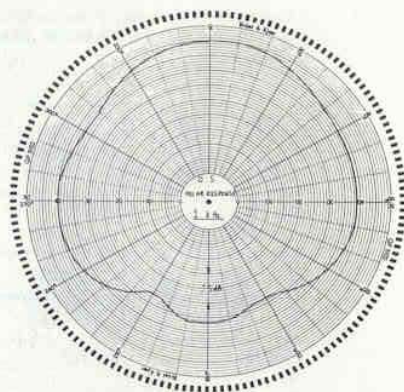
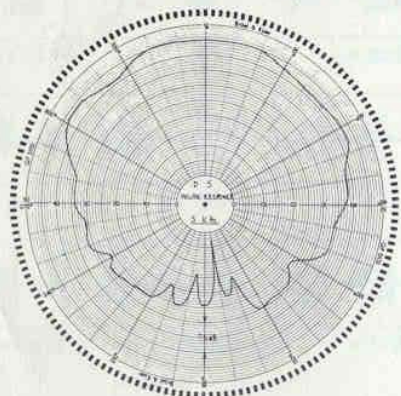


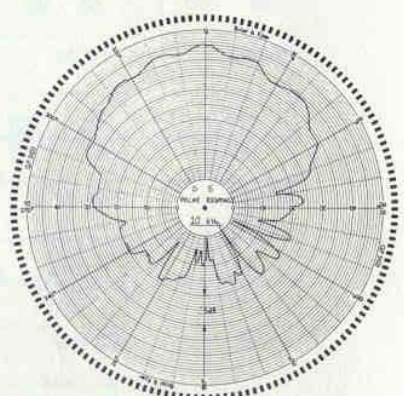
Polar response  
100 Hz



Polar response  
1 k.Hz.



Polar response  
5 k.Hz.



Polar response  
10 k.Hz.

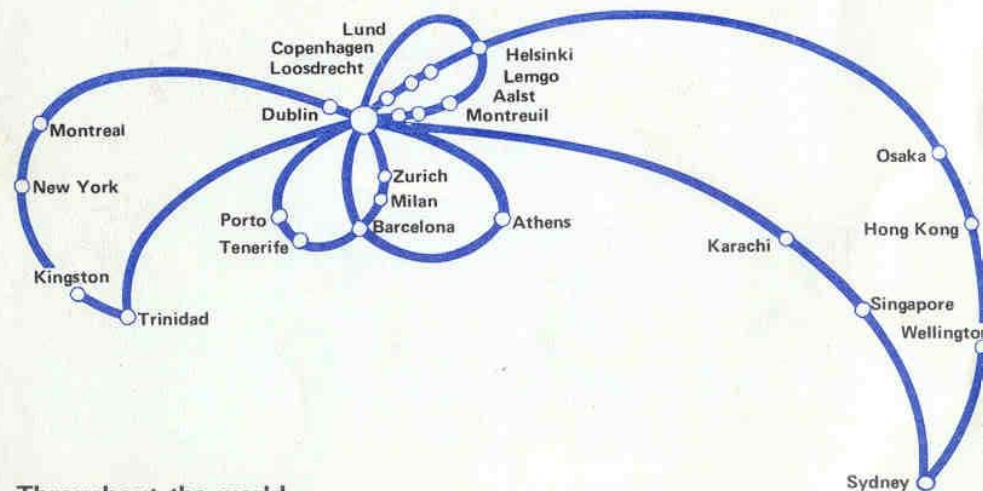
**B&W** electronics

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B&W D5

Printed in England

# B&W D5 Loudspeaker System



Throughout the world  
B & W monitor loudspeakers  
set the standard

**B&W** electronics



## Introduction

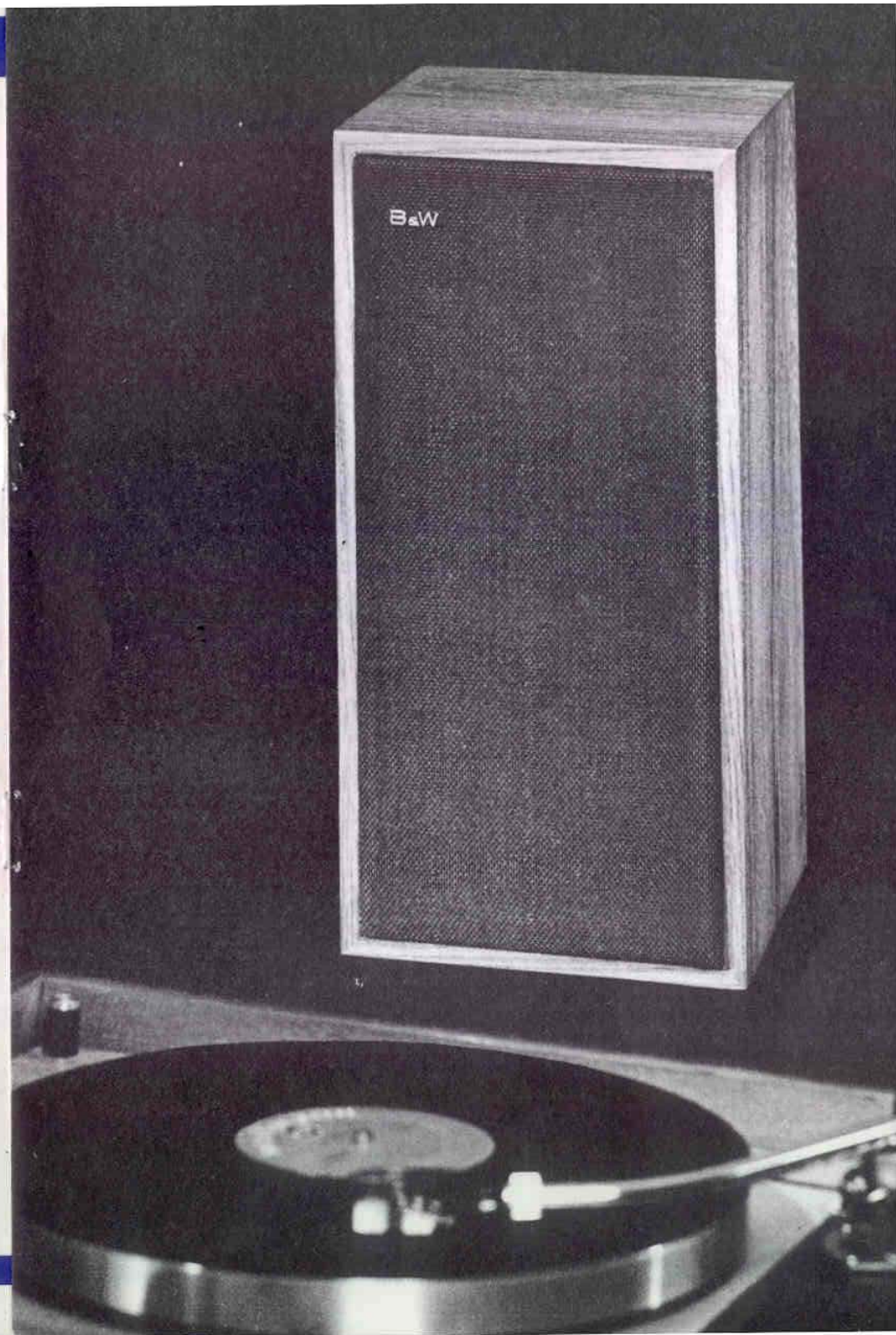
The D5 is a compact two way loudspeaker system designed to meet the needs of the critical home user where space and cost are a consideration.

B. & W. Monitor Loudspeakers, sold in some 25 countries have been acclaimed throughout the world as 'approaching perfection' and it has always been our aim to produce an above average product in terms of performance and value for money.

For a number of years we have felt a growing need for a really first class small loudspeaker which was not a true monitor as is the case with our DM series and yet would provide above average performance, built and tested to B. & W. rigid standards of quality control and capable of being produced at a competitive price.

The D5 falls perfectly in this category. Its design and subsequent production was made possible by basic research carried out for our DM2 and DM4 Monitors and although employing a smaller Bass/Mid-range unit than either of these two loudspeakers the research which we carried out with new materials and measuring techniques in terms of linear extension of mid-frequency response made it possible to produce a two unit design which closely approaches monitor standard in performance.

Built to the usual B. & W. high standard, we are confident in offering this loudspeaker system as a worthy member of the B. & W. family. Every D5 system is pen tested in our production Anechoic Chamber, boxed in matched pairs complete with instruction book.





## General Description

The B. & W. D5 is a two unit compact loud-speaker system comprising highly developed Bextrene coned Bass/Mid-range unit (designed and produced in our own factory) with a 25mm dome type upper mid-range and high frequency unit. Third Order Butterworth low-pass and high-pass filters optimise and integrate the performance from both drive units and produce an exceptionally smooth and linear response from 40Hz to 25kHz. Extremely rigid enclosure in Teak or Walnut veneers and with a satin white version ensure that this system will fit unobtrusively in to a wide range of home furnishings.

## Detailed Specification

### Drive Units

**DW150/5.** Bass/Mid-range unit, consists of 124mm diameter piston of critically contoured Bextrene driven from a 25mm voice coil on an aluminium former. The entire voice coil is coated with a bonding agent and heat cured to ensure long term stability. A long throw voice coil with rubber roll surround ensures long travel/low distortion characteristic. A pressure die-cast chassis of alloy material is employed with a high flux magnet assembly. All units are individually hand assembled, cones treated with a critical amount of damping compound and frequent quality control response curves and distortion measurements taken on Brüel & Kjoer equipment.

**PCH24/8.** Upper mid and high frequency unit consists of a specially treated ultra light weight dome assembly operating from a 25mm voice coil. The response of this unit is remarkably flat with a broad and balanced polar characteristic showing excellent transient behaviour to at least 25kHz.

### Crossover and Filter Unit

The third Order Butterworth high-pass and low-pass sections gives 18db per octave attenuation in the stop band and ensures optimised operation of both units. LF series inductors on Bass Unit are of low distortion Ferrite construction to reduce DC resistance and ensure maximum amplifier damping to voice coil.

## Cabinet

Construction throughout is of 12mm high density chipboard with balancing veneers on both sides, in Teak, Walnut and Satin White finishes. All battens are pinned and glued, and the front baffle is of 12mm laminated ply. The front grille material produces negligible deterioration in system response and is backed with an open weave material to render units virtually invisible.

## Acoustic Loading

Infinite, with critical amount of synthetic damping material to ensure low 'Q' at system resonance.

## Sensitivity

10 watts into nominal impedance required to produce a sound pressure level of 95db at one metre at 400Hz.

## Power Handling

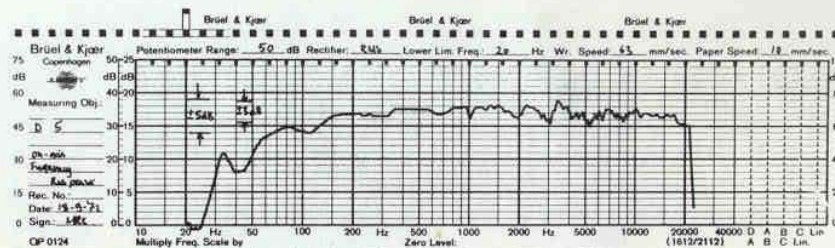
Entirely suitable for all high quality amplifiers with true RMS output of between 10 watts and 25 watts.

## Dimensions

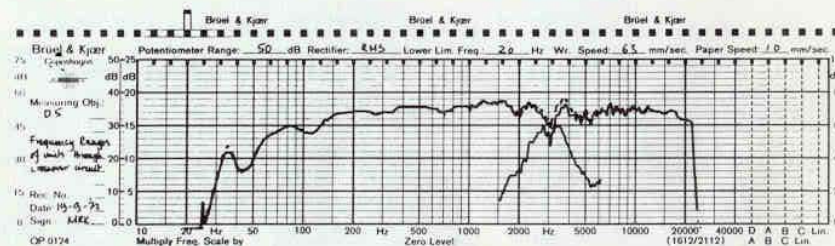
Height: 456mm (18"). Width: 228mm (9"). Depth: 175mm (7"). Weight: 6.35kg (14lb).

## Acknowledgments

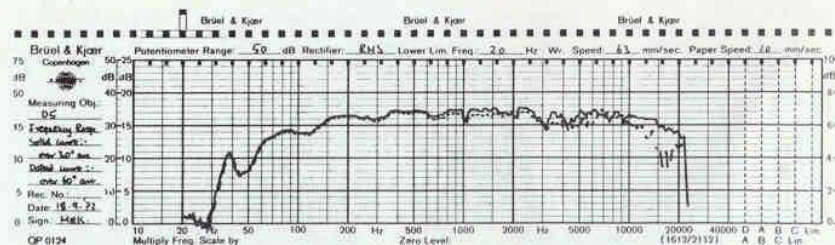
Design Engineers:  
Peter Hayward and Dennis Ward.



**Frequency Response.** On Axis  $\pm 3$  dB 150 Hz to 3kHz.  $\pm 5$  dB 80 Hz to 20 kHz. On axis response of a production sample D5 taken in R & D Anechoic Chamber. B & K equipment used throughout, with type 4133 microphone at one metre.



**Crossover and Filter Unit.** Individual acoustical output from each drive unit showing crossover frequencies.

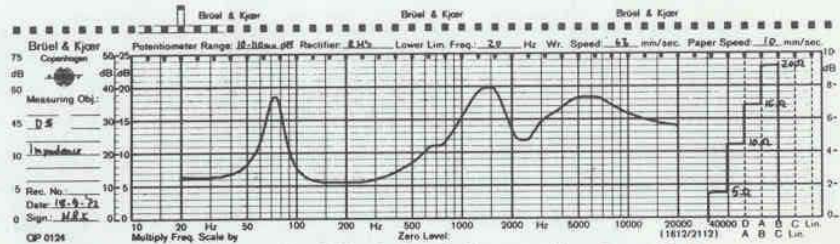


**Polar Distribution.**  $\pm 3$  dB envelope 20 Hz to 15 kHz over 30 degree arc.  $\pm 6$  dB envelope 20 Hz to 12 kHz. over 60 degree arc. Off axis plots showing response for 30 degree arc and 60 degree arc.

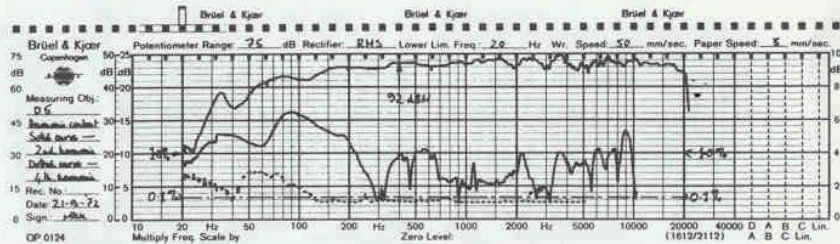


# Laboratory Measurements

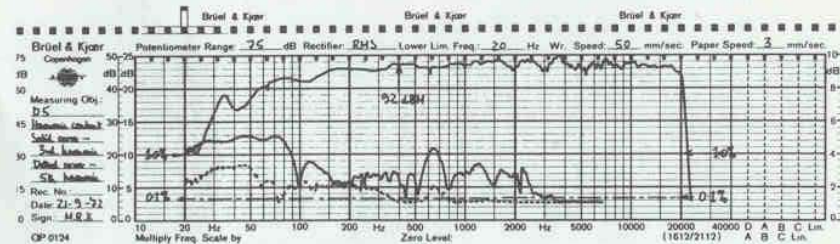
# Laboratory Measurements



Impedance. Nominal 8 ohms. Not falling below 6 ohms, or rising above 18 ohms throughout frequency range 20 Hz. to 20 k.Hz.  
 Plot of impedance of production sample D5.



Distortion. Harmonic analysis plotted against frequency.  
 Content of 2nd. & 4th. Harmonics.



Content of 3rd. and 5th. Harmonics.

Transient Response. Tone burst oscillograms taken at one-third octave intervals in our Research Anechoic Chamber. Microphone type B & K 4133.

