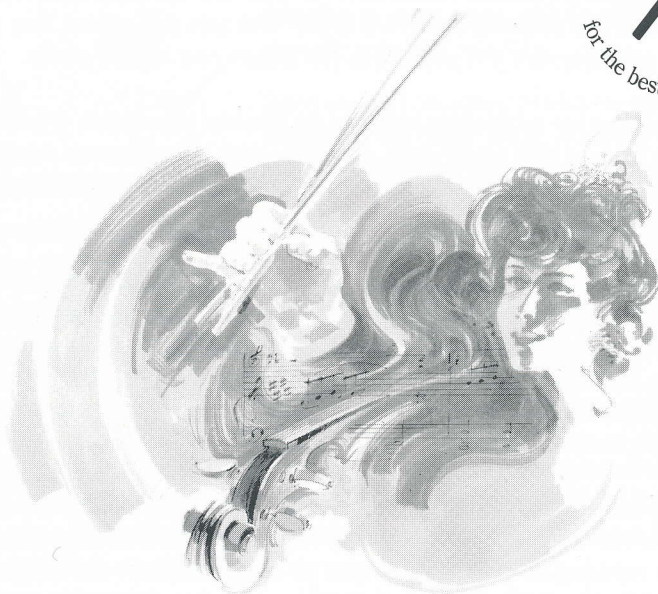


Please read first
for the best sound around!



User guide

HARBETH[®]

ACOUSTICS
MONITOR SPEAKERS MADE FOR MUSIC



Engineered in England

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Congratulations and welcome. . .

to the world of Harbeth - the wonderful and exciting sound of reality brought to your home. Your Harbeth loudspeakers are precision instruments, on a par with the finest optical lens; focused, accurate, balanced and satisfying to own and to use. With care and respect, they will give you very many years of real enjoyment and pleasure as you explore new musical worlds.

This manual makes a few suggestions based on my personal experiences of teasing the best out of hi-fi systems for more than twenty years. Although I don't know the exact details of *your* hi-fi system, room or even preferences, I'm sure that the following guidelines will be of help in the vast majority of situations.

Musical appreciation is a partnership between performers and recording engineers, professional equipment designers like us, your local dealer, and you, the listener. The importance of a good dealer can't be underestimated; he wants you to get the best from your hi-fi and has the time we all wish for to tune and tweek; don't hesitate to ask him for help. Feel free to experiment; don't be afraid to try repositioning your speakers, to check out new equipment and accessories or even new musical avenues. Keep an open mind!

During the long design stage I've worked really hard to hone Harbeth HL speakers into the precision instruments you now own, and to guarantee that every pair performs just as our master reference. No other manufacturer goes to the lengths we do to maintain quality, right down to measuring every coil and capacitor, let alone every drive unit. In fact, the exact characteristics of all the electromechanical parts in your Harbeth speakers, and even their beautiful real-wood veneers are recorded and preserved in our computer and video tape archives.

Your HL monitors allow you to critically appraise a recording - to search its inner depths - as you would a photograph for lighting, composition and detail. Such fine detail is lost in conventional speakers. Now that you've graduated to this standard of excellence, you'll frequently hear details in even your most cherished recordings that will take you aback; if only all recordings were as good as the resolution capability of Harbeth monitors!

The basics: *amplifiers*

Whilst a good amplifier contributes little or nothing of its own sonic character to the sound it's reproducing, there are discernable differences between designs. It's worth exploring different combinations - some amplifiers seem to work particularly well with certain speakers; ask your dealer for advice. Harbeth speakers are designed to be a good match to both valve (tube) and solid state amplifiers and the individual Harbeth data sheets suggest suitable power-output ratings.

Because modern amplifiers offer enormous power potential at very reasonable cost, we've never considered super-high loudspeaker dB/W efficiency to be particularly relevant to the reproduction of high quality sound in the home. As a Harbeth user you will already appreciate that balance, smoothness and 3D soundstage are *far* more important than mathematical efficiency. Under normal sensible domestic use, an amplifier of 50W per channel rating is a good starting point; 100W would leave plenty of reserve for the loud 'hill-climbing' musical passages.

The volume control on your amplifier has the same function as a camera's telephoto lens - it can zoom you 'into' the recording. Every recording has an *optimum* replay volume; too loud and the perspective and balance is lost; too quiet and the warmth and emotion is missing.

Naturally, Harbeth speakers perform perfectly on both analogue and digital recordings.

The basics: *stands*

The loudspeaker stands lift the speakers off the floor and away from adjacent walls and also completes the overall aesthetic of your h-ifi system. The beautiful Harbeth cabinets deserve stands that really show-off your h-ifi - any rigid non-resonant material, natural or man made can be used. The cabinet may be attached to the top plate with modelling putty, plastic or rubber cushioning 'dots' or even metal spikes that minutely pierce the underside veneer of the cabinet. Harbeth speakers are heavy: ensure that the top plate of the stand is adequately large to prevent the speaker from toppling over.

Ideally, the tweeter should be raised to a position that's approximately level with the listeners ear (the so called reference axis where the frequency response is optimised) although this may not be practicable. The smaller Harbeth models will therefore require taller stands than the larger models.

The basics: *cables*

In the absence of detailed scientific research our advice is to buy the best you can afford; your dealer will certainly be familiar with good combinations of cables and speakers. Very thin cables with high resistance or strange inductive windings should be avoided. Theoretically, it's a good idea to use the same length to both speakers and keep to the shortest possible route from the amplifier commensurate with domestic considerations!

It's vitally important to connect the speakers with the proper *phase* between the left and right channels (and in a biwired setup also *between* the woofer and tweeter connections - see later). Wiring-up your speakers is *much* easier if you select a clearly colour-coded cable (i.e. where the red insulator is unambiguously the + or live signal and black the - or cold signal) or the cable has an external rib or stripe running down one conductor. If the cable only has a feint coloured stripe painted on one conductor and repeated every metre or so TAKE CARE; when the markings are poor it's important to be consistent in assigning the marked strand to (say) the + or live conductor throughout the wiring-up process, especially if biwiring!

Don't allow a + conductor to touch (short) against the - conductor: amplifiers don't like working into a short circuit!

All Harbeth loudspeakers are fitted with four binding posts, and leave the factory with 'biwire links' fitted. This permits two alternative connection strategies - see later. Most dealers will be pleased to make-up or order cables to just the right length, terminated with the most suitable connectors.

Connecting to your amplifier

SAFETY FIRST: turn off your amplifier and wait a few minutes before wiring-up your speakers. Take special note of the biwire links; these **MUST** be removed from both speakers if you opt for setup B, biwiring OR C, biamping (not shown). If in doubt ask your dealer.

The rear terminal panel on your Harbeth speakers carries two red coded and two black coded connectors. The upper pair is connected internally to the tweeter via the crossover network and the lower pair to the woofer through its network. Access to the woofer and tweeter independently presents two alternative strategies for connecting the amplifier to your Harbeth speakers.

The sonic differences are modest, but may well be amplifier dependent. We suggest you start out with the 'standard wiring' making use of the biwire links fitted at the factory; familiarise yourself with the speakers over a few weeks then, perhaps, experiment with 'biwiring'.

A: Normal (standard) wiring (default)

ENSURE that the biwire links are fitted and just run one twin cable to each speaker. We recommend connection to the lower black and red terminals. The amplifier's red or + (positive) terminal connects to the speaker's red terminal; conversely black or - (negative) to the speaker's black terminal.

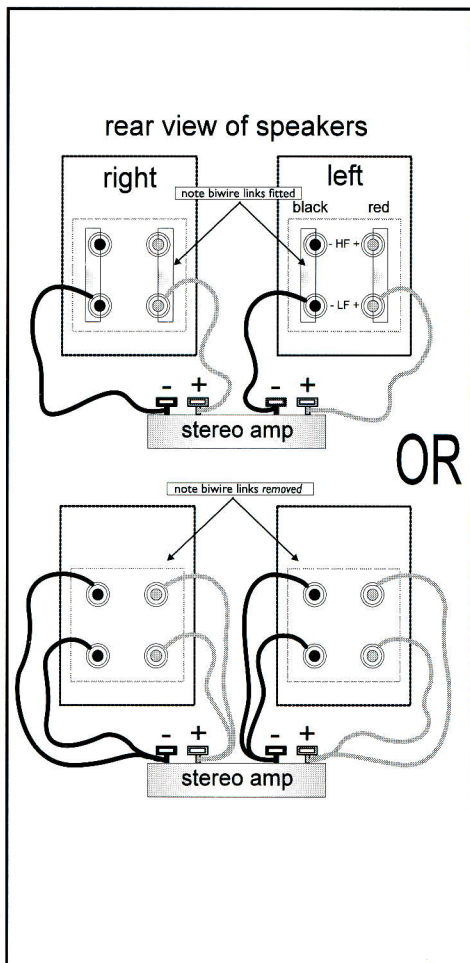
B: Biwiring

REMOVE the biwire links and connect *two* pairs of conductors to each speaker. From the amplifier's red or + terminal connect cables to each speaker's red terminals; from the amplifier's black or - terminal connect to each speaker's black terminal. USE COLOUR CODED CABLE TO ENSURE THAT RED IS TRULY CONNECTED TO +.

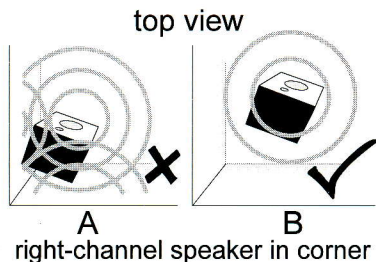
C: Biamping (not shown)

Biamping is the most sophisticated arrangement. It requires *two stereo* amplifiers which be wired so that *one* complete stereo amplifier drives *each* loudspeaker (eg: left channel to woofer, right channel to tweeter); wiring is complex and based on B: biwiring (above). Please take the advice of your dealer.

IT IS ESSENTIAL TO REMOVE ALL FOUR BIWIRE LINKS BEFORE
SETTING-UP FOR BIAMPING OR AMPLIFIER DAMAGE MAY RESULT.



Locating your speakers: *corners*



Wherever a loudspeaker is positioned close to a wall, floor, ceiling or in a corner, adjacent surfaces will act as reflectors of sound waves with an efficiency that depends upon their structure.

Since we can't accurately predict the nature of these surfaces at the design stage, all Harbeth loudspeakers are optimised for so-called 'free-space' use. In practice, under domestic conditions, a compromise has to be

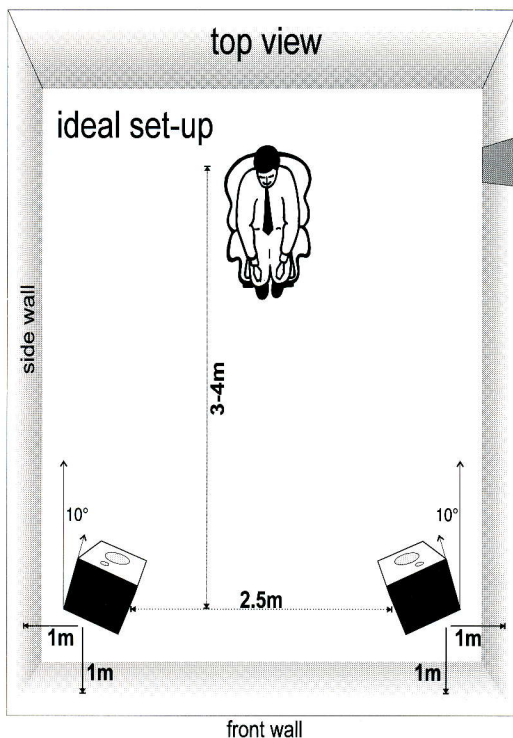
reached between the speakers being positioned unobtrusively near the walls and windows or positioned well into the listening area.

For the very best sound our advice is: wherever possible place the speakers away from room boundaries and avoid hard, reflective surfaces adjacent to the speaker.

A suggested listening room

The ideal domestic listening room is large, softly furnished, and sufficiently insulated so that hi-fi can be played at a realistic volume without complaint from neighbours or family! Sadly, for the majority of us we have to accept a compromise: the following is a set-up I like but feel free to experiment, especially with the distance between speakers and listener.

- the speakers are at least 1m from the nearest wall and are on stands (see **Stands**)
 - the listener(s) are seated centrally and further away from the speakers than they are apart (this gives the best stereo)
 - the listener(s) ears are approx. level with the tweeter (this is not easy to achieve if you are close to the speakers - try applying a gentle backwards tilt to the speaker cabinet)
 - the speakers are angled in towards each other by approx. 10°
- Of course, this is the ideal: as designers we're well aware that domestically the ideal can't always be achieved!



Recordings and what to listen for

A perfect recording, regardless of vintage, reproduced over Harbeth monitors has:

- a smooth, natural and *believable* sound and an *effortless* dynamic range
- a super-wide stereo spread that *extends far beyond* the actual position of the speakers: you should *never* be aware of where the speakers physically are
- a 3D sound stage: the performers appear in the air *unconstrained* by the speaker enclosures
- a crystalline *inner clarity* that permits you to suspend disbelief as you're transported in time and space to the recording venue itself

plus, of course, all the emotion and feeling of a top class performance! Use your Harbeth's as you would a fine camera; be on the lookout for new exciting soundscapes, whatever your musical tastes. Really *beautiful* recordings are rare: many are over mic'd, and the performers appear to be in your lap (listen to the pools of ambience that surround individual instruments for tell tale signs that the recording has been synthesised). Aim to build a personal library of recordings that *you* have confidence in and use them as the yardstick to judge new hi-fi equipment. Never dismiss a recording because of it's age: some of the finest recorded *balances* were made many years ago, and may make excellent 'reference' recordings provided you are alert to their technical limitations.

Care of your cabinets

We've carefully matched the real wood veneers of your cabinets. No two pairs are alike; we'll never be able to reproduce the unique colour and features of your pair. Real wood deserves to be treated with respect and benefits from a monthly wipe over with a damp cloth, followed by a thin application of fine furniture polish. Kept out of strong sunlight and away from radiators and draughts and they will look as good in ten years as they do now.

Warranty

With our attention to detail during production, Harbeth speakers have a long trouble free service life provided you play them at a normal responsible volume level; your local dealer is only too happy to advise you. Please do return your warranty card. It helps us to keep our records up to date.

Thank you. . .

on behalf of my team for making the investment in Harbeth loudspeakers. We are all dedicated to delivering to your home *exactly* what the performers and recording engineers intended.

You've joined a strong and growing following of dedicated Harbeth users around the world; time will prove your new Harbeth's to be the finest investment you've ever made. Now, over to the music . .

Alan A. Shaw.

Alan A. Shaw
MD & Designer, Harbeth Acoustics Ltd.