IT'S ABOUT TIME

Real Drummers Don't Beat Buttons

BY NORM WEINBERG

WHAT EXACTLY IS MUSIC? Easy question, tough answer; we could say that music is a series of sounds organized over a period of time. You can't have music without sounds and you can't have sounds without taking up time. This column will be devoted to those aspects of the music-making process that relate to sequencers, arpeggiators, time and clock converters, and other time-based devices. Today's timely topic is drum machines.

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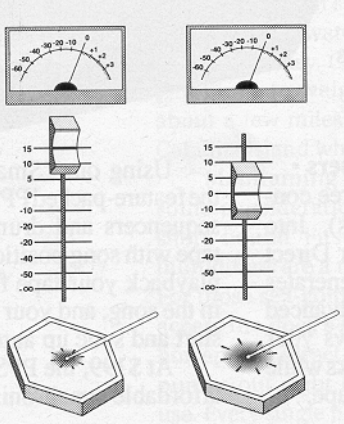
Timing and music. It seems that the pendulum of change has started another swing. When drum machines were first introduced, the notion of having a recorded drum track with "perfect time" was manna from the gods. Perfect was hot. Recently, manufacturers have been trying their best to bring back "human feel." Now perfect is cold. Machine-generated rhythm tracks sound pedestrian, lifeless, and just plain dull to many ears. But this doesn't have to be the case.

Beat It. To program like a drummer, you've got to think and act like one. First off, "real" drummers don't play little plastic buttons with their fingers, they use sticks. The most realistic way to program a drum machine is from a drum pad, period! Even if you've never held a pair of sticks in your life, the purely physical sensation of hitting something is going to impart a certain amount of realism into your programming. (It's great therapy, too.) So, beg, borrow, or steal (well, maybe not steal) some sort of percussion controller immediately.



Higher MIDI velocities yield cleaner mixes.

The Long & Winding Pattern. Drum machine manuals suggest you conserve time and memory by working in short patterns of one to two measures that can be called up in various sections of the song. But drummers don't think in small chunks. Every bar flows into the next, and like snowflakes, no two measures are exactly the same. Try setting your machine's pattern length to eight or 16 measures, or even longer if it makes sense.

Air O' Dynamics. Don't hear quite enough dynamic variation? Try adjusting the pad controller to a different velocity curve or level setting. When programming from pads, your loudest stroke should have a MIDI VELOCITY under 127 (the maximum velocity setting). Drummers are always capable of hitting a drum or a cymbal just a little harder for those special situations where the music needs an additional kick in the butt. If you're peaking the velocity at anything under strokes that could kill mortals, adjust the velocity curve.

By the same token, playing and recording at too soft a velocity level could result in a higher noise floor, since you might be required to crank up the fader of the drum machine track to get a good mix among the other instruments when you lay the final version to tape. The trick then becomes striking a balance between a good dynamic range and good overall level.

Let Me Hear Your Body Clock. Programming a great "feel" into a machine is actually a matter of phrasing. We haven't yet addressed the problem of quantization (auto-correcting your performance to the closest specified note value, e.g. eighths or sixteenths). Here are some other experiments you can try:

First, set the metronome to a faster click if possible, such as sixteenth-notes (change the resolution, not the tempo). This provides a more intricate framework in which to program feeling. Second, do all your drum machine programming in high-resolution mode by turning the quantization off; after all, drummers don't have quantizers! You can capture the subtle dynamic nuances by programming from pads, but you need to be in high-resolution mode to capture any sensitive timing variations.

Try the previous suggestions with the hi-hat first. If the result is close to what you want, bring the machine into step programming mode and fix any fluctuations in the tempo that seem to get in the way. Once you're happy with the result, play in the bass drum, the snare, and any other sounds you want in your pattern, using the same techniques. As before, go back into step mode to fix any offending attack points. Don't fix them all—just the ones that bother you.

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The end result of all this is a pattern that sounds more like a drummer than a machine, with variations in dynamic contrasts and timing resulting from musical expression. These are just a few of the tricks and techniques that can be applied to drum programming. Next month, we'll cover a few creative techniques that can be applied to computer-based sequencers. Until then, keep organizing those sounds over time! •

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