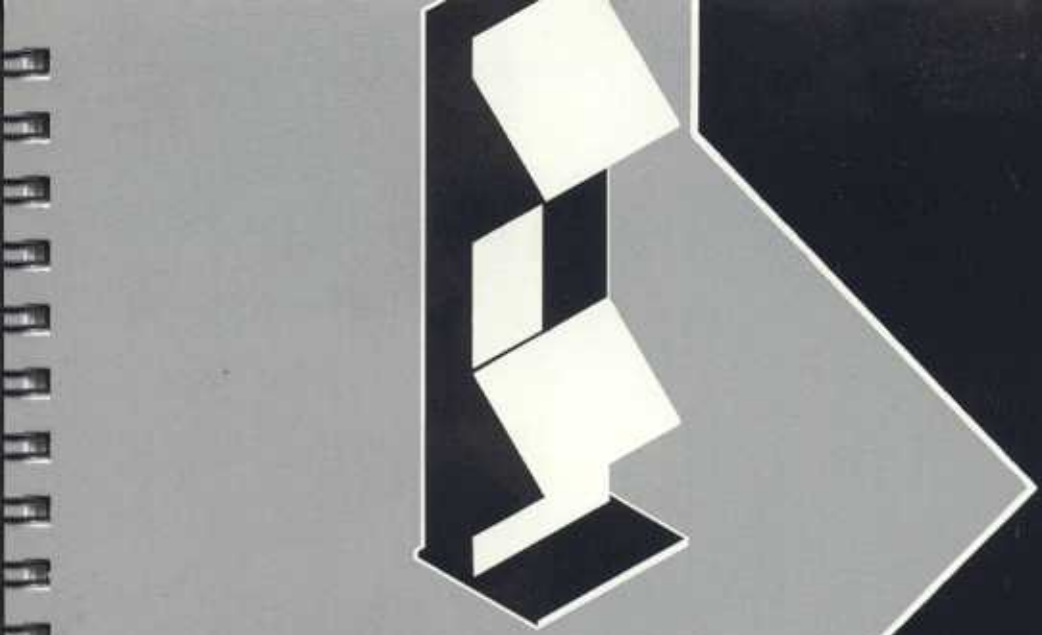


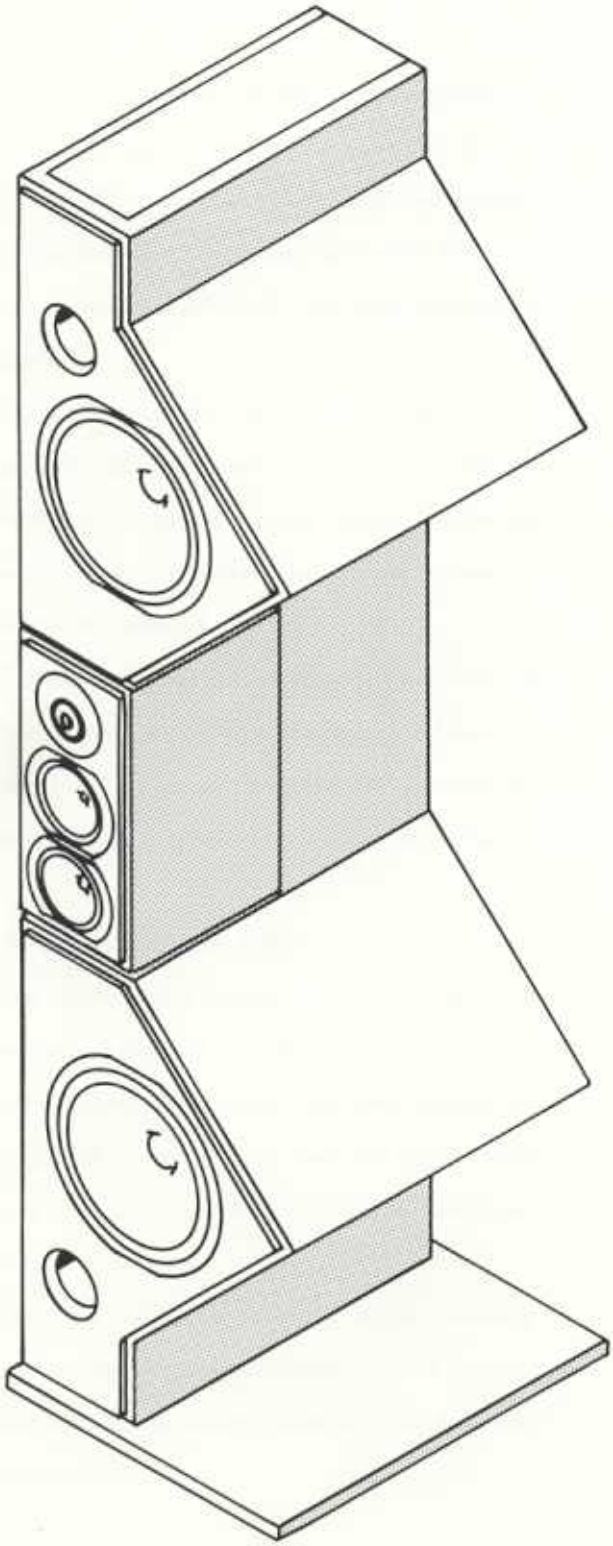
MATRIX 800

USER MANUAL

B&W LOUDSPEAKERS

B&W LOUDSPEAKERS

MATRIX 800



INTRODUCING THE B&W MATRIX 800

Your Matrix 800 loudspeaker system is an extension of the now legendary Matrix 801, and incorporates many of the features which have contributed towards the enviable reputation which the latter enjoys as the classical recording industry's chosen monitor. The 800 could be described as the ultimate digital monitor in that its dynamic capabilities are awesome.

Peak power handling of around 800W and a free-field sensitivity of 93dB/2.83V/1m translate to around 120dB at 4m (156in) in a normal listening environment.

It goes without saying that Matrix 801's accepted virtues of neutrality and low coloration have been repeated in Matrix 800.

The aim of this manual is to ensure that you understand the principles behind your system and derive the maximum pleasure from it.

The design background follows, and later sections dealing with ancillary equipment, and the effects of the immediate environment, provide further useful advice.

A carefully vetted distribution network handles B&W products in more than 50 countries worldwide. Should a problem arise that your local dealer cannot resolve, the area distributor will be more than willing to help.

Thank you for the confidence and perception you have demonstrated by purchasing B&W Matrix 800 loudspeakers. Please read this manual carefully. It is an assurance of our continuing interest in your long-term listening pleasure.

B&W LOUDSPEAKERS

MATRIX 800

DESIGN BACKGROUND

THE BASS UNIT

The low frequencies are handled by twin asymmetrical enclosures each containing a variation on the Matrix 801 bass driver with its own crossover network. In line with the other members of the 800 Series the low frequency cut-off follows a sixth-order Butterworth alignment.

The enclosures have only a small proportion of parallel faces, thus minimising standing wave problems. A Matrix divides the radiating surfaces into narrow strips, effectively pushing fundamental resonances outside the passband.

The bass modules are deliberately positioned high and low to attack the problem of uneven low frequency response due to room interactions. Each driver excites a different set of room modes to spread their effect.

THE MIDRANGE UNIT

The mid-frequency section utilises two Matrix 801 midrange drivers in a single Matrix enclosure. Vertical polar response irregularities have been avoided by tailoring the responses of the individual drivers so that only one driver is effective at the midrange/high-frequency crossover.

The size and baffle contours of the midrange enclosure/grille combination have received considerable attention to ensure a wide and even dispersion characteristic.

THE HIGH-FREQUENCY UNIT

Frequencies over 3kHz are reproduced by a new 32mm (1¼in) metal dome tweeter.

Originally developed for high-power/high-efficiency studio monitor use, its larger coil diameter and ferro-fluid cooling combine to enhance greatly the power handling. A sensitivity of more than 3dB above that required for the Matrix 800 effectively doubles its safe input capabilities.

THE CROSSOVER

The performance of excellent drive units must, by definition, be degraded to some extent by the introduction of components and wiring. The effects of speaker and interconnect cables are evidence of this. In the Matrix 800 crossover network, B&W, by careful acoustic design, have eliminated as many as possible of these elements.

Hard wiring, which ensures direct contact between component leads, is universally employed. Where connections have to be made, this is achieved by clamping together heavy duty gold-plated copper spade connectors. Each section has a completely separate crossover to virtually eliminate interactions. Polypropylene capacitors are used throughout.

UNPACKING

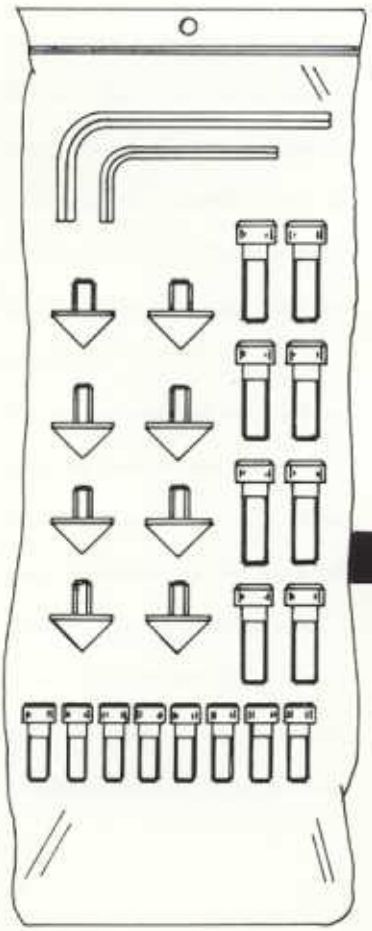
Each pair of Matrix 800 systems is supplied in six separate cases containing:

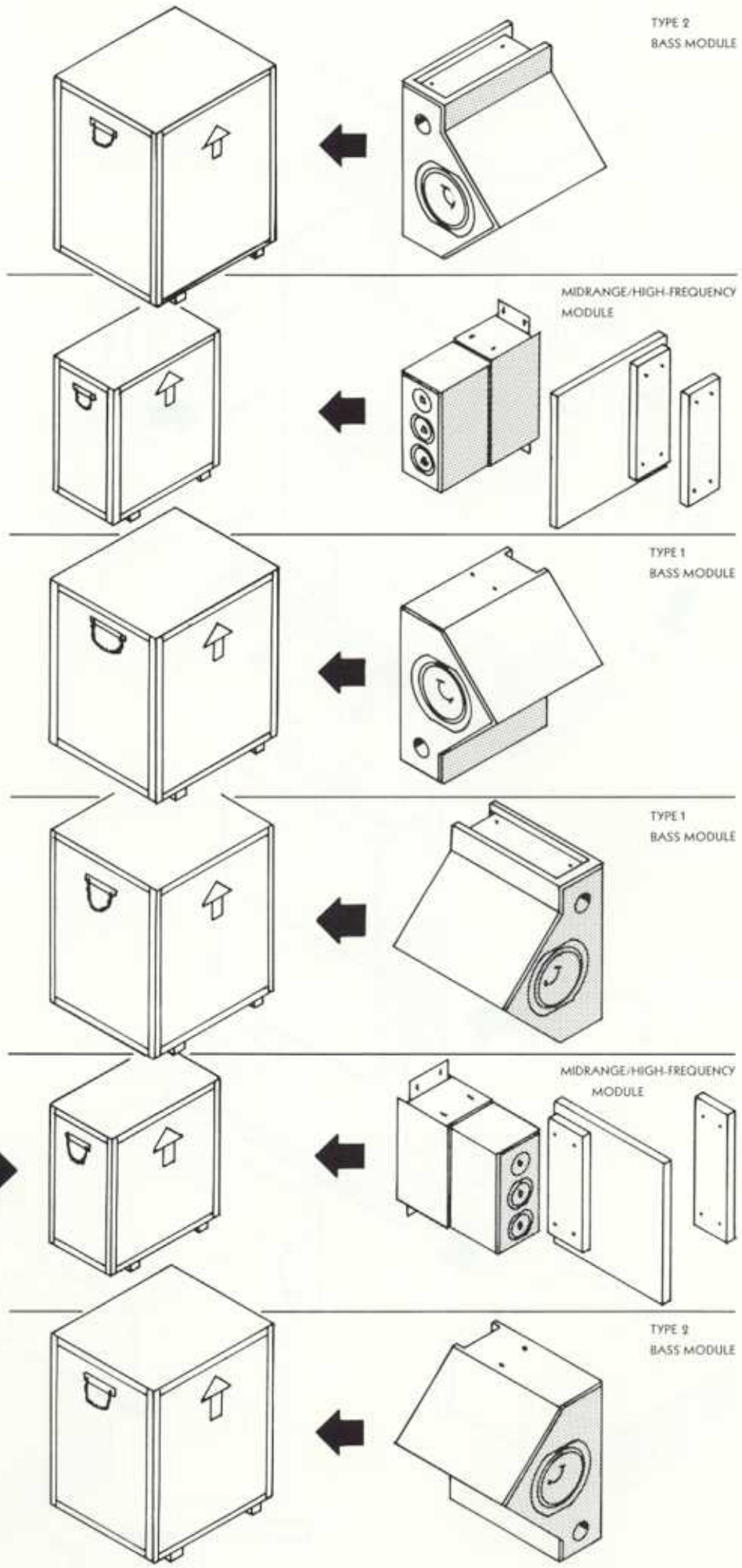
Two type 1 bass modules.

Two type 2 bass modules.

Two midrange/high-frequency modules, each with one cast base plate and one top cover plate.

And in one midrange/high frequency case only, one accessory pack containing eight adjustable stainless steel floor cones, sixteen M8 × 25mm (1in) socket head bolts, and three Allen keys.





UNPACKING

Unpacking is straight-forward provided the following procedures are followed.

MIDRANGE/ HIGH-FREQUENCY MODULES

The two smaller cases contain the midrange/high-frequency modules which are fully assembled to the main steel bridge sections.

Stand the case upright (handles at the top). Remove all wood screws attaching the lid to the outer packing sleeve.

Remove the lid to reveal the midrange enclosure and the cast base, attached to a wooden sub-plate. Remove the two screws which secure the sub-plate to the sleeve, and slide the assembly out of the sleeve. Remove the four bolts to release the cast base from the sub-plate.

Remove the remaining wood screws from the base of the sleeve, and then the sleeve. The top cover plate is attached to the inside of the sleeve by two wood screws.

Finally remove the bolts securing the midrange/high-frequency assembly to the base of the packing.