

Ehrlund

EHR-M

When we say we're reviewing a new angle on mic capsule design, we mean it!

REVIEW BY PAUL VNUK JR.

Once upon a time, in the village of Siljansnäs, in the Dalarna province of Sweden, lived a man named Göran Ehrlund who had a rather unusual idea for a mic. Together with Sven Åke Eriksson, he launched the Ehrlund Microphone company in 2005.

The first Ehrlund product was a contact mic/pickup system with a triangular membrane now known as The Ehrlund Acoustic Pickup (EAP). This product came about when Göran discovered that a triangular membrane was more transparent and accurate than a circular one. In 2007 he applied this idea to the traditional condenser microphone, and with the help of Sven's electronics expertise, the EHR microphone series was born.

As an aside, it's interesting that the two other major Swedish microphone companies, Pearl and Milab, both make mics with unusually shaped capsules.

The EHR-M

Currently there are five models in the EHR line in various enclosures, all built around the same triangular-membrane capsule: the instrument focused EHR-E, the drum focused EHR-D, and the compact EHR-M1 (the Mini-M). The one non-cardioid Ehrlund is the EHR-T, with the ability to split its dual capsule (front and back) into two separate outputs so the polar pattern can be adjusted in the mix—another idea born in Sweden!

The EHR-M, on review today, is arguably Ehrlund's flagship. It's futuristic, minimalist and classy in its design. The lightweight aluminum body measures 2.36" in diameter and 6.10" in height—at only 13.4 oz. in weight, this is one of the lightest high-end large-diaphragm condenser mics I have used.

The body takes up half of the mic, including the removable aluminum mounting ring. The top half of the mic is the capsule housing, surrounded by an open, single layer nickel-plated steel mesh.

The EHR-M comes with a foam-lined wooden slide-top box with a snug red velvet protection sock/bag. Beyond the aluminum mount, Ehrlund does not currently offer shock mounts for it, but I had no trouble using the mic with a third-party Rycote mount.

Why a triangle?

Behind the mesh is the patented triangular capsule assembly, which at a distance looks circular. That's because the capsule starts with a circular aluminum dual membrane, but the stainless steel capsule ring is cut to expose only a perfectly tensioned triangular surface area.

The "point" of a triangular capsule is all about speed, accuracy and a highly linear frequency response. On the Ehrlund web page, this concept is illustrated brilliantly in two videos. First they strike a circular metal bell; its ringing has a long decay. Then they strike a triangular bell of the same size and material, resulting in a super-fast ping. This illustrates the shorter time it takes for a rectangular capsule to stop resonating vs. a circular one.

The second video demonstrates why a fast-decaying triangle is better than the slow decay of a circle by dripping water drops into standing water in a bucket. Just like ripples on a pond, the waves from the drop not only radiate out from the center to the edges, they also fold back in. They are never fully dissipated before another drop falls, resulting in constant motion, which in a mic could result in constant resonance that could smear the sound. This is also a great example of why smaller-diaphragm mics typically have better transient response than large ones.

When water is dripped into a triangular pan of water, the ripples dissipate almost instantly before another drop falls, barely having time to fold back in on themselves. Sonically this means that the triangular Ehrlund mic is always only reacting to fresh sound waves hitting it, and not getting muddled up with previous resonant information.

Sven's circuit design is also all about extreme linearity. The EHR-M sports a noise level lower than 7 dBA, a maximum SPL of 105 dB, and a frighteningly broad frequency range of 7 Hz to 87 kHz... and no, that's not a typo.

Frequencywise the mic is fairly flat and even subdued from the low end up through about 2 kHz, where the mic then has a 4–5 dB rise from about 5 to 18 kHz.

Sounds like

As advertised, the EHR-M is one of the clearest and most natural large-diaphragm mics I have ever used. Yes, it does have a very open, clear top end, but it is a wide top end presence vs. a peaky and forceful one. In fact, nothing about this mic is forceful in any way.

I initially worried about this mic being bright, especially based on its specs, but rather than bright, it's just really, really, *really* open. More impressive



is how said open clarity extends down low for a full beautiful low-end capture.

This mic is not colored sonically in any way, yet it's not clinical either—not so much a “stark reality” mic as just a “reality” mic. The depth that this mic offers surrounds the source in a very full gelled way. It's like the source and the space are equals in the soundstage... hard to describe without hearing it for yourself.

Equally impressive is how true and sonically natural the off-axis rejection is. There's a touch of top-end rounding off-axis, but sonically the rest of the sound on the sides remains true to its on-axis capture, only about 8-10 dB quieter. As to proximity effect, it has one, but it's very subtle. You need to be “eating the mic” to really make it pronounced.

In use

Again, based on its specs, I was expecting to not like the EHR-M on high-frequency content such as cymbals, tambourine and brass. I could not have been more wrong; the EHR-M captures all of the above in stunning detail, and

as a drum overhead it balances nicely with the toms and kick. I only had one as a mono overhead, and yet in a mix it was so full of depth I never lamented any lack of stereo width.

On vocals, I work with some mad P-poppers, and I did find a good pop filter necessary for “up on the mic” vocal work. The clarity and realism the EHR-M brings to the voice is quite nice, although it is very unforgiving with spittle clicks, mouth noises, and breaths.

I enjoyed its natural sound on cajon in a remote tracking session I did. I was impressed enough to come back to the studio and try it on the outside of the kick drum. I was once again impressed by how full the low capture was, and how much the recorded kick sounded like the kick in the room. This is perfect for jazz and mixes where the kick needs to sit in a space.

If I had to pick a favored use, though, it would be acoustic guitars. On a nice Taylor or Martin, it's very much a no-need-for-EQ mic. The realism and fullness on string instruments overall is humbling.

Having said all that, all of this mic's up-sides can be downsides. The EHR-M, while not clinical, is one of those mics that gives back what it gets. A badly maintained instrument, so-so singer, or a bad, noisy room are not where I would use it, nor would I choose it for vibe and coloration to massage a sound.

Getting to the points

The verdict? This is a mic you need to hear for yourself, you really do. Sadly, I know that its clarity may scare off potential users, especially the vibe seekers, and that would be a mistake. Really!

Demo one now, especially if you do anything with acoustic instruments of any kind. Six months ago I had never even heard of Ehrlund mics... and now I am an Ehr-vangelist! ☺

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