

AE1

REFERENCE SERIES

Classic



1. Introduction

Welcome to the AE1 Classic monitor. Perhaps more than any other professional audio product, monitors are sensitive to installation so please take a little time to read this manual and to follow, as far as practical, the installation guidelines it contains. Careful installation will help ensure that your monitors perform optimally.

Following this introduction, the Manual is divided into sections covering installation, positioning, connection, listening, specifications, and warranty information. We recommend that you read at least the first four of these sections carefully before installing and using your AE1 Classics.

The AE1 Classic is a relatively delicate precision engineered product that can be damaged by inappropriate handling. Please take care when unpacking or moving the monitors not to touch either of the drivers. Damage to a driver will at best degrade performance and at worst result in complete failure.

The packaging should be retained for future use.

2. Installation

AE1 Classics are intended to be used mounted either on a mixing-desk meter-bridge or preferably on speaker floor-stands relatively clear of room boundaries. Alternative, near-wall, mounting arrangements such as wall brackets are possible although these may result in less accurate performance. If brackets are to be used they should be as rigid as possible and firmly attached to brick-built walls.

The construction style, rigidity and dimensions of the floor-stands are of critical significance to the performance of the AE1 Classic. Stands should broadly follow the specification below. Your retailer or distributor will be able to offer advice.

Recommended Floor-stand Specification.

Construction Style:	Direct coupled pillared.
Mass Loading:	Preferred.
Overall height:	As appropriate for AE1 Classic top panel to be just below head height when seated.
Top plate Dimensions	
Minimum width:	160 mm
Maximum width:	180 mm
Minimum depth:	220 mm
Maximum depth:	240 mm
Top plate interface:	Direct coupled tri-point or damped-compliance.
Floor interface:	Floor spikes (M6 minimum).

3. Positioning

The position of monitors within the studio room is likely to have more influence over their performance than any other aspect of their installation. It is worth spending some time experimenting both with the finer points of monitor positioning, as well as the larger scale issues of room layout.

If you are already familiar with the acoustic characteristics of your studio room, and the way speakers perform in it, you may already have a good feel for where to position your AE1 Classics. However, installing any new component provides a good opportunity to review an existing set-up and perhaps make improvements.

The position requirements for a pair of AE1 Classics installed in a typically sized and equipped studio room, illustrated in Diagram One, are as follows:

- Stood upright, tweeters uppermost.
- Between 0.5 and 1.5 metres from the rear wall.
- 1.0 minimum metres from side walls.
- Between 2.0 and 3.0 metres apart.
- Clear of corners.
- Angled inward towards the primary monitoring position.

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 experiment with the different options that are practical and find the one that works best.

Wherever your AE1 Classics are positioned it is important that each of the pair is located in a similar acoustic environment (different environments would be, say, a curtained area and a solid wall). The acoustic character of the side walls of the room in the area where the main reflection between speakers and listening position will occur should also be similar.

Once your AE1 Classics are connected and working, and you begin to become familiar with their performance, it is likely to be worthwhile experimenting a little more with their positioning.

Reducing the distance between the monitors and the rear wall will increase the level of bass and low midrange making the monitors sound warmer. The warmth however is likely to be gained at the expense of some mid-range clarity and stereo image focus and depth. Increasing the toe-in angle of the monitors may regain some image focus but again this is likely to be at a cost of image width and openness. Learning through experimentation how AE1 Classics behave in your studio will help you find the optimum solution.

The AE1 Classic is not magnetically shielded and should be kept away from magnetically sensitive equipment or media.

4. Connecting

Connecting your AE1 Classics to an amplifier is fundamentally a simple process. However, there are some choices to be made and issues to consider concerning cable type.

Each AE1 Classic is fitted with a pair of binding-post terminals. The terminals can accept stripped wires, spade connectors, or 4mm plugs. Each of these termination methods is potentially equally effective and the choice is likely to be influenced by type of speaker cable used.

Cable Type

Choice of cable type will be influenced by the characteristics of other components in your monitoring system and your dealer or distributor will be able to advise. Even so, there are some simple guidelines to consider:

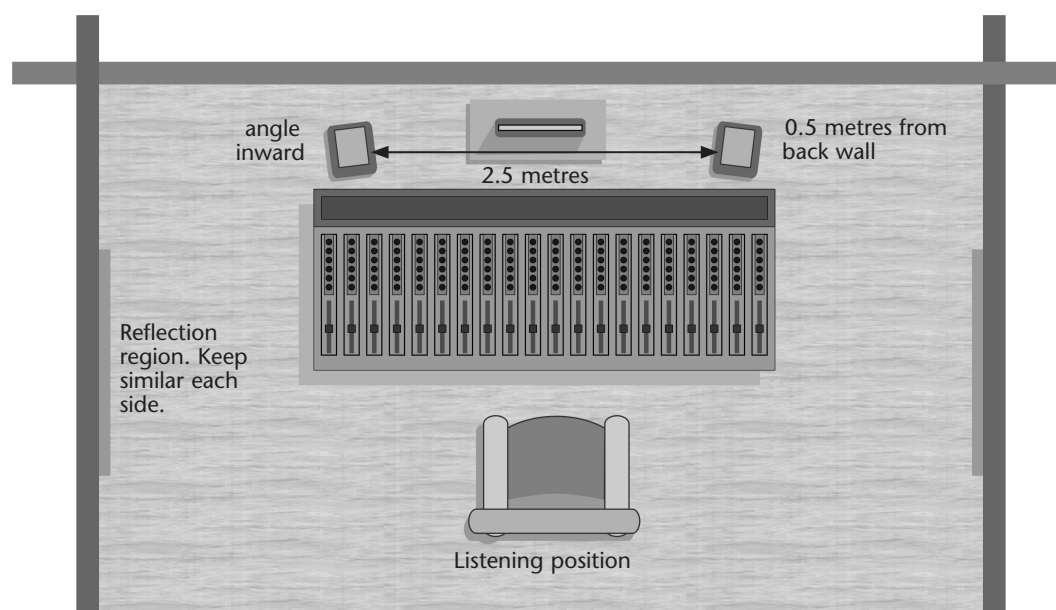
- Cable runs to each speaker should be kept as short as possible consistent with each being of equal length.
- Short cable runs are especially important if the cable is of relatively small cross-sectional-area.
- If the cable is advertised as “directional” care should be taken to ensure that its orientation is as recommended.

Connection Polarity

It is important when connecting speakers to ensure that each terminal is connected with the correct 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 seriously degraded if connections are made with incorrect polarity.

Take care when connecting cables not to touch the negative and positive terminals together and “short-circuit” the amplifier. Make connections with the amplifier switched off.

Diagram One



6. Amplifiers



The AE1 Classic is a medium sensitivity speaker that demands a relatively powerful amplifier if adequate monitoring volume levels are to be achieved in an average studio room. A minimum of 75 and maximum of 200 Watts into 8 Ohms per channel is recommended. AE1 Classics offer a relatively easy load to the amplifier and do not make unusually heavy demands on its current delivery.

No overload protection systems are fitted to the AE1 Classic so it is possible to cause damage through over-driving. Such damage can occur whatever the power rating of the driving amplifier and is not covered by any warranty. If ever the sound at high volumes becomes distorted your AE1 Classics are at risk of damage. In such circumstances the volume must be reduced.

7. Listening

Before using your AE1 Classics for the first time 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.

AE1 Classics may take a little time to reach normal operating temperatures and to "run-in". It is unwise therefore to make too rapid a judgement about the performance of the monitors. Your ears too will take some time to adjust to the new sound so revisiting the speaker positioning is best left for a few days.

8. Specification

Bass/Mid Driver: 90mm ceramic sandwich aluminium cone. 32mm edge-wound voice-coil.

Tweeter: 25mm magnesium alloy dome.

Crossover: Symmetrical third order at 3kHz.

Power Handling: Compatible with amplifiers rated at up to 200 Watts into 8 Ohms

Frequency Response: 70Hz - 22kHz \pm 3dB

Sensitivity: 88dB for 2.83V at 1m

Nominal Impedance: 8 Ohms

Total Harmonic Distortion: Typically less than 0.3%, 200Hz to 20kHz

Power Compression: Less than 1dB for 16dB gain at 250Hz

Dimensions (H x W x D): 295 x 180 x 255mm

Weight (single speaker): 8kg

9. Warranty

Your Acoustic Energy speakers are guaranteed against original defects in materials, manufacture and workmanship for 3 years 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. Claims and enquiries under the warranty for Acoustic Energy 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.

Please retain all original packaging materials for possible future use.

For any sales, technical or spares enquiries contact your local dealer or distributor first.

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