

Improve Your Mixes With This Critical Listening Exercise

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When I teach recording classes my favorite lesson is this critical listening exercise. It's fun and light, and practicing it helps us all improve our mixes. First, let's look at what makes a great mix, then we'll jump into the exercise.

The Elements of a Mix

In his book *The Mixing Engineer's Handbook*, Bobby Owsinski suggested that there are six elements of a great mix: Balance, Panorama, Frequency Range, Dimension, Dynamic and Interest. Below I'll outline what these elements mean. My definitions vary a little from Owsinski's, as I feel these definitions add some important factors that were missing from his definitions.

Balance: Do all instruments feel like they have appropriate weight in the mix? Are any instruments being lost in the mix because they are being overpowered? Are some instruments more prominent than others? (The answer may often be yes to the last one, but that should be a deliberate decision, not an accident.)

Panorama: Do instruments sit at various points in stereo field (left to right speakers)? Does the point of interest shift within this field?

Frequency Range: Are all frequencies represented somewhat equally? Is there something happening in all frequency ranges? (There are times when we deliberately have little happening in a frequency range – a violin concerto would sound silly with pounding bass – but again this should be a conscious decision.)

Dimension: Do some instruments sound closer or farther away than others? Is there a sense of movement in the mix?

Dynamics: Does the song change over its duration? Most often in recording we use the term dynamics to refer to changes in volume, but we need to consider other dynamic changes such as tempo, time signature, key, or major/minor tonality.

Interest: There are two important sides to interest. First is the hook; Is there something memorable about the mix? This could be a melodic hook, or a memorable tonality (think Cher's "Do You Believe" or Smashmouth's "Walking On The Sun").

The second, and less thought about, side of interest is this: What pulls the listener through the song? When the lead instrument stops playing, what takes over as the focus of the song? The analogy I like to use is that of a TV show or play. If the characters leave the stage, other characters must enter right away to keep the viewer's interest. If a TV show had long gaps of just background between dialogue and action everyone would get bored and change the channel. Music is no different.

It All Starts With Arrangement

Keep in mind that the first step in all of these comes with arrangement. Keeping these elements in mind during the arrangement process will make mixing far easier.

The Exercise

Now that we have outlined some criteria that we can use to critique a mix, pick some commercially produced recordings and pick them apart. Do this on a regular basis and it will become instinctual. Your mixes will improve and your creativity will soar.

Let's look at a song. These are just my opinions, so feel free to add your own insight in the comments field below. Those who do not have a decent pair of speakers with their computer may want to consider listening on headphones.

Billy Jean by Michael Jackson (Song Removed Copyright)

Improvise and grab a song of your choice and apply the methods used below to your song.

Step 1: Listen For Balance

Try to pick out each instrument being used and take note of exactly what it is doing. In a well mixed song this should not be difficult. Poor balance often results in instruments being hard to pinpoint. What instruments do you notice the most?

What instruments are subtle enough that you only notice when listening carefully? In this song the bass and percussion are very prominent. They are what drives the song

forward. The vocals are clear and upfront as they are the focal point of the mix (after all, it's Michael's name on the album cover).

Step 2: Check For Panorama

Picture where from left to right each instrument seems to be coming from. If it helps, you may want to draw a line on a piece of paper and make a tick for where each instrument seems to be.

The percussion, synths and backing vocals in this tune take full advantage of the stereo field. Note the double-tracked backing vocals panned left and right such as at 0:44 and leading into the chorus at about 1:28.

Step 3: Examine The Frequency Range Being Used

Listen for low, low-mid, high-mid and high frequencies. Is there content in each of those ranges? Does it feel like there is too much in any given range? In this song the thin kick and snare make room for the thick bass.

The synth fills the mids subtly in the verse, thickening along with some guitar and additional vocals in the chorus. The highs have some percussion, backing vocals, and the higher overtones of the synth.

Step 4: Listen For Dimension

This is a harder one. It may help to close your eyes. Imaging that you are watching this being performed on stage. Which instruments feel closer to you? Which feel farther away?

In Billie Jean the bass and kick feel right up front. The snare and other percussion is farther back, as are the lead vocals. The synths are farther back still. The layered backing vocals sit at various depths (such as at about 2:50).

Step 5: Observe Any Dynamic Changes

Take note of changes in the song. The most obvious dynamic changes in this song are the energetic choruses which contrast nicely with the more reserved verses (see about 1:30).

Within the chorus itself the guitar provides a dynamic change. It comes in first at 1:39 and plays double time in alternating 2 bars on, 2 bars off and then 2 more bars on, greatly changing the feel of the chorus while it plays.

Step 6: Take Note Of Where Your Interest Goes

Pay attention to what is holding your interest at each moment in the song. Again, pen and paper may help. Here, the interest is pulled forward by the interplay between the additional vocal tracks, the guitar and the synth which each take their turn as focal point when the lead vocals pause.

Let's take the turnaround at the end of the first verse as an example (1:14). At the end of the first line the sax-like synth takes over our attention between lines (1:17), then after the next line the backing vocals (the famous Michael Jackson "Heee-eee") do the same (1:20), then the synth again (1:25), then the layered backing vocals pull us into the chorus (1:26).

Below are a couple more examples of great mixes and how they hold up to this exercise.

Sun King by The Beatles

Balance: Note how the kick and the bass are distinct, as are the two guitars. In the second half of the song the vocals are big and prominent without drowning out any of the other instruments.

Panorama: From the hard panning to the moving instruments this mix takes great advantage of the stereo field. When the vocals come in they are everywhere, rather than singular.

Frequency Range: Each instrument has its own place, nothing gets in the way of anything else. Thick lows and sparkling highs.

Dimension: In a reversal from the usual way of doing things, the bass and kick are right up front with the guitars and keys farther back. When the vocals come in they are farther back still.

Dynamics: Subtle at first, though big when the vocals come in.

Interest: The interplay between the instruments grabs you at the beginning and leads you right to the vocals which take their place as the focal point.

Supervixen by Garbage

Balance: The snare hides a bit in the heavier bits, though this is probably intentional in this aggressive mix.

Panorama: The bass and kick sit solidly in the center. Abstract sounds tease at the edges. The guitars play back and fourth from left to right in the bridge.

Frequency Range: A bit bass heavy in the heavy parts, but balanced nicely with the highs of the vocals and the far thinner low end in the verse.

Dimension: The backing vocals and drums feel very distant in stark contrast to the very upfront guitars and bass.

Dynamics: Huge. It's rare to hear jumps in volume and energy so large in modern music.

Interest: The abstract sounds take over interest between the lines of the verse carrying interest nicely along. In the chorus the backing vocals do the same.

Source: http://www.co-bw.com/Audio_Logic_Improve_listening.htm