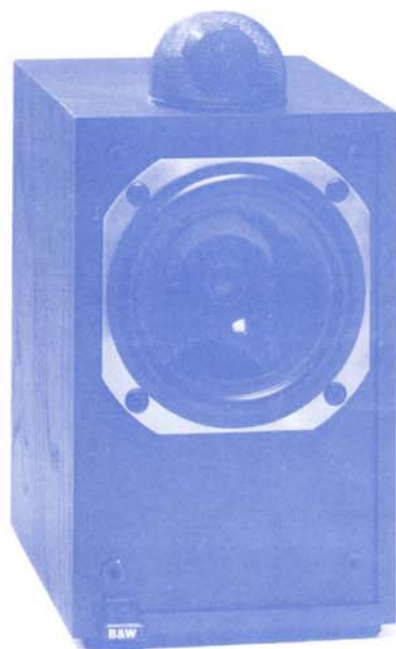
Automatic Protection

THE DM17 LIMITED enjoys the automatic protection of APOC (B&W's patented audio powered overload circuit). If and when the preset safety power level is exceeded, the drive units cut out and visual warning is given by the LED mounted at the base of the cabinet. As soon as the overload condition is removed, operation is restored automatically.

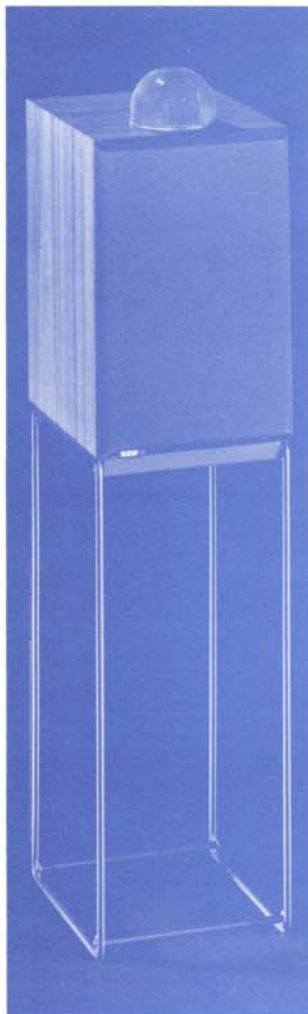


The Crossover Network

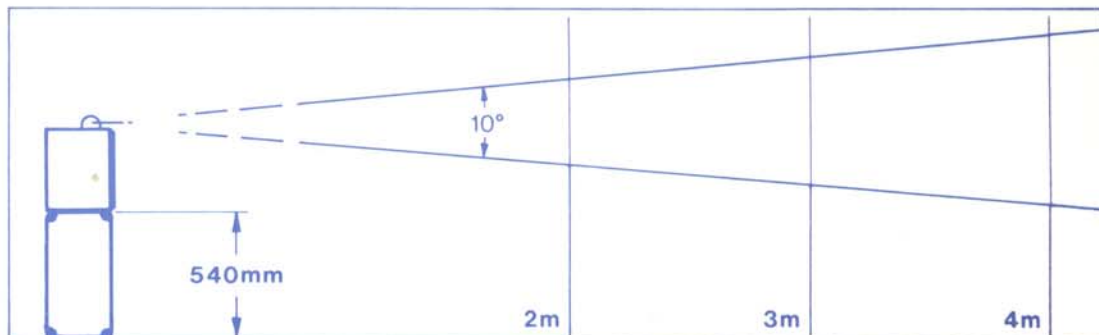
The fourth order Butterworth squared crossover network owes its sophistication to computer-aided design optimisation techniques, perfected for the 801. The result is uniform sound pressure/frequency response, correct phase relationships, vertical polar response of enhanced symmetry, and desirable impedance characteristics.



used by the major digital recording studios worldwide



The purpose-designed stand (type STAV/12) for THE DM17 LIMITED.



Positioning

Given such conveniently small dimensions, it will often be convenient to locate the speakers on shelves, tables or wall units. Care spent in experimenting with different speaker positions is sure to be rewarding.

It is warmly recommended that wherever possible THE DM17 LIMITED should be mounted on the purpose-designed stand, which is available as an optional extra.

In the context of the home listening experience, one might equate the speaker system with the performers, and the room with the concert hall. The effect of these special stands is comparable to suspending a pair of the loudspeakers in space — creating a near-ideal relationship between THE DM17 LIMITED and its environment in the listening room.

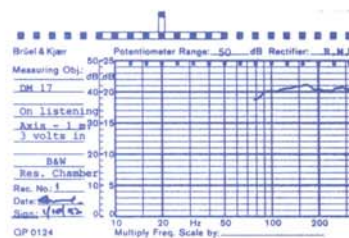
Resonance-free

The sealed enclosure of the bass/midrange unit, massively constructed of 12mm high-density particle board, is laminated with 6mm bituminous pads and a 19mm front baffle assembly. This provides an almost totally inert, resonance-free enclosure, which — together with mechanical driver isolation — results in freedom from enclosure colouration comparable with that achieved in Model 801.



Computer-matched

At the B&W factory, strict quality control reaches through to every aspect of the manufacturing process. Finally, the pairs are computer-matched to $\pm 0.5\text{dB}$ for integrated performance and each unit goes out with its own individual calibration certificate. In the case of THE DM17 LIMITED, this is signed personally by John Bowers.



Specification

Frequency response

Better than $\pm 2\text{dB}$ from 85Hz to 20kHz free-field on listening axis at 2m.

Low-frequency system

Acoustic suspension $Q = 0.6$.
System resonance 70Hz.

Dispersion

Vertical: Better than $\pm 2\text{dB}$ over 10° arc.
Horizontal: $\pm 1.5\text{dB}$ over 60° arc to 10kHz.
 $\pm 2\text{dB}$ over 60° arc to 20kHz.

Drive units

Two, vertically in-line. Time-aligned spherical HF driver. All driver pairs are computer-matched to give system pairing better than $\pm 0.5\text{dB}$.

Bass/midrange driver BM150/17

150mm dia. Bextrene cone heavily damped with p.v.a. compounds. 26mm dia. high-temperature voice coil, phenolic resin impregnated on a foil-lined former.

Vibration-isolation mountings reduce excitation of minor structural enclosure resonances.

High-frequency driver TS26

Diaphragm: 26mm dia. multi-filament polyester weave dome.

Voice coil: 26mm dia.

To achieve a compact unit with excellent directional characteristics, a high-energy nickel cobalt centre pole is used in the magnet system.

Distortion

For a nominal s.p.l. of 95dB at 1m.

Second harmonic: Less than 3% 60Hz to 600Hz.
Less than 1% 600Hz to 20kHz.

Third harmonic: Less than 1% 60Hz to 150Hz.
Less than 0.5% 150Hz to 20kHz.

Impedance

8 ohms nominal. Not falling below 6.4 ohms throughout the frequency range 20Hz to 200kHz.

Sensitivity

1 watt into 8 ohms for a s.p.l. of 85dB at 1m, sine wave input at 300Hz.

Power handling

Suitable for amplifiers having a power output of 40 watts or greater. No upper limit because of electronic overload protection device. Maximum s.p.l. at 1kHz 106dB, at 1m.

Dimensions

Height: 410mm (16in).
Width: 220mm (8 $\frac{3}{4}$ in).
Depth: 270mm (10 $\frac{1}{2}$ in).

Weight

9kg (19.8lb).

Cabinet finish

Selected veneers of black ash or walnut.

B&W Loudspeakers Ltd reserve the right to amend details of their specifications in line with technical developments.