Gotharman's
Little deFormer

Update 337

New Functionality:

-FilterBank mode added. By switching to filterbank mode, the sample filters are organized as 4 filters with each 4 fully adjustable frames, it can morph between. The filterbank can be assigned to any of the 4 audio busses, so it can also affect the external audio inputs.

-AbstructO effect added in the Time And Pitch effect section. An effect that records the audio input and plays it back randomly via 3 "playback heads". The pitch of 2 of the heads can be adjusted, and one of them can be filtered.

-Vari and Octave parameters has been added to **PitchShaper 1.** With these 2 parameters, it is possible to catch the natural pitch variations of the input sound.

-Samples can now play backwards – Ooooops, forgot this function in the first place!

-When sample QuickRec is stopped, all sample and sequencer playback is now also stopped.

-The Freeze LED is now only flashing the delay tempo, on the delay 1 TAP page. Ealier it was flashing any Time and Pitch effect tempo, so it was impossible to see, if Freeze were on or off.

-Each audio BUS can now be assigned to both or one of the outputs.

-The trigger button number, of the sample selected for editing, are now showed on the "SAMPLER" edit group screen, the sample assign screen and on the AutoChop screen.

Update 303:

-Quick re-sample record mode added. By holding down the "**Exit**" button and pushing the "**Freeze**" button, Little deFormer will immediately start recording either it's output or it's input with effects (as selected in the common section).
It is possible to tweak all parameters while quick recording.

-Morph, **FM** and **Octave** parameters added to **PitchShaper 1 and 2**.

-**Manual mode** added to **Double Gran**, where it cuts up the input signal in equally sized frames (grains), regardless of the input signal tracking.

-It is now possible to turn off the **Double Gran reverb**, and get access **to compressor, distortion and filter** instead. **REMOVED IN V357!**

-On the **sample assign** page, and on the **sample edit** pages, it is now possible to push the "**edit**" button, so it starts flashing, and a sampling can now be selected for editing, without triggering, by pushing it's step button.

-It is now possible to **stop sample playback**, by holding down the "**Exit**" button, and pushing the **sample step button**.

-**Fast scroll** mode can now be enabled, by pushing and holding the "**inc**" button, while at the same time pushing the "**dec**" button, and vice versa.

-When **auditioning** a sample, on the sample record pages, it is now auditioned on **BUS4**, instead of BUS1, to avoid double effecting, when resampling.

Bug fixes:

-The firmware has been optimized, so its system now runs much smoother.

-When "DoubleGran" is selected as Time And Pitch effect, reverb, filter and distorion are now available all at the same time. The compressor is still de-activated.

-All controllers are now reset when changing preset.

-When samples was played back via MIDI note-on's, it selected these as the displayed edit sample, without updating the display.
This is now fixed, so only samples selected by the trigger buttons, are selected as the displayed edit sample. Samples trigged by MIDI are now only played back.

-When on the "AutoChop" page, another sample can now not be selected for editing. Earlier it was possible to select another edit sampling, while it just had autochopped a sampling. This caused the autochop system to malfunction.
It is still possible to trigger and audition other samplings.

-When on the "AutoChop" page, it is now no longer possible to select another sampling, since this also caused the autochop system to malfunction. If you need to change the sample for autochop, exit the autochop page, select the sample, and then re-enter autochop.

Update 303:

-Freeze sample save with preset, now works on all Time & Pitch effects. In earlier versions, it didn't work properly with the Double Gran and the Variator.

-It is now possible to select all 32 modulation routings, in the "Modulation" section. In earlier versions, only 16 were accessible.

-PitchShaper 1 now pitch'es correct, and pitchmodulation now works.

-Double Gran signal tracking improved.

FilterBank

The filterbank has it own edit group:

```
FILTERBANK
```

This is located right after the "SAMPLER" section and right before the "COMPRESSOR" section.

When pushing the [Edit] button from this screen, it goes to the first filterbank screen:

```
Mode . #frm .  Bus . Trig .
Smpl       4      1    free
```

Mode – smpl, bank. When "smpl" is selected, each of the 16 samplings in a preset, each has it own filter assigned to it. So this is the "normal" mode, from the ealier firmware versions.
When "bank" is selected, each sampling no longer has its own filter. Instead the 16 sample filters forms a bank of 4 filters with each 4 frames of settings, that it can morph between.

#frm – 1 to 4. Selects how many frames you want it to morph between. It is always starting at frame 1, and morphs through frame 2, 3 and 4. If this setting is set to '1', it will not morph at all, but only play back the settings of frame 1.

Bus – 1 to 4. Selects what audio bus you would like the filterbank to process.

Trig – free, key.
Free: it morphs from one frame to the next, in the "Time" adjusted in the frame.
Key: It morphs to the next frame, every time all sample triggers has been released, and a sample is trigged.
On the standard model, you will need to push the [Inc] or [Dec] buttons to access this parameter.

By pushing the [Edit] button again, you will access this screen:

```
FRAME 1
```

On this page, you select what frame, you would like to edit. Pushing the [Inc] and [Dec] buttons, selects between frame 1 to 4.

The [Freeze] button on this page:
When pushing the [Freeze] button, while on this page, or the frame edit pages, it will freeze the selected frame, and not do any morphing. Using this function, it is possible to adjust and hear just one frame, without any interfearrence from the morphing.
You can also use this function to manually select frames, without any morphing.

By pushing the [Edit] button yet another time, you will access this screen:

```
Time . Smot .
  60      On
```

Only if "bank" is selected as "Mode". If not, it will just display: "SmplFILTER MODE".

Time – 0 to 255. Adjusts how long time it should take, to morph from the selected frame, to the next.

Smot – Smooth on/off. If this is "Off", it will not morph to the next frame, but just hold the settings of this frame in the "Time" amount of time, and the hardshift to the settings of the next frame.
If this is "On", it will morph to the next frame.

By pushing the [Inc] and [Dec] buttons, you can access the settings for the four filters of the selected frame.

On the Limited Edition model:

```
F1    . Levl .  Cut . Reso . Type . Filter Adjust
         255     22    222   bpf8   0    0    0
```

On the standard model:

```
Lvl1.  Lvl2 .
  255      0
```

```
Cut .  Reso . Type      F
 22     222   Bpf8      1
```

```
Filter Adjust           F
    0      0    0        1
```

F1, F2, F3 and F4 indikates which of the four filters you are editing.

Levl (Lvl1 – 4 on the standard model) – 0 to 255. Adjusts the output level of the selected filter, in the selected frame.

Cut – 0 to 255. Adjusts the cutoff frequency of the selected filter in the selected frame.

Reso – 0 to 255. Adjusts the resonance of the selected filter in the selected frame.

Type – Lpf, Bpf, Bpf8, Hpf, Bef, Add, Bass, LoFi. Selects the filter type of the selected filter in **ALL FRAMES**. It does not morph between filter types, so the type setting in any frame, affects all frames.

Filter adjust 1, 2 and 3 – 0 to 255. A little deFormer speciality. With these 3 parameters you can adjust the filter response, and create completely new filter types, for the selected filter, in the selected frame.

AbstructO effect

This new effect has been added to the Time And Pitch effects. It is selected in the same way as any other Time and Pitch effect is selected, by accessing the "TIME & PITCH" edit pages, and turning the "Effect" parameter rightwards until it writes "AbstructO".

This effect constantly records the audio applied to its input (BUS 1), in a time interval determined by a "RecT" parameter. It uses 3 "playback heads" to play back the recorded audio. Each of these playback heads can be swithed on and off, and the playback length can be adjusted for each of them. Every time a head has played back the adjusted amount of time, it jumps to a new random location of the recorded piece, and starts play back again. The playback pitch of head 2 and 3 can be adjusted. Since there are no feedback path in this effect, when common filter connection is set to "Feed", playhead 2 will be individually filtered.

The parameters:

RecT – 0 to 255. Adjusts the record buffer size. Determines for how long time it should record the input, before it starts over again.

Ply1, Ply2, Ply3 – Off, 1 to 255. Adjusts for how long time each of the playback heads should play back, until it jumps to a new random location.

Pit2, Pit3 - -128 to +127. Adjusts the pitch of the playback for playhead 2 and 3.

Psiz – Off, 1 to 255. This parameter adjusts the total playback buffer size, independent of the record buffer size. If this parameter is "Off", the RecT parameter determines the playback buffer size, but if it is at any other value, this parameter determines the playback buffer size. It can be used as a fast way of adjusting the playback length of all 3 playback heads at the same time. At low settings, granular effects with very small grains can be obtained. If the value of this is higher than the RecT parameter, it will play back areas of the record buffer, that is not being recorded, and create a "Freeze" effect.

Sample playback direction

A new parameter named **"Dir"** has now been added to the "SAMPLER" section.
It has 2 selectable values:
Fwd: Plays back the sample normally in forward direction (from start to end).
Bwd: Plays back the sample in backwards direction (from end to start)

Selected edit sample visibility

It is now possible to view what sample you are editing. On the "SAMPLER" edit group page, the sample assign page and on the AutoChop page, the trigger button number is now shown like this: "SAMPLER [04]".

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Bus output select

In the "COMMON" section it is now possible to route audio BUS 1 to 4 to specific audio outputs.

Parameters:

Bus1, Bus2, Bus3, Bus4 – Both, Out1, Out2, Off.

Notice, that the Time & Pitch effects are always routed to BUS 1.

New parameters added to PitchShaper 1

Vari – 0 to 255. The more this parameter is turned up, the more the PitchShaper will follow the pitch of the input sound.

Oct – -4 to +3. Changes the output pitch of the PitchShaper in octaves.

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