What is it?
Your classic, large diaphragm studio condenser microphone, albeit at a more attractive price than some of the major-league alternatives.

Why should I want one?
This type of mic is reckoned by most top artists, producers and engineers to be unbeatable for recording vocals, as well as being great for acoustic instruments. The STC-2 delivers on that reputation but at a very good price. Overall, it's a really good performer. It also looks great and comes with a hard case and suspension cradle, which can be two expensive accessories.

Sontronics STC-2 mic
SRP: £149.99
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Every good recording needs a good condenser mic, but can the Sontronics STC-2 be this good at this price?

Words: Simon Croft

the PROFESSIONAL

I used to have this book about sound recording. It was about 50mm deep and was full of advice from 'top professionals'. Some of it was great but a lot of it was waffle. One chapter in particular was written by the owner of a big commercial studio, who went on and on about the importance of getting the artist relaxed. By the end, I was getting the distinct impression that all that stood between me and a major-league hit song was a bottle of sedatives for the band.

For what it's worth, let me tell you some of the things that I've found help to get a really great performance, especially from vocalists. It's got to start with the mic – which one you choose and how you position it relative to the sound source. But with singers, there's more to it than choosing a mic that is up to it technically. It really helps if it looks the part.

Everyone has seen those moments on TV when they show a singer in the studio, doing the vocal overdub. The vocal is way up loud in the mix, the singer has the big headphones on and he/she is singing into a silvery mic that's at least the size of an aerosol can. You know the scene.

So if someone's about to attempt the vocal performance of their lives, they will feel massively more inspired if they find themselves looking at a mic just like the ones all the top studios use.

Of course, it also helps the end result if the mic actually delivers what it promises. As I've said in previous issues of Playmusic, it's a lot easier to design a mic that looks good than to make one that genuinely gives top-level performance.

Is the Sontronics STC-2 a brilliant mic, or just a dog dressed to impress? Before I plugged it in, I was torn in two directions. Part of me was headed in the direction that less than 150 notes was not going to buy you a major league condenser mic. But the other part of me remembered reviewing the Sontronics STC-1S stereo pair of condensers last issue. They were also 'too cheap to be any good'. Or at least, that's what I thought until I plugged them in. By the time I had finished with those mics, I'd come to the conclusion that they were truly excellent. So can the STC-2 repeat the same performance?

The theory

Before we go plugging the mic in, let's just remind ourselves what's so great about this type of mic and also what exactly you get when you buy a Sontronics STC-2.

The reason you always see that bog ol' mic used on singers in studios is that the best vocal sound comes from condeser mics that have a large 'capsule'. The capsule is the assembly that includes the fine diaphragm that picks up sound, as well as the system that converts it into a tiny current.

Over the years, it has turned out that the best sounding vocal mics have a capsule diameter of about an inch. The simplest way to explain it is, being wider, they capture more of the sound. ▸

"Peering through the grille of the Sontronics STC-2 reveals it is genuinely a large-capsule condenser."

ROADTEST

"I think it's fantastic that the suspension cradle for the STC-2 is included..."

You will need a mixer that has 48V phantom power to use this mic but most mixers do these days. Alternatively, you can use an external supply. I used an old desk I rescued from a radio station a few years ago and it worked fine.

The obvious thing to test this STC-2 on was vocals. Which is exactly what I did first. Because you sing into the side of the mic where the logo is, you're best off mounting the mic vertically. Not only is that the most useful position for the mic, it makes most effective use of the suspension cradle, because the weight is pulling straight downwards on the two elastic supports that isolate the mic from the stand.

Given that the suspension cradle for some major league studio mics costs about the same money as this whole STC-2 outfit, I think it's fantastic to find it included. It's one of those things that are really useful but if they're pitched too high in price, you kid yourself you can do without them.

The irony is that you're much more likely to need a suspension cradle to protect the mic from unwanted vibration when recording on a wooden floor at home than you are in a professional studio, which will certainly have a solid floor.

At the risk of sounding like a total bod, I tested the efficiency of the cradle by gently kicking the mic stand. It picked it up a little but that was mainly the sound of the impact travelling through air, not up the mic stand. Impressive stuff.

I then switched in the 75Hz rolloff, found at the front of the mic. That really reduced what little rumble had been coming through the stand. I was impressed. I mean, wouldn't you be?

Doing my best 'Lou Reed when he was any good' impression, I discovered that not only does this mic have the sparkling top end that you look for in a condenser, it puts a real richness into the chest range of your voice. Any mic that can give the impression that I'm a vibrant baritone is a good one where I come from!

Some of that extra bass is artificial and comes from what is known as 'proximity effect', where the closer you get to a directional mic, the more bassy it sounds. You can use the rolloff switch to compensate for this, or you can simply move back from the mic a little. Failing that you can always perform the low bit from Radiohead's Exit Music (From a Film) and enjoy yourself!

Every voice is different and so is every song but as a starting point, I'd recommend being about 300mm away from the mic. Such is the extended high frequency response of the STC-2, if I got any closer, my voice became very sibilant (it sounded as if I'd got a gap between my teeth).

The upside comes when you back off a bit. Even without using any compression, the STC-2 still retains that wonderful breathy quality you get from a good condenser, but the sibilance is gone. As I would expect, I experienced a bit of vocal popping but I've told you how to cure that for free in *The Technical Bit*.

I also used this mic to very good effect on an acoustic guitar, placing it more-or-less over fret 12 and backing off maybe half a metre. You'll need a reasonably nice sounding room to carry this off because the STC-2 will pick up everything and throw it straight back into your ears. It's a great mic though.

And you know what? It didn't ever occur to me to touch the EQ. **PM**

Sontronics STC-2

Peering through the grille of the Sontronics STC-2 reveals that it is genuinely a large-capsule condenser, not just some run-of-the-mill unit put in a big case to impress people. The mic feels solid in the hand and all the metalwork seems to be quite thick. If you imagine how the same electronic parts would sound mounting in a tinny casing that resonated, you can see why the mechanical build quality matters a lot.

Having a large capsule is good but the benefit will be wasted unless the diaphragm is incredibly thin. Otherwise, it won't vibrate fast enough to pick up the highest frequencies. The Mylar film used for the Sontronics diaphragms is only six microns thick, about seven times thinner than a human hair. This is one reason why it's not a great idea to go blowing into the mic to see if it's working!

Another reason is that the diaphragm has to conduct electricity in order to work. Condensation, such as found on your breath, won't help. So as well as not blowing into the mic, it's best to avoid singing right up close.

Like many of the best studio condensers you can buy, the Sontronics diaphragms are made conductive through a coating of gold. The whole capsule is later artificially aged so its performance then remains the same for years.

It may be that all this is more detail than you need but what I'm trying to explain is that this STC-2 mic is made using similar techniques to some of the most expensive mics in the world. As a result, it has a fair chance of achieving similar performance.

The practice

Nor have Sontronics skimped on the details. To wit, the STC-2 comes in a mini fitted flightcase. That's great because this isn't the sort of mic you can chuck into a box with a load of other gear if you expect it to continue to give its best performance.

It also comes with a suspension cradle. As I've noted in the *Roadtest*, this is a really useful piece of kit most people end up doing without because of the cost. I think the fact that Sontronics has thrown it in as part of the deal is brilliant.

The STC-2 is a cardioid mic, so it will reject off-axis sounds, which is what you want unless you have a really perfect recording room. That said, it is amazingly sensitive, so don't be surprised if you seem to sprout bionic ears if you turn up the gain. You can reduce the level to the preamp inside the mic by using the -10db attenuator. This is useful if you are recording very loud instruments, such as brass. I have occasionally come across singers who can cause similar overloads, so an attenuation switch is useful. Likewise, the rolloff, or low-cut filter. I've also covered this in the *Roadtest*.

Having used the STC-2 for a bit, I'm impressed. It seems to me that Sontronics is trying very hard to offer value for money and is punching above its weight in terms of performance. I'd certainly be happy to have this mic in my collection and I suspect that you will be too. **PM**

"Sontronics is offering value for money and punching above its weight in terms of performance"

My brain hurts! It must be...

THE TECHNICAL BIT!

Instead of giving you a headache, I thought I'd give you the heads up on how to make your own pop shield for absolutely no outlay. You see, unlike stage mics, studio grade condensers don't have foam shields inside them. That's because the foam would degrade the frequency response and other aspects of the sound performance.

So, rather than stick a big lump of foam over the capsule, the better technique is to create a fine barrier between the singer and the mic. This will stop the worst of the vocal pops without losing that studio quality sound.

Take a wire coat hanger and wrap the hook end round the shaft of a mic stand as tightly as you can. If you've got strong thumbs and can wind the wire tightly, the coat hanger should now stay put. Otherwise, you can always use a bit of Gaffer tape to hold it.

Grab the middle of the bottom bar of the coat hanger and pull it towards you until the hanger forms a long diamond shape. Now put in a right angle bend where the corners of the coathanger used to be. This will give you a vertical frame.

If you cut an end from a pair of women's tights and stretch it over the frame you have a perfect pop shield. All you have to do it adjust its position until it is between the singer's lips and the mic.

A secondary advantage is that it forces the singer not to get too close to the mic. Top tip! **PM**