Octatrack zero crossing issue
Posted by skab - 2012/02/01 00:52
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Not sure if this has come up before. Sorry if it has. When I slice a loop using the slice grids, and tell the OT to cut the slices at zero crossing points, I still get a fair few clicks at the end of each slice. I've never come across a click at the beginning of a slice. I know I could adjust the amp controls to compensate for this, but doing so would limit the effects off the retrigger parameters. Has anyone else come across this before,mor have any tips on how to deal with this? The clicks only seem to occur with drum loops, so I'm guessing it's a problem with the algorithm that detects the the decay of a hit down to zero when the waveform is not sustained...maybe:unsure:

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Re:Octatrack zero crossing issue
Posted by skab - 2012/02/01 00:54
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Just to clarify - it doesn't happen with every slice, but in a loop cut to 32 slices I still get at least 4 that need to be manually adjusted.

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Re:Octatrack zero crossing issue
Posted by GYS - 2012/02/01 01:18
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I have also noticed that issue, especially when slicing noisy and/or heavily compressed drum loops. I'm still learning/playing with the OT so I haven't let it bother me all that much as I haven't used it seriously yet for production. Sounds like you're approaching the issue the right way for now though.

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Re:Octatrack zero crossing issue
Posted by skab - 2012/02/01 14:52
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Thanks. Glad it's not just me.

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Re:Octatrack zero crossing issue
Posted by manuelcicca - 2012/02/02 03:02
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To think about it, it has happened to me a couple of times.
It happens with drum loops played by a human being (i.e. following human quantization rather than machine quantization). The problem gets sometimes solved by taking advantage of the microtiming feature of the OT. At least that's my personal experience. So I would try to play around with that moving trigs slightly ahead or behind until the slices lock in!

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Re:Octatrack zero crossing issue
Posted by ntothe - 2012/02/02 22:24
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i had the same thing a couple of times!

i zoomed in close enough to actually see the zero crossings and to my surprise when i used the function+knob it set the end point after the zero-cross thus generating a click. and it happened both with drum loops and melodic loops.
never annoyed me though - i always micro-tweak the loops myself :D

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Re:Octatrack zero crossing issue

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i found that adding a tiny bit of attack can eliminate clicks too...

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Re:Octatrack zero crossing issue
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Thanks for the tips fellers. It looks like the snap to zero is not as tight as it could be. Never mind. Micro shifting the start and end points on the octa is still a helluva lot faster than it was on my old MPC 2000 :)

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Re:Octatrack zero crossing issue
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I noticed the same but with a different reason: Slices with correct length but starting too late. In my case, a click in the end comes from the start of the next slice. Instead of adjusting the end point I need to adjust the start points.

A transient detection would be useful to solve such things.

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Re:Octatrack zero crossing issue
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Should this be reported as a bug???

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Re:Octatrack zero crossing issue
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My understanding is that most samples do not have any points exactly at zero - boring details at the end. You can see this with a program like Wavosaur if you keep zooming in on amplitude and such. So it's always going to be an approximation and possibly a bit of audible clicking unless you use the attack function, etc. The more high frequencies you have and the more complex waveforms, the harder the approximation gets and the more clicking.

(To get a sample to have points exactly at zero with any regularity, you would probably need a simple waveform like saw or sine and the waveform would have to have a frequency that can be multiplied by an integer to get the sampling rate (e.g., waveform is 441 hz, you can multiply this by 100 to get 44.1 khz) and you would have to start the waveform and the sampling at exactly the same time.)

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Re:Octatrack zero crossing issue
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Just thought of something else - if you want to ask Elektron to support higher sampling rates like 88.2 khz or 96 khz, that would probably reduce clicking because the approximation would have a lot better shot at approaching zero.

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Re:Octatrack zero crossing issue
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Is this not due to the fact that human played loops, aren't super on the beat. Therefore the auto slice doesn't capture everything quite right, as i think it is purely mathematical and then looks for the nearest zero. This means that an end point of one slice, could in fact be the start point of what should be the next one slice.

e.g.

Waveform of Sound to be sliced:

/\/\/\\-----/\/\/\\-----

First slice:
/\/\/\\-----/

The end point of the slice above could still be bang on a zero crossing but the sudden change in dynamic just prior to this, the first transient of the next sound, would still create a click sound.

I recently auto sliced to zero a well known drum break in my octa and nearly every start and end point needed some serious nudging to get it sounding anything like, due to the complex swing/groove on the sample.

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Re:Octatrack zero crossing issue
Posted by Umazeki - 2012/02/07 00:55
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Veets wrote:
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DUDE SERIOUSLY no one has any idea here. All wave form have zero crossing every half cycle They rnt some special thing to find wtf

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Re:Octatrack zero crossing issue
Posted by skab - 2012/02/07 13:10
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As I said earlier, manually nudging the end point back while keeping function pressed to ensure zero-crossing detection always seems to fix it. I'm going to have a look at a sample when I get home and calculate the space between start and end points when sliced to a grid. Perhaps there is some override within the OS which prevents the OT from deviating too far from the mathematically defined slice point:huh:

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Re:Octatrack zero crossing issue
Posted by SecretMusic - 2012/02/07 13:32
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Umazeki wrote:

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what Veets was trying to get across, is that, depending on your sampling frequency, you might not be able to get exactly to that zero crossing point. no need to get all excited about it :)

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