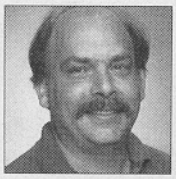
DRUM MACHINE PROGRAMMING



NORMAN WEINBERG

PROGRAMMING TRICKS FOR CYMBALS, PART 1

A SINGLE CYMBAL HAS LITERALLY hundreds of different colors. The design and construction of a cymbal is such that the timbre of the sound depends on where on its surface it is struck. Generally speaking, high frequencies get stronger as the stick strikes closer to the dome, and low frequencies are more prominent toward the edge of the cymbal. Other factors that help determine sound quality are the stick angle, the force of the stroke, and even the type of stroke (glancing or straight down). It follows that using one monotonous ride, hi-hat, or crash cymbal sample isn't going to be very convincing. The key to creative and realistic cymbal programming is variation.

This month, we're going to concentrate on one technique: Using a sampler as the primary sound source for all your cymbal needs. First, a few cymbal sampling tips.

➪1: Generally, cymbals should be sampled at the fastest possible sample rate. Cymbals are ripe with high-frequency information that can be lost at slow sample rates.

➪2: Try to capture the cymbal's full natural decay. Use your sampler's envelope controls to taper the decay and regain memory if necessary later on. Try to avoid chopping off the ends of samples.

➪3: When sampling any type of cymbal, get four or five similar colors by striking the same instrument at slightly different locations, dynamics, and stick angles.

➪4: When sampling ride cymbals, first play several strokes to get the instrument vibrating, then sample a single stroke while the instrument is still ringing. This will give your samples more realism, as the cymbal's tone gets richer during constant playing.

➪5: When sampling closed and open hi-hats, sample several bars of a rhythmic pattern. Then pull out individual samples that can be used for various dynamic levels.

➪6: If you have access to a number of drum machines and multitimbral sound modules, sample them. By grabbing the best cymbal sounds from each machine, you can create a warehouse of cymbal colors.

Crash Cymbals. Twenty years ago, a typical drum kit would include one or two crash cymbals. Today's players surround themselves with five or more crash cymbals of various sizes, weights, and special tonal colors.

A small splash cymbal is needed for quick jabs, two fast-speaking thin crashes for body blows, two medium crashes for the ol' "left-right combination," and a heavy crash for the uppercut to the chin. Oh yes, don't forget a china cymbal for that raunchy "I-don't-play-by-the-rules" sound.

When programming a series of rhythmic crashes, use at least three or four cymbal colors. You can try samples of different cymbals or different samples of the same cymbal. Either way, constantly vary the tone color throughout the passage.

Ride Cymbals. Unlike crash cymbals, one or two rides tend to be enough for most players. The concept behind riding a cymbal requires that many strokes be played successively on the same instrument. But drummers don't strike the same spot for every stroke. There are subtle tonal changes that take place depending on the position of the stick on the cymbal's surface. In fact, the basic "swing" ride rhythm is most often played with a particular physical movement that produces unique colors for each rhythmic value (see Figure 1). It's "lang, spang-a-lang", not "dum, dum-dum-dum"! Each note requires its own color.

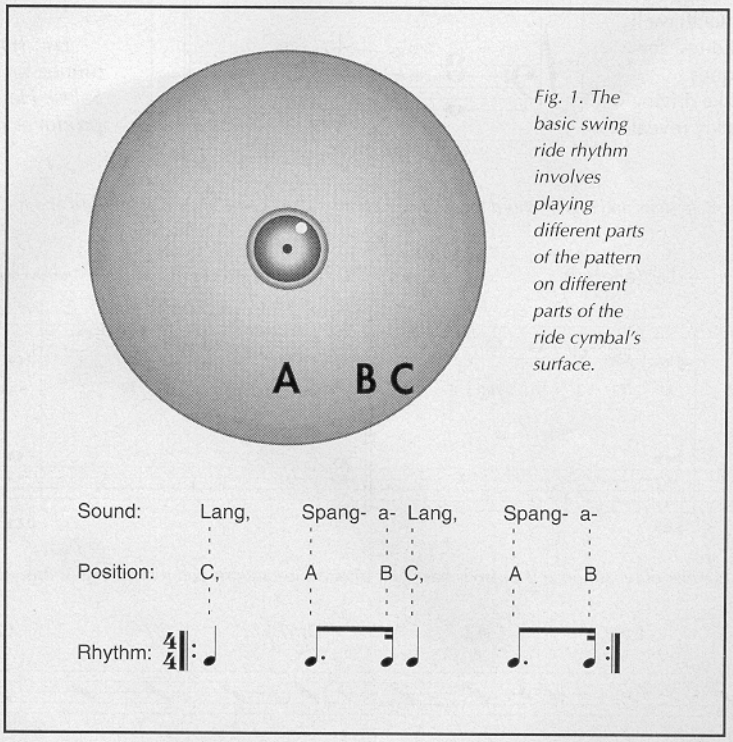


Fig. 1. The basic swing ride rhythm involves playing different parts of the pattern on different parts of the ride cymbal's surface.

Hi-Hat Cymbals. Let's face it—with the bass drum kicking one and three and the snare hammering out two and four, it's up to the hi-hat cymbals to give a pattern some life and movement. All too often, the same two sounds are used for all the open and closed hi-hats in a groove.

One method of getting great hi-hat patterns involves sampling several different strokes (see Tip 5 above), and using their individual colors for different levels of dynamics. This way, an accented hi-hat's color will sound slightly different (not just louder) than one that isn't accented.

Samples of a foot-closed hi-hat are best used when a live drummer would be riding on another surface (like a ride or china cymbal, cowbell, floor tom, etc.). When the drummer is playing the hi-hat with the stick, the sound of the foot closing the cymbals is almost entirely masked by the stick stroke (unless the drummer is extremely sloppy).

Next month we'll explore another technique for programming cymbals: linking and layering multiple drum machines and sound generators together. ■

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