ON TEST

DPA 2028 vocal mic

Simon Allen reviews DPA's 2028 supercardioid vocal condenser microphone . . .

ABOUT THE EXPERT
SIMON ALLEN
Simon Allen is an internationally recognised freelance engineer/producer and pro audio professional with over a decade of experience. Working mostly in music, his reputation as a FOH and studio mix engineer continues to reach new heights.
simona@lsionline.com

DPA's reputation for high quality products is well known, but along with quality and performance usually comes a high price tag. The new 2028 stage condenser microphone, however, is aimed at delivering an excellent vocal microphone with the sonic qualities of the company's flagship d:facto 4018 series at a lower price point.

There's quite a choice available now for modern vocal condenser microphones for the stage, but to have an option in this price range from DPA is really intriguing. Released only recently, demand is already high - so, I'm clearly not the only one looking forward to trying this one out . . .

OVERVIEW

This microphone is labelled as delivering a supercardioid polar pattern, but a closer look reveals that it's almost a combination of both cardioid and supercardioid. This is really clever, as it benefits from the directivity and separation of a supercardioid, while also retaining the rear rejection of a standard cardioid pattern. It's easy to see how this suits the live stage scenario; offering greater gain before feedback even when used with a wedge monitor. However, when compared to other supercardioid condenser mics, the polar pattern here is quite remarkable. More on these polar pattern characteristics will follow later in this review.

The 2028 sports a triple pop filter design. We've seen this approach to built-in pop filters for hand-held mics from other manufacturers, but DPA has executed this with great effect. Firstly there is the typical exterior black metal grille, followed by a foam windshield, and then an inner metal pop filter that looks like a very fine mesh.

Besides these well-considered materials, DPA has also made sure there's a generous gap between the top of the grille and the capsule inside. This distance helps separate the plosives as well as allowing the vocalist to get as close as they like to the microphone.

This pop filter design worked really well; it's always a pleasure when you don't have to compromise on your high-pass filter setting to avoid any sudden thuds. In addition, the outer grille and inner windshield can be detached and rinsed. Behind the pop filter is DPA's 'Advanced Shock Mount' system, designed to ensure only the vocal content is captured rather than any handling or stage noise. The DPA website demonstrates this interesting design in a video clip, where the capsule containing the diaphragm appears to pivot within the microphone. While I didn't poke around inside too much - to avoid breaking anything - I didn't detect any handling noise when in use.

Talking of handling, we must mention the feel of the handle found on the 2028. There is a real sense that this microphone was built to survive a rock'n'roll lifestyle, but it's still slender in shape and size. It's slightly narrower than

you might expect, which leaves a curve just behind the grille of the capsule. Hopefully this will subliminally encourage an artist to hold it correctly too. After all, anything that can be done to minimise someone cupping their hand around the capsule has to be worth a shot. I was really impressed with how comfortable this microphone was to hold, even with a cable attached. The mic clip that comes with the 2028 is a good, simple design which works well. Even if the microphone is dropped into the clip rather than slid, it doesn't fight and still manages to be secure.

I have been testing the wired version of the 2028, but as with other capsule designs from DPA, wireless adapter configurations are also offered. There's the SE2 adapter for use with Sennheiser 2000 / 6000 / 9000 / D1 / Evolution transmitters, or the SL1 adapter for Shure, Sony or Lectrosonics transmitters.

"A closer look reveals that it's almost a combination of both cardioid and supercardioid. This is really clever . . ."

GREAT IMPRESSIONS

Let's look at the supercardioid polar pattern again. I lined the 2028 up on stage with three other vocal microphones and each had a wedge monitor in front. I was able to achieve the same level before feedback than that of a regular well-known dynamic mic. With some slight treatment, this could have even been perceived higher thanks to the extra clarity. That's pretty good for a condenser microphone. Even with a pair of wedges behind the 2028 at 135° - 150°, there was plenty of gain before feedback.

The success of this polar pattern doesn't finish there either. When the vocalist moves off-axis a little, there is hardly any detectable colouration - the level simply drops a little as you move further round. This is really unique, even compared to some of DPA's more expensive capsules.

When considering proximity, this microphone works with both forward and back placements, but delivers a particularly present result when used really close and tight. It offers a slight shine to the sound without being harsh, and the warmth isn't overpowering, proving very natural. With this in mind, the significant benefit is the way it minimises cross-talk and bleed from other sources on stage very effectively. This obviously lends itself well for artists using IEMs as well as allowing the FOH engineer to bring the vocal forward in the mix with ease.

DPA quotes the dynamic range of the 2028 to be 117dB, with a max SPL of 160dB. I always take these numbers with a pinch of salt, as values from manufacturer to manufacturer differ when in the real world. Here, however, the dynamic range must be every single one of those 117dBs. There are other live vocal microphones available today that quote a higher dynamic range, but don't perform quite as well as this 2028 did for me.

Ever since we've seen DPA's CORE technology arrive in the company's headset mics and 4099 instrument mics, it feels as though the dynamic capability of DPA microphones has moved on to a new level. Equally, there's no need for concern about extreme input levels either, as this condenser microphone handled anything I threw at it.

DPA 2028
TECH SPEC

FEATURES

- Dimensions: 48mm Ø x 188mm
- Weight: 286g
- Capsule diameter: 19mm
- Frequency response: 20Hz - 20kHz
- Frequency range: 100Hz - 16kHz
- Dynamic range: Typ. 117dB
- Max. SPL, THD 10%: 160dB SPL peak
- Rated output impedance: 150Ω
- Minimum load impedance: 1 kΩ
- Current consumption: Max 2.5 mA
- Connector: XLR-3M. Pin 1: shield, Pin 2: signal + phase, Pin 3: - phase
- Max output voltage, RMS: 9 Vrms; 19 dBV; 28 dBu

A consistent trait in many DPA microphones, which contributes to that "DPA sound", is their fast transient response. This performance feature on a vocal microphone, I believe, helps in preserving speech intelligibility, which in turn makes sitting the vocal into the mix much simpler.

Finally, no microphone review would be complete with a look at the frequency response. The 2028 is quoted to offer an effective response all the way between 20Hz and 20kHz. In a similar vein to the dynamic range values, DPA quotes a frequency range of ±2dB between 100Hz and 16kHz. At the low end, this is due to a permanent third order low-cut filter at 80Hz. I haven't found this curve to be unwanted or intrusive in any way for vocals. At the high end, I didn't find the roll-off to be at all dramatic, with plenty of detailed highs available.

Other live vocal condenser microphones offer a wonderful 'sparkle' to the top end, often with a slightly hyped HF region before rolling off, sometimes quite dramatically. While this suits many applications producing a more 'studio' sounding result, not all artists and engineers like this for certain scenarios - hence, one reason the SM58 continues to be underlined in red on some riders. The 2028, however, has a much

"There is a real sense that this microphone was built to survive a rock'n'roll lifestyle, but it's still slender in shape and size . . ."

less hyped HF region, which rolls off very gently indeed. This leaves DPA's frequency diagram showing frequencies up to nearly 40kHz. I believe the top end is slightly more coloured than the flagship d:facto 4018, but isn't harsh or over-cooked in any way.

CONCLUSION

Like many, there's no point denying I am a fan of the DPA microphone family, and therefore I approached a product like this with a high level of expectation. That expectation was certainly met with the 2028, and even exceeded thanks to a few pleasant surprises too.

While the sound is unmistakably that of DPA, the natural sound delivered by this mic is more extreme than you will perhaps be prepared for. Thankfully, here we have a microphone that requires very little processing, if any, for an affordable price. With such a pure sound from the moment you're connected, time can be spent finessing the sound or being creative.

While this might be a simple vocal microphone, there are a few surprises with this new release,

too. The supercardioid pattern has been carefully crafted for the stage, but with a new emphasis placed on the off-axis response. Internally, the 2028 is built really well too, sporting a great pop filter design and advanced shock mount system. It definitely looks like a space will need to be found in my mic box for the 2028!

www.dpamicrophones.com