

CAD M179 and M9

Two microphones that share a similar capsule but have a completely different take on how they are implemented. We're looking at a valve cardioid and fully variable pattern non-tube incarnation, or rather **JON THORNTON** is.

CAD MICROPHONES MAY NOT be the most well known brand on this side

of the Atlantic, but they have garnered over the last ten years a significant reputation in their home territory as capable studio microphones at an affordable price. Unlike many other microphone manufacturers in this particular market sector, the CAD range does not employ old Eastern European capsule designs, invariably assembled in China or the Far East, but instead uses capsules that are designed and manufactured at CAD's home base in Ohio. Both microphones being looked at here feature the original capsule designs from CAD's Equitek range, but are repackaged with new electronics to achieve superior performance.

First up is the M179, which is a side address, large diaphragm capacitor microphone with a variable polar pattern. First impressions are of a good, rugged if somewhat unusual visual design. Featuring a dual-sided, externally biased 1.1-inch diaphragm, the M179 offers a continuously variable polar pattern from figure-of-eight through to omnidirectional. The polar pattern is selected via a large thumbwheel, which has a slight detent point at the cardioid setting. Fairly large switches also allow a 20dB pad to be selected, and a high pass filter with a roll-off point of 100Hz. While the filter's slope, at 6dB/octave, might not be sufficient to really hold low rumbles and handling noise in check, it is nice to see switches that don't require surgical instruments to use. For the sake of repeatability though, it would have been nice to have a detent position at each of the main polar patterns rather than just the cardioid pattern.

When hoisting the M179 onto a stand for the first time, there was a worrying amount of movement from within the mic body, which prompted me to think that something had come adrift in shipping. Further investigation with the aid of a screwdriver revealed nothing untoward, but the rubber shockmount assembly for the diaphragm did seem to be a little on the loose side, and allowed a significant degree of movement.

The frequency plot that shipped with the microphone was, I assume, the omnidirectional plot,



and shows a gently rising response from 1kHz up to 15kHz, with the usual bumps in response at the high end typical of large diaphragm designs. CAD has gone to some lengths to improve the electronics on this microphone, and has opted for using high-speed op-amps rather than discrete transistors. In addition, the power supply circuit has been updated in the quest to improve dynamic range and self-noise. On this subject, the literature and product manual is very specific in several places about the power requirements for the microphone, stating that phantom supplies should be capable of delivering at least 8mA between 24 and 48 Volts. While this shouldn't be a problem for many mixing desks, it does imply that the microphone may not be happy with heavily loaded phantom supply rails.

In use, the M179 sounds at least as good as its quoted figures with respect to self-noise (11dB equivalent SPL, A-weighted), and has a healthy output level. With the omni pattern selected, it sounded fairly open and pleasant, with good bass extension and a useable, if not outstanding high frequency response.

With the cardioid pattern selected, though, it was less convincing - particularly close up on acoustic guitar. Here, the sound became a little on the harsh side, almost brittle in tone. While the M179 compared quite favourably in omni mode with an AKG 414 on vocals, in this particular application the 414 won hands down.

Moving on to the M9 valve microphone then. The M9 is a kind of intermediate stage between CAD's own VX2 valve microphone and the solid-state design of the M179. While the VX2 uses two valves, one for the capsule head-amp and the other for the output stage, the M9 uses a valve for the capsule head amplifier married to the same high-speed op-amp circuitry developed for the M179.

The valve in question is the ubiquitous 12AX7 type of Russian manufacture, and sits in what is a very striking blue microphone body. Ventilation slots in the back of the microphone allow you to see the valve glowing away, which is nice, but more importantly means that access to the valve for service and replacement is a relatively easy job involving the removal of just four screws.

The M9 ships in a custom flight case, together with a cradle shockmount, the external power supply/audio interface unit, and a 30-foot 7-pin XLR lead to connect this to the microphone. Again, fairly chunky front panel switches allow the selection of a 16dB pad and a high-pass filter

with the same characteristics as the one on the M179.

The M9 features a similar 1.1-inch gold sputtered

diaphragm to the M179, but in this case offers a fixed, cardioid response. The accompanying frequency plot indicates a pretty uniform low-end response, rising slightly above 1kHz, and with a noticeable peak at around 15kHz. In practice this makes the M9 very useable on most vocals, with sufficient definition at the top end to capture the nuances of delivery, and with a low frequency response that stays warm sounding without becoming muddy, even when set very close to source.

Used on solo and ensemble strings it also gave a pleasingly balanced sound. While it couldn't match the absolute detail of the solo strings that was provided by a Brauner Phantom in the test, on ensemble pieces this was something of a virtue as it managed to disguise tiny imperfections in the playing.

On balance, the M9 sounds at least as good as budget conscious valve designs from the likes of AKG and Rode, with the added bonus that its striking design can help make vocalists feel that something really special has been put up in front of them. And at its current pricing, which is somewhat below the competition, it merits a careful listen. ■

PROS

M179: Nice big chunky switches; continuously variable polar pattern.

M9: Striking design; ease of maintenance; pleasant, useable sound; price.

CONS

M179: Slightly suspect diaphragm suspension; cardioid response sounds a little thin.

M9: Absolute high frequency detail a little lacking; high-pass filter may not be aggressive enough for some applications.

EXTRAS

Each side of the extra large Optema condenser capsule in the CAD VX2 mic has its own independent tube head amp



and output amplifier, including separate output transformers. The dual tube design allows the head amp tube to be optimised for low noise, while the output tube is optimised for driving the transformers and cables. Polar pattern switching is done at the output of the microphone rather than at the capsule.

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