

Samar Audio TF10

Cardioid Capacitor Microphone

For their newest project, Samar Audio set themselves the challenge of creating the ideal cardioid microphone. Have they succeeded?



SAM INGLIS

Mark Fouxman of Samar Audio is the quintessential 'boutique' audio designer. He's immensely knowledgeable, supremely talented, slightly obsessive and, in the best possible way, opinionated. One opinion he holds particularly strongly is that the multi-pattern capacitor microphone is an unfortunate compromise. If you want figure-8 pickup, you should use a microphone with a natively figure-8 polar pattern, and the same applies to omnidirectional capture. Designers of cardioid mics, meanwhile, should focus on their main objective, rather than embracing versatility at the expense of accuracy.

For many years, Mark has poured his energies into the first of these three categories, creating a range of stunningly good ribbon microphones. Samar ribbons are not only works of art to look at, they also boast a usable frequency response extending well beyond 20kHz, backing up Mark's claim that a well-designed ribbon offers the best approximation to the ideal figure-8 mic. He hasn't yet turned his attention to omni mics, which he says are best realised using small-diaphragm capacitor capsules, but has now focused on the only pickup pattern to which he thinks the large-diaphragm capacitor mic is well suited.

Play Your Cardioids Right

Originally, the TF10 was to be marketed under the brand name Omni8, reflecting the theoretical basis of the cardioid pattern as a halfway house between omni and figure-8, but Mark has since decided to keep it as part of the Samar line. Its cosmetics have also changed since the early prototypes were built. Those mics appeared outwardly like shorter, fatter versions of the Samar ribbons, with the same elegant, lace-like grille; the production TF10 omits the grille, and thus looks more like an old-school 'lollipop' mic. Mark has also developed a radical new shockmount design of which he is very proud, but unfortunately this wasn't available in time to be sent with the review mic.

The most interesting part of the TF10's design, however, is the capsule. Nearly all large-diaphragm capacitor mics on the market draw on the same handful of generic capsule patterns, mostly originating with Neumann, but Mark has gone back to the drawing board to develop his own design.

The vast majority of large-diaphragm mics employ dual-diaphragm capsules based on the Braunmühl-Weber principle. These are broadly symmetrical front-to-back, with a rear diaphragm that plays a significant role in shaping the polar pattern and frequency response even when it's not energised, as would be the case in a cardioid setting. Polar patterns resembling omni and figure-8 can be added to such a mic fairly easily by energising both diaphragms and combining their contributions either in the same or opposite polarity.

As previously stated, Mark Fouxman isn't interested in creating a multi-pattern mic, and has focused all his attention into perfecting the cardioid pickup. This has led him to create a single-diaphragm capsule with three sets of acoustic chambers. Two of these shape the frequency response, while the third forms the delay network that gives the capsule its cardioid characteristic. An internal frequency-dependent screen also contributes to the purity of the polar pattern, and helps to reduce proximity effect, while another unusual feature is the use of aluminium as the diaphragm material. The single-sided design has also allowed Mark to dispense with the surround that encloses the capsule in most 'lollipop' mics, eliminating unwanted diffraction and reflection effects and helping to optimise the polar pattern still further.

Mark's capsule is designed to be biased from 48V phantom power without a DC-DC converter, and he has also paid attention to eliminating parasitic capacitance within the capsule, which he says helps to reduce distortion. The TF10 is a solid-state mic that puts out a balanced output courtesy of one of Samar's own transformers. No specs were available at the time of writing, though

emphasis is laid on the mic's capacity for handling very hot signals.

Light Work

Like Samar's ribbon mics, the TF10 is both beautifully made and highly distinctive, and adds a touch of class to a session as soon as you get it out of its simple wooden box. Two finishes will be available: brushed stainless steel (pictured above), or carbon. The mic itself is relatively small and light by the standards

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of large-diaphragm mics, and is easy to position and work with.

You don't have to use the TF10 for long to realise that it behaves rather differently from most large-diaphragm mics. If I had to use one word to describe its sound, that word would be 'open'. Yes, it's a directional mic, but unlike many cardioid models, off-axis pickup doesn't suffer a drastic loss of high end, so that directionality doesn't feel quite as narrow as is often the case. It's also strikingly less prone to proximity effect than any of the classic large-diaphragm designs.

Put it up next to a U87 or C414 on conventional close-miked vocal duty, and your immediate reaction might be that the Samar doesn't have the same weight in the bass; but when you come to mix the resulting tracks, you'll realise that the TF10's low end sounds a whole lot more natural. You never seem to run into that situation where something needs to be cut from the low mids to stop the vocal

sounding muddy, but no single EQ setting seems to do the job in quite the right way.

Close-miked vocals thus have a somewhat 'lighter' tone than you might expect from other large-diaphragm mics, but it's a balanced sound and certainly not over-bright or brittle. I always think the hallmark of a good large-diaphragm mic is that it subtly enhances the good qualities of the source, rather than imposing its own character, and that is very true of the TF10. It was particularly impressive on

female vocals, which tend to expose fairly ruthlessly any resonances or unpleasant mid-range harshness in a mic.

As you'd expect, the TF10 is also a fine general-purpose instrument mic, especially in situations where you want a natural-sounding capture of the source. I found myself quite often setting it up in situations where I'd normally reach for a small-diaphragm mic such as a KM84, and although I didn't get the opportunity to try it as a spot mic for orchestral work, I'd expect it to excel in this role. Other mics might provide greater separation, but the spill they do capture will usually be more coloured.

Standing Alone

The best boutique products are usually those that channel a clear and individual vision, and that's absolutely true of the Samar TF10. We're used to thinking of large-diaphragm mics as occupying one of a few familiar niches: the larger-than-life Neumann tone with its forward mid-range, the airy, mid-scooped AKG sound, the hard brightness of the Sony C800G, and so on. The TF10 doesn't fall into any of these categories. It is very much its own thing, but don't be fooled into thinking that makes it any less useful or versatile. I've been racking my brains to try to think of a source that the TF10 wouldn't work on, and so far I've drawn a blank. Yes, it only does cardioid — but it does cardioid extremely well, and the natural, open sound that Mark Fouxman has achieved with the TF10 fully justifies his decision to pursue this direction.

I also think the TF10 represents very good value for money, given that almost every part of the mic is handmade by Samar, and that build quality, attention



The TF10, with optional carbon finish, in Samar's newly designed shockmount.

to detail and performance are all first rate. There are lots of boutique mic manufacturers whose bread and butter is copying older designs, or buying in ready-made capsules that they can add their own brand of retro bling to. Relatively few of them are capable of making their own capsules at all, still less of designing a capsule from the ground up. The fact that Mark has not only done this but brought the resulting mic to market at a three-figure price is most impressive. ■■■

Samar Audio TF10

£999

PROS

- Superb build quality and elegant design.
- Lovely open, clear sound with an unusually pure cardioid pickup.
- Less proximity effect than most large-diaphragm mics.
- Good value for an entirely handmade, boutique product.

CONS

- None, unless you need other polar patterns!

SUMMARY

The TF10 is an innovative, attractive and, above all, useful mic that admirably fulfils its creator's individual design brief.

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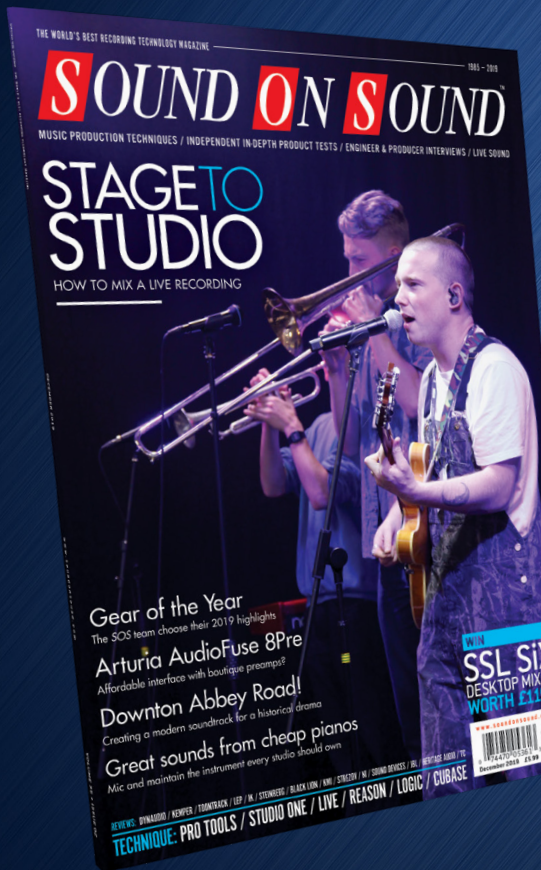
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