
Wavetables on the MD!

Posted by Nils - 2008/03/21 20:15

Don't know if this is old news..

Just uploaded a pattern showing some melodic stuff on the MD, using retrig with the E12 BD. I've always loved the retrig sounds of the MD. Just upgraded to UW a few months ago, and though I haven't really tried it yet, the retrig possibilities are suddenly endless.

Then it struck me that if you load a sample in the UW that only consists of single-cycle waveform snippets in succession, it should be able to do some of the wavetable stuff that soon will be available on the Mono. A simple sine LFO can sweep the start point and thereby select the waveform. Combinations of LFOs will make this more complex.

Not sure how to match the loop length and the waveform length, though. If it turns out to be difficult, you'll still end up some freakish and possibly cool sounds. Now, if I only got C6 to work on my computer..

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Re:Wavetables on the MD!

Posted by monofever - 2008/03/21 20:28

Whatever sample length you choose, it should be divisible by say 64 (for wave lengths of 2 on the MD) or 128 (for wave lengths of 1), so if you say 16 wavelengths it doesn't matter how long the sample length because the calculation is $128/16$ for the wave length so start=0 end=8 etc LFO would need to modulate start and end.

Actually you would struggle because you don't have a way to modulate one lfo and specify sample length.

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Re:Wavetables on the MD!

Posted by Allerian - 2008/03/21 21:35

Interesting that you bring this up Nils, I was putting together a Sandbox post about this very thing. The MD-UW does granular synthesis very well by using LFOs to sweep the start and end points.

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Re:Wavetables on the MD!

Posted by actuel - 2008/03/21 21:42

me and anselmi had a pretty good discussion about this here: http://elektron-users.com/index.php?option=com_fireboard&Itemid=28&func=view&id=26236&catid=9&limit=10&limitstart=10

here's the request i sent to Elektron

So i've been really getting into the UW's ability to have looped playback. A user on the site and I started talking about waveforms/wavetables and we realized you can't do wavetables because of how the UW's start and end points work. Right now for continuous loop playback the end point has to remain set to 127. if it's 126, it just plays the waveform or sample as a single shot.

I'm proposing we just 'Hold' to determine the 'on/off' state of loop playback. essentially move the functionality of having the parameter of 127 to the Hold knob. Thus freeing the End knob of having to be in the 127 position for continuous loop playback. By allowing the start and end point to move freely within a loop, you can scan through waveform ala wavetables.

So in short, I'd like to see the loop on/off to Hold vs. End.

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Re:Wavetables on the MD!

Posted by Allerian - 2008/03/21 22:17

That thread really left me wondering what y'all are expecting from the MnM Wavetable function. When I think wavetables, I think sweeping sonically rich samples that result in gritty granular sounds.

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Re:Wavetables on the MD!

Posted by Tarekith - 2008/03/21 22:35

I guess it depends on how they implement it. Some synths like the Virus Ti use interpolation to smooth the wavetable transitions, so the sound is much smoother. Actually a lot of people complained about that, so Access added a function to decrease this smoothing.

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Re:Wavetables on the MD!

Posted by actuel - 2008/03/21 23:29

Allerian wrote:

That thread really left me wondering what y'all are expecting from the MnM Wavetable function. When I think wavetables, I think sweeping sonically rich samples that result in gritty granular sounds.

yeah, i have no idea what they have proposed but in the Sonic State MESSE '08 video Owland clearly said "it will have Wavetable ability". now who knows what that means to them.

i personally love how the Waldorf has them implemented, as well as the Ti. sweeping throughout the tables and equally being able to assign LFOs or in a Modulation Matrix would be ideal.

my suggestion to Elektron above isn't ideal but would allow one to 'kinda' do wavetables on the UW.

staying tuned...

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Re:Wavetables on the MD!

Posted by Allerian - 2008/03/21 23:37

Tarekith wrote:

I guess it depends on how they implement it. Some synths like the Virus Ti use interpolation to smooth the wavetable transitions, so the sound is much smoother. Actually a lot of people complained about that, so Access added a function to decrease this smoothing.

Yeah, I hear ya. The Ti's granular implementation is fantastic, but I can really do a lot more granular creativity with the MD-UW. Sweeping combined with setting start/end locks for specific trigs opens up huge possibilities. Man, can we have 64 steps on the MD MKI already? :P

Ultimately, the new wavetable implementation in the MnM seems a lot more like an extension of the Digipro Wave machine than a granular tool. (imo!)

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Re:Wavetables on the MD!

Posted by Toni - 2008/03/22 04:48

actuel wrote:

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So in short, I'd like to see the loop on/off to Hold vs. End.

Yeah! This is excellent idea. Actually I have been thinking the same thing couple of times. It would be way cool to be able engage an endless loop with any start/end positions. Like record your beat with the ram-machines and reconstruct the same beat by looping different kind of segments of the original recording. This would be way cool and very handy!!

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Re:Wavetables on the MD!

Posted by Nils - 2008/03/22 05:22

This is an interesting discussion. I see that I'm a UW rookie :-)

Actual; did you get a response to your suggestion to move the loop on/off functionality to the hold parameter?

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Re:Wavetables on the MD!

Posted by Allerian - 2008/03/22 06:46

I'm a little unclear on how the proposed hold function would differ from just using a series of trigs to loop the captured beat.

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Re:Wavetables on the MD!

Posted by Toni - 2008/03/22 07:34

Allerian wrote:

I'm a little unclear on how the proposed hold function would differ from just using a series of trigs to loop the captured beat.

Maybe the beat is not a good example. Think of it this way. You create a file of 8 different single cycle loop of oscillators (1024 bytes each) and transmit it, for example, to rom-place 32. Now you 'lock on' to each individual cycle with start and end -parameters, but this way the cycle will only be played once. No looping here, because you can only set one loop point to one sample. So making a effective single-cycle oscillator with the UW, you can only load one cycle per sample. You are with me so far? Retriggering doesn't do it, because it is just *retriggering* the cycle with certain rate (technically it is 'sync'). With retriggering you can play single osc with some speed, but will not be able to pitch it up and down with the semitones (at least you will break the smooth cycling, which generally sounds bad).

Now, if one could set start and end parameters to which ever and *then active the loop* with the hold setted to maximum 127, you could pitch up and down easily. With another set of start and end, you are changing the core cycle of the oscillator (little pulse here and saw there). Change the start and end to odd values and you will be scanning thru bunch of waves, which might sound similar to DigiPro at the MnM. You see the difference?

And now in the end, microlooping the beat, with start and end parameters, you could set repeating loops *that repeat themselves off from the sequencer grid*. If you use 'just series of trig to loop captured beat', you will end up triggering them always with the perfect align with the sequencer grid. With looping feature, you could in someways break out of the grid. Actually would be pretty nice for inventive glitchy loops.

Well, thats how I understand it at least. The more I think of it, the better it sounds. We should really approach Elektron with this fine-tune of UW-machines. That is, if others accept it also. I don't see how this would break anything how the UW-machines work now. By setting the hold to max (127) you introduce endless decay. Most of the cases you want to

use this, because you have somekind of loop introduced with the sample created. This way you can only do one looppoint. With the new fine-tune, you could change as you would want. Sounds pretty good to me, :)

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Re:Wavetables on the MD!

Posted by actuel - 2008/03/22 07:53

Nils wrote:

This is an interesting discussion. I see that I'm a UW rookie :-)

Actuel; did you get a response to your suggestion to move the loop on/off functionality to the hold parameter?

"We'll add it to the list." was the response i got. gawd only knows how long that list might be :)

Toni did a great job of explaining this and is far more articulate...i struggle with my own native English language. so the short version i will explain in an example: (verbal blunder will ensue)

Within your preferred audio editor or in C6 you can set a sample to 'Loop On'. What this means is the sample will play in continuous loop/infinity if your End point is set to 127. in order to get a wavetable and be able to 'scan' through the waveform you need to be able to move within that loop. Well this is the issue. As of now you can move the Start point but if you adjust your end point below 127 it will no longer be set to loop infinity.

The suggestion of moving the sample to Loop On to Hold would mean you could then within the loop adjust your Start and End points freely giving you more of a Wavetable like interaction.

It's not a slick as the Ti's interpolation feature but with parameter locks and LFO'ing the Start and End point you can get some really cool wavetable synthesis. Loop On as of now is pretty cool but i think moving the Loop On to Hold not only makes more sense but will also open up the UW ROM's for far more synthesis possibilities.

and what Toni said :D

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Re:Wavetables on the MD!

Posted by Tarekith - 2008/03/22 11:42

I'd agree as well, having it on the Hold parameter makes more sense. In fact when I first started messing with looped samples loaded into the UW, I was surprised it wasn't the hold parameter controlling this.

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Re:Wavetables on the MD!

Posted by Nils - 2008/03/23 20:05

Just a slight concern about the hold parameter changing functionality.. If I understand this correctly, with hold set to 127 thereby giving an endless loop, you will also cancel out the decay parameter, always giving you full sustain on any sound? If this is the case, these two tricks might be suitable workarounds:

1. Stopping the sound by entering an event at VOL=0 where you want the sound to stop. OR
 2. More elegantly, set VOL=0 in on the whole track, and use a single shot ramp to control the volume.
- I've used these simple techniques for "alternative envelopes" in other cases, works well.

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Re:Wavetables on the MD!

Posted by Allerian - 2008/03/23 21:15

I've read and reread and I'm still unclear. To my mind, setting up a "looping" anything on the MD (as opposed to

rhythmically triggering it on time) would cause any length inaccuracy to shift the loop out of time over a period of measures. Am I completely missing it here?

By the way, this thread is way more "Elektron Gear" than "Sandbox", imo.

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Re:Wavetables on the MD!

Posted by Toni - 2008/03/23 22:33

Allerian wrote:

I've read and reread and I'm still unclear. To my mind, setting up a "looping" anything on the MD (as opposed to rhythmically triggering it on time) would cause any length inaccuracy to shift the loop out of time over a period of measures. Am I completely missing it here?

No, you are not missing anything here, you are correct. There are just so many different angles how one could approach MD features; I realized that you have somewhat different approach to this than I have. I guess the usefulness loop feature with the different single cycle waves is clear to you, so I won't go back to it anymore. But here is how I would approach the loop-thing with the beat:

I would make one bar beat and sample it with the RAM-record. Then I would use the Ram-play to construct the second bar (I have MK1). I would do it so that I would parameter lock little loops with Start and End knobs and would turn the loop on. For example in the step 16 I would trigger of loop of 2,3 steps to loop continuously for 8 steps. Odd loop length would break out from the grid. Then from step 24 I would engage another loop with the length of 1,3 steps and let it run for 4 steps. That would be enough, for steps 28-32 I would just use the regular beat. This way I have introduced a small microloops that have a syncopated rhythm within the pattern. Little glitches where perception of rhythm is manipulated; yes, inaccuracies, as you say, but being played with. I think you approached the loops from the different angle, like looping long beats in sync with the grid (=sequencer).

The way things are now, is that you can make microloops with retrigger, but they are never longer than one step, because the maximum value for RTIME (127) means one step. So the MD retrigger works within the timeframe of 0-1 steps. Beyond that, you have to use the grid and you are slaved to it. I think the MnM has this better: RTIME of the DPro-Beatbox allows user to have odd syncopated retriggerings, like retriggering BD every 1,5 steps. Very enjoyable (but you probably already know this).

Am I making it any more clear or am I just making it more mess? :huh:

By the way, this thread is way more "Elektron Gear" than "Sandbox", imo.

Yeah, it has become a feature request thread. I guess we started from wavetables. Anyone seen this:

<http://www.galbanum.com/products/architecture-universal/>

1800 single cycle waves!! :blink:

Sometime ago I downloaded a demo of that, which comes with 50 or so cycles. Everything trimmed to 1024 samples, giving you a middle-C. I tried them with the MD, loading single cycle wave to one slot with loop turned on. You can make your MD a pretty basic bassline-synthesizer. But it takes one whole slot for one cycle! If we could set the loop with the Start end End parameters, one could have, for example, 16 different waves in one slot taking just 16 kb! That would make a pretty nice collection of oscillators for basslines.

Product above, would also be pretty handy for upcoming MnM wavetables B)

I just hope they would find a way to implement to MK1 versions too. I mean, the SXF-6 is the mothership and should have it also! :)

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Re:Wavetables on the MD!

Posted by Allerian - 2008/03/23 23:09

Thanks Toni - you're right, I had never thought about using the UW features in this way.

Man, isn't this the beauty of Elektron gear?

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Re:Wavetables on the MD!

Posted by Tarekith - 2008/03/23 23:11

Honestly I still don't understand the difference between Sandbox and Elektron gear anyway :)

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Re:Wavetables on the MD!

Posted by Allerian - 2008/03/23 23:43

In my mind, the Sandbox is supposed to be articles that give you something to try right now - something that comes with circles and arrows that point at the cool parts.

From the get-go I've feared that it would simply become Elektron Gear][rather than an instructional, inspiring resource..

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Re:Wavetables on the MD!

Posted by actuel - 2008/03/24 01:45

By the way, this thread is way more "Elektron Gear" than "Sandbox", imo.

it can appear as if it's a blurry line when a proper Sandbox thread spawns discussion but i see this as a good thing. most of the discussion here is still on topic of Wavetables in the MD. it has drifted a bit from talked specifically from Nils' Sandbox to further discussion.

the intent of the Sandbox is to be a knowledge/file exchange for how people are using their Elektron equipment. so like if i wanted to share a Monomachine kit showing of various pads i've made, and how they were made. also under the Sandbox umbrella would be tips & tricks.

Nils started off sharing cool tip w/ an associated file. this is a great Sandbox entry! we've since gotten in deep on how the UW could be further used to get 'truer' wavetable implementation. i think it's inevitable that many of the tips, tricks, and files shared will spawn conversation. much of which may drift off a bit. i'm don't think this is a bad thing, but it can blur things.

the Sandbox is still young and i see it in a 'beta' stage, as it is still being worked out. it may take some time but i believe it will get it's own voice.

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Re:Wavetables on the MD!

Posted by Tarekith - 2008/03/24 03:43

A mighty YALP? :)

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Re:Wavetables on the MD!

Posted by actuel - 2008/03/24 03:52

Tarekith wrote:
A mighty YALP? :)

what does this mean? :blink:

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Re:Wavetables on the MD!

Posted by futureimage - 2008/03/24 04:07

actuel wrote:

Tarekith wrote:

A mighty YALP? :)

what does this mean? :blink:

Yellow

Alpine

Locking

Pen

of course! it's obvious!

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Re:Wavetables on the MD!

Posted by Tarekith - 2008/03/24 05:17

Sorry, Dead Poets Society movie quote...

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Re:Wavetables on the MD!

Posted by grain - 2008/03/24 08:04

Nice thread. Interesting discussion.

Just recently got an UW MK2 after a year spent with the SPS1 MK1... .

MK1 / MK2 - whatever (ok, slimmer and 64step :cheer:)

no sampling / User Wave - now THATS what I'm talking about.

You lucky bastids have been having some fun alright! ...

its great to hear this kind of talk about the possibilities of sampling. Must check the whole single cycle samples thing.. only been having fun so far with actually having any custom audio at all in the thing. The thoughts of coming at it from the serious synth end of things are exciting to say the least.

Hope Elektron seriously considers the change suggested. Can't imagine it would be too hard to implement. Maybe if enough people ask for it - is that the way it works? I'll certainly do my bit with a personal email request. :)

Looking forward to seeing some of the talk in this Sandbox... will contribute myself when I've got a bit more comfortable with the sampling.

Enough talk. Time for some music. See ye later.

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Re:Wavetables on the MD!

Posted by grain - 2008/03/24 08:13

Toni wrote:

<http://www.galbanum.com/products/architecture-universal/>

Holy Christmas Toni..

Thank you. just downloaded that demo and can already say
I will be buying a disk from those brilliant people.

Wow.

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Re:Wavetables on the MD!

Posted by Alex Hasten - 2008/03/24 09:33

actuel wrote:

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So in short, I'd like to see the loop on/off to Hold vs. End.

if you move the loop on/off to the hold knob, how you want to control the length of a sound, didn't get it ;-)

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Re:Wavetables on the MD!

Posted by Allerian - 2008/03/24 09:38

Toni wrote:

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I just finally came to grips with this. Interesting idea.

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