

BY DR. FREDERICK J. BASHOUR

# Royer SF-24 Stereo Ribbon Microphone

Five years ago I purchased a Royer Labs SF-12 stereo ribbon mic, along with a pair of Royer's R-121 mono units. Finally realizing that a modern ribbon mic could stand comparison with the best of my tweaked-out vintage condensers was a veritable epiphany for me and, accordingly, I have used that SF-12 (and R-121s) on almost half of all the sessions I've done since that time.

After a session of very quiet contemporary acoustic music about three years ago, however, I started lamenting the fact that I would have been using my SF-12 even more, if it did not have such a low output level that no mic preamp in my kit could raise its voltage without adding so much noise that it would actually become distracting in a mix.

To make a long story short, in late August, 2001 I received Royer's first pair of SF-1A microphones — serial numbers 001 and 002. They had not yet built an active stereo mic, and wanted my opinion on the sound of these prototype mono units — each of which, I was told, was exactly one-half of a stereo SF-12A (the working prototype name for the SF-24). The minute I plugged them in and turned on the phantom power, my mouth fell wide open. A few months later, Royer sent me a prototype SF-12A, serial #002, and during the past several years, I have used that one, as well as #003, since the company continued to tweak various amplifier and ribbon diaphragm thickness parameters until everyone was satisfied.

## FEATURES

Say what? Amplifier? Phantom power? Yessiree, these are active mics, complete with internal circuit boards! The phantom power from my Crane Song Spider mixer supplies plenty of current to run the SF-24's internal circuits, two special toroidal transformers mated

## Fast Facts

- **Applications:**  
Studio, location
- **Key Features:**  
Ribbon element; stereo
- **Price:**  
\$3,795
- **Contact:**  
Royer Labs at 818-760-8472,  
[www.royerlabs.com](http://www.royerlabs.com).

to little boards which together raise the SF-24's level about 20 dB or so above a standard "passive" Royer ribbon mic. This puts its output level in the same ballpark as, say, my tweaked-out large-diaphragm vacuum tube Neumann SM-69. Make no mistake, using phantom power current does not mean that these mics output line level; they still require a preamp.

But extra level is not exactly the point here, for gain with noise is not really worth very much. What was so special about those two prototype mics was that their noise level was virtually identical to that of any other condenser mic I own, and a far cry from the noise produced by my SF-12 when mated with the quietest of my high gain preamps — a Manley Mic/EQ 500 or Crane Song Spider mixer.

Since my first iteration of serial #002 incorporated the same transducer elements as Royer's passive SF-12 microphone (its minimalist electronics were purposely designed to be as transparent as possible) it sounded exactly like my SF-12, only noticeably louder, and much quieter. With Royer's active electronics, the ribbon "sees" an ideal load (just an inch or so away) at all times. Thus, its performance should be consistent regardless of a preamplifier's input impedance characteristics. Impedance mismatching is a common problem with standard ribbon mics and, to a lesser extent, with all microphones. This phenomenon is the rationale for the new mic preamps that offer adjustable input loading characteristics. The SF-24, on the other hand, sounds great with any preamp. Subsequent modifications to my SF-12A made it actually sound better than my SF-12 in such factors as transient response and hall ambience reproduction.

## IN USE

The first time I got to use my first SF-12A took place at the end of October, 2001, for a week-long Dorian Recordings session of the early music supergroup, Fortune's Wheel. As usual, I used it as one of four pairs of mics in my setup at Mount Holyoke College's Abbey Chapel (along with my other favorites at the time — AKG C 24, Neumann M 50s and SM 69) and the singers and string players liked its sound so much that it became the main mic used

in the final mixdown. Even while picking up the quietest whispers from the group's soprano, Lydia Knutson, and the tiniest plucks from Robert Mealy and Shira Kammen's medieval vielles and harps, any noise contribution from the SF-12A was completely unnoticeable within the wonderful wash of sound captured in that stone chapel.

That session was the beginning of a long string of recordings I have made with my various prototype SF-12As. The mic I presently own is now representative of current production SF-24 models. I used it a few months ago on a solo piano recording of the music of Philip Glass, performed by Bruce Brubaker, at New York City's American Academy of Arts and Letters auditorium, and it helped establish a new "believe it or not" item in my recording career. After Bruce selected it as the best-sounding stereo pickup (up against the aforementioned mics, as well as SF-12A serial #003, which had a slightly thicker diaphragm), it received the distinction of being the first mic I was ever able to use all by itself for a solo piano recording! Its low noise level and superb ambience pickup was just perfect for capturing the sound of those hypnotic Glass Etudes in that most wonderful of East Coast chamber music recording venues.

## SUMMARY

I have been pretty lucky to be able to make recordings with Royer's SF-24 for two years before anyone got a chance! This is a great microphone.

*Dr. Fred Bashour holds a Yale Ph.D. in Music Theory, and currently performs as a jazz pianist and church organist, in addition to working as a classical music producer and engineer.*

