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Introduction

Congratulations on purchasing Monitor Audio loudspeakers. We are confident they will provide a reliable, high performance sound for many years as only quality components have been used throughout.

Monitor Audio are a highly respected member of the 'Guild of Master Craftsmen' with over 30 years of experience in the art of traditional wood working techniques and leading edge drive unit technology. This blend of experience and technology brings you the Radius Series.

Please follow this user manual carefully as it contains important information about positioning and set up procedures. **For further advanced information on system set-up, FAQ's and multi-lingual support please refer to our website at: www.monitoraudio.co.uk**

Safety Instructions

- 1. Water & Moisture:** The loudspeaker should not be used near water - for example, bathtub, washbowl, kitchen sink, and washing machine, in a wet basement or near a swimming pool. Under no circumstance should plants or fish bowls be placed on the loudspeaker
- 2. Heat:** The loudspeaker should not be placed near any heat source such as radiators, open fires, stoves, direct sunlight and any other appliance that produces heat.
- 3. Cleaning:** Great care and attention has gone into the materials chosen to produce the Radius loudspeakers. A gentle wipe with a dry, clean cloth is all that is required to remove any dust. Treat them as you would a fine piece of furniture because that is how they have been designed.

Positioning

The Radius 90 can be positioned on a stand, or shelf by fitting the rubber feet provided to the underside of the speaker. Alternatively you can choose to fix the Radius 90 to a wall by using the high-quality metal alloy wall bracket provided. Please refer to the 'Wall Bracket Fixing Instructions' on page 4. When using the wall bracket, we do not recommend connecting the loudspeaker using 4mm plugs into the ends of the terminals. Instead the connection can be made by unscrewing the terminal cap and using the through hole. The terminal cap can be retightened to provide a secure connection, please refer to the illustration in the 'Wall Bracket Fixing Instructions' on page 4.

Configuration

The Radius 90 is extremely versatile and can be used in a number of system configurations. It is fully magnetically shielded and can be positioned as close to a TV as you wish. On it's own it can be used in a two-channel stereo system for use in a small room, or to provide background music in a kitchen or bedroom. Alternatively the Radius 90 can be used as part of a Home Theatre system or multi-channel audio set-up. The Radius 360 sub-woofer can be used with the Radius 90 to provide deep, powerful bass. Please refer to the section; 'System Wiring Configurations' on page 8.

Grille Fitment

To help the Radius 90 fit into any life-style environment we include a choice of silver and black grilles as standard. You will find the black grilles enclosed within the polystyrene packaging end caps.

If you wish to change the grille colour, you can do this by carefully removing the grille, using your fingers to gradually pull the existing grille off the cabinet. To fit a grille, ensure the badge is correctly orientated and gently press the grille into place.

Technical Specification

Frequency Response	Nominal Impedance	Sensitivity (1W@1M)	Maximum SPL	Power Handling Full Range (R.M.S)	System Power Handling (R.M.S)	Recommended Amplifier requirements
85 Hz – 25 KHz	8?	87dB	105dBA	60W	100W	10-100 W

Bass Alignment	Drive unit Complement Bass	Drive unit complement tweeter	External Dimensions (CM)	Weight Kg (each)
Rear ported Bass reflex	1 x 4" MMP 2 (Second generation metal matrix polymer)	1 x 25mm C-CAM gold dome tweeter	19 H x 12 W x 14 D	

RADIUS 180

Positioning

The Radius 180 can be positioned vertically (portrait) or horizontally (landscape). The Radius 180 can be positioned on a stand, or shelf by fitting the rubber feet provided to the underside of the speaker. Alternatively you can choose to fix the Radius 180 to a wall by using the high-quality metal alloy wall bracket provided. Please refer to the 'Wall Bracket Fixing Instructions' on page 4. When using the wall bracket, we do not recommend connecting the loudspeaker using 4mm plugs into the ends of the terminals. The connection can be made by unscrewing the terminal cap and using the through hole. The terminal cap can be retightened to provide a secure connection, please refer to the illustration in the 'Wall Bracket Fixing Instructions' on page 4.

Configuration

The Radius 180 is extremely versatile and can be used in a number of system configurations. It is fully magnetically shielded and can be positioned as close to a TV as you wish. On it's own it can be used in a two-channel stereo system as part of a multi-channel audio/ Home Theatre system. The Radius 360 sub-woofer can be used with the Radius 180 to provide deep, powerful bass. Please refer to the section; 'System wiring configurations' on page 8.

Grille Fitment

To help the Radius 180 fit into any life-style environment we include a choice of silver and black grilles as standard. You will find the black grilles enclosed within the polystyrene packaging end caps.

If you wish to change the grille colour, you can do this by carefully removing the grille using your fingers to gradually pull the existing grille off the cabinet. To fit a grille, ensure the badge is correctly orientated and gently press the grille into place.

Technical Specification

Frequency Response	Nominal Impedance	Sensitivity (1W@1M)	Maximum SPL	Power Handling Full Range (R.M.S)	System Power Handling (R.M.S)	Recommended Amplifier requirements
60 Hz – 25 KHz	8?	87dB	105dBA	60W	100W	10-100 W

Bass Alignment	Drive unit Complement Bass	Drive unit complement tweeter	External Dimensions (CM)	Weight Kg (each)
Front ported Bass reflex	1 x 4" MMP 2 (Second generation metal matrix polymer)	1 x 25mm C-CAM gold dome tweeter	35 H x 12 W x 9.5 D	2.3

Radius 90/180 Wall Bracket Fixing Instructions



WARNING: For safety reasons do not attempt to fix these speakers to your wall if you are unsure of your ability to provide a secure and safe fixing. You will need to determine where to fit the bracket and the structure of the wall. If unsure, please obtain the services of a competent qualified tradesperson.



WARNING: Ensure that there are no water pipes, or electricity cables running behind where the wall bracket is going to be secured. Work from secure steps and avoid trailing wires.

1. Offer the bracket up to the wall ensuring that it is level. Mark the centres of the four holes with a pencil. For reference the screw hole centres are: 40mm (1 9/16") horizontal, and 60mm (2 6/16") vertical.

The wall bracket should be orientated as illustrated.

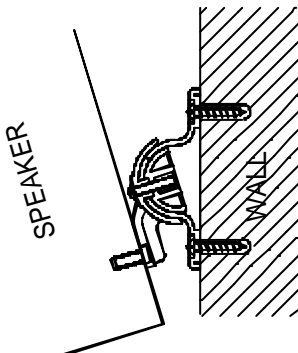


2. For fixing to plasterboard (sheet-rock) or a solid wall use a suitable 6.5mm (1/4") drill bit. Drill the four positions deep enough to accept the enclosed wall plugs provided, this should be 30mm (1 1/8") Insert the wall plugs and screw the bracket to the wall using the 25mm (1") screws provided.

3. Unscrew the 2 wall bracket mounting screws in the back of the speaker cabinet using the 'hex' key provide. These only need to be unscrewed enough to accept the key hole in the bracket (3mm/ 1/8"). These screws are located to the left and right of the terminals and can be seen in the picture below.

4. Adjust the angle of the bracket by loosening the screw in the centre of the bracket using 'hex' key provided. Tighten the screw when the angle is set.

5. Connect the speaker cables as in the illustration below and slot the speaker onto the bracket. We recommend that you seek assistance when fitting the speaker to the bracket. It is important to hold the speaker firm. NOTE: never let the speaker hang on the bracket before the securing screws are tightened. If you are sure the speaker is set to the desired angle, tighten the securing screws using the 'hex' key.



RADIUS 225

Positioning

The Radius 220 can be positioned vertically (portrait) or horizontally (landscape) and has been designed ideally to be used with a plasma TV or in places where space is at a premium. The Radius 220 can be positioned on a stand, or shelf by fitting the rubber feet provided to the underside of the speaker. Alternatively you can choose to fix the Radius 220 to a wall by using the high-quality metal alloy be-spoke wall bracket provided. Please refer to the 'Radius 220 Wall Bracket Fixing Instructions' on page 6.

Configuration

The Radius 220 is fully magnetically shielded and can be positioned as close to a TV as you wish, either as a pair in a two-channel stereo system as part of a multi-channel audio/ Home Theatre system. The Radius 360 sub-woofer can be used with the Radius 220 to provide deep, powerful bass. Please refer to the section; 'System wiring configurations' on page 11.

Grille Fitment

To help the Radius 220 fit into any life-style environment we include a choice of silver and black grilles as standard. You will find the black grilles enclosed within the polystyrene packaging trays. We have also included a spare badge. This is for when the Radius 220 is used as a centre channel speaker. If you don't like the factory fitted location of the badge, you can simply remove this badge and place the enclosed spare badge in your preferred location.

If you wish to change the grille colour, you can do this by carefully removing the grille using your fingers to gradually ease the existing grille off the cabinet. To fit a grille, gently press the grille into place.

Technical Specification

Frequency Response	Nominal Impedance	Sensitivity (1W@1M)	Maximum SPL	Power Handling Full Range (R.M.S)	System Power Handling (R.M.S)	Recommended Amplifier requirements
55 Hz – 25 KHz	8?	90dB	108dBA	120W	W	20-120 W

Bass Alignment	Drive unit Complement Bass	Drive unit complement tweeter	External Dimensions (CM)	Weight Kg (each)
Front ported Bass reflex	2 x 4" MMP 2 (Second generation metal matrix polymer)	1 x 25mm C-CAM gold dome tweeter	61 H x 12 W x 10.5 D	

Radius 225 Wall Bracket Fixing Instructions



WARNING: For safety reasons do not attempt to fix these speakers to your wall if you are unsure of your ability to provide a secure and safe fixing. You will need to determine where to fit the bracket and the structure of the wall. If unsure, please obtain the services of a competent qualified tradesperson.



WARNING: Ensure that there are no water pipes, or electricity cables running behind where the wall bracket is going to be secured. Work from secure steps and avoid trailing wires.

1. Offer the enclosed wall bracket fixing template to the wall that you are going to secure your Radius 225 to. Monitor audio recommend that you use a spirit level to align the template so that it is fixed square to the wall. Mark the hole centres with a pencil or similar. For reference the hole centres are: 504mm (19 27/32") and 88mm (3 15/32").
2. For fixing to plasterboard (sheet-rock) or a solid wall use a suitable 6.5mm (1/4") drill bit. Drill the four positions deep enough to accept the enclosed wall plugs provided, this should be 30mm (1 1/8") Insert the wall plugs into the wall. A hammer may be needed to tap these gently into the wall so they are flush with the surface.
3. Screw the 25mm (1") screws, provided, into the wall plugs leaving them approximately 2 - 2.5mm (up to 3/32") out of the wall.
4. Fix the 2 wall brackets to the back of the speaker cabinet using the four countersunk screws provided. These need to be securely fixed the the loudspeaker cabinet.
5. Connect the speaker cables to the specially designed terminal panel on your Radius 225 hook the speaker onto the four screws in the wall. We recommend that you seek assistance when fitting the speaker to the bracket to ensure that it is fixed securely. It is important to hold the speaker firm. If the Radius 225 appears to be a little loose or insecure, remove it from the wall mounted screws and tighten the relevant screws a little and try positioning the speaker again.

Positioning

The Radius 270 is the only floor standing loudspeaker in the Radius line up. This excellent performing floor stander, comes ready to play straight out of the box with stabilizing plinth ready attached (we do not recommend that you take this plinth off). To improve the bass response you can fit the acoustic spikes to the underside of the plinth. These simply screw in to the remaining four holes in the bottom of each plinth. Caution must be taken when handling the spikes as they are very sharp. The Radius 270 should be positioned no closer than six to eight feet apart for optimum sound.

Configuration

The Radius 270 can be used in a number of system configurations. It is fully magnetically shielded and can be positioned as close to a TV as you wish. On its own it can be used in a two-channel stereo system for use in a medium size. Alternatively the Radius 90 can be used as part of a Home Theatre system or multi-channel audio set-up. The Radius 360 sub-woofer can be used with the Radius 270 to provide deep, powerful bass. Please refer to the section; 'System Wiring Configurations' on page 11.

Grille Fitment

To help the Radius 270 fit into any life-style environment we include a choice of silver and black grilles as standard. You will find the black grilles enclosed within the polystyrene packaging end caps. The extra black grille with the badge should be used on the bottom bass driver. However this is not essential. You can change it to the mid bass unit if you so wish.

If you wish to change the grille colour, you can do this by carefully removing the grille, using your fingers to gradually pull the existing grille off the cabinet. To fit a grille, ensure the badge is correctly orientated and gently press the grille into place.

Technical Specification

Frequency Response	Nominal Impedance	Sensitivity (1W@1M)	Maximum SPL	Power Handling Full Range (R.M.S)	System Power Handling (R.M.S)	Recommended Amplifier requirements
50 Hz – 25 KHz	8?	89dB	107.5dBA	120W	140W	40-140 W

Bass Alignment	Drive unit Complement Bass	Drive unit complement tweeter	External Dimensions (CM)	Weight Kg (each)
Front ported Bass reflex	2 x 4" MMP 2 (Second generation metal matrix polymer)	1 x 25mm C-CAM gold dome tweeter	92 H x 12 W x 14 D	

RADIUS 360

Unpacking & Installation



Remove the clear plastic, bass driver transit protection disk. It is important to position the subwoofer initially to have easy access to the control panel. Make sure all your cables will reach easily and leave the Radius 360 unplugged from the mains electricity supply, until the installation and initial set-up procedure is complete.

The optimal control settings will ultimately depend entirely on your system configuration. For initial trials set the controls as follows:

Volume - Should be set to the minimum position.

Frequency - Should be set to approximately 100 Hz.

Phase - Should be set initial to 0 degrees.

Mode - If you are setting your system up as two channel, set the mode switch in "music" mode. If you are installing a predominately home cinema system it may be more effective to set mode switch to "movies" position.



WARNING: Do not adjust the main voltage selector, as this is factory pre-set.

Position/Location

Your Radius 360 Subwoofer is magnetically shielded and can be located in close proximity to a T.V. No matter where you place your Radius 360, you must allow sufficient spacing for ventilation of the rear panel. We recommend this distance to be not less than 100mm (4").

Subwoofer Connections

There are a number of ways to connect your subwoofer into your system. One uses loudspeaker cables; the other uses interconnect cables with RCA phono plugs. Looking at the rear panel of your subwoofer you will see two sets of speaker terminals, one labelled 'amplifier input', the other 'speaker output', and RCA phono sockets labelled 'input' (right and left).

Please refer to the section; 'System Wiring Configuration' on page 8.

Radius 360 Features

1. **Power Switch with Auto off Facility:** The power switch has two positions: Off - Auto On. In the Auto On position the sub-woofer unit will remain in stand by mode until the unit receives an input signal. If the subwoofer unit does not receive a signal within 15-20 minutes, it will switch to stand by mode until it receives a further signal.

2. **Mode Switch:** This facility is used to set the desired frequency contour for music or home cinema system.

3. **Volume:** This control allows the subwoofer level or loudness to be adjusted in order that you can achieve a totally controlled balanced sound.

4. **Frequency:** This feature controls the upper frequency limit of the Radius 360.

5. **Phase:** The phase control is used to synchronise the output between the Radius 360 and main/satellite speakers. For most applications this should be set to 0 degrees.

6. **RCA Phono Input Connection:** This method of connection is recommended where a pre-amplifier or home theatre processor/ receiver is to be used.

7. **Amplifier Input:** This facility provides the Radius 360 with connection directly from the amplifier output terminals (speaker level).

8. **Speaker Output:** This provides output to satellite speakers via a built in high pass filter.

9. **The Mains Fuse:** This should be replaced with one of the exact specification. Note: A spare fuse is provided within the fuse holder. If a fuse blows more than once, it is advisable to have the subwoofer unit checked by an authorised service agent.



10. **Mains Voltage Selector:** This is factory set to your countries mains voltage specification. Do not attempt to adjust this as this may lead to permanent damage to the product and even the risk of fire.



Technical Specification

Frequency Response	Phase control	Frequency control	Bass Alignment	Drive unit Complement Bass
27 Hz – 180 KHz	0 - 180 degrees	Variable 40 Hz - 180 Hz	Sealed cabinet	1x 8" Ultra long throw sub bass driver. Hand treated paper cone woofer

External Dimensions (CM)	High pass filter (speaker level output)	Mains power input (switchable)	Power output
32.5 H x 22.5 W x 32 D (36.7 high inc feet)	100Hz @ 6dB/octave	110-120v 60Hz 220-240v 50Hz	100W @ 4Ohms

Fine-tuning

1. Connect the mains supply and switch on the Radius 360. Play the music/movie at an average listening level; the Subwoofer should switch on automatically (blue LED on front will illuminate)
2. The volume control can now be adjusted to a desirable level.
3. The frequency control can now be set to give a seamless sound balance. The setting will depend on the low frequency response of the main/satellite speakers.
4. The volume may need to be fine-tuned to complete the installation process. It is very important to try a variety of music/movies with which you are familiar in order to obtain the optimum overall settings.

Troubleshooting

No sound from the subwoofer

- Check that the power connection is made correctly.
- Check to see if the power light is on.
- Check the input connections to the subwoofer are correct.
- If the amplifier input is in use, check the connections are phased correctly (+ to + and - to -).
- If the amplifier input is in use, check the speaker wires are connected at the amplifier.

Excessive bass from subwoofer

- Check the position of subwoofer - ensure that it is not too close to a corner of the room
- Re-check the set-up procedure

Inadequate bass from subwoofer

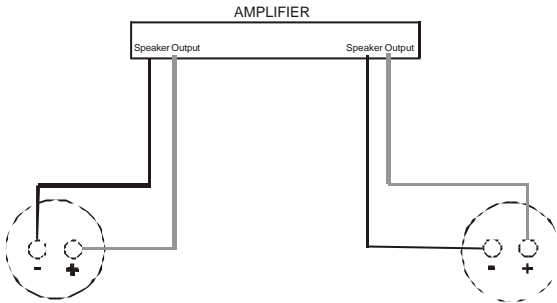
- Re-check full set-up procedure

Vibrating noise from subwoofer

- Check that this is not caused by items located on top of or close to the Subwoofer, which may vibrate when subject to deep bass sounds

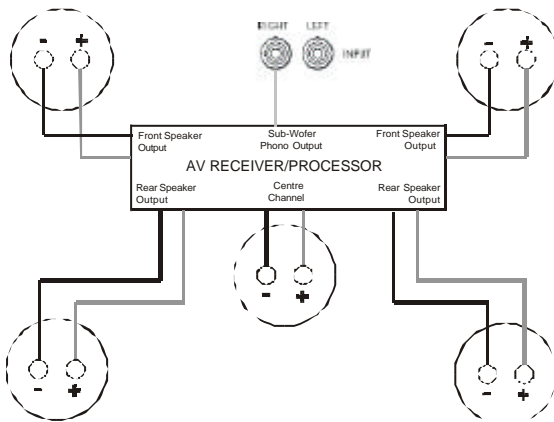
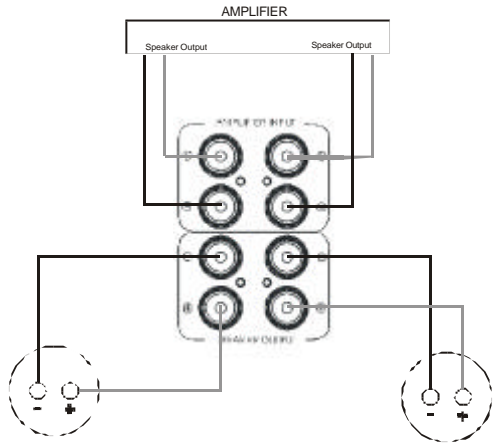
If problems persist contact your dealer for assistance.

System wiring configuration



The illustration to the left shows how the Radius 90 or 180 can be connected direct to your amplifier.

This next illustration to the right shows how the high pass filter is used on the Radius 360 sub-woofer using high-level speaker outputs.



This final configuration to the left shows how the Radius speakers can be used in home cinema. Connect the Radius 90's, 180's, 225's or 270's to your AV receiver/processor using the speaker outputs and use the RCA phono sub-woofer output on the receiver/processor and connect to the right input on the Radius 360 sub-woofer. **When connecting your Radius loudspeakers to an AV amplifier, please set the amplifier up so that it recognises that they are small speakers. To do this you will need to refer to the AV amplifier's owners manual.**

Ancillary Equipment

All Monitor Audio Radius loudspeakers present an easy, efficient load and are compatible with most good quality amplifiers.

Implementation of the latest design and construction techniques offer equal suitability to the demands of both current and future digital and analogue formats. Monitor Audio's power handling figures are based upon undistorted speech and music signals.

All Monitor Audio loudspeakers are primarily intended for use in a normal domestic environment. Provided you do not overdrive your amplifier or make excessive use of bass or treble boosts, you should never damage either the amplifier or loudspeakers.

High quality components are utilised to produce these loudspeakers ensuring accurate reproduction of the signal fed to them, so it is important to appreciate that the ancillary equipment used will profoundly affect performance.

If distortion is evident when the volume level is increased this is a sign of overdriving and the volume level should be reduced immediately.

Used properly, loudspeakers will rarely fail and if both units reproduce the same fault or distortion, then it is likely that the problem is elsewhere in the system. In such instances please contact your dealer.

Guarantee and Service

Valid upon completion of the guarantee card and its return within 30 days of purchase.

This equipment has been fully tested prior to dispatch from the factory. Both the craftsmanship and the performance of this product is guaranteed against manufacturing defects for the period of three years (one year for Radius 360) from the date of purchase (see conditions below), provided that the product was supplied by an authorised Monitor Audio retailer under the consumer sale agreement.

(The words 'consumer sale' shall be construed in accordance with Section 15 of the supply of goods act 1973).

Monitor Audio accepts no responsibility for defects arising from accident, misuse, abuse, wear and tear, modification or operation outside of that specified within this manual. Neither will responsibility be accepted for damage or loss occurring during transit to or from the parties claiming under this guarantee.

This guarantee covers both labour and parts. The liability of Monitor Audio is limited to the cost of repair or replacement of the defective parts (at the discretion of Monitor Audio) and under no circumstances extends to consequential losses or damage.

Service

The user should not attempt to service their Radius loudspeakers beyond that specified in this manual. Qualified service personnel should carry out all other servicing requirements.

Claims under this Guarantee

The equipment should be returned in its packaging to the original supplier where possible, or to any other authorised Monitor Audio dealer. If it is not possible to return the equipment by hand, then it should be sent carriage prepaid via a reputable carrier. If the original packing is not available replacement packaging can be purchased from Monitor Audio. If you have any difficulties complying with these requirements please contact us at the following address:

Monitor Audio Ltd.
Unit 2, 24 Brook Road
Rayleigh
Essex
SS6 7XL
England

Tel: 44 (0) 1268 740580
Fax: 44 (0) 1268 740589
Internet: www.monitoraudio.co.uk
Email: info@monitoraudio.co.uk

This guarantee does not affect the statutory rights of the consumer under UK law. Monitor Audio reserve the right to alter specifications without notice if it is considered that an improvement can be made to the product.