



INSTALLATION MANUAL

CUSTOM WALLMOUNT MONITORS

CWM5/CWM6/CWM8

B&W Concept 90 wallmount monitors CWM5/6 and 8 have evolved from the same advanced technology as the acclaimed Matrix 801 studio monitor, revered by professional engineers and audiophiles alike throughout the world. The high frequency driver is a direct development of that used in the 801, and the parameters of the bass units have been computer optimized to take advantage of the special acoustic conditions afforded by wall and ceiling location. The mounting hardware has been designed, in conjunction with experienced installers, with flexibility in mind so that even the most difficult locations can be handled with ease.

WORKING WITH CARE FOR A PROFESSIONAL AND PERFECT INSTALLATION

Before commencing work, be sure to plan the speaker locations with acoustic considerations in mind and with an understanding of wall and ceiling construction details at the site.

Acoustics – optimizing the sound quality

Where freedom of location is possible, the speakers should be sited equidistant from a line drawn at right angles from the wall through the desired listening positions and preferably with the tweeter at ear level. The speakers should be positioned vertically where possible. Corner positions and close proximity to floor and ceiling are not recommended, as these tend to excite the room's natural resonances (Eigentones) with a subsequent reduction in sound quality. B&W wallmount monitors are designed to operate satisfactorily within a range of cavity volumes, with some reduction in low bass output for lower volumes (the cavity between two uprights at 41cm (16in) centres is approximately 2.5cu ft). Volumes less than 1cu ft may lead to boominess and should be avoided if possible. Sound leaks in the enclosed volume, however small, will reduce bass output and could cause audible distortion. Take care, therefore, to seal around the mounting ring and any other potential leakage paths. Loose wires should also

be fixed with mastic or tape to avoid possible buzzing. Correct phasing is essential for a stable image and to avoid loss of low frequencies. Ensure that the red (+) and the black (-) terminals of the speakers are connected appropriately to the red (+) and black (-) terminals of the amplifier.

Placement – choose a 'clean' position

For existing walls it is recommended that a pipe detector is used to scan the area selected for installation. Check there is no pipework, wiring or air conditioning apparatus to be disturbed or that may interfere with the placement. The available depth behind dry walls should be a minimum of 75mm (3in) CWM6/86mm (3³/₈in) CWM8. Ensure that no debris is left around to get into the system after installation.

Protection – dust and dirt can croak the monitors

Keep the speakers away from filings, chips or shavings, and in their plastic bags until the surrounding area is clean and ready for final installation. The tweeter employs a relatively delicate alloy diaphragm and since it is easily dented take care not to touch it.

INSTALLATION – IN EXISTING WALLS OR CEILINGS – CWM6/CWM8

To create the correctly sized aperture,

use the template supplied to mark the cutting line. The speakers are designed for existing walls without the need for a fitting bracket. Mounting is achieved by securing with spring clips, and the system is supplied with ten spring clips which can be located at any of the 22 holes (14 for the CWM6) around the rim. The number of holes allows for a concentration of clips if strengthening is needed – for example where a wall is uneven or a stud has to be cut.

The mounting ring is placed into the hole and the clips loosely fitted as required. After final alignment, the screws can be fully tightened. The flange is designed to flex slightly to conform to any irregularities in the wall. When fitting the baffle, first connect the wiring to the spring clips, observing the colour coding, then place the baffle into the mounting ring and fix with the four screws provided.

INSTALLATION –

IN EXISTING WALLS – CWM5

The correct size aperture can be made in the same way as the CWM6/8 by using the template supplied. After cutting the hole, the mounting bracket can be inserted through the hole and held against the dry wall by means of the four clips provided. These should be pushed firmly into the four slots in the corners of the bracket. The speaker baffle can now be screwed to the bracket, after first connecting the wiring (observing the colour coding). See diagram.

INSTALLATION –

DURING NEW CONSTRUCTION (ALL MODELS)

Slotted steel strips are supplied for the installation in new constructions allowing the speakers to be sited in walls or ceilings. Each speaker has its own sized mounting plate, which is used in conjunction with the strips. One strip is fixed along the desired top or bottom position of the mounting plate. The plate is then slotted into the top strip, the lower strip slotted onto the opposite side of the mounting plate. The plate is then slotted into the top strip, the lower strip slotted onto the opposite side of the mounting plate, and the unit swung into position and secured to the studwork as shown in the diagram. The tags on the

mounting plate are designed to move slightly to firm-up the fitting when the second slotted strip is secured. Fine alignment adjustments can still be made, however; by tapping the frame lightly with a hammer. Once the dry wall is in place the moulded mounting ring can be fitted into the plate using the screws supplied, and painted if desired, without the need for masking. It is strongly recommended that sealing compound is used between the ring and the wall or ceiling – especially if the surface is uneven.

DECORATION AND FINISHING – FREEDOM AND FLEXIBILITY

B&W wallmount monitors have been designed to offer a limitless choice of decorative options. They allow the interior designer to blend the speakers into the wall or ceiling treatment, or to feature them, using the range of paints or fabrics appropriate to the room decor.

CWM6/CWM8

The mounting ring is primed in semi-matt white and will accept any water – or oil-based paint finish. If paint is applied to this ring, the work should be carried out before fitting the baffle and grille assembly.

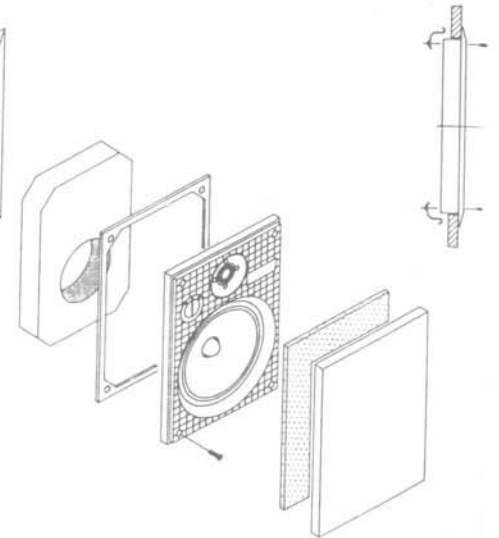
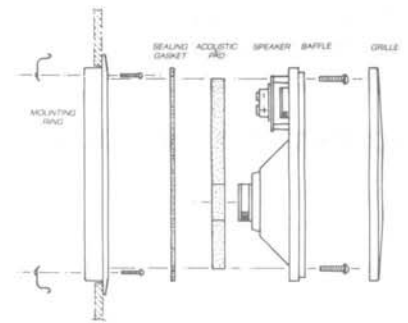
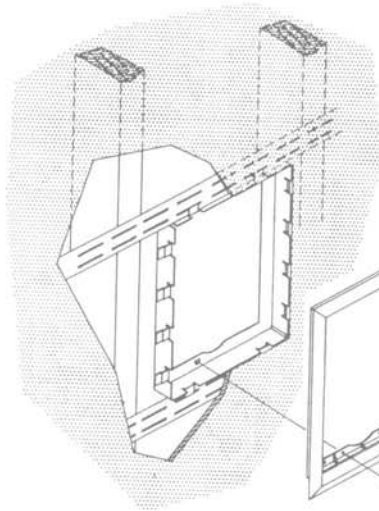
The grille assembly consists of a moulded frame with an acoustic fabric covering, onto which is clipped a perforated metal cover. If this assembly is to have a painted treatment, remove the perforated cover and paint it separately to avoid the possibility of contaminating the acoustic fabric.

As an alternative treatment for the grille assembly, the acoustic fabric may be replaced with a suitable material of your choice. Alternatively, the frame alone can be covered dispensing with the perforated cover; and as a further option your material may be applied over the perforated cover. When applying new fabric, always be sure to remove the original fabric from the assembly since a double layer will affect the acoustic qualities.

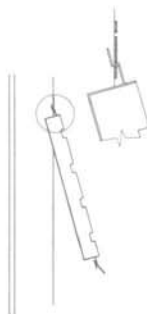
CWM5

Unlike the CWM6/8 the CWM5 does not have a separate baffle moulding, and consequently if the frame is to be painted the units should be masked, with care being taken not to damage the tweeter. The grille assembly comprises a moulded frame with a foam lining. When painting the grille, it should be removed from the baffle and the piece of foam should be temporarily removed to prevent it becoming clogged with paint. If the grille is to be covered with cloth the foam can be omitted on re-assembly.

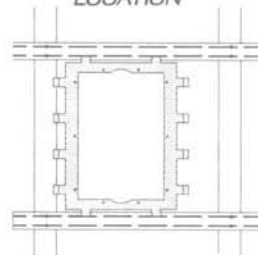
CWM6/CWM8 EXISTING CONSTRUCTION



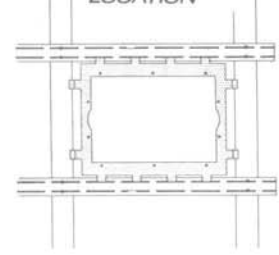
CWM6/CWM8 NEW CONSTRUCTION



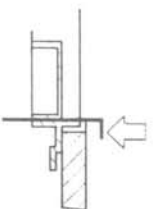
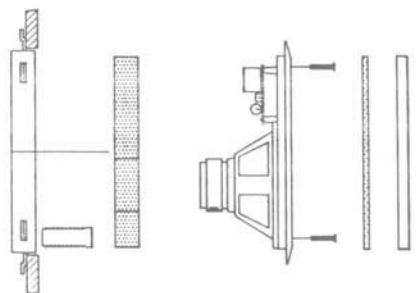
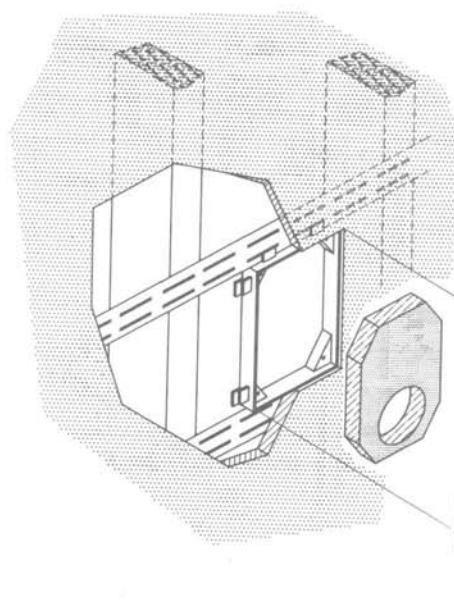
VERTICAL LOCATION



HORIZONTAL LOCATION



CWM5



CUSTOM WALLMOUNT MONITORS

SPECIFICATIONS	CWM5	CWM6	CWM8
Frequency response	75Hz to 20kHz ±3dB	45Hz to 20kHz ±3dB	35Hz to 20kHz
Bass loading	Second-order acoustic suspension	Second-order acoustic suspension	Second-order acoustic suspension
Dispersion	20Hz to 20kHz Vertical: ±2dB over 10° arc Horizontal: ±2dB over 40° arc	20Hz to 20kHz Vertical: ±2dB over 10° arc Horizontal: ±2dB over 40° arc	20Hz to 20kHz Vertical: ±2dB over 10° arc Horizontal: ±2dB over 40° arc
Sensitivity	87dB (2.83V, 1m)	89dB (2.83V, 1m)	90dB (2.83V, 1m)
Impedance	8Ω	6Ω	4Ω
Crossover	Second-order low-pass and high-pass	Second-order low-pass and high-pass	Second-order low-pass and high-pass
Drive units	One 125mm (5in) low frequency with polypropylene cone, one 26mm (1in) high frequency with polyester dome	One 180mm (7in) low frequency with polypropylene cone, one 26mm (1in) high frequency with metal dome	One 220mm (8¾in) low frequency with polypropylene cone, one 26mm (1in) high frequency with metal dome
Power handling	Suitable for amplifiers with 20 to 70W output. HF auto-reset overload protection	Suitable for amplifiers with 20 to 70W output. HF auto-reset overload protection	Suitable for amplifiers with 20 to 100W output. Total system protection with B&W's patented APOC
Dimensions	Height: 227mm (9in) Width: 160mm (6¼in)	Height: 320mm (12½in) Width: 230mm (9in)	Height: 360mm (14½in) Width: 272mm (10¾in)
Mounting aperture	Height: 210mm (8¼in) Width: 145mm (5¾in) Depth (min. cavity): 65mm (2½in)	Height: 290mm (11½in) Width: 200mm (8in) Depth (min. cavity): 75mm (3in)	Height: 330mm (13in) Width: 242mm (9½in) Depth (min. cavity): 86mm (3¾in)
Finish	Semi-matt white	Semi-matt white	Semi-matt white

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