



Voxengo AcuDrums User Guide



<http://www.voxengo.com/>

Document revision date: 09-Oct-2012

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Introduction

Voxengo AcuDrums is a professional sound sample library that captures the acoustical sound of various drum and cymbal instruments. The main idea behind AcuDrums library is to capture a maximally pristine and unprocessed contemporary drum kit sound. Library as a whole contains more than 11000 WAV files, more than 90 instrument files and takes more than 8 GB of disk space. Instruments of this library have multiple velocity layers with each velocity layer having 5 sample variations reducing the “machine gun” effect greatly.

Samples for Voxengo AcuDrums were recorded in Voxengo recording studio which has a deep, warm and diffuse sound with less than 200 milliseconds reverb time making it an excellent room for recording “dry”, maximally clear-sounding samples that are great for a further reverb processing.

The microphone placement that was used for sample recording reproduces a 3-dimensional sound stage. For example, the cymbal samples of this library while sounding “in your face” at high velocities sound airy and spacious at low velocities. Instruments of the library when combined together as a kit have a good spatial separation and placement: they will sound like they were placed on a sound stage, not like they are coming from the same position in space.

It is also important to note that during sampling the instruments were played by an experienced drummer making the recorded samples sound maximally close to how they would sound in an actual drumming performance.

Features

- Up to 16 velocity layers per instrument
- 5 sample variations per velocity layer
- Several stick and beater types
- Several zones per instrument
- Prolonged decay
- Hundreds of samples per instrument
- 44100 Hz 16-bit stereo samples
- Stored in plain WAV sample files

Compatibility

Samples and instrument files of this library are compatible with Native Instruments Kontakt 3.5/4 (Kontakt Player is supported in demo mode only – it times out) and Cakewalk Session Drummer 2 and 3. NKI and SFZ instrument files of this library can be additionally loaded in various compatible samplers. Individual WAV files can be loaded in most samplers.

Library Structure

Each drum and cymbal instrument file of this library is located in the same main folder (e.g. “Voxengo AcuDrums”). Plain WAV sample files that are referenced by instrument files are located in subfolders within that main folder, sorted by sample variation index (1 to 5). The folder names and instrument file names have a fixed naming scheme:

{Instrument class} {Instrument diameter/depth} {Instrument mark} {Stick type}

e.g. “CRASH 16 SB-HH-U S” means 16-inch crash cymbal mark “SB-HH-U” played with hickory sticks (stick type “S”). Snare drums also have depth specified: “1465” which means “14 by 6.5 inch”. Instrument mark may include single- or two-letter drumhead mark, e.g. PL-MMP-A (PL-MMP-B) or PL-MMP-AD which means drumhead mark “A” with a damping ring.

Since some instruments have zones that are better mapped to MIDI notes of another instrument (e.g. crash cymbal’s bell hit is similar to ride bell hit), such instruments may have additional files with the suffix added after the “stick type” (e.g. “CRASH 16 SB-HH-U S RIDE.nki”).

Note that instrument mark is used in the library for distinction between instruments of the same class and size, only. Instrument mark should not be associated with a particular drum or cymbal manufacturer.

Instruments of a larger diameter or depth usually have a lower/darker tone.

Instrument Classes

The following instrument classes are presented in the library:

- BDRUM – Bass drum. Double pedal – left and right beaters sampled. Mapped to MIDI notes 35 (B0) and 36 (C1).
- CHINA – Chinese cymbal. Mapped to MIDI note 52 (E2). Chinese cymbal choke zone is mapped to MIDI note 72 (C4, long whistle). Also includes “tip” instrument zone (instrument file name suffix “RIDE”) that is mapped to MIDI note 51 (D#2, ride cymbal 1).
- CRASH – Crash cymbal. Mapped to MIDI note 49 (C#2). Crash cymbal choke zone is mapped to MIDI note 57 (A2). Note that the peak loudness of the choke hit is usually louder than the peak loudness of the edge hit due to difference in playing technique. Also includes “tip”, “flat top” (non-edge hit with drumstick’s shoulder) and “bell” instrument zones (instrument file name suffix “RIDE”) that are mapped to MIDI notes 51, 51 (D#2, ride cymbal 1) and 53 (F2, ride bell), respectively. The “bell” of the crash cymbal is hit with drumstick’s shoulder (the area where drumstick’s taper begins).
- HIHAT – High hat. Mapped to MIDI notes 42 (F#1, closed high hat), 44 (G#1, pedal high hat), and 46 (A#1, open high hat). Open high hat has 8 levels of openness controlled via the MIDI CC #4 (pedal controller).
- RIDE – Ride cymbal. Mapped to MIDI note 51 (D#2), 53 (F2, ride bell) and the “edge” zone is mapped to MIDI note 59 (B2, ride cymbal 2). The “ride bell” is hit with drumstick’s shoulder (the area where drumstick’s taper begins).

The “bell tip” (ride bell hit with stick’s tip) variant of the “bell” zone is presented in the instrument file with the name suffix “BTIP”.

- SNARE – Snare drum. Mapped to MIDI notes 38 (D1, acoustic snare), 40 (E1, electric snare, rim shot), 37 (C#1, side stick).
- SPLASH – Splash cymbal. Mapped to MIDI note 55 (G2). Splash cymbal choke zone is mapped to MIDI note 58 (A#2, vibraslap).
- TOM – Tom drum. Toms are usually presented as a set of different-sized drums. In the instrument file names, the size of a particular tom drum is specified after the “Stick type” (e.g. “TOM PL-MMP-A S 10 HI” which means 10-inch high tom). Tom instruments usually have the “off-center” zone which is a variation of a standard “center” zone, but sounds spongier and with a more boom to it. The low tom is mapped to MIDI notes 41 (F1) and 43 (G1), the mid tom is mapped to notes 45 (A1) and 47 (B1), the high tom is mapped to notes 48 (C2) and 50 (D2).

Stick/Beater Types

The following stick and beater types can be found in the library (the weight, tip type, and length of the sticks are unspecified):

- “S” – American hickory sticks.
- “B” – birch rutes. Rutes are packs of thin sticks which sound much softer than regular sticks, but much harder than brushes.
- “P” – plastic rutes. These rutes can be considered “hardened” birch rutes. Plastic rutes also have their own signature “plastic” sound and they usually give less amount of click in comparison to birch rutes.
- “H” – hard plastic beater for bass drum, or a hard mallet.
- “F” – felt beater for bass drum, or a felt mallet.
- “W” – wooden beater for bass drum.

Cycle Random

NKI and SFZ instrument files play library’s samples in “cycle random” manner – that is, at a given MIDI velocity level a single random sample (out of 5) is selected each time a MIDI note is played.

However, NKI high hat instrument files have the “cycle round robin” sample selection manner since NKI instrument files cannot correctly combine MIDI CC tracking with “cycle random” sample selection manner.

WAV Files Naming Scheme

The naming scheme of WAV files basically follows that of instrument files. However, WAV file names always include suffix that consists of instrument’s zone name, sample variation and velocity indices:

“CRASH 16 SB-HH-U S BELL 4-07.wav” means crash cymbal “bell” zone, sample variation 4, velocity layer 7. Note that total number of velocity layers differs for every instrument and zone.

High hat WAV file names also include maximum MIDI CC #4 value where a particular sample maps to:

“HIHAT 14 SB-HH-R S EDGE 3-079-02.wav” means high hat “edge” zone, sample variation 3, maximum MIDI CC #4 value 79, velocity layer 2.

Instrument Files Notice

It is important to note that since each drum or cymbal instrument of this library resides in a separate instrument file, certain samplers may not be able to load all required instrument files together as a kit.

While in Session Drummer and Kontakt samplers you can load several instrument files at once thus building a drum kit “on the fly”, samplers like “rgc:audio sfz” may require manual creation of a combined SFZ file that includes individual SFZ instrument files.

We are not providing combined instrument files since our library permits purchasing of instrument samples individually.

A similar notice applies to situations where you want to load more than one instrument of the same class (e.g. crash cymbal) at the same time. Since samples of every crash cymbal in the library are mapped to the same range of MIDI notes, loading two crash cymbal instruments will create a MIDI note overlap. In such situation you may need to manually remap the MIDI notes assigned to the second loaded instrument of the same class.

MIDI CC #4

Note that high-hat instruments of this library have 8 levels of openness and they react on MIDI CC #4 (pedal controller) events. By default, the open high-hat may play at the “full closed” or “half open” level. You have to add MIDI CC #4 event to get the required openness level from the open high-hat sound.

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Sample set of each individual instrument of the AcuDrums library is licensed under the following conditions:

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11. Entire Agreement

This agreement is the final, complete and exclusive agreement between you and VOXENGO that supersedes any prior agreement or understanding, whether written or oral, relating to the subject matter of this license agreement.

Credits

The library was recorded and performed in Voxengo recording studio by Max Sivkov.

Sample sorting and editing was done by Aleksey Vaneev.

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Questions and Answers

Q. Does each instrument has a separate volume control for overhead, room, direct mics like some sample libraries have on the market?

A. No, the instruments do not have such individual microphone volume control. Instruments of the library are composed of flat stereo samples. For your information, such separate microphone volume control is usually redundant as you can change the sonic balance of the drums by means of equalizing. Direct microphone usually captures the main tone of the drum – e.g. 200 Hz for a snare drum. Boosting or cutting this frequency region is equivalent to boosting or cutting the direct microphone level.

Q. Can you please let me know if I can use these instruments in BFD, Drumagog and some other drum sample module plug-ins?

A. BFD, Drumagog and many other drum sample module plug-ins are not supported since they use “closed” proprietary formats, or are not wide-spread. We provide instrument files only in the NKI and SFZ formats as among universal sample library formats they are most wide-spread and sufficiently “open”.

Q. I like the fact your library is offered in the NKI instrument file format, but I find it inconvenient that each instrument resides in a separate NKI file, unlike some libraries that have a single NKI file that contains several instruments.

A. We are not offering a single NKI file, because as practice says customers usually buy only several instruments out of all available. Beside that, having different stick types sampled, drumheads with and without damping, offering a single NKI file is quite a limiting approach since in a kit, for example, one musician may want a damped snare played with a stick and cymbals played with rutes, while another musician may want only ride cymbal to be played with rutes. Thus, the number of usable kit piece combinations is large.

Also note that Kontakt allows you to save multi-instrument patches. So, you have to build your kit out of several separate NKI files only once. In the case of a possible MIDI note overlap, remapping the samples from one MIDI note to another MIDI note is also quite an easy drag'n'drop operation in Kontakt. It is also possible to change panning/volume of individual kit pieces when you are using a multi-instrument setting.

Q. In the “High Hat” sample set I've got I cannot seem to find WAV files for the open high hat. I also cannot seem to vary openness level when playing MIDI drums.

A. The open high hat samples reside in the folder with the “EDGE” suffix. The openness level is specified in the file name (ranges from fully closed to fully open).

To set the high hat openness level you have to program the MIDI CC #4. Note that in many cases the MIDI loop libraries do not set the MIDI CC #4 explicitly and so your sampler will most probably use the default “half open” value for MIDI CC #4.