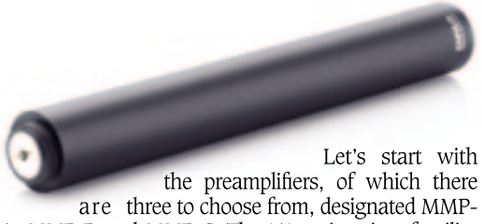
DPA Reference Standard

DPA has reinvented and refreshed its classic 4000 microphone series with modularity and preamp options and augmented it with the more affordable 2000 series. JON THORNTON counts himself lucky.

If there's anything that I could almost guarantee would have most audio professionals salivating in anticipation then it's the small Pelican case that I have sitting next to me as I write this. No, not the case itself (although they are very nice objects), but the fact that sitting inside it is a pair of nearly every combination of DPA's new reference standard microphones. The new range marks a significant shift for the company, as it's modular in nature, featuring a range of preamplifiers and capsules that can be freely interchanged and combined. While some of these components have a certain familiarity about them, there are also some less familiar additions. Interestingly, the website promotes the separate capsules and preamplifiers, but also specific combinations as individual microphones. At the same time, some previous models have disappeared — suggesting that the new modular designs have or will replace them at some stage.



Let's start with the preamplifiers, of which there are three to choose from, designated MMP-A, MMP-B and MMP-C. The 'A' variant is a familiar pencil design, measuring just shy of 6-inches in length and feeling reassuringly weighty at 140g. It's plain and simple looking, with no obvious external controls although it does have a -20dB pad, engaged by poking a pen or pencil down the XLR end of things to activate a pushbutton switch.

The MMP-C preamplifier is the most compact of the three on offer, measuring just over 1.5-inches, and feeling very much more lightweight. While the obvious visual differences from the MMP-A are its size and the fact that it loses the -20dB pad switch, there are also some changes internally. Rather than just being more compact, DPA has also elected to imbue it with a slightly different tonal character. DPA has made a clear decision that the output stages of the new reference standard series should be transformerless. The justification for this is in weighing up the pros and cons, and coming to the conclusion that the advantages of transformers (better common mode rejection, longer line driving capability) are outweighed by the disadvantages — chiefly the inevitable sonic colouration, and the physical dimensions required for a decent performing transformer. The problem here is that this might compromise the physical dimensions of a microphone body, and therefore its acoustic influence on the capsule. The MMP-A and MMP-C therefore employ what DPA refers to as 'Active Drive' — essentially an impedance balanced (not symmetrical signal balanced) output stage. CMRR figures range up to >60dB and while higher figures could have been achieved with a transformer coupled output stage, further gains here were judged to be outweighed by the disadvantages outlined above.

Finally, the MMP-B will be familiar to anyone who's used the 4017 shotgun microphone, as it looks just like half of the old 4017. Incredibly lightweight, the MMP-B, features two rotating rings that switch a low cut filter (120Hz @ 6dB/octave) and high frequency shelving boost (4dB @ 8kHz) in or out of circuit. In addition, there's a permanent third order HPF at 50Hz to tame the worst of any sub-sonic/handling noise.

There are some significant variations in published specs for each of the preamplifiers. The MMP-A posts the best results in terms of CMRR (>60dB), noise (0.5uV pin shorted) and maximum output (>5V RMS, >16V peak). The MMP-C manages a CMRR of >50dB, marginally higher noise and a lower output level, while the MMP-B lowers CMRR to >40dB with more than twice the noise of the MMP-A and the lowest output levels of the three. Admittedly, in my testing none of these performance figures were ever an issue but in some applications (RF/noise heavy environments, longer cable runs, quiet sources), the MMP-A is clearly the body of choice.

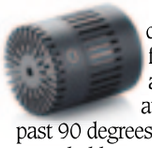
Moving on to the available capsules, and these are split into two categories — derivations of the familiar 4000 series capsules, and the new 2000 series. The MMC4017 capsule is a shotgun design, with a supercardioid response using an interference tube. When mated to the MMP-B, it looks exactly like its predecessor, the 4017, and by and large delivers the same results — good side and rear rejection coupled with a smoothness of off-axis response that is unusual for such a design. One key difference with the new design is that the low cut filter kicks in slightly lower down — the old 4017 came in at 300Hz whereas the new combo moves this to 120Hz. Overall, I found this to be an improvement, as I have found the 4017 to be a little thin sounding in the past with the filter engaged.

The whole assembly is, like its predecessor, lovely and light when sitting on the end of a boom and was used with great success on a couple of ADR sessions. Here that smooth off-axis response really pays dividends as you still get the right tonality to make the lines 'fit', but end up using much less corrective EQ to combat any objectionable room tones.

The MMC4006 omni capsule is a conventional, single diaphragm pressure design, and ships with three different grids to modify the on-axis and diffuse field HF response. Mated to the MMP-A preamp it looks quite different to the 4006-TL — you lose the gradually tapering body of the 4006, which is replaced by a much more severe taper at the capsule. Other capsule options here are the MMC4011 cardioid, and the MMC4015 wide cardioid and these look pretty much identical to the front ends of the 4011-TL and 4015-TL.

So, shootout time. Rigged for initial comparison were a pair of the new 4006 capsules mated to the MMP-A and MMP-C bodies, together with an old (transformer output) 4006. For clarity, I'll refer to these as the 4006A, 4006C and 4006 from now on. All three were fitted with the 'default' nearfield grid, and preamps were the standard desk preamps on an SSL Duality.

An initial walk around each microphone with spoken voice shows a couple of things. First, the overall response is incredibly similar. And second, nothing in the new designs has diminished that almost unnerving accuracy, detail and reach that I love about the 4006. Positioning the three contenders as single overheads, slightly forward of a drum kit reveals some more nuanced distinctions. The 4006A seems ever more slightly open here, both in terms of HF detail and in a clear, unclouded and extended low frequency response. Unsurprisingly, the differences between the 4006A and the 4006 are the same that I experienced when first comparing the 4006-TL to the original 4006. Here, though, the differences between the 4006A and 4006C become more apparent. Certainly, it's a subtle shift, but the 4006C seemed to soften the 'bite' and 'edge' of the snare drum and cymbals — not in a way that dulls the sound or attenuates the HF response, but in a way that just makes the sound a little less clinical.



Swapping capsules now for the 4011 cardioid on a MMP-A body and the fabled off-axis smoothness is evident in a walk around. Yes, there's a little HF attenuation apparent when you move past 90 degrees or so, but the overall impression is of a remarkably consistent, progressive drop in level across the frequency range, with any obvious colouration only really evident at the rear of the microphone.

In comparison, the 4015 wide cardioid delivers much more consistency at the rear of the microphone, but seems a little more directional in terms of HF. Comparing both as single mics on an acoustic guitar, relatively close up, and the 4011 delivers a much more balanced performance, with a less pronounced proximity bump than the 4015. But switch the source around and things change. After some experimentation with various permutations, a spaced pair of 4015Cs on a drum kit delivered a superb overall kit balance, with terrific imaging and attack, only requiring a little bit of fill-in for the kick drum.

So far, so good but in truth what you are getting here is a modular take on some existing and well established capsule designs, with the benefit of a little more variety in preamplifier size and sound. The real new kids on the block are the 2000 series capsules, the MMC2006 omni and MMC2011 cardioid.

Promising 90% of the performance of the 4000 series but at less than half the price, these differ as they leverage the capsule technology employed in the DPA miniature microphone ranges. Two of these capsules are re-engineered into a single double-diaphragm assembly, with the aim here being to preserve the transient and frequency response of a miniature diaphragm, while improving overall signal to noise. The 2011, although a standard cardioid pick-up, also employs a fairly pronounced interference tube in its design, which gives rise to worries about that famed off-axis response being preserved, as well as being somewhat bulkier than the equivalent 4011 capsule.

The 2006 omni capsule doesn't come with the interchangeable grids of the 4006, instead having an HF response that is fixed at something mid-way between the responses of the diffuse-field and nearfield grids of the 4006. Comparing a 2006A with a 4006 equipped with the nearfield grid reveals, unsurprisingly, a slightly more present sound from the 2006 with its response bump around 13kHz and this works in its favour when working at a distance from the source. There's still a great sense of clarity and detail to the sound, but where it differs chiefly is in the definition and resolution at the bottom end. It's there, but doesn't have quite the extension or clarity that the 4006 achieves.

The 2011 cardioid is even more markedly different from its 4011 inspiration although it seems this is a deliberate design decision. Off-axis response is still smooth but in a narrower frequency range, with a significant drop in low and high frequencies even slightly off-axis. That said, it sounds natural and not (as I was expecting given the interference tube) at all 'notchy'. And there's something to be said for these characteristics if spill rejection or higher levels of gain before feedback are the order of the day. Indeed DPA's own marketing material suggests that the 2011 is geared more towards stage than studio but you shouldn't let that define them entirely. With the 2011 and 2006 I did feel that they worked better close-in than at a distance, but there are times when having a broader palette is useful, when less can sometimes be more.

Reinventing and refreshing what some would regard as classic microphones was always going to be a challenge but I think that DPA has managed this extremely capably. At one level, the new preamplifiers and 4000 series capsules remain faithful to the original designs and values, but add flexibility in tone and ergonomics. Throw in the 2000 series capsules and you simultaneously address other audio production needs while providing a more accessible, entry-level price point to the reference standard range that is easily upgradeable. And if a sweetener was needed you need only look at the range of available mounting options and accessories, including the nicest stereo bar I've ever seen, Rycote designed 'lyre' suspension mounts, and compact XLR connectors so as not to nearly double the length of the compact MMP-C in visually sensitive scenarios. ■

PROS

Modularity, a modest selection of preamps and capsules would cover almost any requirements; 4000 series capsules retain all the usual DPA values; discrete miking possibilities with MMP-C and mounting/cable options; 2000 series capsules provide a lower cost point of entry to range.

CONS

2000 series capsules lack absolute reach and definition of 4000 series stablemates.

Contact

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