

Vm_Hi-Hat Proc



Vm_Hi-Hat Proc has 3 articulations, Closed, Foot, and Open.

The **Closed** has 2 sets of samples in 2 groups that play Round Robin. Each group has 24 velocity layers. The bottom layers recorded level is -32.0db and the top layer is -0.5db

The **Foot** has 36 velocity layer samples. The bottom layers recorded level is -32.0db and the top layer is -0.5db

The **Open** has 29 velocity layer samples. The bottom layers recorded level is -32.0db and the top layer is -0.5db

Vol_Close, Vol_Foot, Vol_Open: The individual Amplifier volumes for each articulation.

Hat Dyn: The Hi-Hat Velocity Intensity. There will be an explanation on how to set this up later.

The **ReSet All Volume** button resets each volume to the default level.

- > The default for Vol_Close and Vol_Foot are both -9.0db.

- > The default for Vol_Open is -12.0db.

KeyMap for the HiHat articulations

HiHat Closed> F#2 (2 group Round Robin)

HiHat Foot> G#2

HiHat Open> A#2

Vm_Ride Proc



Vm_Ride Proc has 2 articulations, Regular (Reg) and Bell.

The Regular has 2 sets of samples in 2 groups that play Round Robin. Each group has 24 velocity layers. The bottom layers recorded level is -32.0db and the top layer is -0.5db

The Bell has 28 velocity layer samples. The bottom layers recorded level is -32.0db and the top layer is -0.5db

Reg Dyn & Bell Dyn: The Velocity Intensity for the 2 articulations. There will be an explanation on how to set these up later.

Lock Dynamics Button: This locks & unlocks the two dynamic controls together. When they are locked together, the Bell Dynamics are locked to the Regular Dynamics and either knob will make the adjustment.

Vol_Bell: The Amplifier Volume for the Bell Ride articulation.

The Add Attack Section>> This can add attack and can be programmed using Keyswitches along with CC-Controllers, this will be explained later. Add Attack works with the Regular Ride only and does not affect the bell.

Add-Attk: This knob controls the amount of attack to add. It adjusts in 0.5db increments from 0.0db to +12.0db. This control does not adjust the ahdsr Attack. Instead it adjusts the Amplifier Volume up while at the same time adjusting the ahdsr Sustain down in equal amounts, thus retaining the same level for the body of the samples.

Hold: This knob adjusts the ahdsr Hold in milliseconds. You will want very little Hold if any, the default is 2.3ms.

Decay: This knob adjusts the ahdsr Decay in milliseconds. The default is 17.4ms.

Reset Attack Button: This resets the Add-Attk, Hold, and Decay to default.

Bot_KS: A Value Edit box where you can set the bottom KeySwitch. There are 4 KeySwitches and will be explained later.

KeyMap for the Ride articulations

Ride Reg> D#3 (2 group Round Robin)

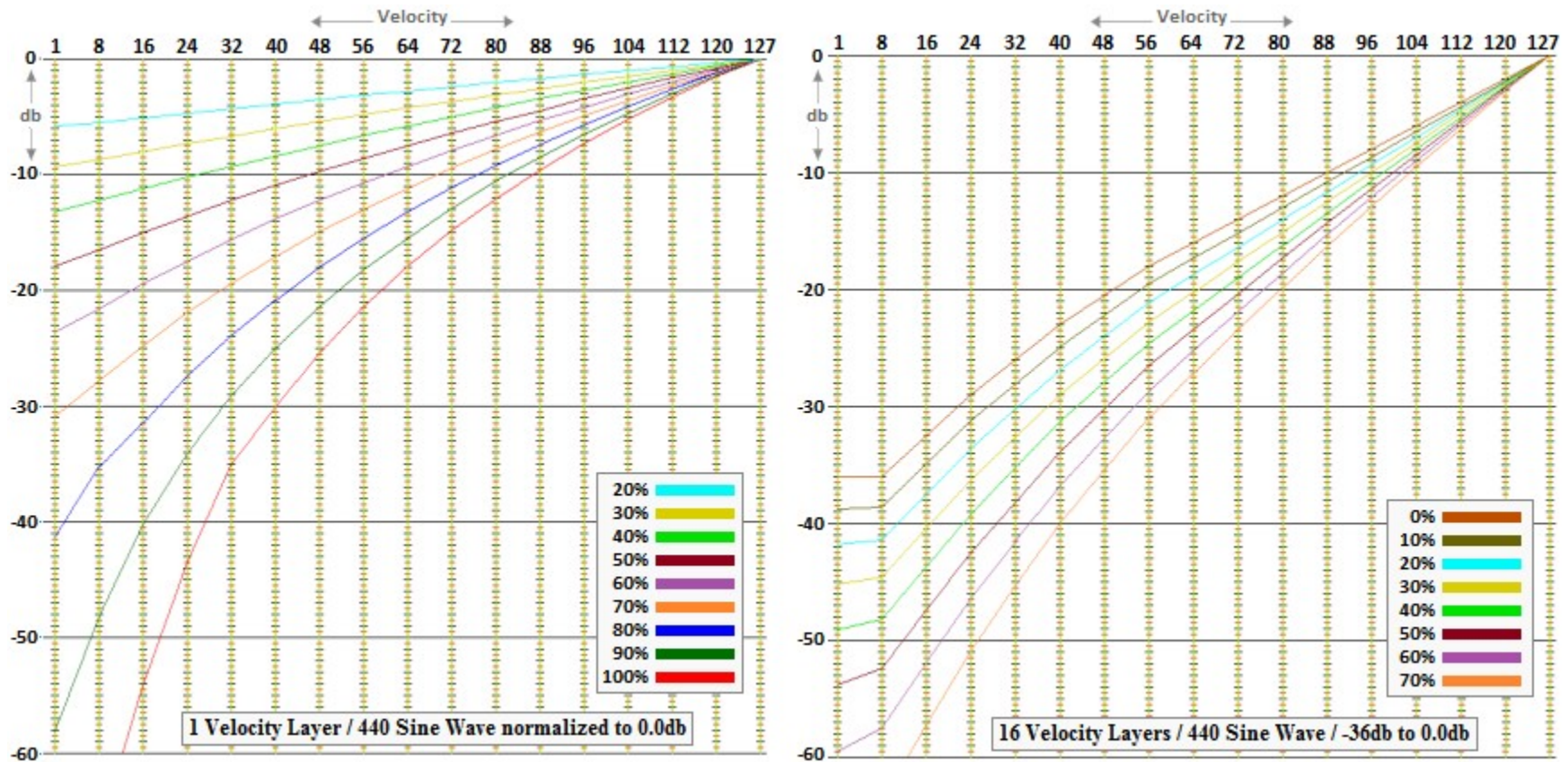
Ride Bell> F3

A short explanation of Velocity Intensity

None of the Hi-Hat or Ride samples have been normalized. My personal preference is that if I have enough layers then there's no need to normalize. However, setting the Velocity Intensity (Dynamics) can be crucial and to better understand how Velocity Intensity works please take a look at the graphs below. The charts below are all based on a linear velocity intensity curve.

The graph on the left is one 440hz sine wave sample normalized to 0.0db. As you can see, if you get above 70% to 80%, the lower velocities become nearly inaudible.

The graph on the right has 16 440hz sine wave sample layers with evenly recorded levels from -36.0db to 0.0db. As you can see, with a Velocity Intensity setting of 20% or more the lower velocities will be nearly inaudible.



How to setup the Hi-Hat and Ride dynamics (Velocity Intensity)

The rule of thumb is, the wider the disparity is between higher and lower velocities, then the lower the Velocity Intensity (Dynamics) should be set.

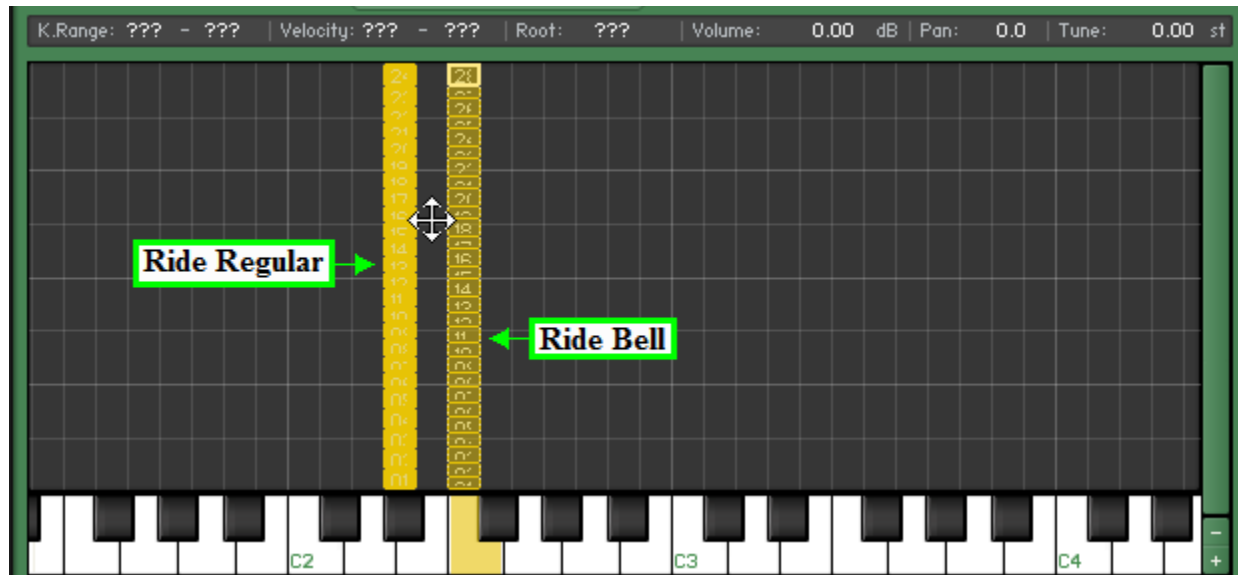
One way to set the dynamics up while playing a keyboard controller is to start out with a Dyn setting of 40% or 50%. Then while playing the Hat or Ride as you would normally, adjust the Hat Dyn or Ride Dyn down until it doesn't sound like there's too wide a gap between the higher and lower velocities. You can also play a very soft note, and if the volume seems too soft compared to harder hit notes then the Velocity Intensity probably needs to come down which will make the softer notes louder.

You can do the same thing with a midi track that is already recorded. Start out with intensities of 40 to 50% and as you play the midi sequence, adjust the Dyn control down until the difference between the higher and lower velocities sound right.

Don't be afraid to bring the Velocity Intensity down, even if you set it at 0% you still have the dynamics of the samples because they go from -32.0db to -0.5db.

Changing the Key Notes positions (KeyMaps)

If you want to change the key position of the samples to better fit your own drum libraries it can easily be done. For example, if the position of the Ride Reg (Regular) is on D#2 which is midi number 51, and the Ride Bell is on F2, you can re-position these anywhere using the Mapping Editor in Kontakt. Just make sure that **Edit All Groups** is on in the Group Editor and you select **all** the samples as shown below.



The most important thing is that the samples in the two groups VmRide Reg Gr-1 and VmRide Reg Gr-2 stay together on the same keynote. If they are not on the same key then the Round Robin will not work.

Also the Script will need to be adjusted so that it reflects where the VmRide Reg samples are positioned. To do this open the Script Editor and click on the Edit button. Change the number (51 in the Pict) to the number of the key you moved the VmRide Reg samples to. For example, if you moved the VmRide Reg samples up 1 octave to D#3, then you would change the number to 63. Once you've made the change, hit **Apply** and close with the Edit Button.

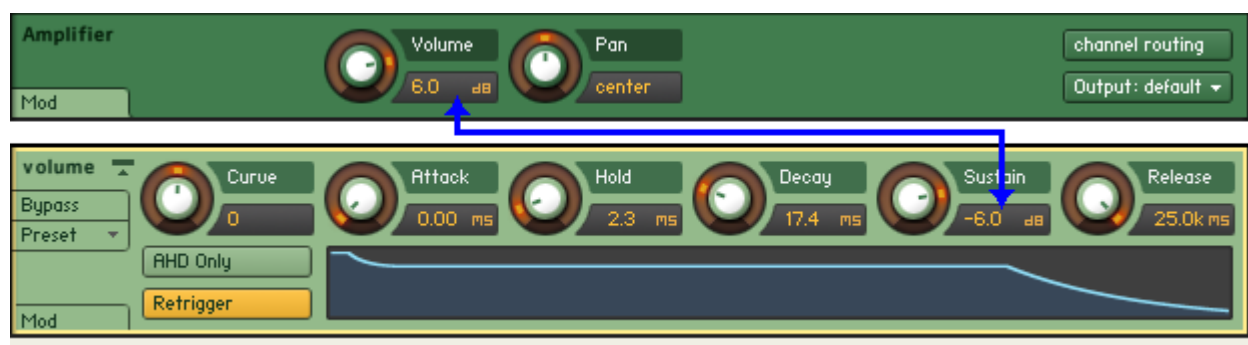


The same thing can be done with the Hi-Hats, however it's the [VmHiHat Closed](#) samples that need to stay together. Also, the script for the HiHats will need to be changed too, depending on which key the VmHiHat Closed samples end up on.

Other than the VmRide Reg and the VmHiHat Closed, it don't matter where you put the other grouped samples.

Adding Attack to the Regular Ride

The way Add Attack works, is that it adjusts the Amplifier Volume up while it adjusts the ahdsr Sustain down in equal amounts, thus retaining the overall level of the samples. By using either no or very very short Hold, and very short Decay, the overall Attack can be increased up to +12.0db. In the picture below there is a +6.0db increase in the attack. Notice the Hold and Decay which are at default.



The best way to check it out is to play a programmed midi track and make adjustments of the knobs so you can hear what's happening. You can simply hit the “Reset Attack” button to take it back to the default. When the “Add-Attk” is 0.0db then it is not adding any attack, effectively taking it out of the equation and playing the samples as they have been recorded.



Programming the Ride in Reaper

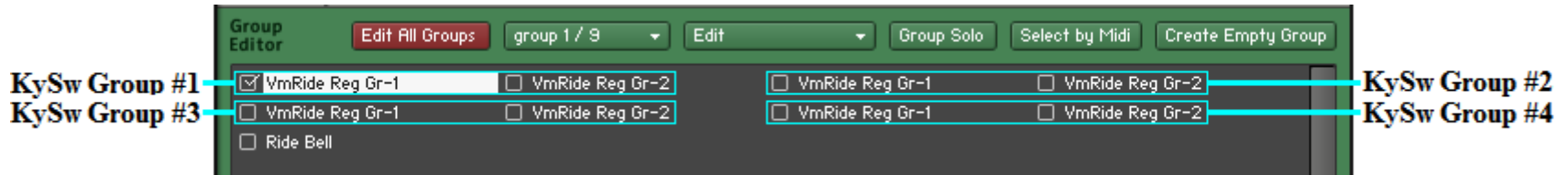
Bot_KS: First you need to set the bottom most keyswitch. Where you choose to set this will depend on what other drums you have programmed. For example, I have several drum parts, the lowest being a Kik which is on a G0 (#31). Consequently, I set my **Bot_KS** to start at C0 (#24). There are 4 keyswitches and as you can see, starting with #24 it goes from C0 to D#0.
(KySw1=C0) (KySw2=C#0) (KySw3=D0) (KySw4=D#0)

To enter the number, you can use the little up and down arrows, LeftClick/Drag up/down, or you can simply type it in. The numbers go from 0 to 124. **** (Also with all of Kontakt's knobs you can use Shift-Left/Drag to make fine adjustments)**

<<KeySwitches>>

Kontakt has 4 sets of KeySwitch groups for the Reg Ride controlled with 4 KeySwitches. The velocity of the KeySwitches determines the amount of Added Attack. There are also 4 CC-Controllers that control the ahdsr Decay.

(CC03, CC04, CC05, CC06)



In the Midi Editor you use the KeySwitches to select which groups will play. The **Velocity** of the KeySwitches determine the **amount of attack** to add from 0.0db to +12.0db in 0.5db increments as can be seen below. Also you can see the amount of Added Attack that is controlled by the Velocity values as well as which Controller is associated with each KeySwitch, On the right shows “**Decay**” with the amount of Decay for the various CC values. A CC value of **38** gives you a Decay setting of **17.4 ms** which is the default value marked in blue.

<u>KySw</u>	<u>Velocity</u>	<u>Add Attack</u>
0 to 4	+0.0db
5 to 9	+0.5db
10 to 14	+1.0db
15 to 19	+1.5db
20 to 24	+2.0db
100 to 104	+10
105 to 109	+10.5db
110 to 114	+11.0db
115 to 119	+11.5db
120 to 127	+12db

<u>KySw</u>	<u>Decay</u>
<u>Switches</u>	<u>CC #s</u>
KySw-1 CC03
KySw-2 CC04
KySw-3 CC05
KySw-4 CC06

<u>Decay</u>	
<u>CC</u>	<u>Dec</u>
<u>Val</u>	<u>ms</u>
20 ...	4.2
28 ...	8.7
32 ...	11.6
38 ...	17.4
42 ...	22.7
48 ...	33.4
56 ...	55.1
65 ...	95.9
80 ...	238
84 ...	303
88 ...	385
94 ...	553
106 ..	1.1k
117 ..	2.2k
127 ..	4.0k

The best way to think of the KeySwitch velocity values is 10 = 1.0db, 20 = 2.0db, 30 = 3.0db, 40 = 4.0db, 50 = 5.0db, etc...

Also in the Doc folder there is another folder called Help Images. It has an image file that matches the Decay image on the right above. I use IrfanView to display it when I'm programming the Ride because it keeps it small and On-Top.

I urge you to get it if you don't already have it because it is such a great tool. Although it's a good graphics editor, I mainly use it for screen captures and especially displaying images. It also supports nearly all image formats including the GIF videos used on the forum. You can download it at: http://www.irfanview.com/main_download_engl.htm

The picture below shows the Midi Editor with some KeySwitches and CC-controllers. Notice how the CC-controllers used with each KeySwitch lines up with that KeySwitch. This is important so that the right Decay is used with the right intended groups in Kontakt. Following the number 1, 2, and 3 in the picture below:

#1> I always put the default value for CC-Controllers at the front. In this case for the Decay, the 4 events equal 38 which is the default.

#2> A Reg Ride note with a velocity of 89. It has a KeySwitch (KySw-2) with a velocity value of 21 which gives it an Added Attack of +2.0db. It also has some added Decay (CC04) with a value of 81, expanding the Decay to 253.1ms.

#3> A Reg Ride note with a velocity of 107. It has a KeySwitch (KySw-4) with a velocity value of 51 which gives it an Added Attack of +5.0db. It also has some added Decay, CC06 with a value of 56 expanding the Decay to 55.1ms.

The screenshot shows the MIDI Editor interface with a piano roll and MIDI data entry window. The piano roll displays notes with their velocities and durations. The MIDI data entry window shows the MIDI data for the selected notes, including KeySwitches (KySw-1 to KySw-4) and CC controllers (CC3, CC4, CC5, CC6). Red arrows and numbers 1, 2, and 3 highlight specific MIDI events and their corresponding decay values.

- Arrow 1:** Points to a MIDI event with a value of 38, labeled "38 Default".
- Arrow 2:** Points to a MIDI event with a value of 81, labeled "81=253.1ms".
- Arrow 3:** Points to a MIDI event with a value of 56, labeled "56=55.1ms".

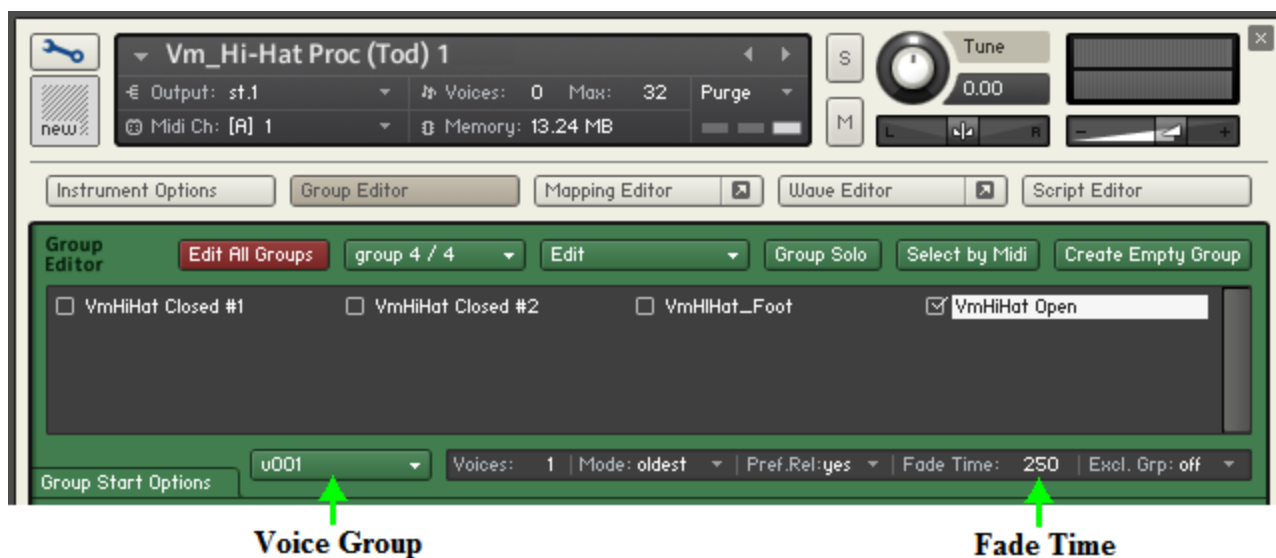
The MIDI data entry window shows the following data for the selected notes:

Channel	Velocity	KeySwitch	CC Controller	Value
16	109	KySw-4	CC6	41
16	89	KySw-2	CC4	31
16	102	KySw-2	CC4	21
16	75	KySw-2	CC4	31
16	99	KySw-2	CC4	21
16	89	KySw-2	CC4	11
16	82	KySw-2	CC4	11
16	80	KySw-2	CC4	11
16	107	KySw-4	CC6	51
16	99	KySw-4	CC6	11
16	88	KySw-4	CC6	11
16	89	KySw-4	CC6	11
16	86	KySw-4	CC6	11
16	85	KySw-4	CC6	11
16	95	KySw-4	CC6	21
16	58	KySw-4	CC6	11
16	118	KySw-4	CC6	31
16	73	KySw-4	CC6	11
16	94	KySw-4	CC6	61
16	81	KySw-4	CC6	31
16	85	KySw-4	CC6	11
16	56	KySw-4	CC6	31
16	81	KySw-4	CC6	11
16	70	KySw-4	CC6	11

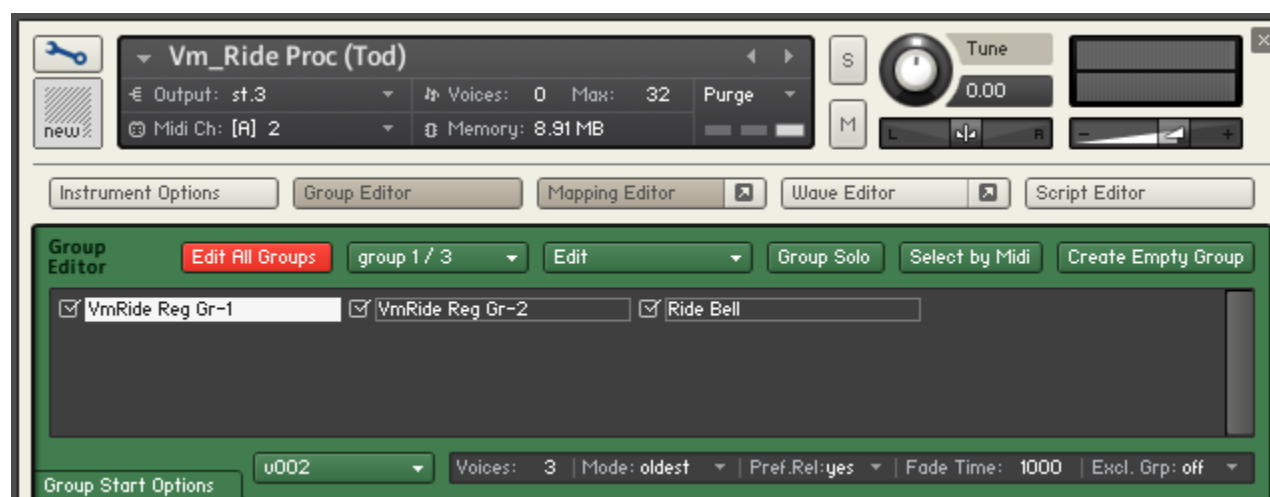
Notice how I stacked the CC controllers. I did this so that they would visually line up with the KeySwitches.

Voice Groups in Kontakt

Here's another little tip about Kontakt in case you didn't know, setting up the Hi-Hat so that the Open Hat will close off when the other keys are hit. You do that with the Voicegroups which in this case are the v001 shown in the picture below. All the Vm_HiHat groups are in this Voicegroup. The significance is not only that it chokes off the open hi-hat, but if you set the Fade Time you can get different results, the longer the Fade Time the longer the decay or release on the open hi-hat. This is something you can play around with or even change according to the situation, there are times you might want the fade time longer and times you might want it shorter.

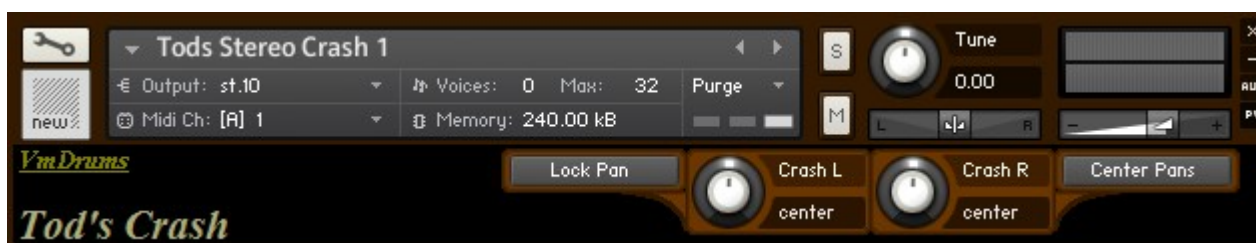


The Ride cymbal also has a Voice Group. Here it's used to avoid excessive ringing. The Fade Time also helps smooth out the sound.



Tods Stereo Crash 1

This has only two samples on two different keys, they've been recorded stereo and in place. Basically they probably don't need any Panning but I added it just in case. Many years ago at the end of a recording session I asked the drummer if I could get a couple of crash samples from him and he quickly obliged me. I've been using them ever since for a quick and small alternative.



Crash L & Crash R: Adjustment knobs for panning the individual samples.

Lock Pan: When this button is in the locked position both knobs will turn if one knob is turned, however in opposite directions. If the left knob is turned left the right knob will turn right in equal amounts and vice versa.

Center Pans: This button does just what it says, it centers both pan knobs so that they are dead center.

Tods Stereo Toms 1

These are some hybrid toms I made several years ago. I've found them quite useful for ballads and orchestra type video tracks.



Vel Dyn: Like the other instruments this stands for dynamics and actually controls the Velocity Intensity. The samples are basically normalized so settings of between 60% and 80% are probably the best.

The Low Tom, Mid Tom & High Tom knobs: These are the individual Pan Controls for the three different toms.

Vel Dyn: This button has 5 different settings for panning the Low Tom left and High Tom right.

L5 <C> R5 L10 <C> R10 L15 <C> R15 L20 <C> R20 L25 <C> R25.

KeyMap Tods Crash

Crash L > D3

Crash R > E3

KeyMap Tods Toms

Low Tom > G2

Mid Tom > A2

High Tom > B2