

# Gotharman's Little deFormer



Update 006

## New Functionality:

**-VERY IMPORTANT:** You must make sure, that your Little deFormer is updated with version 385, before performing this update. How to check: In the "SAMPLER" section, find the parameter named "Type" (FilterType). Check if it is possible to select Type "shp". If it is, your Little deFormer are correctly updated, and you can go on with this new update. If not, you must first update it with both files of update 385, then perform this update.

**-Oscillators added.** You select an oscillator for a step button, the same way as you would select a sampling. Push "Assign" and use the dec button to select sample "0" Waveform. Now the selected step button will play back an oscillator instead of a sampling. The oscillators can morph between sine, triangle, sawtooth, square and noise waveforms. PWM works on all waveforms. The oscillators can be modulated in the same way as the samplings (Except for startpoint, endpoint and loop of course).

**-10 LFO's added.** These can morph between triangle, sawtooth, square, pulse and unlinear high-speed waveforms. They can be key-triggered or free running, looped or one-shot, and rate, waveform and output levels can be modulated. The LFO's appears as sources in the "MODULATION" section, and can modulate almost any parameter. 2 LFO's are reserved for the effects section and 8 for the sampling section.

**-16 sample trigged Random generators.** Each time a sampling or and oscillator is trigged, it causes the random generator connected to it, to change to a new random value. All 16 random generators appears as sources in the "MODULATION" section, and can modulate almost any parameter.

**-Sample Envelope can now pitchmodulate the sampling/oscillator.** New parameter "Penv" added in the "SAMPLER" section.

**-Velocity added in Modulation.** The velocity value received for each of the 16 samplings/oscillators, either from MIDI in or from the Note Randomizer, does now appear as sources in the "MODULATION" section, and can modulate almost any parameter.

**-A few more MIDI controllers added in Modulation.**

**-The FilterBank can now be modulated** by sample/oscillator 1-4 filtermodulation.

**-Sequencer tracks can now have different lengths.** The "Last" parameter adjusts the overall length of all sequencer tracks. Each track now has an "Rst" (Reset) parameter added, for selecting a step where the track should reset. If "Rst" for a track has a lower value than the overall "Last", the track will reset when it reaches that step. If "Rst" for a track is higher than "Last", it will have no effect, and the track will reset when it reaches the "Last" step.

**-Sequencer controller tracks can now have their time signature separately adjusted.** Completely independent of the note tracks time signature, the controller tracks now has their own adjustment.

**-Pattern Link mode added.** It is now possible to link two patterns/presets together for continuous playback. It is possible to adjust how many times it should play back each pattern, and all edits you make in both patterns will be kept. NOTICE: When you save a preset that is linked to another preset, Little deFormer will save both presets at one time, so it will take up TWO preset locations. The presets you link can be completely different, with for instant different Time and Pitch effects, so this can really get odd.

**-Song mode added.** It is now possible to chain patterns/presets together for automatic playback in up to 120 steps. For each step you can select the preset number, and how many times the preset should play back, until it goes on to the next step. Little deFormer can hold 512 songs.

**-Sequencer tracks can now be selected via the step buttons.** When exit'ing the sequencer edit pages, and trigger a sampling/oscillator, this will now also select the sequencer track to be edited, when you return to the sequencer pages again. You can, of course, also still use edit knob one to select a track.

**-Sequencer pattern clear, copy and randomize functions added.** Just to make life easier.

**-Time/Pitch effect copy and randomize functions added.** To make life even more fun.

**-Sample record auto-trigger added.** An "Auto" parameter has been added to the sample record screen. When the audio signal to be sampled reaches the level adjusted by this parameter, sample recording starts automatically. When auditioning pre recording, the sample VU-meter (the stepLED's) will not react at all, when the input signal is below the Auto level.

**-Knob "snap" mode added.** When this is on, the parameter values on the edit pages will not be changed, until you reach the position with the edit knob, where it initially was.

**-It is now possible to transmit and receive presets via MIDI.** It is now possible to share your presets and soon it will be possible to download new Little deFormer presets on the GotharMusic website.

**-SamplePitc effect improved a bit.** It is now working better/granulating more, when tuning up.

**-Sample trigger point can now be modulated.** For Neil Baldwin.

**-AnaX: It is now possible to output LFO3 to 10 and Random Generator 1 to 16 via the CV outputs.**

**-AnaX: Sequencer reset can now be selected as a trigger input or output.** For Dan.

**-Delete all sampling function added.** If you are tired of all your samplings or Gotharman's preset samplings, that he btw used very long time to make just for you, you might use this function, to start all over. But please think again before you use this. IT IS SAMPLINGS FROM REAL GOTHARMAN MACHINES!!!! YOU WON'T GET THESE SAMPLINGS AGAIN! I PROMISE!!!

## The Oscillators

Now it is possible to select an oscillator for each step button, instead of a sampling. These can morph between sine, triangle, sawtooth, square and noise waveforms. Pulse Width are adjustable on all waveforms.

### **To select an oscillator for a step button:**

- Push the step button you would like to assign an oscillator to.
- Push the "Assign" button.
- Push and hold the "Dec" button, until the display shows [∞∞WaveForm∞∞]. The oscillators are placed as sample number 0.

Now when you push the stepbutton, you should hear the oscillator.

When entering the "SAMPLE" section in the edit menu, an oscillator will have the following parameters:

**Tune:** -128 to +127. Tunes the pitch of the oscillator up and down in quarter tone steps.

**Fine:** -64 to +63. Fine tunes the the pitch of the oscillator.

**Gain:** -128 to +127. Adjusts how loud the oscillator will go in to the filter. Positive values will create overdrive.

**Dec:** 0 to 255. Oscillator VCA envelope decay. Adjusts how long time it will take for the oscillator to fade out. Besides controlling the output VCA level, this envelope can also control the filter cutoff and mix, and the pitch of the oscillator.

**Mode:** poly, mono. Selects polyphonic or monophonic playback.

**Wave:** **Sine** to **Tria** to **Saw** to **Squr** to **Nois**. Selects the oscillator waveform. The numbers inbetween the waveform names, indicates that it is morphing between two waveforms.

**Strt:** Off, 1 to 255. By this parameter it is possible to make the waveform start at a fixed point, every time the oscillator is triggered. This can be very useful for creating percussive sound with a harder attack. When this is off, the waveform is completely free-running.

**Pw:** 0 to 255. Adjusts the pulse width of the waveform. Unlike on much other gear, this works on all waveforms in the Little deFormer.

**Trig:** Off, 1 to 255. When this parameter is set to any other value than "Off", it will trigger another sampling/oscillator, selected by the "Smpl" parameter, when it reaches the selected point of playback. When exactly it will trigger another voice, is very dependent on the envelope decay setting.

**Smpl:** 1 to 16. Selects the sample/oscillator that should be triggered by "Trig".

**Bus:** 1 to 4. Selects the audio bus, the output of the oscillator should be routed to.

**Levl:** 0 to 255. Adjusts the output level of an oscillator voice, after the filter.

**Cut:** Same function as when a sampling is selected.

**Reso:** Same function as when a sampling is selected.

**Type:** Same function as when a sampling is selected.

**fEnv:** Same function as when a sampling is selected.

**fMix:** Same function as when a sampling is selected.

**mEnv:** Same function as when a sampling is selected.

**Filter Adjust 1 to 3 (1 to 7, when "shp" is selected as Type):** Same function as when a sampling is selected.

**pEnv:** -127 to +128. NEW PARAMETER. Adjusts how much the sample/oscillator VCA envelope should affect the pitch.

## The 10 LFO's

Little deFormer now has 10 LFO's. These can morph between triangle, sawtooth, square, pulse and unlinear waveforms. They can be key-triggered or free running, looped or one-shot. The LFO's appears as sources in the "MODULATION" section as "LF1 to 9+/-" and "L10+/-", and can modulate almost any parameter.

The LFO's also appears as destination in the "MODULATION" section. Their rate, waveform and output level can be modulated, with one exception: LFO10 can't be modulated.

LFO 1 and 2 are reserved for the effects section, and LFO 3 to 10 are reserved for the sample/oscillator section.

For the LFO parameters, a new edit group has been added, with the name: "LFO's".

In this group, you will find the following parameters:

**Rat1 to 10:** 0 to 255. Adjusts the rate (or speed) of the LFO's. From very slow to very fast.

**Wav1 to 2:** **tri** to **saw** to **sq** to **puls** to **rndm**. Selects the LFO waveform. The numbers inbetween the waveform names, indicates that the LFO is morphing between two waveforms.

**Wav3 to 10:** **tri** to **saw** to **sq** to **puls** to **Utri** to **Usaw** to **Usqu** to **rndm**. Selects the LFO waveform. The numbers inbetween the waveform names, indicates that the LFO is morphing between two waveforms. The **Utri**, **Usaw** and **Usqu** are unlinear high-speed waveforms, great for FM.

**Trg1 to 10:** Off, 1 to 15. LFO reset trigger. Selects a sample/oscillator, that when it is triggered, will reset the LFO.

**Lop1 to 10:** On, Off. LFO loop on/off. When off, the LFO will only run its cycle one time, every time it is triggered, and then stop. With this function, the LFO's can be used as a kind of envelopes.

## **16 sample triggered Random generators**

Each time a sampling or and oscillator is triggered, it causes the random generator connected to it, to change to a new random value. All 16 random generators appears as sources in the "MODULATION" section as "Rn1 to 9+/-" and "R10 to 16+/-", and can modulate almost any parameter.

## Sample Envelope Pitch Modulation

The sample Envelope can now modulate the the pitch of a sampling/oscillator.  
A new parameter for this is added in the "SAMPLER" section:

**pEnv:** -127 to +128. Adjusts how much the sample/oscillator VCA envelope should affect the pitch.

## **Velocity added in Modulation**

The velocity values received for each of the 16 samplings/oscillators, either from MIDI in or from the Note Randomizer, does now appear as sources in the "MODULATION" section as "V11 to 9+/-" and "V10 to 16+/-", and can modulate almost any parameter.

## **More MIDI controllers**

MIDI CC 12 to 17 does now appear as sources in the "MODULATION" section as "C12 to 17+/-", and can modulate almost any parameter.

## **FilterBank Modulation**

It is now possible to modulate the filter parameters, when FilterBank is on. The filter parameters of sample/oscillator 1 to 4 (Sm1 to 4) in the "MODULATION" destination section is used for this. Modulating the filter parameters of sample/oscillator 5 to 16, will have no effect, when FilterBank is "On".

## **Sequencer tracks can now have different lengths**

The "Last" parameter adjusts the overall length of all sequencer track. Each track now has an "Rst" (Reset) parameter added, for selecting a step where the track should reset. If "Rst" for a track has a lower value than the overall "Last", the track will reset when it reaches that step. If "Rst" for a track is higher than "Last", it will have no effect, and the track will reset when it reaches the "Last" step.

Parameters added to the "SEQUENCER" section:

**Rst: (Independent for each track)** 32 to 1. Selects a step for the track, on which it will reset to step 1, and start over.

**RsC1 to 4:** 32 to 1. Selects a step for the controller track, on which it will reset to step 1, and start over.

## **Sequencer controller tracks time signature**

The 4 controller tracks now have their own time signature setting, which is completely independent from the note tracks time signature setting.

Parameters added to the "SEQUENCER" section:

**ScC1 to 4:** 1/32, 1/24, 1/16, 1/12, 1/8, 1/4, 1/2, 1/1. Selects the time signature (scaling) for each controller track.

## **Pattern Link mode**

It is now possible to link two patterns/presets together for continuous playback. It is possible to adjust how many times it should play back each pattern, and all edits you make in both patterns will be kept.

It is not possible to select which preset it should link to. It will always just increment the preset number with one, when linking, and play back the next selectable preset.

**NOTICE:** When you save a preset that is linked to another preset, Little deFormer will save both presets at one time, so it will take up TWO preset locations.

The preset you link to can be completely different, with for instant different Time and Pitch effects, so this can really get odd.

Parameters added to the "SEQUENCER" section:

**Link:** On, Off. Switches the link function on or off.

**This:** 1 to 64. Adjusts how many times it should play back the currently selected preset, until it shifts to the next preset. If the tracks of this preset has different lengths, the number indicates how many times track 1 will play back.

**Next:** 1 to 64. Adjusts how many times it should play back the next preset, until it shifts back to the currently selected preset. . If the tracks of this preset has different lengths, the number indicates how many times track 1 will play back.

## Song mode

It is now possible to chain patterns/presets together for automatic playback in up to 120 steps. For each step you can select the preset number, and how many times the preset should play back, until it goes on to the next step. Little deFormer holds 512 songs.

In song mode, it is not possible to edit all the voice and effect parameters. Only the parameters assigned to the knobs and MIDI CC's can be edited, but unlike Link mode, your edits will not be kept. The song mode is just a simple arranger.

### **How to switch between song and pattern mode:**

On the first edit group page "COMMON", Little deFormer will now write: "PATTERN –hold dec to change".

While on this page, push and hold the "Dec" button for around one second, and that text will change to: "SONG –hold dec to change".

You are now in song mode.

Perform the same operation to change back to pattern mode.

In song mode, the preset select screen changes to song select screen. It is possible to select any of 512 songs, exactly the same way as you select a preset, except you don't have to push "Edit" to confirm, and it is not possible to select another song while the sequencer is running. It must be stopped.

When Little deFormer are in song mode, it has other edit groups, than when in pattern mode:

**COMMON** is the same as in pattern mode.

**ARRANGE** – Here you arranges your song, by selecting in what order presets should play back, and how many times each preset should play.

**SAVE SONG** – Here you name and save your song.

## Song Edit Pages:

### ARRANGE:

Step . Bank . Ptn . X .
1     A     1     1

**Step:** 1 to 120. Selects the song step number, you would like to edit. Song playback always starts at step 1, then it plays step 2, then step 3 and so on....  
Use either the inc and dec buttons, or edit knob 1 to select a step.

**Bank:** A to H, End, Loop. Here you select the bank number of the preset you would like to play back on the selected step, or if you would like to end or loop your song, you can select "End" or "Loop" here.

**Ptn:** 1 to 64. Here you select the number of the preset you would like to play back on the selected step.

**X:** 1 to 64. Here you select how many times you want the selected preset to play back, until it shifts to the next step. If the tracks of a preset has different lengths, this number indicates how many times track 1 will play back.

## Naming and saving a song

Select this edit group page, using the "Inc" button:

SAVE SONG
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Push the "Edit" button, to go to this page:

[My Song 1        ] SAVE TO: A02
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Here it is possible to select the memory location, in which you would like to save your song. Push the "Inc" and "Dec" buttons to select. The "Edit" LED will flash. There are 512 locations to choose from. It is only possible to enter this page, when the sequencer is stopped.

If a location reads this out:

[ <empty>        ] SAVE TO: A02
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No song has previously been saved on this location. If you choose a song, that already has a name, this will be overwritten by the new song.

Push the "Edit" button to proceed. This screen will appear:

Name 1-8        PUSH
My Song 1       <inc>

Use edit knob 1-8, to select the first 8 letters of the name in your song.

Push the "Inc" button to proceed.

Use edit knob 1-4, to select the last 4 letters of the name in your song.

Push the "Inc" button.

Your song is now stored in the selected location, and it is automatically selected.

## **Sequencer tracks can now be selected via the step buttons**

When exit'ing the sequencer edit pages, and trigger a sampling/oscillator, this will now also select the sequencer track to be edited, when you return to the sequencer pages again. You can, of course, also still use edit knob one to select a track.

## **Sequencer pattern clear, copy and randomize**

When on any sequencer edit screen, where you can edit the sequencer parameters, push the "Edit" button to enter the sequencer functions. Use the "Dec" and "Inc" buttons to select a function, and push the "Edit" button to execute a function.

The sequencer functions are:

**Clear:** This function will erase all 32 note tracks, and leave you with an empty sequence, to start over. The controller tracks and time signature/length/tempo parameters are leaved unchanged. If you regret having cleared a pattern, you can always exit to the preset select screen, select another preset, and select this preset again. Data in memory are not changed, until you save the preset.

**Copy:** By using this function, you can copy the sequencer data from any other preset. Use edit knob 1 and 2 to select the bank and number of the preset you want to copy from, and push the "Edit" button.

**Rndm Note:** Randomizes one note track. Select the track you wants to randomize, using edit knob 1, and push the "Edit" button.

**Rndm Ctrl:** Randomizes one controller track. Select the controller track you wants to randomize, using edit knob 1, and push the "Edit" button.

## Time/Pitch effect copy and randomize

When on any Time & Pitch effect edit screen, where you can edit the effect parameters, push the "Edit" button to enter the effect functions. Use the "Dec" and "Inc" buttons to select a function, and push the "Edit" button to execute a function.

The Time & Pitch effect functions are:

**Copy:** By using this function, you can copy the Time & Pitch effect from any other preset. Use edit knob 1 and 2 to select the bank and number of the preset you want to copy from, and push the "Edit" button. The parameter settings of the common filter will also be copied, since it is sometimes a part of the effect.

**Rndm:** Randomizes the Time & Pitch effect parameters. Effect type will not be randomized. Hit the "Edit" button to be surprised.

## **Sample record auto-trigger**

An "Auto" parameter has been added to the sample record screen, under the "SAMPLER" section. When the audio signal to be sampled reaches the level adjusted by this parameter, sample recording starts automatically. When auditioning pre recording, the sample VU-meter (the stepLED's) will not react at all, when the input signal is below the Auto level.

## **Parameter "snap" mode**

Added as "Snap" in the "COMMON" section, when this is on and you tweak a parameter, the parameter values on the edit pages will not change, until you reach the position, where it initially was.

## **Transmit and receive presets via MIDI**

If you would like to share some of your presets with other deFormer users, or your second deFormer, or if you would like to back up your presets, or try some of the new presets on the GotharMusic site, that is now possible.

### **Transmit preset:**

Connect the MIDI out of your Little deFormer, to MIDI in of a computer, your second Little deFormer, or any other device that can record MIDI sysex.

Select the preset you would like to transmit, on the preset select screen.

Enter the "FLASH" section. The first function in this section is now: "Send Preset". Push the "Edit" button, and Little deFormer will transmit all the parameters from the selected preset.

### **Receive preset:**

Connect the MIDI in of your Little deFormer, to MIDI out of a computer, your second Little deFormer, or any other device that can transmit MIDI sysex (.syx) files.

Select the preset location, on Little deFormers preset select screen, on which you want the preset transferred to.

Transmit the preset file to your Little deFormer.

Listen to the preset.

To keep the transferred preset, you must remember to save it. The transferred preset is not named, until it is saved.

## **SamplePitc effect improved a bit**

It is now working better/granulating more, when tuning up.

## **Sample trigger point can now be modulated**

It is added as a destination in the "MODULATION" destination section, under "sm1 to sm16".

## **AnaX: It is now possible to output LFO3 to 10 and Random Generator 1 to 16 via the CV outputs**

Using the "Cv01 and 2" parameters in the "ANALOG EXPANSION" section.

## **AnaX: Sequencer reset can now be selected as a trigger input or output**

Using the "Trigger 1 to 8" parameters in the "ANALOG EXPANSION" section.

## **Delete all samplings function added**

As the last parameter in the "FLASH" section.

**GotharMusic**

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