

German Physiks Unlimited Mk II loudspeakers

by Alan Sircom



German Physiks is one of those brands that makes a fairly broad range of loudspeakers, but traditionally they all have three things in common; they are omnidirectional, they need large rooms to work well, and they need deep pockets to own. In some cases, make that very large rooms and very, very deep pockets; the top Gaudi Mk II finished in carbon fibre will set you back more than €300,000 per pair. But with room sizes at an all-time low and purse strings tightened to the point where you can pluck out a tune on them, something more down-to-earth was needed.

Ironically, given the nearly limitless budget needed to reach its top range, that down-to-earth model is called the Unlimited Mk II. It is designed specifically to bring the German Physiks omni sound into small rooms.

The key to the German Physiks sound is the carbon-fibre 'DDD' loudspeaker unit, which sits at the top of the Unlimited Mk II's simple, satin finish cabinet. And the reason why DDD is key, is it's the same mid-treble driver found in all the brand's speakers this side of about £35,000 and the same basic design as found throughout. As you go up the range, so the number of DDD units, the type of bass loading and the number of bass units in the system increases, but essentially the Unlimited Mk II could be considered the fighting weight version of some truly awesome loudspeakers.

The Dicks Dipole Driver (DDD) is based on a concept minted 35 years ago by mathematician and engineer Peter Dicks, although production samples didn't appear for another 15 years, under the German Physiks banner. Dicks helped create a design that addressed fundamental problems inherent to drive-units; specifically in terms of cone break-up, phase and directionality. The driver essentially works as a four-way system, at low frequencies working pistonically in its resonant range, then pistonically above resonance, next moving progressively into bending wave mode and finally using modal radiation at high frequencies. This is a massive oversimplification of some very sophisticated mathematical modelling, which resulted in a drive unit that looks like a downward firing horn, but behaves in some very clever ways. Those with encyclopaedic audio memories might recall a similar design from Ohm called the model 'F' that used a similar 'Walsh' technology, but put simply the DDD brings that design into the modern age, with use of materials like carbon fibre.

In fact the term 'put simply' neatly goes on to describe the Unlimited Mk II. It's that DDD unit, put simply. It's sitting atop of a vinyl wrapped pillar with a downfiring 200mm bass unit. Only the name on the 'hat' atop the DDD unit and a pair of speaker terminals mark it out as a speaker, and not a plinth on which you might use to display a bust in an art gallery.

The Unlimited Mk II has a reasonably simple demand when it comes to partnering amplification – current. It's not an especially demanding loudspeaker when it comes to the power output of an amplifier – you could ►

► happily use it with a good small 50 watt amplifier design, or impress your audiophile chums with a kilowatt powerhouse, because the loudspeaker is hugely tolerant of such things. What it likes though is good stiff current delivery. I used a range of amplifiers, everything from the Arcam A19 (not a good match) to the Devialet D-Premier (sublime) with valves and solid state and hybrids and everything in between. In my opinion, the best balanced ‘matches’ in a purely sound per pound manner (that’s pounds sterling, not pounds avoirdupois) were the Naim SuperNAIT and Sugden’s evergreen A21se.

The purpose of the Unlimited Mk II is two-fold, to keep the price low, and to make an omnidirectional loudspeaker that works in the smallest of rooms. That last demands some care with positioning, but perhaps not in the way you’d imagine. The mid and top ends are reasonably easy to integrate into a room, although they could do with the speaker being about 30cm from the rear and side walls. The bass, on the other hand, needs to be handled with a little more care. You may find the speakers need to be slightly further out into the room to integrate the deep bass with the rest of the speaker sound. This is in part because the upper bass to the treble is so well integrated, the disconnect between the bass and the rest of the presentation is that bit more noticeable if not right. But the good thing is you can hear when it’s in the right position

better, because suddenly there isn’t that half octave inconsistency at the far left hand of the piano.

The Unlimited Mk II takes some getting used to. How much getting used to depends on how much live, unamplified music you listen to in the flesh. If you go to regular concerts and recitals, the transition to understanding the Unlimited Mk II is fairly speedy, but if instead you listen mostly to recordings of that live, unamplified music it might take some time to shake off the time spent in front of boxes.

But when – if – you get it, you begin to hear things very differently. The pinpoint stereo image is gone, replaced instead by the sort of flow you get to hear in the concert hall, and the loudspeakers do a fine job of disappearing. One of the concerns here is when you go back to more studio-oriented albums, with a singer front and centre; if they become diffused, the overall presentation can be ruined. That didn’t happen here – even the a cappella version of Tom’s Diner by Suzanne Vega presented a right sized living, breathing and articulate person standing in front of the listener, rather than a disembodied floating head. The uncanny thing is that it did not matter where you sat in the room. German Physiks’ slogan sounds a little Marxist – “Free yourself from the tyranny of the sweet spot” (it could be ‘Audiophiles of the world unite! You have nothing to lose but your cushions.’) – but it’s a fair point, you can sit remarkably off axis and still hear a fully stereophonic sound.

Vocals aside, it’s orchestral music that really shows what the Unlimited Mk II is capable of, although one of those occasional Radio 4 documentaries that has an ‘aural soundscape’ proved fantastically enveloping. Saint Saens Symphony No 3 (Munch/Boston SO, Living Stereo) had a sense of musical occasion that is generally either connected to the beauty of the soundstage (at the expense of everything else) or the temporal information (also at the expense of everything else). ►

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► This cut through all that and just made it sound like the sound of music in your room. Neither a hologram of the concert hall, nor a tapping-foot's eye view (how's that for bad anatomy?); just the music plain and simple. I moved over to Sigur Rós '0' album, and stayed there through the whole emotionally draining ambience of it all. That becomes so enveloping, it's as much a therapy session as a musical experience, and you come away entranced and ultimately uplifted for going through those feelings. They perhaps don't 'rock out' too well.

The best way of describing the Unlimited Mk II performance is it's a bit like listening to a live recording in an adjacent room, only without any of the attenuation the walls create. You know there's a live event taking place, because the sound is dynamic and 'real', but there's no imagery, and no need for imagery. If that makes any kind of musical sense to you, the German Physiks sound should be checked out.

Bass, even when properly integrated, is designed for use in a small room, so don't expect the deepest, most delineated bass possible. I'd also say if you are really into music that lives in that 50Hz-80Hz region (say, a lot of dub reggae or organ music... and that's probably the only time those two genre make happy bedfellows) you might find the difference between pistononic and bending wave designs just too abrupt a change and will settle for a series of dynamic drivers (the same can be said for dynamic subwoofers with electrostatic panels), but I think for those who really 'get' the German Physiks sound, that wouldn't be a compromise, it would be a sacrifice.



That's the thing about the Unlimited Mk II. It is not for everyone, but it should be on everyone's list. It has one of those sounds that if it gets into your head, you will not be happy with anything else, and even the least 'hi-fi' sounding box of cones and domes will sound contrived. +

TECHNICAL SPECIFICATIONS

Operating Principle: two-way loudspeaker with 360° surround radiation

Frequency Response: 32Hz-24kHz

Sensitivity: 88dB/W/m

Impedance: Four Ohms

Power Handling (Nominal/Maximum): 110W/170W

Amplification required: Minimum 90W/4ohms

Crossover frequency: 200Hz

Crossover slopes:

DDD Section: 6dB/octave (electronic), 18dB/octave (acoustic)

Woofer Section: 18dB/octave (electronic & acoustic)

Input connectors: 1x binding posts

Drivers: 1x carbon-fibre DDD driver, 1x 200mm woofer

Finish: satin white, black, light grey or dark brown vinyl

Dimensions (WxHxD): 24x105x24cm

Weight: 28.9kg

Price: £8,900 per pair

Manufactured by: German Physiks

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