



Big sound authority

Not for everyone perhaps, but JBL's new Studio 530 standmount loudspeaker is certainly a commanding listen, thinks **Jason Kennedy**...

Warp back forty years and there was a diverse range of loudspeakers on sale at pretty much every price point, from infinite baffle to transmission line. These days however, most just come with ever more subtle variations on the theme of reflex ports. IB speakers are virtually extinct and as for horn-loaded designs, well you'll have to turn to the likes of JBL for those...

Except, apparently JBL's new Studio 530 is *not* a horn loudspeaker. Instead the company has chosen to call it a compression driver design. You don't have compression drivers without horns in front of them, but the word horn is probably the problem, as it sounds old fashioned. But then so is the wheel and you don't hear BMW rebranding them 'radial ground interface contact systems'!

The Studio 530 is the least expensive compression driver speaker that JBL, or anyone else for that matter, has made for quite a long time. The US speaker giant has been having a fair degree of success with its LS series of compression driver designs which are in the next price bracket up, so it would seem to think that maybe there is an appetite for this technology further down the scale. If the results available from this standmount are anything to go by, they could well be right...

Horn loading was originally conceived to make loudspeakers sensitive enough to use with single figure output valve amplifiers. A big horn has sensitivity in three figures, but it has to be enormous to produce anything akin to the bass extension you get from a reflex-loaded standmount. As a result, full range horns are very rare beasts and most of the companies that make horn-loaded speakers combine a traditional direct radiating bass system with horn-loaded mid and treble.

JBL has taken this approach with the Studio 5 series, of which the 530

is the most diminutive example. In this case a 25mm compression driver covers the range from 1.5kHz upwards, and leaves the mid/bass duties to a 130mm cone. It makes for a remarkably compact and affordable speaker that confers many of the advantages of horn technology, without the drawbacks of scale and price.

The inclusion of a relatively small enclosure for the mid/bass driver does however, come at a cost, specifically in sensitivity, which is lower than average at 86dB with a six ohm impedance. This isn't disastrous, and I got rather good results with a low-powered amplifier, but this isn't necessarily a valve amp friendly speaker.

Compression drivers are capable of producing high sound pressures and as such are commonplace in public address systems and professional

DETAILS

PRODUCT:
JBL Studio 530
ORIGIN:
US/China
TYPE:
standmount
loudspeaker
WEIGHT:
7.7kg
DIMENSIONS:
(WxHxD)
214x467x222mm
FEATURES:
• HF: 25mm
compression driver
• LF: 130mm
PolyPlas cone
with SFG magnet
structure
• quoted sensitivity:
86dB
• quoted impedance:
6 ohms
• finish: black
or cherry
DISTRIBUTOR:
Harman Consumer
UK
TELEPHONE:
01707 278100
WEBSITE:
harman.com

Horn of plenty – the JBL Studio 530's gateway to its compression driver



audio equipment. What differentiates them from direct radiating drivers of the sort normally found on hi-fi loudspeakers is that they are used with a horn that has a smaller throat area than the driver itself, and this provides a better impedance match with the air, hence the high efficiency.

The compression driver in the Studio 530 is a flat diaphragm made of a polyethylene naphthalate film called Teonex, a material developed by DuPont that's both very thin and has high rigidity, along with a number of other qualities that are beneficial in this application. It sits in the throat of a bi-radial horn made of glass-filled ABS plastics, the shape of which is designed to maximise dispersion as

A dynamic speaker that makes you want to keep listening until way after bedtime...

well as providing the efficiency enhancing qualities mentioned above. The grille for the main driver curves up to form the lower quadrant of the horn, but JBL supplies a plate to use in its place should you prefer to run the system uncovered.

The cabinet itself is tall for its footprint, but because the compression driver needs to be at head height it requires a 60cm stand in most situations. It is made of 19mm MDF and has a reflex port in the rear above the cable terminals. Here, there are two pairs for bi-wiring.

Sound quality

Given the many advantages that horn-loaded compression drivers have, you might be forgiven for asking why they are not more popular among speaker builders. One reason is that it seems to be almost impossible to produce a totally smooth frequency response.

This is still the case with this JBL, but it's not so severe that you can't get used to it pretty quickly. In fact, the aspect of the sound that sticks out most obviously is the bass, which has a somewhat portly character. Jaco Pastorius' bass guitar lacks the definition and texture that it usually reveals, for instance.

However, it doesn't take long to familiarise yourself with the balance and start hearing the speaker's qualities, which are of a variety that you don't get without compression drivers. The best word to describe what they do so well is immediacy, there's a speed and power to JBL that

Q&A

JASON KENNEDY SPEAKS TO MARK HOCKEY AT HARMAN CONSUMER...



JK: What inspired this product?

MH: The Studio Series 5 fits in between the standard ES speakers and the LF speakers which are compression drive unit designs that feature supertweeters. The series 5 brings compression drive units to the masses.

It doesn't seem overly sensitive for a horn; is that because of its size?

Absolutely. The whole thing about big compression drive units is that they can be super-efficient if they're loaded correctly. If it were a single horn it would be very efficient, but when you add that to a mid/bass unit, then that efficiency tips away. If you were just using the compression driver alone it would be about 95dB. The misconception about compression drive units is that they are going to be mega efficient but that's only because the history of horn speakers is that they are thus.

What do you like about the end result?

Compression drive units do give you a window into what the amp's actually doing, which is why when I've tried them with a number of amplifiers some of them have shortcomings that are not usually apparent. The one thing I really like about them is when I'm doing late night listening where you can't listen at high volume, that's when they really come into their own. I was listening to the ballet Spartacus by Khachaturian (the music from the Onedin Line) and I couldn't believe how detailed it was at low volume levels!

What are your favourite albums?

The Alana Del Ray album I absolutely love. It's a just a really good mix and it's a great recording as well, she's got superb range, a really good voice. I'm also listening to the Kate Bush album *50 Words for Snow* which is equally excellent, my favourite track is *Snowed in at Wheeler Street* with Elton John. I've got a big pair of JBL studio monitors that I'm testing and I've been listening every night to that. Another album I'm really liking is the *Best of Sade*, which came out about two or three months ago. It's been remastered and is just adorable, she's got the best voice ever. You forget how good and how jazzy she was!

HOW IT COMPARES

THE COMPRESSION driver and horn make the Studio 530 a very different loudspeaker to its peers at the price. Its imaging style is quite distinct; the sound is placed in front of the loudspeaker and while tall and wide, it isn't as deep as a conventional box. It's more revealing across the midband and treble, but doesn't have the same transparency in the bass. And while it times well, there isn't quite the same coherence as a good two-way.

One example of the latter is the Ruark Sabre III, a more expensive standmount at just under £900 that comes in a real-wood veneer. It produces a far more open and tonally even result that has a better sense of timing, but doesn't deliver the low-level detail that the JBL can, nor is it as easy to drive with a low-powered amplifier. If you like what the Studio 530 does, then there is little to touch it at the price.

IN SIGHT



is electric with a good recording. Rainer's *Live at the Performance Centre* is just such a thing, one man and his acoustic guitar delivered with so much visceral energy that it's uncanny. Imaging is slightly odd and the balance not totally neutral, but such factors are a very worthwhile price to pay for the sense of a living, breathing musical performance.

This speed and energy comes from the way that the driver couples to the air; the horn makes it so much easier for a small diaphragm to vibrate the air that it brings sonic thrills that conventional speakers struggle to match. And another advantage that becomes apparent when there is a need to keep the volume level civilised is that the horn allows this speaker to be detailed and involving even when playing quietly.

It is also highly transparent to the source and amplifier. I found that while the Leema Tucana integrated worked pretty well, the less powerful and less expensive TEAC A-H01 was a better match. This pairing produced massive image height and width, throwing sound out beyond the speakers with apparent ease.

While it produces good scale, it doesn't sound open in the way that conventional speakers can, but in some respects it makes that openness sound like a coloration by comparison. It's certainly a very different style of presentation and one that won't be to all tastes, but the aforementioned immediacy does let musicians beguile you in a fashion that few conventional

speakers at this price can match. It is also very nicely paced, there is no emphasis on timing, but you get the sense that things are moving at the tempo that was put down in the studio.

Conclusion

In a world of 'me too' loudspeaker designs, I have to congratulate JBL for building a 'compression driver' speaker at such an affordable price; it means that those of us who are not obsessed with glowing valves can discover how much energy and vitality there is in our music. This in the context of a fast and dynamic speaker that offsets its slightly coloured balance with an immediacy that makes you want to keep on listening until way after bedtime.

The fact that it sounds so beguiling even at lower levels is the icing on an already rather tasty sonic cake. ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★

LIKE: Tremendous immediacy and energy for the price

VALUE FOR MONEY ★★★★★

DISLIKE: Possibly too revealing for some budget components!

BUILD QUALITY ★★★★★

WE SAY: Highly engaging speaker that does things that non-horns can only dream about

EASE OF DRIVE ★★★★★

OVERALL



