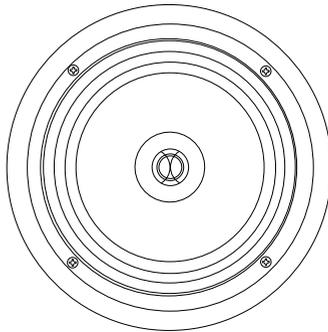


Contractor Series

CCM20 Owner's manual



Bowers & Wilkins

Figure 1

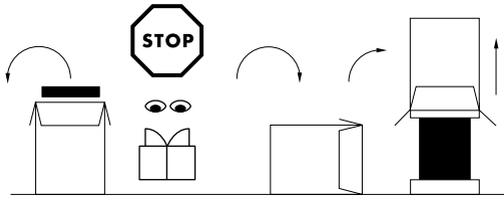
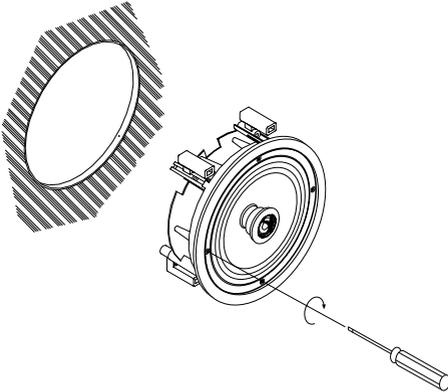


Figure 2



**Owner's manual
CCM20**

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INTRODUCTION

Thank you for purchasing Bowers and Wilkins Contractor Ceiling Mount (CCM20) speakers.

Since its foundation in 1966, the continuing philosophy of B&W has been the quest for perfect sound reproduction. Inspired by the company's founder, the late John Bowers, this quest has entailed not only high investment in audio technology and innovation but also an abiding appreciation of music to ensure that the technology is put to maximum effect.

It is also our policy to make sure the advanced features pioneered on one product are incorporated into others we manufacture.

However, no matter how good the speakers themselves, they must work well into the listening room and time spent on planning the installation will reap the reward of many hours listening pleasure. Please read through this manual fully. It will help you optimise the performance of the system.

B&W distribute to over 60 countries worldwide and maintain a network of dedicated distributors who will be able to help should you have any problems your dealer cannot resolve.

UNPACKING

(figure 1)

- Fold the top carton flaps right back and invert the carton and contents.
- Lift the carton clear of the contents.
- Remove the inner packing from the product.

Check the contents:

- 2x Baffle with drive units, crossover
- 2x Loudspeaker grille
- 1x Alignment template
- 2x Paint mask

We suggest you retain the packaging for future use. Remove the grilles from the wall frames and, to avoid damage, keep them in their plastic bags (and preferably in the carton) away from the work area until you are ready to fit them.

POSITIONING - NEW CONSTRUCTION VERSUS RETROFIT

Check that there is no conflict with other installations (pipe work, air conditioning, power-cabling etc.). In existing construction, use a stud-finding tool to map the construction accurately and a pipe detector to scan the proposed installation position. Avoid installing the speakers in the same cavity as flimsy ducting, which may be induced to rattle. The speakers are designed to operate satisfactorily in a wide range of cavity volumes, ideally above 1.5 litres (0.5 cu ft).

The speakers are balanced for half-space mounting (i.e. flush in a ceiling or soffit).

Placement near a wall/ceiling junction or in a corner is to be avoided as it may give rise to too much bass and a boomy quality to the sound. If possible, keep the speakers more than 0.5m (20in) from the ceiling edges.

The following sections give guidance on optimum positioning, but this may be modified in line with domestic constraints.

Normal Ceiling Applications

For distributed sound, mount the loudspeakers in the ceiling. The spacing will depend on the height of the ceiling and the level of sound required. More speakers played at a lower level will give better clarity.

Home Theatre Surround Speaker Applications

The sound from surround speakers should be as diffuse as possible. This ensures that the frontal audio image is not distorted by changes of listener position or head movements. The speakers should generally be placed behind and 0.6m (2ft) or more above ear height. Ceiling mounting often gives good results in this application. The orientation is less important in this application than in other cases.

WARNING: The CCM speakers produce a static magnetic field that extends outside the cabinet boundary. As such they should not be placed within 0.5m (20in) of equipment that may be affected by such a field, e.g. Cathode Ray Tubes in TVs and Personal Computers.

DAMPING THE CEILING CAVITY

In addition, loosely fill the whole section of the cavity with wadding. Fibreglass and mineral wool matting supplied for heat insulation are suitable, but not closed cell foam or expanded polystyrene. Check that there is no debris that may fall into the speaker (especially in ceiling mount situations).

IMPORTANT: YOU SHOULD CHECK THAT THE MATERIALS YOU USE MEET THE LOCAL FIRE AND BUILDING REGULATIONS.

FITTING THE WALL FRAME

Existing Construction

Position the template on the ceiling as required. Mark around the outside of the template and cut the aperture neatly.

All Methods

(figure 2)

Position the frame in the ceiling and screw in the 4 screws visible from the front of the frame. These screws swing out clamping dogs that locate behind the drywall. Ensure that they have located properly and tighten the screws. A certain amount of flexing of the frame is allowed to take up unevenness in the mounting surface, but do not over tighten the screws as excessive distortion of the frame may occur.

CUSTOMISING

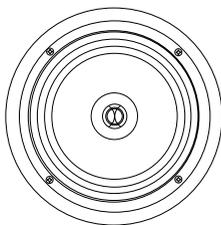
The frame has a paintable white semi-matte finish, ready if necessary to be re-finished to match your own decor. Fit the paint mask before re-finishing. Do not re-finish the drive units or baffle area behind the grille. Avoid touching the drive units, as damage may result.

CONNECTIONS

All connections should be made with the equipment switched off.

The terminals accept bare wires. Connect the red (+ve) terminal to the positive terminal of the amplifier and the black (-ve) to the negative. Failure to observe correct polarity will result in ill-defined panning of sounds and strange phase effects.

When choosing cable, keep the total electrical impedance (out and back) below the maximum recommended in the specification. Ask your dealer for advice, as the optimum cable will depend on the length required. Cut off excess length and tie down loose cable to prevent rattles.



CCM20

Drive units	1 x 25mm (1in) high-frequency 1 x 165mm (6.5 in) mid/bass
Nominal impedance	8Ω
Frequency response	50Hz – 20kHz ±3dB
Sensitivity	89dB spl (2.83V, 1m)
Crossover frequency	3.5kHz
Recommended amplifier power	20W – 130W continuous into 8Ω on unclipped programme.
Frame size	Diameter: 225mm (8.9in)
Cut-out size	Diameter: 206mm (8.1in)
Min depth required	73mm (2.9in) from ceiling surface
Net weight	1kg (2.2lb)
Finishes	Semi-matt white suitable for customising or pre-painting



L I S T E N A N D Y O U ' L L S E E

B&W Loudspeakers Ltd. reserves the right to amend details of the specification without notice in line with technical developments. E&OE
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