

B&W DM6

The B&W DM6 is Britain's first linear phase loudspeaker. A dynamic system that will reproduce sound with transient accuracy usually achieved by only the very best electrostatic designs. It represents a breakthrough in the measurement of two vital aspects of loudspeaker performance that have not been previously assessed: phase response and impulse response.

It is well known that complex wave shapes are made up of a fundamental sine wave plus a harmonic series, and that the amplitude of these harmonics must not only be correct but must also arrive in the correct phase or time if the desired wave shape is to be reproduced. It is this correction for phase or time in the design of the units, the crossover network and the physical placement of the units, which enables the DM6 to dramatically improve the square or impulse waveform performance.

DM6 incorporates three entirely new drive units developed at the B&W factory:

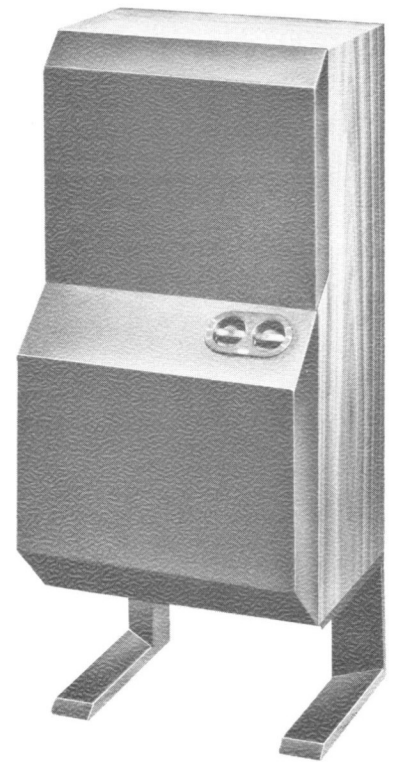
The bass unit achieves a level of performance that would normally be associated with a cabinet of much larger capacity than DM6's 51 litres.

The mid-range unit employs totally new technology and materials and shows significant improvements in transient and conventional measurements.

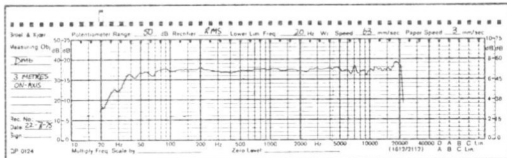
A new high-frequency transducer also shows improvements equivalent to those achieved in the mid-range unit and linearly extends frequency response to 40kHz.

All three units are integrated into a linear phase system by mounting in a stepped arrangement, after skilful shaping of the front baffle to allow for the different arrival times of the various components. And when a series of linear impedance first order filter configurations are introduced, new levels of linear phase and amplitude characteristics are achieved.

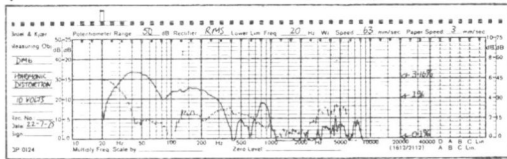
The DM6 is guaranteed for 5 years.



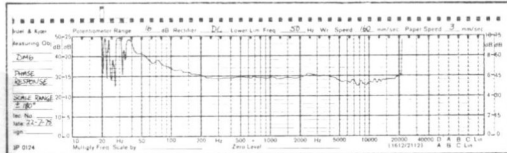
On axis free-field amplitude/frequency response



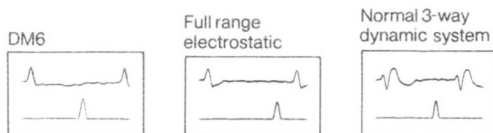
Harmonic Distortion for 10 volts input (solid curve=2nd, dotted curve=3rd)



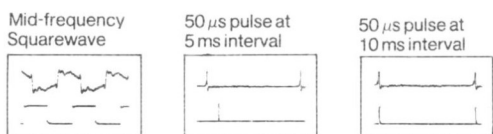
Phase Response on axis at 3 metres



Response to sin² pulse of 0.33ms half-amplitude duration



Impulse response of DM6



Height including stand
931mm (36 3/8 in).

Width
410mm (16 1/8 in).

Depth
380mm (15 in).

Stand height
178mm (7 in).

Weight including stand
34kg (74.8 lb).

Cabinet construction

The fully braced carcass and partitions are high-density particle board and mechanical damping panel laminate.

Stand

Black nylon finished cast alloy.

Cabinet finish

Standard:
selected veneers of teak or walnut.

Special:

satin white or selected veneers of rosewood or black ash.

Amplitude/frequency response

±3dB 50Hz to 20kHz, 3 metres on axis.

Phase/frequency response

±15 degrees 150Hz to 5kHz.
±30 degrees 100Hz to 20kHz.

Sensitivity

7.6 watts into nominal impedance (i.e. 7.8 volts) for pink noise sound pressure of 95dB at 1 metre (anechoic conditions).

Power handling

Suitable for amplifiers between 25 and 350 watts r.m.s. under normal domestic conditions.

Overload protection

2.5 amp fusing for complete system; 0.5 amp for h.f. unit.

Crossover

Crossover frequencies of 500Hz and 5kHz. Close-tolerance components throughout.

Nominal impedance

8 Ohms.

Control: Contour

±2dB in the range 500Hz to 5kHz.

Control: H. F. Energy

±2dB above 5kHz.

Bass unit B&W BW250

Effective cone diameter 224mm.

Voice coil diameter 52mm.

Free-air resonance 18Hz nominal.

Flux-density 1.0 tesla nominal.

Mid-range unit B&W MW150

Cone diameter 131mm.

Voice coil diameter 37mm.

Free-air resonance 48Hz nominal.

High-frequency unit B&W TW20

Voice coil diameter 19mm.

Dome-formed polyester weave.

Total moving mass less than 0.2gm.

Drive unit loading

Both bass and mid-range units are loaded into independent irregularly shaped totally sealed enclosures.

Bass loading volume

51 litres gross, giving 40Hz system resonance.

Mid-range loading volume

20 litres gross, giving mid-range resonance of 65Hz.

All measurements taken at the Building Research Establishment anechoic chamber, Garston.

B&W Loudspeakers Ltd reserve the right to amend all specifications without prior notice in line with technical developments.

B&W Loudspeakers

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