

Earthworks TCS

Think of a high quality, small diaphragm omni for general-purpose studio and location recording and the chances are your thoughts head over to Germany or Denmark. Steer them over the Atlantic, though, and other options are there for the taking explains **JON THORNTON**

BASED IN NEW HAMPSHIRE, and formed by dbx founder Dave Blackmer, Earthworks designs and builds a range of microphones, preamplifiers and monitors for the professional market. In addition to microphones designed for measurement purposes, the company has three broad ranges of mics — the QTC range, TC range and SR range. All three ranges are small diaphragm capacitors with the QTC and TC ranges (Quiet Time Coherent and Time Coherent respectively) being omnidirectional, and the SR range features a cardioid pattern. The numeric designator that follows indicates the extent of the microphone's HF response — a TC50, for example, exhibits a useful response up to 50kHz.

This makes sense of what is quite an extensive series of microphones, and helps place the pair of TC25s reviewed here into context. It's clear from the accompanying literature that Earthworks views this model primarily as a studio tool — suggested applications are 'drums, percussion, amplified instruments and loud sound effects'. The microphone itself is what I'd term a 'proboscis' type — with a standard width body tapering down to a very narrow snout, at the end of which sits the capsule protected by a mesh grille. The prepolarised diaphragm, coupled to a transformerless, FET-based output stage gives a quoted frequency response of 9Hz to 25kHz +/-3dB. In reality, the response is pretty linear between 20Hz and 15kHz on-axis, rolling off gently to -3dB at about 25kHz and similarly below 15Hz. Response 90 degrees off-axis gives an earlier, but shallower roll-off in the high frequencies, starting at about 9kHz.

Earthworks' philosophy is built around ensuring that the frequency response is as linear as possible and also ensuring accurate phase and transient response. The TC25, it transpires, was originally engineered as part of the company's drum miking kit (comprising two TC25s for overheads and a cardioid pattern SR25 for the kick drum). With all of this in mind, kit overheads seemed to be a good first test.

Initially set up as a spaced pair directed at the snare/hats and rack tom — first impressions explain the suggested applications listed above. You'd expect a small diaphragm design like this to be relatively noisy, but with even fairly conservative amounts of gain these are noticeably so. The quoted 27dB SPL (A weighted) equivalent noise seems fair, but you aren't going to want to record quiet sources with these particular



models. Fortunately the drummer in question wasn't lacking in either enthusiasm or ability in the volume stakes, and the TC25s delivered a nicely balanced fairly neutral performance. They delivered plenty of attack to the snare, toms and cymbals, while maintaining good levels of tonal detail.

Perhaps the cymbals sounded slightly splashy in comparison to a pair of DPA4006s — there is a slight presence lift around 10kHz on-axis, and their relatively low sensitivity forced me to drop their height a little more than I would usually — but a sound with plenty of depth and focus. There's some experimentation to be had with placement to get the best results — despite being omnis, tilting the microphones in these positions so that they were about 40 degrees off-axis to the top skins of the drums softened that splashiness nicely.

Acoustic guitar was next on the agenda and again the best description of the sound is balanced and neutral, both with a single TC25 and a spaced pair — there's a superb transient response and HF clarity here that seems to place the sound right in front of you. It's a shame that on quieter passages the TC25's self noise was starting to intrude slightly. On an upright piano, the story was similar — nice tonal balance, particularly in the bottom octaves, but plenty of bite and attack to the sound — but fairly tight placement was needed to minimise noise on some passages, which was something of a compromise.

With both the acoustic guitar and the piano, the vote remained clearly with the DPAs used for comparison but on the kit it was less clear-cut. I actually liked the slightly more present sound of the TC25s here, which helped pull the overheads into the mix slightly better than the DPAs.

For the sake of completeness I tried a single TC25 on a 1 x 15 bass cab. Care has to be taken here, as they are quite sensitive to air movement, and in this case I had to point the 'snout' of the mic in the opposite direction to the cab to stop the resulting clipping sound, but was rewarded with a very clean, almost DI-like sound, but with the slight compression that the cab lends.

In summary, the TC25s are good and versatile performers, which seem to be quite tolerant in terms of positioning — although in all applications tweaking a placement could improve the sound, first attempts never produced anything that was other than eminently useable. For those concerned about the noise issue, you could do worse than check out the



QTC30, which offers much better performance in this respect. It's possibly unfair to compare the TC25s with the 4006s — a more useful comparison would be DPA's 4090 or 4091, but these weren't to hand. If you were considering these, then the TC25s would definitely be worthwhile auditioning. ■

PROS Extended frequency response; great transient response; very tolerant in terms of positioning.

CONS A little too noisy for quiet sources.

EXTRAS The Sigma 6.2 and 6.3 monitors take Earthworks principles of time coherent response and impulse response and apply them to the playback process. The 6.3 is essentially the same monitor as the 6.2 but features dual woofers for higher output handling.



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