STEREO VISION

Meet the new perfect couple on the microphone block...

Words: Simon Croft

It's not often in the world of professional microphones that you get a new kid on the block. Come to think of it, most of the big brands have been around for the best part of 50 years now. So when Sontronics appeared – apparently out of nowhere – with some radically different designs, I couldn't wait to have a go and let you know what I thought.

Although I'm sure we'll be looking at some of the less traditional Sontronics very soon, I decided to start off with a microphone set-up that almost every band could benefit from owning. Cue the STC-1S set we're having a nose at here.

Before we get into the review proper, I'd like to spend a bit of time explaining what's on offer and how it can help you on the road to a really pro sound. Unlike a guitar or a drum kit, where the function is obvious, a 'matched pair' of microphones like the STC-1S might make you think: what's that all about?

If that was your first reaction, I wouldn't blame you at all. On the other hand, if you can get your head around what I'm about to explain, you'll be onto something that will almost definitely take your live and recorded sound to a whole new level.

To give you a pointer, let's think about the way we hear sound as human beings. A sound can come from any direction – straight ahead, to the left or right, or somewhere behind us. Yet even confronted with such randomness, the amazing thing is that, although we've only got two ears we can tell where a sound is coming from, even around a full 360° circle. (If you want some info on how that can be, take a look at *The Technical Bit*.)

Not only that, we can tell where multiple sound sources are coming from, all at the same time. ▸

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> "If we can hear this rich, detailed soundfield with two ears, we can capture it using two mics."

What is it?
A 'matched pair' of condenser microphones that can be used for stereo recording and live sound. In addition to the two mics, the complete kit includes a wooden storage box, a 'stereo bar' for mounting the mics together, two mic clamps and two pop shields.

Why should I want one?
This stereo mic outfit is very keenly priced. In rock and roll, the most obvious applications for a matched pair like this would be drum overheads and pianos. Of course, just because they are matched, that's not to say you can't use them individually.

Sontronics STC-1S
SRP: £229.99
Sonic 8
08701 657 456
www.sonic8.com

MY BRAIN HURTS! IT MUST BE...

THE TECHNICAL BIT!

"I thought that guitar came out of the right channel and bass came out of the left. Where did everything else go? Dunno..."

When I was a kid, my idea of stereo was so wrong, I thought that lead guitar sort of came out of the right channel and bass guitar came out of the left channel. Where did everything else go? Dunno. Maybe in the middle somehow...?

Even when I had grasped the idea that the left and right channels worked together to place sounds anywhere within the 'stereo field', I still missed the point. I thought, okay, I pan one channel to the left on my multitracker, another to the right and leave a few somewhere around the middle and I've got stereo, right?

In reality, the way the human ears and brain sort out the location of sound sources is way, way more subtle. It turns out that the relative volume level of a sound in your left and right ears plays only a small part in you knowing where that sound comes from. What matters most is which ear the sound arrives at first.

Because your ears are spaced apart, as well as being either side of your face, sound takes a slightly different route to the left and right ear. This creates a tiny delay on one side of your head compared to the other and this is what your brain unconsciously uses to decode positional information.

This is known as the 'Haas effect', after the very clever guy that worked this out, and I'm unreasonably pleased to think that Playmusic is probably the first music mag in the world to ever write about this.

The big point here is that a stereo pair of mics can provide the 'first arrival' information to your ears that tweaking the pan pots will never deliver. So real stereo requires real stereo mic techniques, because they capture the Haas effect. (If Carlsberg made stereo recordings they'd probably...) **PM**

"I know the two mics are carefully matched because they come with individual frequency plots, which is impressive."

For example, most listeners have no difficulty picking out the location of various sections of an orchestra, even when there are 70 or more players going at it full blast.

If we can hear this rich, detailed soundfield with two ears, it's not so difficult to realise that we could capture that same sound using two mics, placed in a similar way to our own ears. And that's exactly what the Sontronics STC1S outfit can do. If you set the mics up carefully and have a high quality audio system to reproduce what they pick up, what you hear should contain a lot of detail from the original soundfield.

Hopefully, I've given you some idea of the potential of using two mics to capture sound in stereo – but why a 'matched pair'? If you're going to capture stereo accurately, it's important that the left and right sides are as close to identical as possible. After all, you wouldn't expect much of a stereo sound if you played your recording back with a hi-fi speaker on the left channel and 4x12 from a guitar rig on the right channel. Likewise, if you've ever suffered a badly blocked ear, you'll know that it feels as if half your world has been taken away.

For these reasons, the left and right microphones in a stereo pair have to be carefully matched so that they have very similar characteristics. In the real world, that means measuring each individual microphone's frequency response and pairing up the ones that are closest in performance. It's an extra process for the manufacturer to go through, so you generally expect to pay a bit more for a matched pair of mics, compared to a couple of units chosen at random.

I know that the two mics in the Sontronics outfit are carefully matched because they come with individual frequency plots, which is impressive. Most manufacturers provide a printed plot showing a typical readout for the model in question, and only provide individual plots for their more expensive models.

Also adding to the impression of high quality is the wooden storage box, with its classy crushed velvet interior and the included accessories. Again, many manufacturers only go to this much trouble for their most up-market products so it says something about the mics to see it here.

As you can see from the photographs, the mics are fitted with a switchable pad and a bass rolloff switch.

ROADTEST

"I am sure that you could make a commercial album this way – singer/songwriters please note."

Before I let these mics loose on a drum kit in a studio, I thought I'd check them out at home to see if they were any good. They look really well made and the 25Hz-20kHz frequency response suggested that they were going to sound good too but hearing is believing.

Now, any sensible reviewer is going to give readers the impression that's he's the big expert and that he knows it all. So I must be nuts telling you this but I did something really stupid. As I had a Phonic Helix Board 12 out and plugged up, I decided to use the Sontronics through them. As I brought the channel level up, the sound was really distorted. "Oh no," I thought, "how am I going to tell Sontronic that these mics are rubbish?" Then it dawned on me. The digital effects on the Helix includes a distortion setting - and that's exactly what I was listening to!

Once I had turned the distortion off, the sound was fantastic. I started with a single mic, placed at about head height and facing down at my acoustic guitar. I found I could very easily alter the tone just by changing the angle of the guitar relative to the mic. What I didn't find was a bad sound. I just couldn't get that horrible, boomy sound that's normally quite easy to get out of a jumbo. Great!

Before I tried these mics, I was ready to tell you that they wouldn't be a first choice for vocals. Wrong. They make excellent vocal mics. Even without the foam pop shield, I got really good results with none of the popping problems I was expecting.

In fact, once I had introduced the second mic, I made a really nice recording by just singing and playing the guitar. It was a really fantastic, natural recording, with a lot of depth and dimension to the guitar. Given the right artist, I am sure that you could make a commercial album this way - singer/songwriters please note.

The only thing I would warn you is that these mics are super-sensitive. I first set up fairly close to the window. Just as I had got a decent level, a builder across the road slammed his van doors shut and nearly took my head off. I'm sure this won't cause feedback problems on stage but it does suggest you should chose your recording environments with care (unless you're putting together Now That's What I Call Roadworks, of course).

Over to my mate Mick's garage studio and a drum kit. Although he's got a reasonable selection of mics, overheads have been a bit of a compromise, as he's been using a couple of Tandy plate mics attached to the ceiling. Not the best set-up.

I have to say the Sontronics STC-1S mics made the cymbals sound so much richer and 'real'. They are a class act. There are a number of ways you can arrange two mics to record stereo. We just splayed them out on the bar to about 110°, which gives a nice, wide stereo image but the nice thing about using two mics is that you can change the angle to get the result you want. Because the floor of the garage is concrete, rumble was not a problem but we set the rolloffs to 75Hz anyway, just to get a cleaner sound.

It whet my appetite and I would love to try these mics on a grand piano and on a string section because I am sure they would give awesome results. Sadly, Mick's garage isn't big enough for that. **PM**

"They are, to quote David Dickinson, as cheap as chips."

The pad is useful when there is a danger that the sound level will overload the mic, which can easily happen when you've got a drummer bashing seven sorts out of a kit. You'll notice that the pad has a -10dB and a -20dB position, which is fairly unusual.

Similarly, the bass rolloff has a 75Hz and a 150Hz setting, as well as a flat position. There's a good chance you'll want to use that rolloff when using the mics as overheads on a kit. If you think about it, what you're mostly wanting to pick up is all that high frequency energy from the cymbals – but the mic stands are sat on the same floor as the bass drum. So when the drummer goes into one of those 'duggada, duggada, duggada' routines with the toms and bass drum, a lot of it gets picked up by the overheads. If you've already got separate mics on the bass drum and toms, there's no point them appearing as low frequency rumble in the overheads, so you filter it out with the rolloff switch. Simple eh?

Something you probably won't notice from the pictures is that the capsules unscrew. The idea is that you can change them for hypercardioid or omnidirectional ones. This is great because it means that you can have three different types of mic, while only paying for the capsules. I have seen this idea before but never at this price level. (Incidentally, there are cutouts in the box for the alternative capsules, so the whole thing makes a really neat outfit.)

Is there room in the mic market for Sontronics? I'd certainly like to think so, because the STC-1S set-up is excellent. But I'm sure the manufacturer realises it will have to fight very hard to gain a place alongside the big brands, which probably explains the very low price. They are, to quote David Dickinson, as cheap as chips. Be warned though – I'm certainly not banking on them staying that way forever. **PM**