



# BRUSH KIT

VERSION 1.0



## ADVANCED VIRTUAL DRUM SET

FOR KONTAKT 4.1 AND HIGHER

Welcome!

Thank you for downloading the Wavelore Brush Kit! This help file contains an overview of the instrument, its playing techniques, and its interface controls. Reading this document carefully and familiarizing yourself with the interface and parameters offered will allow you the most control possible when using this highly versatile and flexible virtual instrument.

Enjoy!

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# Before you Start: The Concept and Design of The Wavelore Brush Kit

The Wavelore Brush Kit contains 208 samples from a 5-piece drumset. The kit consists of a kick drum, snare drum, hi-hats, and two rack toms, a ride cymbal, a crash cymbal, and a splash cymbal. The drumset was mic'd with a pair of overhead microphones, and the kick, snare, were also mic'd "close". In addition to all this, a microphone was placed in an adjacent room to capture some ambiance for the kick drum, hi-hats, and toms. In this virtual rendition, you can switch these mics on and off, as well as adjust their relative levels and panning for each part of the drum kit.

The drums were played with a set of wire brushes, and each stroke was performed 4 times over, so that the samples could be used in "round-robin" programming, allowing repetitions to sound more natural than the traditional "machine gun" effect often heard on sample libraries in the past. The kick drum, toms, crash, and splash cymbals were only struck in a single, plain strokes; The following is a summary of the "special" performances of the other parts of the kit:

- **Snare Drum:** The snare drum, in addition to its regular strokes, was used to play "stirs" (that swishing, swirling effect heard on a lot of soft jazz, easy-listening, country ballads, and other music that requires a soothing touch on the drums). The stirs were recorded with both left and right hands separately, and in four different lengths.
- **Hi-Hats:** The "hats" were played in five different gradations of "open-ness": Fully closed, almost closed, halfway open/closed, almost open, and fully open. There are also samples of the hi-hats being closed by the pedal.
- **Ride Cymbal:** The ride was struck on both the edge and the bell of the cymbal.

The library follows the traditional method of mapping the parts of the drum kit to various notes on the MIDI keyboard, but also allows some interesting performance control options for folks who like to play their drum parts live. Read on!

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## I) What is a "Brush Kit", and How Does It Work?

Well, we assume you know that "kit" refers to "drum kit". Since you've downloaded the library, you are probably interested enough in drums to know that a drum "set" is often referred to as a "kit"...

The "Brush" part refers to the way in which the drums are struck; As mentioned above, these samples were recorded using wire brushes to hit the drums. Brushes are often used when a softer attack is needed, such as when the drummer is playing in ensemble with other performers on quiet instruments, when the style of music requires a softer attack than sticks would allow for, or perhaps simply if he/she is practicing...(insert drummer joke here)...Other than the tool used for striking, there is no difference between a "brush kit", and a regular kit, unless perhaps a drummer owns different drum kits and has them set up and tuned for his/her preferences when playing in different styles...

While some parts of the kit are simply struck with little regard to anything other than dynamics, others are more complex; The hi-hats, for instance, involve a foot operated pair of cymbals that can be struck when squeezed together, when held apart, or at any number of increments in between the two. Also, the "hats" can be played using just the foot pedal, closing them on one another to produce the sound; They can also be released quickly afterward to an open position, allowing them to ring out after the strike. Further, any time the hi-hats are sounding, the foot can be used to close them, stopping the sound with a closing noise. This arrangement allows the player to perform a wide variety of articulations on the hi-hat.

Other more complex articulations include playing "stirs" on the snare drum (where the brushes are dragged over the rough skin on the top head of the drum, creating a white noise-like effect), and playing cymbals at different locations on their surfaces for contrasting dynamics and timbres.

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## II) How Does All of That Translate to MIDI and Kontakt?

In the virtual brush kit, the "simple" parts of the kit (toms, snare hits, kick drum, crash and splash cymbals), each drum's single articulation is mapped to an arbitrary MIDI note on the keyboard. Play the note, get the sound. The only consideration for these drums is dynamics. Here is a run-down of considerations for the other parts of the kit:

**Hi-Hats:** The six available hi-hat articulations are, by default, mapped to different notes on the keyboard (see the quick start guide below, or just load the instrument and mess with your keyboard, for their locations). These include five

gradations of “open-ness” when hit with the brush, as well as the sound of the pedal being used to close the hi-hats. The instrument also has the capability to use an assignable MIDI CC# to operate a virtual “hi-hat pedal”; You can, for instance, use CC#11 (your expression pedal) together with a single MIDI note to play the hi-hats, where the CC# determines how “open” the pedal is, and thus, the sound of the hats. Further, when using a CC#, pushing the controller all the way to a value of 127 (maximum) will sound the closing hats, cutting off any previously sounding hi-hat samples. One final note on the hi-hat pedal: Whether using a MIDI CC# or a MIDI note to play a closing sample, releasing the note (or lowering the value of the CC#) within 150 milliseconds of closure will trigger a ringing open hats sample – just like when a real drummer taps his/her foot on the pedal and immediately lets go, sounding the ringing hats.

**Snare Stirs:** The snare stirs are accessible by (default, re-assignable) playing C2 and D2, which trigger left hand and right hand stirs respectively. To increase the duration of the stirs, raise the value of CC#1 (Mod Wheel). We recommend using the stirs with the assigned controller at 127 always, as stirs can be more easily shortened by simply releasing the key used to trigger the sample. The exception would be if you want a greater variety of samples in your performance: In this case, continuous variation in CC# value will yield more believable results.

**Cymbal Strike Location:** Though we didn't sample any complex “zones” for any drums or cymbals in this library, we thought it was important to at least sample the ride cymbal on both the bell and the edge, since both these articulations are extremely common. They are to be found on C3 and D3 by default.

**Almost Forgot – The Virtual Kick Drum!:** Since drummers use a pedal to operate their kick drum, we included a way for you to play the kick in this library by tapping your sustain pedal with your foot! The instrument tracks your overall dynamics on the keyboard, and imposes the average playing level on the sustain-pedal triggered samples, keeping your virtual kick drum and keyboard-triggered samples in the same dynamic range! This extra way of triggering kick samples might come in handy when used together with keyboard-triggered kick drum samples, for instance, if you wanted two or more quick consecutive stokes. In live playing.

# 1) Quick Start

## 1.1) The Instrument at a Glance

When you load the instrument into Kontakt, you will see the main page of its user interface:



Looking from left to right across the top of the interface (below the Kontakt controls), you'll see the name of each piece of the kit. Each name has a column below it containing the main controls for that piece. Ignore all that for now, and look for the button that says "MAP", in the "RIDE" column. Clicking that button will bring you to the mapping page:



On this page, you can both see the factory settings for how the drums are mapped to the keyboard/MIDI controllers, as well as make your own assignments. Play the notes on your keyboard that are indicated under each drum/articulation to trigger the desired sound. You can re-assign the parts of the kit to play them differently if you have a certain preference, but remember that you must save the instrument from Kontakt's file menu if you wish to retain those changes.

Note the button under "Hi-Hats", which, by default, says "USE NOTES". The default manner in which hi-hat open-ness is controlled is by MIDI note. That is, each gradation is mapped to a different key. If you click the button, it will change to "USE CC#", and the "Closed" to "Open" note assignments will all change to that of the "Closed" articulation. Now, only that note will play the Hi-Hat, and your expression pedal (CC#11) will control its open-ness.

Regardless of which mode you use, the assigned CC# will also trigger the closing of the hats when it is increased to maximum, with the dynamics of the sample determined by how fast you moved the controller. Also, the MIDI note assignment for "Foot" remains the same in either mode, so you can always trigger the closing sample with that note (default Gb3).

## 1.2) “Enough Jargon! How Do I Play This Thing!?” or Understanding The Wavelore Brush Kit In 9 Easy Steps.

Playing the Wavelore Brush Kit is as easy as playing the drum sounds on your favorite synthesizer. That is, you can just bang the keys to get what you want! That said, there are extra performance features to make the library more flexible and fun to play, but these are, as stated, merely extras. With the default bank/patch loaded (that is, load the instrument in its factory state), do the following.

- 1) Set the hi-hat mapping mode back to “USE NOTES”, if you still have it set to “USE CC#” from the instructions in the quick start guide above. That is, do the opposite of the change made above; navigate to the mapping page, and click the “USE CC#” button so that it says “USE NOTES”
- 2) Play the notes B1, E2, F2, and G2. These are the kick, snare, and high tom, and low tom, respectively.
- 3) Play the notes A2, and B2. These are the crash cymbal and splash cymbal respectively.
- 4) Play the notes C2 and D2. These notes both trigger the ride cymbal, with C2 triggering the edge of the ride, and D2 triggering the bell.
- 5) Play the notes F#2, G#2, A#2, C#3, and D#3. These are the hi-hats in five gradations, from fully closed, to fully open. Play the notes again, but this time in descending order. You'll notice that moving from a more open to a more closed articulation causes the more open sample to stop playing. To really understand this point, play D#3 followed by F#2. These are the fully open and fully closed samples. It will be obvious that the closed sample cuts off the open one. If you change the hi-hat control from “USE NOTES” to “USE CC#”, your expression pedal will be used to determine which gradation is used, with all gradations mapped to F#2.
- 6) Now play F#3. This is the “foot” (or hi-hat closure) sample. If you hit this key and hold it briefly, you just get the closure sound. If you hit it and release it immediately, you'll get the sound of the closure, followed by the sound of the hats ringing.
- 7) Try to reproduce step 6 by pushing your expression pedal to fully closed. The same closure sample will trigger. Now repeat, but open the pedal immediately afterward to trigger closure followed by ringing. Different speeds of pedal movement will trigger different hi-hat dynamics.
- 8) Play C3, then D3. These are the snare stir samples, played by the left and right hand respectively. Alternate the two notes continuously to get a consistent stir sound. Continue doing this while raising the value of your mod wheel; The mod wheel controls the duration of the stirs, with greater values allowing longer stir samples. Of course, any stir can be shortened by simply releasing the key used to trigger the sample.
- 9) Now, for a quick look at the different sounds the library can produce, click the “PRESET” button. There are ten factory presets, and ten user (blank) preset. Choose any factory preset that interests you, and note how the sound of the kit changes. If you change any settings on the main page or EQ page, you can use the “SAVE AS...” button to assign your edits to any factory or user preset, and your settings will be recall-able without having to re-save the .nki. There is more info on editing the instrument, saving your changes, and just how the factory presets are configured in the sections that follow.

## 2) Editing the Instrument's Setup

There is always a possibility that a given instrument configuration will not behave in the way you may prefer. Given the enormous number of possible opinions on how any instrument should be configured, we've done everything possible to offer the best out-of-the-box programming we can in this library, but you may still have certain reservations or differences of opinion. These differences could be about a wide variety of choices, including:

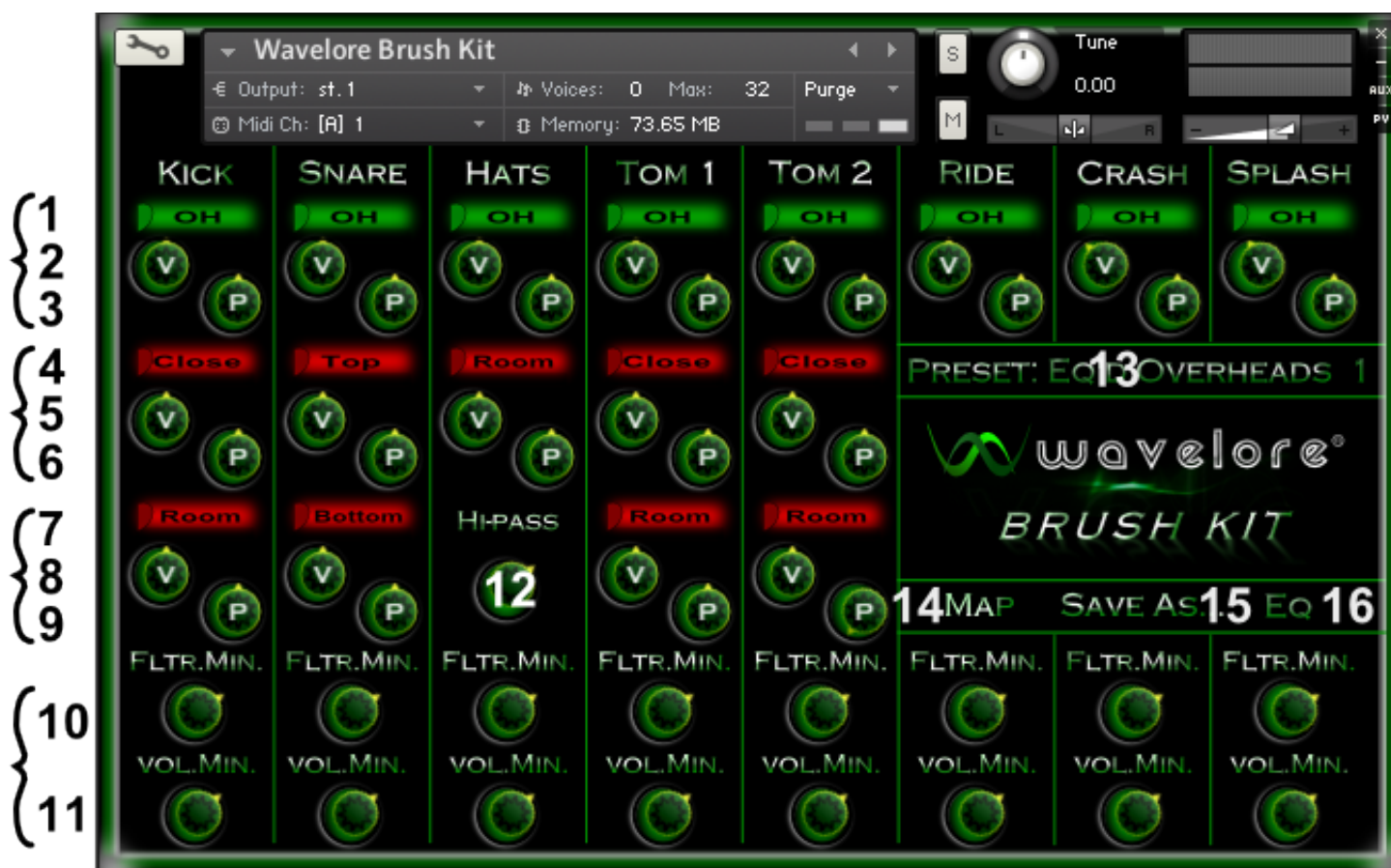
- Choice of assigned controllers: Many may want, for example, to have the instrument use different controllers for stirs and hi-hat control, where our configuration uses the mod wheel and expression pedal, respectively.
- Mapping of drum kit parts to the keyboard: This is the big one. Some people prefer/are simply used to the general MIDI mapping of drum kit parts, for instance. We mapped our samples a little differently, since there are sounds (stirs, for instance) that are not part of the GM drum mapping setup.
- Microphone usage/mixing: There are a practically infinite number of of sounds that can be made with this library; we've included a ton of controls so you can mix the kit parts to your preference or project needs, and a way for you to save your settings as user presets.

In addition to these variables, there are countless other ways in which the instrument could be different, and some of those ways could be better, at least for certain people or projects. This section contains instructions on some of the many ways that you can customize the sound and performance features of the library to suit your needs.

**Important: All volume, panning, EQ, and tune knobs in this library's interface can be reset to default/nominal/center values by holding the ALT key on your computer's keyboard while clicking them!**



## 2.1) About the Mix Page (Default View)



### Concept:

In the screen-shot above, the buttons (shown in green or red) allow the de/activation of the different mics for each drum. The various knobs allow you to configure the volume and panning of the mics, and the dynamics of each kit component. Note that the image is labeled with black numbers at left, and several white numbers overlaid.

### Controls 1-3: Overhead Mics' On/Off, Volume, and Pan, Respectively

- 7) *On/Off Switch*: When this switch is active (green), playing the kick drum will trigger the stereo overheads sample of the kick drum, together with any other mics that are active. If it is off (red), the overhead mics will not trigger when the kick drum is played.
- 8) *Volume*: Controls the overall level of the overhead mics for the kick drum. Use volume controls for mixing multiple mics to taste. Note that the EQ page also contains a volume control for each drum, but that it is a *master volume* for all mics on the given drum.
- 9) *Pan*: Controls the location of the overhead mic samples within the stereo field.

Notice, as you look across the top of the interface from left to right, that all parts of the kit contain the same three controls. That is, every piece has an overhead mic on/off switch, and both a volume and pan control for the overhead mics.

### Controls 4-6: Other Mics' On/Off, Volume, and Pan, Respectively

These three controls are also the same as the ones above, but they control the kick drum's close mic samples. As you look across the different drums within this row, you'll notice that each drum's contents differ slightly: The snare has two close mics (top and bottom), so it has knobs and a switch here for "close". The hi-hat does not have a close mic, but rather a room mic, so its controls are at that location. The two toms have close mics, so that's the same as the kick drum's layout. Finally, the cymbals and ride all use just the overheads, so the remaining space is taken up by the logos and navigation buttons.

### **Controls 7-9: Other Mics' On/Off, Volume, and Pan, Respectively**

These three controls are identical to the ones above, but they control the room mics (where available) and the bottom close mic for the snare drum.

### **Controls 10-11: Velocity Response**

- 10) *Filter Minimum*: This knob sets how much of the kick drum's high frequencies will be attenuated when the drum is played at minimum velocity. For example, setting it to full value will mean that the sound is unaffected at any velocity. Setting it to minimum value will mean that high frequencies are attenuated more when quieter notes are played.
- 11) *Volume Minimum*: This knob sets how much the entire kick drum (all microphones) will be attenuated when the drum is played at minimum velocity. For example, setting it to full value will mean that the sound is unaffected at any velocity. Setting it to minimum value will mean that the drum will get much quieter when notes are played softly.

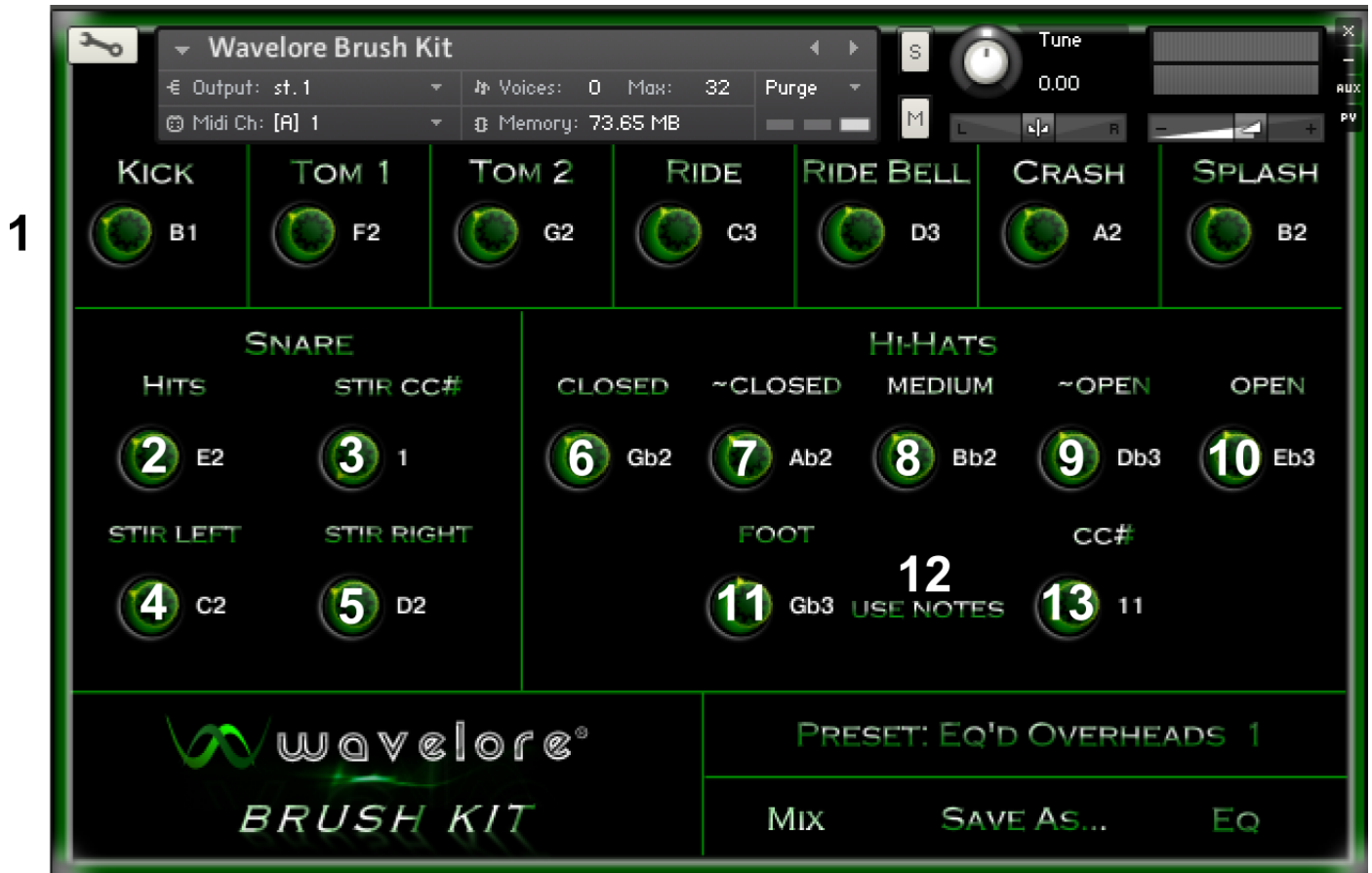
### **Control 12: Hi-Hats Hi-Pass Filter Center Frequency**

- 12) *Hi-Pass*: This knob sets the center frequency of a hi-pass filter applied to the hi-hat. Set to minimum, the hi-hat samples will be unaffected. Increase the value to filter out unwanted lower frequencies from the sound.

### **Controls 13-16: Navigation and Preset Controls**

- 13) *Current Preset*: Displays the currently loaded preset. Click this control to open a menu allowing the selection of other factory and user presets. Note that any changes you've made to the setup will be lost when you use this menu, unless you first use the "Save As..." menu to save your changes first!
- 14) *Map*: Click this button to view the Mapping Page, where the drum kit's samples can be re-assigned to your choice of MIDI keys and controllers.
- 15) *Save As*: Clicking this button will reveal a menu that allows you to store your setup as a preset. Note that factory presets can be overwritten, so be sure that you are prepared to lose the factory settings for a preset if you choose to save a setup as one of the factory presets!
- 16) *EQ*: Click this button to view the Equalizer Page, where the drum kit's components can have their tone, tuning, and overall volume adjusted.

## 2.2) About the Mapping Page



### Concept:

In the screen-shot above, the knobs allow you to configure the MIDI mapping of the drum kit components. Note that the navigation and preset controls are at the bottom right on this page, and that there is now a “MIX” button among them; This button will bring you back to the mix page. Note also that the image is labeled with a black number 1 at left, and several white numbers overlaid.

### Control(s) 1: MIDI Notes to Trigger the “Simple” Drums

- 1) *MIDI Note*: Set the knobs across the top row of controls to change which MIDI notes trigger the drum in question. Note that the two ride cymbal articulations are present here (“bell” and “ride”, or edge).

### Controls 2-4: Snare Drum Mapping

- 2) *Hits*: Set the knob to change which MIDI note triggers the snare drum's plain hits.
- 3) *Stir CC#*: This knob is used to choose which MIDI continuous controller is used to control stir length.
- 4) *Stir Left*: Set this knob to change which MIDI note triggers the snare drum's left hand stirs.
- 5) *Stir Right*: Set this knob to change which MIDI note triggers the snare drum's right hand stirs.

### Controls 6-12: Hi-Hat Mapping

- 6) *Hi-Hats Fully Closed*: Set the knob to change which MIDI note triggers the hi-hats when fully closed.
- 7) *Hi-Hats Mostly Closed*: Set the knob to change which MIDI note triggers the hi-hats when mostly closed.
- 8) *Hi-Hats Half Closed/Half Open*: Set the knob to change which MIDI note triggers the hi-hats when half closed/half

open.

- 9) *Hi-Hats Mostly Open*: Set the knob to change which MIDI note triggers the hi-hats when mostly open.
- 10) *Hi-Hats Fully Open*: Set the knob to change which MIDI note triggers the hi-hats when fully open.
- 11) *Hi-Hats Foot*: Set the knob to change which MIDI note triggers the hi-hats closed by the pedal. This note will trigger a hi-hat closure sample when struck, followed by a ringing sound if the key is released immediately afterward.
- 12) *Hi-Hats Control Mode*: Click this button to change the mode of hi-hat control. The two options are “Use Notes”, and “Use CC#”:
  - “*USE NOTES*”: In this mode, the note mappings determined by controls 6-10 are used to trigger the different hi hat samples. That is, different gradations between fully open and fully closed are mapped to different notes on the keyboard. You can still use the assigned note to trigger the hi-hat closure samples regardless of whether this mode is active.
  - “*USE CC#*”: In this mode, the hi-hat's open-ness is determined by the current value of the MIDI continuous controller assigned in item 13, below. When this mode is activated, controls 6-10 will “lock” to the same value. You can still use the assigned CC# to trigger the hi-hat closure samples regardless of whether this mode is active.
- 13) *Hi-Hats MIDI CC#*: This knob is used to choose which MIDI continuous controller is used to control the open-ness of the hi-hats when “USE CC#” mode is active. Regardless of the current mode, this CC# will always trigger a hi-hat closure sample when increased to a value of 127, followed by a ringing sound if the controller is lowered immediately afterward.

## 2.3) About the Equalizer Page



### Concept:

In the screen-shot above, each drum has a three-band EQ, a master volume and a master tune control. Note that the navigation and preset controls are at the bottom right on this page, and that there is now a “MIX” button among them; This button will bring you back to the mix page.

### Controls 1-3: Three Band Equalizer (High, Mid, Low)

- 1) *High*: Set the knob to boost or cut high frequencies for the relevant kit component.
- 2) *Mid*: Set the knob to boost or cut midrange frequencies for the relevant kit component.
- 3) *Low*: Set the knob to boost or cut low frequencies for the relevant kit component.

### Controls 4-5: Master Drum Volume and Drum Tuning

- 4) *Volume*: Use this knob to raise or lower the overall volume of all microphones for the relevant kit component. This control is helpful as a “makeup” gain control for restoring the volume of the drum after making drastic EQ changes or changing the microphone mix.
- 5) *Tune*: Set the knob to change the tuning of the relevant kit component. Center position is the original pitch of the sample, and the range is +/-one octave.

## 2.4) Saving Your Changes

If you've gotten this far in the manual, you're probably familiar with all the controls available for this instrument and how to use them, and you probably discovered some sounds you like (We sure hope you have!). If you've made changes to the MIDI mapping, you need to save the instrument in order to recall them! Saving the instrument is best done under a new filename (so you keep the factory settings, just in case), and is done from the "files" menu at the top of Kontakt's interface. Choose "Save As...", type a new filename, and make sure you select "patch only" from the save mode option at the bottom of the save dialog – if you choose patch + samples, Kontakt will write a redundant set of identical samples to a new samples folder, doubling the size of the library.

Once you've saved the instrument, all your sound and performance configuration tweaks will be instantly recall-able!

## 3) Where to Get More Help

At Wavelore, we consider it our duty to ensure that you have the best possible experience with our products and support.

***If you're having trouble, e-mail us and we'll help you!! We're at:***

[support@wavelore.com](mailto:support@wavelore.com)

There is also a support section on our website which will contain updates to the product as they become available, and currently contains links to a number of useful resources.

## Appendix A: Factory Presets

Please see the list below for details on the setup of the factory presets:

### **Preset 0: “Dry Overheads”**

As its name indicates, this preset uses just the overhead mics, with no alterations to the natural sound of the kit other than slight tweaks to the relative levels of some of the drums.

### **Preset 1: “EQ'd Overheads 1”**

This preset uses just the overheads, but with some EQ tweaks that give the kit a high end brilliance.

### **Preset 2: “EQ'd Overheads 2”**

This preset uses just the overheads, but with some EQ tweaks that make the kit sound somewhat more present in a mix.

### **Preset 3: “Drum Machine 1”**

This kit uses a flat dynamic response, extensive EQ, e-tuning and a 1 way round robin setup to create an electronic drum sound.

### **Preset 4: “Drum Machine 2”**

A variation on the approach used for “Drum Machine 1”.

### **Preset 5: “Levee Breaks”**

Named after the well known Led Zeppelin song that its sound is reminiscent of, this preset uses lots of ambient mics, de-tuning and EQ to accentuate the room sound.

### **Preset 6: “Jazzed”**

Thanks to its increased dynamic range and specific mic mix, this preset is suitable for very touchy, dynamic playing.

### **Preset 7: “Studio Rock”**

This kit uses a medium dynamic range on the overhead mics, plus a dash of other mics mixed in on the snare and kick drums. A good all-purpose drum sound.

### **Preset 8: “Beefy”**

Generally increased mid-range and close mic sounds give this kit lots of punch.

### **Preset 9: “Dry Overheads”**

This preset features extra high-end sheen and slight upward tuning of kit components to help it cut through a mix.

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