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Right angle

Choice Exotica: Wilson Benesch Square 3 speaker





Right angle

Wilson Benesch's conventional speaker design approach goes off in another direction with the new Square 3, says **Jason Kennedy...**



Folks from Sheffield like to talk straight. They call a spade a spade, and if they are Wilson Benesch they call a square speaker a Square. You and I might get the impression that most speakers are square, or at least rectangular, but this isn't generally the case with Wilson Benesch – which uses carbon fibre in the cabinets of most of its models and, therefore, doesn't stick to rectilinear shapes. So when it made the first Square series in 2007 using MDF cabinets, the name seemed appropriate.

Five years later the company has revamped the range with the Square series 2, which introduces some useful revisions to the design, and a larger floorstander – this two-and-a-half way Square 3.

The main change has been to balance the speakers for free space siting, the original Squares were designed to sit against the wall in British living rooms where space is usually restricted. What happened, however, was that Square became popular world-wide, and its price meant that buyers were sufficiently dedicated to the pursuit of good sound to position them out in the room. This improves imaging but reduces the bass reinforcing effects.

Series 2, therefore, has greater bass output, which is achieved by using heavier cones. These remain WB's Isotactic polypropylene weave design, which are found across the company's model range, in this case they are seven-inch examples for both bass and midrange. The bass unit has a stiffer, heavier cone and a lower inductance flat wound aluminium coil to suit its task.

The Scanspeak soft dome tweeter is open on the rear to avoid reflections and has a first order low-pass filter, which hands over to the mid at 5kHz. The mid itself is mechanically filtered by the size of its enclosure, and the only other crossover component in the speaker is an

air cored bass inductor that rolls off output above 500Hz.

You may have noticed how close these drivers are to the edge of the cabinet, this reflects the fact that Square series 2 has steel-framed grilles. This seems a bit of an expensive approach, but WB's argument is that the thinner profile allows for distinctly greater dispersion, because a steel frame is stiff enough to be spaced away from the cabinet, and does little to impede sound travelling in all directions.

It also has the aesthetic advantage of sharp, precise corners which reflect the square shape of the cabinet. It probably helps WB that this brings Square in line with the rest of its speaker range, including the Curve floorstander which has the same driver array in a carbon fibre cabinet.

Designer Craig Milnes has gone to great lengths to control vibration in this speaker, it may look like a regular if shiny wooden cabinet from

► DETAILS

PRODUCT:
Wilson Benesch
Square 3

ORIGIN: UK

TYPE:
2.5 way
floorstanding
loudspeaker

WEIGHT:
32kg

DIMENSIONS:
(WxHxD): 200x975
x255mm

FEATURES:
• 25mm soft dome
tweeter
• 170mm WB Tactic
midrange driver
• 170mm WB Tactic
bass driver
• sensitivity: 87dB
• quoted impedance:
6 ohms nominal,
4 ohms minimum

• gloss wood
finishes: piano
black, white, red
tulip, red bird's
eye, bird's eye
maple, burr walnut,
ebonised walnut,
walnut, Zebrano

• satin wood
finishes: natural
cherry, maple, oak

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the front, but one peek at the back reveals something different. This consists of two drive units that sit directly behind the bass and mid units on the front, their purpose is to dissipate the initial energy from the driver rather than to act as an ABR (auxiliary bass radiator), which is usually a substitute for a reflex port. These so-called energy absorbers are made with a heavy rubber surround that turns a large amount of the rearward driver output into heat.

The cabinet is internally divided into three sections with the bottom bass section being ported, leaving the rest effectively sealed. The midrange section is braced with carbon composite and the panels throughout the box are controlled by 5mm metal plates that are attached with a ring of visco-elastic damping,

There's no shortage of energy with a live recording, you can feel the electricity...

WB uses steel and aluminium plates to combat resonance at different frequencies.

The cabinet itself is superbly finished, and sits on a gloss black plinth that's wider at the back to provide a bit of stability and anchorage for four sharp spikes that Craig is very keen should be used at all times, but it's easy enough to take them out if you're feeling rebellious! There's a brace of cable terminals in a horizontal line, but no colour coding, just moulded indicators, the terminals themselves are substantial, even industrial.

Sound quality

With Leema solid-state power, the Square 3 proved to be a very pacey and direct sounding loudspeaker. A little tonally dry and bass-light perhaps, but with trial and error I was able to balance this with placement and the right choice of partnering components.

Although the Square 3 is designed for free space siting, it doesn't need as much space as some other speakers of similar size. My room is a little dry in bass terms and tends to suit bigger speakers, but by placing this one with the front baffle 65cm away from the rear wall it was possible to produce a good balance between bass speed and power. This allowed the steel strings of Nils Lofgren's guitar to really zing in the way that only new strings played by an extremely able

Although the Square 3 has a more conventional look than traditional Wilson Benesch loudspeakers, build quality remains superb...



Q&A

JASON KENNEDY SPEAKS TO
WILSON BENESCH FOUNDER
AND DESIGNER CRAIG MILNES...



JK: What is the difference between an auxiliary bass radiator and the energy absorbers on the back of this loudspeaker?

CM: You get more energy from an ABR because you're using it essentially like a port. With this you've got a really heavy rubber surround on a diaphragm structure which is not intended to try and generate sound energy. The key objective is for the rubber to dissipate a lot of the energy.

There is movement at the back, and especially when it's driven hard you will get a little bit more power from the back, but it's not the main objective. Its purpose is really to get rid of energy that would go into the enclosure and cause noise which results in smearing. What Wilson Benesch loudspeakers are all about is trying to get rid of noise from the cabinet – that's why we have introduced carbon composite and metal structures. Essentially then, what we have taken from all our previous high end speaker designs into this design is trying to control materials that are hard to control!

Is this the case with the midrange drive unit as well?

The midrange driver is to a large degree controlled by the energy absorber, you could view it as a sealed enclosure, it rolls off very nicely. This gives a faster response that's tighter and because we're not using a filter we want to control the bass extension and the absorber gives excellent mechanical damping of the mid-range unit without having to have filters on it.

What then happens in the bass region, where you have an absorber and a reflex port?

The bottom bass driver is ported as well, so you are getting some port energy from the bass driver to augment the bottom end somewhat. The energy absorber tends to flatten the Q of the system, so that the output from the port is not so aggressive. I have found that this is a nice way of getting the port energy that you want.



THERE IS NO SHORTAGE OF COMPETITION at this price point. Bowers & Wilkins has the 805 Diamond at £3,750 plus stand, which is arguably more refined than the Square 3, offering greater high frequency extension from its well controlled cabinet. But it is certainly not as fast as the Wilson Benesch, and suits rather different partnering electronics.

I would also be tempted by the PMC twenty.24 which is less expensive than the WB (£3,100), but feels arguably more musical. However, it doesn't have the cabinet quietness and the rewards of transparency that this brings. It does have a similar bandwidth and footprint, though.

If you wanted a speaker that is more in the same mould as the Wilson Benesch Square 3 then I would point to the Naim Ovator S-400 (£3,250), which also has a firm grasp of pace and the potential for edge-of-the-seat intensity, albeit not in quite such an attractive package.

IN SIGHT



- 1 Scanspeak soft dome tweeter
- 2 170mm Tactic midband driver
- 3 rear-mounted energy absorber
- 4 rear panel binding posts
- 5 170mm Tactic bass driver
- 6 high quality veneered cabinet

musician can. There is, as a result no shortage of energy with a live recording like this, you can feel the electricity of the original event.

I took another tack and brought in a Quad II Classic integrated which has a more relaxed demeanour, but one which can work extremely well with certain speakers. This valve-powered beastie maintained the exciting pace of the Leema, but brought a mellowness to the midband that made for more enjoyable listening, and the ability to appreciate the tonality of instruments and voices. It helped bring out the music's richness, combining well with the searching transparency of the WB midband.

You don't have to be told that there are no crossover components on this crucial drive unit, because it gets you extremely close to the low level details and nuances that can turn a recording into a musical event. This was apparent time and again with well worn tracks, and for a while it distracted me from noting how much decay could be heard. This is a result of the cabinet damping techniques that WB employ and makes for a cleaner backdrop to the music. Piano sustain, for instance, is considerably clearer even when there are other notes being played. This could be heard on Keith Jarrett's *Testament* disc, a recording for which a 24-bit/96kHz version has been released by ECM. Moving over to the higher resolution version brought immediate increases in low-level detail combined with an ease to the presentation that makes it considerably more natural.

The only thing missing from this Quad/Wilson Benesch pairing was

bass power, but by using a valve preamp (the rather charming Shindo Laboratory Masseto) with the power amp section of the Leema Tucana, more low end grunt arrived. Still, the Square 3 is unlikely to be the basshead's choice, because it delivers very tight and timely bottom end rather than the blustery power you get with some floorstanders. It revels in high quality recordings like Gregorio Paniagua's *La Folia*, which really came to life with the texture of the strings and the vitality of the music making a convincing case for a more nuanced approach.

Conclusion

Wilson Benesch's new Square 3 is a very special loudspeaker. Breath-takingly fast and dynamic, its tactility and visceral speed is remarkable at the price. But this balance won't be to all tastes, neither will it work with all systems. It demands careful partnering and placement to give of its glorious best. Maybe it's still not hip to be square, but it sure is fun! ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



LIKE: Ultra fast, nimble sound; engineering depth; superlative quality of finish at the price

VALUE FOR MONEY



DISLIKE: Dry, bass-light balance not for all tastes; needs right ancillaries

BUILD QUALITY



EASE OF DRIVE



WE SAY: Lovely, if you like this sort of thing. An exotic taste of what music is like!

OVERALL

