



# DETON8 USER MANUAL

7 June 2019

Thanks for adapting deton8!

# 1 Quick Start

[watch the walkthrough video here](#)

In this quick start guide we will cover the basics from selecting a voice to creating a pattern, step by step and real time. We will then add some bass Melodies by modulating it's pitch and decay.

## 1-1 Create a pattern

Let's start from scratch, you can edit your pattern while the sequencer is running which is more fun!

-First start Deton8 by pressing **play**

-go to pattern1 by holding **pattern** and pressing **pad1**

-clear the pattern by holding shift and pressing clear twice (first time clears the selected voice, second time clears the entire pattern)

lets start with a **kick** drum

-turn the **part knob** fully left to select the **kick** voice.

-press some pads to add some steps

lets add some **hi-hats**

-turn the **part knob** right to select **metal**

-Press some pads to add some hats

Finally lets add some snare

-Turn the **part knob** slightly left to select snare

-Press some pads to add some snare

You can adjust the volume of the selected part to the desired level by turning the **drive knob**.

Let's add some claps but in real time

Hold **shift** and press **record**. Now you can trigger the voice by pressing the top row of pads.

-when you are ready to record some claps, press **record** to arm the sequencer (top row of pads is now flashing)

Tap the **clap pad** to add some claps to your pattern

Note: Deton8 automatically quantizes the pattern that you are recording.

Now lets add some bass.

-with the recorder still running, tap the **SYNTH pad** a few time to add notes.

you can now modulate (change over time) the pitch by turning the **pitch knob**. You can also do the same for the **decay** knob.

-Wiggle the **pitch** and **decay** knobs until you are happy with your melody.

-Press **shift** to stop recording mode.

# 2 Patterns

You can create patterns in real time or step by step

Patterns are automatically saved to memory shortly after the sequencer has been stopped  
**Please do not unpower the device immediately after use as you could lose your latest work!!!**

## 2-1 Pattern Editing

Select a voice by turning the **part knob**, and add steps to your pattern by pressing the **pads**.

You can clear the steps by pressing **shift** and **clear**.

To clear the entire pattern (all voices) hold **shift** and press **clear** twice.

To randomize the pattern of the selected voice, hold **shift** and press **clear** 3 times

To randomize the pattern of all voices, hold **shift** and press **clear** 4 times

You can copy the selected pattern to any of the 15 other pattern slots using the copy and paste pads. Hold **shift** and press **copy** to copy the selected pattern to memory. hold **shift** and press **paste**, followed by the **pads** where you wish to paste the pattern.

## 2-2 Pattern Recording (real time)

You can record patterns in real time when the sequencer is running.  
Hold **shift** and press **record** to enter record mode.

Use the flashing **tempo** pad to turn a metronome on or off.

In record mode you can preview the parts by pressing the top **pads**. Nothing is recorded until the sequencer is armed.

When you are ready to record the pattern press **record** to arm the sequencer (the top pads will flash)

Now press the top **pads** to record your pattern.

You can press the flashing **clear pad** at any time to start over.

## 2-3 Modulating Pitch and Decay

You can record the pitch and decay knob movements in real time when the sequencer is running and armed.

Hold **shift** and press **record** to enter record mode, and press **record** again to arm the sequencer.

(the top row of pads flash when the sequencer is armed). You can now move the **pitch** and **decay** knobs to record their movement. Use the **part** knob at any time to modulate another voice.

## 2-4 Switching and Chaining Patterns

You can switch to another pattern at any time by holding **pattern** and pressing **any pad**. The pattern will change after the sequencer reaches the last step of the pattern.

To chain patterns hold **pattern** and press a sequence of **pads** without releasing pattern.

You can chain up to 16 patterns theoretically allowing a pattern of up to 256 steps

## 2-5 Shortening Patterns

You can set each pattern to any length between 2 and 16 steps by causing a step to reset the sequencer.

Hold **shift** and press **reset** to enter reset mode, then without releasing shift press **any pad** from 2 to 16 to make it reset. To return to a 16 step pattern hold **shift** and press **reset** then press the lit pad. It cancels the reset.

# 3 Tempo and Sync (master and slave)

## 3-1 Slave

You can slave deton8 to another sequencer either by MIDI CLOCK (hardware MIDI or MIDI USB) or by 5V analog sync pulses (1 pulse for 2 beats) on the sync input jack (mono TS).

## 3-2 Master

Deton8 transmits a 5V pulse on every 2 beats  
Via the sync output Jack (mono TS).

## 3-3 Tempo

When in master mode, you can tap the tempo at any time by holding **shift** and pressing **tempo multiple times**.

## 3-4 Swing

Add swing by holding **shift** and **tempo** and turning the **decay knob**. The swing increases as you turn the knob clockwise.

# 4 Sound & Effects

You can vary the sounds of some of the voices and add trigger real time effects.

## 4-1 Sound knob

You can use the sound knob to:

-add sub sine wave to the kick

-add noise to the Snare

-change the texture of the metal (hi hats) below 50% the kit's sample is used,

Above 50%the metal is synthesized by a noise wavetable. You can change the texture of this wavetable with the pitch knob

## 4-2 Ring Modulator

Hold **shift** and the **sound** knob activates a master ring modulator. Turn the **sound** knob to adjust the frequency of the modulation

## 4-3 Pitch (tune)

Use the **pitch** knob to change the pitch(tune) of the selected voice, you can record the movements in the record mode (see section 2-3)

When you hold **shift**, the **pitch** knob affects all the voices at once (except for the synth)

## 4-4 Decay

Use the **pitch** knob to change volume decay of the selected voice. This can be used to make the drum hit longer of shorter. you can record the movements in the record mode (see section 2-3)

## 4-5 Decay

When you hold **shift**, the **decay** knob activates delay on the selected voice when above 50%

You can change the delay repeat speed by holding **shift+play** and turning the **decay** knob

You can add pitch decay to the delay by holding **shift+play** and turning the **pitch** knob.  
At 50% the pitch is unaffected, beyond 50% the pitch rises and below 50% it falls.

## 4-6 Drive

Use the **drive** knob to set the volume of the selected voice.

Towards the upper limit of the drive knob's travel deton8 will saturate the selected voice via bitrate reduction causing it to crunch

## 4-7 Pump (side chain compressor)

You can make the selected voice “duck” the other voices resulting in the pump effect like a side chain compressor. Hold **shift** and turn the **drive** knob to increase the effect.

The more pump you add to the voice, the more it will duck the others  
The other voices are ducked longer as you increase the decay

## 4-8 Reverse

A voice can trigger the sample backwards if the reverse is set.  
Hold **shift** and press **reverse** to activate this feature.

# 4-9 Stutter

Deton8 continuously records a portion of audio to its playback buffer. The stutter effect plays around with this portion of audio.

There are 8 stutter modes that can be activated by holding **shift** and **stutter**. When **shift** and **stutter** are held, use the top 8 pads to change modes:

## **-Mode 1: beat repeat**

The same step is repeated forever. You can change the repeat rate with the **decay** knob  
You can use the part knob to only repeat a single voice.

## **-Mode 2: Grain/Buzz**

A portion of audio is looped from the buffer.  
Use the **pitch** knob to change the pitch of the grain  
Use the **decay** knob to change the size of the grain

## **-Mode 3: Grain/Buzz reversed**

A portion of audio is looped backwards from the buffer.  
Use the **pitch** knob to change the pitch of the grain  
Use the **decay** knob to change the size of the grain

## **-Mode 4: Grain/Buzz ping/pong or scratch**

A portion of audio is looped forwards then backwards from the buffer simulating a back and fourth record scratch.

Use the **pitch** knob to change the pitch of the grain  
Use the **decay** knob to change the size of the grain

## **-Mode 5: Variable Grain**

A portion of the audio buffer is looped  
Use the **pitch** knob to change the pitch of the grain  
Use the **decay** knob to change the index of the grain in the buffer

## **-Mode 6: Falling buzz**

A portion of audio is looped and the pitch falls over time.  
Use the **pitch** knob to change the speed of the falling

## **-Mode 7: Rising buzz**

A portion of audio is looped and the pitch rises over time  
Use the **pitch** knob to change the speed of the rising



# 4-10 Filter

Deton8 has a resonant low pass filter

Hold **shift** and **pattern** to activate the filter

Use the **sound** knob to change the cutoff frequency.

Hold **shift+pattern+play** and use the sound knob to set the resonance

# 5-1 Sample Editor Driver Setup (Windows Only)

You can create and upload kits to your deton8 using the sample editor.

## 1-1 Setup

No drivers should be needed on windows10 but on previous versions please use the included drivers. For Mac users no drivers are required.

[Here is a video demonstrating the driver setup.](#)

We need to tell windows to use deton8 as a virtual com port.  
First we install the appropriate driver:

Example:

VCP\_V1.5.0\_Setup\_**W7**\_x86\_**32**bits (windows 7, 32bits)

VCP\_V1.5.0\_Setup\_**W8**\_x64\_**64**bits (windows 8, 64bits)

Install the driver in a location that you will be able to find easily later.

Once installed, we go to the device manager.

Locate and right click deton8 in "Other devices" , choose "update driver software"

Click "Browse my computer for driver software"

Click "Let me pick from a list of drivers on my computer"

Choose "Ports(COM and LPT)" from the list of devices and click "Next"

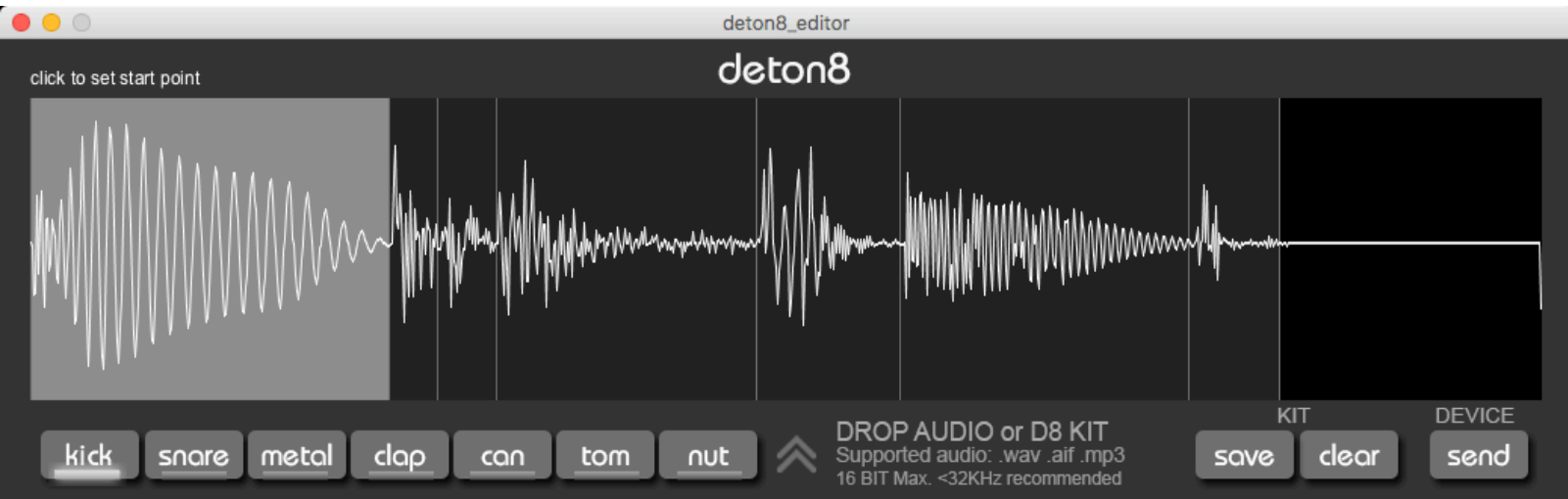
Click "Have Disk"

Browse to the file we installed called "stmcdc"

Click "Next", "Yes" and close window.

Now you can use the Editor.

## 5-2 Using the Sample Editor



Simply drag the D8 kit files onto the editor window to load them.

Use the bottom left 7 buttons to select and preview a sample,

You can redefine the in and out locations of the selected sample simply by dragging the cursor over the waveform from left to right.

Sample locators can overlap (a single voice can contain multiple waveforms)

## 5-3 Recommended Audio Format

The editor can import WAV or AIF files, of up to 16BIT but it is recommended to use 8BIT WAV 32HZ files.

Higher resolutions and sample rates will automatically be converted down to 8bit.

Deton8 has a limited amount of space (56K), please keep your samples short. If the sample is too large, the sample rate will be reduced to fit the audio which will result in quality loss and pitch raising.

# 6 Midi Implementation

You can use MIDI CC to change the parameters of deton8 according to the following chart:

<b>PARAMETER</b>	<b>MIDI CC NUMBER</b>
MASTER VOLUME	7
VOLUME VOICE 1	10
VOLUME VOICE 2	11
VOLUME VOICE 3	12
VOLUME VOICE 4	13
VOLUME VOICE 5	14
VOLUME VOICE 6	15
VOLUME VOICE 7	16
VOLUME VOICE8	17
PITCH VOICE 1	30
PITCH VOICE 2	31
PITCH VOICE 3	32
PITCH VOICE 4	33
PITCH VOICE 5	34
PITCH VOICE 6	35
PITCH VOICE 7	36
PITCH VOICE 8	37
DECAY VOICE 1	20
DECAY VOICE 2	21
DECAY VOICE 3	22
DECAY VOICE 4	23
DECAY VOICE 5	24
DECAY VOICE 6	25

PARAMETER	MIDI CC NUMBER
DECAY VOICE 7	26
DECAY VOICE 8	27
STUTTER ON/OFF	40
STUTTER RATE	41
STUTTER PITCH	42
FILTER ON/OFF	43
FILTER CUTOFF FREQUENCY	44
FILTER RESONANCE	45
RINGMOD ON/OFF	46
RINGMOD X	47

## 7 Firmware updates

While we strive to deliver a bug-free product, it is likely that firmware updates will become available over time.

Please follow the instructions on this web page for a detailed walkthrough:  
[www.twisted-electronics.com/update](http://www.twisted-electronics.com/update)

If you have ideas for new features or If you find bugs, feel free to report them and we will work on them ASAP.

[info@twisted-electronics.com](mailto:info@twisted-electronics.com)