

EXTREME5

EXTREME8

1. INTRODUCTION

Thank you for purchasing this Acoustic Energy product. As a valued customer we would like to keep you up to date with all news and events including new products, exhibitions and exclusive promotions. To enable us to communicate these exciting developments please go to our website - www.acoustic-energy.co.uk - and complete the ownership registration form.

Perhaps more than any other audio product, speakers are sensitive to installation so please take a little time to read this manual and to follow, as far as practical, the guidelines it contains. Careful installation will help ensure that your Extreme Series speakers perform optimally. Should you have any questions not covered here we are happy to try and answer them either by telephone or email. Contact information can be found in Section 11.

This manual covers the Extreme 5 and Extreme 8. Following the introduction, it is divided into sections covering handling, installation, positioning, mounting, connection, amplifiers, listening, specifications, warranty and contact information. We recommend that you read at least the first six of these sections carefully before installing and using your speakers.

3. INSTALLATION

Extreme Series speakers are intended to be mounted either vertically or horizontally using the supplied mounting brackets. The brackets can be attached to any suitably sound structure.

Wall fittings (Rawlplugs, etc..) and screws are not included but should be chosen appropriately for the type and condition of the structure the brackets are to be attached to. Extreme Series speakers are heavy and you must be sure that the structure and fittings chosen are able to support their weight. If you have any concerns over the suitability of the structure, or doubt in your ability to fix the brackets securely, you should seek professional advice and help.

Extreme Series speakers are "weather-proof", "splash-proof" and suitable for use in outdoor, damp, dusty or humid applications. They can also be installed and used in environments that are subject to long-term ambient temperatures between 5°C and 35°C. They are not suitable for installation where they will be continually in contact with water.

Extreme Series enclosures and grilles can be painted to match interior design schemes using domestic matt emulsion paint. Take grate care when painting grilles that neither the driver units become contaminated with paint, nor that a significant number of the grille perforations become blocked.

Neutrik® Speakon® input sockets only are fitted to Extreme Series speakers. An appropriate Speakon plug is included with each speaker.

2. HANDLING

Extreme Series speakers are precision engineered products that can be damaged by inappropriate handling. If the speakers' perforated grilles are removed take care not to touch any of the drivers. Damage to a driver will at best degrade performance and at worst result in complete failure.

The enclosure surfaces should also be handled sympathetically. Any cleaning should only require a soft cloth, slightly dampened if necessary. Be wary of using any polishes or solvent based cleaning agents.

The packaging should be retained for future use.

4. POSITIONING

The location of speakers within a listening environment is likely to have more influence over their subjective performance than any other aspect of installation. It is worth spending some time considering both the finer points of speaker location, as well as the larger scale issues of room and speaker layout.

If you are already familiar with the acoustic characteristics of the listening environment, and the way speakers perform in it, you may already have a good feel for where to position the speakers. However, installing any new audio component provides a good opportunity to review an existing set-up and perhaps make improvements.

Extreme Series speakers are not magnetically shielded and should not be positioned in close proximity to magnetically sensitive equipment and media.

Stereo and Home Theatre Positioning

If a pair of speakers is to be used in a conventional stereo audio system or for the front channels in a home theatre system they should be positioned approximately as follows:

- At least 1.0 metre from side walls.
- Between 2.5 and 3.5 metres apart.
- Clear of corners.
- Angled inward towards the listening position.
- At, or slightly above, listening head-height.

If a speaker is to be used for the centre channel in a home theatre system it should be positioned approximately as follows:

- Directly above or below the display screen.

If two or more speakers are to be used for the surround channels in a home theatre system they should be positioned approximately as follows:

- Generally in-line with or behind the listening position.
- At least 0.5m above listening head height.

Diagram One illustrates general home-theatre speaker positioning.

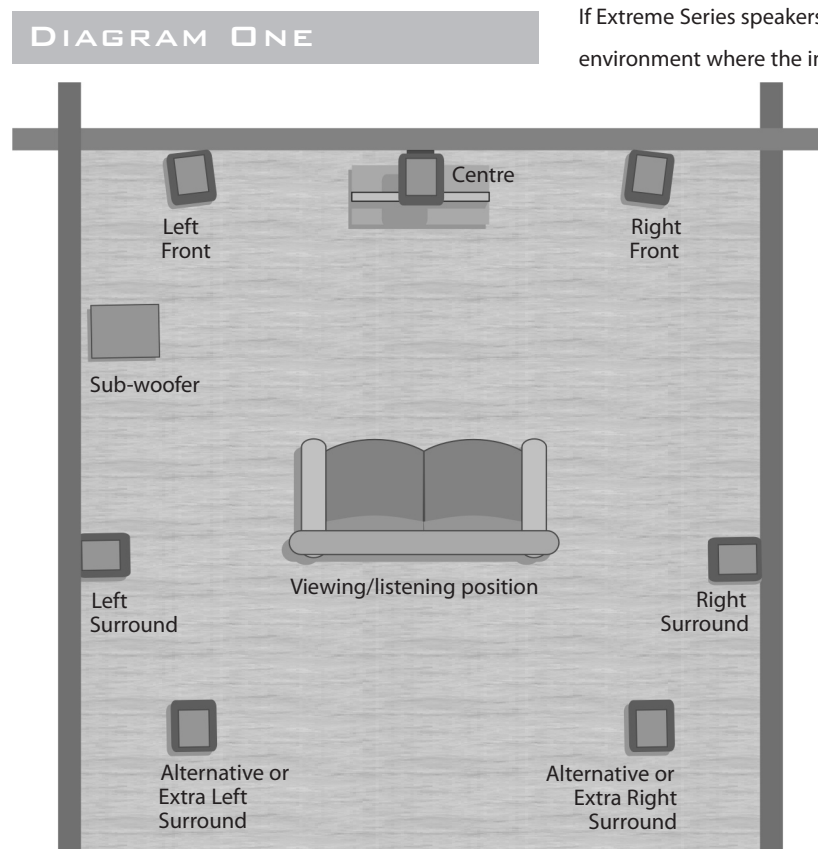
Don't worry if, thanks to the architecture or layout of your room, it is not practical to follow each requirement exactly. The most important thing is to consider the different options that are practical and identify the one that is likely to work best.

Utility Speaker Positioning

If Extreme Series speakers are to be used as multiple "utility" speakers in an environment where the intention is to provide background music and/or public

address announcements they should be equally distributed throughout the space and mounted above head height. Mono audio is usually preferable in utility applications but if only stereo is available multiple speakers should be connected alternately to the left and right channels.

In choosing locations for the speakers consider the "coverage" required with respect to the likely listener positions. Try and ensure that coverage is even and that as listeners move around the environment their distance to the nearest speaker remains relatively constant.



5. MOUNTING BRACKETS

With speaker mounting locations selected, the **Mounting Brackets** can be attached to the mounting surface or structure. **Diagram Two** illustrates the bracket, speaker and associated components.

Use the bracket itself as a template to mark the mounting hole positions employing a spirit-level to ensure the bracket is level. The mounting holes are provided with key-hole slots to simplify attachment. At least two screws must be used to attach each bracket.

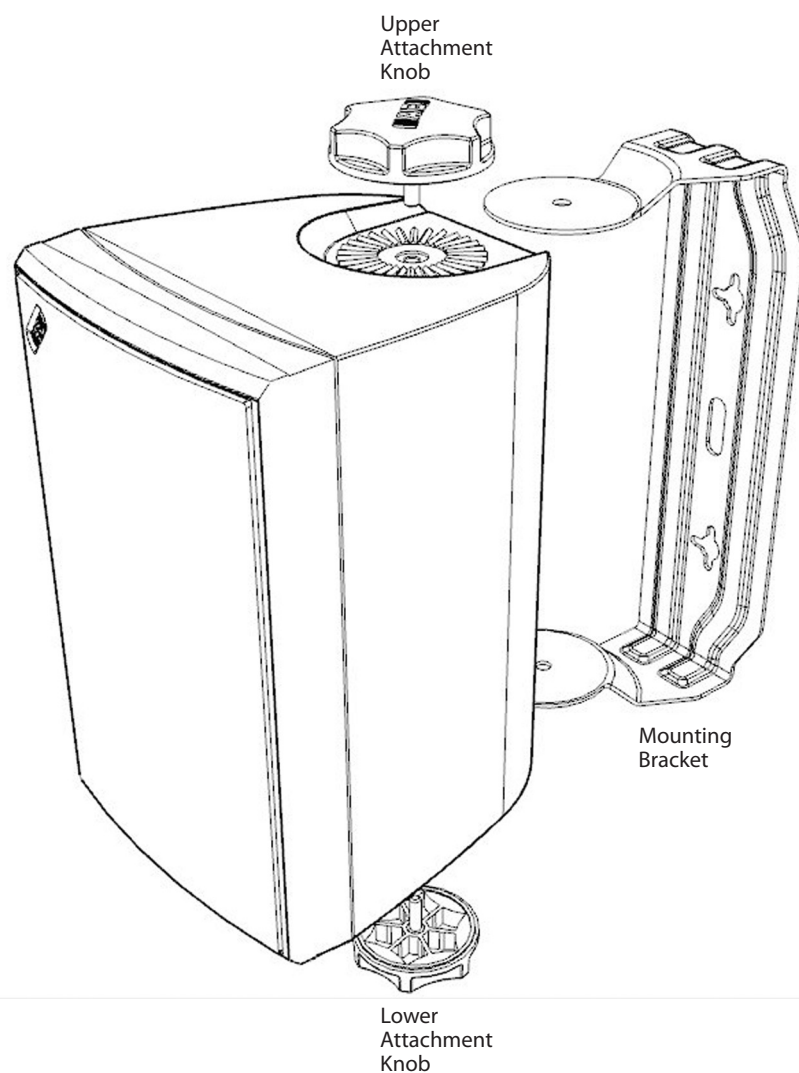
Fittings (Rawlplugs, etc.) and screws are not included with the bracket but should be chosen appropriately for the type and condition the of structure the brackets are to be attached to. Extreme Series speakers are heavy and you must be sure that the structure and fittings chosen are able to support their weight. If you have any concerns over the suitability of the structure, or doubt in your ability to fix the brackets securely, you should seek professional advice and help.

Once a bracket is securely fixed, attach the speaker by offering it up to the bracket and inserting the threaded section of each **Attachment Knob** in turn through the bracket and into the threaded holes in the speaker. Tighten the **Attachment Knobs** while holding the speaker at the desired mounting angle.

The speaker cable can either be threaded through the elongated hole in the centre of the **Mounting Bracket** (before the bracket is attached) or left unattached to the bracket. If the cable is to be threaded through the **Mounting Bracket** make sure that there is enough cable left free to enable easy attachment of the Speakon plug and also that the cable is not trapped behind the bracket when the mounting screws are tightened.

Connecting the Speakon plugs and speakers is described in the following section.

DIAGRAM TWO



6. CONNECTING

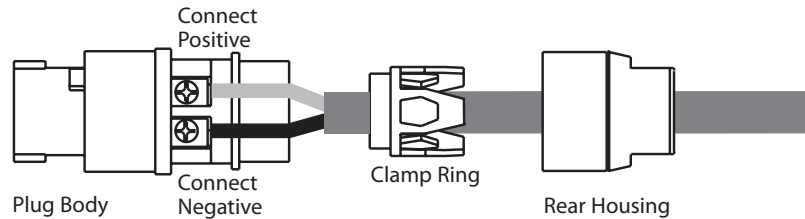
Extreme Series speakers are fitted with Neutrik Speakon connection sockets. An appropriate Speakon plug is included in each pack. Speakon sockets and plugs provide a reliable, secure, and potentially weather-proof connection.

Either 2-pole (Part No. NL2FC) or 4-pole (Part No. NL4FC) plugs may be used. The supplied plug is a 2-pole type. 4-pole Speakon plugs can additionally be fitted with a weather-proof rubber sleeve (Part No. BSL-WR).

Speakon plugs and accessories are widely available from audio and electronic component distributors and retailers.

Diagram Three illustrates the assembly and connection of a 2-pole Speakon plug. Remember to thread the cable through the **Rear Housing** and **Clamp Ring** before connecting it to the terminals. Strip approximately 6mm of bare wire and connect to the screw terminals within the Speakon. If using **4-pole** Speakon plugs use the terminals labelled +1 and -1. Take care not to connect the negative and positive terminals together and “short-circuit” the amplifier. Make connections with the amplifier switched off. Once the cable is connected to the terminals, the plug can be reassembled. The **Clamp Ring** secures the cable as the **Rear Housing** is tightened.

DIAGRAM THREE



To connect the speakers simply push the Speakon plug into the socket and twist the plug clock-wise to lock. Twist counter-clockwise and pull to disconnect.

Connection Polarity.

It is important to ensure that each speaker is connected with the same polarity. **Positive** speaker terminals should always be connected back to amplifier **positive** terminals, and **negative** speaker terminals connected back to amplifier **negative** terminals. Performance will be degraded if connections are made with incorrect polarity.

Cable Choice.

Choice of cable type will be influenced by the application intended for your Extreme Series speakers and the characteristics of other components in your system. Your dealer or distributor will be able to advise. There are however some simple guidelines to consider:

- The external cable diameters compatible with Speakon plugs are as follows: NL2FC (2-pole): 4mm - 10mm, NL4FC (4-pole) 5mm - 11mm (white Clamp Ring), NL4FC (4 pole) 9.5mm - 15mm (black Clamp Ring).
- Cable runs to each speaker should be kept as short as possible.
- Short cable runs are especially important if the cable is of relatively small cross-sectional-area.
- If the cable is advertised as “directional” care should be taken to ensure that its orientation is as recommended.

7. AMPLIFIERS

Extreme Series speakers offer relatively high sensitivity and do not require generously rated power amplifiers for adequate volume levels to be achieved in typical listening environments. They also offer a relatively easy load to the amplifier and do not make unusually heavy demands on its power delivery.

No overload protection systems are fitted to Extreme Series speakers so it is possible to cause damage through over-driving. Such damage can occur whatever the power rating of the amplifier and is not covered by any warranty. If ever the sound at high volumes becomes distorted your speakers are at risk of damage. In such circumstances the volume must be reduced.

8. LISTENING

It is wise before listening to your speakers to make one final check of the cables and connections. If all appears well begin listening at a relatively low level to confirm that the system is operating as expected. Only increase the volume if you are happy with the sound at low levels. If you are unhappy, turn the system off and re-check all the cables and connections.

Extreme Series speakers may take a little time to "run-in", and similarly the system will also perhaps take some time to reach normal operating temperatures. It is unwise therefore to make rapid judgements about the performance of the speakers. Your ears too will take some time to adjust to the new sound, so revisiting the system set-up, speaker positioning especially, is best left for a few days.

9. SPECIFICATIONS

Model:	Extreme 5	Extreme 8
Type:	2-way, closed-box loaded.	2-way, closed-box loaded.
LF/MF Driver:	110mm pressed alloy cone.	160mm pressed alloy cone.
HF Driver:	25mm Dome.	25mm Dome.
Filter Network:	3rd order at 3.0kHz.	3rd order 3.0kHz
Cabinet:	Reinforced Structural Polymer.	Reinforced Structural Polymer.
Frequency Response:	70Hz to 18kHz \pm 3dB	55Hz to 18kHz \pm 3dB
Frequency Range:	60Hz to 20kHz @ -6dB	45Hz to 20kHz @ -6dB
Power Handling:	125W peak programme	150W peak programme
Amplifier Compatibility:	25 - 125 Watts into 8 Ohms	25 - 150 Watts into 8 Ohms
Nominal Impedance:	8 Ohms	8 Ohms
Sensitivity:	89dB for 1 Watt at 1 metre	90dB for 1 Watt at 1 metre
Ambient Temperature Range:	5°C to 35°C	5°C to 35°C
Enclosure Sealing Specification:	IP54	IP54
Dimensions (H x W x D):	260 x 160 x 180mm	390 x 260 x 260mm
Weight (including bracket):	3.0kg (single, unpacked)	7.0kg (single, unpacked)
Finish:	Black or white	Black or white

Acoustic Energy reserves the right to modify product specifications.

10. WARRANTY

Your Acoustic Energy speakers are guaranteed against original defects in materials, manufacture and workmanship for one year from the date of purchase.

Under this warranty Acoustic Energy agrees to repair any defect or, at the company's discretion, replace the faulty component(s) without charge for parts or labour. This warranty does not imply any acceptance by Acoustic Energy or its agents for consequential loss or damage and specifically excludes fair wear and tear, accident, misuse or unauthorised modification.

This warranty is applicable in the United Kingdom only and does not in any way limit the customer's legal rights. If you have reason to claim under the warranty please contact your dealer in the first instance

Claims and enquiries under the warranty for Acoustic Energy products purchased outside the UK should be addressed to the local importers or distributors.

Please retain all original packaging materials for possible future use. We suggest that you complete details of purchase now and keep this information in a safe place for future reference.

Name: _____

Address: _____

Dealer: _____

Purchase Date: _____

Serial Numbers: _____

11. CONTACT

Acoustic Energy Limited

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Cirencester

Gloucestershire GL7 1NJ

UK

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+44 (0)1285 656890 (Technical)

Fax: +44 (0)1285 654430

Email: info@acoustic-energy.co.uk

Web: www.acoustic-energy.co.uk

Products that display the crossed-out wheeled bin logo cannot be disposed of as domestic waste but must be taken to a facility capable of re-cycling them and appropriately handling any waste by-products. Contact your local authority for details of the nearest such facility.





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