

# 100 SERIES

**Owner's manual**

# AET109



**LOUDSPEAKERS**

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# Introduction

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**Congratulations on choosing the Acoustic Energy AE109 — a powerful, floor-standing three-way loudspeaker which is capable of outstanding performance.**

**Please take a few moments to read this manual. The advice it contains will enable you to get the very best performance out of your Acoustic Energy loudspeakers.**

The AE109 is an original Acoustic Energy loudspeaker and features critically shaped polymer-pulp cone mid and bass drivers capable of exceptional transparency and dynamics. All Acoustic Energy 100 Series loudspeakers feature fully magnetically shielded drive units to allow positioning close to a television for Home Cinema use.

The upper bass or mid-range driver has a damped alignment with the classic AE double port bass loading. The lower-bass driver has its own separate enclosure which is reflex loaded by a high-power flared port on the rear panel. The tweeter — or treble driver — is a soft fabric dome unit matching the clarity of the rest of the system. In addition to conventional, passive driving, the AE109 is also capable of being bi-wired or bi-amped for optimum sound quality and audiophile performance.

AE109s are best heard with the tweeters at, or just below, ear height when the listener is seated. For serious listening the grilles are best removed.

Please unpack your AE109s carefully as each cabinet weighs over 20 kg (44 lb) and if necessary get someone to help you.

Locate the plinths and fittings and, having carefully inverted the

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# Positioning

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speaker, screw the plinth to the base of the cabinet using the screws and pilot holes provided. Please take extra care during this operation as the AE109 cabinet is factory fitted with mass-loading in the base and is therefore top-heavy when inverted. Please also ensure that you have tightly screwed the plinth to the cabinet, failure to do this will affect performance.

High tensile 8mm floor spikes and lock-nuts are provided for use with the plinth, these will guarantee the optimum coupling of the AE109 to the floor surface particularly in rooms fitted with carpet. The floor spike will penetrate the carpet and couple the speaker firmly to the floor structure below. The floor spikes (with lock-nut screwed down to the knurled part of the spike) should be fitted to the threaded insert in the underside of the plinth while the speaker is still inverted. The speaker is now ready for installation. Any final adjustment of spikes to eliminate cabinet wobble can now be made using a spirit level if required. The lock nuts should be tightened when the final adjustments to cabinet position and alignment have been made.

Closeness to room boundaries has a major impact on the low frequency performance. The speakers should be kept away from corners (which will produce booming). The speakers can be positioned fairly close to a back or side wall but the distance away from that wall should not approximate to the height of the speaker.

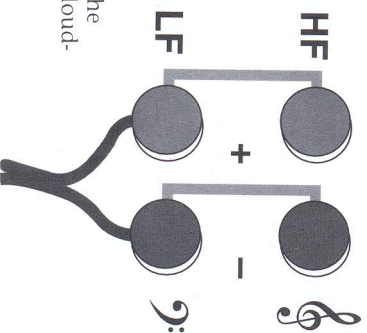
Experiment with the best position to achieve a full, yet clean bass response. Trust your judgement and ears. For best stereo imaging the speakers should be as far apart as they are from the listening position.

# Connection

Check that your amplifier is switched off before installing your loudspeakers. Failure to do so may result in speaker or amplifier damage. The diagrams illustrate one loudspeaker only.

## Conventional

Normal passive wiring requires shorting links to be in place between the treble and mid/bass sections. The positive (ribbed) cable from the amplifier positive (or red) terminal should connect with the positive (red) terminal on the loudspeaker. Similarly the negative (smooth) cable should connect the amplifier negative terminal (black) to the negative terminal (black) on the loudspeaker.



**Bi-wiring**  
Bi-wiring separates the bass and treble ground paths in the loudspeaker and offers great sound quality advantages. An extra set of cables is required.

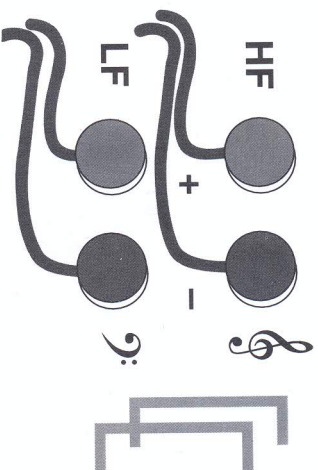
Note that the shorting links are removed between the treble and mid/bass sections and should be stored for later use if conventional, passive driving is required.

Two pairs of cables are connected to the amplifier terminals.

One cable of each pair should connect to the HF or treble section and one to the LF or bass section. The positive (ribbed) cables from the amplifier positive (or red) terminal should connect with

the positive (red) terminals on the loudspeaker.

Similarly the negative (smooth) cables in each pair should connect the amplifier negative terminal (black) to the negative terminals (black) on the loudspeaker.



**Bi-amping**  
Bi-amping adds a second amplifier to the system. One power amplifier drives the treble section of both loudspeakers; a second drives the mid/bass sections.

As regards the loudspeakers, wiring for bi-amping is achieved in much the same way as bi-wiring. Treble amplifier positive (red) terminal should be connected via the ribbed cable to the positive (red) HF terminal on the speaker. Similarly, treble amplifier negative is connected to the negative (black) HF terminal on the speaker. Repeat this process with the bass amplifier and LF terminal pair.

## After wiring up

Lower the volume to minimum, switch on the amplifier, select the signal source and then raise the volume to the listening level required.



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# Specifications

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# Warranty

**HF unit**  
25 mm soft fabric dome, ferrofluid cooled and damped.  
Magnetically shielded.

**MF/LE units**  
90 mm polymer-pulp diaphragm cones with 32 mm high-power voice coils.  
Magnetically shielded.

**Crossover**  
3-way, 8 element 12 dB per octave slope at 300 Hz and 3 KHz.  
High power low-distortion toroid inductor for bass

**Power handling**

150 watts max

**Overall frequency response**  
35 Hz – 22 KHz

**Frequency response  $\pm 3$  dB**  
55 Hz – 18 KHz

**Sensitivity**  
90 dB/1 w/1 m

**Impedance**  
typically 6 ohms

**Cabinet**  
Precision engineered low resonance triple chamber bass reflex enclosure. 18 mm MDF throughout with full internal bracing, mass loading and base plinth

**Terminals**  
Gold-plated 2-way binding posts bi-wired

**Weight (excl. packaging)**  
20 kg each

**Dimensions (WxHxD)**  
180x840x250 mm

Your Acoustic Energy loudspeakers are guaranteed against original defects in materials, manufacture and workmanship for 5 years from the date of purchase. Please retain all original packaging materials for possible future use.

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

If you have reason to claim under the warranty please contact your dealer in the first instance.

Dealer's name: .....

Address: .....

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Date of purchase: .....

Serial numbers: .....

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