

Hi-Fi

WORLD

MARCH 1997

SUPPLEMENT

Reviews
on all three
loudspeakers
7.1, 7.2, 7.3

Wharfedale's **NEW** diamonds⁷



**Plus - The
Technology
and
Wharfedale
History**

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special

Supplement

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INTRODUCTION

Excited by their new three-model Diamond range, Wharfedale were hoping for extensive coverage in Hi-Fi World, knowing that we not only measure loudspeakers using industry-standard techniques, but also design and build them for our DIY Supplement. But the magazine was full. So, in conjunction with Wharfedale, we decided to give them space in a Supplement of their own, where a more comprehensive look was possible. I do hope you like it.

You might be intrigued to know that Wharfedale's founder, Gilbert Briggs, was a great writer. He produced a whole string of books on loudspeakers, hi-fi and musical instruments. Today, the company is run by another writer and engineer, Stan Curtis. Like Gilbert, Stan has been in hi-fi all his life and knows a thing or two about it. In fact, he's famed for his extensive knowledge, having designed many Cambridge products, for example. I'm sure Gilbert would have approved.

Noel Keywood Editor

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Started by Gilbert Briggs in 1933, Wharfedale is one of Britain's oldest loudspeaker manufacturers.

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diamond 7.1

£99.95

It's hard to make a serious hi-fi 'speaker for a gnat's whisker under £100, but this is Wharfedale's territory. They've turned out millions of budget Lintons, Dentons - and Diamonds of course - building a reputation on them. The company is out to protect its name in this field, one reason the Diamonds now straddle a relatively wide market segment in terms of sales volume. Price-wise the new Diamond 7.1 enters at the bottom of this segment, aimed at the first-time buyer. So does it offer high fidelity?

Definitely, is our answer. The 7.1 uses a bass/midrange unit with a treated fabric cone and polymer dust cap to reach up to 3kHz. Above this a polymer dome tweeter cuts in to continue output to 20kHz. Together the two cover the audio band with an evenness that disgraces many larger 'speakers. So although it costs a paltry £99.95, Wharfedale have managed to make the 7.1 a fundamentally accurate loudspeaker.

Small 'speakers are invariably designed to work close to a rear wall for bass reinforcement. This includes the Diamond 7.1s, but with a rear-mounted port, they should be kept at least a few inches forward. For review, ours were mounted on tall stands, close to a rear wall, and driven by an Audiolab 8000S.

With 'Trick Bag' the plucked steel strings of John Lee Hooker's guitar cut out from the 7.1s, making us aware of how strongly they can project. Whilst they didn't emphasise his low growls, they did make lyrics like "shoppin' for my tombstone" very explicit. Hooker



was out in front of the tiny boxes, croakin' in the room. This sort of projection is the sign of a good 'speaker, not box-bound but able to 'throw' images so they are seemingly divorced from the hardware.

Some of the softness of Gabrielle's crooning tones was bleached away by the tweeter, which is a little forward. It keeps the 7.1s sounding bright and clear, with ringing treble from metallic percussion instruments, but that wasn't all. Whilst Gabrielle's voice was prised out of the mix and thrown forward, sibilants hissed a little. There's a choice to be made here between clarity and smoothness; Wharfedale have aimed for clarity. To get both requires a more expensive fabric dome tweeter, used in the 7.2 and 7.3.

The cabinet could be heard contributing a little boxiness to vocals at times, but the effect was minor. It is

the sheer midrange clarity of the 7.1s that is most striking.

Down at the bass end the 7.1s are dry, controlled and tuneful. They play bass lines lightly, that's for sure, but are devoid of boom or one-note bass. Instead, Wharfedale have gone for a firm sense of control, with clean fundamentals from bass guitar. This was obvious on the opening track of Hooker's Boom Boom album, quite a feat since the track gets complex and there's strong bass in there. With albums of a lighter balance, like Kula Shaker's K, the 7.1s sounded light although delightfully clean.

Wharfedale's new Diamond 7.1s are basically accurate, clear and clean sounding. They project performances strongly into the room and display tuneful, if not heavy bass. The tweeter is a little forward, aiding clarity. They do a fine job for £99.95 ●

diamond 7 7.2



£139.95

structure of the Concertgebouw behind Ashkenazy. His left hand commanded real weight, and kettle drum thundered convincingly during the final crescendo. For a small loudspeaker the Diamond 7.2s go low, producing a convincing impression of orchestral power. Yet vitally, strings ebbed and flowed with silky smoothness; 'speakers with an extra zero on their price often don't manage as well in this area.

All of which showed just how well these minis spanned the full audio band. For £139.95 it isn't easy to find a loudspeaker that displays such ability, all the time maintaining sufficient composure to allow it to communicate the hall ambience and depth perspectives of a live recording clearly. String sections didn't fall into one another, nor clash with brass and woodwind, no matter how hard they played.

As with the 7.1s, Wharfedale have kept the 7.2s well damped, clean sounding and controlled. That's why they didn't lapse into confusion when the Concertgebouw was in full flight behind Ashkenazy and - a world away - it's also why Skin shouted, yelled and, perhaps, sung her way so forcefully through 'We Love Your Apathy'. Again, these 'speakers push vocals forward very strongly. Doubtless the small midrange peak we measured around 800Hz helped in this respect, but the 7.2s have enough low-end power to give Rock plenty of drive.

Lead guitar and drums sounded clean and tight, the 7.2s demonstrating they could hold together and keep up with a band like Skunk Anansie. They proved equally smooth and confident with a whole range of recordings, from Alanis Morissette through to the Upsetters. Our measurements showed just how accurate they were too. There's little to criticise here; the 7.2 is a great budget 'speaker ●

For a few dollars more than the 7.1s, the Diamond 7.2s come with a completely different set of parts, although visually you'd hardly know it. Both models share the same dedicated plastic front mouldings, so the driver apertures are identical. But Wharfedale slot into the 7.2 an entirely different bass/midrange driver. This possesses a low coloration, mineral-loaded, homopolymer plastic cone and a stronger magnet assembly. The reflex cabinet extends rearward by an extra 50mm to increase its internal volume and, unsurprisingly, the rear port increases in diameter.

These differences are barely visible from the front, apparently adding little to the cabinet's size, but they make quite a difference to the bass loading and overall bass performance.

The tweeter changes too, from a plastic dome unit to a larger, better damped fabric dome. Wharfedale say

little about this, but our measurements picked up big differences. The unit has an unusually flat frequency response from 3kHz up to 18kHz, holding out a promise of smooth, unfatiguing treble.

A single pair of rear terminals obviates bi-wiring, but that's no real loss at this level. Like the 7.1s, the Diamond 7.2s are best used close to a rear wall to bring bass level up. They are relatively well damped in the bass department, in anticipation of this. As with the 7.1s, we drove them with a powerful solid-state amplifier, the Audiolab 8000S. In practice, a budget design with muscle, like a Denon PMA-350SE, would be a good choice because the Diamonds are not sensitive - they need power.

If any one performance summed up these new Diamonds effectively, it was Ashkenazy with Rachmaninov's magnificent Piano Concerto No2, where they fully conveyed the scale and

diamond 7.3

£199.95

The Diamond 7.3 is a floorstander and that alone makes it look a lot different to its stablemates. But looks deceive. It uses the same fabric dome tweeter and bass/midrange unit. It is similar in basic sonic character too, but there are subtle but important differences.

Most people not incorrectly imagine that a bigger loudspeaker gives a bigger sound. Cabinet volume is the crucial parameter, and as it goes up then so should bass go down - to a lower frequency that is. This assumes that the drive unit changes its parameters accordingly; if it doesn't, then bass is just as likely to get weaker. Doubtless this is why Wharfedale only use a little more volume in the 7.3 than the 7.2, not the entire cabinet volume.

A peek into the hollow lower chamber reveals a partition roughly half way down. The upper chamber provides reflex-loading for the bass/midrange unit with a rear-firing port. The lower chamber can be filled with kiln-dried silver sand (not wet builder's sand), or with material like Sound Bytes. The idea is to stabilise the cabinet by adding mass, as well as damping down its panel resonances. This tightens bass, making it sound firmer. Without it, strong bass induces a little box boom.

The 7.3s also accept floor spikes, again to improve bass quality. And finally these 'speakers can be bi-wired, which lessens muddle. We used them bi-wired, with Sound Bytes, and on their spiked plinths.

Experiment showed they sounded



best when about one foot from a rear wall. Like their smaller siblings, the 7.3s sound and measure as if they are a little overdamped. This means they go low and play bass tunes well, as our listening tests confirmed. But bass fundamentals sounded a little light without a modicum of wall reinforcement.

Guessing the 7.3s would play a bass tune, I pulled out a few. One was Robbie Shakespeare backing Grace Jones singing 'Use Me', from her Nightclubbing LP. There was no doubt about that walking bass line; the 7.3s resolved it clearly, although it lacked a little substance. Wharfedale have opted for control and agility in the bass performance of the 7.3s rather than weight.

Whether it was attributable to sample differences I don't know, but our 7.3s were distinctly brighter than the 7.2s and measurement showed why. They have a smooth treble lift of around 1dB or so from 4kHz up to

20kHz that brought cymbals forward, for example.

Other subtleties made themselves known. These 'speakers displayed great insight into performances, retrieving low-level ambient information especially well. Clean studio recordings, like Moseley Shoals (CD) from Ocean Colour Scene, were almost rudely close and very real.

This property goes down especially well when there's the acoustic of a big hall just waiting to be mapped out. The Diamond 7.3s captured the Chicago Symphony Orchestra playing Scheherazade beautifully, proving they could keep their composure in the face of a large, complex performance.

The 7.3s are a tidier and more sophisticated version of the 7.2. They demand a little more in terms of spiking, sand-loading and positioning. But bass goes lower, the midband has more insight, and there's a touch more treble. A £199.95 bargain ●