

A SCHOOLBOY'S AMBITION!

(as told in 1991)

Harbeth's designer and owner, Alan Shaw talks about how his experience as a 'Saturday Boy' in local radio shaped his view of quality sound.



I was born the oldest of three brothers in Glasgow, Scotland on 16th July 1957. I am married and have three children – Adam 11 1/2, Leanna 8 1/2 and David who is 3 1/2. I became a student of the Chartered Institute of Marketing in London in 1980 and obtained my Certificate and Diploma in marketing studies in 1981 and 1983 respectively. I was elected to membership in 1989. In 1979 I joined a Process Control System Manufacturing Company as a Sales Engineer and Assistant to the Sales and Marketing Director. In January 1981, I joined NEC Electronics (UK) Ltd as one of the first UK employees of this Japanese multinational. I progressed through seven jobs within the company eventually becoming Sales Manager for micro-chip sales in the East of the UK.

An understanding of the HARBETH HL-P3 mini-monitor requires a history lesson in its forerunner – the HARBETH BBC LS3/5A.... During 1973 or 4, when I was still at school, I enthusiastically followed a teenager's programme on the local BBC radio station. I can't remember exactly what motivated me to write to them asking if I could become involved "behind the scenes", but I recall arriving at the studios to meet the producer. Then, as now, BBC local radio was largely run by volunteers and enthusiasts – the BBC providing the equipment and technical knowledge and the local community creating the programmes. The studios were in an old converted Edwardian mansion, triple glazed and acoustically treated – very quaint. Before long, I was a regular, although peripheral, member of the production team and became "hooked" on the medium of radio and sound transmission.

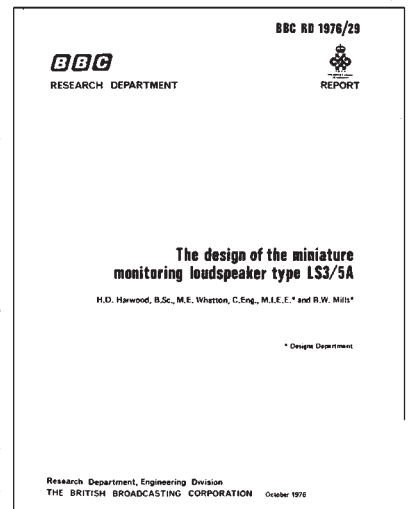
The monitor loudspeakers used then ranged from the enormous LSU10, the size of a wardrobe, to a commercially designed miniature speaker called the Maxim. This was mounted on its side on top of a small amplifier and, as it was inexpensive, became the backbone of BBC local radio. Although it was an "off the peg" design, it paved the way for the BBC's own LS3/5A.

My enthusiasm for the BBC's approach to high quality sound inspired me to read up all their published papers on sound reproduction, especially loudspeaker design, and around this time, the names of Messrs Shorter and Harwood came to light. These gentlemen were responsible for establishing the BBC's reputation as the world's principal research centre during the 1950's and 60's. Their concepts "struck a cord" with my own experience in the control room. After all, when the presenter finished his



programme and returned to the control room, the difference in the tone colour of his voice was all too readily discernible to us at the control desk. Since then I've concentrated on minimising the contribution of the loudspeaker to the reproduction chain.

In June 1975, Hi-Fi News and Record Review published a review of a new miniature monitor known as the BBC LS3/5A and about the size of a shoebox. This two unit design promised the almost unbelievable frequency response of 80-20,000 Hz \pm 3dB – better than many full size so called 'monitors' of the day. The review concluded that "there is no



The original legendary L5/35A was designed by the founder of Harbeth, Dudley Harwood succeeded by Alan Shaw. This is the cover of his specification book written by the designer in 1976.

doubt that these loudspeakers do a job that is quite astonishing... with their natural uncoloured response they must represent a great attraction to those who are unable - or unwilling - to find space for a large installation... and make some of today's loudspeakers look pretty silly". I must have read the review a hundred times for clues about the skill applied to this miraculous design.

I set about intensively investigating the techniques the BBC had mustered to achieve this remarkable performance in so small a box. There was, in fact, an earlier secret model known as the LS3/5 which metamorphosed into the now familiar LS3/5A before production commenced and incorporated a new grille and the now familiar felt box around the tweeter. Once LS3/5A production started, licences were appointed, including the late Chartwell and Audiomaster.

My classmate friend, now working at the BBC, was lucky enough to be offered an LS3/5A kit in the mid 1970's comprising the necessary piece parts, a circuit diagram and assembly instructions. I doubt that the BBC would have recommended DIY construction because of the close tolerance match but, nevertheless, he was delighted. Now, at last, I could strip down the design and analyse what was necessary to make a pair myself from commercially available components. Woodwork presented no problem - I was already familiar with the BBC classic 'plywood and bitumen damping' but the crossover was much more challenging because of its complexity, my limited knowledge and the unavailability of transformer type inductors. Nevertheless, I managed to wind my own coils and over the following few months my 'home-made' LS3/5A's started to take shape. Unlike my previous home-made speakers, I took great trouble to veneer the cabinet to make it look just like the real LS3/5A. I can still remember finishing the design and proudly emerging from my garage with these two new arrivals. The first piece of music I played ("Young Hearts Run Free" performed by Candy Statton) symbolised the long hot summer of 1976 and this revolutionary speaker design. Everything the BBC claimed about the importance of accurate sound was manifest in the design of the LS3/5A!

Although my career took me into semiconductors, the BBC speaker philosophy remained my hobby. Little did I know that 10 years later I would be the owner of HARBETH and in a position to continue in the BBC's tradition!

We met representatives of the engineering department in 1987. They were sufficiently confident in our approach and enthusiasm that we were granted a licence agreement for the LS3/5A. At last I could manufacture the real speaker to the high standard that we set ourselves. In fact, I took the decision to withhold manufacture until the new computer optimised LS3/5A design was completed. This clearly differentiated HARBETH from other licencees and gave us a head start.

Because the performance of the HARBETH *computer optimised* LS3/5A was such an improvement over its predecessor, many discriminating customers selected our version. We offered a standard of construction and testing which was significantly better than our competitors. Although the LS3/5A is very small, the customer demands our usual attention to detail and naturally, every HARBETH LS3/5A manufacture is supplied complete with its individual test certificate signed by the engineer responsible. As he has personally assembled the speaker from start to finish, his signature is a genuine assurance of quality. Our extensive record keeping allows us to match components to unprecedented accuracy and to provide perfectly matching service replacements.

The combination of my formal Business qualification, my long-standing enthusiasm for hi-fi and the experience gained in a family firm then in a Japanese multinational, makes a strong foundation. In October 1986 I acquired Harbeth Acoustics.



HL-P3

The true successor to the LS 3/5A

Now you understand the background and my long-time interest in the LS3/5A, you can appreciate the origins of the HARBETH HL-P3. I designed the P3 to fulfil a role that the 3/5A is not suited for - as a reference monitor loudspeaker for use in close proximity to colour television.

The design came about from the requests of my children who asked if I could give them a pair of small loudspeakers to be placed either side of our colour television, opening the dramatic world of Hi-Fi Stereo videos. My wife was unenthusiastic about introducing a pair of HL5's in the corner of the living room, adjacent to the TV. It was then I discovered that the LS3/5A's were unsuitable due to their wide, stray magnetic field (it's OK to place P3's next to a TV but please don't experiment with the LS3/5A or you may need professional help to degauss your set). The recent launch of broadcast stereo sound in the UK naturally interested me and during 1990 the idea for a successor to the LS3/5A was hatched. The HL-P3 concept became an irresistible design challenge and tested my ability to the limit. What was required was a system of similar size to the LS3/5A utilising 1990's technology in the magnet design and offering a sound balance in keeping with the "Harbeth house sound". How close could I make the HL-P3 sound like the HL5?

Well, I'm flattered and delighted that the HARBETH LS3/5A and HL-P3 have been such an international success. Wherever high quality monitor standard sound is required with or without video images, the P3 is very much at home.

None of this would have been possible without the pioneering work of BBC engineers who struggled so hard to prove "a quart could be got out of a pint pot".

Alan Shaw

CD/LP List

<i>Creme de la Creme</i>	<i>Sheffield Lab</i>
<i>Mozzart Piano Concerto No 21 Tate/Uchida</i>	<i>Philips</i>
<i>Rachmaninov Piano Concerto No 3 Ashkenazy</i>	<i>Decca</i>
<i>The King James Version</i>	<i>Sheffield Lab</i>
<i>simply Red</i>	<i>Elktra</i>
<i>Peter Grimes</i>	<i>Decca</i>

Printed in Hong Kong in late 1991. The children are very much bigger now!