



The sound contracting engineer

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• On our cover, The San Diego Sports Arena. The story begins on page 6.

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A Minimalistic Philosophy

Rather frequently I am asked for advice on the subject of sound recording, perhaps because I was the first kid on my block to own a recording studio. Many of these seekers are novice recordists who are setting up their own studios or struggling to get "that big sound" from their small rigs. Having been in this business for about ten years, I have developed a framework for approaching this mystical art/craft/science that I willingly share.

"Minimalism" is the term that I have chosen to describe this methodology. According to Webster's, a minimalist is one who "advocates a program...of a minimal or conservative kind." It is akin to frugality, when frugality is defined as efficiency or not being wasteful, versus "cheap." (But, since the culinary world already has a Frugal Gourmet, I have chosen to be a minimalist. It will be less confusing.)

A LOGICAL APPROACH

The minimalist approach seems particularly logical for those of us practicing our craft at some level lower than the state-of-the-art. Beginners will find this paradigm invaluable. Further, minimalism is a philosophy that may be applied to many aspects of the recording field: equipment selection and purchase, production, engineering, and mixing, to name a few. Let us examine each of these areas in turn, from the perspective of the minimalist.

The rationale which we have long applied to equipment acquisition in our operation has been to purchase items which are of the required fidelity, regardless of other considerations. Implicit in this deceptively simple maxim are several things. Buy those pieces of equipment which are of professional quality, versus professional brand. If the required performance is available under a private label brand or through a consumer electronics store—buy it.

We have found, for example, some very good values at places like Radio Shack. Outlets such as this often market products which are produced for them by major manufacturers such as Koss, Sony, Crown, Fostex, Shure and others. This had led us to select headphones, microphones, pre-amplifiers, meters, monitor speakers and other items from these sources. Ultimately one pays a lower price because the brand name is not a conspicuous

feature on the equipment, but the quality is still very high.

USING WHAT IS NEEDED

In our operation, we are also cautious of buying equipment that is actually higher in quality than we require. This almost blasphemous notion recognizes that we are, after all, a narrow gauge eight-track studio. Much of our product will be heard over the limited bandwidth medium of radio, or be reduced to an audio cassette for playback on consumer systems, while keeping future growth and expansion in mind.

Minimalism in engineering may take several forms. In laying tracks, resist the temptation to use more microphones than really are needed. I have noted on several occasions that neophyte engineers will instinctively regard the drum kit as an instrument requiring at least one microphone per striking surface—large kits demanding up to a dozen mics.

Experience has shown that is not necessarily the case. A simple set up placing microphones on the kick, snare and two overhead will often produce excellent results. Listen. Let your ears decide if that is really all that is required. Until one has a solid understanding of placement and phasing considerations, the caveat "less is best" should be kept in mind. After the basics are mastered should come the expansion and experimentation.

Minimalism should always prevail in equalization and the use of effects.

Just be sure that the frequencies which you will want to bring out of EQ in the mixing can replace what is not there. But, essentially, it is my belief that the emphasizing, boosting and cutting should go on in the mixdown. Good basic tracks will contain a full range of frequencies with which to work.

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Of course, the "rule" stated above, like all others, is made to be broken. There are certainly times when severe equalization is required in the tracks to achieve the desired end result. Overall, though, try to capture the entire spectrum initially, alter it later.

Generally, effects should not call attention to themselves. Another common tendency for those new to engineering is to overuse certain effects, notably the application of reverberation. That is particularly true for vocals. Reverberation should only be used to add a sonic environment to the voice, a sense of the space in which the performance took place.

Begin with no effect on the signal, then very gradually bring it up in the mix. Stop when the vocal exhibits the desired ambience, before you can "hear" the reverb. Again, experimentation is the only teacher. and, as previously stated, this is obviously another rule made to be broken, but is a great help in learning to use effects.

Inasmuch as minimalism is the achieving of maximum results with minimum resources, studios with limited track capability will always benefit from this philosophy. Taking full advantage of the narrow gauge studio may require "pre-mixing" drum tracks, background vocal tracks, rhythm tracks or others.

A stereo drum mix can be created during the track laying and save many precious tracks. We generally place the drum mix on two tracks of the multi-track with the conventional stereo placement, snare and kick in the center and toms and cymbals panned across the stereo field.

Limited numbers of outboard devices may also necessitate recording of effects during the track laying, rather than during the mix. While this commitment to a given type and amount of effect will make many engineers uncomfortable, it will allow the minimalist engineer to take fullest advantage of the multi-effect units now popular.

Our practice is to put effects on the drum tracks as they are laid. Similarly, we will often do the same for guitar and background vocal tracks. This allows us to "save" the effect units for use during the mix for lead vocals, lead guitar, horns or other predominant tracks.

DON'T OVERMIX

Finally, minimalism in producing will demand a layered but uncluttered sonic environment created through the


recording process. Again, many novices will exhibit a tendency to "over-mix" tracks by adding too many parts to the piece.

As the mix is built, resist the temptation to bring in all the parts simultaneously. Often a more powerful cut emerges through the interplay of the basic rhythm tracks, rather than through the addition of many guitar parts, horn sections, or layers and layers of vocals. Bring parts up in the mix selectively.

As the instruments are juxtaposed in the sonic space of the stereo field, so should they be juxtaposed in frequency content. that is, a mix is structured in at least three domains: where the instrument is placed "left to right" (achieved through panning), where the instrument is placed "near to far" (achieved through level control), and where the instrument is placed in terms of "harmonic content."

This third element of the sonic space is accomplished through the layering of frequencies. an instrument whose harmonic content is lower frequencies is placed at the "bottom" of the mix. Usually that is the kick drum or bass guitar. The next instrument introduced into the mix should be one whose harmonic content is the next highest. If the lowest frequencies in the mixing are contained in the bass guitar or synth track, the next track should then be the kick drum, whose frequencies are slightly higher.

So, the mix is constructed of layers of frequencies, layers of levels and spatial positioning or panning. This will prevent signals from getting cluttered or lost in the mix because their levels, frequencies or position are too close together.

Keep in mind that what I've termed the minimalistic approach is only one among the myriad philosophies which can be applied to the field of audio recording. Its particular usefulness is for those who have limited budgets, limited facilities or those who are beginning their careers as recordists. It would certainly appear to be just as applicable to many other practitioners. And, as stated above, minimalism has no "rules;" it is a framework for problem solving. 

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