

May 2009 : P3ESR

Visitors to January's CES in Las Vegas were treated to the first glimpse of a successor to the diminutive Harbeth HL-P3, itself a consumer version of Harbeth's M20 professional broadcast monitor.

Although conceived for studio use, Harbeth's smallest speaker rapidly became popular with audiophiles with smaller rooms and who valued midrange purity and superbly stable, well-defined stereo imaging. The bass extension and ultimate loudness has always been exceptional for the shoebox size cabinet.

Harbeth owner Alan Shaw says that a design goal was to match the low-frequency response and tuning of the earlier version. The new speaker will be easier to drive. "It is very much an evolution", adds Alan. "Things move on and it is time to incorporate the Radial-2™ bass-midrange unit into our ever popular mini monitor which is loved the world over."

Initially the new model will be sold in cherry and rosewood veneers, and Harbeth is reconsidering a black finish which is popular with audiophiles in several markets.

Those who heard the preproduction sample in Vegas commented on the beautiful woodwork which drew considerable attention in the Santos rosewood finish pictured here.

Visitors commented on the astonishing bass and the remarkably clean uppermidrange and treble. "It sounds like a Harbeth Monitor 40.1 only in miniature – a speaker you'll never tire of listening to", said Harbeth USA's Walter Swanbon. "Audiophiles everywhere will love it."

The RADIAL 5" unit is Harbeth-made alongside the Harbeth-made 12" (for the M40.1) and 8" units (all models) and we have full control over our drive unit sourcing and have recently bought-in enough component parts to make these woofers for *years* ahead.

Concerning the excellent tweeter used in the P3ES2 - we've experimented with alternatives but returned to the SEAS custom-made unit because its really unbeatable - although, as you'd expect from a Scandinavian unit, expensive..

So, when designing the P3ESR woofer, what was the brief? The starting point was to re-measure the LS3/5a and the P3ES2 at the BBC anechoic chamber to refresh my memory about the overall response shape, loudness (sensitivity) and bass response. That done, I studied the

curves, made a lot of cups of green tea (good for thinking!) and conceived a specification for the new P3ESR compared with the P3ES2 and LS3/5a ...

1. Match or exceed the overall midband sensitivity around 1kHz with similar power envelope for a small speaker
2. Design for an easier electrical load on the amplifier = increase the impedance from the P3's 4 ohms to about 6 ohms so that the P3ESR needs less power and a smaller amplifier
3. Reduce coloration in the presence region (and completely eliminate LS3/5a-type coloration at 5kHz by careful design of dustcap) so that the P3ESR sounds more like its bigger, RADIAL-based Harbeths. Remarkably so, actually.
4. Increase clarity, detail and stereo imaging and overall 'smoother' sound.
5. Maintain same bass response

All have been achieved although the manufacturing cost has increased a little. It must be said my respect for the P3ES2 is very high: it has a remarkable deep-bass output with a moderately powerful amplifier.

THE HARBETH M20 mini monitor was created as successor to the BBC's LS3/5A. That meant it had to have the same size, shape and sound. After almost twenty years of success it was time to review just what made the M20, in its shoebox size cabinet, really sing.

Alan Shaw's starting point was to compare as many LS3/5As as he could muster with the reference sample M20 in the BBC's anechoic chamber. (A video of this will soon be available to watch online.)

"Mini Monitors capture the imagination", Alan feels. "It is no coincidence that vocals take on a vivid presentation with a mini monitor which is the size of a human's head." Alan was determined that his new design would be a clear improvement on the original BBC units.

"I have great respect for the fact that the BBC actually invented the mini monitor, but technology has moved on", adds Alan. "The result is the P3ESR which sounds like its bigger, Radial-2™ brothers, but in miniature."

While the BBC worked with off-the-shelf drive units Harbeth has re-designed the mini monitor's core using its unique Radial-2™ technology. "Just imagine if Radial-2™ had been available to Harbeth's founder, Dudley Harwood, when he created the LS3/5A during his BBC days!"

Available in July: The new Harbeth P3ESR