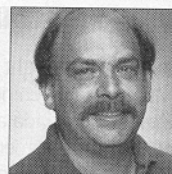


# DRUM MACHINE PROGRAMMING



NORMAN WEINBERG

## FUN WITH PERCUSSION

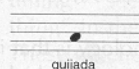
**W**HEN IT COMES TO PROGRAMMING authentic drum tracks — especially of the Latin variety — a little bit of background can work wonders for your grooves. Last month we explored claves, agogos, shakers, and congas. This time around we'll take a look at several other percussion instruments common to most modern drum machines.

**Quijada.** The quijada is a unique-sounding instrument made from the lower jawbone of a mule or zebra. The animal's teeth are loosely wired into their sockets, and a buzzing sound is created when the jaw is struck with the player's fist. This instrument is best used minimally. It sounds great when played once or twice per phrase. Used too often, it loses its

exotic character. Example 1 shows two quijada

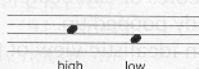
*Norman Weinberg teaches percussion and electronic music at Del Mar College in Corpus Christi, Texas. His latest book, The Electronic Drummer, is distributed by Hal Leonard Publishing.*

key to Ex. 1



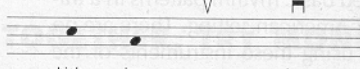
quijada

key to Ex. 2



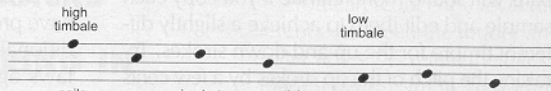
high cuica  
low cuica

key to Ex. 3



high guiro  
low guiro  
up movement  
down movement

key to Ex. 4 and Ex. 5



paila open rimshot cross-stick  
open rimshot cross-stick

Ex. 1. The quijada should be used sparingly, as demonstrated in these short phrases.

♩ = 72-100



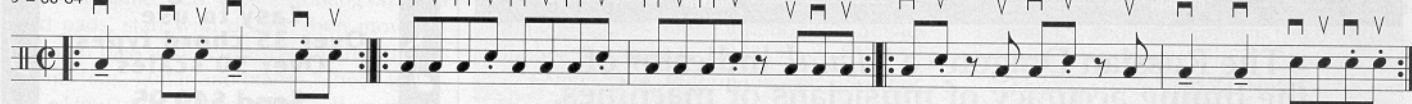
Ex. 2. Try programming these cuica patterns using a high sample for the upstrokes and a low sample for the downstrokes.

♩ = 72-92



Ex. 3. As in Example 2, these guiro patterns require samples with different pitches. A third sample with a short decay is required for the staccato notes.

♩ = 60-84



Ex. 4. Three authentic timbale patterns.

♩ = 80



Ex. 5. These timbale phrases are ideal for fills and solos.

♩ = 60-88



## DRUM MACHINE PROGRAMMING

rhythms that might be used in a musical setting. Most drum machines and sound generators that include a quijada are actually playing samples of another instrument called the Vibra-Slap. Since real quijadas are both expensive and fragile, the mass-produced Vibra-Slap is a standard substitute. To make a drum machine's Vibra-Slap sample sound more like a true quijada, shorten the decay and add a lowpass filter to darken the timbre. Compared to other Latin percussion instruments, the quijada is quite soft, so it's a good idea to keep it mixed in the background.

**Cuica.** The cuica is a type of friction drum that can perform a wide range of pitches and even play quick glissandi. Depending on the samples in your machine, the cuica can be a very expressive instrument. In order to program the cuica effectively, you'll need at least two versions of the sample — one high and one low.

When playing the cuica, the percussionist rubs up and down on a small stick. Your cuica parts will sound more realistic if you copy each sample and edit them to achieve a slightly different timbre for the up and down strokes. Try raising the pitch of the up strokes by a few cents or experiment with shorter and longer envelopes for more diversity. Program the patterns in Example 2 and see if you like them.

**Guiro.** A guiro is a gourd rasper that is scraped with a small wooden stick or stiff metal wires. As with the cuica, different sounds are

obtained when the instrument is scraped in an upward or downward direction. Pitch changes are created by scraping slowly for low sounds, and faster for high sounds. For this reason, high guiro notes are usually shorter in duration than lower notes. Combinations of fast-slow, high-low, and short-long create a range of textures for the guiro. Example 3 offers three traditional guiro patterns.

**Timbales.** Timbales are a pair of large, single-headed drums with metal shells. To program hip timbale patterns, you'll need several colors at your disposal. Common sounds for timbales are open strokes with a full tone and maximum sustain, rimshots that produce a high-pitched "crack," cross-stick rimshots that sound like a muffled tomtom with a sharp "click" at the attack, and the "paila" (also called "cascara"), which is created by hitting the metal shell with the stick (a cowbell can be substituted for the paila if necessary). Example 4 contains a few authentic rhythm patterns for timbales. Example 5 shows how timbales can be used for fills or short solos.

One important note: These two installments have presented basic rhythm patterns in a traditional Latin-American setting. There are no laws against using these instruments or the rhythms they play in non-traditional settings (in fact, it should be encouraged). Latin percussion instruments can lend rhythmic support and add timbral diversity to just about any style of music. Experiment, be creative, and keep an open mind when exploring these colorful instruments. ■

## MIND OVER MIDI

Continued from page 130

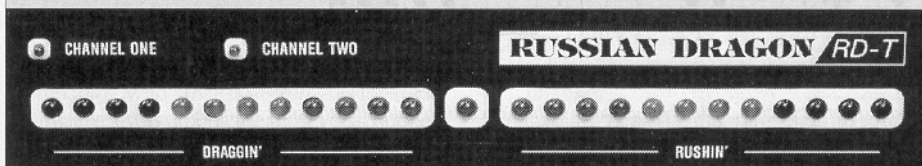
factory presets or it won't sell).

First, no one has to use General MIDI. "Real" musicians can always load "real" sounds over any factory presets they don't like. I expect most synthesizers to support the GM Sound Set as a ROM patch bank or simply not at all. And no one is being forced into using General MIDI when they create their own scores. Ignore it. Or embellish it — just as when you're writing for a traditional orchestra or rock band, using GM as a foundation with a few "solo" instruments on top isn't a bad orchestration strategy.

On the other hand, a lot of people are already using General MIDI. The first GM instrument, the Roland Sound Canvas SC-55, sold better in its first two months than any other instrument in recent times. Korg has released a GM Sound Set card for the 01/W, and various little birds have told me about at least two other manufacturers who will be releasing GM instruments possibly by the time you read this. Not to mention the scores of GM Score composers who have already popped up.

An idealistic view of technology is that it should make mundane or highly technical jobs easier while also expanding the possibilities for those who want to get out on the cutting edge. General MIDI does the former with music. Next column, we'll get back to talking about the latter. ■

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