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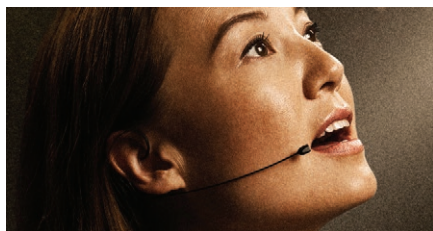
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REVIEW

BY PAUL VNUK JR.



DPA Microphones d:fine Series headset microphones

Techniques for an unusual approach to vocal recording—and a great mic to do it with

For this issue on recording vocals I thought it would be worthwhile to look at an area of vocal recording we don't often dwell on, and report on an exceptional mic for the task.

I have been recording and running front-of-house sound for many years now. The performances range from spoken word (for sermons, seminars, dramatic readings), to plays and musicals, with a cast ranging anywhere from a single person up to ensemble casts of 10 to 14 people. The best tool for this job in recent years, fast replacing the lavalier-style microphone, is the over-the-ear or headset microphone. I have used many makes and models over time, and my hands-down favorite is the d:fine Series from DPA Microphones.

In this review I will point out the specifics that make the d:fine an excellent choice for serious recording of stage vocals, while teaching some general tips for getting the best recorded and live sound from headsets of any type.

More than fine

Like most headset mics, the d:fine consists of an ear piece with an adjustable attached boom and a cable made to connect to a wireless body pack. We will take a more in-depth look at how it fits below.

The d:fine is available in two polar patterns, omni and cardioid, each with a number of configurations and colors—Black, Beige, Brown and Lime Green (great for when your actor is an alien monster...only half kidding), in several different boom lengths, with single or dual earpiece.

A few specs (see the DPA website for more): The omni has a frequency range of 20 Hz–20 kHz with 3 dB soft boost at 8–15 kHz, and the cardioid's is 100 Hz–20 kHz with 3 dB soft boost at 8–20

kHz. Self-noise is 26 dBA (omni) and 28 dBA (cardioid), and max SPL is 144 dB.

DPA will provide pretty much body-pack connection for the d:fine (Lemo, TA4F Mini-XLR, mini jack, etc.), but I recommend DPA's own Micro-Dot connector (same as on the 4099 d:vote series of instrument mics reviewed in our June 2010 issue), as this allows the most compatibility; you can buy separate adaptors for any of the above, which connect to the Micro-Dot. That way you're not tied to any one system.

Each d:fine ships with a large molded nylon case, color-coded identification clips (so you can tell which mic is on whom from front of house), wind screens and a makeup guard.

Wearing the mic

Almost as important as a headset mic's sound is its comfort, and the d:fine excels in this area. While much of the competition make use of rigid or bendable wires for fitting the mic to the ear, DPA chose to use a thin flexible wire that wraps around the ear with an under-the-ear base that is contoured to the ear's anatomy. DPA is very specific about how it should be placed on the ear, and it's best to read the manual or watch the online video on DPA's website.

There is a small divot on the earpiece that sits on the small bump at the base of your ear, not on the earlobe, and the top wire goes up and over the top of the ear, not around the ear. Once properly placed, the d:fine is so light, I have had users forget they are wearing them.

DPA also includes a small collar clip to help control the placement and tension of the cable. It must not be so loose that the cable flops around, but not so tight that it pulls the mic out of position.

Additional to being available in various boom lengths, the d:fine is adjustable and you can move the mic capsule forward and back to get the best placement by the mouth. It's best to be close to the corner of the mouth when at all possible, never in front of it.

Lastly you want the capsule to be as close to the face as possible. The d:fine has a small face guard that allows skin contact, but I get the best results when the d:fine floats a few millimeters away from the cheek. This is especially important if the person has a stubbly beard, which can occasionally crackle against the mic.

Sonic setup tips

The main reason I gravitated toward the d:fine over previous models was due to DPA's reputation for pure and clean sound. With the d:fine I found myself using much less eq on my miked vocals, which not only gave improved sound but also meant less struggle with feedback.

The goal is to have the person sound as close as possible to how they would sound standing next to you having a conversation, both in the room and over the sound system. Start by ringing out the mic in the room while the subject wears the mic but is silent. This will give a good indication of the overall volume threshold you have to work with as well as the troublesome sonic nodes of the room.

Next have the subject start to speak or sing; their voice will naturally trigger additional resonances and peaks that you will need to rein in with eq. After finding the best balance, you can then start to factor in compression and even de-essing if that is an option (most digital consoles feature both). When I can, I will set up a compressor with

5-10 dB of gain reduction, with a medium attack so it sounds natural. I will set the release fairly fast and timed to the rhythm of the speaker's diction.

Which polar pattern and when?

As DPA offer both omni and cardioid models, you may be wondering which is the best choice for you and your room? Surprisingly, it's probably the reverse of what you may think.

In a large reflective room you'd probably expect the cardioid to be the champion, but omni may be the better choice. If you have used omni-patterned mics on vocals in the studio, you will know that they are the least prone to proximity effect, the low-end buildup that happens as you move closer to a mic. On a cardioid mic right by the mouth, increased proximity effect will cause bass buildup that can lead to feedback as well as being more prone to plosives, which in a room with subs is not pretty.

Still, while the omni is my usual choice, I do keep one cardioid d:fine on hand for a few reasons. Occasionally, if the room is very empty and reflective, then the cardioid pattern can help save the day. Next, if the speaker is on the quiet side, a cardioid can help me zero in on the voice to get the level I need. Lastly I will use a cardioid occasionally in large-ensemble productions when two actors or singers are very close and

invading each other's personal space. Here the tighter pattern can help cut down on phase cancellation between crossing polar patterns. When I do use the cardioid model, I always use the included wind screen as it helps lessen plosives and breath blasts.

One last thought: While omni is easier to work with in *most* rooms, with *most* people, *most* of the time, if you have a controlled professional vocalist in a nicely treated room, the cardioid will give the tightest, most focused results.

Final application thoughts

One: speak up! The more the talent projects, the less work the mic has to do and the less room sound creeps in.

Two: Although in a live setup you mix for the room, have headphones on hand, as they will allow you to hear what the mic is hearing, and headphones aid in tweaking both the eq and gain level as you will better hear the echoes in the room and help assure the best quality of your recorded tracks.

Three: When possible, learn the script and practice riding the faders. The fewer open mics you have at any one given time, the better. In my world, manual rides usually work better than gates, which almost always lose a word at the worst possible time, or muting, which sounds unnatural. A good trick here is to find an acceptable median volume with all of the mics on at

the same time. Then simply bring them up and down by 3–6 dB as needed.

Conclusions

Recording live productions, dramas, and seminars can be challenging, but it can also be a fun and rewarding alternate revenue stream for your studio. And while my suggestions can apply to any headset mic, I must reiterate that of the many headset mics I have used in my work over the past decade, the DPA d:fine is easily the best so far. It's lightweight and has a magnificently clear sound that gives me studio quality in a live situation. What more can one ask? ➤



Prices: omni, \$559.95; cardioid, \$599.95 (prices for single-ear versions with Micro-Dot connectors; dual-ear versions and added bodypack connectors can add \$80 to \$150)

More from: DPA Microphones, www.dpamicrophones.com