

Royer Labs R-121 Ribbon Microphone

A Mic for All Seasons

By David Darlington

Ribbon microphone technology has been around since the 1930s, and is responsible for many of the great sounding jazz records of the '50s and rock records of the '60s. Ribbons fell slightly out of favor when the newer and "hotter" condenser mics came on the scene, and when television needed a less bulky mic on camera. (Ribbons require a large magnet structure, which accounts for the size of old RCA 44s and 77s as seen on The Letterman Show).

Royer Labs has now introduced the R-121 ribbon mic, which boasts smaller magnets due to improved technology, as well as a lighter, more forgiving ribbon element. The press release accompanying the test models was full of superlatives from some of the world's greatest engineers, so my curiosity was well piqued, and I was anxious to put these guys to the test.

Ribbon of Light

Right out of the box they look great! the R-121s are compact and solid, and are built for the long haul. (Royer's stated warranty offers "lifetime [guarantee] to the original owner"). The satin nickel finish is beautiful, and even the wooden jewel case with satin interior says "quality." They are side-address mics, designed to operate in a bi-directional figure 8 pattern. They come with a clip stand adapter, but Royer offers a shock mount as well as foam windscreens.

Luckily, I was scheduled for a horn ensemble date the day they arrived, so I stuck the R-121s right in front of the trombone and trumpet. Royer claims that these mics can take sound levels up to 135 decibels, so I thought the trumpet would give them a good run. The mics were up to the task. The entire range of each horn was reproduced smoothly and evenly -- better than some condensers.

The mics captured louder sections as clearly as soft passages, with no added harshness and, in fact, with an enhanced bottom end. What was most surprising was the amount of detail that defined the color of each instrument. I felt like I was out in the studio instead of isolated in the control room.

Next, I set up the ribbons for an acoustic guitar overdub (this is traditionally the domain of large-diaphragm condenser mics). The Royers beat my more expensive mics for clarity, nuance, and presence. Everyone in the control room agreed that the acoustic guitar sound was exceptional.

Royer touts the mic's ability to handle electric guitar amps, which in the past was not recommended due to the fragile nature of ribbon mics. I recently had a chance to try them on my classic Twin Reverb, which was set up for a high level guitar solo. With the Royer about 6" from the grille, I recorded a solo with one of the warmest tones I could remember. Every note spoke clearly and definitively. Even when the levels intensified, the mic sounded natural and undistorted. There was no boominess in the low registers, and a real smoothness up top. I was really beginning to love these mics. Later, we did a guitar overdub with a subtler, quieter jazz comping sound, which was reproduced faithfully and pleasingly by the Royer. This is one sweet mic for guitar recording.

On vocals, the R-121 was warm, and very sensitive to the proximity of the singer. You must use a pop filter to ward off thumps, and the singer must stand a few inches further from the mic than expected, but the results are very natural and detailed. In fact, even the breaths and lip noises are reproduced faithfully, which may seem disconcerting at first.

If you need a bit more brightness, simply turn the mic around to the backside. According to Royer, due to their patented "offset ribbon" design, the backside characteristic has a bit more high end than the front, and I found this to be true.

Instrumental Facts

During the next few days, I tried these mics on everything I could think of, effectively turning me into a Royer/ribbon evangelist. Congas and percussion had a rich detail and warm bottom end that allowed them to stand out in a track without being too loud. A Yamaha C-7 concert grand came through with a uniform sound all sounded like I was sitting alongside the pianist, with an even sound all the way to the top register. Overheads on live drums were warm and punchy with none of the harshness that can occur when cymbals get loud.

Incidentally, the accompanying literature is very helpful in describing recommended miking techniques, particularly those that are specific to ribbon mics, and I learned a few things from the Royer engineers. They suggested miking a kick drum from a foot or two out, so I swallowed

hard and tried it. With a little fooling around with placement, I got a fat, punchy kick with plenty of bottom and a nice point on top.

As you can see, I've found my new favorite mic. If I'm stuck on a desert island with only one mic, I want it to be a Royer R-121. My recent tracks sound more natural and detailed than ever before, and this mic takes levels that other mics can't touch. Do your studio a favor and try this mic. Your records will thank you for it.

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