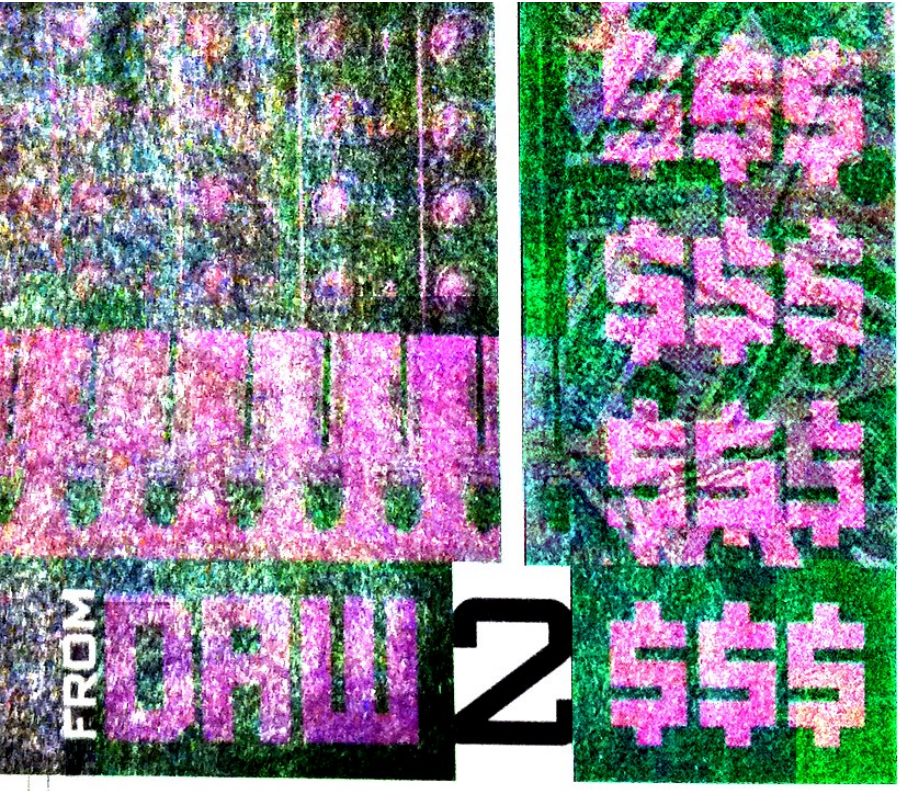



# BEYOND THE PAN POT—
## A PLEA FOR THE DEPTH DIMENSION

*Get some space into your mixes!*

BY ALEX CASE

Let's review some of what we learned those many years ago in Geometry. A line possesses just one dimension. A plane is two-dimensional. A cube is three-dimensional. The pan pot, used with such care in assembling our stereo mixes, helps us work one—and only one—dimension: that line between the loudspeakers from left to right. Productions that simply pan things left to right are boring, one-dimensional works that miss so much opportunity. You and I want so much more.

### Near and far

There is no excuse not to make all of our stereo recordings at least two-dimensional. To get beyond the narrow left-to-right dimension, we must learn to pull things forward ("In-Yer-Face", as we discussed in the September 2008 issue) and push things back, away from the listener.

As individual elements of your multitrack arrangement are pushed back into the soundstage, the overall stereophonic image of your work grows much more interesting. A crowded mix stretched taut in a line from left to right loosens up to make room for more tracks and more effects front to back.

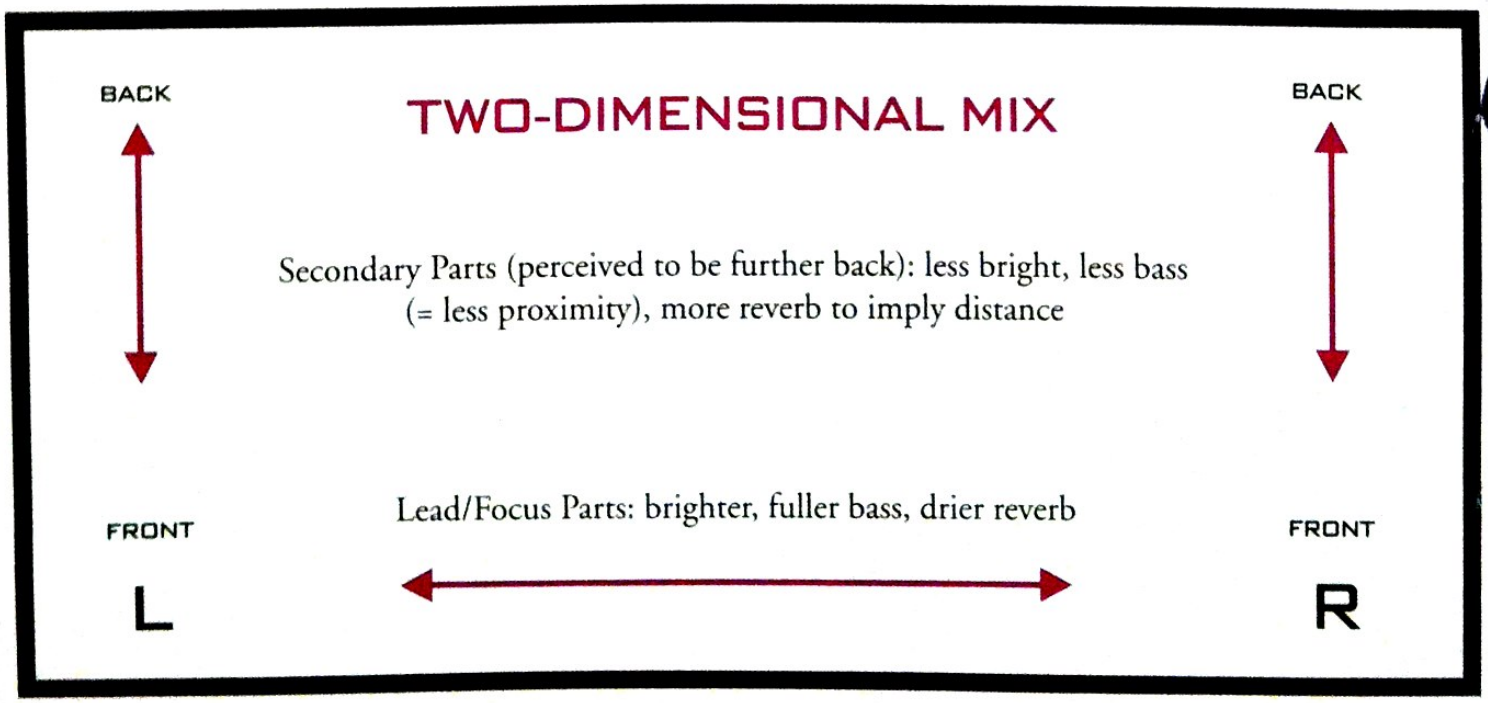
Audio engineers ought to think hard about the sonic cues associated with distance.

- Gently roll off some highs to simulate air absorption and tell your listeners a track is some distance away.
- Perhaps shelf-eq down the lows a little to undo proximity effect and create the spectral contour of something a little quieter, a little farther away.
- Shift the wet/dry mix of your reverb effects more in favor of the reverb to separate that sound source from your listener.
- Avoid present or bright reverbs and instead use warm, natural programs that roll off high frequency content in the reverb tail, very much in the spirit of air absorption and distance.
- Use a light touch with compression so th some notes are deliberately, expressive obscured in the mix by other tracks, suggesti overlap and distance. Even pulling the fa down a smidge to evoke the lower level ass ated with distance can be a powerful effec

These mix moves enable you to tiptoe a t backward into the depth dimension of loudspeaker performance space. Be warned: All of these mix moves take prac finesse, and a little bit of guts.

### Get used to it

Pulling out the highs to simulate air absorption is logically and perceptually valid. The trouble is, the first few times we do it, it sounds

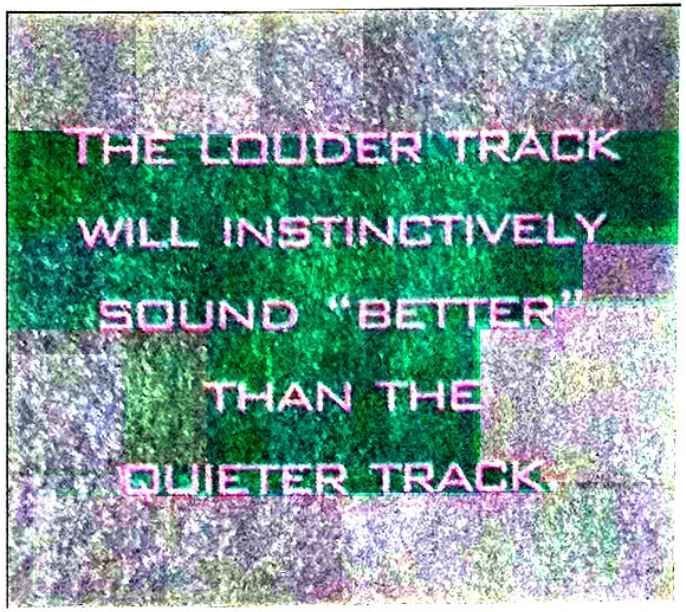


more than a little disappointing. The brighter track probably sounds "better" than the gently filtered track. The reverb presents a similar dilemma. The drier track sounds "clearer" than the more reverberant track. It's hard to pull a fader down. The louder track sounds instinctively "better" than the quieter track. Implementing these mix moves in isolation seems to make things sound worse. (See the September 2008 issue for my discusson of the Equal Loudness Contours—those lessons apply here as well.)

Mature engineering judgement eventually teaches us otherwise. The key is to have a light touch and to evaluate these properties of the signal in the full context of the mix.

## Easy does it

All of the effects for distance discussed above are low-magnitude adjustments. Distance is evoked with ust a few decibels of high-frequency ltering, and/or less than 3 decibels ore reverb. A little massaging of the nal goes a long way, pun intended. Consider the rock tune with ngs. A midrange clutter of strings, doubled or tripled guitars, maybe some keys, and definitely some vocals presents itself. The strings, when soloed, might lose desirable texture when attenuated, filtered and treated to extra reverb, but in the context of the entire mix, they




drift back and away from the guitars and singers and find their own lush space behind the band.

In the full context of the arrangement, the strings stop fighting the guitars and vocals, and starting adding to the mix. The strings are now easier to hear, even though they are perceptually farther away. Probably more important, the guitars on the sides and the vocals in front all reveal themselves. With the strings deeper into the sound stage, the midrange competition is over.

## Courage and seduction

Engineers who have the strength of character to push selected tracks back in the mix will find they begin to fabricate bigger, deeper, more complicated images between two loudspeakers. Listeners are seduced right in. You may not need more effects to do this, just better coordinated use of the ones you have. It's just eq, reverb, and faders, after all.

A two-dimensional sound stage that spreads out left to right and front to back offers the band, their fans, and you a far richer listening experience.

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