DrumKAT Notation

BY NORMAN WEINBERG

When the folks at Alternate Mode decided to include a notation feature into the new Turbo 4.0 operating system, the idea presented a number of interesting and exciting challenges. The drumKAT has ten pads on the playing surface, and nine trigger-jacks for additional pads or pedals. How does one place nineteen playing surfaces on a staff?

Another problem involves the very nature of an electronic percussion performance. A single pad can fire a single note over a single MIDI channel, a chord made up of notes on several MIDI channels, a 4- 8- or 128-note alternate, a loop, a rhythmic pattern, or even an entire sequence. How does one go about putting all this together into a logical notation system?

The solution to the second problem was simple: The notation had to be a "kinetic map" rather than a score of how the piece is actually going to sound. In other words, the notation had to show the player when to hit what pad. It wasn't going to deal with the problem of what that pad is programmed to do or how the sound generators are going to respond. This is a different matter that will be discussed in a future article.

With the second problem solved, it was only necessary to deal with putting nineteen surfaces on a single staff. The traditional five-line staff was determined to be the best system due to its high degree of familiarity and compact area. Since the drumKAT is often approached as an expansion of a drumkit, it seemed logical to use a single five-line staff rather than a double five-line staff.

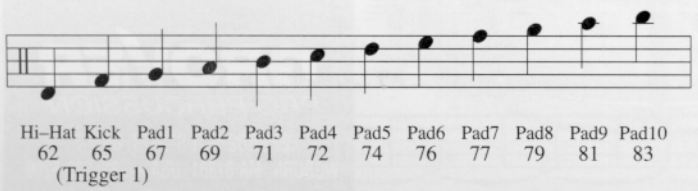
It was thought that many musicians would be using the drumKAT without any additional triggers. With this in mind, the notation for the drumKATs "on-board" pads (with the inclusion of a bass drum trigger and hi-hat pedal) had to be simple and easy to read.

The use of accidentals was considered, but determined to be too clumsy, as transitions between on-board pads and external triggers could require a large number of accidentals. Several other possible configurations proved to be too difficult to write and/or read, or too convoluted for most computer-assisted notation programs. A solution was found by using normal noteheads for the on-board pads and triangle noteheads for trigger pads.

DRUMKAT NOTATION CONVENTIONS

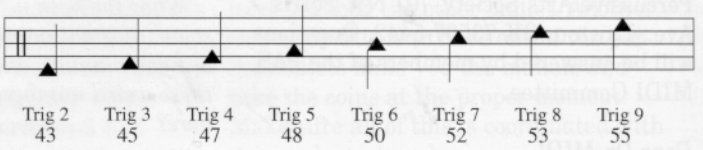
Pad Note Assignments

Note placement and MIDI note number assignments for the ten onboard pads. Notice that the Kick (Trigger 1) is included with the pads to make the notation easier to read/play.



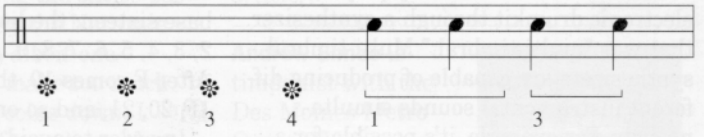
Trigger Note Assignments

Note placement and MIDI note number assignments for the nine trigger inputs (remember that Trigger 1 is shown with the PAD assignments).



Additional Pedal Assignments

The four pedals on the drumKAT do not automatically generate MIDI note numbers like the pads and external triggers. However, their notation can be extremely important to a performance. It is suggested that the following notational procedure be used when pedals are pressed momentarily, or when pedals are held down for a particular length of time.



SOFTWARE WITH DRUM MAPS

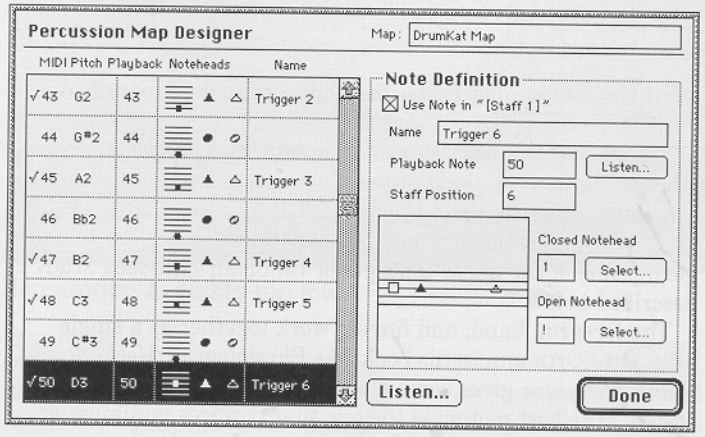
Some programs, such as Finale by Coda Music Technology, offer drum notation that "maps" incoming MIDI messages to certain positions on the staff with user-definable noteheads.

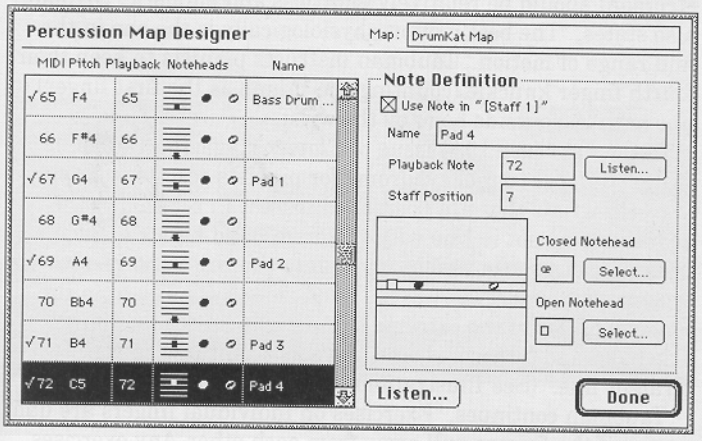
To have mapping software automatically transcribe your real-time drumKAT performances into standard notation, create a map with the following MIDI note number assignments and noteheads. Be certain to assign the proper staff positions.

Surface	Note Number	Note Shape
Pad 1	67	Normal
Pad 2	69	Normal
Pad 3	71	Normal
Pad 4	72	Normal
Pad 5	74	Normal
Pad 6	76	Normal
Pad 7	77	Normal
Pad 8	79	Normal
Pad 9	81	Normal
Pad 10	83	Normal
Trigger 1 (Bass Drum)	65	Normal
Trigger 2	43	Triangle
Trigger 3	45	Triangle
Trigger 4	47	Triangle
Trigger 5	48	Triangle

Trigger 6	50	Triangle
Trigger 7	52	Triangle
Trigger 8	53	Triangle
Trigger 9	55	Triangle
Hi-Hat	62	Normal

In the examples below, a drumKAT notation map is being created for Finale.

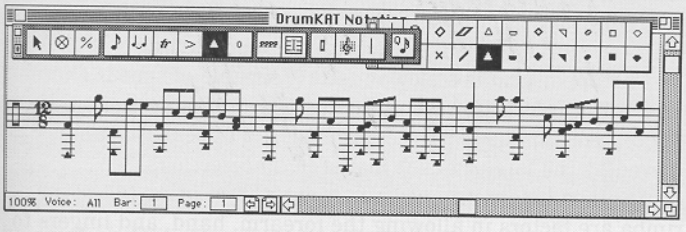




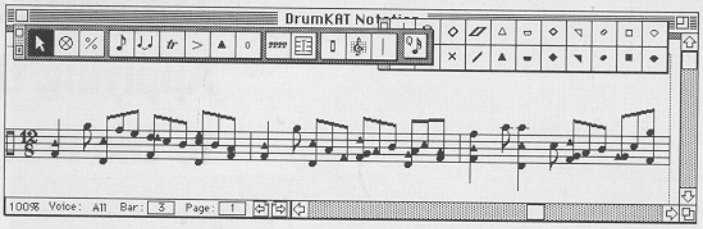
SOFTWARE WITHOUT DRUM MAPS

Programs without drum maps can still be used for drumKAT notation. Below is a brief description of the process. (Your notation software may look different from these screen shots, but the process should be the same.)

1. After recording your real-time drumKAT performance, select all notes below Middle C and change the noteheads into triangles.



2. Select all notes below Middle C and transpose up an octave and a sixth.



3. Use the tools in your notation software to add pedal indications, dynamics, articulations, slurs, and other musical symbols as needed.

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