

# Velodyne Deep Blue 15" Subwoofer Review



Velodyne signals its return with a new and serious sealed-box subwoofer, says Michael Darroch...

Velodyne

Deep Blue 15"

AUD \$2,099 RRP

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Velodyne is a name that is synonymous with bass. Since 1983 – long before it was commonplace to have a low-frequency channel – the company has been pioneering technical innovation in sub bass reproduction, culminating in the flagship 18-inch Digital-Drive Plus servo-controlled subwoofer. For us mere mortals who still want an engaging low-frequency experience but can't quite stretch the budget to a DD18+, Velodyne's latest release could be just what you're looking for.

The all-new Deep Blue subwoofer series aims to deliver astonishing low-frequency performance for both music and home theatre at a consumer-friendly price point. Fair enough, but can it deliver deep bass without you needing to have deep pockets? Also, what are we giving up to meet the more restrained price point? I spent some quality time with the 15-inch version to find out.

When we refer to the Deep Blue as all-new, it refers to the fact that it's the

first non-update product line to be developed by a revived Velodyne following the brand's recent purchase by German-based Audio Reference. Despite being a subwoofer design and development leader, as the world entered the new century, self-driving cars were beginning to become possible. Fascinated by this, Velodyne founder David Hall began working in the field of LIDAR technology (Light Detection and Ranging, essentially radar using lasers).

This division within Velodyne – now operating as Velodyne Acoustics and Velodyne LIDAR – led to a slowing in subwoofer innovation, with the last new product line being 2014's Wi-Q subwoofer. Some may have thought that the writing was on the wall for this humble Californian subwoofer maker, but on the other side of the world, Audio Reference was poised to seize an unmissable opportunity...



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Mansour Mamaghani may not be a name that comes immediately to mind. Still, despite relative anonymity to the end-consumer, if you live in Germany and have purchased a product made by Velodyne, Krell, M&K or D'Agostino (and many more), then it's likely that behind the scenes, Audio Reference's owner has been responsible for its distribution. With decades



of passion, experience and a sharp ear for serious sound, it was easy for Mansour to recognise the huge value in Velodyne's rich history and technology, as well as potential in its future. After careful negotiation, the purchase was finalised in late 2019 and brought together the existing properties of Velodyne Acoustics with the strengths of Audio Reference's German HQ.

When discussing the purchase, Mansour's clear intention is to bring Velodyne back to the forefront of the subwoofer market. "I can guarantee we will keep the DNA and soul of Velodyne Acoustics and develop it further," he says. "We know there is a lot to catch up on, and my team and I are in the process of bringing a lot of new products to the market." Optimistically, he sees what he described as almost exclusively positive feedback since taking over Velodyne, as something, "that continues to spur us on to make our customers happy, and to work even harder to bring the brand back to where we all want it to be again."





## UP CLOSE

This 15-inch subwoofer is the largest of the Deep Blue series, the first of three product ranges planned for release this year. The DB, as its model number designates, is also available in 12, 10, and 8-inch sizes to suit any room or application. Designed and engineered in Germany and – as is commonplace now due to cost – made in China, the DB15 takes on the aesthetic cues typical of Velodyne's existing range, bearing a design familiar to SVS fans. It has a quality finish, with a black woodgrain veneer wrapped around the chic smooth rounded corners of a surprisingly compact box, which measures a mere 425x445x488mm and weighs 23kg. This deceptive size – relatively speaking in 15-inch terms – is good news for those with limited space but still seeking the acoustic depth that only a large diameter driver can provide.

The front of the cabinet is refreshingly free of any displays or switches, a sole Velodyne badge and round cloth cover being the only adornments. Removing the speaker cover requires a firm pull on the small loop on the bottom edge of the cover. The effort required is a reassuring indicator that it's not going to make unwanted noise under load if you leave it in place. Behind this, we get a glimpse of the large 15-inch driver buried deep into a claimed 52mm front baffle. Designed for excursion, the polypropylene reinforced cone has a large surround, dwarfed only by the dust cover protecting what Velodyne says is a four-layer 75mm voice coil. Sitting on four rubber feet, Velodyne describes its structure as rigidly braced to help prevent resonances. This, alongside the sealed enclosure means you won't get port chuff and/or extraneous noises.



Turning the cabinet around, and we find a simple backplate design featuring inputs for stereo line-in, LFE input and even high-level inputs, giving options to suit almost any application with only XLR missing out here. Three easily placed dials control volume, phase and low-pass filter frequency, and there's a toggle switch for power/auto-on. A 12v trigger is the only surprising omission here, but this did not create any issues for me while using the subwoofer, and as soon as signal voltage begins to pass into the inputs, the unit turns on quickly and stays on as long as needed.

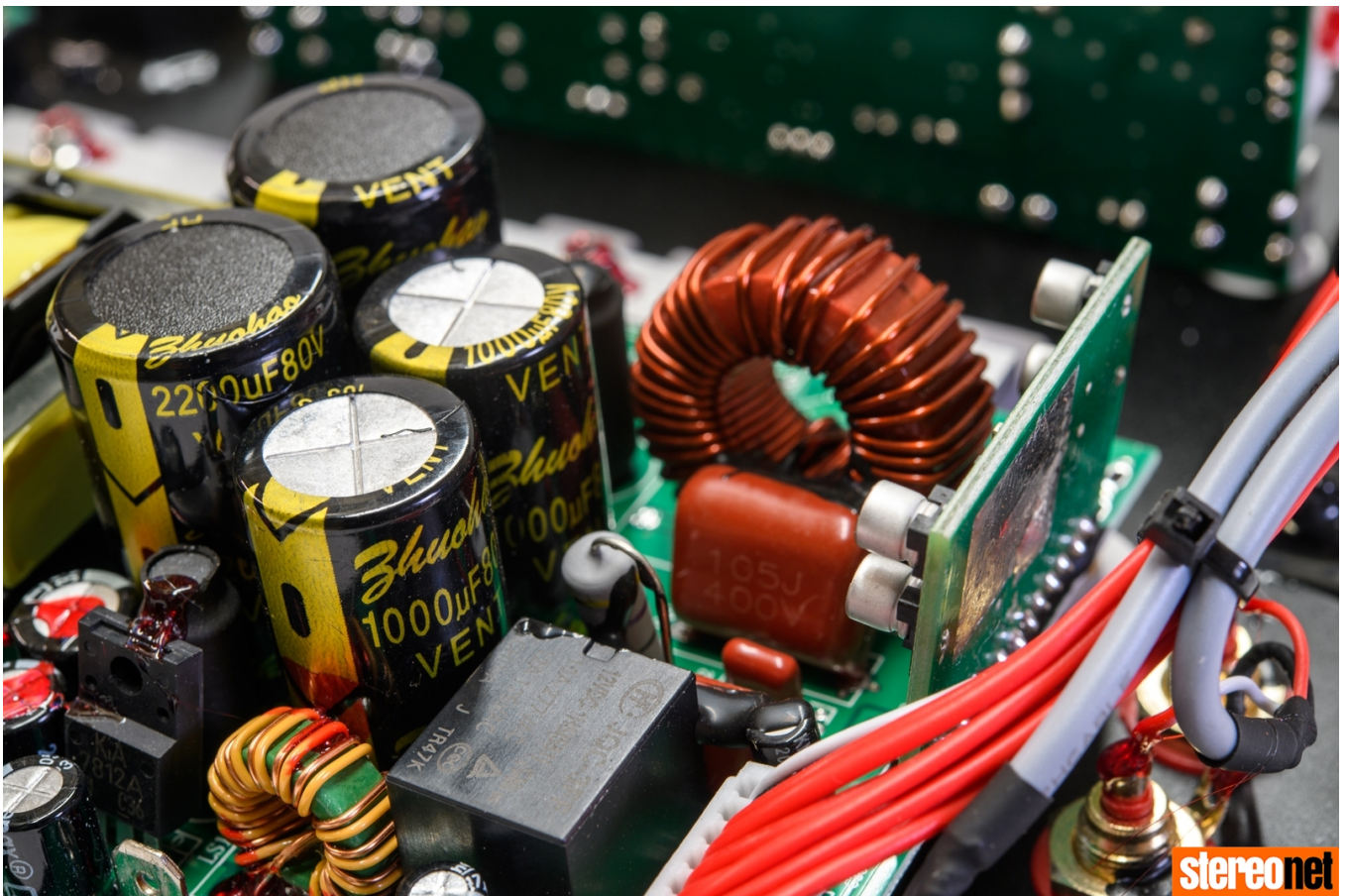
Behind the unassuming backplate lies what Velodyne says is an all-new Class AB amplifier, providing a claimed 450W RMS and up to 1kW peak power on demand to help the driver across its 13Hz–200Hz frequency response (23Hz–120Hz,  $\pm 3$ dB). For those of us not possessing a degree in electrical engineering, the class designation refers to the way the electronics handle power amplification. Class D is generally the most efficient in terms of power consumption that we have available today, and Class A is the least but offers the best sound. Class AB is widely thought



the best compromise for hi-fi and AV audio applications, owing to its balance of high-quality output and efficiency.



The Deep Blue's use of Class AB mode strikes me as an interesting choice because the market has largely turned to Class D for subwoofers, where peak power and minimal heat build-up are the primary goals – and sound quality is often considered secondary in low-frequency applications. For Velodyne, this choice was a matter of purpose; Mansour says: “We want the consumer to benefit in both situations when listening to music and watching movies in their home theatres. To make every experience with Velodyne Acoustics a very special one, for this series we have listened to a lot of different prototypes of amplifiers, Class AB, Class D or Class H and our opinion is that Class AB is the best for a series that suits both two-channel and multichannel situations.”



With that insight, it was impossible not to be a little excited when unboxing the DB15. Setting up the sub was a straightforward exercise. Simplicity rules here, so if you want onboard room EQ and dynamic real-time volume adjustment, then you'll be spending more than this kind of money. I dialed in the low-pass frequency to maximum, set the gain, and off I went. The only exception to my usual routine was to reverse the way I set the sub level. Usually, I would set the gain at fifty percent and let the room correction do the rest, within reason. Then I would make slight adjustments using a handheld meter to get the levels right. The DB15 seemed more certain of itself with a firmer input signal, and the best result was obtained when setting the output on my AV processor closer to neutral, with a lower gain on the sub's volume dial.

This may not be the same experience for everyone, so I'd suggest spending a bit of time exploring what works best in your room and with your individual components. For reference, I was using my tried and true Marantz AV7005 in my dedicated room for this experience – yes, I know, it's time for an upgrade! The area being pressurised by the DB15 was approximately seventy cubic metres. Once set up, it was straight into a



selection of my favourite bass-heavy movie scenes before shifting to some magical musical moments to see what the Velodyne was made of.



## THE LISTENING

The Deep Blue 15 did not disappoint. Its large driver capably stretched itself to the lowest reaches of the frequency domain, so I have no doubts about its claimed response. Getting runs on the board below 20Hz is a challenge for any subwoofer at this price point, but even though the output predictably shrinks below this range, there's still enough raw movement to provide a tactile bass response which is particularly welcome when movie-watching.

Although not the first release in Dolby Digital, for most of us, 1993's Jurassic Park gave us a reason to want the clearest and loudest digital sound. Nearly thirty years later, it's still capable of delivering showcase aural thrills, with the T-Rex attack giving the DB15 opportunity to provide menace and control to the distant footfalls as the dinosaur lumbers to the stricken SUVs. The lowest nodules of the Tyrannosaurus's

guttural growl as it reaches over the damaged fence were given new life, as the Deep Blue brought the deepest detail of the giant beast's throaty warning into the room. The large diameter of the subwoofer lent itself to a seat-of-the-pants feel as the monster smashed through the vehicle's glass roof, building up to an effortless cacophony of thunderous motion as the T-Rex stomped its way in chase of the flare-wielding Dr. Malcolm.



Moments like this remind you that there really is no substitute for a large diameter, high-excursion woofer, and the DB15 has enough of both to be the centre of the action. This was also apparent in 2016's *The Finest Hours*, as the coast guard crew attack the bar on their way to rescue the crew of the *Pendleton*. It was perhaps inevitable that a subwoofer named after the power and depth of the ocean would so gracefully demonstrate those qualities in the deep and powerful booms as the giant waves hammered into the sandbar. This lent a sense of increased urgency to what is already a pivotal moment in this film, culminating in the rolling barrel-wave that rumbled through my listening room and felt like it was



crashing through my chair. Any doubts I had entertained about the capability of a sealed sub to deliver the thrills in my listening position were put to rest; it was clear that you definitely need to ask the unreasonable of this unit before it begins to become overwhelmed.

It wasn't just the rumbles and booms that the DB15 is good at either. Despite the amount of driver being moved, the Deep Blue showed itself to also be quite nimble, helped in no small part by its sealed design. 2014's Star Trek highlighted some of the sharper qualities of the unit. As the newly crewed Enterprise bursts into warp, then finds itself exiting into a debris field, the room is veritably lit-up with explosions and phaser-shots, with pieces of the Federation fleet tumbling and colliding through space. The DB was able to render the lowest parts of these different sounds confidently and accurately, merging the bottom frequencies flawlessly into the other channels of my room and giving a deep sense of immersion to the scene.



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Moving from movie to musical material, the transient response of the subwoofer is an even more important characteristic, along with the

compliant character of the bass performance. Here we divert from excursion and power being the dominating requirements, to a situation where control and agility become the defining factors. With my crossovers set to 80Hz at the processor, the DB15 integrated seamlessly into my main channels, giving the impression of an almost limitless full-range speaker, rather than a separated subwoofer and main.

Listening to the SACD of Dire Straits' *Money For Nothing*, and the DB15 was able to amply supply dynamic support to the bass drum, with the short and firm pops appearing and disappearing right on their marks. It never lacked in presence, even when admixed with John Illsley's purposeful bass rhythm, itself given an almost live feel. This dynamic quality is supported by fine detail in Billy Joel's *Live from Shea* Blu-ray presentation, where *River of Dreams* is anchored by a deep and strong bass drum backbone that the Deep Blue delivers with gusto. What I particularly liked about this piece is the way that the DB15 also subtly presents the kick drum with enough detail in the low-frequency reproduction that you can sense the texture of the hammer beating into the batter head, despite it being buried in the deep synthetic bassline.





With all these positive qualities, does this mean that the Deep Blue is faultless? No, but nor is it meant to be. This isn't the Digital-DrivePlus or a PB16-Ultra, and thankfully it isn't priced like one either. We are coming in at less than half of the cost of the cheapest of those units, which does mean compromise. In some cases, the compromises are to be expected, such as the basic adjustment options on the back panel or the lack of a 12v trigger. Others are only visible when you look closely, such as the exposed wood where the driver opening was machined through the baffle being a basic black pigment which stands against the otherwise smooth woodgrain veneer finish of the rest of the sub. This is an aesthetic oversight that will be thankfully all but unnoticeable buried in a dark dedicated room or with the cover on.

Perhaps the only example of compromise that actually impacts the performance of the Deep Blue is in the amplifier. Its Class AB circuitry isn't infinite in power, and doesn't have bottomless reserves of grunt; this is more pronounced in a sealed design as you don't have the port augmenting the output across the frequency range. Watching 2017's *The Greatest Showman* is a good example of this, as the opening musical notes feature some very heavy and long synthetic bass at around 30Hz. These had a tendency to lose impact at deliberately high volumes, particularly when the bass drum cut over the top strongly at around 50Hz, leaving the DB a little unsure of itself.



This is in contrast to the parts of this sequence that the Deep Blue reproduces well, such as giving balanced weight and expression to the stomping feet in the packed stands, or delicate moments later in the film like adding the extra velvet to Zac Efron's voice during Rewrite the Stars. This was at a volume I wouldn't normally listen at, which, combined with the asking price of the Deep Blue 15 makes it hard to pinpoint this as a real criticism. Still, it would be an important consideration if you are seeking outright sound pressure levels as your primary concern.

The DB15 is still no lightweight in this area. Indeed, I was able to see peaks in my main listening position well in excess of what my own ported 12-inch sub could extract in the same circumstances, almost 3dB higher when



listening to Hans Zimmer's Live in Prague electro suite. The Deep Blue ultimately performs favourably against its direct competition on price and performance, both in a music and movie scenario, and the amplifier choice and output generally seems well balanced against the mechanical limitations of the overall subwoofer design.



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## THE VERDICT

There's no escaping the fact that a large portion of you reading this are going to be unassailably pro-sealed or pro-ported. While each one has its benefits and drawbacks, the Velodyne DB15 very much behaves like a traditional sealed design. Despite this, the combination of a compact cabinet and a large robust driver means that it manages to hit a sweet spot by carrying many of the benefits of a sealed design, but challenging the perception that a sealed unit can't fill a larger listening space. At this price point, the Deep Blue is an attractive proposition that will find itself at home, not just in home theaters, but as a real option for many of you with perhaps bookshelf speakers or floorstanders for music, wanting to find those extra few Hertz down low, but not wanting to colour the source with a boom-box.

Although I didn't have the opportunity to listen to the smaller sizes in the range, the qualities displayed by the DB15 lend themselves to exciting possibilities in limited space applications, particularly as the smaller 8- and 10-inch Blues will fit just about anywhere you can poke a standard school ruler. This experience leaves me with a certain feeling as I seal up its carton, ready to send it back, something Velodyne followers haven't been able to feel for some time...excitement. The Deep Blue 15 not only delivers low-frequency thrills, but also sends the message that Velodyne is back – and it's only just getting started.

[For more information visit Velodyne](#)