

# Gotharman's Little deFormer 3



## Granular Workstation

## Update Manual 13.34

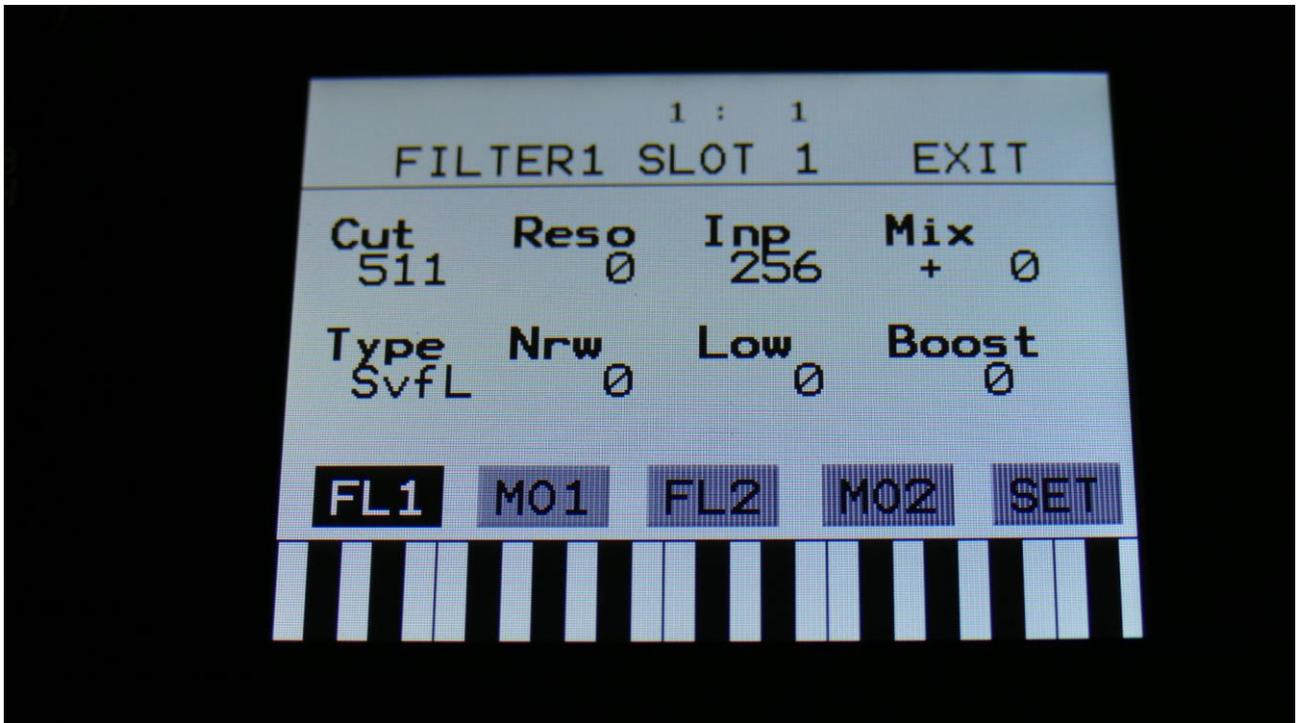
- 4 new SVF digital filter types [Page 3](#)
- New insert effects OverShifter, EQ 2 and asymmetrical Distortion [Page 4](#)
- Filter board types are now selected by their actual VCF number, and correct parameter names are now shown [Page 10](#)
- Compatible with the forthcoming VCF10 filter board [Page 16](#)
- SpazeBoard2/VCF8 cutoff limitation added [Page 17](#)
- Filter board "Peaks" switch is now set to "Separate" in an initialized preset [Page 18](#)
- LFO's key triggered one time mode added [Page 19](#)
- Effect buffer clear when changing presets, can now be switched off [Page 20](#)
- Transpose sequencer note track from MIDI keyboard is now possible [Page 21](#)
- LD3 and Tiny LD are now running exactly 44.1 KHz [Page 22](#)

#### **Bug Fixes:**

- If the sub position steps on the sub position track of the sequencer note tracks, were not all set to zero, adjusting "All " position steps at one time, would not work correctly. This has now been fixed.
- When the sequencer note tracks gate times were adjusted as "All", it was not possible to set them higher than half of the maximum gate time. This has now been fixed.
- When effects were linked, the Gain parameters were not linked. This has now been fixed.

## New SVF digital filter types

4 new state variable filter types have been added to the digital filters. These are placed as the last 4 filter types.



The selectable SVF filter types are:

-**SvfL**: Low pass filter.

-**SvfB**: Band pass filter.

**SvfH**: High pass filter.

**SvfN**: Notch filter.

When an SVF filter type is selected as the digital filter for a part, filter 2 is deactivated, and the parameters Nrw and Low have no function.

Since the SVF filters are only single filters, the Stereo, Conn and Link parameters on the filter setup page, have no functions.

The rest of the filter parameters have the same function, as when any of the other filter types are selected.

## **New Insert Effects**

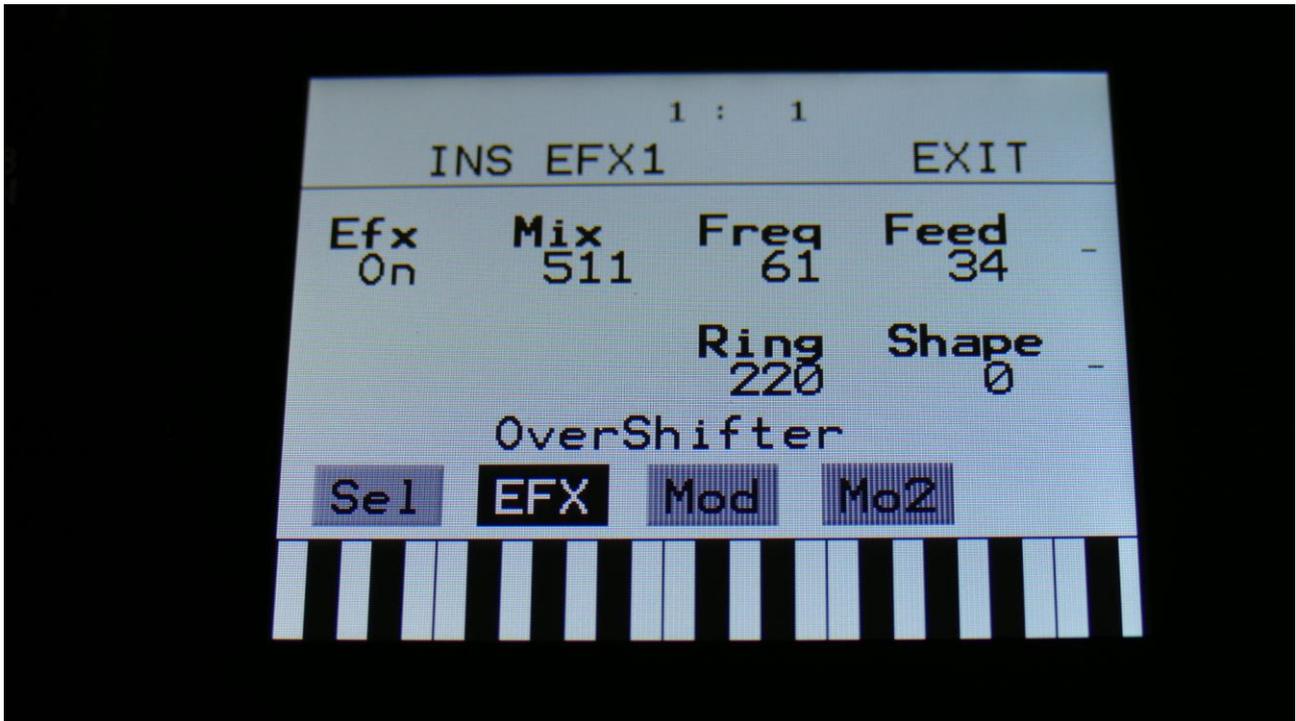
3 new insert effects have been added:

-**OverShifter**: A kind of frequency shifter, that can shift the frequency bands of the input signal up, and add feedback and ring effects.

-**EQ2**: A parametric EQ with different characteristics, than EQ1.

-**Asymmetrical Distortion**: Will add a large amount of distortion, especially when keeping the input signal to it a bit low.

## OverShifter Parameters



Touch the EFX touch button, to access this page.

The 2 VU-meters at the right of the screen, shows the Effect input and output.

**Efx:** Off, on. When the effect is off, it is bypassed.

**Mix:** The mix between the un-effected signal on the effect input, and the effected signal on the effect output.

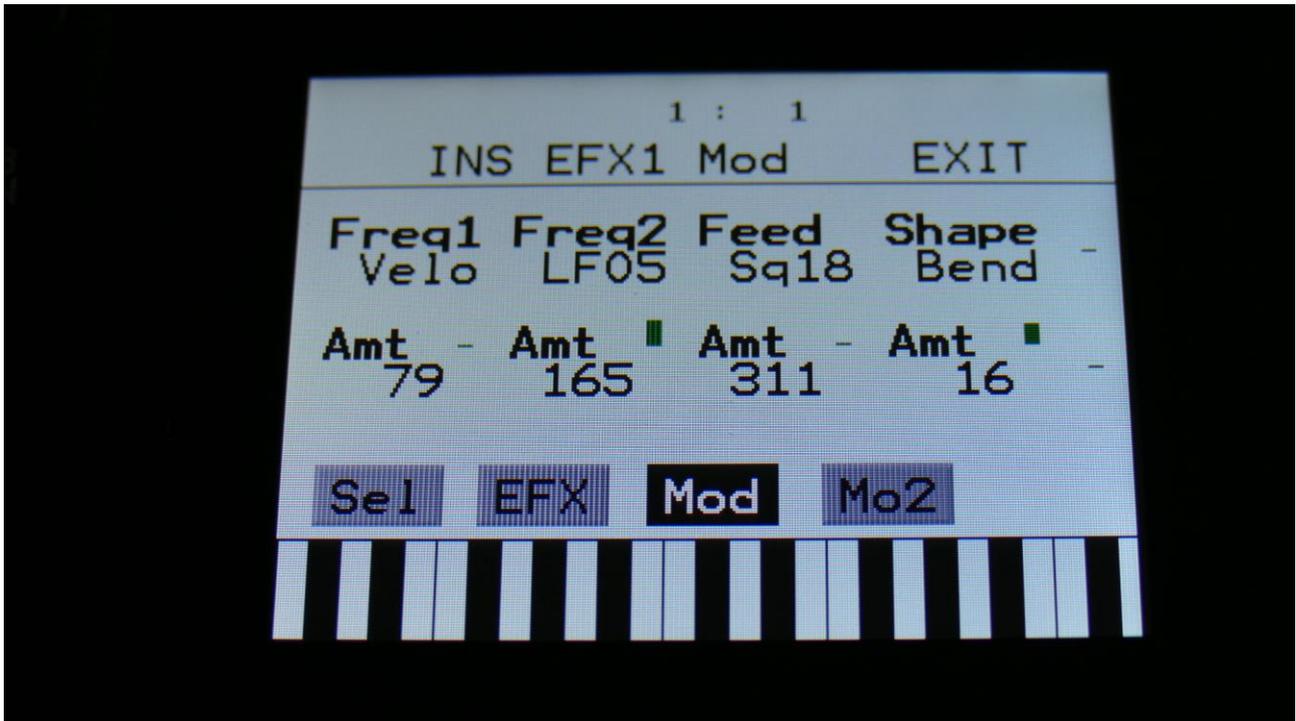
**Freq:** Turning this up will shift the frequency spectrum of the input signal up.

**Feed:** Turning this up, will feed the output signal of the OverShifter back to its input. At certain settings, this can get really brutal!

**Ring:** Turning this up will add ringing/metal/noise to the signal.

**Shape:** Turning this up will alter the shape of the OverShifter, and add harmonics to the sound.

## OverShifter Modulation



Touch the Mod touch button, to access this page.

The 2 VU-meters at the right of the screen, shows the Effect input and output. The small VU-meters next to the parameters, shows the activity of the selected modulation sources.

For each parameter, that can be modulated, it is possible to select a modulation source, and to adjust the modulation amount. Only the positive modulation sources, can be selected by the Edit Knobs. To make a modulation source negative, touch the modulation source parameter. For a complete list of modulation sources, see the list in the start of this section.

**The upper row of parameters** selects the modulation sources, **the lower row of parameters** (Labelled Amt) adjusts the modulation amount in the range 0 to 511.

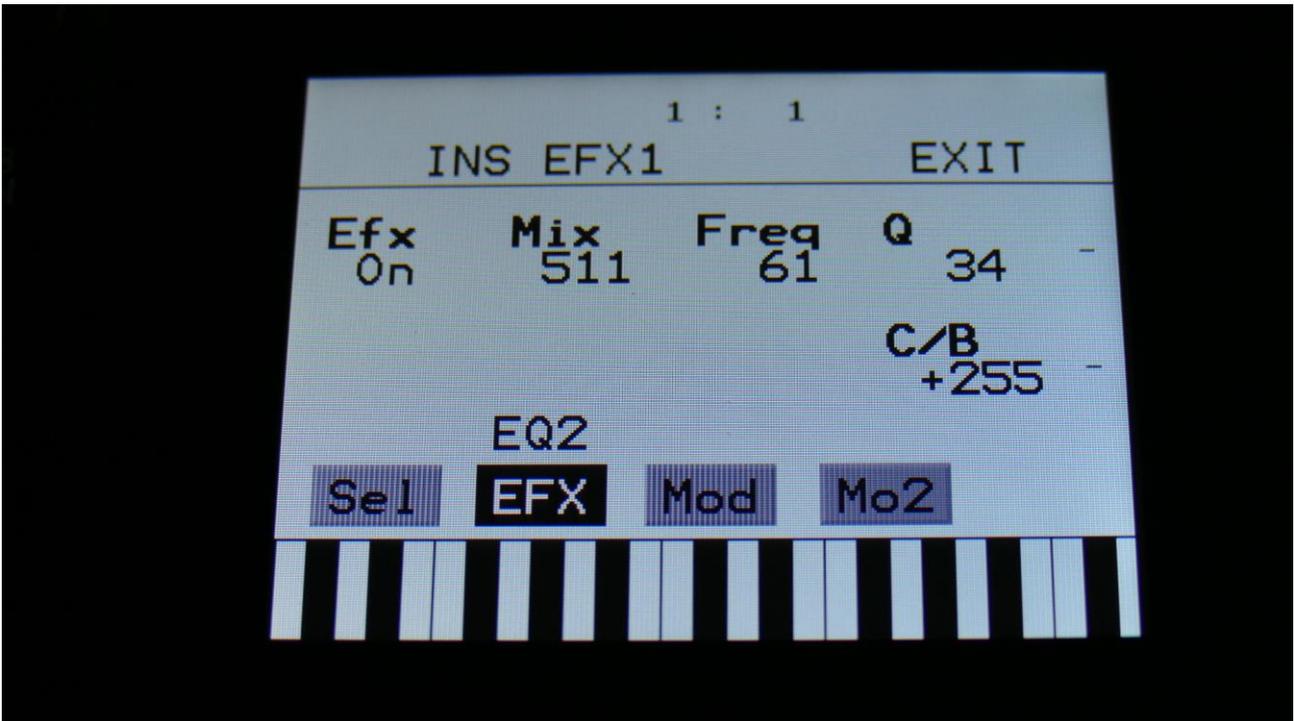
The parameters on this page:

**Freq1 and Freq2:** Modulates the frequency shift parameter.

**Feed:** Modulates the Feed parameter.

**Shape:** Modulates the Shape parameter.

## EQ2 Parameters



Touch the EFX touch button, to access this page.

The 2 VU-meters at the right of the screen, shows the Effect input and output.

**Efx:** Off, on. When the effect is off, it is bypassed.

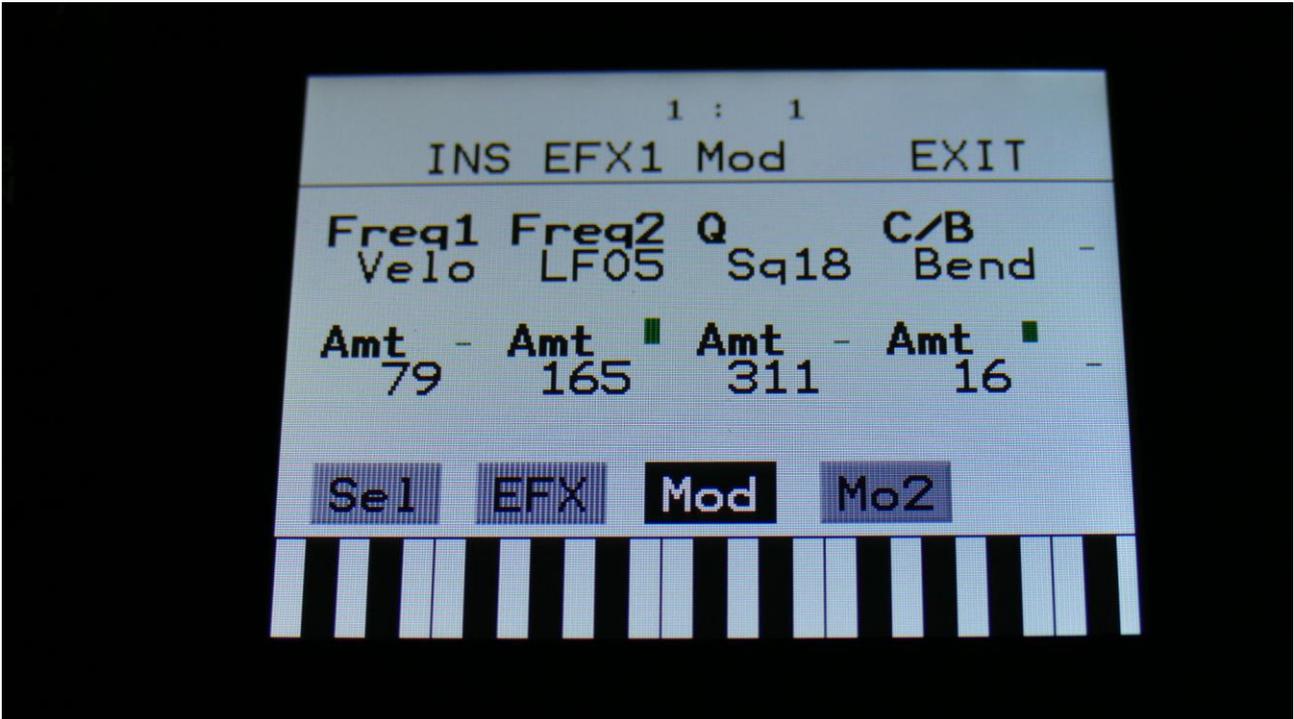
**Mix:** The mix between the un-effected signal on the effect input, and the effected signal on the effect output.

**Freq:** Sets the frequency, at which the EQ will cut or boost.

**Q:** Sets the width of the frequency band, that will be cutted/boosted.

**C/B:** Cut/Boost. Setting this to a negative value, will damp frequencies on the input signal. Setting it to a positive value, will boost frequencies on the input signal.

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**The upper row of parameters** selects the modulation sources, **the lower row of parameters** (Labelled Amt) adjusts the modulation amount in the range 0 to 511.

The parameters on this page:

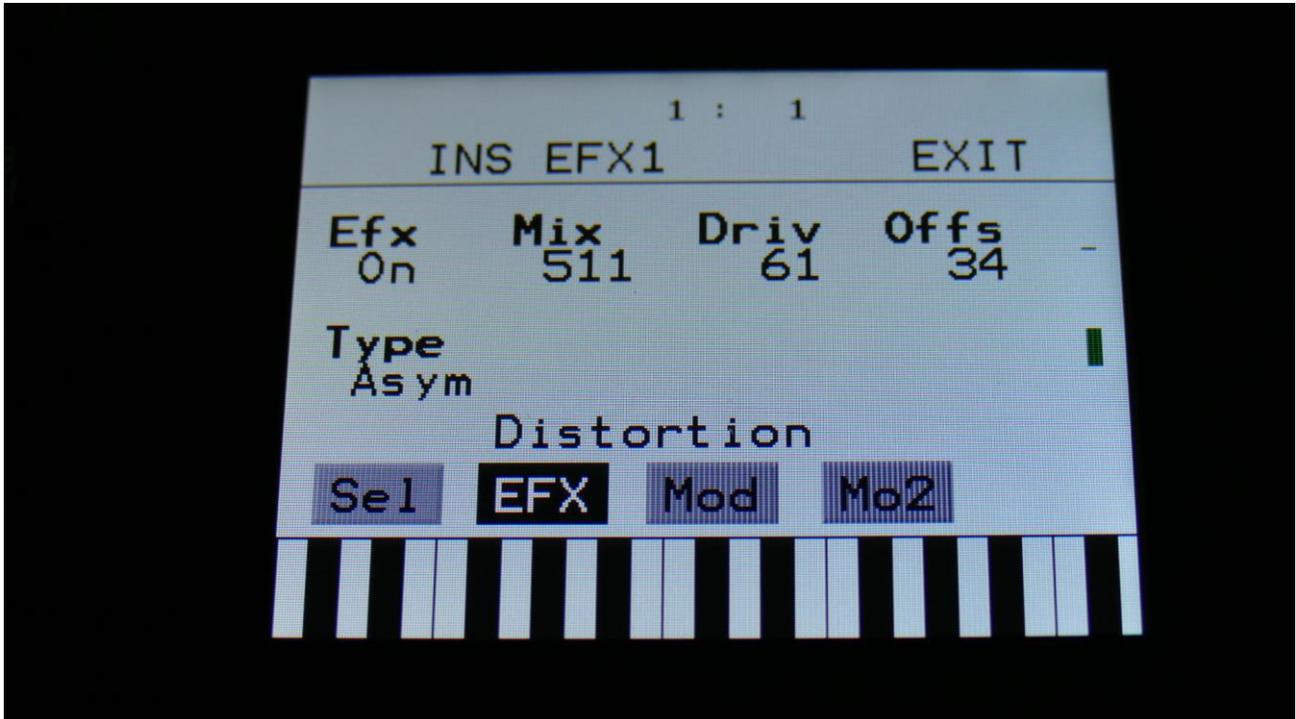
**Freq1/Freq2:** Will modulate the EQ frequency.

**Q:** Will modulate the EQ frequency width.

**C/B:** Will modulate the cut/boost parameter.

## Asymmetrical Distortion

This effect is just added as an extra distortion type selection, on the Distortion insert effect, that is already there. The parameters are the same as the other distortion types.



## Analog Filter Boards Type Settings

In the "VCF Types" menu under MOR, each of the 10 available analog filter boards, now each have their own unique number, and the "1-Most Filters" has been removed.

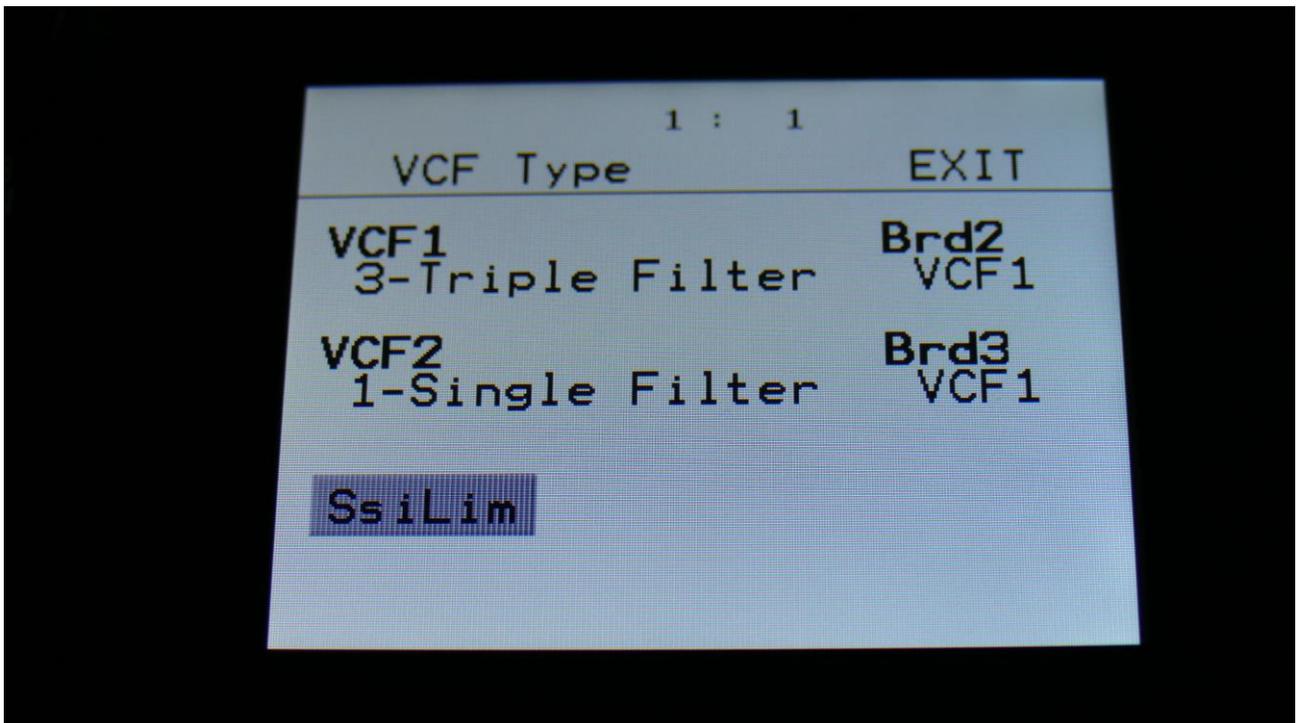
The first time you power up your LD3/Tiny LD after installing this update, it will set the filter types according to the settings, that were already made.

If you had VCF1, VCF2, VCF3, VCF4 or VCF9 installed, and the setting were "1-Most Filters", LD3/Tiny LD will select "1-Single Filter", so if you have VCF2, 3, 4 or 9 installed, you will have to go to the MOR>VCF Types page, to select the correct filter board(s), in order to get the right parameters shown.

If you have VCF5, 6, 7 or 8 installed, it should not be necessary to change the VCF types settings, but you might want to check anyway.

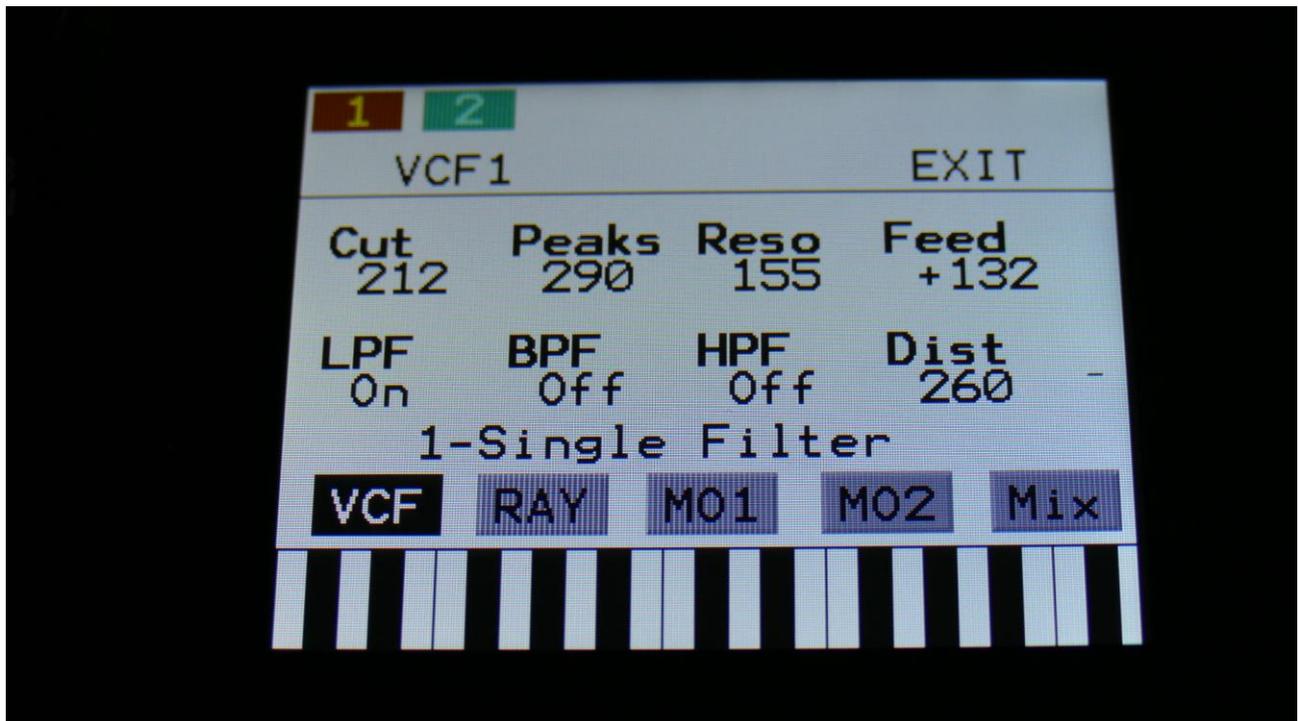
If you have SpazeBoard2 installed, no changes needs to be made, since it, in this case, was already possible to select a unique number for each filter board, before this update.

An example on, how the VCF types page could look like now:

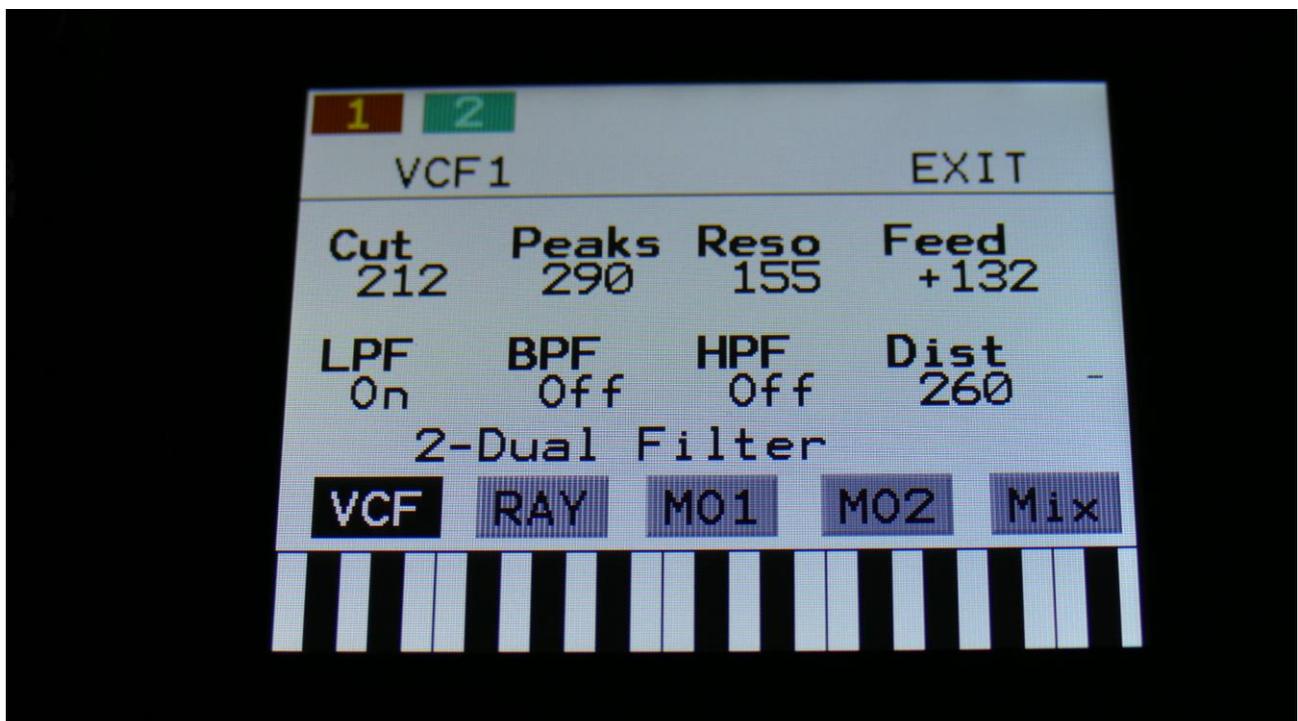


Each filter board now also has unique parameter names. These are shown on the following pages.

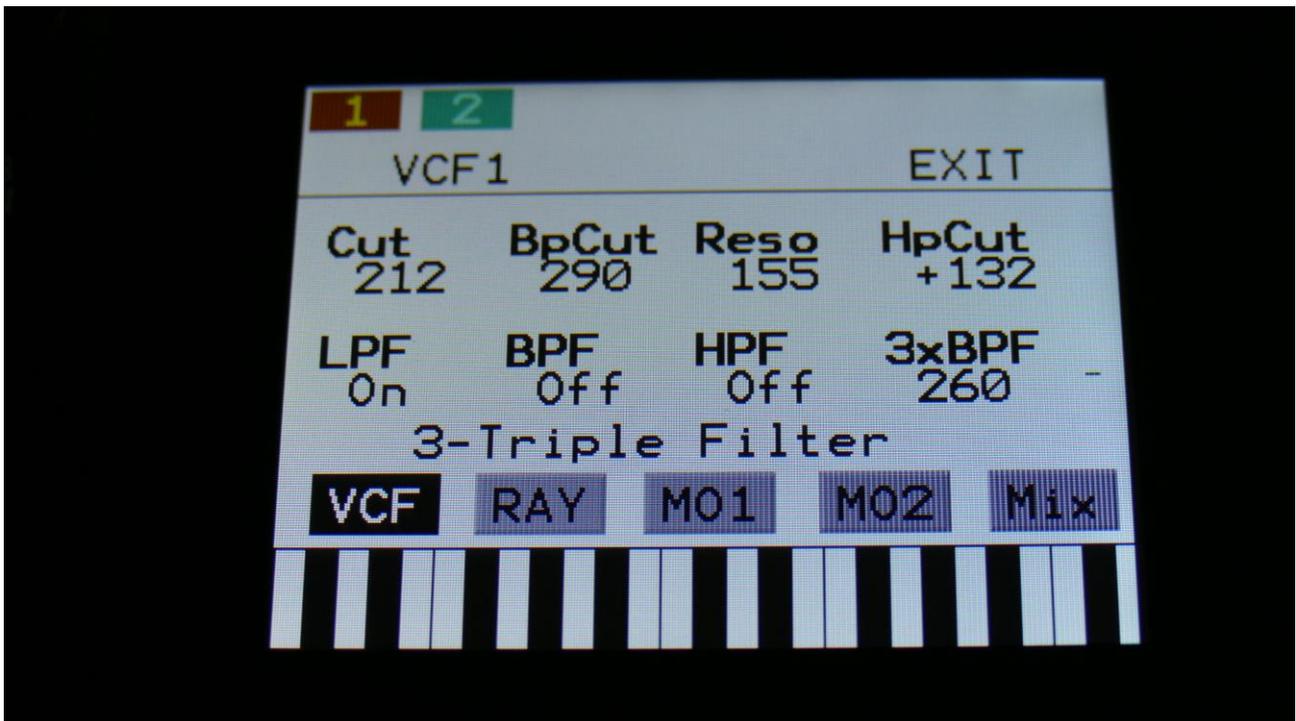
## 1-Single Filter



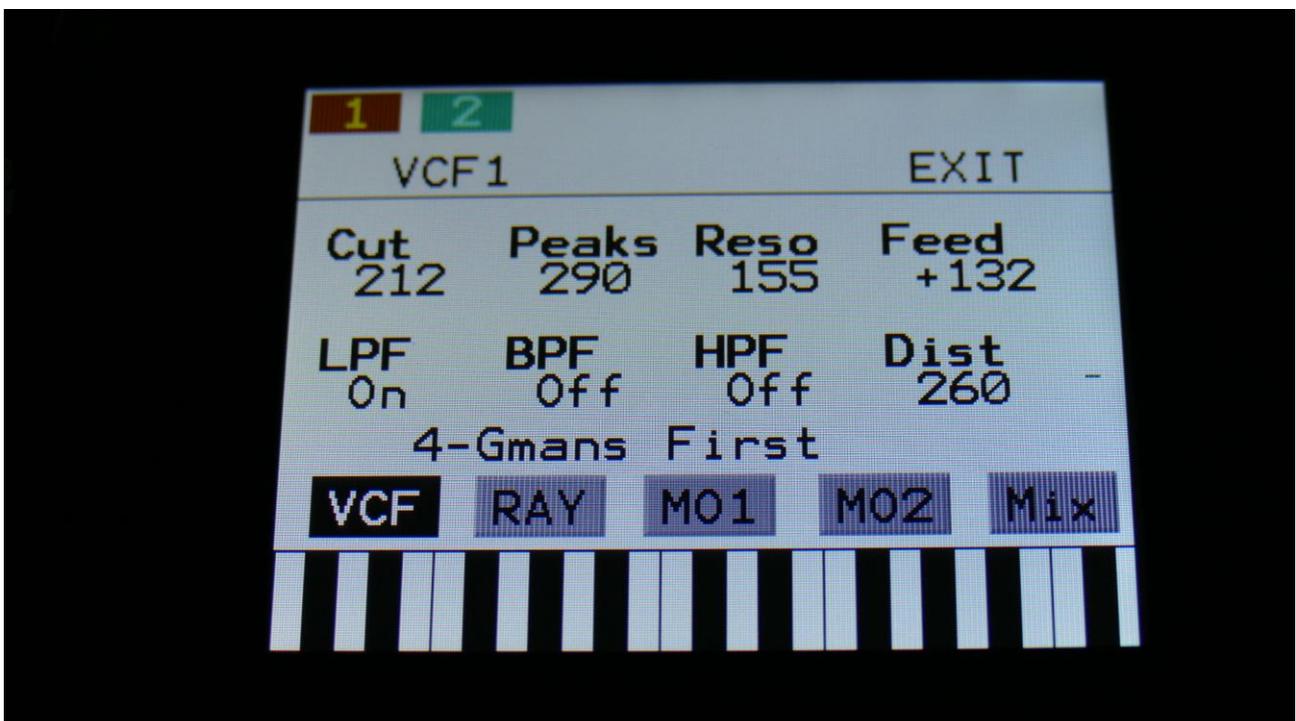
## 2-Dual Filter



### 3-Triple Filter



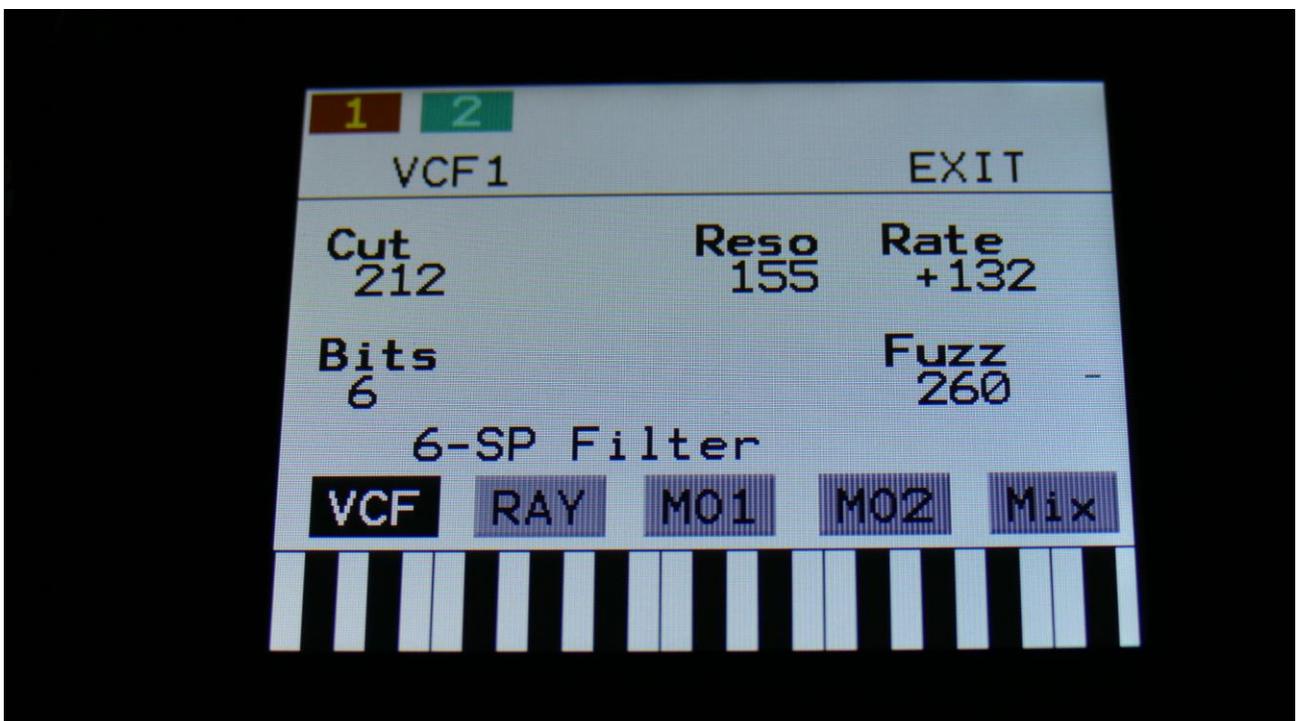
### 4-Gmans First



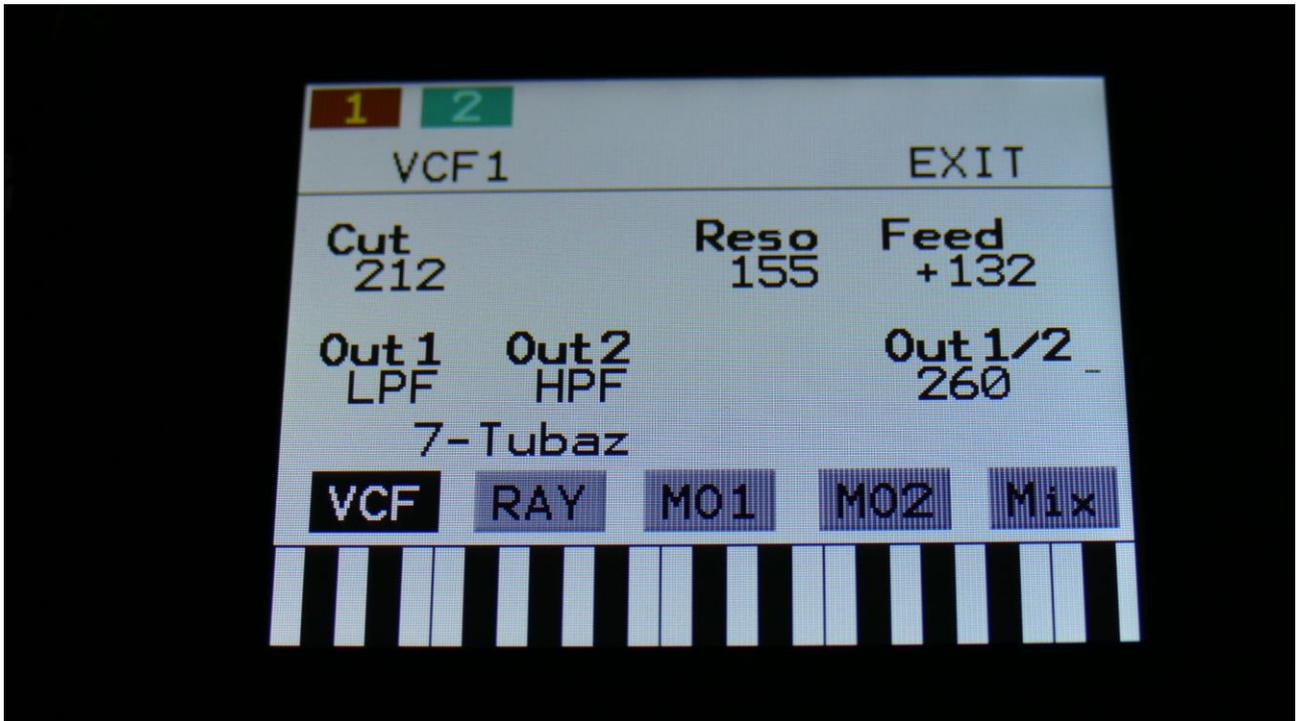
### 5-MiniProphet



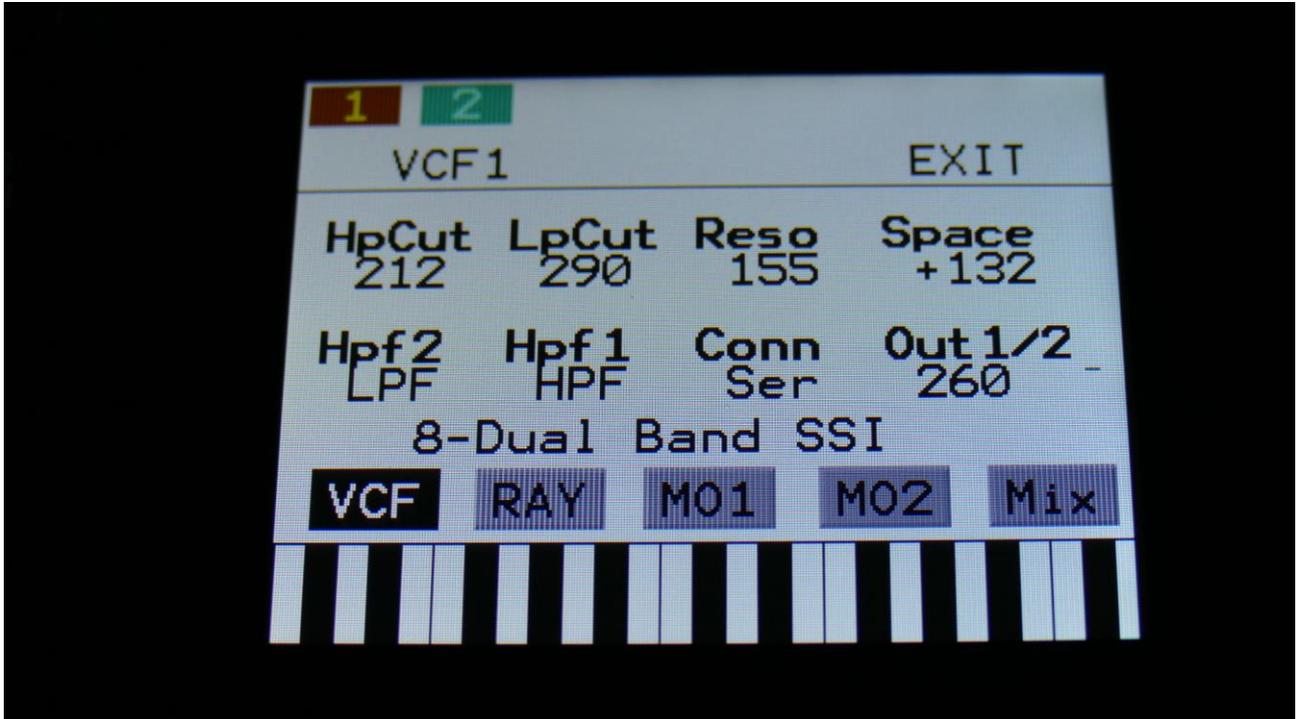
### 6-SP Filter



7-Tubaz



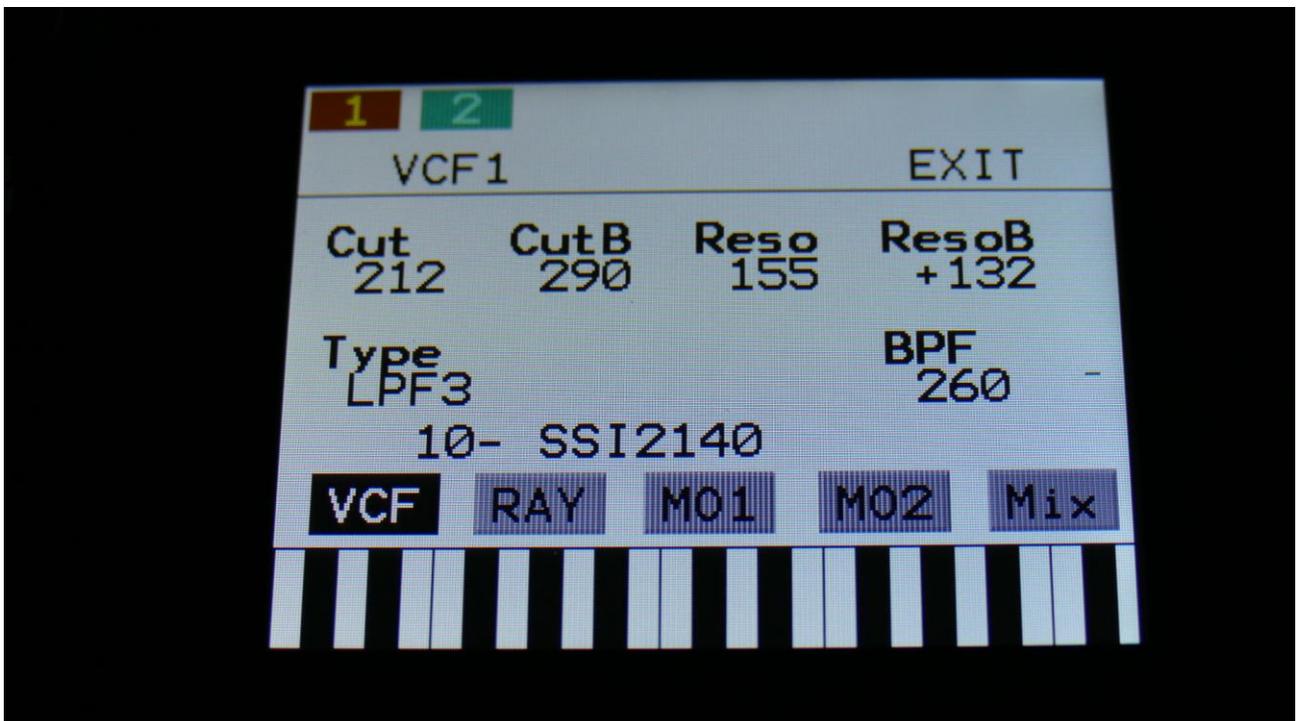
8-Dual Band SSI



9-Xtra Distort



10-SSI2140



## VCF10 Filter Board

This update will make LD3 and Tiny LD compatible with the forthcoming VCF10 filter board. This is a dual filter based on the SSI2140 filter chip. One filter has 8 filter types to select from:

-LPF4 (24dB)

-LPF3 (18dB)

-LPF2 (12dB)

-LPF1 (6dB)

-BPF

-Notch

-HPF

-AllPass

The second filter is always a band pass filter. It is possible to mix between filter 1 and 2.

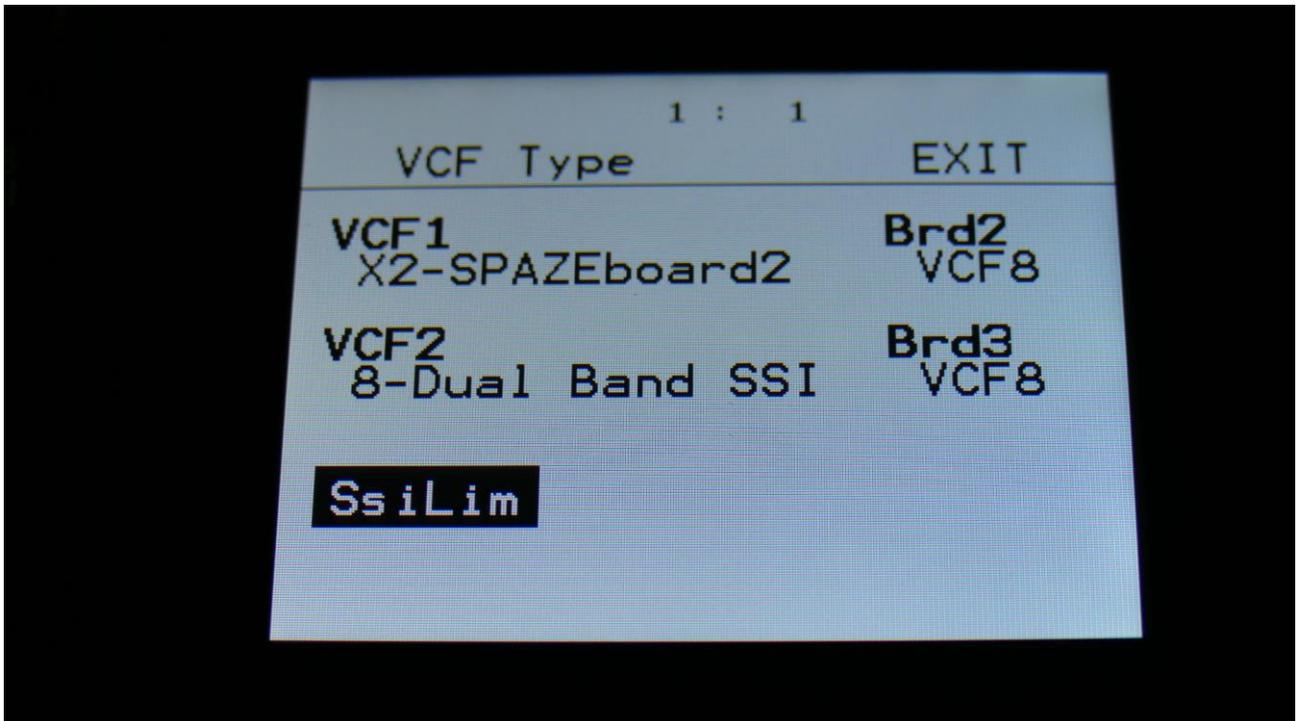


## SpazeBoard2/VCF8 cutoff limitation

With the Spaze filters on SpazeBoard2 and VCF8 (Dual Band SSI), it is possible to tweak the parameters to extremes. When the Spaze parameter is set to a low value, and the Cut off parameters is also turned down to a low value, the Spaze parameter (Space on VCF8), which is set as an offset to cut off, will enter an extreme setting, which will cause the filter to generate noise (it is a deformer, right?).

Unfortunately some users do not understand the concept behind calling an instrument for a deformer, and suspected these filters to be defective.

Therefore a touch switch (**SsiLim**) has been added to the VCF Types pages. When this is on (black with white text), the Spaze parameter on any installed SpazeBoard2's and VCF8's, will work in a limited range, and will not be able to create deformed noise.



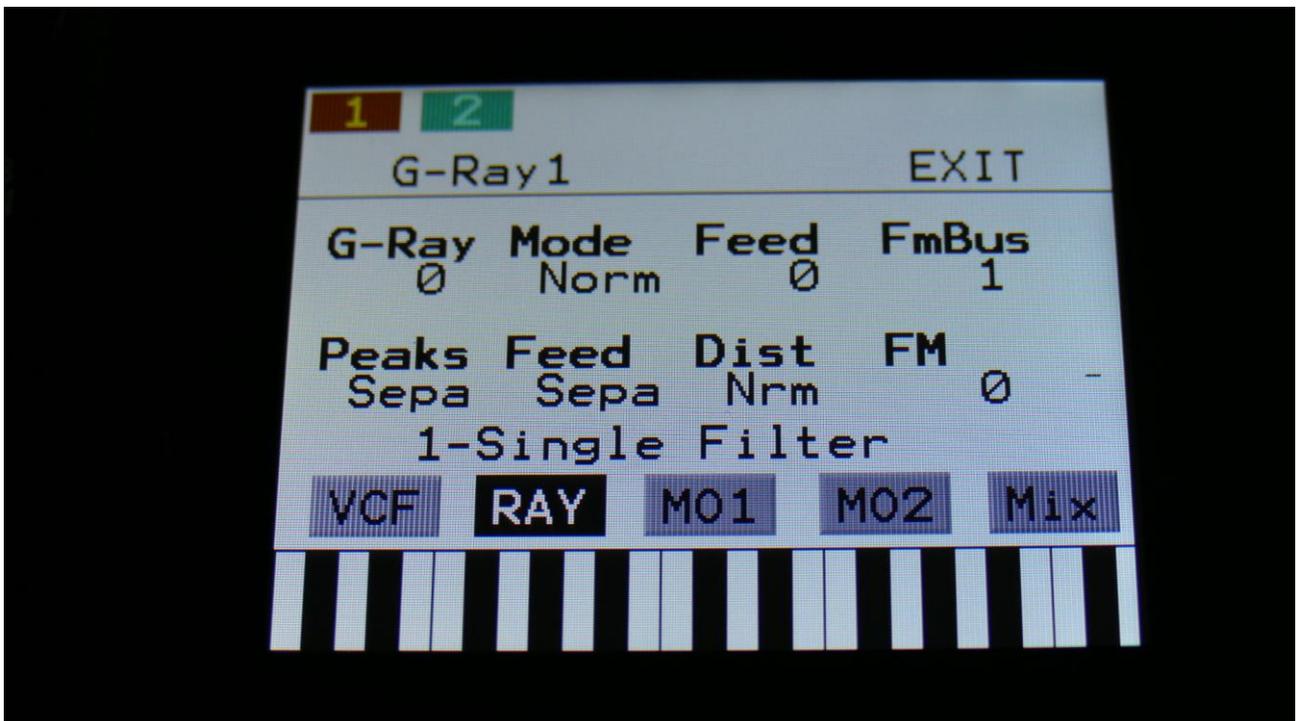
On the picture, the limitation is on. Make sure to keep it off (grey), to get the extra noise.

## Peaks Switch

In the firmware versions up until this one, the analog filter boards “Peaks” switch were set to “Add”, when initializing a preset, which would make the Peaks parameter an added offset to the Cut parameter.

With most filter boards this would work fine, but with VCF8 – Dual Band SSI filter, the LPF cut would be an added offset to the HPF cut, which would mean, that no sound would go through the filter. On VCF9 –Xtra Distortion, the extra distortion would be an offset added to the Cut parameter, which would make this filter quite uncontrollable.

Especially with VCF8, this was super annoying, so now it has been changed. When initializing a preset, the Peaks parameter will now be set to “Sepa” –Separated, which will completely separate the Peaks parameter from the Cut parameter.



## LFO's one-time mode

It is now possible, when key triggering an LFO, to make it run only one single cycle, and then stop. This makes the LFO's usable as extra envelopes with special shapes.



To put an LFO in one-time mode, on the LFO pages set the **KeyS** (Key Sync) parameter to any number that has an "s" after it (s for single cycle). The number before the "s", tells which part will make the LFO restart.

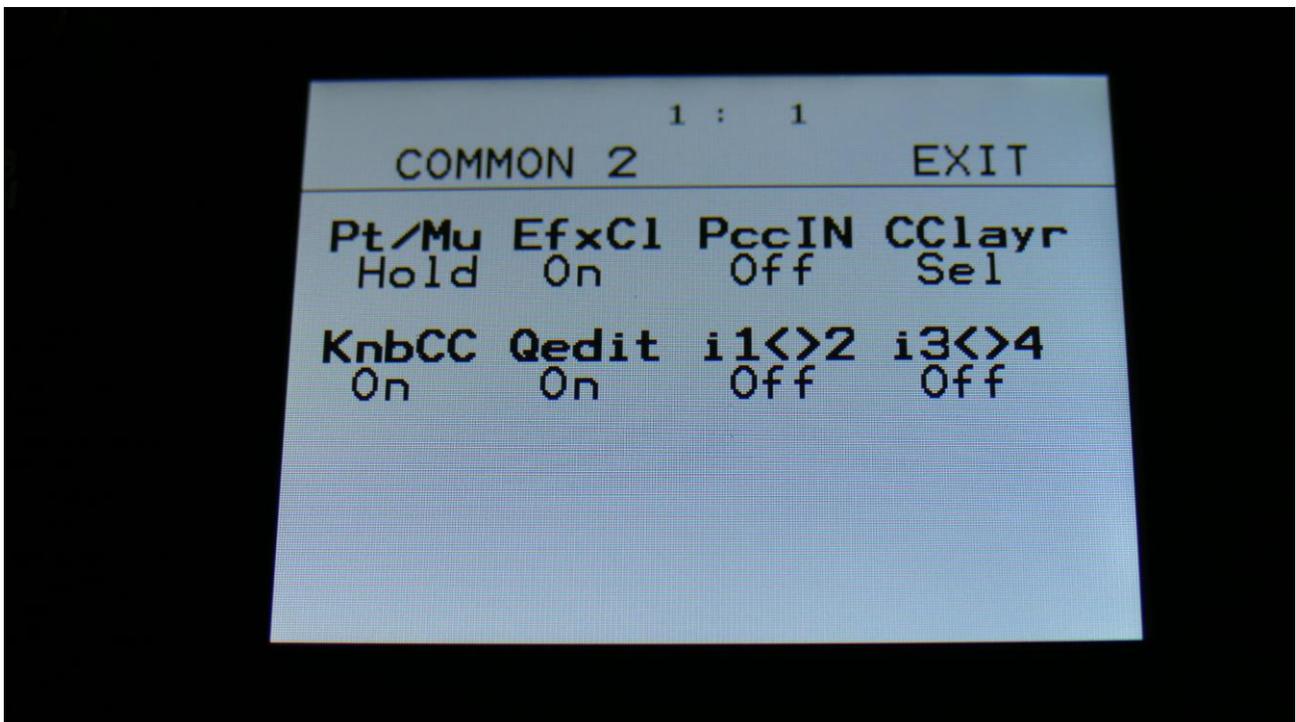
## EFX buffer clear

When LD3/Tiny LD is shifting from one preset to the next, the effect RAM buffers are cleared, to avoid any fractures of the sounds from the previous preset, to sound in the new preset.

This will give a tiny break in the effect processing.

If you would like to avoid this tiny break, or if you do like effects like delay and granulators to keep the sounds from a previous preset, when shifting to a new one, it is now possible to switch the effect RAM clear off.

This is done on the **COM2** page, by setting the **EfxCl** parameter.



## **Sequencer Transpose from MIDI keyboard**

In the previous firmware versions, when setting up Kybd (keyboard) to control the note values of a sequencer note track, the note track would modulate the note number of itself, together with incoming MIDI notes, and notes played by the trigger buttons and the touch screen keyboard. This really made the note track pitch quite uncontrollable.

Now, when a note track is set up with Kybd as the modulation source, and Note as the modulation destination, notes from the sequencer will no longer be transferred to the grid of modulation sources, and notes coming from MIDI in, the trigger buttons and the touch screen keyboard, will be transferred to the modulation sources grid, without the note itself playing back.

This will make it possible to transpose a note track from a MIDI keyboard.

-When the 2 middle notes, note number 64 (E4) and 65 (F4), are played, the note track will play back at its original pitch. When notes below these are played, the note track will be transposed down, and when keys above are played, it will be transposed up.

## Sample Rate

Unfortunately there were a small deviation in the sample rate clock of LD3 and Tiny LD, causing the samples root key to be played back at 43.945 Hz, instead of 44.100 Hz.

I sincerely apologize for this. This deviation is only 0.35%, and such a small deviation is pretty hard to detect with any measurement equipment.

Thanks a ton to Joakim Gleisner for doing the necessary measurements, to detect this.

This has now been corrected, and the sample root key is now playing back at exactly 44.100 Hz.

Since this might cause loops that were sampled on LD3/Tiny LD to not fit a sequence any more, a Mode switch has been added to the oscillators Mod2 page, where it is possible to switch between the new sample frequency (44.100 Hz) and the old sample frequency (43.945 Hz). This only affects sample playback. The oscillators will stay as they were.



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