

Wharfedale

BRITAIN'S MOST FAMOUS LOUDSPEAKERS



ONYX-300 ONYX-SURR

IMPORTANT SAFETY INFORMATION



CAUTION! RISK OF ELECTRIC SHOCK DO NOT OPEN



TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER-REMOVEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED PERSONNEL

ADVERTISSEMENT: RISQUE DE CHOC ELECTRIQUE-NE PAS OLIVRIR



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

Read these instructions.

Keep these instructions.

Heed all warnings.

Follow all instructions.

Do not use this apparatus near water.

Clean only with dry cloth.

Do not block any ventilation openings.

Install in accordance with the manufacturer's instructions.

Do not install near any heat sources such as radiators, heat registers, stoyes, or other apparatus (including amplifiers) that produce heat.

Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Use only attachments/accessories specified by the manufacturer.



Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

Unplug this apparatus during lightning storms or when unused for long periods of time.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

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.

No naked flame sources such as candles should be placed on the product.

Caution: Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this device.

Warning: The mains power switch for the subwoofer is located on the rear panel. To permit free access to this switch, the apparatus must be located in an open area without any obstructions.

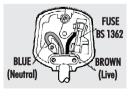
ESSENTIAL INFORMATION FOR UK USERS

The power cord on your subwoofer 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: 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.



Class II construction double insulated.
This product must not be connected to earth.

PRELIMINARIES

UNPACKING YOUR LOUDSPEAKERS

After taking out the top packing piece, lift the loudspeakers and accessories from the carton. Remove all the protective bags. Do NOT lift the loudspeakers out using the bags.

The floorstanding speakers and the subwoofer are heavy. Get someone to help you with unpacking and moving them. Accessories provided with each loudspeaker are as follows:

ONYX-200; 300

- One set of spikes with mounting hardware.
- One set of rubber feet

ONYX-CEN 1: CEN 2

One set of rubber feet

ONYX-100: ONYX-SURR

No accessories needed

ONYX-10 SUB

- One set of spikes with mounting hardware.
- One set of rubber feet
- IEC power cord suitable for your location

Check all items after unpacking. If any item is missing or damaged, immediately contact your Wharfedale dealer. Retain the packaging. If you dispose of the packing, follow all recycling regulations in your area.



Before installing this product read all these instructions!

Before making any connections, switch all the units in your system off at the mains.

Set the volume control at minimum when you switch on your system or change sources, and turn the level up gradually.

DO NOT use your amplifier at full volume.

Ensure that all loudspeakers in the system are correctly wired.

DO NOT subject your loudspeakers to excessive cold, heat, humidity or sunlight.

DO NOT place heavy objects on top of loudspeakers

DO NOT connect speaker terminals to the mains supply.

DO NOT dismantle the loudspeaker. There are no user serviceable parts inside it and you will void the warranty.

PREPARATIONS FOR INSTALLATION

Before connecting your system consider where you will place the speakers in the room. This is particularly important if you are wall mounting the centre or surround loudspeakers.

ONYX-100: This loudspeaker is designed to be mounted on a rigid floor stand. The ONYX-STAND is designed to optimise the performance of the ONYX-100. The ONYX-100 may also be placed on a sturdy shelf or mounted on a suitable wall bracket.

ONYX-200 & 300: These are floorstanding models. For improved performance the loudspeakers are spike coupled to the floor. Rubber feet are provided as an alternative. Please note these loudspeakers use side firing bass units. Follow the placement instructions on Page 4 and 5 to ensure you get the best from these loudspeakers.

ONYX-CEN 1, CEN 2; These loudspeakers come with rubber feet for mounting on a shelf above or below the monitor screen. Follow the placement instructions on Page 5 to ensure you get the best from these loudspeakers.

ONYX-SURR: This loudspeaker is intended to be operated attached to the wall via keyhole mounts in the rear of the loudspeaker (see Page 6). Fixings for attaching the loudspeakers to the wall are not supplied.

ONYX-10 SUBWOOFER: Ensure there is a mains point within easy reach of the unit.

You will need to purchase a suitable RCA interconnect cable to connect the subwoofer to your pre-amplifier or A/V amplifier (See Page 12). This cable must be a high quality fully screened cable. Poorly screened cable is liable to pick up stray hum and interference fields and should be avoided.

Do not run signal input cables parallel to mains cables as they may pick up mains hum.

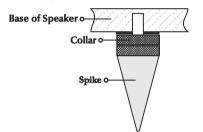
CAUTION: When running cables to loudspeakers, do not trail them across open floors where they can be a source of danger.

FIXING SPIKES TO THE ONYX-200, 300 and 10 SUB.

CAUTION: SPIKES ARE SHARP

Make sure that there are no wires or hidden obstacles that could be damaged by the spikes in the immediate operational area of the speakers.

NEVER drag a loudspeaker on its spikes. Always lift it. If the item is heavy get assistance.



Place a soft cloth on the floor to protect the speaker. Invert the loudspeaker and place it on the cloth.

Thread the knurled collar two-thirds of the way up the spike. Insert each spike assembly into a spike mount on the loudspeaker. Tighten the collar finger tight so that the spike is secure but not locked in place.

LEVELLING THE LOUDSPEAKER

After all the spikes are attached, invert the loudspeaker and place it carefully on the floor. Place a spirit level on the speaker

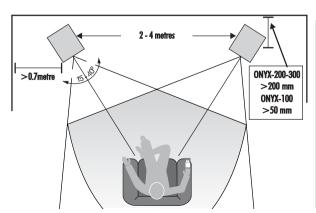
Loosen the nut on each spike one turn. If the floor is not perfectly level you will find that one spike is off the ground. Starting with this spike, unscrew it so that it touches the floor. Move the other spikes in and out so the speaker does not wobble and is level front and back and sideways. Now tighten the nuts to lock the spikes firmly in position

POSITIONING STEREO LOUDSPEAKERS

The ONYX-200 and 300 are floor standing. We suggest that they are positioned at least 200 mm from the rear walls and 700 mm from the side walls, facing slightly inwards. The ONYX-100 should be stand or wall mounted or placed on a rigid shelf. The ONYX-STAND is custom designed to optimise the performance of the ONYX-100.

The bass extension will improve if smaller speakers are operated closer to the rear walls. If the loudspeakers are placed too dose to the walls the bass will increase but may be boomy and indistinct. If the loudspeakers are placed away from the walls, the inward angle may be increased by up to 40%, but this may restrict the width of the optimum listening position.

A rule of thumb is that the listener should be as far from the loudspeakers as they are from each other. The speakers should ideally be positioned so that the treble units are roughly at ear level to a seated listener. As personal taste plays a large role, experiment with different configurations and play a wide range of programmes before finalising the position of your speakers.

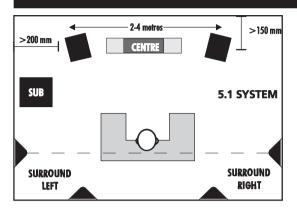


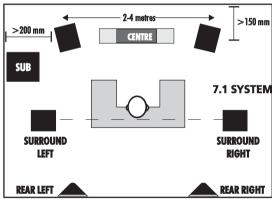
IMPORTANT

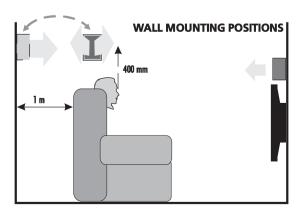
The ONYX-200 and 300 utilise sidefiring bass units. These speakers are built in mirror-image pairs.

Ideally the speakers should be positioned with the bass units facing inward. There should be no obstructions close to the bass units. If your room is so designed that there is a large item of furniture between the loudspeakers, positioning them with the bass units firing outward may improve the sound.

POSITIONING HOME CINEMA LOUDSPEAKERS







5.1 POSITIONING

Place the front speakers as shown. Front loudspeakers should be placed away from walls for best results. Angling the speakers inward slightly will improve stereo images but too extreme an angle will impair movie sound.

The ONYX-100, 200 and 300 speakers must be placed at least 450mm from a TV screen.

The ONYX-CEN 1 and CEN 2 centre speakers can be placed above or below the TV screen.

Place the ONYX-10 SUB subwoofer as close to the wall as you can, leaving just enough space to operate the controls and mains switch. Room positioning is not critical but we recommend that it is placed in front of the listening seat. Never operate the subwoofer within 450mm of a conventional TV screen.

The ONYX-SURR is designed for wall mounting. The design of this loudspeaker enables its use either on the rear or the side walls of the room presenting both direct and ambient reflected sounds.

If the distance between the side walls is too great, you shuld use a pair of stand mounted ONYX-100 loudspeakers as surrounds, placed as shown in the drawing opposite.

7.1 POSITIONING

If you are using a 7.1 system, the back loudspeakers must be at least 1 metre behind the listening seat.

WALL MOUNTING POSITIONS

If you are wall mounting the centre and effects loudspeakers we recommend that they be mounted as shown.

Wall mounting the centre channel loudspeaker below the screen is not recommended for fixed installations.

WALL MOUNTING THE SURROUND LOUDSPEAKERS

The ONYX-SURR loudspeakers are provided with integral keyhole mounts for wall mounting.

Wall mounting should be carried out by licensed sound contractors or technicians with appropriate qualifications and experience. All installation and wiring should comply with the relevant standards laid down by the competent authority in the country and place of installation.

Ensure the wall is sound, free of obstructions, hidden pipes etc. and capable of supporting the loudspeaker plus a small amount of pulling force.

You will also need suitable wall fixings and some No 8 Round Head screws of sufficient depth to suit your wall. These are the responsibility of the installer who should supply suitable fixings for this purpose.

Draw a horizontal line on the wall and mark off two mounting

holes at 176mm centres.

Drill and plug two holes.

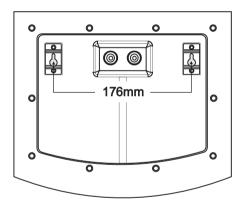
Screw 2 No.8 screws into the holes leaving 7mm protruding.

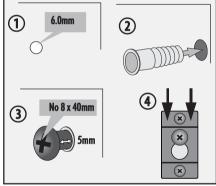
Connect the connecting wire to the loudspeaker but do not connect the cable to the amplifier. You will need to use low profile cable -your dealer will recommend a suitable product.

Lift the loudspeaker up to the mounting position.

Align the keyhole slots over the screw heads and gently pull down until the speaker is securely fastened. You may now connect the loudspeaker to the amplifier.

This operation may need two people. If you are in any doubt about your ability to carry out this procedure, consult a suitably avalified builder or domestic electrician.





CONNECTING YOUR LOUDSPEAKERS

CHOOSING LOUDSPEAKER CABLE

Specialist audio cable offers better performance than general purpose 'bell' or 'zip' wire. Audio cable is polarised, with two cores of different colours, or a coloured tracer or identification rib. We suggest that you connect the coloured/striped wire to the RED, Postive terminals of your AV amplifier. This will ensure that all the loudspeakers are connected the correct way round and avoid set-up problems.

Before you purchase your cable, we suggest that you give careful thought to the positioning of your loudspeakers.

Cable lengths to loudspeaker pairs should be the same for left and right channels. Allow some slack in your speaker cables so you can alter their position to best advantage, but do not have your cables over-long.

PREPARING LOUDSPEAKER CABLE

Split the twin cores to a depth of about 40mm. Carefully strip the insulation from each end, leaving about 10mm of bare wire. If the cable is stranded, lightly twist to gather any loose strands.



CONNECTING SCREW TERMINALS

All the loudspeakers use screw terminals. Unscrew the terminal. Insert the bare end of the cable into the hole in the base of the terminal. Tighten securely.

When connecting terminals do not leave any strands of bare wire that can short across to adjacent terminals.

As an alternative to bare wire you can use spade connectors.



CROSSOVER PANELS

All ONYX loudspeakers with the exception of the ONYX - Surround use Bi-wireable panels. A bi-wiring panel has four terminal binding posts. The upper terminals connect to the treble units, the lower pair to the bass unit.

As supplied the treble and bass terminal pairs are connected via removeable straps. This arrangement facilitates standard single wiring, or advanced bi-wiring which offers significant performance advantages. Follow the drawings carefully to see the correct orientation of the loudspeaker terminals.

Why Bi-Wire? Bi-wiring involves the use of two separate cables between the amplifier and the loudspeakers. One pair connects to the treble unit the other to the bass driver. Using separate cables for treble and bass units reduces intermodulation effects and improves headroom and clarity. To bi-wire, you will need to install two lengths of twin core cable between the amplifier and each loudspeaker.

The ONYX-SURR uses a standard crossover with the connectors built into the rear wall of the loudspeaker. As the bass extension of a surround loudspeaker is limited, bi-wiring has no significant advantage. Additionally, bi-wiring wall mounted speakers is inconvenient.

ONYX BI WIRING CROSSOVER

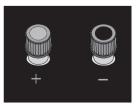




As supplied

In bi-wiring mode

ONYX -SURR CROSSOVER



(Detail)

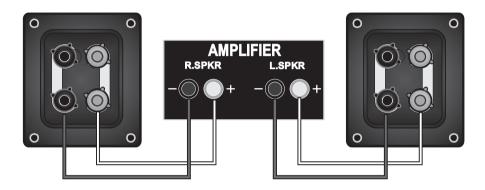
CONNECTING FRONT LOUDSPEAKERS

STANDARD LOUDSPEAKER WIRING

Choose a suitable length of twin core speaker cable for each channel, and prepare the ends. Unscrew each terminal a few turns.

Connect the red, positive (+) terminal of the Left loudspeaker to the corresponding red, positive (+) amplifier terminal. Connect the black, negative (-) terminals similarly. Tighten the terminals securely. Repeat this procedure for the Right Channel.

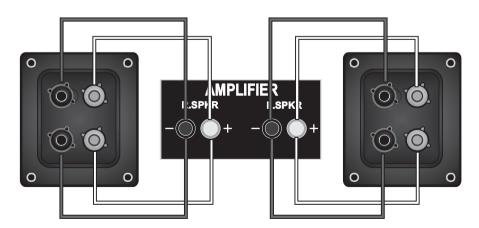
If you are standard wiring a bi-wiring panel make sure that the binding straps are securely in place.



BI- WIRING

To Bi-wire, you will need to install two lengths of twin core cable between the amplifier and each loudspeaker.

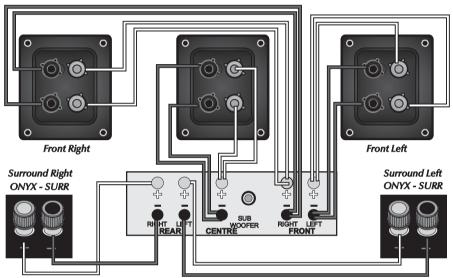
Note: Some amplifiers have two pairs of output terminals to facilitate bi-wiring but this is not essential. The advantages of bi-wiring are fully retained if your amplifier has only one pair of loudspeaker terminals per channel (as in the illustrations).



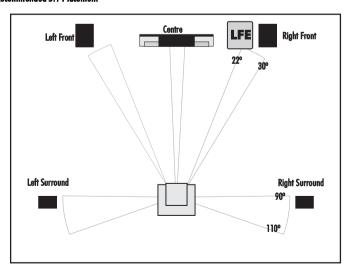
MULTICHANNEL CONNECTIONS - 1

5 CHANNEL SYSTEM CONNECTIONS

Centre: ONYX -CEN 1; CEN 2

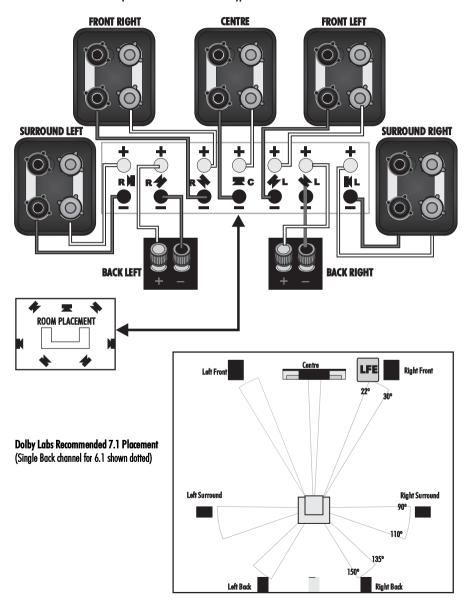


Dolby Labs Recommended 5.1 Placement



7 CHANNEL CONNECTIONS & PLACEMENTS

7 CHANNEL SYSTEM (Shown Standard Wired For Clarity)



INSTALLING THE ONYX-10 SUBWOOFER

PRELIMINARIES

Open the carton and remove all the top packing pieces. Lift the subwoofer out taking care not to damage the cabinet. DO NOT lift the subwoofer out of the carton using the protective bag. The unit is heavy; if you cannot manage it easily, get assistance.

Retain the packing materials. If you decide not to keep the packing, please dispose of it having regard to any recycling regulations in your area. Please retain the user manual. If you transfer this equipment to a third party, please ensure all the instructions are passed on with the product.

PREPARATION

Attach the spikes and level the unit as described on P4.

POWER CONNECTIONS

This subwoofer is factory set to operate from the mains voltage marked on the amplifier panel. Before connecting check this voltage is correct for your mains supply.

- 230 volt products 220 volts to 240 volts
- 115 volt products 110 volts to 120 volts

If you move to an area with a different mains supply, consult your Wharfedale dealer for advice.

REAR PANEL CONNECTIONS AND CONTROLS



- 1 Auto Power Switch
- Phase Switch
- 3 Crossover Frequency Control
- 4 Volume Control
- 5 Line Level Inputs
- 6 Line Level Outputs
- Speaker Level Inputs
- Power ON/OFF Switch
- IEC Mains Input
- **10** Mains Fuse

PLACEMENT — Please refer to the notes on Page 3.

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. DO NOT operate the unit within 450mm of a CRT television set as the picture may be distorted.

The subwoofer driver and bass port are mounted BEHIND the subwoofer. As these units are rear-firing do not place the subwoofer in front of surfaces or objects that may rattle.

Place the subwoofer about 100mm from to the wall. A position close to the wall will enhance the bass; If the bass is excessive you can move the subwoofer out from the wall to a distance of about 200mm from the wall. Placing the subwoofer across a room corner will increase the bass further, possibly at the expense of clarity. Experiment with a variety of locations and sources before making a final decision.

Your system will perform best if there is a clear line of sight between the subwoofer and the listening position.

CONNECTING THE ONYX-10 SUBWOOFER - 1

A/V PROCESSOR CONNECTIONS

Your subwoofer has been designed for optimum performance with a Digital processor. If your AV processor has a line level or LFE subwoofer output you should use this connection. You will need to purchase a single screened RCA phono lead from your dealer. Connect this lead to the Left line input of the Subwoofer as shown below

Alternatively, you may use a split mono lead from the processor to both inputs of the subwoofer. In this case the input level at the subwoofer will be slightly higher.

STEREO LINE CONNECTIONS

If your amplifier has a spare preamplifier output or a stereo sub-woofer output, connect the sub-woofer as shown. You will need a stereo screened RCA phono cable.

PRE OUT - MAIN IN CONNECTIONS

If you use a stereo pre and power amplifier, or a stereo amplifier where the pre and main amplifier can be separated, connect the sub-woofer as shown. There are two alternative methods.

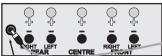
A: You will need two screened RCA 'Y' adaptors and two single RCA phono cables.

Remove the Pre-Main links on your amplifier. Connect the socket (common) of an RCA 'Y' adaptor to one of the mono cables. Connect one leg of the 'Y' adaptor to the Left Channel Pre Out socket on the amplifier and the other leg to the Left Channel Main In socket. Connect the remaining plug to the Left Channel Line Level Input on the subwoofer. Repeat for the Right Channel.

B: You will need two stereo screened RCA cables.

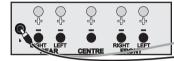
Connect a Stereo cable from the Line Level Inputs of the sub-woofer to the Pre Out sockets of the amplifier. Now connect a second Stereo cable from the Line Level Outputs of the sub-woofer to the Main In sockets of the amplifier. The sub-woofer is now inserted in the system loop.

AV AMPLIFIER





Subwoofer Out (Line Level)





AV AMPLIFIER

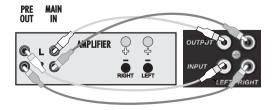




Subwoofer or Pre Out (Line Level)







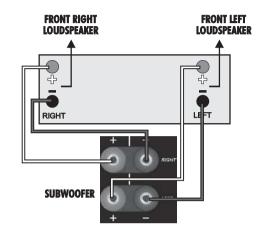
CONNECTING THE ONYX-10 SUBWOOFER - 2

SPEAKER LEVEL CONNECTIONS

The high level Speaker connections should be used only if your amplifier does not have a line level subwoofer output. In this connection the subwoofer is fed together with the Front loudspeakers. For this you will need two extra twin core cables.

Measure out two loudspeaker cables of the appropriate length. Prepare the cables as described on Page 7.

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 of the amplifier.



ONYX-10 SUBWOOFER - OPERATION

SETTING UP

- Set the subwoofer power switch to OFF.
- Turn the system Volume Control to minimum.
- Re-check all system connections.
- Connect the supplied subwoofer power lead to the IEC power socket on the subwoofer and connect the mains plug into the wall socket.
- Set the subwoofer volume control midway (12o'dock)
- Switch on the mains power.

FINE TUNING

Switch on the subwoofer power switch. 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.

PHASE SWITCH: If the bass is indistinct or lacks depth, the Phase switch may need adjustment. Set the switch to 0° and listen carefully to some music with extended bass. If there is insufficient bass output from the sub-woofer set the Phase switch to 180°. Select the position which produces the most natural, extended bass.

LOW PASS FILTER. This adjusts the blend between the subwoofer and the main speakers. and enables the system to be set up for optimum bass performance. The higher settings are for use with bookshelf loudspeakers, the lower settings for large floorstanding models. If you choose too low a setting with small speakers, there will be a 'hole' in the bass response; too high a setting with large speakers will result in the upper bass becoming bloated.

AUTO SWITCH. In normal mode the subwoofer is permanently on. This may result in low level hum or noise if the rest of the system is switched off and the subwoofer is left switched on. Setting the AUTO switch to ON automatically turns the subwoofer on when a signal is detected at any of the inputs and turns it off (Standby Mode) after a period of inactivity. We recommend the AUTO switch be set to ON for normal operation.

In AUTO mode the indicator on the front of the subwoofer will glow RED when the unit is in Standby and GREEN when operational. If your subwoofer is disconnected from the mains or the Power switch is "Off", the indicator will be extinguished.

When the system is not in use for extended periods, we suggest you switch off the subwoofer to protect it from switching noises caused by domestic appliances, etc.

HOME THEATRE TOPICS

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 alters the amount of bass. Some prefer to place the subwoofer against a room corner. 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'. We recommend that you set the centre and surround speakers to 'Small'. This will direct all the bass in the system to the subwoofer and provide clean, deep and louder bass.

Set the ONYX-100 and 200 to "Small" The ONYX-300 should be set to "Large". We recommend the ONYX-300 be set to "Small" though if the bass is excessive, you may wish to set it to "Large".

Set the 'Subwoofer' option on the processor to 'On' or 'Yes'.

SETTING LEVELS

Once the loudspeaker settings have been finalised, put the AV amplifier into its "Test" mode (see your processor instructions), Adjust the levels until all channels are equally loud.

You may need to adjust the subwoofer output level. Avoid

setting too high a level or you will swamp the sound with bass which be 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. The subwoofer volume control should be between 12 o'clock and 3 o'clock.

LEE

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.

TROUBLESHOOTING Before investigating a problem, always switch off the system at the mains.

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

Symptom	Possible Cause	
No Sound	System not switched on; Speaker cables shorting terminals out; Wrong source selected	
Sound lacks bass content Bass reproduction indistinct	Front loudspeakers out of phase. Check all system connections and rectify. Subwoofer not switched on; Subwoofer phase incorrect; Subwoofer crossover control too low	
Excessive bass distortion at low volumes	Subwoofer level set too high; LFE level set too high; Subwoofer incorrectly wired	
Excessive or distorted bass at high levels	System level set too high; Bass control set too high; Speakers too close to room corners	
Distorted / rattling sounds at high levels	System level too high; Objects on speakers/subwoofer; Objects too close to subwoofer	
Popping or thumping from the subwoofer	System level set high; Subwoofer level set too high; LFE level set too high	
Indistinct sound; Poor localisation of effects. Poor localisation of dialogue	One or more loudspeakers is out of phase. Check all system connections and rectify. (Read the manual for correct connection procedure)	
Television picture colour is distorted	Subwoofer too close to TV. (Switch off system and TV. Move units away. Leave 15 mins. Switch on.	

SPECIFICATIONS

Front Loudspeakers	ONYX-100	ONYX-200	ONYX-300
Format	Stand Mount: Reflex	Tower: Sealed/Ported	Tower: Sealed/Ported
Bass unit	_	170mm	200mm
Bass mid unit	125mm	125mm	125mm x 2
Tweeter	25mm	25mm	25mm
Rec. Amplifier Power	30 - 100w	30 - 120w	30 - 150w
Nominal Impedance	6 Ohms	6 Ohms	6 Ohms
A/V shielding	NO	NO	NO
Sensitivity (1W @ 1M)	86 dB	88 dB	90 dB
Freq. Response (-6dB)	50Hz - 24kHz	45Hz - 24kHz	38Hz - 24kHz
Cabinet Volume	8.7 litres	13 / 28 litres	20.5 / 36 litres
Size (H x W x D)	320 x 180 263	890 x 180 x 383	1050 x 180 x 433
Size with feet (H x W) mm	_	950 x 205 x 375	1110 x 205 x 425
Net Weight	5.44 kg	18.2 kg	24.5 kg

Effects Loudspeakers	ONYX-CEN 1	ONYX-CEN 2	ONYX=SURR
Format	Centre; Ported	Centre; Ported	Wall Surround
Bass/Bass mid unit	100mm x 2	125mm x 2	100mm x 2
Tweeter	25mm	25mm	25mm
Rec. Amplifier Power	30 - 120w	30 - 150w	30 - 120w
Nominal Impedance	6 Ohms	6 Ohms	6 Ohms
A/V shielding	YES	YES	NO
Sensitivity (1W @ 1M)	89 dB	91 dB	87 dB
Freq. Response (-6dB)	80Hz - 24kHz	70Hz - 24kHz	70Hz - 24kHz
Cabinet Volume	5.7 litres	9.4 litres	2.8 litres
Size (H x W x D) mm	155 x 410 x 180	180 x 460 x 208	230 x 275 x 130
Net Weight	5.0 kg	7.0 kg	1.7 kg

Subwoofer	ONYX-10 SUB
Format	Reflex
Bass Woofer	250 mm
A/V shielding	NO
Amplifier Power	150 Watts
Input Sensitivity	250 mV at 75 W output
Avg. Max Output at 1 metre	110dB
Freq. Response (boundary pos)	35 Hz - 110 Hz
Crossover Range	35-85 Hz in 10dB steps
Cabinet Volume	20 Litres
Size (H x W x D) mm	500 x 320 x 210 mm
Net Weight	14.2 kg

SERVICE AND WARRANTY

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 in different countries but in all cases 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.

AUTHORISED SERVICE CENTRES

UK

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

ASIA

IAG. Room 2310 - 2311, Press Building, Shennan Road C, Shenzhen. China.

Tel: +86-755-82091200 Fax: +86-755-82091205

For information on other authorised service centres worldwide contact Wharfedgle International in the LLK

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

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

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