DPA 4055 Kick Drum Mic

JON THORNTON test a condenser mic capable of taking the SPL of an aircraft carrier take-off deck

The latest addition to DPA's instrument mic range makes no bones about its intended purpose — it's badged and promoted as a kick drum microphone for both live and studio applications, and therefore enters something of a crowded marketplace. What makes it distinctive though are two qualities. The first is that unlike many competitors, it majors (as you'd expect with DPA) on a natural, flat response rather than a 'pre-voiced' sound. And the second is that, unlike many other dedicated kick drum microphones it's a capacitor rather than a dynamic design.

It's worth a bit of historical context here. Perhaps the first 'standard' for kick drums was the venerable AKG D12. But at launch, the D12 was marketed (and used) as a general-purpose instrument and vocal microphone, and apart from the usual slight bumpiness typical in dynamic mics, its response was pretty flat in its range. It didn't take long though, for engineers to discover that its good low-end response and high SPL handling made it eminently suitable for bass instruments and kick drums, and it found its niche. Fast forward several decades, and the D112 (aka the 'egg') was launched. In response to changing musical tastes, this time the response was specifically tailored to scoop out the low mids and emphasise the 'click' of the beater with a presence peak — add a healthy dose of compression and you get an instant 1980s kick drum sound. That trend to 'voicing' kick drum microphones continued thereafter, with the now ubiquitous Audix D6, Shure Beta 52A, Beta 91A and many others all bringing their differing takes and sounds.

User-friendly design

The 4055 is supplied with both a hard shell case and a soft pouch, and comes with its own specific clip. This in itself is worth a mention, as it slides over the body portion off the mic and clamps firmly by twisting a knurled ring. In conjunction with the slightly asymmetrical shape of the body, this means that the overall cross-section of the assembly is reduced, making tricky positioning through holes in the resonant head remarkably easy. It's the first sign that DPA have really thought about the end user here — and the good news carries on in terms of overall solidity and build quality. It certainly looks and feels like something that will withstand the rigours of life on the road as well as the studio.

Internally, the 4055 features a pre-polarised capacitor capsule with a 17mm diaphragm. Polar pattern is fixed, with what DPA describe as 'open-cardioid' which is properly wide, almost hemi-spherical up to about 8kHz. Quoted frequency response is flat up to about 5kHz, with a gentle lift above that to +6dB at 10kHz. Sensitivity is, as you'd expect, on the low side at 2mV/Pa, but this is unlikely to be an issue in this particular application, and helps towards achieving a maximum SPL handling of 164db SPL — or a more useable figure of 159dB with less than 1% THD.

Unscrewing the windshield reveals what looks for all the world like the business end of the company's 4011 or 4015 instrument microphones, mounted in a flexible shock-mounting assembly. There's plenty of space between the capsule and the windshield assembly for it suppress air blasts effectively — and it is very effective. Even in the worst case scenario (just outside of the port on the resonant head) there's no trace of wind induced overload in most cases.

Warm to the sound

And it's in that position that I first open up the mic. There's good news and bad news here. The good news, and perhaps slightly unexpectedly, is the sound. Without any excessive voicing, you would expect that you wouldn't get an 'out of the box' sound. The reality is that it sounds just fine out of the box. It's different, for sure, but there's a weight and, dare I say it, a warmth to the sound that takes you by surprise.

Certainly there's scope to sculpt the sound with some EQ, but surely that's better done by you than the mic's designer? The bad news is that you might need to pay far more attention than ever to tuning and damping the kick. That's not to say that the 4055 is ruthlessly revealing, but it will reward the effort to get the best sound at source you can.

Changing tack and moving to the inside of the shell (delightfully easy to poke through by the way), and the 4055 continues to impress. There are two takeaways for me here. The first is the low mid attack you get to the sound, backed off about three inches from the front skin and angled toward the beater. Coupled with a very useable proximity effect, the overall sound is incredibly solid but still natural. The second is just how tuneable the mic is simply in altering working distance and angle — it seems far less susceptible to accentuating odd little in-shell resonances as you move it — in part I assume to that smooth off-axis response.

In all, the 4055 is something of a revelation — although so is the price (MSRP €560 ex VAT). I dare say that for some, the speed of simply slinging a Beta 91A on the kick drum pillow and taking that sound will still win the day. But DPA have succeeded in redefining exactly what a kick drum mic should be — and what you get for the money here is a mic that is supremely adaptable, and equally capable of working in pop, rock, jazz or acoustic contexts. And all wrapped up in a thoughtful, sturdy package that will earn its keep in any environment for many years. There will be at least one in the mic cupboard shortly...

resolution/ VERDICT

PROS Sturdy 'tour ready' design; neat useability design touches; great wind / shock suppression; solid, open and dynamic sound; takes EQ well; no pre-voicing

CONS If you only think of kick mics as dynamics, then price... but as a condenser, the 4055 is around a sixth the price of a U47FET!

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