

/ the concept

3 in 1

Livetweaker is a new vst instrument, gathering in a single plugin one 12 slots drumsampler, one drumsynth, and a monophonic synth.

Conceived with live use in mind, the idea is to have 3 instruments on one single track for quick & easy tweaking using a midi controller.

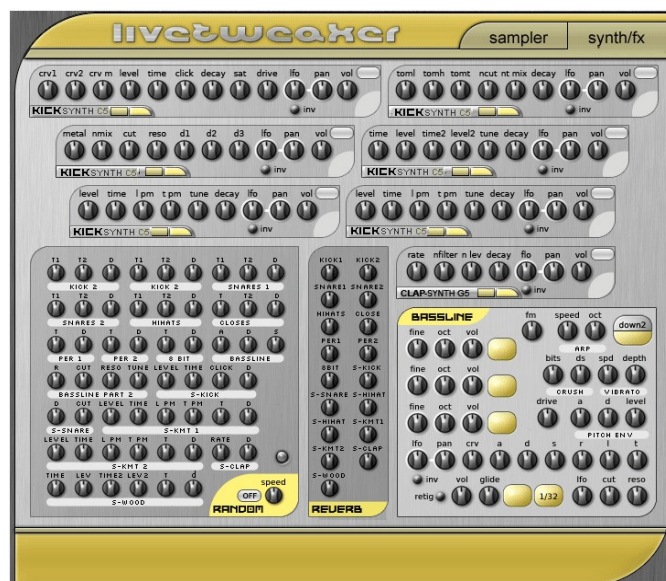
Random random

The second idea is to avoid sterile repetition of the same thing in including various random features.

So, you can reach subtles variations on a snare's pitch, a cymbal's decay, or simulate the osc pitch instability of an old analogue synth, but you can also turn your pattern into something totally different after each repetition.

Livetweaker aims at keeping things both simple, quick & easy to use, all along with deep user customizable features for more sonic control.

/ the interface



Because Livetweaker gathers 3 instruments in one (and also adds a reverb and a complete random matrix), we had to make its interface more readable using two tabbed panels.

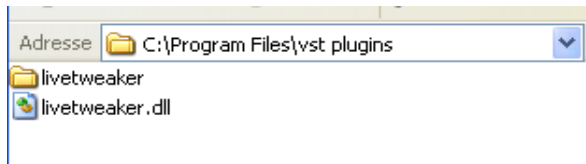
The first panel is all devoted to the drumsampler, and on the second one you can meet the drumsynth modules, the bass synth, the random matrix and the reverb routing system.

To switch from one panel to the other, just click with your mouse on the pad :



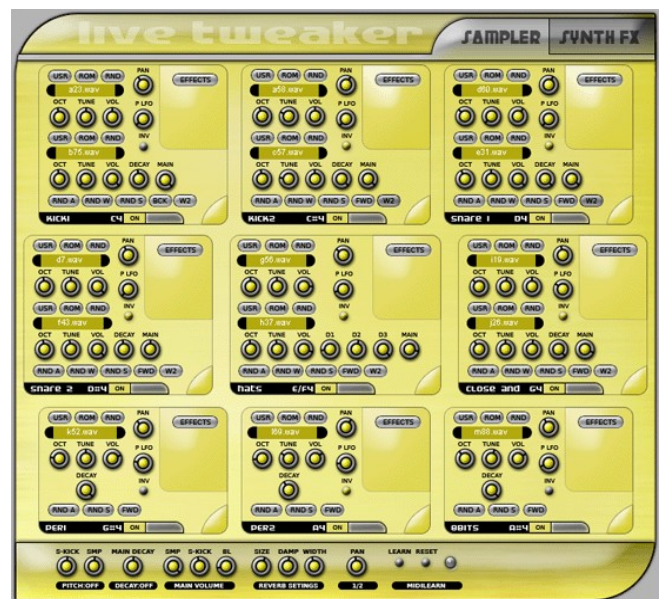
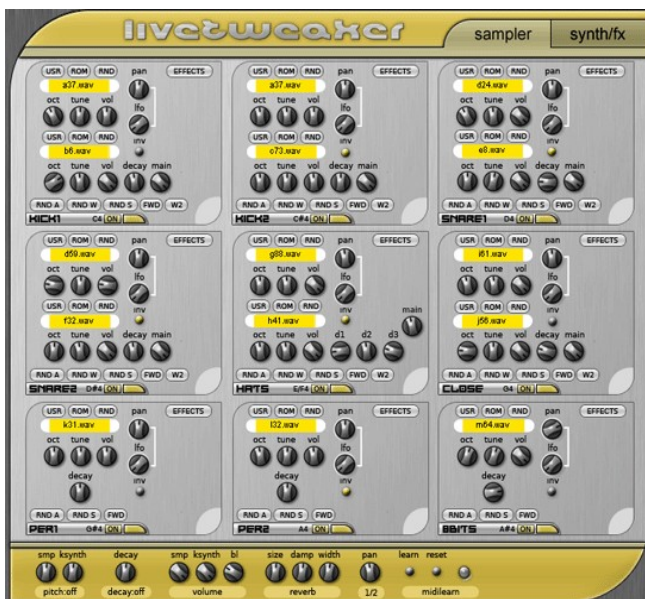
/ installation :

The installation procedure is very straight-forward : just extract the zipped file and drag&drop both the .dll file and the samples folder into your favourite vst plugin folder on your hard drive.



It is very important to copy both the .dll and folder containing the samples in the same folder, or you won't be able to load easily the provided sounds (Livetweaker won't « see » them).

Two skins are available (a yellow one and a metallic one). There is no difference between them feature-wise. But as the two versions share the same name, you can not have both installed on your system (because the sample's path depends on the .dll file's name, so renaming the .dll would cause the inability to load the factory samples from the integrated browser).



/ the drumsampler

Livetweaker's first panel is dedicated to the drumsamplers.

1 – drumsampler tech spec



Oneshot

LT has 12 sample players in 9 slots. 6 among them are layered (allowing two sounds playing at the same time), and 3 are simple. It is not loop players, but one shot samplers, so it is better for triggering drum sounds.

Resolution

The samples coming with LT are all 16bit/44,1khz, but the sample players can read 16 to 24bit, and up to 96khz samples. You can load stereo sounds, but it will be played as a mono sample.

Layers

The six first samplers are layered. So you can load 2 sounds into one slot, and make individual settings for each. To bypass the second layer, just hit on the «W2 »button. Each sample is triggered by a specific note which is written on the GUI (on this example : C4).

Decayed sampler module.



The fifth samplerslot is a bit different : one sample is assigned to three different decay settings, each triggered by a different note (E, F, F#).

This way, it is easier to simulate a hat sound from a « real » drum. For the same source sound, you have a « closed hat » setting, a « mid-open », and a « open » setting, and all this comes with *choke*, which means that the close hat will mute the open hat if played together.

2 – loading sounds



How to load a sample from the internal bank

- **To select a sound** : click on ROM : a window will pop up with a list of all samples available in the bank. You just have to click to confirm your choice.
- **Browsing sounds** (+/-) : The selected sample is displayed in the yellow window. The white rounded angle on the right can be used to load the next sample in the bank, where clicking on the one on the left will load the previous sample in the bank.
- **To random-load a sample** : Hit RND. LT will load one of the sample available in the bank. But beware : depending on your computer performances and the sample duration, using this feature during live playback can cause audible glitches.

how to load a user sample

Each sampleslot comes with his own sample bank, but you can also load your own sounds. To do this, just hit USR, it will make an explorer pop up, and you just have to make your choice by browsing your hard drive.

3 - modifying sounds

For each sampler, you can modify the following parameters :

- **the pitch** (*octave* and *tune*) :
- **the decay** (when the knob is turned fully on the right, there is no modification) ;
- the playback **direction** : hit on the button to choose FWD (*forward*) ou BCK (*backward*) ;
- the **pan** position : the pan knob allows you to place your sound in a stereo space. But if you want your sound to move from left to right in tempo synchronization, just add some LFO to the pan. The auto-panning speed is controlled with the knob in the yellow control bar (more info later).
- the **volume** : Of course, you can set it for each slot, but in the case of a layered slot, you have a volume setting for each sample, and also a main volume. In the yellow control bar, you can also set a master volume for all the drumsampler with a single knob (more info later).
- And, last but not least, each slot comes with an **effect** section. By default, no effect is enabled. To load an effect, just hit the « effect » button, and select the one you will need among filters, distortion, and bit reduction.

Random settings modification :



RND A = random all : every settings and samples gets randomized ;

RND W = random waves : loads a random sample from the bank ;

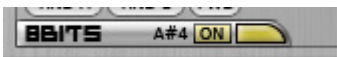
RND S = random settings : randoms the settings, but doesn't changes the samples.

Pre-listening using the mouse :



You don't need to have a sequence running in your host or a hardware controller to hear how does your sample actually sounds. To monitor it the easy way, just hit with your mouse the right corner of the slot (light grey).

some more infos :



In this little bar, you can :

- see the note which is used to trigger the sample (here : A#4) ;
- switch the module on or off ;
- And, while playing, you can see if a slot is played because the little shape on the right gets whiter when a sample is triggered.

Autopan



It is possible to make your sound move from left to right if you increase the LFO amount applied to the pan setting.



The LFO speed is tempo synced, and can be set for every modules in the yellow control bar in the lower part of the GUI.

4 – about the samples

Livetweaker comes with more than one thousand samples. More than 400 have been recorded by Sink, from his personal collection of vintage analogue drum machines and synths, processed through tube compressors, filterbanks or spring reverb...

They all are classified in 3 main categories, and each one is categorized into three sub groups :

[AC]

We have put under this term every « acoustic » sounds.

- « **curtis** » : this bank gathers every rock, soul, jazz & rare groove sounds. It could have been called *Herbie*, but it got called *Curtis* (not *Ian*, but the *Supafly* guy...);
- **phat** : ces sons sont issus de samples de batteries acoustiques, mais on été « gonflés » à l'aide de compresseurs à lampes, de distortions... ou bénéficient de la coloration de *resampling* multiples. Il sont davantage destinés à être utilisés dans des productions jungle, drum &bass, hip hop...
- **h_ware** : stands for «hardware processed» : J'ai enregistré tous ces samples en passant des sons issus de boîtes à rythmes hardware au travers de filterbanks analogiques, spring reverb, ou en les samplant à l'aide de vieux samplers gadget comme le Yamaha VSS-200... Le résultat est un son « altéré » et chaud à la fois...

[TRON]

La seconde catégorie est dédiée aux sonorités électroniques..

- La première sous-catégorie se nomme « **vin** », pour *vintage*, et comprend des sons de vieilles boîtes à rythmes telles que les légendaires Roland ou les moins connues Korg Kpr-77, Boss dr-110, etc. Ce sont donc des sons obtenus par des boîtes à rythmes qui étaient encore des synthétiseurs.
- La banque « **lofi** » regroupe des samples tirés des premières boîtes à rythmes utilisant la technologie d'échantillonnage du son. Il y a donc ce « *gritty* 12bit sound » ! Si vous aimez *Sabrina* ou le vieux hiphop, si *Stock, Aitken & Waterman* vous dit quelque chose, cette banque est pour vous... On y retrouve aussi des sons *casio*, et cette banque devrait correspondre à votre ardent désir d'electro-pop ou de revival 80... !
- La dernière banque « **syn** » a été entièrement créée à partir de synthétiseurs analogiques.

[VARI]

La dernière banque regroupe 3 types très différents :

- les sons 8bit (dénommés « **chip** »), pour les nostalgiques d'*atari*, *amiga* ou *comodore64*, ou les freaks de retrogaming ;
- la seconde banque, nommée **XPR**, regroupe des sons « expérimentaux » (vive le DSP !!);
- et enfin, la dernière banque « **War** », pour nos amis fans de makina, de tuning (on a tous écouté *Scooter* un jour) ou de free parties...

/ the drumsynth section



I won't tell a lot about the drumsynth section, because most of the modules need more to be *used* than understood...

Every settings can also be randomized, so it can be a nice starting point to hear what kind of sounds to expect from these ones.

The idea behind this section was not to make another « x0x emulation », but a *real* percussion synth with deep abilities and many tweakings.

Of course, you find all the necessary tools to make « common » sounds (and so are labelled each modules : kick, snare, hats, etc), but you will also meet those KMT beasts, taken from the Odo's KickMeToo drumsynth (available on his website), which uses FM synthesis to create unheard sounds.

In a general way, here is what the letters mean :

pm = phase modulation (used in FM synthesis)

n = noise

l= level

t=tune

... happy tweaking !

/ the synth section



This synth has 3 oscillators for more sonic power and more creativeness.

Once again in this module you can quickly and easily get what you're after, but you will be able to drown for hours in his sonic potential : it can fit anywhere !

Let's take a tour :



oscillators

For each one, you can select the osc type (sine, square, triangle, saw, etc), and set the octave, volume, and fine tune (or detune, in order to create thick basses *Hoover styleeee* !);

To change the osc type, just hit the yellow square.



enveloppe

- Crv = curve. Here you can tweak the curve behaviour.
- ADSR : well... i know, you already know that.
- « l » stands for level
- ... and « t » for time.



arpeggiator

- speed : you can read the arp speed in the yellow zone.
- oct : octave range for the arp ;
- mode : click the grey zone to change the arp mode (up, down...);



filter

- first/free : first = the lfo starts when you start your song. And free = the lfo is always running and you don't know where it starts.
- Tempo-sync : set the lfo speed by clicking the yellow square ;;
- lfo : amount of LFO applied to the filter.
- cut/reso : do i really have to tell ?
- mode : hipass, lopass, 4pole (for a more hardcore sound), etc.



pitch envelope

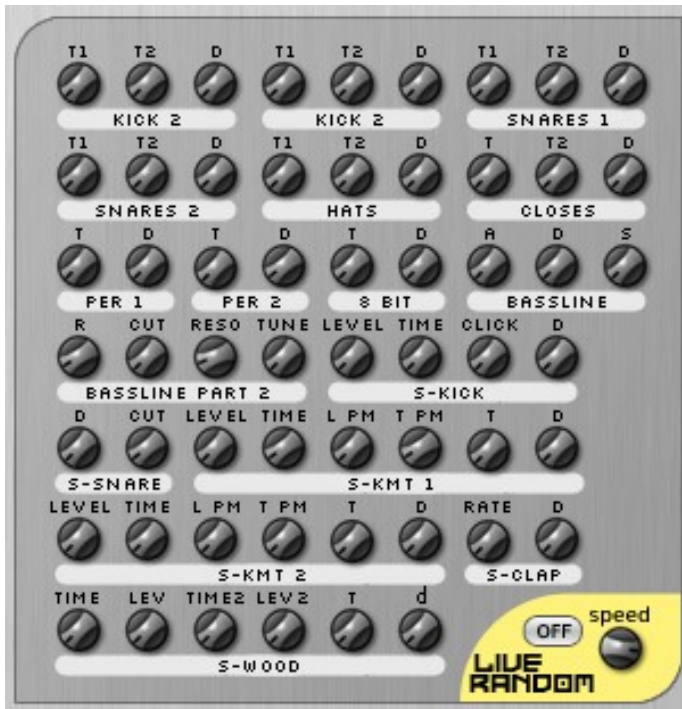
You can't avoid this killer feature ! Not so many vst instrument have that, but it is very nice. It applies some pitch to the osc. Wit some extreme settings, you can reach kick-like sounds and really mess up your synth sound.

drive, bitcrush, vibrato, glide...

Least, but not last, the synth comes with a nice little sonic arsenal to enhance your sound pleasure :

- **drive** : give your sound some dirt !
- **bitcrushing** more dirt, and because we all love 8bit !!
- **vibrato**, to give subtle « analogue-like » pitch variation, or... well... to add vibrato.
- **Glide** : We like that since we like that little silver flat box with knobs.

/ enter the random matrix



You have reached the place where random occurs.

If « live random » is set to OFF, there is no random involved and you can play the same thing for hours. C'est ici que se détermine de quelle manière le random permanent va être appliqué au jeu.

But if you switch it to ON, you will be able to set from subtle cymbal pitch variation to total modification of every sound after each repetition !

Here is how to make the random matrix work :

A grey label tells which module will be affected. The first 3 rows are dedicated to the sampler slots (and also the beginning of the synth). The 4 last rows deal with the bass synth and the drumsynths randomizable parameters.

To help the user to find out more easily which module he's tweaking, the « S » at the beginning of some labels stands for « Synth » (not sampler).

This is what you can randomize :

- for the **samplers** :

T1 = tune (« 1 » means : « for the first layer »)

D = decay

- for the bass **synth** : you can add random to :

ADSR, filter's cutoff and resonance, osc tune.

- for the **drumsynths** : it depends on the modules.

The « speed » knob is here to set the random speed change. But you guessed it.

/ reverb



The same principle applies as for the *live random* matrix.

The reverb's general settings are done in the yellow control bar in the lower part of the GUI.



Then, the knobs in the grey reverb column work just like insert on a mixing desk : the more you turn the knob to the left, the more sound comes from the slot (written above the knob) to the reverb effect.

/ the control bar



Global pitch & global decay

This setting allows to modify with only one knob the decay or pitch settings of a whole section.

By enabling the *global decay* knob and turning it to the left, you will be able to shorten every samples from the drumsampler at once. Only the drumsampler is affected by the *global decay* knob.

The *global pitch* knobs allows you to do the same thing for the pitch settings of the whole drumsampler section, but also for the whole drumsynths modules by turning the « *ksynth* » knob.

Note that by enabling one of this feature, all the sampler modules will temporarily go back to their standard pitch and decay settings. The custom settings of the project will be found back again by disabling the global pitch/decay option feature.

volume

By default, the mod wheel of your controller is assigned to the master volume output. Moving this wheel can increase or lower the main volume, and you will see the three knobs (sampler section, drumsynth, and bass synth) moving on the GUI.

But you can also modify each section's volume with the mouse.

midi learn

With this feature, you can assign (nearly) any of the knobs on the GUI to a knob or a fader of your hardware midi controller.

It is very easy to make it work, just follow these 2 steps in the correct order :

- click « learn » on the GUI : a led will ight up (next to the « reset » button)
- turn a little bit the knob on the GUI you want to assign to your hardware controller (for example, the second sampler's decay) ;
- turn a knob or a fader on your controller : you're done, and the light should turn off.

Note 1 : Because of the huge amount of parameters involved in Livetweaker, not EVERY parameters are midi-learnable. That's sad, but maybe that your host can bypass this limitation if it can link not from the plugin's interface but from the host itself (Ableton Live does, and so does EnergyXT, among others...). By the way, we have carefully hand-picked the most important parts to be midi learnable. If, when turning a knob with « learn » on, the little light doesn't light on, it is that the parameter you wished to learn can't be learned.

Note 1 : The midilearn mapping is stored in the plugin itself, and not in the host or the project. So it means that if you make a special map in one host, it will be remembered by LT even in other hosts. And any changes will erase the previous settings.

/ important notes

Loading LT in your host

Due to the huge amount of internal parameters, LT can take several seconds to load in your host. We advise you not to load it on the fly during playback, but since the beginning of your project or session. No crash has been experienced so far, but the loading procedure might cause audible glitches (depending on your machine performances).

CPU & latency

LT doesn't have any latency and works in real-time.

As it gathers many instruments in one, plus a reverb and also random features, the cpu use might be higher than a more « basic » instrument. But the code has been optimized in order to use the least possible cpu and to provide a smooth playing.

Loading samples on the fly

Loading samples while playing can cause audible glitches (depending on your machine performances, and also the duration of the sample), but if you use a stream recorder plugin to record your live session, those glitches aren't heard on the output audio file.

Known issues & various notes

- If you use Fruity Loops, be sure to uncheck « reset plugins on transport » (in « options > audio settings »). This is not a Livetweaker bug, but the way FL handles some plugins.
- Some users reported that in some hosts, using Livetweaker in a project, there could have a lag between the moment you hit « start » and the moment the playback actually begins.
- The first time a sample is loaded and played, a small audio glitch can be heard. It only occurs the very first time you play it.
- We recommend you to save your kits in the same time as your projects.

Notes keyboard mapping :

bass synth : C1 > B3

drum sampler : C4 > A#4

drumsynth : C5 > G5

/ midi cc list

drumsampler

kick 1

cc03 decay
cc09 tune1
cc14 tune2
cc15 oct1
cc20 oct2

Kick 2

cc77 decay
cc78 tune1
cc79 tune2
cc80 oct1
cc81 oct2

Snare 1

cc21 decay
cc22 tune1
cc23 tune2
cc24 oct1
cc25 oct2

Snare 2

cc72 decay
cc73 tune1
cc74 tune2
cc75 oct1
cc76 oct2

Hihats

cc26 decay1
cc27 decay2
cc28 decay3
cc29 tune1
cc30 tune2
cc70 oct1
cc71 oct2

Closed hats

cc82 decay
cc83 tune 1
cc04 tune 2
cc84 oct1
cc05 oct2

perc 1

cc85 decay
cc87 oct
cc86 tune

perc 2

cc88 decay
cc90 oct
cc89 tune

bits

cc10 decay
cc08 oct
cc07 tune

bassline

cc93 drive
cc94 a
cc95 d
cc96 s
cc97 r
cc102 reso
cc103 cut
cc104 Lfo
cc105 glide
cc106 arp speed

drumsynth

Kick synth

cc107 crv1
cc108 crv2
cc109 crvmix
cc110 lenght
cc111 hight

Snare Synth

cc112 tom tune (Snare)
cc113 tom hight (Snare)
cc114 tom lenght (Snare)
cc115 Cut (Snare)

KMT 1

cc119 tune
cc120 time
cc121 level
cc122 pm level

KMT 2

cc123 tune
cc124 time
68-cc125 level
69-cc126 pm level

main

cc31 verb size
cc91 pan speed
cc92 global decay
cc01 Modulation (MSB modweel) main volume
cc116 main Pitch
cc127 main decay

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Credits

Thanks to everyone who helped and supported us, and special thanks to Dave Haupt, Chris Kerry, Synthedit, and of course all the beta-testers and demo makers !

Visit **Odo** Synth's page : <http://odosynths.com/> and **Sink** music's website : <http://www.sinkmusic.com>

... and if you like it and use it, please donate !