



Figure 1

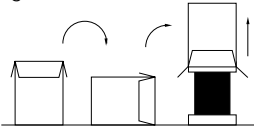


Figure 2

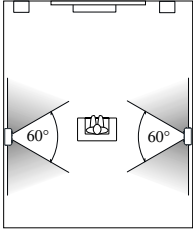


Figure 3

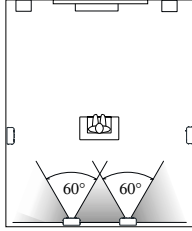


Figure 4

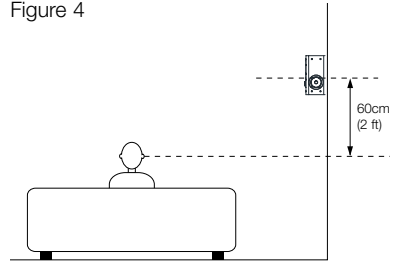


Figure 5

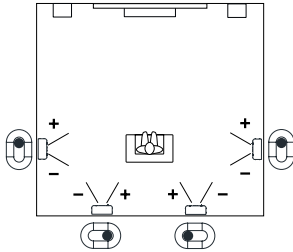


Figure 6

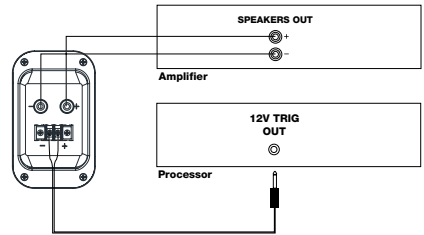


Figure 7

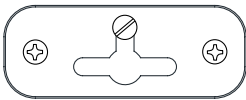


Figure 8

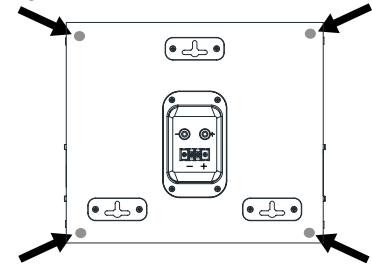


Figure 9

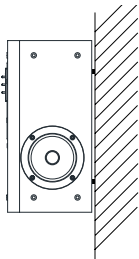
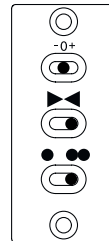


Figure 10



English

Limited Warranty

Dear customer,

Welcome to B&W.

This product has been designed and manufactured to the highest quality standards. However, if something does go wrong with this product, B&W Loudspeakers and its national distributors warrant free of charge labour (exclusion may apply) and replacement parts in any country served by an official B&W distributor.

This limited warranty is valid for a period of five years from the date of purchase or two years for electronics including amplified loudspeakers.

Terms and Conditions

- 1 The warranty is limited to the repair of the equipment. Neither transportation, nor any other costs, nor any risk for removal, transportation and installation of products is covered by this warranty.
- 2 This warranty is only valid for the original owner. It is not transferable.
- 3 This warranty will not be applicable in cases other than defects in materials and/or workmanship at the time of purchase and will not be applicable:
 - a. for damages caused by incorrect installation, connection or packing,
 - b. for damages caused by any use other than correct use described in the user manual, negligence, modifications, or use of parts that are not made or authorised by B&W,
 - c. for damages caused by faulty or unsuitable ancillary equipment,
 - d. for damages caused by accidents, lightning, water, fire heat, war, public disturbances or any other cause beyond the reasonable control of B&W and its appointed distributors,
 - e. for products whose serial number has been altered, deleted, removed or made illegible,
 - f. if repairs or modifications have been executed by an unauthorised person.
- 4 This guarantee complements any national/regional law obligations of dealers or national distributors and does not affect your statutory rights as a customer.

How to claim repairs under warranty

Should service be required, please follow the following procedure:

- 1 If the equipment is being used in the country of purchase, you should contact the B&W authorised dealer from whom the equipment was purchased.
- 2 If the equipment is being used outside the country of purchase, you should contact the B&W national distributor in the country of residence who will

advise where the equipment can be serviced. You can call B&W in the UK or visit our web site to get the contact details of your local distributor.

To validate your warranty, you will need to produce this warranty booklet completed and stamped by your dealer on the date of purchase. Alternatively, you will need the original sales invoice or other proof of ownership and date of purchase.

Owner's manual

Introduction

Thank you for choosing Bowers & Wilkins.

We are confident that you will enjoy many years of listening pleasure from your speakers, but please read this manual fully before installing them. It will help you optimise their performance.

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

Unpacking (figure 1)

- Fold the carton flaps right back and invert the carton and contents.
- Lift the carton clear of the contents and remove the inner packaging from the speakers.

We suggest you retain the packing for future use.

Operation

The DS7 is specifically designed as an on-wall surround speaker for multi-channel audio and home theatre installations.

Surround speakers generally fall into two main types – those that one might describe as 'normal' speakers – so-called monopoles, where the sound comes from a set of drive units mounted on the front of the enclosure – and those that give a more diffuse sound field, such as dipoles. Each type has its advantages.

Most multi-channel music is recorded with home entertainment in mind and is monitored using monopole surround speakers, whatever the multi-channel recording format. This enables better location of side and rear images, although the formation of such images is never quite as precise as it is between the front speakers.

Most films are originally balanced for cinemas, where a large number of speakers spread around the auditorium are used to create the surround sound field. In that case there are more surround speakers than there are discrete channels of information and a less precise image is created that gives an all-enveloping effect. Dipoles and similar diffuse speakers are better at recreating this type of sound field in the home, but using fewer speakers to do it. Image positioning with these types of speaker is never as precise as it can be with monopoles. However, they do have the

advantage of making it easier to balance the system for a larger listening area.

You may well receive conflicting advice from different sources on the best type of surround speaker to use. The truth is that there is no one perfect solution for all situations and the final choice for any given application will be influenced by several criteria, some of which may have a degree of conflict. The DS7 has the advantage of offering a choice of both monopole and dipole operation, either via a switch located on the front baffle, behind the removable grille, or remotely, using a 12V trigger from the surround processor. You may therefore choose whichever type of operation best suits the conditions of the listening room, the size of audience and the type of programme being played. Indeed, you may even change the characteristic for different types of programme and, as the total energy into the room is the same in both modes, no recalibration of the installation is necessary when switching between them.

In monopole mode, only the two drive units on the front face operate. In dipole mode, the front tweeter is disconnected; the two side firing drivers are brought into operation and the crossover frequency to the bass unit is lowered. The side units are connected out of phase with one another, which creates a wedge-shaped null zone at right angles to the wall. If the listeners sit within this zone, they become less aware of the location of the speakers and hear more reflected sound; hence the diffuse nature of the sound field.

Positioning

Ascertain the optimum position for the speakers before permanently fixing them in place.

In order to successfully enable both modes of operation, the speakers should be placed so that the listeners sit within the null zone of dipole operation.

5.1 format (figure 2)

Place each of the speakers to the side and slightly behind the centre of the listening area.

6.1 and 7.1 formats (figure 3)

We recommend the use of 4 surround speakers, even when using a 6.1 format.

Place the side speakers in line with the centre of the listening area.

Place the rear speakers behind the listening area within the angle limits shown in the diagram.

All formats

The surround speakers will normally be placed approximately 60cm (2 ft) above ear height. (figure 4) Higher positions may be used if necessary.

Although the speaker can theoretically be fitted to the ceiling, it is not recommended unless precautions are taken to prevent the speaker sliding off its mounting. B&W cannot accept any responsibility should the speaker fall from a ceiling mount.

You can choose which way the positive and negative dipole lobes point using the centre toggle switch marked ►◄ on the front baffle. The stem of the switch points in the direction of the positive lobe.

To optimise the smoothness of sounds panning from the front of the room to the back and vice versa when speakers are used in dipole mode, we recommend that the side speakers have their positive lobes pointing towards the front of the room and the rear speakers have their positive lobes pointing towards the centre of the rear wall. (figure 5)

Stray magnetic fields

The speaker drive units create stray magnetic fields that extend beyond the boundaries of the cabinet. We recommend you keep magnetically sensitive articles (television and computer screens, computer discs, audio and video tapes, swipe cards and the like) at least 0.5m (20 in) from the speaker.

Connections (figure 6)

All connections should be made with the equipment switched off.

Ensure the positive terminal on the speaker (marked + and coloured red) is connected to the positive output terminal of the amplifier and negative (marked – and coloured black) to negative. Incorrect connection can result in poor imaging and loss of bass.

The terminals accept 6mm (1/4 in) spades, bare wire ends or round pins up to 6mm diameter and 4mm banana plugs.

Important safety notice:

In certain countries, notably those in Europe, the use of 4mm banana plugs is considered a potential safety hazard, because they may be inserted into the holes of unshuttered mains supply sockets. In order to comply with European CENELEC safety regulations, the 4mm holes in the ends of the terminals are blocked by plastic pins. Do not remove the pins if you are using the product where these conditions apply.

Always screw the terminal caps down tightly to optimise the connection and prevent rattles.

Ask your dealer for advice when choosing cable. Keep the total impedance below the maximum recommended in the specification and use a low inductance cable to avoid attenuation of the highest frequencies.

Below the speaker input terminals are two screw terminals for the 12V trigger signal. Strip insulation from the ends of twin cable and connect to the trigger output of your processor, if available. **To avoid damage, ensure that you observe the correct polarity of the connection.**

Fixing the speaker in place

The speakers may be fixed to a wall using screws in the range 5mm to 6mm diameter (No.10 to No.12). On the back of the cabinet are three wall plates. The screw head should be inserted into the round part

of the aperture and slid fully along one of the slots. (figure 7)

Ensure, especially when fixing to drywall panels, that the screw length and wall plug security are sufficient to hold the weight of the speaker. B&W can accept no liability for any failure of wall or ceiling fixings.

Use the template provided to mark the screw positions. The outside dimensions of the template correspond to the rear of the cabinet.

Stick 4 of the clear self-adhesive rubber pads to the rear panel of each speaker, one close to each corner. These stop the speaker vibrating against the surface and help keep it in position. (figure 8)

Adjust the protrusion of the screws such that the rubber pads are a friction slide on the surface when the wall plates are hooked over the screw heads. (figure 9)

Always check and ensure that:

- All the screws slide right to the ends of the slots in the wall plates.
- Screw protrusion is adjusted so that the rubber pads provide enough friction to prevent the speakers sliding out of position.

Mode selection (figure 10)

Use the bottom switch on the front baffle when selecting between monopole and dipole modes. In the ● position, the speaker defaults to monopole mode. However, if a 12V signal is applied to the trigger input, internal relays switch to dipole mode. In the ●● position the speaker is always in dipole mode, whatever the trigger signal.

Some processors feature programmable triggering and may be set up to change the mode of the speakers depending on the type of material being played. Ask your dealer for advice on choosing a suitable processor if you wish to use this facility and refer to the processor manual on how to carry out the programming.

Experiment to find the settings best suited to your requirements. Typical combinations are:

- All surround speakers monopole
- Side speakers dipole, rear speakers monopole
- All surround speakers dipole

It would be unusual, but not impossible, to set side speakers to monopole and rear speakers to dipole.

Fine tuning

In monopole mode, the high frequency output level may be adjusted using the top toggle switch on the front baffle. In the centre 0 position, the system response is nominally flat. The + position gives more output, which may be required, for example, if the acoustic of the room is dull, if circumstances dictate that the speakers have to be placed more off line than recommended or if the speaker is built into custom furniture and placed behind fabric that is more absorbent than that on the

grilles supplied. Conversely, the – position reduces the level for when the room acoustic is too bright or if you want to reduce your awareness of the speakers' location.

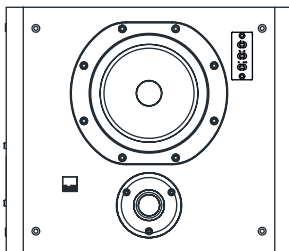
Running-in period

The performance of the speaker will change subtly during the initial listening period. If the speaker has been stored in a cold environment, the damping compounds and suspension materials of the drive units will take some time to recover their correct mechanical properties. The drive unit suspensions will also loosen up during the first hours of use. The time taken for the speaker to achieve its intended performance will vary depending on previous storage conditions and how it is used. As a guide, allow up to a week for the temperature effects to stabilise and 15 hours of average use for the mechanical parts to attain their intended design characteristics.

Aftercare

The cabinets normally only require dusting. If you wish to use an aerosol cleaner, remove the grilles first by gently pulling them away from the cabinet. Spray onto the cleaning cloth, not directly the cabinet. With the grilles detached from the cabinet, clean the fabric with a normal clothes brush or vacuum cleaner with appropriate accessory.

Avoid touching the drive units, especially the tweeter, as damage may result.



DS7

Technical Features	Nautilus™ tweeter Kevlar® brand fibre cone bass/midrange
Description	2-way closed-box selectable dipole/monopole surround system
Drive units	1x ø25mm (1 in) alloy dome high-frequency 2x ø100mm (4 in) midrange/highfrequency 1x ø165mm (6.5 in) woven Kevlar® cone bass/midrange
Frequency range	-6dB at 60Hz and 42kHz (monopole mode) -6dB at 60Hz and 15kHz (dipole mode)
Frequency response	80Hz – 22kHz ±3dB on reference axis (monopole mode) 80Hz – 10kHz ±3dB power averaged over front hemisphere (dipole mode)
Dispersion	Monopole mode: Within 2dB of reference response Horizontal: over 40° arc Vertical: over 10° arc Dipole mode: horizontal figure of eight Effective null zone ±30° (250Hz-15kHz)
Sensitivity	89dB spl (2.83V, 1m)
Harmonic distortion	2nd and 3rd harmonics (90dB, 1m) <1% 110Hz – 20kHz
Nominal impedance	8Ω (minimum 3.0Ω)
Crossover frequencies	4kHz (monopole mode) 250Hz (dipole mode)
Power handling	25W – 120W into 8Ω on unclipped programme
Max. recommended cable impedance	0.1Ω
Dimensions	Height: 302mm (11.9 in) Width: 383mm (15.1 in) Depth: 200mm (7.9 in)
Net Weight	8.5 kg (19 lb)

B&W Bowers & Wilkins

B&W Loudspeakers Ltd
Dale Road
Worthing West Sussex
BN11 2BH England

T +44 (0) 1903 221800
F +44 (0) 1903 221801
info@bwspeakers.com
www.bwspeakers.com

UK Sales Enquiries and Service
T +44 1903 221 500
E uksales@bwspeakers.com

B&W Loudspeakers of America
T +1 978 664 2870
E marketing@bwaudio.com

B&W Loudspeakers (Asia) Ltd
T +852 2 790 8903
E bwahome@bwspeakerasia.com.hk

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