

DRUM MACHINE PROGRAMMING



NORMAN WEINBERG

INDUSTRIAL DRUMMING (MAN-MACHINE-MUSIC)

IN THE EARLY PART OF THIS CENTURY, the Italian writer Filippo Tommaso Marinetti coined the term *futurismo* to refer to a movement of extreme radicalism in the arts. The musical futurists were the first composers to accept the music of steamboats, automobiles, and planes on equal footing with the music of brass, woodwinds, and strings. In the decades since, many com-

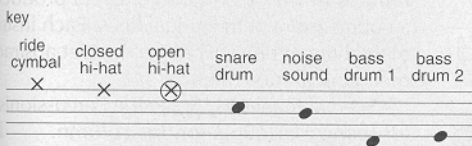
positions, such as Edgar Varèse's *Ionisation*, George Antheil's *Ballet mécanique*, and Alexander Mosolov's *Symphony of Machines—Steel Foundry*, have incorporated noise as a viable musical resource. Now, in the latter part of this century, noise and the sounds of industry have returned in the field

of pop music.

The sounds. If your electronic rig contains a sampler, consider using it as your primary sound source for industrial drumming. The pristine drum samples contained in many drum machines are just too clean and "real" for industrial drum sounds. In other words, the notes that are usually played by a hi-hat can be replaced by a sampled iron pipe, automobile brake drum, staple gun, or just about anything else that you can imagine. You can design a bass drum replacement by sampling a car door slam, tuning it down an octave, and playing it backwards. A fat snare drum sample can be mixed with a gun shot to produce a sound with plenty of energy and identity. If the concept is the musical use of noise, anything is fair game.

If you don't own a sampler, consider passing your drum machine's sounds through outboard processors. Add massive amounts of mid-range boost to the hi-hats, add chorus and flange to the snare drum, or send the bass drum through a reverse reverb. Again, be creative and design sounds that are unique and colorful.

The patterns. One of the most distinctive



Ex. 1a. Dual bass drum samples animate this one-bar industrial pattern. Note the snare drum on every beat.



Ex. 2a. Here, the snare has been moved to the second half of the beat, where it alternates with the ride cymbal.



Ex. 3. The dual kick drum from Ex. 2b, plus a standard backbeat on the snare, plus a more active hi-hat.



Ex. 4a. Various hi-hat patterns, here and in Ex. 4b and 4c, add life to a simple kick/snare beat.



Ex. 1b. In this variation on Ex. 1a, the snare is dropped from the downbeat.



Ex. 2b. Another pattern where the snare alternates with the ride, this time with a heavy dual bass-drum beat.



Ex. 4b.



Ex. 4c.



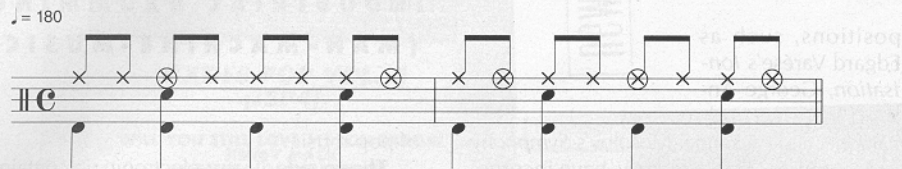
Norman Weinberg teaches percussion and electronic music at Del Mar College in Corpus Christi, Texas. His latest book, *The Electronic Drummer*, is distributed by Hal Leonard Publishing.

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aspects of industrial drumming is the unrelenting repetition of short patterns. Typically, a one-measure pattern forms the basis of the "machine," while subtle variations prevent monotony. In Example 1a, the two bass drums

and snare form a pattern with intense drive (try panning one bass drum hard left and the other hard right). Example 1b is a variation with the snare drum removed from beat one. Examples 2a and 2b move the snare drum over to the second half of each beat, creating a conflict with the ride cymbal.

Ex. 5. The open hi-hat creates a two-bar phrase.



Ex. 6. A noise shot on the second half of the fourth beat keeps this pattern moving.



Ex. 7. Several of the concepts used in other examples are combined in this pattern.



In Example 3, the hi-hat cymbals play a more active role against a steady, high-energy drum beat. When programming patterns of this type, mix the cymbals in the background and add minor variations from time to time. Examples 4a-4c illustrate a few hi-hat variations that might be added to a simple drum pattern. Notice that the hi-hat is independent and that open sounds occur in unique places. In Example 5, the open high-hat notes produce a two-measure phrase (somewhat uncommon in industrial drumming).

Example 6 adds an industrial noise sound on the last half of the fourth beat. Many of the previous concepts are tied together into a single pattern in Example 7.

Aesthetically, one might say that the machine performs several different actions at varying rates. The throbbing bass drums move at a faster speed than the hi-hats, which move faster than the snare drum, which moves faster than . . . you get the picture. Combining unique timbres in various rhythmic layers produces a counterpoint of individual lines. Each instrumental line represents a specific (yet abstract) mechanical movement.

Special thanks to "Spike the Percussionist" for being a resource for this column. ■