

Record Vocals like Allen Sides at

HOME

TRACKING TIPS FOR PERSONAL STUDIOS

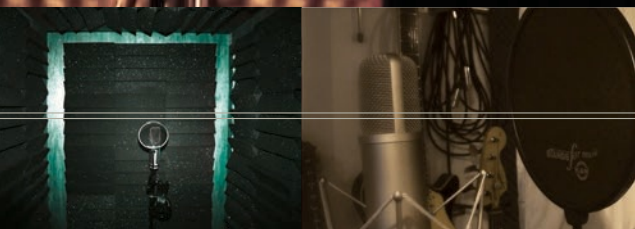


**Recording artists, including Angela Josephine
can track vocals in homemade booths.**

ANGELAJOSEPHINE.COM



ALLEN SIDES is a five-time Grammy-winning engineer/producer who has worked on more than 1,000 albums. His credits include some of the most iconic voices of all time: Ray Charles, Mary J Blige, Aretha Franklin, Vince Gill, Alanis Morissette, Duke Ellington, and Ella Fitzgerald. Here he offers us his expert advice on setting up a vocal booth, choosing a vocal mic, and more.





FREEDOM OF CHOICE

ALLEN SIDES shares tips for selecting the right microphones for your studio

BY SARAH JONES

When looking for microphones, is there anything we should know about modern design, as far as the characteristics that various elements impart?

I'm not sure there's anything really particularly new that's transpired in the last 30 years. My original AKG-C-12s from the late '50s had nine patterns, remote-controllably switchable at the power supply. Generally speaking, patterns determine how much information the mic will receive from different directions, but different patterns also affect the overall frequency response. One of the more important issues is the microphone's off-axis response, which from an engineer's perspective can determine how well any one mic will work on a drum kit, a horn section, or string section with multiple other mics. Even though you're putting a mic on a specific instrument, that mic is also going to pick up other instruments around it, and if its off-axis response is unpleasant, it will tend to make the sound of the whole section sound unpleasant.



ONE OF the toughest things to record is a vocal. You don't have to have a multimillion-dollar microphone collection or be at the best studio in the world to get a great vocal sound, but there are certain things you can do to obtain maximum recording results at home.

One size clearly does not fit all when choosing a recording method, as singers vary dramatically in regard to microphone technique, ability to stay in tune, tonality, and clarity of full-out voice vs. delicate delivery. Some of the typical challenges you can face when trying to get a good vocal sound are:

Every room or space you record in can sound totally different. Every microphone has its own unique color and sound.

The distance and axis alignment of the source in relationship to the microphone can drastically alter the sound.

It can be difficult to determine how much—if any—compression should be used.

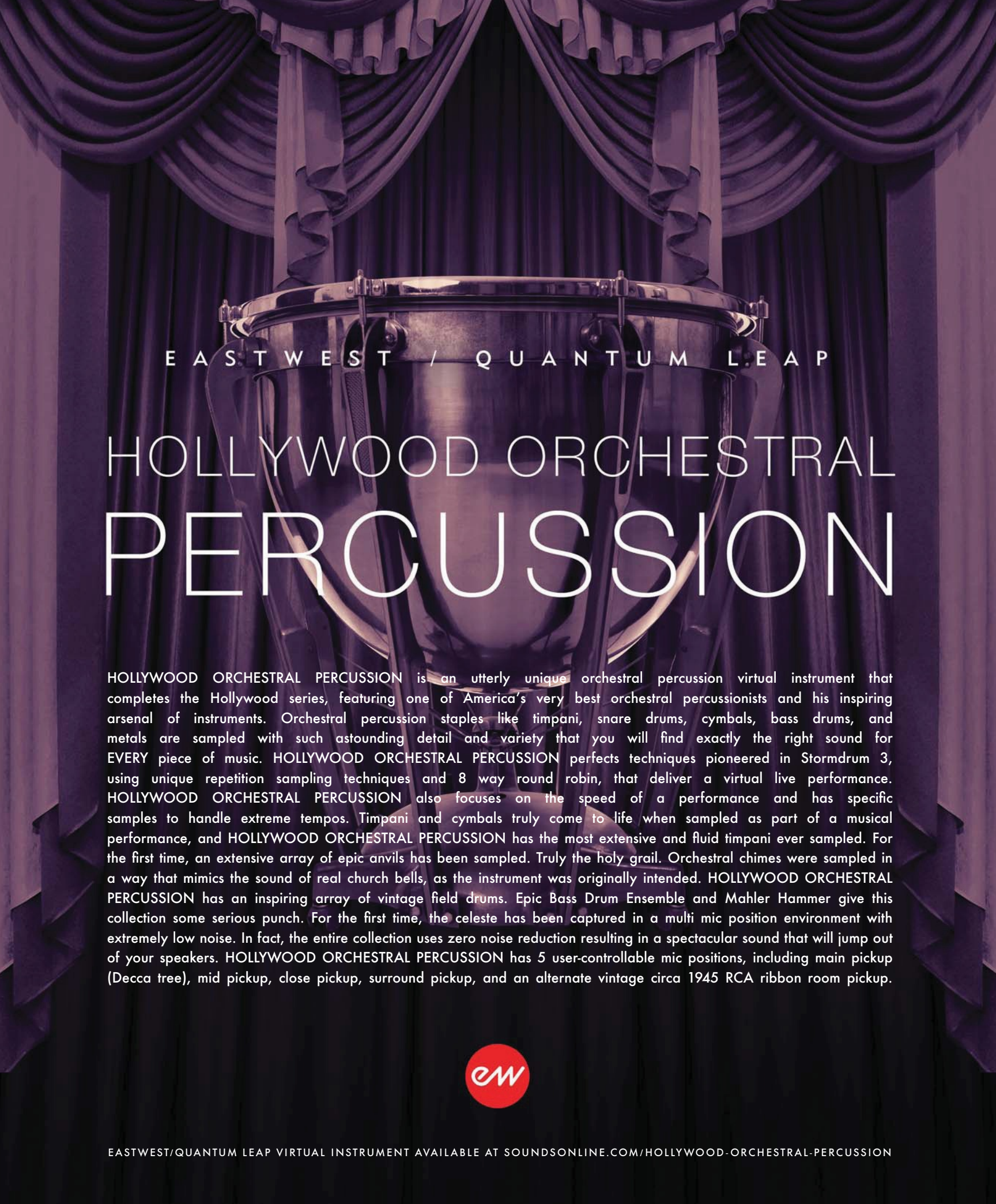
It can also be confusing to determine which mic preamp to use and how to optimize the gain to maximize resolution when recording into digital audio workstations.

Here are some of the techniques I use to get the most out of recording a vocal at home.

Isolating the Singer The first thing I look at is the space in which I am going to record the vocal. Most spaces at home, whether a bedroom, living room, etc. are usually much too live and have lots of first- and second-order reflections echoing back and being picked up by the microphone. The singer may sound fine to you in the room, but when you listen back to him or her through the mic in the control room, you may hear unwanted ambience that you were unaware of while you were in the room.

Part of the reason for this is that since you hear in stereo, when you listen to the singer live in the room, your brain allows you to focus in on just the singer and ignore much of the room ambience. But when you hear the singer through the mic, in the control room, you can no longer separate the voice from the room sound.

Luckily this problem can easily be solved by hanging packing (moving) blankets on three mic stands that are placed to the left, behind, and to the right of the microphone. This forms a sort of insulating "U" shape around the microphone,



E A S T W E S T / Q U A N T U M L E A P

HOLLYWOOD ORCHESTRAL PERCUSSION

HOLLYWOOD ORCHESTRAL PERCUSSION is an utterly unique orchestral percussion virtual instrument that completes the Hollywood series, featuring one of America's very best orchestral percussionists and his inspiring arsenal of instruments. Orchestral percussion staples like timpani, snare drums, cymbals, bass drums, and metals are sampled with such astounding detail and variety that you will find exactly the right sound for EVERY piece of music. HOLLYWOOD ORCHESTRAL PERCUSSION perfects techniques pioneered in Stormdrum 3, using unique repetition sampling techniques and 8 way round robin, that deliver a virtual live performance. HOLLYWOOD ORCHESTRAL PERCUSSION also focuses on the speed of a performance and has specific samples to handle extreme tempos. Timpani and cymbals truly come to life when sampled as part of a musical performance, and HOLLYWOOD ORCHESTRAL PERCUSSION has the most extensive and fluid timpani ever sampled. For the first time, an extensive array of epic anvils has been sampled. Truly the holy grail. Orchestral chimes were sampled in a way that mimics the sound of real church bells, as the instrument was originally intended. HOLLYWOOD ORCHESTRAL PERCUSSION has an inspiring array of vintage field drums. Epic Bass Drum Ensemble and Mahler Hammer give this collection some serious punch. For the first time, the celeste has been captured in a multi mic position environment with extremely low noise. In fact, the entire collection uses zero noise reduction resulting in a spectacular sound that will jump out of your speakers. HOLLYWOOD ORCHESTRAL PERCUSSION has 5 user-controllable mic positions, including main pickup (Decca tree), mid pickup, close pickup, surround pickup, and an alternate vintage circa 1945 RCA ribbon room pickup.



Are there any other design characteristics that might not be so obvious?

Once again, I'm not sure there are that many significant differences between ribbon and condenser microphones of 40 years ago and today. The same problems and solutions still apply. Quality control and consistency is still a major issue. In regard to condenser microphones, I do tend to prefer some of the older tube-type microphones, but it's certainly fair to say there are some excellent new microphones available. It's also fair to say that there are a lot of really bad-sounding mics out there, and price and appearance do not necessarily determine how great they will sound. I do however feel that some of the newer ribbon mics available today are more consistent and generally flatter than their older counterparts.

If you can only have, say, three or four mics in your locker, what should you be looking for?

For a setup at home, I think what would be most important to me would be finding a microphone that works well as a great vocal mic, but also, if I had a second one, would work well as a stereo pair to record stereo piano, guitar, or percussion, etc. Usually at home, you are only recording one instrument at a time, so all you need is one great stereo pair.

How do you determine which preamp is right?

My choice for mic pre is strictly sonics, what ever sounds the biggest, widest and most open. That is assuming that I am looking for an accurate reproduction. There are instances where I am looking for a particular color or extra smoothness for a particular singer or instrument in which case I am looking for character not necessarily true high fidelity.

Have you seen any mics debut in the past five to ten years that are destined to become classics?

The Sony C-800-G, which George Massenburg and I consulted on, is in my view a true classic, comparable with the best of the past, but unique in its own right.

I remember the Ocean Way Mic Locker was on CD-ROM. Can you talk about how that project has evolved into a mobile app?

The original OWR Mic Locker was our first attempt at trying to allow people to hear the difference between various great mics on the same instrument and to be able to A/B instantly at matched levels. At the time we did it [in the 1990s], we were right at the edge of what was possible with CD-ROMs—now commonly referred to as Dead Sea Scrolls. We were able to get fabulous studio musicians with great instruments, but it took forever to do. It was very successful and became very popular with music and recording schools all over the country. As technology moved ahead and CD-ROMs faded away, so did our microphone cabinet.

Then one day a good friend of mine, [guitarist/producer] Steve Vai called me and told how much he had liked our microphone cabinet and had even used it for drum samples. He told me he still thought it was an invaluable tool and would like to see it turned into an app. I said it would be nice to see it out again after all that work, and Steve made it happen. Clearly, if I was doing it today, I would have a lot more mics and every sample would be in stereo, but it still sounds great and is very informative. *[The Ocean Way Microphone Locker app is available on iTunes for iPhone and iPad, for \$9.99. —Eds.]*

How does someone at home become familiar enough with the vast number of mics out there to choose the right model for his or her situation?

I try to stay as current as possible and listen to as many new mics as I can. I usually listen first on my electrostatic headphones, using just my voice as a reference. I have been doing this for so long that I really know what to listen for, and will usually compare directly to some of my best tube mics. If I find something that is interesting, I will take it down to one of my tracking dates and double up with a mic that I might normally use on a particular instrument, and A/B live. There are some very decent mics out there, but I haven't been knocked out with anything recently. I try to keep an open mind, but my standards are high and I love the classics.

and will virtually eliminate all unwanted room ambience so the mic picks up a cleaner and more direct sound from the singer. Problem solved! I've set up suitable recording spaces in houses for major bands and producers all over the world and it still amazes me what you can do with a couple of well-placed moving blankets.

Choosing a Mic When choosing a microphone, I will usually put up three that I know from experience will work well for a particular singer. Some of the mics I might typically select from would be a Telefunken 251E, a Neumann U47, a Sony C-800G, a Neumann U67, or an Ocean Way 6050.

Before placing an EQ or compressor in the signal chain, I usually position my three test mics so that their capsules are right next to each other; then I'll set their gains to match and perhaps record a bit of a quiet verse or big chorus and then listen back with the artist to decide which mic works best. Recording and listening back can also help save the singer's voice while I'm choosing a mic.

I recorded one singer that actually sounded much better on a Shure SM58 than on any of the other, fancier mics. You could even put up a mic that might not normally be considered a good vocal mic, such as an AKG 451 or a Neumann KM84, but by placing it at a distance of approximately 8 inches from the source and with the appropriate windscreen, those mics can actually sound quite good.

Once you've picked your mic, position your windscreen at the exact distance you want the singer to be when he is closest to the mic (typically 4 to 8 inches), to keep him from moving in any closer. This distance is very important, because if the singer moves too close to the mic the sound can become dark and muddy, due to excessive proximity effect. When I'm mixing, it's not unusual to receive poorly recorded vocal tracks that have this problem (as well as excessive pops), which usually requires major EQing and finessing to fix these anomalies before I can mix. But if the singer keeps the right distance from the mic, the recording can be clear as a bell.

Another technique I use to retain the presence and highs of the tone is to place a small red dot in the dead center of the windscreen, on-axis to the center of the microphone capsule. I'll then direct the singer to sing into the dot. These simple steps can make a huge difference later on when mixing.

The Signal Chain Some of my choices for microphone preamps might include an original

THE COMPLETE INSTRUMENT.



 **KOMplete KONTROL S-SERIES**

www.the-komplete-instrument.com

Requires KOMplete 9 or higher, optimized integration with KOMplete 10 and KOMplete 10 ULTIMATE.

 **NATIVE INSTRUMENTS**

THE FUTURE OF SOUND



discrete API mic pre, a custom Ocean Way mic pre, an SSL J mic pre (insert out), or a Neve 88-R mic pre (insert out). But there are lots of mic pre's out there that sound perfectly acceptable.

When setting the gain on a microphone, I usually start with no compressor in line and then set the peak level at about 4 dB from clipping or hitting the red on the Pro Tools channel meter. Once a singer gets rolling, she almost always sing louder than she does on the first run-through. Give yourself some headroom so you don't clip a great vocal. I also find that Pro Tools tends to sound better and more natural, particularly on vocals, when you're not right on the edge of clipping.

Next, if needed, I insert a compressor on the channel and set it for unity gain with typically a 6-to-1 ratio. Depending on the singer, I might set the threshold for about 2 to 3 dB of compression, although there are certainly some circumstances where it may require significantly more.

With many singers, I prefer to record with no compression at all and balance any gain changes later in Pro Tools. But if I find I need a small amount of compression, my compressors of choice are the Teletronics LA2A or Summit Audio TLA 100A. If I need a lot of compression, I prefer the original dbx 160.

Sometimes, for monitoring purposes only, I will insert a compressor plug-in across the vocal track within Pro Tools. This helps things sound more even during the recording process, and by not recording compression to the track, the integrity of the dynamic range of the performance is retained.

I often find compression can eat some singers alive and take all the life out of their vocal, but by recording with no compression and adjusting the levels with clip gain, I can

balance the track later while retaining the personality and life of the performance. I find this technique to be particularly useful when recording artists such as Josh Groban or Andrea Bocelli, who are both absolutely incredible singers, but compression is not their friend.

On the other hand, I was recently recording a vocal with Katharine McPhee, who has a very bright, clear voice that really kicks ass, dynamically. I found myself needing as much as 14 dB of compression to balance her track, but the compressor didn't compromise her vocal at all; she still sounded great.

Another amazing singer I recorded recently was Eric Benét. I added just three dB of compression to his track, and it sounded perfect. And last week I was recording Johnny Mathis for a Dave Koz Christmas album. He walked up to the mic, never got closer than 10 inches to it, and without any compression, he sounded flawless. I found the same to be true while recording Frank Sinatra many years ago.

The point here is that every singer is completely different in regard to his or her vocal performance, so you need to adjust accordingly for each.

Session Tricks Here is a trick I use for maximizing resolution when recording singers with a wide dynamic range and for whom compression is not a friend: I record each vocal pass onto two channels within Pro Tools. I record one of these channels so the loudest stuff is at least 3 dB below clipping and the other channel eight to 10 dB hotter. (I usually adjust the Pro Tools analog input gain to create the difference.) Even though the high-gain channel will be totally clipping when the singer is singing full out, the

quieter sections on that channel, that are not clipping, will have much more effective high bit resolution because they were recorded so much hotter. This way, when I comp the vocal track, I can use the hotter track for the softly performed sections and the softer track for the louder performed sections.

After I have created my vocal comp, I typically spend an hour or so precisely tweaking the levels for every single syllable so the vocal perfectly lays into the track I'm mixing. As I'm doing this, I will also take out harshness and clarify dark moments by automating digital EQ plug-ins. And since I'm not fond of any de-esser, plug in or otherwise, I prefer to manually set the level of every "s" and "t" to taste.

In regard to EQ, I try to find the best mic to match the timbre of each singer's voice. I rarely add EQ on the whole vocal. I use EQ to fix specific words that may be a little harsh, or are not as clear as I would like. However, if you only have one mic and the vocal sounds a bit dark in the track, don't be afraid to add whatever EQ may be necessary to make the track sound right. For this purpose, I generally find high-frequency shelves to be much more natural sounding than any sort of peaking EQ.

Another vital tool in getting a great vocal performance is having a killer headphone mix that sounds as close as possible to the intended finished mix. Reverb, effects, etc. that will be on the finished track should be there for the singer. This can make a huge difference in the way the singer delivers a performance.

With all this in mind, your final home-recorded vocal track can have optimum resolution, rich dynamic range, and an even flow without any distracting sibilance.

I'm a firm believer that there's not just one way to do something, but I hope you will find some of these concepts as useful to you as they have been for me. Best wishes and happy recording to all. ■

Grammy-winning engineer/producer Allen Sides designed and built the Ocean Way Studio group, which includes Ocean Way Hollywood, Record One Sherman Oaks, Ocean Way Nashville, and Ocean Way Saint Barths. Sides is CEO of Ocean Way Audio, which comprises Ocean Way Monitor Systems, Ocean Way Drum Sample libraries, Ocean Way Microphones, OWR Studio Designs, and The Allen Sides Microphone Cabinet App. His most recent product is a collaboration with Universal Audio, The Ocean Way Room plug-in.