

## Siwei Zou

The man behind China's premier microphone brand SE Electronics talks about his music, his desire to innovate, shipping seafood to China and his dislike of OEM. **ZENON SCHOEPE**

**C**HINESE MICROPHONES HAVEN'T enjoyed the best of reputations. Originally astounding everyone with unbelievably low prices for what were substantial bits of hardware and impressing more than a few with a performance that was at least acceptable, the novelty started to wear off. The sheer volume of Chinese mics accompanied by an unwelcome variability in the quality of build and performance, plus many obvious instances of blatant rebadging of seemingly identical models at different price points, got the suspicion glands up. Add to this, veiled attempts to hide the Chinese origin of parts in 'Western' mics and the credibility of the country's output took some knocks.

While the OEM of condenser mics in China continues, the emergence of SE Electronics as an original brand has served as a lesson in what China can build when it puts its mind to it.

The story of SE Electronics is also the story of Siwei Zou, who has established the brand as China's premier microphone manufacturer. He now sits atop a growing empire that has created an American company that owns a dedicated Chinese manufacturing plant and sells through the global distribution network of Sonic Distribution. It's also the story of his passion and creativity and his desire to separate his brand from the me-too Chinese output, and to establish it as an international player.

Understanding the genesis of SE Electronics also requires an understanding of the history of mic manufacture in the region. Close ties between East Germany and China imparted essential technology and knowledge on how to build condenser mics for its domestic market, and it wasn't until after the end of the Cultural Revolution that the market was finally opened up to buying foreign produce. At this point the Government radio and TV stations opted to buy Western microphones and this impacted severely on domestic manufacturing. While the enormous karaoke market in the region created a requirement for dynamic mics, condenser production was gradually wound down over the years. It was the prospect of condenser OEM production for the West that eventually emerged in the mid-1990s as something of a saviour, but as competition in the OEM market overseas increased, the driving force increasingly became lower cost with the massive surplus in capacity in China.

What makes Siwei, and SE Electronics, different is that he understood the importance of establishing a brand from the onset — OEM didn't stimulate him from a creative standpoint and it didn't make business sense either. He believed then as he still does now that innovation and quality are the goals to hang a brand on and that copying, rebadging and OEM are not long-term propositions. While he acknowledges that other Chinese operations also wished the same, significantly he had the set of skills that allowed him to realise it — he speaks English, he is a US citizen, he had experience in international trade and he has superb music credentials.

'I graduated from the Shanghai Conservatory of Music in Western Style Composition. I was also first bassoon in the Shanghai Opera House — bassoon was my first major. I've conducted a number of Symphonies in the Shanghai Opera House with the Symphony Orchestra and I've written and composed for the Shanghai Opera House with a lot of CD releases. I wrote Symphony pieces, Chamber Music and I was very successful and, it has to be said, very popular in the 1980s. I made a lot of money!'

### Where does the SE microphones connection come in?

Because I was a conductor and I did a lot of recording sessions in China, I had a relationship with a Chinese microphone manufacturer who would send mics to me to ask my opinion. In 1986 I was invited by the California State University Music Department to be a visiting scholar for three years. I still played in the US and had my own studio in San Francisco. Many of my Chinese classmates went back to China and were promoted and did well very quickly and I kept in contact with them and we worked together. I ended up

sending container loads of seafood to China, then invested the money, and it taught me how to do international business. It kept me very busy but I didn't like it! I had no time to write music.

I was in China for the evening of the Chinese New Year in 1996 and the president of the Chinese microphone manufacturer called me and said he wanted to have dinner with me. We'd known each other for a long time and he suggested that I do international business for him. I took some products back to the US — the sound was good but the machining and design was poor — and I sold them to my local dealer, very easily. It's how it began.

At that stage I was just importing into the US but I had created the SE Electronics brand name there from the very beginning and they were doing the OEM for me. I designed the new microphones — the old bodies were so ugly — and I started to learn about the electronics and the diaphragm. I learnt from Mr Pan who had retired from the microphone manufacturer and is one of the most experienced and important microphone engineers in China. He was taught by the East German microphone professors. He taught me how to make a diaphragm, a ribbon microphone, everything.

He helped me by checking every single microphone I was getting, and telling me what the problems were.

#### So the designs improved?

Of course! He taught me the secret of the diaphragm. I can make a very good German-style diaphragm — that's not a problem for me. You see blueprints for microphone circuit board design but you'll never see a design for a diaphragm. That's because it's an art and even tiny, tiny things can cause you a problem.

Mr Pan holds a class for our young engineers every week, so he's still training and still involved with SE. He is the key.

But back then I was still importing those microphones into the US and I had also started studying related technologies. I knew that what we had was not enough and that we had to study modern technology to build modern microphones.

#### One of the stigmas that has been attached to Chinese mics in the past is that so many of them have just seemed like cheap Neumann clones.

I hate copying. In my first composition class my teacher told me 'Right now you are just Siwei Zou and the number one composer in the world. Beethoven is not as good as you, neither is Mozart... providing you never try to write your music in the style of Beethoven or Mozart because then you'll never be as good as them. You have to do what you do.' That's the way I look at everything, creativity for me is the most important thing. Sometimes my engineers tell me 'Neumann does that' and I tell them to forget it because they have to do it the SE way.

#### How did the establishment of your own manufacturing facility come about?

I was having huge problems with the quality of the product I was getting from the Chinese manufacturer and when I asked them to fix these I then had problems with the management. The things I was asking for cost a lot of money because they needed to fix the environment and to buy new machines. They wouldn't do it.

I knew there were problems with the quality and that I wouldn't be able to compete in the market with products like that. My wife supported me, we got all

our savings plus loans and we started our own manufacturing in China a year and a half ago. We rented space and because I was known in the microphone manufacturing community in China, engineers and staff approached me. This is an American Capital company so we have very good salaries, working relationships and work conditions. The engineers also see that there is a future for them here and they like the idea of making something that is better. And Mr Pan trains them all because there are a lot of secrets in microphone manufacture. Immediately the quality rose above all other Chinese microphones and that's when we introduced the new range of SE microphones, which we still have now.

#### While you are doing your own thing with your own designs, ideology and standards as a separate brand, the tide of OEM Chinese mics has continued into the world market. How do you differentiate yourself?

We have the distribution worldwide now, we have our own factory, no OEM, and we lead by innovation. Today what you see is only the beginning. Everything is new but it's only the beginning. If you come back in a few months time, I promise you it'll be two times better. I have a brilliant and very experienced manager for the factory in Mr Wang and he will make the manufacturing successful.

I want to create a strong brand name and I want to create the best microphones.

## Transform a Master into a Masterpiece

### MASTERING 6000

Mastering 6000 is the latest addition to the prominent System 6000 family. Packed with a choice selection of precision tools for the mastering engineer, it is dedicated to the highest audio quality and the lowest production time. Mastering 6000 comes with the new MD4 5-band Compressor/Limiter, Toolbox 5.1 for mono, stereo, matrixed surround and 5.1 productions, and an enhanced Brickwall Limiter. All of the legendary algorithms from Reverb 6000 and other optional licenses can be added to Mastering 6000 if required. For more info about Mastering 6000, please visit [www.tcelectronic.com/mastering6000](http://www.tcelectronic.com/mastering6000).

**SYSTEM 6000**  
**Mastering 6000:** Stereo Mastering, Multichannel Mastering, Monitor Matrix, VariPitch.  
**Reverb 6000:** Stereo Reverbs, Multichannel Reverbs, Stereo Delay, Multichannel Delay, VariPitch.  
**Optional licenses:** Massenburg Design Works HiRes EQ®, Unwrap, BackDrop.

**t.c. electronic**  
ULTIMATE SOUND MACHINES

TC ELECTRONIC A/S DENMARK • ☎ + 45 8742 7000  
 TC ELECTRONIC UK • FREE ☎ 0800 917 8926 • FREE [FAX] 0800 917 6510  
[WWW.TCELECTRONIC.COM](http://WWW.TCELECTRONIC.COM)



**SYSTEM 6000**  
Ultimate Multichannel Processing Platform



**TSUNAMi:** *n. extremely large and powerful wave.*

The new TSUNAMi D combines excellent acoustic design with powerful digital control.

A high-pressure tweeter and FAR's symmetric wave-guide ensure HF accuracy. The specially treated long excursion cone and sophisticated internal bracing provide deep and defined bass response remarkable in a cabinet of this size.

High performance amplifiers are controlled by 24-bit 96kHz circuitry allowing the user to optimise Tsunami's performance in any room, network systems for remote control and save up to five custom settings for different engineers.

But we don't expect you to be impressed by the technology...

...only by what you hear.



exclusively represented in the uk by

**DIGITAL VILLAGE**

www.dv247.com • sales@digitalvillage.co.uk

|            |               |
|------------|---------------|
| W. London  | 020 8992 5592 |
| N. London  | 020 8440 3440 |
| S. London  | 020 8407 8444 |
| Birmingham | 0121 687 4777 |
| Bristol    | 0117 946 7700 |

**FAR**  
TSUNAMi D  
www.far-audio.com

**What do you see as the challenges that mic manufacturers have?**

If you want to build a really new type of microphone with existing technology, it's very difficult. With existing technology some manufacturers are a little better in certain areas than others are, but we need to explore another level. To my mind if you want to explore the next level the first thing you need to do is forget about 48 volts. It limits the dynamic. I can't tell you what we're thinking here but we have an idea and we want to not be using phantom power with condenser mics.

With a circuit board there is little that you can improve if you're thinking about being revolutionary. We're improving our circuit boards all the time with better components but the components aren't revolutionary. But you can do things with the diaphragm by using different materials. People use gold and we also use titanium, which is good but not brilliant, but you can look at different ways of using the gold.

**What about diaphragm size?**

Right now we are focusing on small sizes — less than half inch. We're talking about smaller diaphragms with larger diaphragm qualities, that's the most difficult part. With a large diaphragm the sensitivity is higher but it's low air and sound pressure. When I'm recording a violin I always use a pair of microphones and when I record vocals I sometimes use two, three or five microphones, but most people like to work with only one mic — it's why people like the u87, it can do everything. The question is how to pick up the low and very high frequencies with the one mic and only a small diaphragm can do that — it's why they are so expensive. They're harder to make — the thickness. If you want to make a very small diaphragm with high sensitivity you have to spread the gold very, very thinly and even. We can do that.

**You are clearly keen to show what China can build.**

I'm very proud that these microphones are made in China because we can build the best. They're made in China but they're made by SE. ■



# Manufacturing

Dispel immediately any visions you may have of Chinese mics being made by low-skilled labour in cramped conditions with chickens running around. That may still be the case in certain places but SE Electronics runs a modern, efficient and highly skilled manufacturing operation.



Occupying numerous large colonial style buildings in a new industrial area just outside central Shanghai that is favoured by foreign manufacturers, the SE plot is enormous with room to expand into and swathes of space to build on in the future. The rate of expansion would seem to warrant this currently overgenerous facility. Some 40 staff worked here in May, in October there were 120. Monthly capacity has doubled regularly, tripled most recently and is expected to have tripled again by the middle of next year to serve the new distribution chains that have been added in Europe and the US after its spectacular start in the UK. That's a lot of mics.



Employees work in three shifts around the clock although capsule manufacturing numbers are limited to maintain quality. That being said, Siwei has five master diaphragm makers, two of which he introduces as the very best in China, and a string of trainees coming up. The work areas are modern, large, clean, purpose built, well air conditioned and well planned out. There are machine rooms, clean rooms, assembly rooms, QC and testing rooms, packing areas and massive storage spaces.



It's the sheer speed and efficiency, not to mention the self-sufficiency, that impresses most. The only thing they don't do is build the wooden boxes that some of the models come in and they don't electroplate because the Government limits the number of licenses granted for this environmentally unfriendly process. Other than that, they start with raw brass tubes and mill them for the parts and end up packaging the finished product before dispatch. They even make the aluminium flightcases that come with some of the models. The ability to respond within days to changes requested by the distribution chain, to such things as packaging, is worthy of mention.



There are QC checks at all stages of production and every mic is tested, listened to and soak tested at completion, with samples also subjected to temperature and humidity tests. Every mic gets a print out plot cross referenced to its serial number, which is also held centrally on computer together with other manufacturing data. SE wants to go a little further in the future to allow end-users to go into the system and match their own stereo pairs at factory level before they even get distributed.



SE's range is currently dominated by its impressive large diaphragm models with three stick mics, including the superb SE3, adding variety. Siwei points out that SE is the only Chinese mic manufacturer with eleven engineers — plus Mr Pan — and they've been busy developing a full family of associated products like Western manufacturers. Consequently, small diaphragm models are planned for some time next year as is a range of dynamics mics. SE is at pains to point out that all will be manufactured on-site by SE. The underlying theme is that they're looking for long product cycles.



Siwei adds that the decision was made at the onset to redefine expectations by quality and innovation while still hitting competitive price points. The true innovation, which is alluded to very guardedly in the Q&A section, will be at a higher price point. Readers should await this with some excitement.

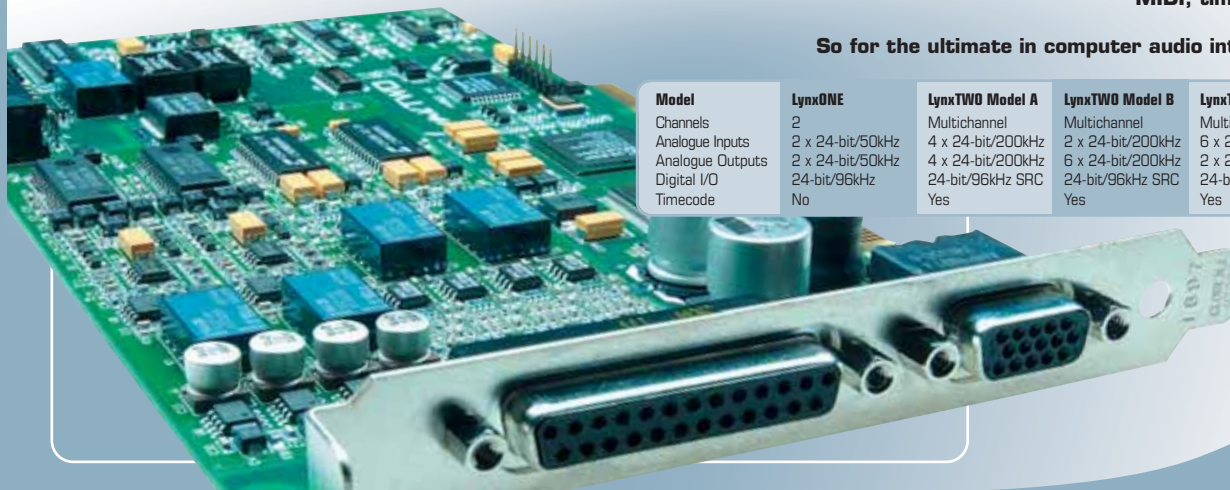


## “The best-sounding soundcard I've ever reviewed.”

Martin Walker, Sound On Sound

Beware of using budget soundcards in critical audio applications. With immaculate, high-resolution, low-noise audio conversion up to 200kHz, Lynx digital audio interface cards rival the performance of many more expensive, high-end, stand-alone converters. Ideal for recording, mixing, mastering, restoration and measurement, Lynx cards feature stable drivers for multiple operating systems, along with extensive MIDI, timecode and synchronising facilities.

So for the ultimate in computer audio interfacing, talk to HHB about Lynx.



| Model            | LynxONE          | LynxTWO Model A   | LynxTWO Model B   | LynxTwo Model C   | L22               | AES16         |
|------------------|------------------|-------------------|-------------------|-------------------|-------------------|---------------|
| Channels         | 2                | Multichannel      | Multichannel      | Multichannel      | 2                 | 16            |
| Analogue Inputs  | 2 x 24-bit/50kHz | 4 x 24-bit/200kHz | 2 x 24-bit/200kHz | 6 x 24-bit/200kHz | 2 x 24-bit/200kHz | N/A           |
| Analogue Outputs | 2 x 24-bit/50kHz | 4 x 24-bit/200kHz | 6 x 24-bit/200kHz | 2 x 24-bit/200kHz | 2 x 24-bit/200kHz | N/A           |
| Digital I/O      | 24-bit/96kHz     | 24-bit/96kHz SRC  | 24-bit/96kHz SRC  | 24-bit/96kHz SRC  | 24-bit/96kHz SRC  | 24-bit/192kHz |
| Timecode         | No               | Yes               | Yes               | Yes               | No                | No            |

GET MORE INFO • +44 (0)20 8962 5000 • www.hhb.co.uk

Exclusively distributed in the uk by



FIRST WE LISTEN