

**FIG. 1:** The Z 5600 A from SE Electronics is a large-diaphragm tube mic that offers cardioid, omni, and bidirectional operation, as well as six “in-between” patterns.



## SE ELECTRONICS Z 5600 A

### A Chinese-made, multipattern tube condenser that offers quality and value.

By Rich Wells

**T**he so-called Shanghai mics that have made their way into the audio market in recent years are a remarkable phenomenon. You can't open a retail gear magazine or look at online audio sites without running into one of them. In fact, I own one and didn't even buy it. (Well, not directly anyway; it came as a bonus with my purchase from a certain Pacific Northwest-based online retailer.)

The overwhelming majority of those mics originated from the 797 factory (a once-secret military facility) in the Beijing area of Feilo, which is a Shanghai-based facility with intellectual-property and engineering ties to 797. You'll find the mics in all shapes, sizes, and brand names. Sometimes you'll even find the same mics with different brand names. Not so, however, with SE Electronics products. All its mics and components are built and tested in its own factory.

#### Eastern Philosophy

Based in Shanghai, SE Electronics was once one of the companies that made its mark in the OEM market. Now privately held, the company no longer sells OEM components. It has redesigned its entire line of microphones and begun to make new models. SE Electronics' current flagship models are both tube mics: the Gemini, which incorporates two tubes, and

the Z 5600 A (an update of the prior Z5600)—which uses the traditional single tube.

The Z 5600 A (see **Fig. 1**) wants to look like a Neumann U 47, although it more closely resembles a Lawson L47 with simpler machining. Both the mic and its hefty spider shockmount exhibit a solid-build quality. The shockmount has a unique locking mechanism that screws onto the base of the Z 5600 A, leaving virtually the entire microphone body securely suspended in space.

#### Totally Tubular

The Z 5600 A's wide body holds a 12AT7 tube, found in many budget tube devices. Whereas most of those use an underpowered tube in the circuit to generate a little distortion (that can then be attributed to the tube), the Z 5600 A uses the 12AT7 in a traditional high-voltage circuit. SE Electronics chose the 12AT7 for its ready availability, which is something you'll

#### LEND ME A MIC

SE Electronics offers a unique program in which it will lend you one of its tube mics free of charge for a seven-day evaluation period. The company will even cover the cost of shipping the mic to you. (You can also borrow nontube models, but you'll have to pay the shipping costs on those.) If you want to keep it, SE will arrange for you to purchase it through one of its dealers. If you don't, it will pay for return shipping. —Mike Levine

appreciate if you've ever looked at the going rates for new old-stock replacement tubes for certain classic German mics. SE Electronics also tests each tube at its facility.

The mic's power supply comes with a 9-position pattern switch that covers the standard omni-cardioid-bidirectional sweep, with six additional points along the way. The power supply light blinks during the first 20 seconds after it is switched on. Sonic Distribution, SE Electronics' U.S. distributor, says the blinking occurs while the power supply gradually applies voltage to the tubes. That gradual application of voltage is intended to prevent cathode stripping of the tube. You can replace tubes without voiding the warranty.

The mic comes in a wood jewel box housed within an aluminum flight case that also accommodates the shockmount, cable, and power supply. The wood box is nothing fancy, but it's functional and appears to be sturdy enough for travel.

### Mics in Action

I tried out the Z 5600 A on a number of different sources. For perspective, I frequently compared it with my Neumann UM 57. The UM 57 is a 1960s-era tube mic that was manufactured in the Gefell plant; it uses the same capsule as a U 47 and the same tube as a U 67.

Overall, the Z 5600 A's sound exuded that larger-

## ICIS

SE Electronics' Icis (see Fig. A) is a cardioid-only tube mic with a list price of \$749. Whereas the Z 5600 A features a center-mount capsule, the Icis capsule is edge mounted, which gives it a bit more of a "hyped" sound, as if you'd already applied a bit of EQ and compression (sort of a radio-ready sound). This can be good for a lot of things, but it may be a problem if you're recording a source that is intended to be for the background of a mix.

I loved its sound on stringed instruments, from classical guitar to acoustic guitar.

On vocals, its sound was a bit more aggressive and biting than the Z 5600 A in cardioid mode, whether the singer stood one foot away with a pop filter or four feet away without one. For these two uses alone, the Icis is worth its price, and I wouldn't hesitate to put it up in any number of tracking situations. That said, considering the relatively minimal difference in price between the Icis and the Z 5600 A, I would opt for the more flexible and natural-sounding Z 5600 A. — *Rich Wells*



**FIG. A:** The SE Electronics Icis is a single-pattern tube mic with a more aggressive sound than the Z 5600 A.

than-life tube-mic goodness. It has nice detail, because of its wide, gentle frequency bump centered at 10 kHz, but it still sounds fairly natural on most instruments. In comparison, the frequency emphasis on the UM 57 is centered a bit lower and is less hyped sounding. Both mics sounded good when I compared them on individual male and female vocalists, and choosing between them was a matter of taste.

When I tried the Z 5600 A on a group-vocal track, I noticed that, unlike the UM 57, its off-axis frequency response was noticeably different than its pickup of direct sound. The sound of the track changed distinctly if there was much movement among the peripheral singers. The effect was most noticeable on sources that were 30 degrees or more off axis. Setting the mic to Omni allowed for a more uniform sound, but it also added more room ambience.

The Z 5600 A was awesome when I used it to mic stringed instruments, especially those with metal strings. I tried it on several acoustic and classical guitars, a sitar, and a fretless cumbus, all with great success. The Z 5600 A's high-frequency bump probably helped. No corrective equalizing was necessary on any of those tracks during mixdown.

The sitar and cumbus tracks sounded particularly nice; the Z 5600 A deftly captured those instruments' natural reverberant qualities. The high output of the mic allowed me to keep the gain on my preamp at moderate levels. I obtained strong, clear signal levels, even with mic distances of up to six feet. At that range, the sympathetic strings of the sitar and the resonant metal body of the cumbus rang out clearly without being clouded by noise.

## Z 5600 A SPECIFICATIONS

Type	tube condenser
Capsule	1.07" sputtered gold 6-micron diaphragm
Polar Pattern	omnidirectional, cardioid, figure-8, and six intermediate stages—selectable on power supply
Frequency Response	20 Hz–20 kHz
Sensitivity	20 mV/Pa or –38 dB (±2 dB)
Output Impedance	<200Ω
Equivalent Noise Level	<16 dB typical (A weighted)
THD	<0.5% at 130 dB SPL
Power	external, custom power supply with 9-point polar pattern selector
Dimensions	8.75" (H) × 2.44" (diameter)
Weight	1.5 lbs.

## Bang the Drums

I tried the Z 5600 A with several drum-miking applications. The first was as a room mic in front of the kit, placed about four feet away and two feet off the ground. The Z 5600 A sounded open and clear in the lows, much more so than the UM 57.

Because my recording room is approximately 400 square feet, bleed can sometimes be a problem. For the most part, I use dynamic mics when recording basic tracks, with a pair of small-diaphragm condensers as drum overheads and a large-diaphragm condenser as either a room mic or a spot mic for hand percussion. The Z 5600 A's ability to take 130 dB SPL with virtually no distortion and its pleasant conveyance of low-end information make it a good choice in front of a kick drum. That is especially true when using a minimal drum-miking scheme. With the mic near the floor, unwanted bleed can be addressed fairly easily with a couple of gobos and a blanket.

I also tried the Z 5600 A as a drum overhead about six feet off the ground, directly above the kit, and pointing at the snare. This time, the mic's upper-frequency peak made the cymbals stand out—in a sizzling sort of way—noticeably more than they did with the UM 57. The toms and snare on the Z 5600 A's track weren't as well balanced as when captured by the UM 57, either. The Z 5600 A's cymbal-heavy

track did sound decent in the mix; the mic would make a pretty good mono overhead if the drums were reinforced with additional mics.

The output of the Z 5600 A was so strong that whenever I used it for drum miking, I had to set both of the preamps I used (an MTA A-Range and a Drawmer 1969) to their lowest gain to avoid overload.

### "Z" Bottom Line

All in all, the Z 5600 A is a versatile and fine-sounding tube mic that has a relatively low price tag. The various clients whose sessions I used it on liked it, even when I told them they were listening to it in comparison with a Neumann. And that may be the biggest sign of all that the Z 5600 A is pretty darned good.

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*Rich Wells oversees the Supreme Reality, a recording studio, band, and waste-management concern in Portland, Oregon.*

## PRODUCT SUMMARY

### SE ELECTRONICS Z5600A

multipattern tube microphone  
\$899

**OVERALL RATING (1 THROUGH 5): 4**

**PROS:** Sounds great on vocals and metal-stringed acoustic instruments. Quality shockmount and metal flight case included in package. Well priced.

**CONS:** Off-axis frequency response noticeably different.

### MANUFACTURER

SE Electronics/Sonic Distribution  
(U.S. distributor)  
[www.sonic-distribution.com](http://www.sonic-distribution.com)