

# MILAB DC-196

A rectangular capsule housed in a tiny frame isn't exactly typical of your garden-variety condenser microphone. But size (and shape) aren't everything, as they say.

**Text:** Greg Walker

► In a market where generic and largely unoriginal microphone design is increasingly the norm, it's great to see that companies like Milab can still thrive. Based in Helsingborg, Sweden, Milab has been designing and building quality microphones for over 60 years and its product line includes a number of wonderfully distinctive and classy offerings. All Milab mics are handmade and hand-tested (each unit even comes with its own individual printed test sheet), and a lifetime guarantee comes standard.

## YOU CALL THAT A MIC?

The DC-196 is Milab's most recent offering: a diminutive side-address multi-pattern condenser microphone sporting a highly unusual *rectangular* capsule. That's right folks, it ain't round. What's more, the superfine dual-membrane capsule inside the DC-196 is also unusual in that it's made of aluminium that's designed to combine good electrical properties with low weight, which contributes to the mic possessing a detailed 'ear' and fast transient response. The mic offers omni, cardioid and figure-of-eight pick-up patterns and claims to be the smallest large membrane multi-pattern microphone in the world. And who could argue? With the DC-196 weighing only 240 grams and measuring 145mm long and 30mm in diameter, it's almost as though someone dared Milab to prove the dictum 'size isn't everything'. And yet despite the pixie-like proportions of its solid brass body, the large rectangular capsule suspended inside its shock-absorbing rubber housing delivers a sound that's every bit as 'big' as its comparatively gargantuan rivals.

## HAND REARED

The hand-signed measurement graph supplied with the review DC-196 shows a very smooth and level frequency response from 50Hz to 4kHz where a gentle rise of no more than 1dB peaks at around 5kHz, with a similar peak at around 10kHz. The mic capsule is protected by several layers of fine and coarse silver steel mesh, and the mic body is finished in a stylish off-white enamel. A basic plastic mic clip and foam windshield are also supplied.

The build quality of the DC-196 is excellent – indeed I'd describe it as a microphonic version of the classic AFL 'crumber' – small but nuggety and very tough; perfect for getting 'in and under' where lumbering giants fear to tread.

## GET SHORTY

After using this mic for the better part of a month now I've certainly heard nothing to suggest that the DC-196, with its unusual capsule design and construction, is in any way inferior to its more conformist circular cousins. [See Greger Admarker's brief outline of the logic behind the rectangular design below.]

I started out using the DC-196 for percussion, tracking tambourine and shaker where it delivered a crisp, well-detailed sound that I quickly warmed to. Next task was a thorough workout on a backing vocal session, which included a number of singers performing in a number of different musical styles and I quickly discovered that the Milab shines as a vocal mic, capturing a smooth, detailed and full-bodied sound that belies its small stature. After that I was hooked – I ended up using it on violins, electric and acoustic guitars, main vocals, drum

## THE MOTIVE BEHIND THE RECTANGULAR CAPSULE

Milab's Greger Admarker explains the design principle behind the rectangular capsule.

GA: The rectangular capsule design combines the advantages of both the small miniature capsule and the large membrane capsule. As we know, small circular capsules are best for applications such as high frequency sounds like cymbals and large circular capsules tend to be pressed into service when the frequency curve requires a lift in the upper midrange, like vocals for instance, or where bottom end frequency capture is important.

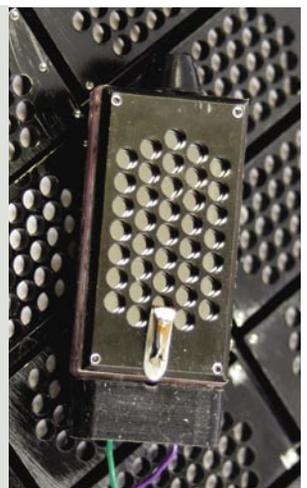
The longer side of the Milab 2700 rectangular capsule in the DC-196 corresponds to the large circular shape of a conventional condenser

capsule while the shorter side is equivalent to the smaller capsule. The design thus attempts to take advantage of both sizes and incorporate their benefits into one signal. This also allows the mic to be of small stature; the small size is only possible because of the rectangular shaped capsule.

To go a bit deeper into the theoretical explanation, sound waves will affect and travel differently in and on the rectangular capsule compared to the circular. Rectangular shapes do have different mechanical resonance phenomena. The main

movements of the membrane are, of course, in and out from the back plane regardless of the shape, but some secondary effects may be notable to the listener.

In the 2700 capsule the length and width are calculated so that peaks in the length direction never coincide with peaks in the width direction. Another fact that makes Milab capsules different from others is that we use a 100% pure aluminium membrane film instead of gold, titanium etc. This makes the membrane lighter and more flexible, causing the capsule to be more sensitive to transients etc.





“The only problem you’ll have using the DC-196 is the quizzical look singers throw you when you first put it in front of them”

overheads, harmoniums and, set to figure-of-eight, two female vocalists (one on either side) singing into it during a live recording.

#### THE LATE INCLUSION

At various times I had the DC-196 going through Focusrite, Universal Audio, Avalon, Aphex and Telefunken preamps and frankly this mic responded beautifully to every situation I put it in (I can’t actually think of many mics I’ve ever used that I could say that about!). The only problem you’ll have using the DC-196 is the quizzical look singers throw you when you first put it in front of them. I found I only had to ask them to give it a try and once they heard the playback they loved it and forgot about the size factor. Of course, no microphone will suit every voice and some may find it hard to consider the DC-196 for main vocal duties. In any case, the Milab seemed pretty versatile for vocals, and overall it was an absolute joy to use. Add to that its utility in any number of stage and studio situations where cramped space and/or a low stage profile is an issue and its sheer quality really stands out. It ain’t cheap (or conventional) but Milab has produced something a bit special here – in my all-star microphone team the DC-196 definitely gets a guernsey. ■



#### NEED TO KNOW

**Price**  
\$2200

**Contact**  
Microphone Solutions Australia  
(08) 9470 4003  
info@microphonesolutionsaustralia.com  
www.microphonesolutionsaustralia.com

**Pros**  
Beautiful smooth tone.  
A very versatile performer with choice of polar patterns and a 12dB pad.  
Great for tight spaces or low stage profile jobs.  
Lifetime guarantee.

**Cons**  
Some singers will be uncomfortable with its size.  
Quite pricey.

**Summary**  
Don’t let its micro size or unusual dimensions fool you, this is a surprisingly versatile and high quality microphone — instruments, vocals, studio or live, it’s shown itself to be a real performer.