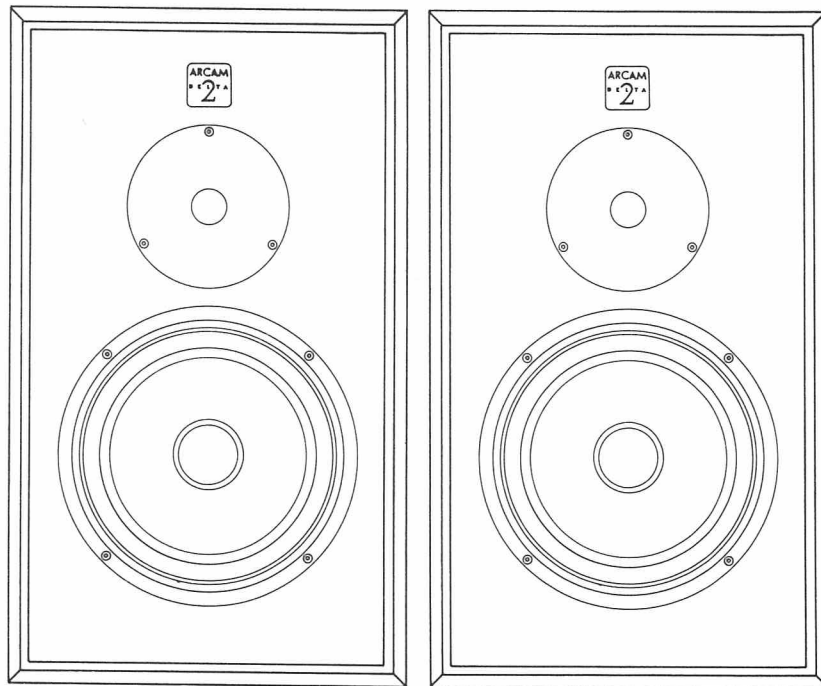


# ARCAM



---

## Arcam Delta 2 Loudspeaker Handbook

## Instructions for use

### Introduction

Thank you for buying the Arcam Delta Two loudspeakers. These loudspeakers have been designed to produce a high standard of sound reproduction at an affordable price. Although suitable for use with any good quality hi-fi equipment, the speakers are an excellent sonic and physical match for the rest of the Arcam Delta range of electronics. They also work well with our entry level Arcam Alpha amplifier.

## Installation Instructions

### Positioning

For optimum results these speakers should be placed on rigid stands 15 to 40cms from a rear wall and at least 60cms (2 feet) from any side wall. They should never be used on the floor or in corners.

The final sound will of course depend on the acoustics of the listening room, and experimentation with speaker positioning and furnishings is definitely worthwhile. As a starting point we suggest that the speakers should be placed 2.4 - 3m (8-10 feet) apart with their backs 10cms (4 inches) from the rear wall. The bass output may then be raised or lowered by moving the speakers closer to or further away from the wall. Toeing-in the speakers, so that their axes cross just in front of the listener may also be beneficial to treble balance and stereo imaging.

### Loudspeaker Stands

The more firmly a speaker is held, the better it will sound. The Arcam STM3 stand is matched to the requirements of the Delta Two and is available from your Arcam dealer.

Alternatively, use rigid metal stands of 40-60cms (14-24 inches) height. Properly damped types that do not "ring" when tapped

with a pencil, either by virtue of construction, or by filling with dry silver sand, will bring out the best in the loudspeaker.

It is possible to obtain a good sound balance when shelf mounting the Delta Two (though stands are recommended for optimum performance). The rear of the loudspeakers should be no less than 50mm from the wall to allow free flow of air from the reflex port and it should be mounted at least 450mm from a corner and 600mm from the floor (these distances may be interchanged if more convenient).

### Speaker Cables

The speakers should be connected to the amplifier using good quality, high purity copper cables with a cross sectional area of at least 1mm<sup>2</sup> per conductor. Solid core cables or those with surface only conductors are particularly suitable. Bell wire and very cheap or giveaway speaker cables should be avoided - they are a false economy and can badly degrade the sound quality. Neither do we recommend the use of fat, heavily stranded cables, as these often impart a harsh and hashy sound to the system. We recommend AudioQuest cables. Your dealer will be able to give you advice on the differences between the various models available.

The cable runs to the two speakers should be of roughly equal length and yet as short as practicable (a long run of speaker cable always sounds worse than a short one). The usual care should be taken over speaker phasing. Both loudspeakers should be connected to the amplifier with the same phase (black to black and red to red). All speaker cables will be colour coded or have some physical identification (such a small "rib" along one wire) to aid correct phasing.

### Bi-wiring

Bi-wiring loudspeakers is a cost effective way of improving the sound quality of a hi-fi system. The bi-wiring principle involves electrically isolating the treble and bass sections of the loudspeaker's crossover network and bringing out the connections to four, rather than two, terminals on the back panel. The use of separate cables to each half of the crossover then enables the complete isolation of the signals fed from the amplifier to the treble and bass speaker units. A reduction in low level intermodulation and crosstalk effects is achieved, resulting in a cleaner sound with improved imaging and separation of instruments.

Further improvements may also be gained by careful choice of the cable types for bass and treble signals. As a general guide bass will usually benefit from a heavier gauge cable and treble from a cable of smaller cross-section. However, cable construction as well as size plays an important part in its behaviour at high and low frequencies.

To bi-wire a loudspeaker first remove the two links between the pairs of red and black terminals on the rear of the speaker and then connect two separate cable runs to the bass and treble inputs. These cables should then be commoned (i.e. connected together) at the amplifier's output terminals. This may be done by connecting both cables into a single pair of 4mm plugs or, if the amplifier has binding posts, by making common bare wire or spade connections to the terminals.

Care must be taken to ensure that all individual loudspeaker units are connected in the same phase (i.e. connect terminals RED to RED and BLACK to BLACK). If this is not done serious frequency response deviations will result.

### **Power Handling**

The Arcam Delta 2 loudspeakers are designed to reproduce recorded music under normal domestic conditions. We do not recommend nor warrant them for use in any form of sound reinforcement application or at discotheques, parties or other forms of speaker demolition derby.

Bearing this in mind the loudspeakers will perform well and safely with hi-fi amplifiers rated at between 20 and 70 watts per channel. However care must always be taken to avoid amplifier overload or "clipping". Apart from possible damage to the amplifier this can and does damage loudspeakers. In this respect, an overdriven low powered amplifier is much more likely to cause damage than a properly used high powered one.

## **Technical Specifications**

### **System design:**

Two way reflex loudspeaker, 14 litres internal volume. Cabinet solidly constructed from 18mm board with a 19mm Medite front baffle, braced and optimally damped.

### **Drive units:**

180mm Polypropylene coned bass / mid range unit with a diecast chassis.

20mm soft domed tweeter.

### **Crossover:**

High performance 8 element design. 3kHz, 12dB / octave.

### **Connections :**

4mm sockets / binding posts on rear.

### **Frequency range:**

40Hz to 20kHz

### **Impedance :**

8ohms nominal (6.5ohms minimum).

### **Sensitivity:**

88dB / Watt measured at 1m.

### **Amplifier Compatibility:**

15 to 70W, under normal operating conditions.

### **Finish:**

Real wood veneers, Black Ash or Walnut.

### **Dimensions:**

223 x 281 x 378mm (width x depth x height).

### **Weight:**

Net 8.5kgs each.

Packed: 20 kgs. / pair.

## Guarantees

These speakers are guaranteed under the conditions which apply in the country of purchase. Any guarantee will not affect the customer's statutory rights.

### Guarantee for UK sales

This equipment has been fully tested and a full record of these tests made before despatch from the factory. Both the workmanship and the performance of this equipment are (except as set out below) guaranteed against defects for a period of two years from the date of purchase, provided that it was originally purchased from an authorised UK dealer under a consumer sale agreement. (The words "consumer sale" shall be construed in accordance with Section 15 of the Supply Of Goods (Implied Terms) Act 1973).

The manufacturers can accept no responsibility for defects arising from accident, misuse, abuse, wear and tear, neglect or through unauthorised adjustment and/or repair, neither can they accept responsibility for damage or loss occurring during transit to or from the person claiming under this guarantee. This guarantee covers both labour and parts, and is transferable to subsequent purchasers, but the liability of the manufacturers is limited to the cost of repair or replacement of the defective parts (at the discretion of the manufacturers) and under no circumstances extends to consequential loss or damage.

### Claims under this guarantee

This equipment should be packed in the original packing and returned to the dealer from whom it was purchased or, failing this, to any other authorised Arcam dealer. If it is not possible to return the equipment by hand, then it should be sent carriage prepaid by a reputable carrier.

If the original packing is not available, replacement packing can be purchased from the manufacturers. The equipment should not be sent by post.

DO NOT CONSIGN THE EQUIPMENT TO ARCAM UNLESS YOU HAVE BEEN SPECIFICALLY REQUESTED TO DO SO BY THE MANUFACTURERS TECHNICAL SALES OR SERVICE DEPARTMENTS.

DO NOT UNDER ANY CIRCUMSTANCES ATTEMPT TO DISASSEMBLE THE EQUIPMENT BEFORE DESPATCH.

If you have any difficulty complying with these requirements, please contact the manufacturers at the following address:

### ARCAM

Pembroke Avenue,  
Denny Industrial Centre,  
Waterbeach,  
Cambridge,  
CB5 9PB.

Telephone: ( 0223 ) 440964

Fax: ( 0223 ) 863384

In either case you should state clearly your name and address, the date and place of purchase together with a brief description of the fault.

In the event of equipment being returned which, after having been tested, is found to comply with the published specification, the manufacturers reserve the right to charge a reasonable fee for testing the equipment, and for the return carriage.

### Enquiries

The manufacturers are happy to answer any queries you may have regarding the use of this equipment on the condition that this enquiry is by letter and a stamped addressed envelope is provided. You should state clearly the serial number of the unit, the dealer from whom it was purchased, and the date of purchase.

THIS GUARANTEE IN NO WAY VARIES OR REMOVES A PURCHASER'S STATUTORY RIGHTS.