



Hot Tips: Designing Vocals: Part II

● Just as a coin has two sides, designing vocals also has two sides: the technical side and the performance side. They are really indispensable to each other, so it is a fruitless exercise to speculate on which factor is most important. Sometimes a great vocal performance can be mired in a bad recording—perhaps a harsh EQ, uncontrolled dynamics, noise or distortion. It can be subtle enough that it will not be immediately noticeable, but such things will quietly turn a listener off. It is like looking at a beautiful mountain view from a chalet with dirty windows: it really spoils the impact! Hopefully, in **Designing Vocals: Part I** we explored the technical factors one needs to keep in mind in order to (as it were) “keep the windows clean.” Technical factors can sometimes be complex, but they are pretty much cut and dried: it’s just learning various procedures and how to use certain devices. Black boxes and acoustics don’t change much; once you establish good recording habits, you are pretty much set for life.

However, the other side of the coin—the performance side—is much more elusive. Here we are not dealing with the predictable flow of electrons through wires, across capacitors or within the maze of integrated circuits; we are dealing instead with real flesh and blood human beings, each individual having a unique combination of intellect, emotions, hang-ups and varying degrees of talent. I don’t know of any books written on this subject, and I think I understand why: it is complex. It’s much easier to generate another volume on how to push up faders than to deal with the intricacies of the human personality in the recording studio. Yet (like it or not), the reputation of

your studio is inextricably tied to how you handle the human factors. If you as engineer and/or producer cannot nurture a good vocal performance from your clients, your pristine sound will never get noticed. To extend the imagery we used earlier: it’s like looking at the scene of a squalid, urban slum through a pane of squeaky clean glass. No one will ever comment on the glass, unless the person has a highly developed sense of irony. The bottom line is that both technical and performance factors need to be considered when designing vocals; and of the two, eliciting a good performance is probably worthy of greater attention because it is tougher to learn how to do.

PERFORMANCE ENGINEERING

I freely admit to having fabricated the term “performance engineering.” It doesn’t exist in the dictionary, nor can you get a degree in it from any known university. I just stumbled on this descriptive term one night while recording a female vocalist. She was having a rough time singing a particular passage in a song; the difficulty was making the transition between her lower range (the “full” voice) and her upper range (the “head” voice). She tried and tried, listening back to each pass for signs of improvement, but the tape was cruel in revealing the uncertainty in her voice. She had an otherwise lovely voice, but the entire track was in jeopardy because of this one blemish. Realizing that she had all the right stuff, but was somehow not putting it all together, I took her aside to encourage her. Straining for an illustration to explain her dilemma, I told her to consider how she would go about building a bridge between

her lower and upper registers. I explained how there was a process involved, decisions to be made, matter and energy to be manipulated to achieve the goal. If she were building an actual bridge over a body of water, she would have to decide exactly where to build the bridge, where to sink the piers on which the bridge would stand, how long the span would be, how high, and so on. Some formulas would have to be consulted, some numbers punched in a computer and a working model built and tested, a few numbers and materials shifted around—but eventually, a bridge would be built. The dimensions, procedures and materials might be up for discussion, but the bottom line was that the bridge could be constructed; she simply had to figure out how.

That’s the way an engineer would look at it. An engineer would take the known and apply it to the unknown in a creative way; an engineer would manipulate matter and energy to achieve a desired goal. That’s the root function of anyone that calls himself an engineer—from the graduate electronics specialist who designs microprocessors to the bulldozer operator who moves around tons of earth. Almost nothing is impossible to an engineer; he just figures out a way to do it. This young lady learned a valuable lesson that night. She realized she had the tools to do much more than she ever imagined. By taking a few minutes to study her range and the phrasing of the song, she figured out where her lower range started to fade and where her upper range crossed over; she decided on which notes to take in full voice and which to take in head voice. She rolled up her sleeves and built a bridge, and in a couple of passes she was blowing through the song

smoothly—like a seasoned professional. That's what I mean by performance engineering. And this "can-do" kind of attitude needs to be applied to every aspect of vocal design. Here are some other aspects of performance engineering you need to consider.

SETTING THE MOOD

The old proverb holds true here: "An ounce of prevention is worth a pound of cure." It is most definitely preferable to set the mood in advance than to try and fix it later on—after it has gone sour. Vocalists generally need a stable, pleasant environment in order to relax and open up in front of a microphone. It needs to be neutral—not emotionally charged—to be able to transform itself (via the imagination) into anything he or she wants it to be; and believe it or not, it's not all that hard to achieve. This area gets fudged a lot, particularly on the level of the home studio, but a few little considerations can make all the difference in the world. For example, proper ventilation and temperature control is a must. How can the vocalist sing a sophisticated love song when he is sweating profusely and the studio smells like a locker room?

Each of the senses feeds the artist with information on whether to be relaxed or uptight. It's no secret that being uptight contributes to muscle tension, muscle tension affects the vocal chords, and so on. Hence, the more elements in the environment under conscious control, the better. Here are some of the elements you might want to think about:

COLORS

They really ought to be neutral and natural, not drawing attention to themselves. If the walls are screaming with super-saturated colors, it can be distracting to a vocalist trying to imagine a particular setting.

LIGHTING

This is another key factor. Indirect lighting works best, and it can cover a multitude of eyesores in your studio. It really doesn't take much to install some track lights; even a couple of clip-on lamps will do the trick. A subtly-colored bulb projected on a neutral wall can

make even the humblest basement studio seem like a well-lit stage.

SMELLS

Smells are an extremely important part of the environment. Physiological psychologists tell us that the senses of smell are mapped onto a very primitive part of the brain (the rhinencephalon). Smell does not register on the cortex (the outer part of the brain associated with consciousness), but rather on the inner part which is associated with instinct. Subtle smells can put people on an emotional trip that takes them back in time to wonderful or traumatic experiences. Once again, neutrality and naturalness are the watchwords. Keep the air circulating and even spruce it up with a negative ionizer (it turns oxygen molecules into ozone by applying an electrical charge to the air) or perhaps some good quality air freshener will do the trick. I may seem a bit of a hippy, but I always burn just a little incense in the studio (*not* the control room) before the client arrives. It's so subtle as not to be obvious, but I always get lots of compliments on what a pleasant, relaxing environment I have in my studio. I am sure tuning up the air has something to do with it.

CONTROLLING THE VOCAL SESSION

There are a few techniques that can really make the vocal session a success. Remember that you, as producer or engineer, play a major role in the vocal. It is a team effort. A vocalist may sing well on stage or in the shower, but he may clam up in the studio. Since you get part of the glory (if the recording is successful) or part of the blame (if it's terrible), you have a vested interest in making even the most naive, unprofessional vocalist sound great. Whether the vocalist be amateur or pro, here are some things to consider:

PREPARATION

This should be done if at all possible. If there is a day or so between the cutting of the tracks and the vocal session, give the vocalist a work tape to practice with. That way, he'll have made lots of creative decisions at home, and when he comes to sing, he won't be drained; he'll be able to focus more energy on performance.

WARMING UP

Warming up the vocal chords is extremely important, since they are muscles. The warm-up can be simply letting the vocalist run-down the tune either live in the control room or in the studio on headphones. I prefer a few passes live in the control room, because it gives an opportunity to hear the performance candidly—without facing the mic. A low-key critique can be made at this time and it will not be perceived as threatening or judgmental, because it is admittedly informal. After a few passes and some exchange of ideas, the vocalist can then proceed to the mic knowing that his/her approach is "in the ballpark."

THE HEADPHONE MIX

It must be conducive to singing accurately. It must be adjusted on the basis of feedback from the vocalist or perhaps on the basis of your own perception of what needs to dominate the mix. Always remember that the purpose of the headphone mix is not to sound pretty—like a final mix, but rather to facilitate a good performance. That may require temporarily abandoning aesthetics in favor of utility. For example, if a vocalist seems to have trouble keeping time, then perhaps it would be best to sneak the drums in gradually, louder and louder, until the rhythm problems are rectified. This should be done as unceremoniously as possible; simply raise the drums a little louder every time you rewind the tape for another pass. Chances are, the artist will not notice the difference, but will imagine that he is "getting into it" a little more with each run through the song.

Another factor to consider is the overall level of the vocal in the context of the mix. Sometimes the artist will hear himself too predominantly in the mix, but instead of asking you to turn his level down, he may simply sing in an extremely reserved fashion. If the song is an up-tempo rocker, this can render a rather insipid performance. It's advisable in this case to pull the vocal level down and slightly under in the mix, so that the vocalist will need to strain a bit to hear himself. The exact converse may also be true, at times. The important point is to sense the problems in performance

and experiment to see if they can be remedied through a modified head-phone mix.

BREAKS


Breaks are a necessary part of the creative process. A wise producer/engineer knows when to call for a break: precisely when the vocalist needs one, but doesn't want to ask. Usually it's best to administer a break with a brief word of encouragement: "Sounds like you're just about ready to lay down a track. Why don't we take a short break, then come back and knock it off?" If the vocalist asks for a break, it might connote a fear of failure, so she will probably just keep hacking away at it until her voice is gone. As with any creative process, a lot is achieved during a refractory period. Writers and painters sometimes speak of taking a nap and waking with solutions to their creative problems. Getting away from it all—even for a few minutes at the water fountain—is sometimes all that is needed to regain perspective on a performance that is missing

the mark. And remembering also that the voice is muscle, it can rebound rather quickly if given a few minutes rest.

DYNAMICS

They must be built into a performance if it is to sound realistic and inspired. Unfortunately, the necessities of recording pop music on tape (limiters, compressors, etc.) can sometimes iron out too much of the natural dynamics—although settings can be adjusted to minimize this problem. Perhaps the biggest enemy of natural dynamics is the very process of multi-track recording. Say, for example, a song has three verses. After listening back to the entire song, it becomes clear that the vocal performance on verse one is not up to par. So, it is decided to re-record verse one. By now the vocalist is hot, so verse one should be easy to cut—and it is. But an interesting phenomenon happens. Because the vocalist is now in high gear, verse one now sounds too animated relative to the verses that follow. (I'm not talking

about volume. That could be remedied by moving a fader. I am referring instead to the *je ne sais quoi* of vocal performance which is not fixable by technological means.) If a song is going to have a crescendo (an increased intensity), it will generally occur towards the end of the song—definitely not at the beginning. So in this case, in order to assure natural continuity between verses, one of two things must be done: either verse one must be performed again in a more subdued mood, or else verses two and three will have to be performed again with increased intensity beyond the standard set in verse one. While it is true that some types of music are deliberately uni-dynamical (such as techno-pop and dance music), most other kinds of pop music productions will benefit from an objective scrutiny of the dynamics and continuity of vocal performance.

In the next installment of **Designing Vocals**, we will review some hot tips on treating vocals in the final mix. 



Was ~~\$31.95~~

Now \$15.00

Limited Quantity The Microphone Handbook

by **John Eargle**

Make checks payable to: Elar Publishing Company, Inc.

38 Pine Hill Lane, Dix Hills, NY 11746

516 586-6530

Send me ___ copies of The Microphone Handbook at the special sale price of \$15.00 each (NYS residents must add appropriate sales tax). Shipping is \$2.00 per book in the USA, \$3.00 per book anywhere else.

I'm paying by check credit card

Name _____

Address _____

City _____

State _____ Zip _____

Mastercard/Visa number _____

Expiry date _____

Signature (required for credit card) _____

**Sale is limited to
books in stock
Final Sale—No Returns
This edition will not be
available again at this
price**