

Wilson Audio LōKē

Not all Wilson Audio's loudspeakers are man-sized floorstanders and its most compact models have been crying out for a partnering, flexible active subwoofer. Meet LōKē...
 Review: **Ken Kessler Lab: Paul Miller**

Wilson Audio's product naming strategy has always raised eyebrows, but the new LōKē reinforces its love for puns. This £9500 powered subwoofer's moniker either shows that it's the baby sister to Wilson's gigantic Thor's Hammer, or it's a play on 'Low Key'. Or maybe not. Whatever the rationale, its pronunciation is helped by diacritical marks to ensure we do not rhyme its name with 'woke'...

Weighing 50kg and occupying a space of 530x352x552mm (hwd) with grille, the unit is just large enough to require forethought about its location, but comes with castors to make the testing of trial positions an easy task. Once you find the sweet spot, you replace the castors with Wilson's proprietary 'Spike & Diode' feet, for rock-solid contact with the floor – toolkit supplied.

SIBLING STYLE

For what is effectively a box, this sub is quite handsome, especially if finished in one of the WilsonGloss colours and a contrasting grille. Also relieving it of anonymity is a slight sculpting to the sides, and you can rightly assume its looks complement the Wilson siblings with which it will be used.

Its front-ported enclosure, with baffle and walls of X-material, houses a 10in woofer with rubber surround and paper-pulp cone – a new driver in the Wilson Audio lineup. Says Blake Schmutz, director of the SAE division [see boxout, p61], 'The LōKē driver is a modified version of a standard part from a USA supplier. The development process with this supplier was quite involved and took several iterations'.

Powering it is a 500W Class D amplifier, also part of an outside-

RIGHT: Weighing in at 50kg, the LōKē's internally braced cabinet comprises a mix of high-density fibreboard and Wilson's 'X material' polymer with a push-fit grille

sourced module which also contains all of the controls and connections. My initial reaction to finding it was an OEM module was nostalgic: it was 35 years ago when the late Dave Wilson told me he would never build an amplifier because his company makes loudspeakers. Hence, Dave turned to established amp manufacturers for his powered subs. For the LōKē, Wilson Audio employs a Dayton Audio unit which Schmutz says 'was already a very well-designed and robust model with a proven track record of reliability'.

Changes to certain components and the DSP functions were made to meet

'I'm in touch with my inner ballroom gigolo'

Wilson's requirements for a small, high-performance, rugged subwoofer with reliable amplification that was not cost prohibitive. (That, of course, is relative, as £9500 is hardly chicken-feed.) Connection is straightforward [see pic, p63], via XLRs or RCAs that can be selected as either line- or high-level, the latter allowing the sub to be connected in parallel with the cables running to one or two of your loudspeakers. There are filtered line-level

outputs too, also on XLRs and RCAs.

However, the one-line LCD display and click/turn navigation rotary remains a clunky, time-consuming method of accessing the LōKē's plethora of nested functions. Suffice to say I would rather be faced with a row of knobs and switches, in the fashion of the 'old-school' subs of years past.

ON THE MENU

There's no denying the versatility of the LōKē's fine-tuning, though, with adjustment in single Hz and to fractions of a dB. Menu options include global level adjustment, a high-pass filter for the line output and low-pass filter for the internal Class D amp/driver. Both offer corner frequencies over a 30Hz-125Hz span with a choice of 12dB or 24dB/octave filter slopes, while the high-pass line output also has a 0-10msec variable delay and the low-pass filter a variable 0-180° phase control. Then there's a subsonic/high-pass filter for the internal amp operating over 25-40Hz, again with a 12dB or 24dB/octave slope. Two parametric eq. menus are offered, operating over 30-125Hz with -12dB to +6dB of level adjustment and Q factor (sharpness) of 0.6-14.

While this is a lot to absorb on first acquaintance [see PM's Lab Report, p63], it also inspires

confidence in knowing you'll be able to 'blend' the LōKē into both your listening room and with your choice of speakers as accurately as possible. This said, once I got stuck in, there were revelations in store.

LOVE HERTZ

While PM focused his modelling of the LōKē with Wilson's more diminutive SabrinaX floorstander [HFN Dec '20] – a likely partner in practice – my critical listening combined the LōKē with larger Sasha DAWs [HFN Mar '19]. This initially seemed ludicrous as the latter fill my 12x18ft room so perfectly that the only way to truly appreciate what the LōKē added was to switch it off to experience the loss of what I suppose one might call 'foundational bass'. I was in the middle of listening to large orchestras with sufficient grandeur down below to access the lowest frequencies, but I wasn't taking any chances: I listened first to open-reel tapes as the bottom octaves massacre any other source I have heard.

Although Guy Lombardo is considered 'lightweight' by snobs, the nether reaches of *Your Guy Lombardo Medley Vols 1 And 2* [Capitol Y2T 2239] are far deeper than you might expect. This is 80 minutes of jauntily played standards that would have most of you running screaming from the room, but, hey, I guess I'm just in touch with my inner ballroom gigolo. Whatever the reasons for my newfound love of schmaltz, the already-majestic scale of Wilson's Sasha DAWs was audibly enhanced by an added sense of weight.

HAMMER DOWN

Wilson Audio is no stranger to subwoofers: the original Puppy was a sub for the WATT. With the advent of home cinema in the 1980s, demand for subs extended to two-channel playback and Wilson responded with the passive WHOW and active POW WHOW in the late-1980s. The powered WATCH Dog (2000) and the massive, passive Thor's Hammer of 2007 [pictured right] remain current. By contrast, the new LōKē is more focused, designed to accompany smaller Wilson speakers past and present, including the Duette II [HFN Apr '14], TuneTot [HFN Nov '18], SabrinaX [HFN Dec '20], etc. I'd love to hear what it does with Puppy-less WATTs.

Wilson Audio's LōKē also heralds a new division in the group, dubbed Special Application Engineering (SAE). Says Blake Schmutz, the director of SAE, 'One of the goals of SAE is to produce products for customers' daily life which are more accessible than larger, more expensive systems requiring dedicated listening rooms and more floorspace'. What results are proper Wilson products, but which deliberately ignore a cost-no-object approach. From what I've heard living with the LōKē, this early goal has already been achieved.



LEFT: A 250mm (10in) long-throw woofer is reflex-loaded via a front-firing slot port. The cabinet is supported and levelled using Wilson's heavy threaded spike and 'mechanical diode' arrangement

Contrasting his re-recording of The Allman Brothers Band's 'Midnight Rider' is a moot pursuit, as both have their merits, but Gregg's version seems to have a more loping bass element, and switching in the LōKē had one specific effect: it added to its prominence (or perhaps that should be presence), making the basslines easier to follow.

This turned out to be the primary benefit of adding a LōKē sub to speakers like the Sasha DAWs which don't actually need it. My recall of Sophias and Sabrinas in my room suggest that they may enjoy more of what the LōKē has to offer than the much larger Sasha DAW, but equally, I never felt either of them to be bass-shy either.

BRING ON THE BEEB...

Subwoofers, like surround sound – subtle surround, not grotesque – both reveal their worth by their removal. It's an old salesperson's gambit: you start a demo with the sub or surround speakers switched on, letting the listener get used to the sound. Then switch off either and the effect is – nine times out of ten – a sale. While this worked up to a point with the LōKē and Sasha DAW, the latter is so eloquent in the low-end that the subtlety was almost too elusive. It was time to dig out a mini-monitor known for rejecting attempts to add a subwoofer to it... ➔

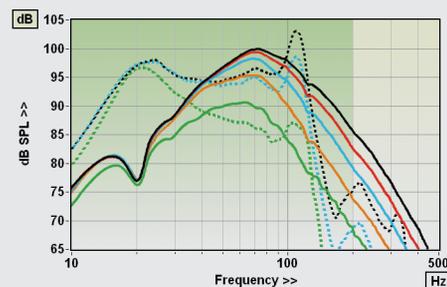


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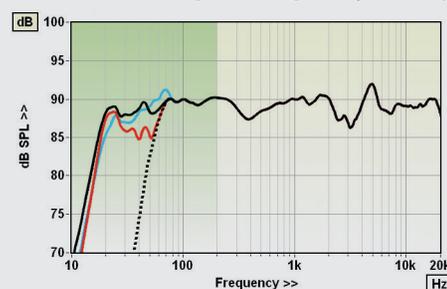
WILSON AUDIO LÖKĒ (+SABRINAX)

Tested with a likely partner for the LÖKĒ, the Wilson SabrinaX [HFN Dec '20], the sheer scope of the former's low-pass (LPF) and subsonic (HPF) frequency and slope options, plus phase, output level, parametric EQ and placement scenarios enables many possible response combinations. For the sake of expediency I left the subsonic (HPF) and PEQ features disabled for the 'flattest' VLF response and focused, instead, on the tunable (30Hz-125Hz, ± 1 Hz) LPF options while integrating the LÖKĒ with the SabrinaX. The latter's port has a 27Hz-85Hz range that supports the 60Hz-280Hz passband of the 203mm pulp woofer (all -6 dB limits), realising a 52Hz bass extension (-6 dB re. 200Hz) despite a steep LF roll-off [dashed trace, Graph 2]. However, when optimally integrated with the LÖKĒ using a 60Hz/12dB/octave slope [black trace, Graph 2], this takes the diffraction-corrected system response down to a rib-tickling 17Hz. The impact of higher and lower LPF frequencies [80Hz, blue; 40Hz, red, Graph 2] is clear, just as the residual notch at ~ 50 Hz may be further fine-tuned by boundary placement and steadily inverting the polarity of the LÖKĒ's output via its 'Phase Degree' facility.

In common with most modern DSP-governed subs, the LÖKĒ is very versatile. Increasing the LPF frequency from 40Hz in steps up to 125Hz results in a shift in the LÖKĒ's passband from 19Hz-98Hz to 42Hz-120Hz (all re. -6 dB) – working ranges that are not significantly influenced by the 12dB or 24dB/octave roll-offs [solid traces, Graph 1]. The long slot port is tuned to 22Hz with an effective 13Hz-134Hz (-6 dB) output when the LPF is set to its maximum 125Hz [dashed traces, Graph 1]. The peak at 111Hz, prior to a steep roll-off, is tamed once the LPF is set to 80Hz or lower [dashed blue trace]. Ultimate bass extension is influenced by boundary reinforcement and the LPF (and subsonic HPF, if applied) but useful output below 15Hz (-6 dB re. 100Hz) is perfectly achievable. There is some small penalty in 2nd harmonic distortion below 60Hz, however, where levels increase from $\sim 0.1\%$ to $\sim 0.9\%$ /50Hz and $\sim 9\%$ /40Hz (all re. 90dB SPL). PM



ABOVE: Nearfield driver (solid) & port (dashed) resp. for the LÖKĒ with LPF at 120Hz, black; 100Hz, red; 80Hz, blue; 60Hz, orange; 40Hz, green (all 12dB/oct)



ABOVE: SabrinaX/LÖKĒ resp. inc. nearfield summed bass (80Hz LPF, blue; 60Hz, black; 40Hz, red), freefield corrected to 1m at 2.83V. Dashed, without LÖKĒ sub

HI-FI NEWS SPECIFICATIONS

LF extension (-6 dB ref 100Hz)	<15Hz
THD 40Hz/80Hz/120Hz (for 90dB SPL/1m)	$\sim 9\%$ / 0.07% / 0.2%
Power consumption (Idle/Rated output)	8W / 630W
Dimensions (HWD) / Weight	527x352x552mm / 50kg



LEFT: Rear panel and OEM electronics are based on the 500W Dayton Audio SPA500DSP module with DSP menu and blue display. Single-ended (RCA) and high/low balanced (XLR) inputs are joined by filtered line outputs

organ on top of Danny Klein's bass guitar and Stephen Bladd's percussion, which adds up to a rhythm section to match The Rolling Stones at their best, and a mass of bottom octaves that's almost a haptic event.

ALL SHOOK UP

But let me put it another way: my wife ignores my hi-fi

activities the way any long-suffering spouse disregards their other half's obsessions. However, when Betty Kessler says, 'Have you changed your system? I could feel the bass', then something serious is afoot. Note that she said this when I was playing the LS3/5As with the LÖKĒ, not the Sasha DAWs. I could hear the liberation of the LS3/5As in the Geils LP, an album I have played dozens of times. It wasn't an increase in detail or information, because the LS3/5As already have those down pat. No, it was like jabbing them with a syringe full of steroids. This box rocks. Call it 'Thor's Ball-Peen Hammer'. ☺

HI-FI NEWS VERDICT

Having lost count of the powered subs I've tried, I thought there were no surprises remaining but the LÖKĒ turned out to be less brand-specific and more universal than Wilson may have intended. The Sasha DAWs barely exploited it in my room, so TuneTot owners craving more bass are the most likely to benefit. But don't think this is a Wilson-only subwoofer: the transformation with LS3/5As was near-miraculous.

Sound Quality: 88%

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Admittedly, Daryl Wilson probably didn't have BBC LS3/5As in mind as potential candidates for marriages with a LÖKĒ. And while I have enjoyed dedicated subs for LS3/5As [see HFN Oct '21], I still prefer to listen to them *au naturel*. But what the heck: I set the LÖKĒ to a 70Hz crossover with the Falcon Acoustics 'Gold Label' LS3/5As [HFN Dec '18], turned down the LÖKĒ's output level, and fed it The J Geils Band's eponymous, peerless debut LP [Speakers Corner/Atlantic SD8275].

If you haven't heard this recording, you need to know that the bass content is a three-pronged attack: Seth Justman's Hammond



ABOVE: Wilson Audio's LÖKĒ is offered in a variety of bright colours/grilles