Gotharman's Little deFormer 3

Granular WorkStation

Update Manual 10.17

-Many parameters can now be hard-assigned to MIDI CC's. These parameters can also be controlled directly from the sequencer controller tracks, and movements of these can be realtime recorded on the controller tracks.

-CV inputs can now be recorded on the sequencer controller tracks.

-SPAZEboard2 Filterboard 2 and 3 can now be set up, so that the proper parameters will be shown.
-Follower gain x2 and x4 added to the Audio BUS Envelope Followers.

-Smooth parameter added to the CV inputs.

-The sequencer controller tracks are now selected separately from the parts.

Bug Fixes:

-When CV input 2 and 4 were set up, and then CV input 1 and 3 were set up after these, CV inputs 2 and 4 would be reset to their initial values. This has now been fixed.

-When changing sampler loop mode, notes would sometimes hang. Now sample playback will be stopped, when loop mode is changed for a part, to avoid this.

-Sampler Loop Toggle mode would not work, when Xfade or smooth was turned on. This has now been fixed.

Parameters CC control

Many of the LD3 parameters can now be hard-assigned to MIDI CC's, for direct control from an external MIDI controller. The same parameters can now also be controlled directly from the sequencer controller tracks, and movements of these can be realtime recorded to the controller tracks.

For part parameters, MIDI channel are equal to part number.

To activate the CC control, first enter the MOR>COMMON page:
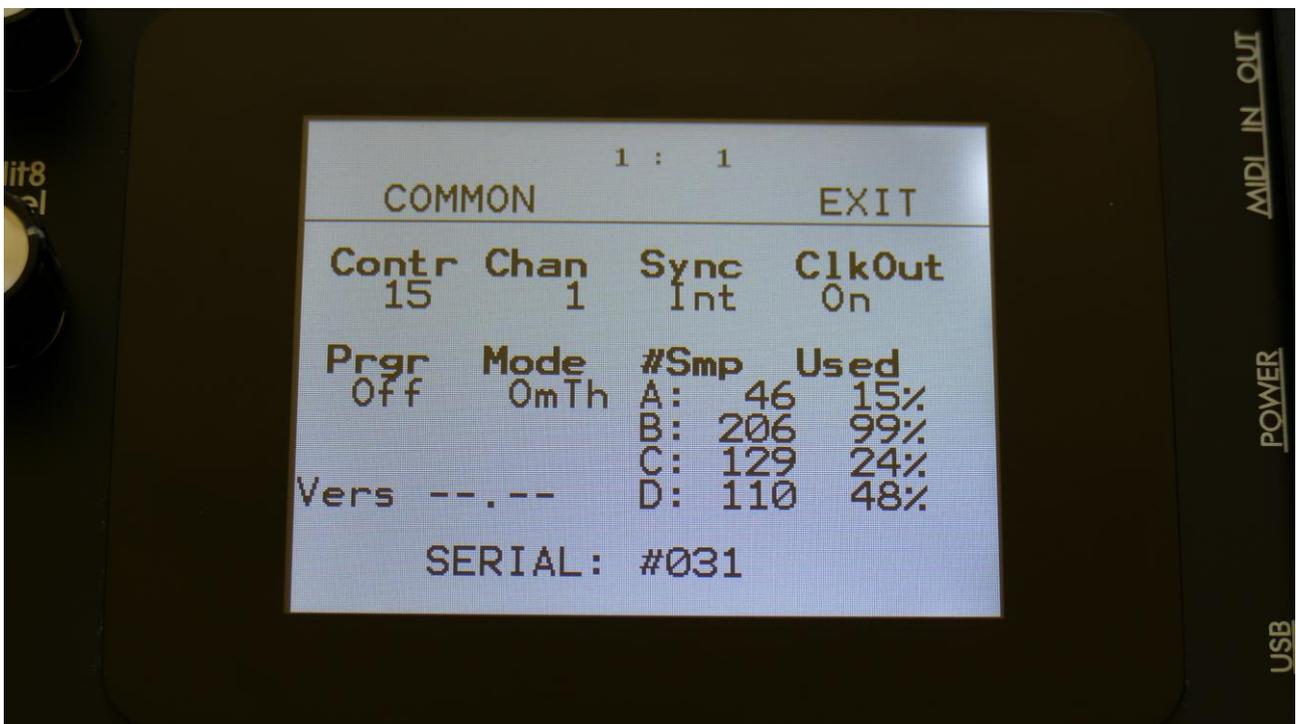
Here you must set the Mode parameter (MIDI In Mode) to either Omni, OmTh (Omni Thru), Mult (Multi-Timbral) or MuTh (Multi-Timbral/Thru). The CC control will not work properly in Sel (Selected) mode.

Then exit from the COMMON page, and enter the COM2 page:
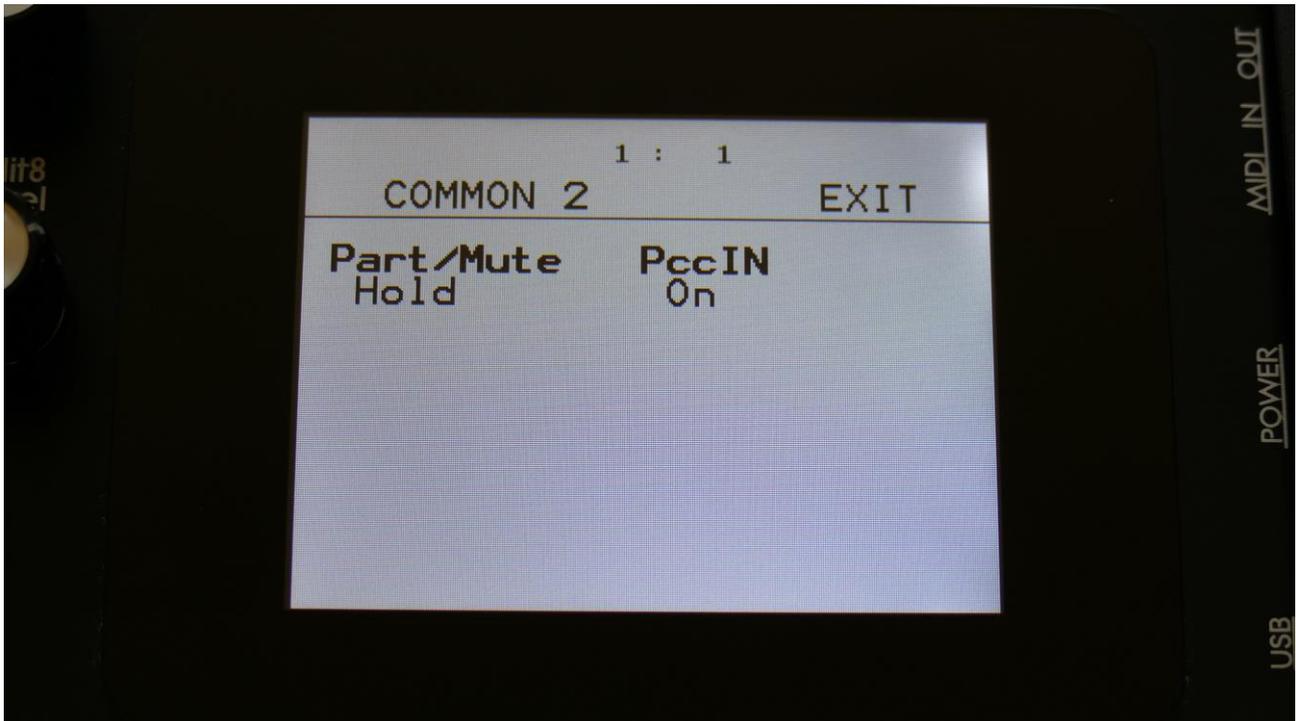
On this page, switch the PccIN parameter (Parameter CC Input) to On.

Now you will be able to control many of the LD3 parameters from an external MIDI device, and from the Sequencer Controller Tracks.

On the following pages, you will find a list of the controllable parameters.

PARAMETER	CC#	PART NUMBER
Oscillator/Sampler Tune	17	MIDI channel 1-16
Oscillator/Sampler Fine Tune	18	MIDI channel 1-16
Oscillator Wave/Sampler Start	19	MIDI channel 1-16
Oscillator PW/Sampler Length	20	MIDI channel 1-16
Oscillator/Sampler FM	21	MIDI channel 1-16
Oscillator/Sampler Porta	22	MIDI channel 1-16
Sampler Chop Select	23	MIDI channel 1-16
Digi Filter 1 Cut	24	MIDI channel 1-16
Digi Filter 1 Reso	25	MIDI channel 1-16
Digi Filter 1 Input Level	26	MIDI channel 1-16
Digi Filter 1 Mix	27	MIDI channel 1-16
Digi Filter 1 Type	28	MIDI channel 1-16
Digi Filter 1 Narrow	29	MIDI channel 1-16
Digi Filter 1 Low	30	MIDI channel 1-16
Digi Filter 1 Boost	31	MIDI channel 1-16
Digi Filter 2 Cut	33	MIDI channel 1-16
Digi Filter 2 Reso	34	MIDI channel 1-16
Digi Filter 2 Input Level	35	MIDI channel 1-16
Digi Filter 2 Type	36	MIDI channel 1-16
Digi Filter 2 Mix	37	MIDI channel 1-16
Digi Filter 2 Narrow	38	MIDI channel 1-16
Digi Filter 2 Low	39	MIDI channel 1-16
Digi Filter 2 Boost	40	MIDI channel 1-16
VCA A	41	MIDI channel 1-16
VCA D	42	MIDI channel 1-16
VCA S	43	MIDI channel 1-16
VCA R	44	MIDI channel 1-16
VCA Drone	45	MIDI channel 1-16
VCA Output Level	46	MIDI channel 1-16
ENV1 A	47	MIDI channel 1-16
ENV1 D	48	MIDI channel 1-16
ENV1 S	49	MIDI channel 1-16
ENV1 R	50	MIDI channel 1-16
ENV2 D	51	MIDI channel 1-16
LFO Rate	52	MIDI channel 1-16
LFO Wave	53	MIDI channel 1-16

PARAMETER	CC#	PART NUMBER
VCF1 Cut/HpCut	54	-
VCF1 Peaks/LpCut	55	-
VCF1 Reso	56	-
VCF1 Feed/Hpf Cut/Spaze	57	-
VCF1 Out ½	58	-
VCF1 Input Level	59	-
VCF1 Output Level	60	-
VCF1 FM	61	-
VCF1 G-RAY Feed	62	-
VCF2 Cut/HpCut	63	-
VCF2 Peaks/LpCut	65	-
VCF2 Reso	66	-
VCF2 Feed/Hpf Cut/Spaze	67	-
VCF2 Out ½	68	-
VCF2 Input Level	69	-
VCF2 Output Level	70	-
VCF2 FM	71	-
VCF2 G-RAY Feed	72	-
VCF3 Cut/HpCut	73	-
VCF3 Peaks/LpCut	74	-
VCF3 Reso	75	-
VCF3 Feed/Hpf Cut/Spaze	76	-
VCF3 Out ½	77	-
VCF3 Input Level	78	-
VCF3 Output Level	79	-
VCF3 FM	80	-
VCF3 G-RAY Feed	81	-
VCF4 HpCut	82	-
VCF4 LpCut	83	-
VCF4 Reso	84	-
VCF4 Spaze	85	-
VCF4 Input Level	87	-
VCF4 Output Level	88	-
VCF4 FM	89	-
VCF4 G-RAY Feed	90	-

PARAMETER	CC#	PART NUMBER
Insert EFX 1 Mix	91	-
Insert EFX 1 Parameter 1	92	-
Insert EFX 1 Parameter 2	93	-
Insert EFX 2 Mix	94	-
Insert EFX 2 Parameter 1	95	-
Insert EFX 2 Parameter 2	96	-
Insert EFX 3 Mix	97	-
Insert EFX 3 Parameter 1	98	-
Insert EFX 3 Parameter 2	99	-
Insert EFX 4 Mix	100	-
Insert EFX 4 Parameter 1	101	-
Insert EFX 4 Parameter 2	102	-
Insert EFX 5 Mix	103	-
Insert EFX 5 Parameter 1	104	-
Insert EFX 5 Parameter 2	105	-
Insert EFX 6 Mix	106	-
Insert EFX 6 Parameter 1	107	-
Insert EFX 6 Parameter 2	108	-
Insert EFX 7 Mix	109	-
Insert EFX 7 Parameter 1	110	-
Insert EFX 7 Parameter 2	111	-
Insert EFX 8 Mix	112	-
Insert EFX 8 Parameter 1	113	-
Insert EFX 8 Parameter 2	114	-
Output EFX 1 Mix	115	-
Output EFX 1 Parameter 1	116	-
Output EFX 1 Parameter 2	117	-
Output EFX 2 Mix	118	-
Output EFX 2 Parameter 1	119	-
Output EFX 2 Parameter 2	120	-

Effects Parameters 1 and 2

The effects parameters 1 and 2, are the 2 parameters located to the right of the Mix parameter, on the effects main pages:
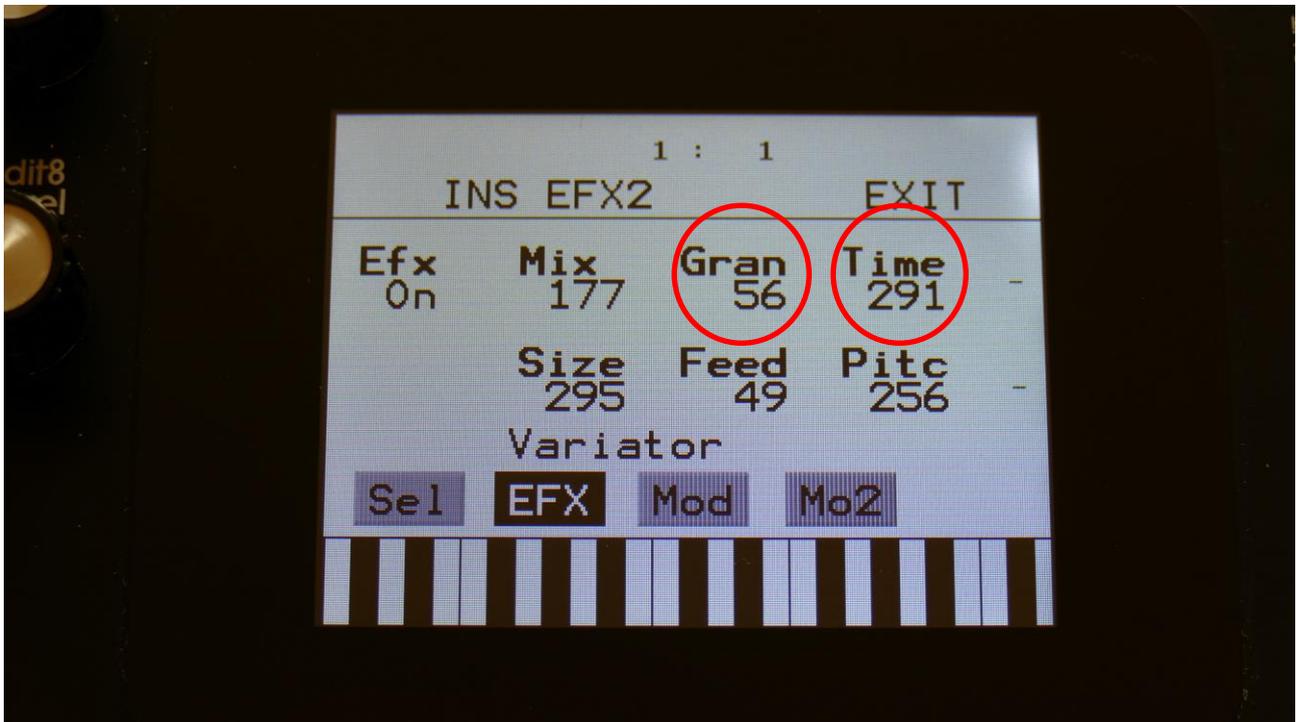
Controlling the CC parameters from the Sequencer Controller Tracks

Enter a sequencer controller track, and go to the CC sub page:
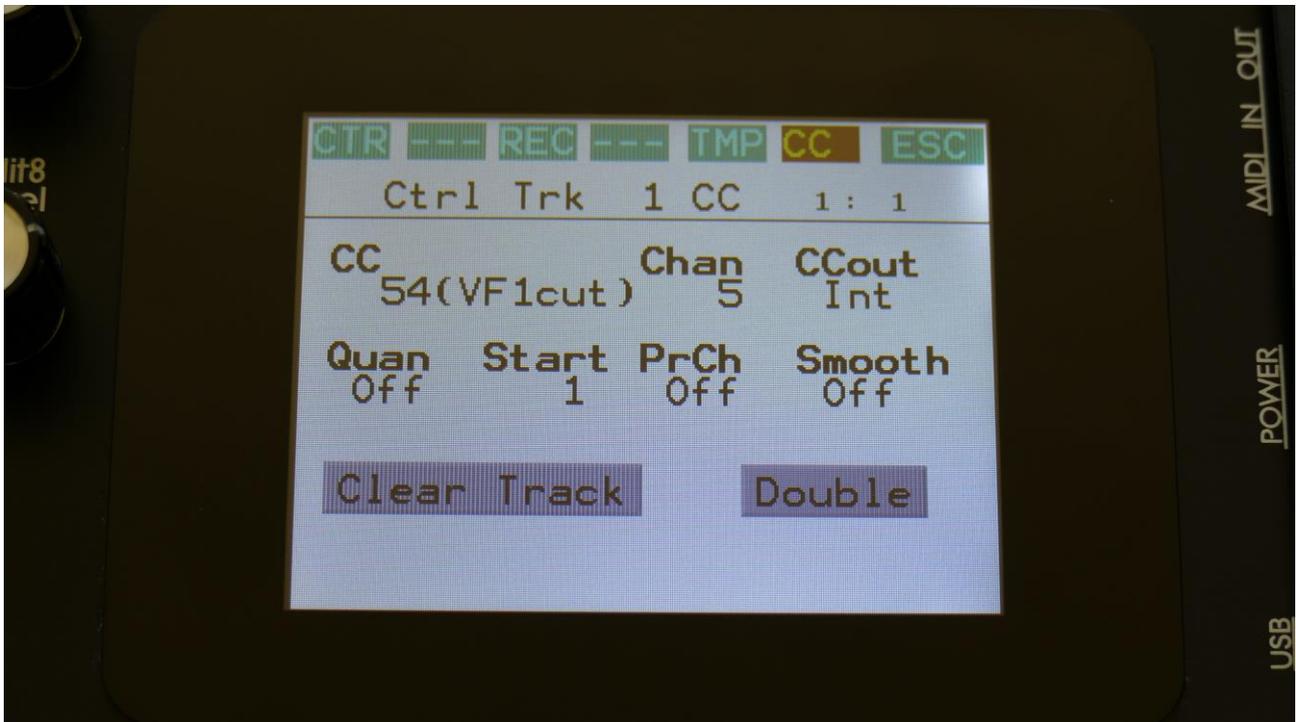
Set the CC parameter, to the parameter, that you want to control with the controller track. A shorted version of the parameter name, will be written in parenthesis.

Then set the Chan parameter to the part number, that you would like to control, if it is a part related parameter.

At last, set the CCout to internal.

It is **important** to set the parameters up, using this sequence. If you set the CCout parameter to internal first, and then set the CC parameter, all the parameters that you pass, will be affected by the controller track.

Now go to the CTR page, and control the parameter.

Recording parameter tweaks to a controller track

First, set up the controller track, as described on the previous page of this manual.

Stop the sequencer, if it is running.

Touch REC in the upper menu bar. Activate recording for the selected controller track.

Go to the CTR page, and set the controller track length.

Now, go to the Synth section page and select the part, where the parameter is located.

Put LD3 in realtime recording mode, by holding down the Part/Mute button, while pressing the Start/Stop button.

Press the Start/Stop button, to start the sequencer.

It will now count in for 2 bars, and the start to record. Tweak the parameter.

When the controller track reaches its end step, recording will stop, and the controller track will start to play back. You will now see the parameter value move by itself!

CV Inputs Recording

The 4 (optional) CV inputs can now be recorded to the sequencer controller tracks, just like MIDI CC's and knob movements.

To do this, simply select CV In 1 to 4 to be the CC on a controller track, and follow the procedure for controller track realtime recording:
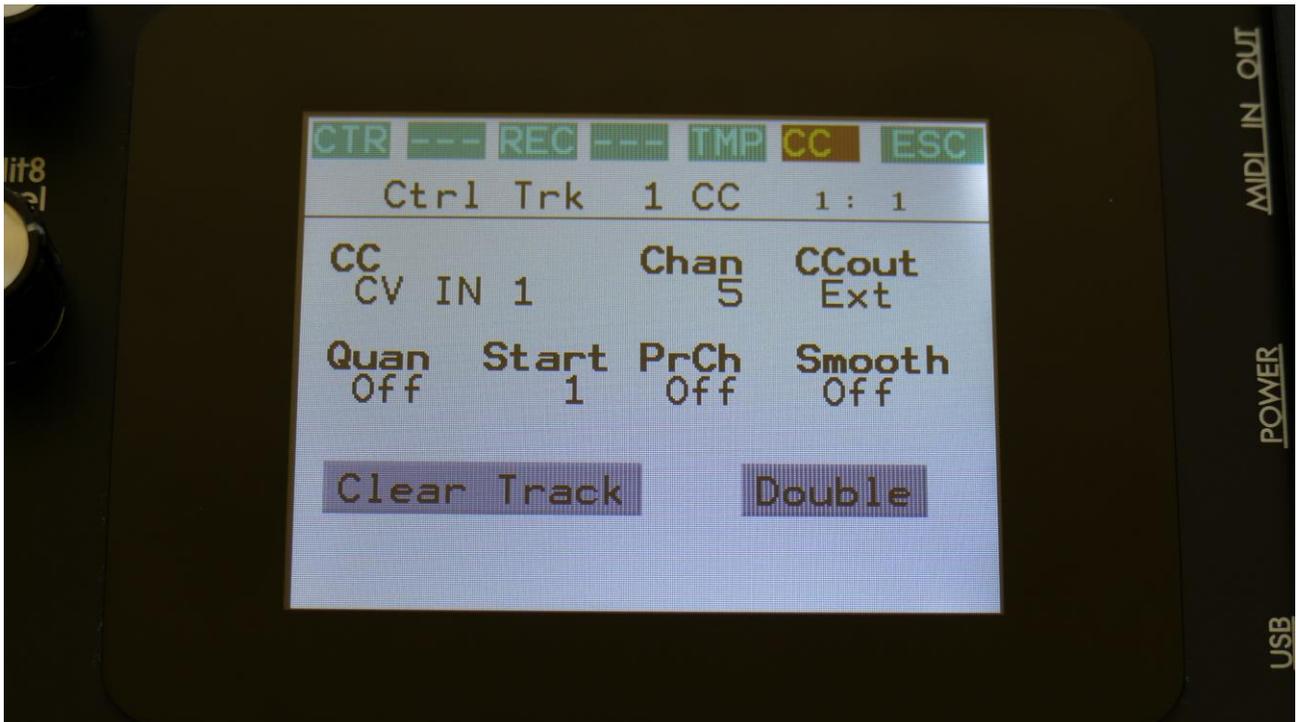
You will, most probably, like to switch the Smooth parameter On, to get smooth transitions between the recorded CV values.

SPAZEboard2 Filterboard 2 and 3 Setup

On the MOR>VCF TYPES pages, 2 new parameters has been added, Brd2 and Brd3, to set up the filterboards attached to Spazeboard2, so that the right parameters will be shown for these:
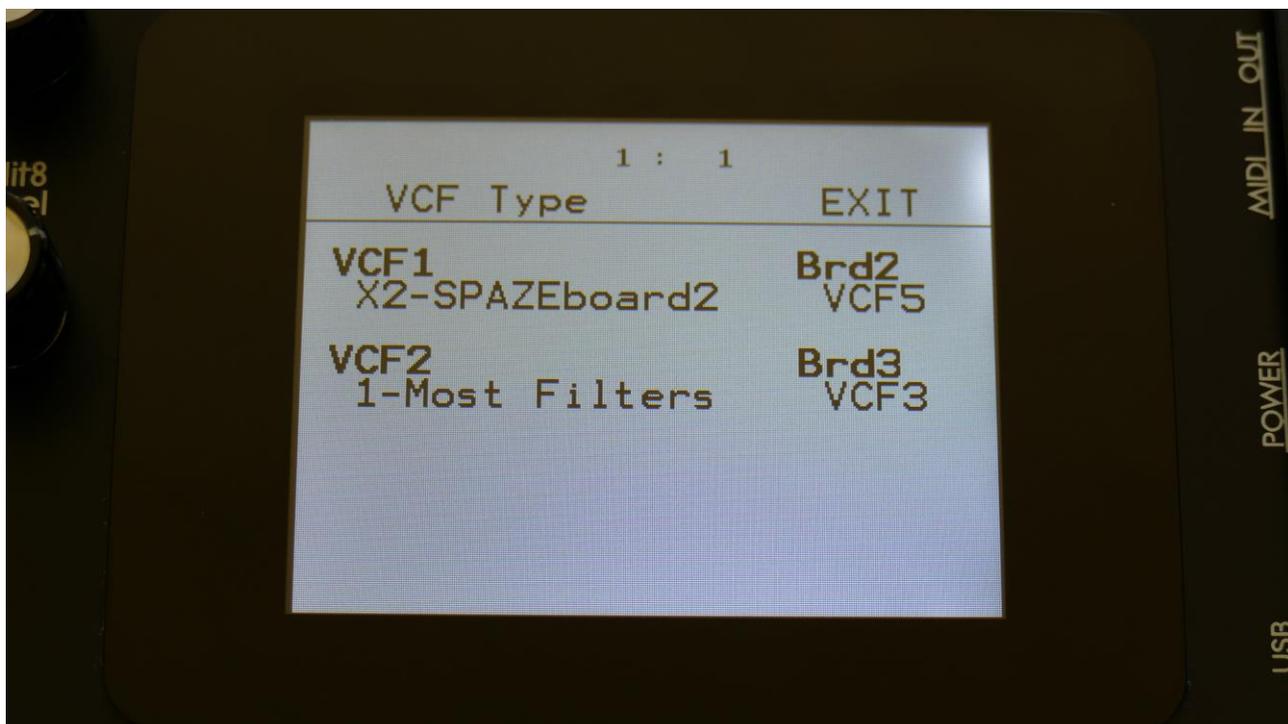
Unlike the VCF1 and VCF2 parameters, the Spazeboard2 filterboards has an individual setup for each of the (currently) 9 available filterboards. So if you have filterboard 5 and 3 installed, you must select VCF5 and VCF3, as shown on the picture.

PLEASE NOTICE:
Certain parameters, like cutoff and resonance on the SP filter, Tubaz and SSI filter, that worked in reverse, under the previous firmware versions, will now no longer work in reverse. You might therefore have to re-adjust your presets, to make them sound exactly the same.
If you do not wish to do this, please set both Brd parameters to VCF1, and use the same parameters as before.

For the different filterboards, the VCF main page will look different.

Please find a detailed description of each parameter in the User Manual.

For Filterboard 1, 2, 4 and 9:
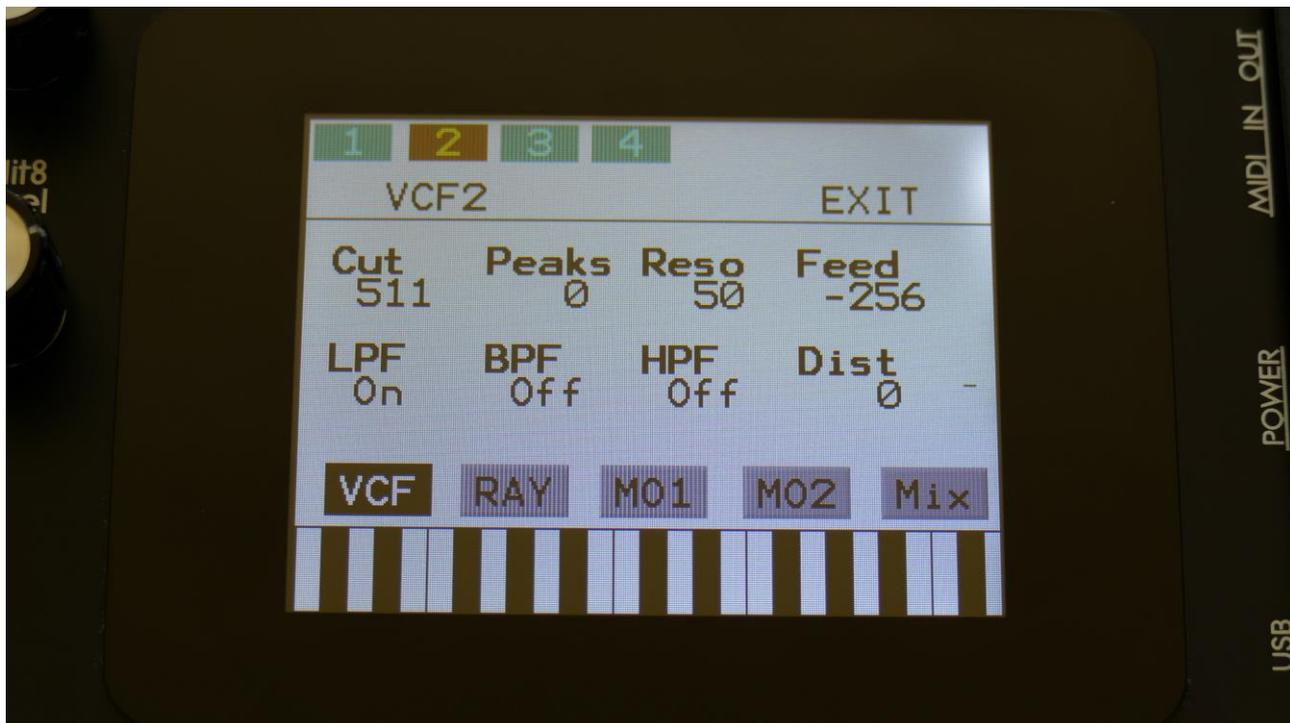
For Filterboard 3:
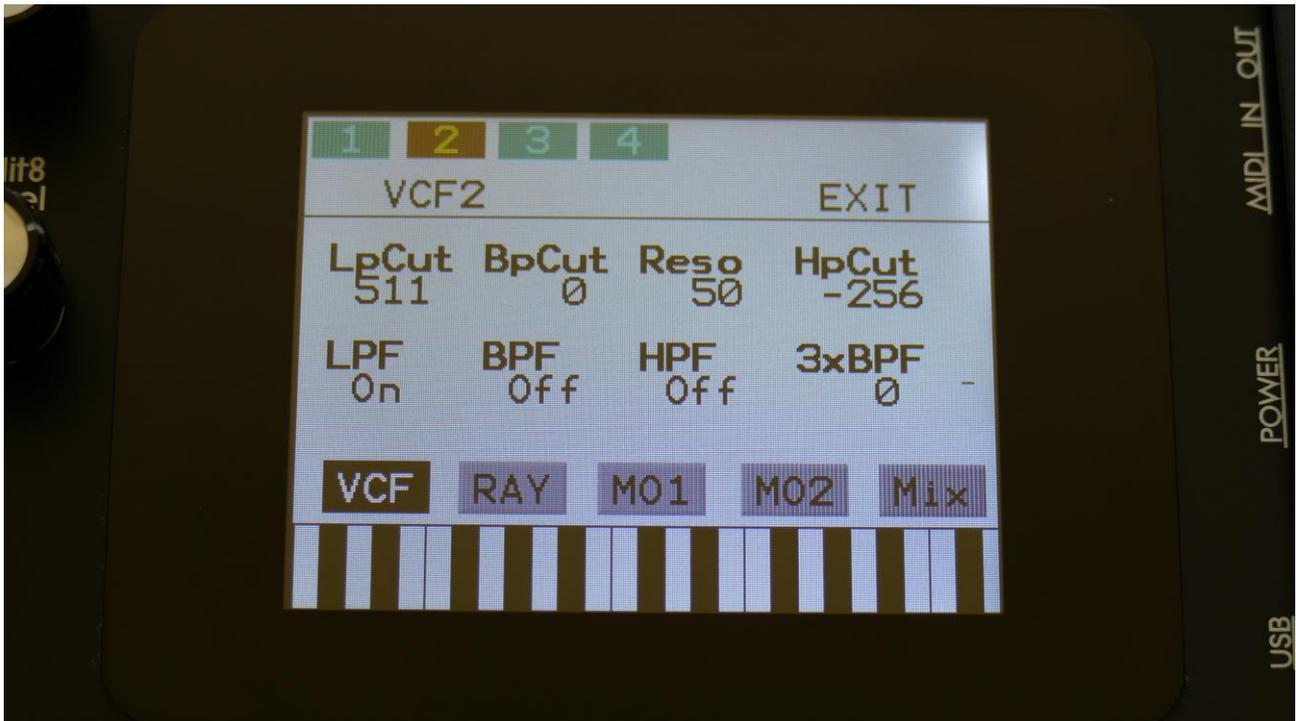
Filterboard 5 (MiniProphet):
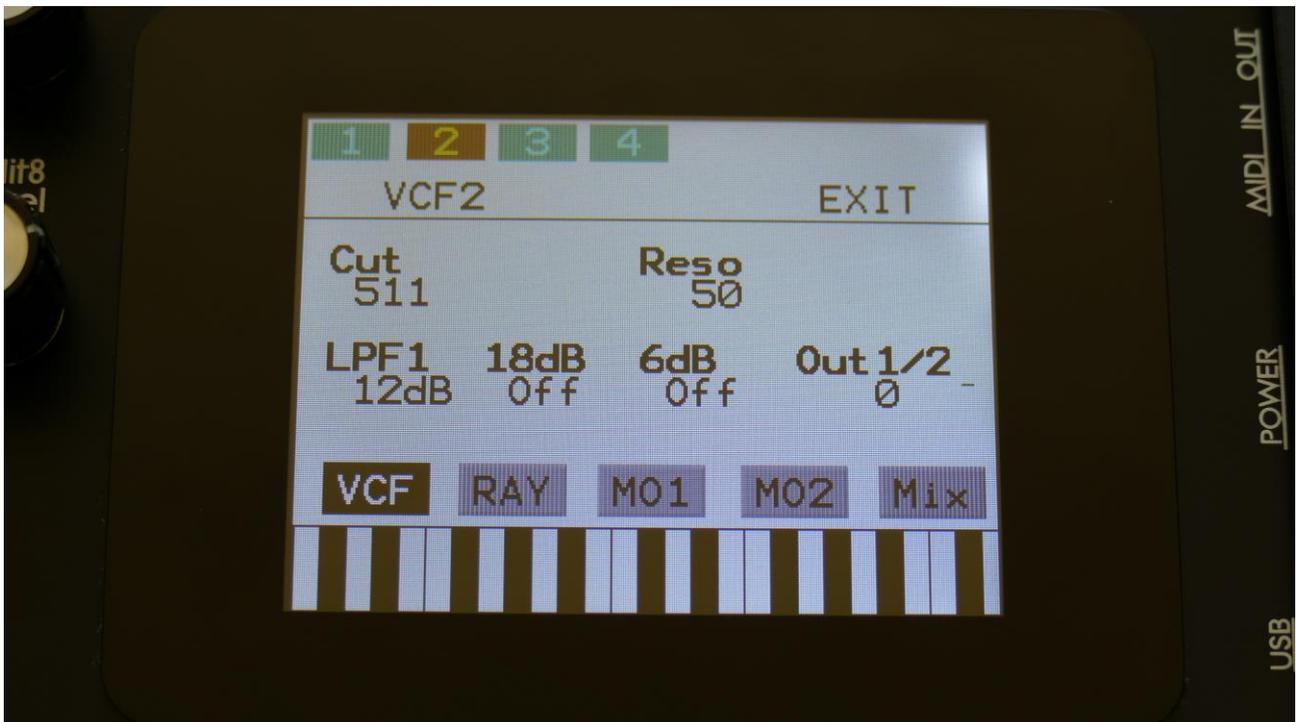
Filterboard 6 (SP Filter):
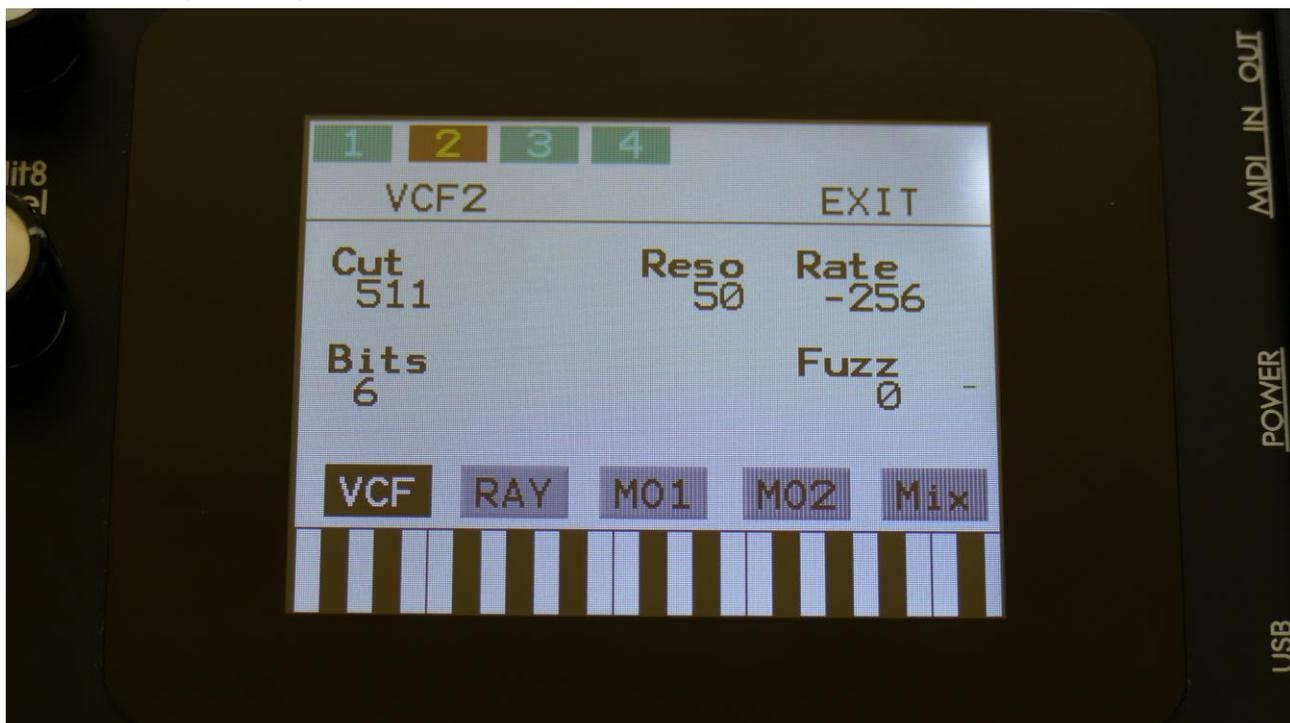
Filterboard 7 (Tubaz):
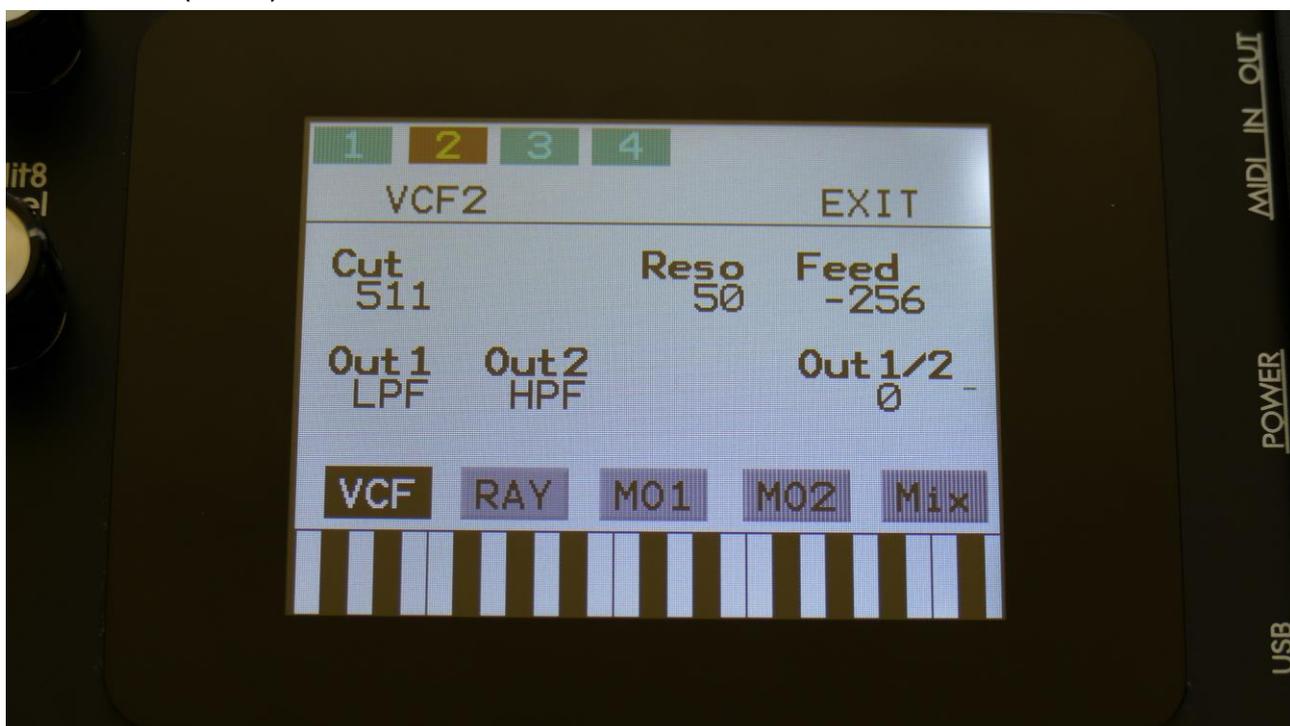
And Filterboard 8 (SSI-Spaze):
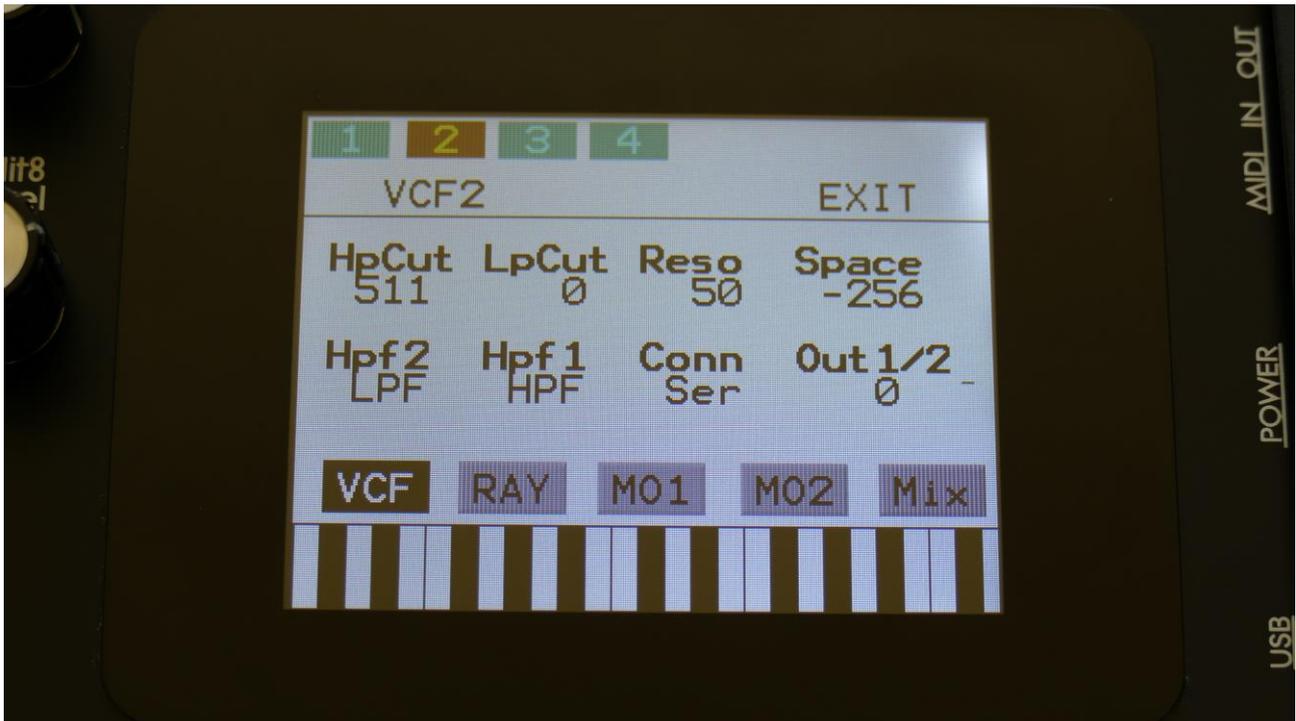
Audio BUS Envelope Followers Extra Gain

Some users have been complaining about the signal getting too low, when using the Bus envelope Followers. A fix for this has now been made:
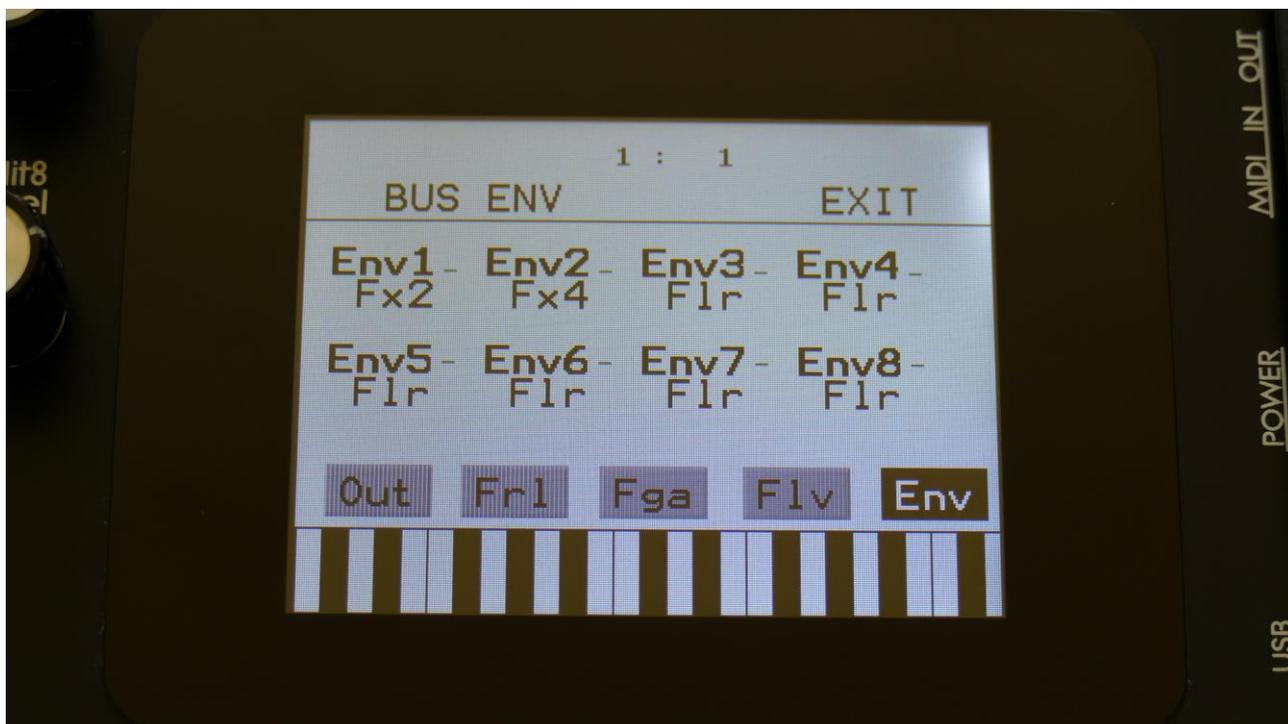
On the Bus Env page, where you can select if you want an Envelope Follower or a part Envelope, to control the output level of the Bus, to extra positions has now been added:

Fx2 and Fx4.

When setting a Bus Envelope parameter in any of these positions, the Bus Envelope Follower will control the Bus output level, but it will be gained by 2 or 4 times.

CV Inputs Smoothing

Sometimes, especially when controlling very sensitive parameters, like the pitch of an oscillator via a CV input, even very small changes on the CV input will affect the pitch, making it sound unstable.

Therefore a Smoothing parameter for each of the 4 CV inputs has now been added:
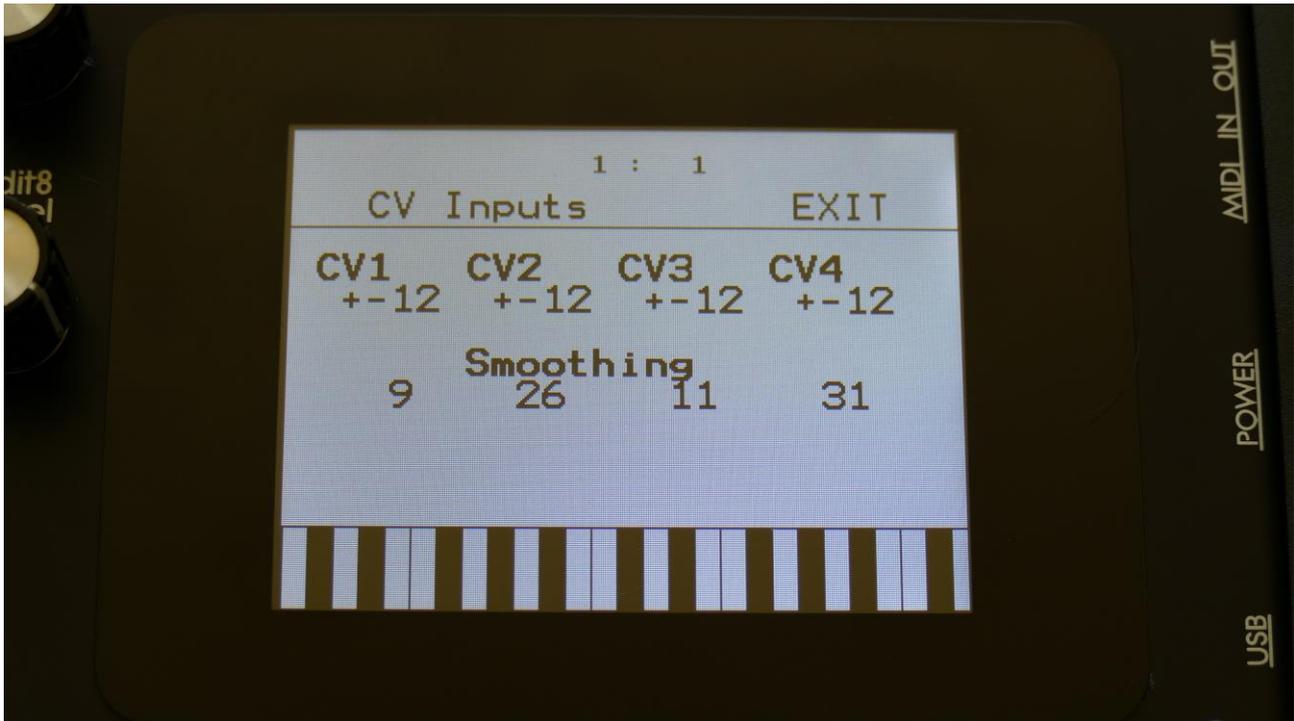
The Smoothings can be set from 0 (no smoothing) to 31 (maximum smoothing).

Sequencer Controller Tracks Selection

Especially after the new parameter tweaking features has been added to the controller tracks, it was a bit annoying, that when going back and forth between a parameter to be tweaked on a specific part, and the controller track to control it, you would have to re-select both the part and the controller track every time.

Therefore the controller tracks are now selected separately from the parts. The procedure is still the same: Push and hold the Steps/Part button, while pressing any of the step buttons, to select a specific controller track. The only difference is, that you will now need to enter the controller track pages, to select a controller track.
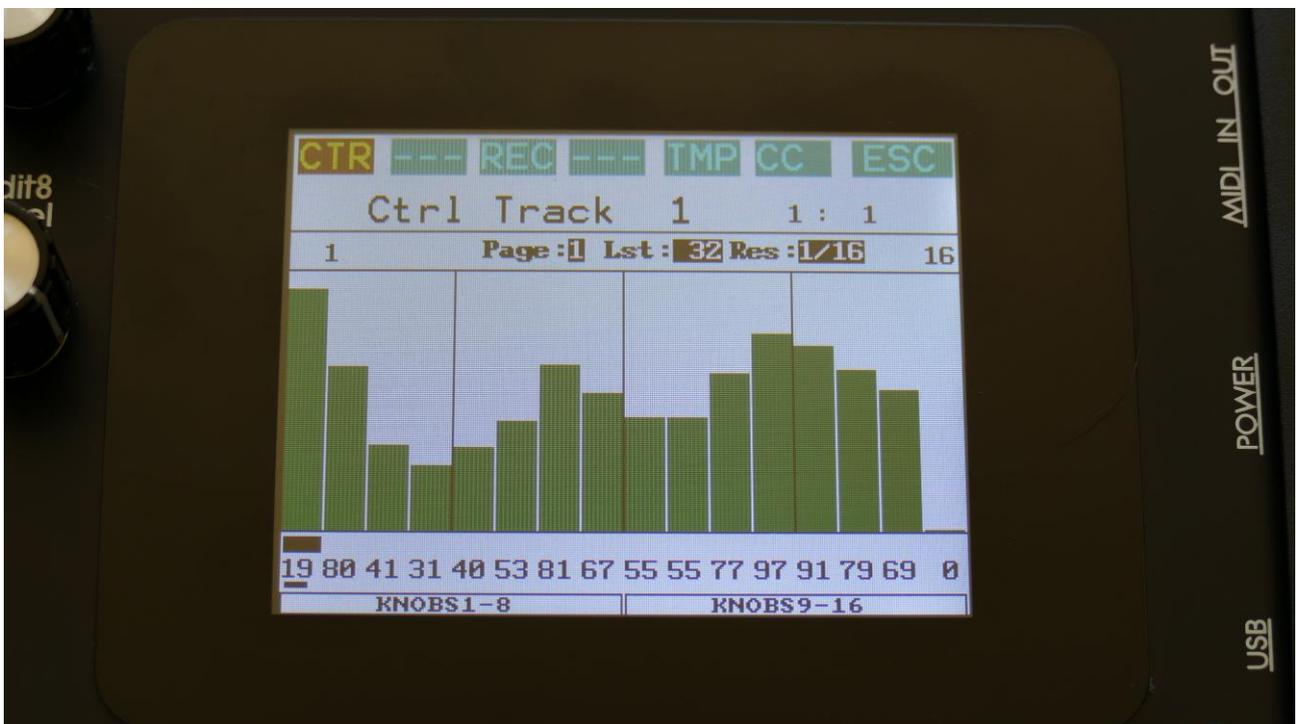
Written by
Flemming Christensen
"Gotharman"
2019

www.gotharman.dk