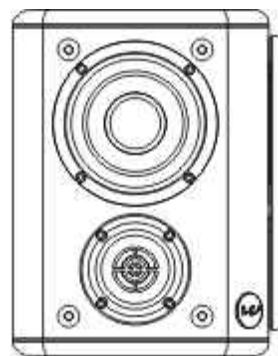


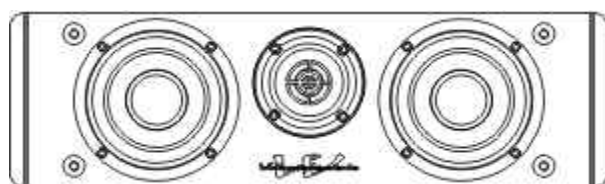
WH 2 Series

Instruction Manual

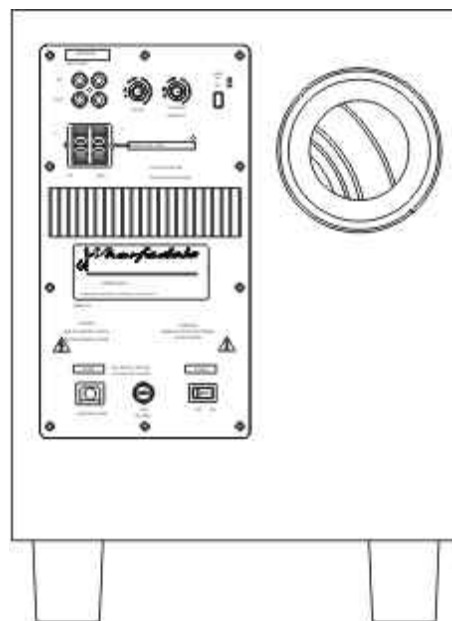
WH 2 Surround



WH 2 Centre



WH 2 Sub Bass



Wharfedale

BRITAIN'S MOST FAMOUS LOUDSPEAKERS

IMPORTANT SAFETY PRECAUTIONS - PLEASE READ CAREFULLY!

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN!



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Read Instructions: All the safety and operating instructions should be read before the product is operated.

Retain Instructions: The safety and operating instructions should be retained for future reference.

Heed Warnings: All warnings on the product and in the operating instructions should be adhered to.

Follow Instructions: All operating and use instructions should be followed.

Cleaning: Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Attachments: Do not use attachments not recommended by the product manufacturer as they may cause hazards.

Water and Moisture: Do not use this product near water - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement; or near a swimming pool; and the like.

Accessories: Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

Moving the Product: A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

Ventilation: Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

Power Supply Cords: Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

Power Sources: This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

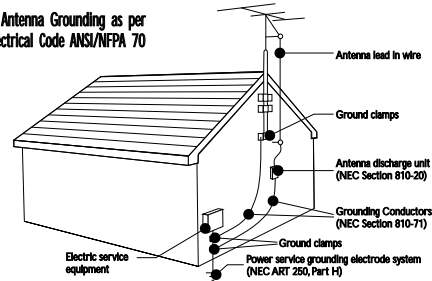
Polarisation: This product is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

Lightning: For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

Antenna Grounding: If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. (Refer to diagram)

Power Lines: An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

Example of Antenna Grounding as per National Electrical Code ANSI/NFPA 70



Overloading: Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

Object and Liquid Entry: Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock.

Heat: The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Servicing: Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Damage Requiring Service: Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power supply-cord or plug is damaged
- If liquid has been spilled, or objects have fallen into the product
- If the product has been exposed to rain or water.
- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- If the product has been dropped or damaged in any way.
- When the product exhibits a distinct change in performance - this indicates a need for service.

Replacement Parts: When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorised substitutions may result in fire, electric shock, or other hazards.

Safety Check: Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Introduction

INTRODUCTION

Congratulations on your purchase of dedicated audio-visual components from the Wharfedale WH 2 series. Before installing your loudspeakers please read these instructions in full.

UNPACKING

Carefully unpack each component taking care not to mark the surface. Inspect the product and report any damage immediately to your dealer. Retain the packing so that the product may be safely shipped in the future.

SOME IMPORTANT DO'S AND DON'TS

WARNING: To reduce the risk of fire or electrical shock do not expose this product to rain or moisture. The product must not be exposed to dripping and splashing and no object filled with liquids such as a vase of flowers should be placed on the product.

DO NOT allow foreign objects to fall into any of the units.

NO naked flame sources, such as candles must be placed on the product.

NEVER remove any components and refer all servicing to qualified personnel. This product contains no user serviceable parts.

DO NOT change any connections to your loudspeakers unless your system is switched off.

DO NOT use your amplifier at its maximum volume setting. The resulting high levels of distortion may damage your loudspeakers.

DO turn down the volume control on your amplifier or receiver before turning the equipment on or off.

WALL OR CEILING MOUNTING: The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

CHOOSING AND PREPARING CABLES

Quality audio cable will usually give better results than 'zip' or 'bell' wire. Choose a quality loudspeaker cable of suitable diameter - cable that is too thin may impair the system's bass response. Audio cable is polarised, with two cores of different colours, or often a coloured tracer. To prepare a cable, split the twin cores to a depth of about 25mm. Strip about 7mm of insulation from each end. Stranded cable should be lightly twisted to gather the ends.

When connecting cables, ensure that there are no loose strands which may touch adjacent terminals

ESSENTIAL INFORMATION FOR UK USERS

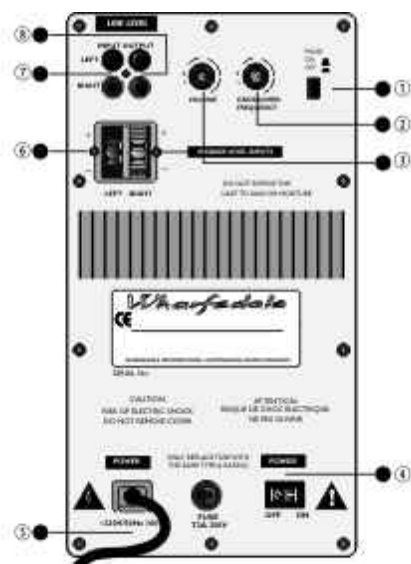
The mains lead on the WH 2 Sub Bass Loudspeaker may be supplied with a plug incorporating a fuse, the value of which is indicated on the pin face of the plug. Should the fuse need to be replaced, an ASTA or BSI approved BS1362 fuse must be used of the same rating. If the plug is cut off it must NOT be re-used. Dispose of any such plug safely. There is a danger of electric shock if a cut-off plug is inserted into a mains socket.

The wires in the mains lead are coloured in accordance with the following code: Green and Yellow - Earth: Blue - Neutral: Brown - Live.

As the colours of the wires in the mains lead may not correspond with the markings identifying the terminals in the replacement mains plug, proceed as follows:

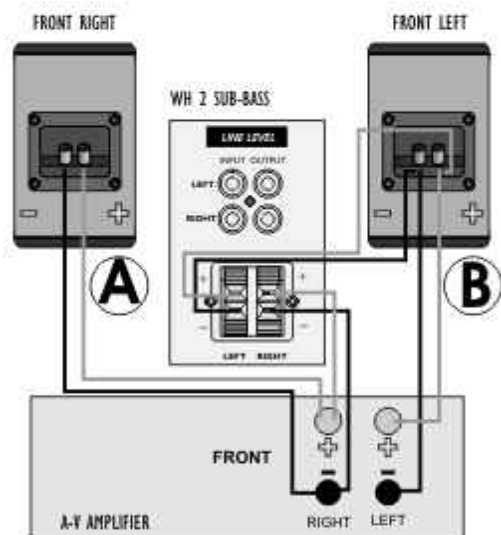
The wire coloured Blue must be connected to the terminal marked with the letter "N" or coloured Black. The wire coloured Brown must be connected to the terminal marked with the letter "L" or coloured Red. The wire coloured Green and Yellow must be connected to the terminal marked with the letter 'E', or coloured Green, or Green and Yellow, or marked with the Earth symbol (⏚)

WH 2 Series User Manual

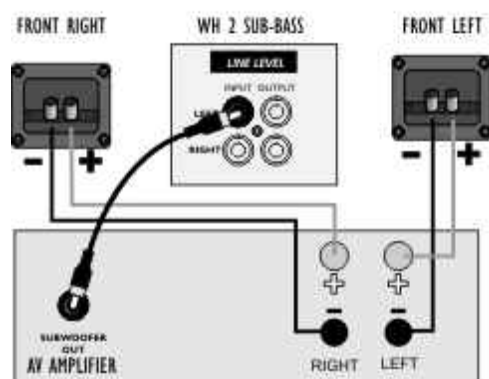


- ① Phase Control Switch
- ② Crossover Freq. Control
- ③ Sub-woofer Vol. Control
- ④ Mains Power Switch
- ⑤ Power Cable
- ⑥ Speaker Level Inputs
- ⑦ Line Level Inputs
- ⑧ Line Level Outputs

Speaker Level Connections



Connecting to a subwoofer Line Output



WH 2 Sub Bass Loudspeaker

The WH 2 powered sub-bass unit uses a custom designed long throw 250mm bass motor and a large 100 Watt power amplifier.

When installing the unit allow a space of at least 450mm between the subwoofer and the TV otherwise the colours on the screen may be disturbed. If this occurs, switch the TV set off and switch it on after 15 minutes. The internal circuits of the TV set should restore normal colour.

POWER CONNECTIONS

This unit is set to the mains voltage marked on the amplifier panel. Before connecting check that this voltage is correct for your mains supply.

230 volt units: 220 - 240 volts

115 volt units: 110 - 120 volts

If you move to an area with a different mains supply, please consult your Wharfedale dealer to arrange the conversion of this product.

Although the power cord can be left plugged in, it should be unplugged if the subwoofer is not going to be used for a long period.

CAUTION (115 volt products only)

TO PREVENT ELECTRIC SHOCK MATCH THE WIDE BLADE OF THE PLUG TO THE WIDE SLOT OF THE POWER OUTLET AND FULLY INSERT THE PLUG.

SPEAKER LEVEL CONNECTIONS

If your amplifier does not have a line level subwoofer output, you will need to feed the subwoofer from the Front loudspeakers. For this you will need two extra twin core cables.

Ensure your Front loudspeakers are correctly connected.

The Speaker Level connectors are spring terminals located on the control panel. Press the lever at the side of the terminal and insert the cable. Release the lever and the wire is held firm.

Make sure that the terminal grips the bare wire.

There are two methods of connecting the subwoofer.

A Using one of the additional twin core cables, connect the Left Speaker Terminals on the sub bass unit to the Front Left speaker terminals on the amplifier. Connect the Red (+) speaker terminal on the amplifier to the Red (+) terminal on the subwoofer. Connect the Black (-) speaker terminal on the amplifier to the Black (-) terminal on the subwoofer. Now connect the Right Speaker terminals on the subwoofer to the Front Right speaker terminals on the amplifier.

B Alternatively you may connect the subwoofer to the Front speakers instead of to the amplifier.

LINE LEVEL CONNECTIONS

If your A V amplifier has a dedicated subwoofer line output use this connection. Ensure you have a quality single screened RCA phono cable. Connect this from the subwoofer Output of the AV unit to the left Line Level Input socket on the subwoofer. Ensure that the plugs are fully inserted and firmly seated.

STEREO CONNECTIONS

If your amplifier has a preamplifier output or a stereo

subwoofer output, use the connection shown in Figure 2. You will need a stereo RCA phono cable. Only the specified outputs should be used - a Tape output is NOT suitable.

PRE OUT - MAIN IN CONNECTIONS

If you use a stereo pre and power amplifier, or an amplifier where the pre and main amplifier can be separated, connect the subwoofer as shown in Figure 3. You will need two stereo screened RCA phono cables. Remove the Pre-Main links on your amplifier. Connect one RCA cable between the Pre Out Sockets on the amplifier and the Line Level Inputs on the subwoofer. Connect a second cable from the Line Level Outputs of the subwoofer to the Main In sockets of the amplifier. Do not mix up the Right and Left Channels!

USING TWO SUBWOOFERS

The figures illustrate some suggestions for wiring two subwoofers. If you need further information consult your dealer for advice.

POSITIONING THE UNIT

Although the unit may be placed almost anywhere in the room, even behind the sofa or the TV set, we recommend that it be placed in front of the listener and as central to the listening position as possible. The subwoofer should not be operated within 450mm of a television set as the drive unit magnet may distort the picture.

We suggest you position the subwoofer about 20cm (8 inches) from the wall. Placing the unit close to the wall will enhance the bass; placing it across the corner of the room will increase the bass further, possibly at the expense of clarity. Experiment with a variety of locations and sources before making a final decision.

As the subwoofer is a powered unit there should be a mains outlet within easy reach.

The bass ports are mounted at the rear of the subwoofer and should not be obstructed by placing the unit against soft furnishings. Do not place the subwoofer close to surfaces or objects that may rattle. The floor under the subwoofer should be sound with no loose floorboards, etc.

SETTING UP

Set the subwoofer power switch to OFF. Turn the system Volume Control to minimum. Re-check all system connections. Now connect the subwoofer power lead to the mains and switch on the power. Set the subwoofer volume control to the mid position (12 o'clock) before proceeding.

VARIABLE CROSSOVER This control should initially be set to 150 Hz when the subwoofer is used with small bookshelf speakers and to 80 Hz when used with large floor standing speakers.

PHASE SWITCH The Phase switch should be initially set to 0°.

FINE TUNING

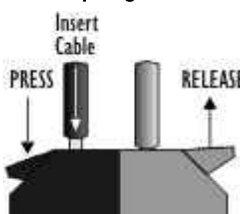
Switch on the subwoofer power switch and check that the power indicator on the front of the cabinet glows. Now switch on the system.

Play a programme with extended bass and set the system volume to a reasonable level. Adjust the subwoofer volume control to produce the desired level of bass. Do not overdo things!

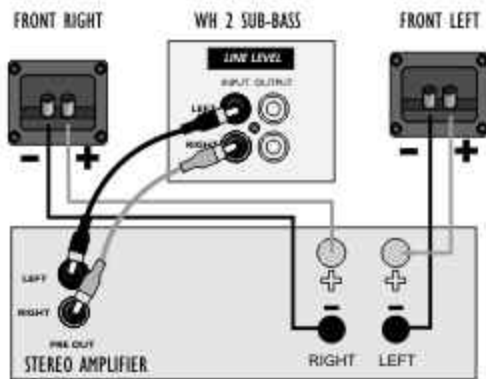
If the bass is indistinct or lacks depth, the Phase control may need adjustment. Listen carefully to a programme with extended bass and switch the Phase switch in and out. Choose the setting which produces the most bass at the listening position.

The Crossover control can now be fine tuned by adjusting the bass output for optimum performance.

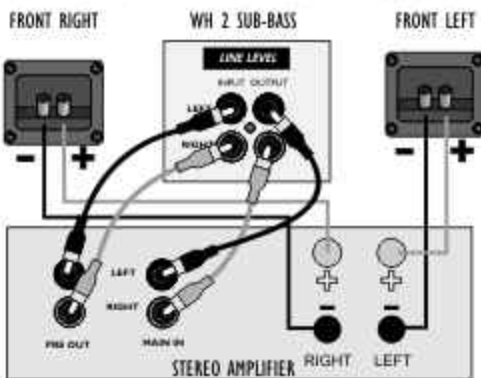
Connecting a cable to a spring terminal



Connecting to a Stereo Line Level Output

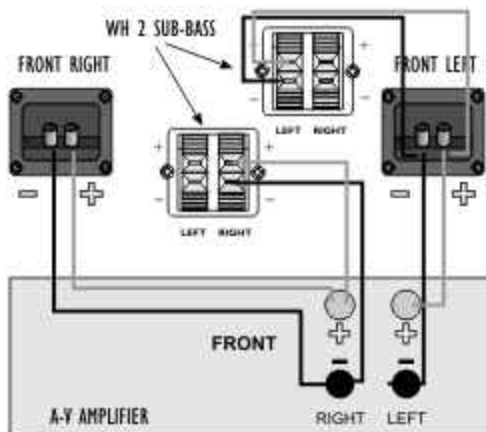


Pre Out - Main In Line Level Connections

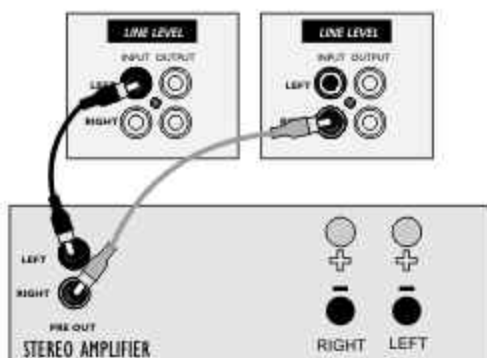


Connecting two Sub Bass Units

Speaker Level Connections



Stereo Line Level Connections



WH 2 Centre Loudspeaker

Centre Speaker Positioning



The Wharfedale WH 2 Centre speaker is a dedicated centre channel unit designed for mounting preferably above, or below, a TV screen. If the unit is mounted on top of the television, move it forward so that the front grilles are level with or slightly in front of the screen. This will reduce sound reflections from the top of the cabinet. The loudspeaker should be located on a stable flat surface to avoid any danger of movement when it is vibrated by high sound levels.

The speaker is supplied with four self-adhesive feet. Apply one to each bottom corner of the unit before mounting.

CONNECTION

You will need a single length of twin core cable. Connect the red (+) terminal of the centre unit to the red (+) terminal of the amplifier's centre channel output. Connect the Black (-) terminal of the centre unit to the corresponding Black (-) terminal of the amplifier. The connection panel uses screw terminals - the drawing opposite illustrates the connection method.

WH 2 Rear Loudspeakers

The Wharfedale WH 2 rear speakers are bipolar units designed for wall mounting and intended for use solely as rear effects speakers.

In a Home Theatre system, the directional cues come from the front and centre channels. The rear channels provide ambience and rear perspective and for this purpose a bipolar design with its mix of direct and reflected sound is ideal. To aid this effect we recommend placing the WH 2 rear speakers in a high position behind the listener.

PREPARATION

Each speaker is supplied with four self-adhesive feet. Apply one to each rear corner before mounting.

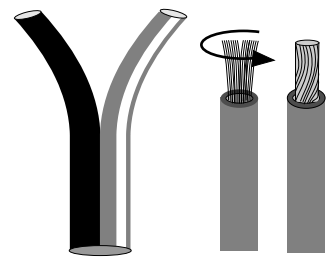
CONNECTIONS

You will need one length of twin core cable per speaker. Connect the red (+) terminal of the left rear unit to the red (+) terminal of the amplifier's left rear channel output. Connect the Black (-) terminal of this unit to the corresponding Black (-) terminal of the amplifier. Repeat for the Right speaker. The connection panel uses screw terminals - the drawing above illustrates the connection.

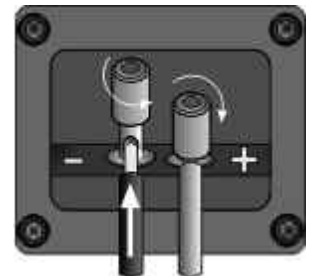
MOUNTING

Connect the cable to the speaker. Site the speakers about 600 mm above the listening position and 2.5-3.5 metres apart, central to the listener and behind the listening position. Ensure that the wall is sound and can support the product. Fix a suitable screw firmly to the wall leaving a stub of 5mm protruding from the wall. Align the hole in the mounting bracket over the screw head and carefully lower the unit onto the screw. The speaker should now be securely attached with the feet against the wall. Now connect the speakers to the amplifier.

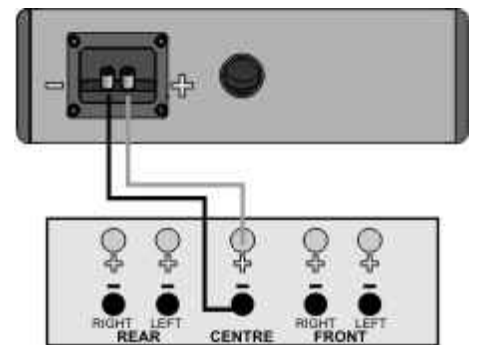
Preparing Speaker Cables



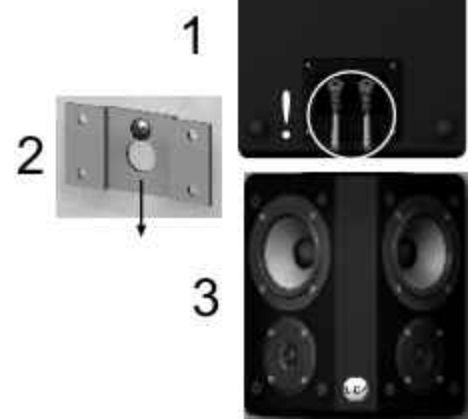
Connecting Speaker Cables



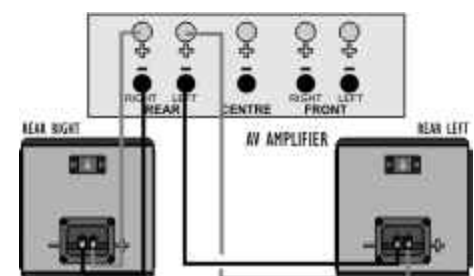
Centre Channel Connections



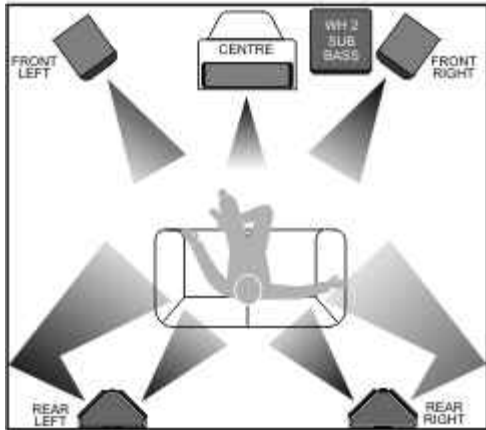
Wall-mounting the WH 2 Rear Loudspeakers



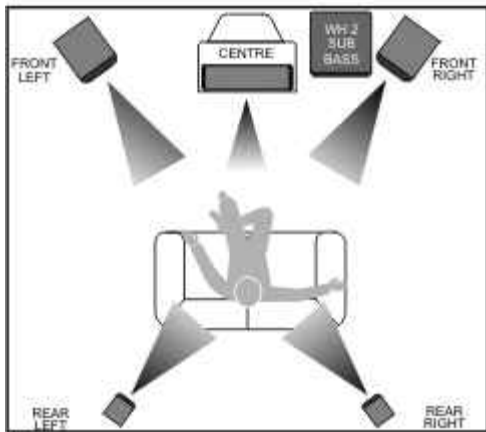
Rear Channel Connections



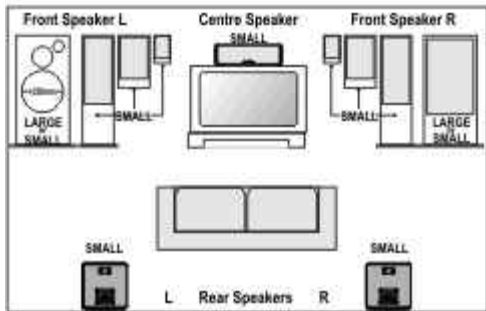
System using WH 2 Surround speakers



System using conventional rear speakers



Selecting Speaker Sizes



The Home Theatre Environment

A Home Theatre system is illustrated opposite.

FRONT AND CENTRE CHANNELS

The front channel loudspeakers should be placed on either side of the television screen, 2 to 3 metres apart, and rotated slightly towards the listeners.

As the Centre speaker carries the dialogue effects, it should be placed central to the listening position and close to the TV screen.

Operating height is important. Ideally, the front and centre channel speakers should be operated at the same height and with the tweeters at ear level to a seated listener.

REAR CHANNELS

If the rear channels are WH 2 Surround units, mount them as already described. If you use other units, we recommend placing the speakers in a high position, angled towards the listener.

SUBWOOFER

As the ear is unable to detect the direction from which deep bass originates, this allows freedom in positioning the subwoofer. Varying the distance from the wall will alter the amount of bass. Some prefer to place the subwoofer against a corner of the room. This arrangement gives more bass at the possible expense of clarity.

LOUDSPEAKER SIZES

Many digital AV Processors require you to specify the size of speakers in the various channels. These are usually 'Large' or 'Small'.

Unless your loudspeakers are large floor standing units, you should choose 'Small' for the Front channels, as the subwoofer is going to be better at providing clean, deep and louder bass. Choose 'Small' for the surround channels and also for the Centre channel.

Set the 'Subwoofer' option on the processor to 'On' or 'Yes'. This will route all the deep bass to the subwoofer.

SETTING LEVELS

Once the loudspeaker settings have been finalised, put the AV amplifier into its "Test" mode (see instructions supplied with your processor.) Adjust the levels until all channels are reproduced at equal loudness.

NOTE: On some programme material the surround channel may seem lower than the front. Do not readjust this level.

You may, however, need to adjust the subwoofer output level. Avoid setting too high a level or you will swamp the sound with bass which is tiring to listen to and may limit the subwoofer's ability to respond to large bass transients. Set a sensible level going into the subwoofer from the AV processor. The volume control on the subwoofer should be between 12 o'clock and 3 o'clock when the system as a whole is playing moderately loud.

LFE

The Low Frequency Effects channel was designed as an additional bass channel with its own dedicated subwoofer. In practice however, if all the speakers are set to Small, the LFE channel will be combined with the bass from other channels and all this feeds into the subwoofer. When you set the LFE level from your AV processor, use care with this setting as the LFE channel may contain powerful low frequencies which, although normal in a cinema, may overload a domestic subwoofer.

If, during a programme, you hear popping or thumping noises coming from the subwoofer, immediately turn the AV Processor's volume level down and then back off the LFE level. If this does not cure the problem, back off the volume level at the subwoofer.

Please read the relevant sections of your AV amplifier manual and familiarise yourself with the various issues. If you are unsure, consult your dealer for help.

MAINS OPERATION

When the system is not in use we suggest you switch off the subwoofer to protect it from switching noises caused by domestic appliances, etc. The best practice is to switch the complete system on and off from a central point. If you play the system with the subwoofer switched off no damage will result but you will get no bass!

Always turn the main volume control to minimum when you switch the equipment on or off.

CONNECTING WIRES

When wall mounting a loudspeaker the connecting cables may be unacceptably obvious. It may be less obtrusive to route cables from the loudspeaker to the ceiling and then within or immediately underneath the ceiling or coving. The cable may then return to floor level at a convenient room corner.

CARE AND MAINTENANCE

If you play the speakers with the grilles off exercise great care. NEVER touch the drive units which are easily damaged.

The loudspeaker cabinets can be cleaned with a damp cloth or with a spray furniture polish and a soft cloth. Apply the spray sparingly to the cloth and then polish the cabinet. Never apply spray directly to the cabinet.

GUARANTEE & SERVICE

In the unlikely event that your unit develops a fault you should return it to your Wharfedale dealer using the original packing to ensure safe shipping.

The terms of your guarantee may vary from country to country but in all locations the guarantee excludes:

All damage caused through accident, misuse, wear and tear, neglect, incorrect installation, adjustment or repair by unauthorised personnel.

Liability for damage or loss occurring in transit to or from the purchaser.

Wharfedale will not be liable for any consequential damage, loss or injury, arising from or in conjunction with this equipment.

Troubleshooting

If your system is not working properly please work through this checklist before returning a unit to your dealer.

No Sound

System not switched on

Speaker cables shorting terminals out

Bass reproduction poor, muddy or indistinct.

Subwoofer not switched on

Subwoofer phase incorrect

Subwoofer crossover set too low

Bass distortion at low volume

Subwoofer level set too high

LFE level set too high

Excessive or distorted bass at high volume.

System level set too high

Bass control set too high

Subwoofer too close to room corners

Distortion or rattling at high volume

System level set too high

Objects placed on or near subwoofer

Popping sounds or thumps from the subwoofer

System level set too high

Subwoofer level set too high

LFE level set too high

Poor localisation of effects or dialogue

One or more loudspeakers is out of phase: (Read the manual for the correct connection procedure)

TV picture is distorted

Subwoofer is too close to the TV. Switch off the system and TV. Move subwoofer away. Leave 20 mins. Switch on again.

Specifications and Service

	WH 2 Surround	WH 2 Centre
Nominal Impedance	6 Ohms	6 Ohms
Power Handling	120 Watts	120 Watts
Sensitivity (1W@1m)	88 dB	89 dB
Frequency Response	80 - 20 kHz	80 - 20 kHz
Bass Unit	2 x 100 mm	2 x 100 mm
Treble Unit	2 x 28 mm Dome	28 mm Dome
Dimensions Overall		
H x W x D mm	244x 225x 126	125 x 420 x 150
H x W x D inches	9.6 x 8.9 x 5.0	4.9 x 16.5 x 5.9

	WH 2 Sub Bass
Line Input Sensitivity	250 mV for 75 W
Amplifier Power	100 Watts
Maximum Output (at 1m)	87 dB
LF Response	28 Hz
Crossover Range	70 - 170 Hz
Drive Unit	250 mm
Dimensions Overall	
H x W x D mm	430 x 320 x 400
H x W x D inches	16.9 x 12.6 x 15.7

Wharfedale speakers are compatible with 4 and 8 Ohm amplifiers

Authorised Wharfedale Service Centres

USA

IAG America, Inc.
180 Kerry Place
Norwood
MA 02062
Tel: +1 781 440 0888

CANADA

Korbon Trading Ltd
6800 Kitimat Road
Units 19-20
Mississauga
Ontario
Tel: +1 905 567 1920

U.K.

Wharfedale International Ltd.
IAG House, Sovereign Court,
Ermine Business Park, Huntingdon,
Cambs PE29 6XU, England.
Tel: +44 (0)1480 447700
Fax: +44 (0)1480 43176

For information on authorised service centres worldwide contact
Wharfedale International in the U.K.

A worldwide distributor list is available on the Wharfedale website:
www.wharfedale.co.uk

1932 Wharfedale

Loudspeaker Manufacturers since 1932

In 1932, when Gilbert Briggs founded the Wharfedale Wireless Works, his company was at the leading edge of an exciting new technology which was dedicated to bringing the pleasure of music and entertainment to a wide range of people. As the technology advanced Wharfedale gave many music lovers their first taste of High Fidelity, mounting a series of live sound demonstrations which excited the audio world and heralded the era of the modern hi-fi loudspeaker.

Today Wharfedale still takes the same uncompromising approach to the design and manufacture of every loudspeaker system, using high quality components and state-of-the-art testing to ensure consistently high performance. And that means that you can continue to count on the quality of all Wharfedale products.

The name WHARFEDALE® is a registered trademark of Wharfedale International Limited.

Wharfedale has a policy of continuous product development and reserves the right to change specification without notice.

Wharfedale is a member of the International Audio Group.