DRUM MACHINE PROGRAMMING

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LESS IS MORE

WITH TODAY'S DRUM MACHINES AND sequencers, it's a snap to perform difficult polyrhythms or patterns of radical complexity. In fact, these musical tools may be one of the reasons behind contemporary music's newfound love affair with intricate rhythms. But often, the most effective drum pro- gramming is the simple, open style of good ol' rock and roll. So, how do you transform a tired rock beat into something with personality and style? The secret is simplicity — walk on the mild side instead of the wild side!

Displace and Erase. Displacement can be defined as moving a note to another position within the measure. Erasing is simply removing a note from the measure entirely. Let's take a look at a few examples and see how these techniques can be applied.

Example 1 is the generic rock beat that hundreds of drummers have played on thousands of recordings. While this is a perfectly good pattern that has withstood the test of time, it doesn't say much about the individuality of the composer. The nine patterns that are shown in Example 2 were created by using the displacing and erasing techniques.

To arrive at the first pattern in Example 2 (measure one), erase the bass drum note on the first beat of the bar. The musical result of this
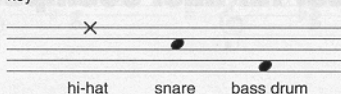
Ex. 1. The most commonly played rock-and-roll drum pattern of all time.
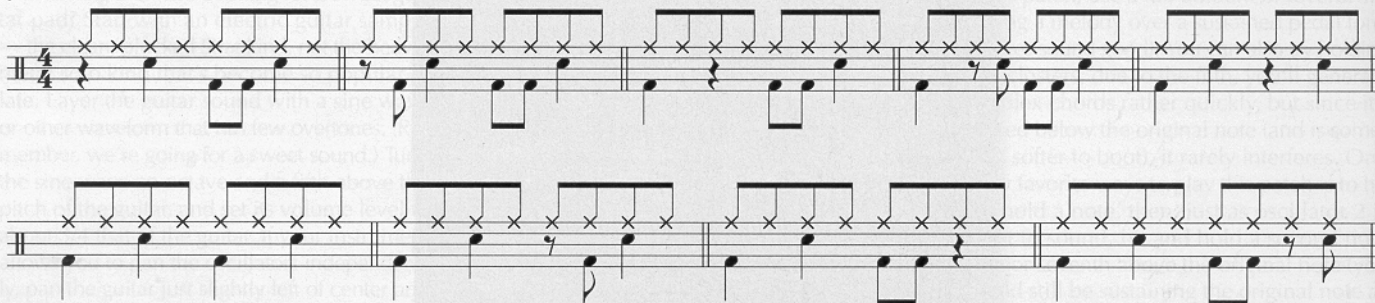

key

hi-hat   snare   bass drum

Ex. 2. By displacing or erasing notes, new patterns are created. Each measure can be repeated by itself as a one bar riff, or combined for a two-bar pattern.

Ex. 3. These patterns are the result of time-shifting certain notes.

Ex. 4. More variations, with alterations in two of the beats.

Ex. 5. Yet more mutations, with changes in three of the beats.

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simple procedure is surprisingly effective, as the snare drum notes on beats 2 and 4 now have a little more stress. To arrive at the second pattern in Example 2 (measure two), shift the first bass drum note to the second half of the beat. This displaces the attack, producing a pattern with more syncopation and forward momentum.

Program the other patterns in Example 2 and listen for the subtle groove changes. Each pattern is unique, and each creates a different series of stresses and accents. In addition to delaying events, you might try experimenting with shifting notes to earlier positions in the measure. Example 3 illustrates the patterns that result when events are advanced by an eighth-note.

Sisters, Nephews, and Second Cousins. All of the patterns in Example 2 were created by modifying only one beat of the original pattern. The original pattern and its variations are very closely related, because three of the four beats are identical. If you perform these alterations on two of the beats, the results will be slightly less fraternal. If you modify three of the beats, the listener may have a difficult time relating the variations to the original pattern. Examples 4 and 5 illustrate more extensive variations to our generic rock beat.

Next month, we'll look at structuring these simple patterns into musically satisfying phrases. Until then, think more about playing less and try these techniques with other patterns. ▪

SOUND DESIGN

is a function of the pitch envelope rather than oscillator tuning. So unlike the two patches above, both of the oscillators in this patch should be set to the same pitch.

Program the pitch envelope so that it has a relatively fast rise time, sustains at a constant pitch for as long as a key is held, then releases moderately quickly on key-up. Now here are the essential parts: (1) Program the envelope amount so that it causes pitch to be shifted by a fifth; (2) route the envelope so that only the pitch of oscillator 2 is modulated.

Last, set the amplitude envelope release time for both oscillators long enough for the sound to last about 1–1/2 seconds after key-up. Add reverb as desired.

Try playing the chord shown in Ex. 1. Notice that on key down, a complex chord is generated from only a few notes; on key up, the chord sounds as fingered. Now play the figure in Ex. 2. What you'll hear — provided you've programmed the patch correctly — is the music as written in Ex. 3.

By carefully adjusting the attack and release times of the pitch envelope, you can make the pitch-shifted chord glide up from and down to the fingered chord as desired. Combine that with some amplitude envelope adjustments (for fade-ins/outs), and indeed, you'll have a whole lotta hoopla goin' on. ▪