

# Milab SRND 360

There have been number of different solutions over the last few years to the thorny problem of recording directly to multichannel formats. **JON THORNTON** encounters a multichannel mic that is clever and different.

Leaving aside the debate over whether spaced arrays or a coincident arrangement is better theoretically, there's no doubt that a compact, easy to rig and vaguely portable multichannel mic solution has many advantages in the studio and on location. Witness the introduction of products such as the Holophone range, DPA's new 5100, and plugins to process the outputs of Ambisonic designs such as the SoundField to deliver a 5.1 output.

From the land that gave us Abba, Volvo and Saab comes yet another take on the subject. Milab's SRND 360 is a deceptively simple approach, which really just builds on well-accepted principles of coincident microphones for stereo recording. What makes it special is its inherent flexibility and a little bit of creative thinking on Milab's part.

Fundamentally, the SRND 360 is based around three matched, near coincident cardioid capsules placed at 120 degrees to each other within a single microphone body. The capsules employed are the same rectangular designs employed in the company's

DC196 microphone, which I've always found to give a particularly smooth off-axis response in the vertical plane. Of course, three capsules isn't enough for a coincident arrangement to provide sufficient channels for 5.0 or 6.0 recording and that's where the creative thinking comes in.

Most multipattern microphones work by adding/subtracting the outputs of two opposing cardioid capsules and Milab has extended this approach with the SRND 360. By combining the outputs of two adjacent capsules and subtracting an amount of the opposing capsule, the three physical capsules can generate three additional 'virtual' capsules with an effective cardioid response. This results in simulating the effect of six near-coincident cardioid capsules placed at angles of 60 degrees relative to each other — corresponding to Left, Centre, Right, Left Surround, Back Surround and Right Surround. In this configuration, L, R and Bs are generated by 'virtual' capsules, and C, Ls and Rs are generated by physical capsules.

The matrixing necessary to do this is performed by an external box, which also supplies power to the microphone. A single five-pin connector on the front panel connects to the microphone and the six outputs are available on XLRs at the rear. Power to this unit is supplied by a 'wall wart' type adapter. All of these ancillaries, together with the microphone itself and a suspension mount, are supplied in a neat aluminium case.

The microphone is, by necessity, of significant girth but also relatively short in length, which gives it quite a squat, Dalek-like appearance. In comparison to the Holophone or DPA 5100, both of which seem geared up for the rigours of location recording inside or out, the SRND 360 is probably far more comfortable indoors. Initial testing was performed with the microphone set up in a medium-sized, quite tight sounding live room. Playback was via a Klein and Hummel 5.1 system, with the rear speakers in the ITU designated positions.

A quick walk around the microphone shows that it's extremely good at localising direction with sources that appear directly on-axis to either a physical or virtual capsule translating accurately to playback. There's also an extremely smooth sounding location of audio as the source moves around the microphone and between channels with little in the way of objectionable phase artefacts. I was pleasantly surprised by this as

given that the physical arrangement of the capsules is somewhat less than coincident I was expecting this to cause some issues.

Tonally, the SRND360 sounds extremely solid. My experience with other compact 5.1 microphone offerings has largely been confined to those that employ small diaphragm capsules, such as the Holophone range. While these are great for detail and accuracy, I sometimes find that the overall tonality can verge on the clinical. Milab's offering is a great antidote for this, giving on overall fairly neutral sound that verges on warm that it manages to convey close-up and at a distance.

I tried the SRND 360 on a small acapella choir and on a drum kit in the same room. The choir were arrayed in a semi circle about six feet away from the microphone, and the drum kit a similar distance but with the microphone raised slightly and tilted down. In both scenarios the SRND 360 proved fabulous at generating rock-solid imaging when played back in 5.1, and in the case of the drum kit, again very little in terms of smearing of transient sounds. Where it wasn't quite as good was in capturing a useful surround ambience in the rears, so feeling this was partly to do with the room in question I relocated the choir to a much larger, more lively space. Although this helped to some degree, it still felt as if the recording would benefit from a little help by playing with the levels of the rears and wrapping a short reverb around them and the other channels. I guess that's the trade-off between a compact coincident array and a spaced mic technique for surround work.

Any shortcomings in this respect, though, are more than made up for by the SRND 360's size and by its flexibility. For example, it's perfectly possible to use it simply as a stereo microphone by swivelling it around so that two real capsules are facing forwards and taking the appropriate outputs. Or indeed, to use it to record LCR using the front virtual capsules or the physical rear capsules for a super-wide image, with a bit of centre thrown in for stability. It's this flexibility together with its very straightforward 'plug-and-play' approach that makes this microphone distinctive. It positively encourages you to be creative and perhaps to try recording in surround when you might not previously have considered it worth the bother. ■

**PROS** Neat and compact; easy to use and set up; flexible enough to work in a number of stereo and surround configurations; big sound and tight imaging.

**CONS** Not really suitable for outdoor location work; can lack a little in terms of 'envelopment' without additional processing.

**EXTRAS** Milab's BDM-01 is a bass drum microphone for the studio and the road. The condenser capsule is handbuilt by Milab and claims 'superb' attack and high-frequency response when compared to dynamic capsules. The dynamic range, frequency response, sensitivity and pop filters have been optimised for the sound and power of bass drums and other bass instruments. The electronics are said to handle 155dB without audible distortion.



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