Gotharman's SpazeDrum Blue & Black

Analog Drum Synthesizers

Update Manual V6.20

Bug fix:

-When note track gates were set higher than half the maximum value, and "All Values Edit" were switched on, all gate times were forced below half the maximum value. This has now been fixed.

Digital Voices

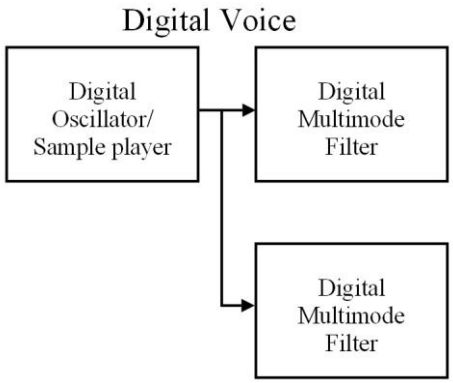
4 extra digital voices have now been added to SpazeDrum.

Each of the 4 analog groups have got one extra digital voice added, that can generate an extra sound, without cutting off the analog voices.

Each digital voice has one oscillator (Waveform, resonator, percussion, cymbal, clap, sampler), up to 2 digital filters (41 types), a VCA, 3 envelopes and 4 random generators.

The 2 Insert Effect processors of the analog group, is shared between the analog and digital voice. Each insert effect can either be assigned to the analog or to the digital voice.

The digital voices are controlled by the sequencer, MIDI, knobs, trigger buttons and modulation, in the exact same way as the analog voices.

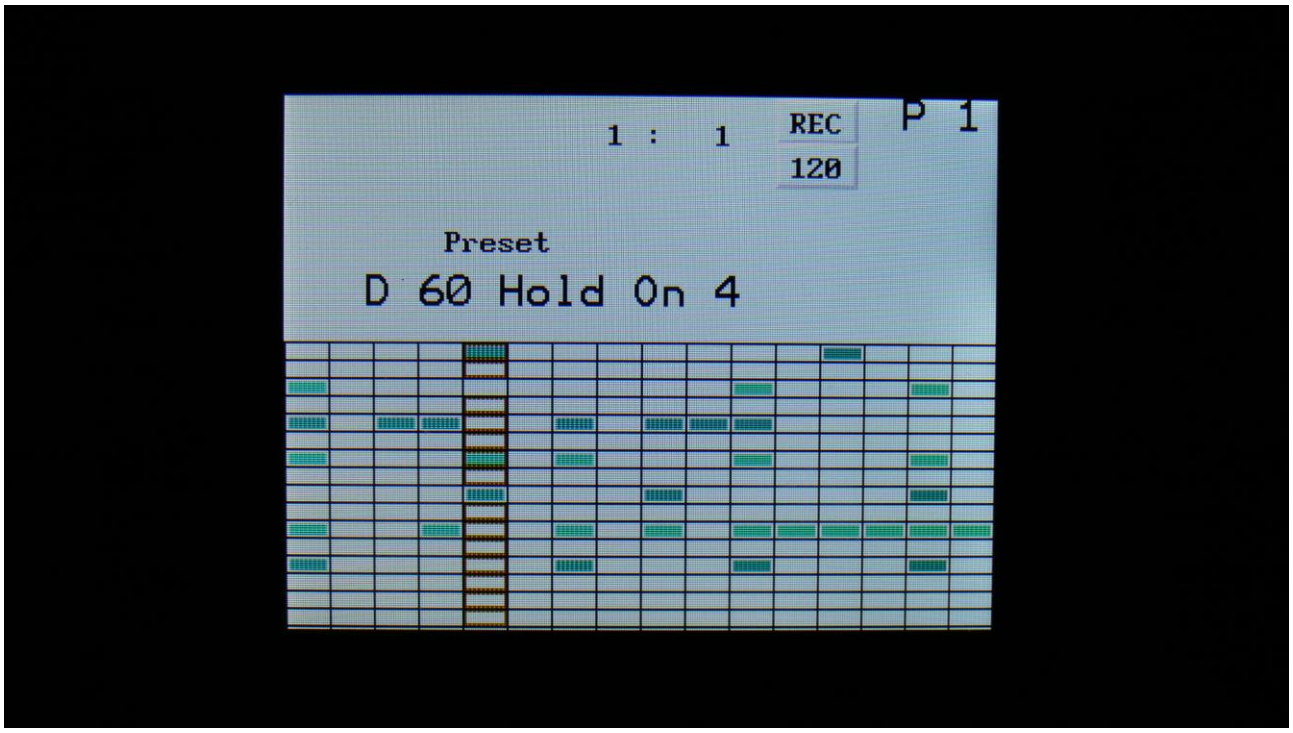


Setting up a part to be a digital voice

On the first Drum Oscillator page, where you select the part Form, simply select Digital Voice.

The digital voice oscillator has the same parameters as Oscillator 1 in Synthesizer mode.

Since there are now 8 voices instead of 4, there are now also 8 VU meters instead of 4. The dark green VU meters shows the analog voices, while the light green VU meters shows the digital voices.



The colors have also been changed on the step grid. Like on the VU meter page, the dark green steps shows the analog voices, while the light green steps shows the digital voices.

Insert effect routing

On the insert effects select pages, 2 new positions have been added to the **Conn** (connection) parameter: **PreD** and **PostD**. When **Conn** is set to any of these 2 positions, the insert effect will be assigned to the digital voices of the currently selected analog group.

25 new filter types!

A bunch of new digital filter types have been added, so that the SpazeDrums now have a total of 41 digital filter types!

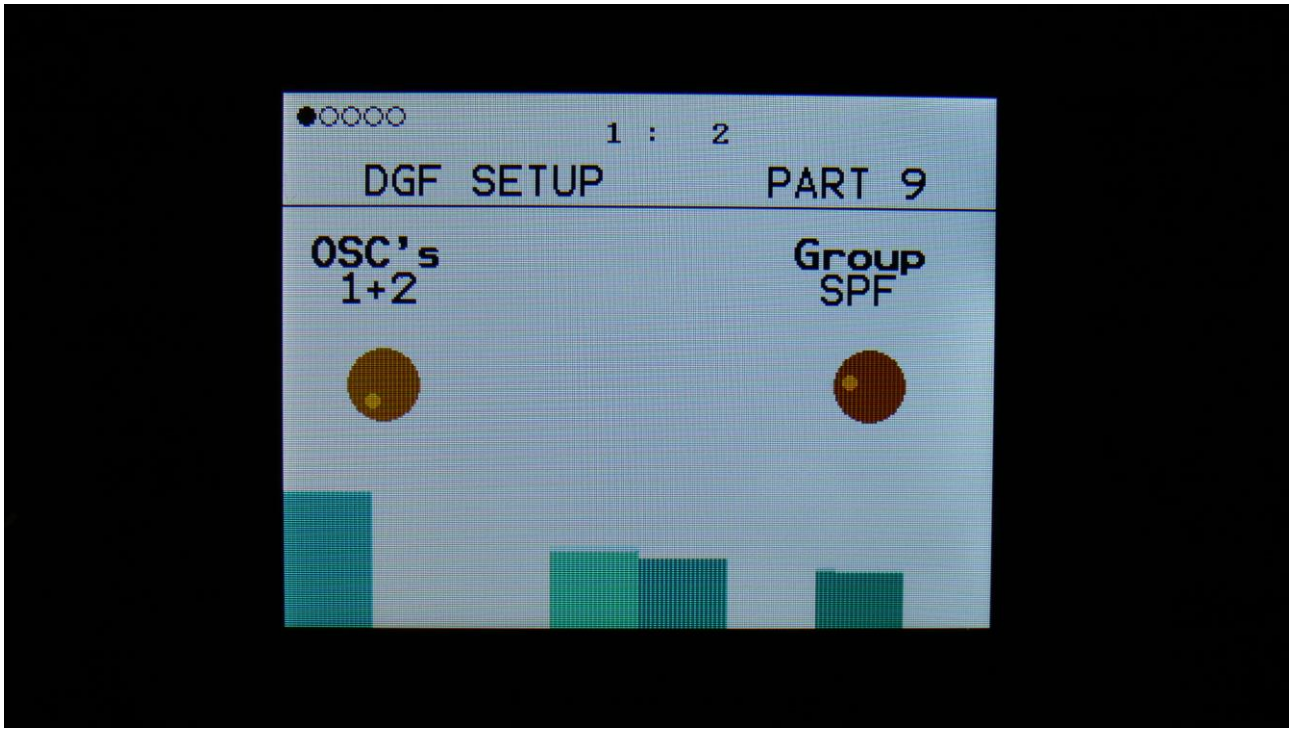
The different filter types have been divided into 3 groups:

-DGF: The “standard” dual digital filters, that SpazeDrum have had from the start.

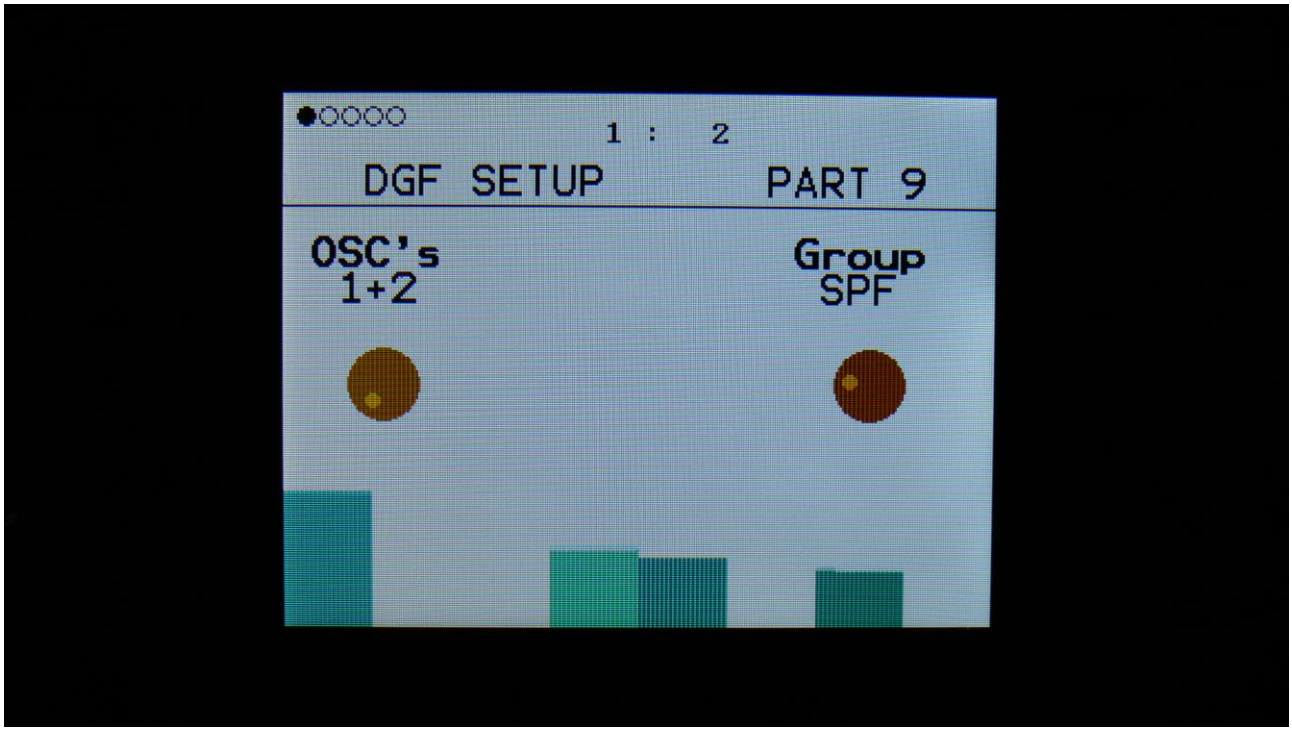
-SPF: Digital Spaze filters. A group of LPF, BPF and tube emulation filters, that has a stronger character than the DGF’s. Many of them also have a stronger bass response than the DGF’s. Only a single filter is available, when this group is selected.

-**SVF**: State Variable Filter. A very neutral sounding 12dB filter, that just does what it says. LPF, BPF, HPF and BEF are available. Filter FM is possible for this group. Only a single filter is available, when this group is selected.

On the first digital filter page (the DGF page), it is possible to select the desired filter group, by setting the **Group** parameter.



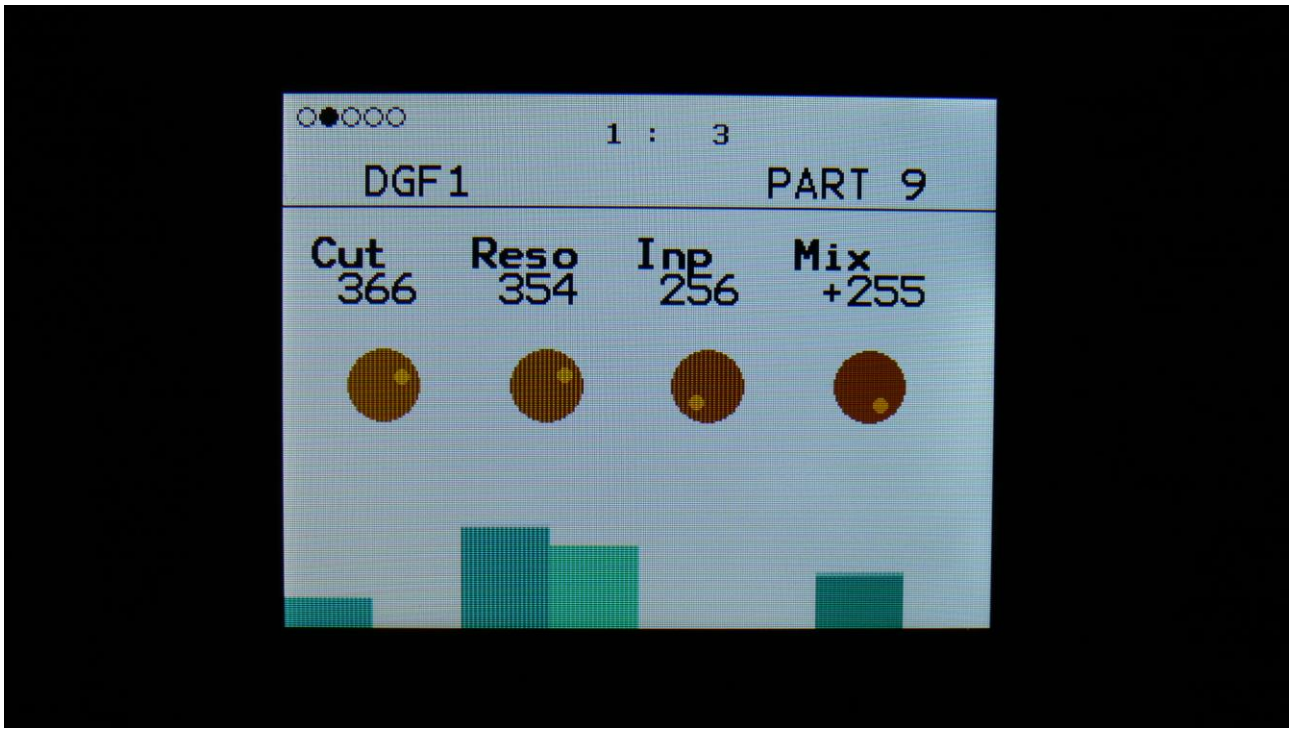
SPF filter group parameters



The following pages will describe the parameters that are available, when the SPF group of filters has been selected.

List of SPF Filter Types:

LPF1: Lowpass filter with emphasis on the bass response. Has a weak high frequency response.
LPF2: Lowpass filter with a strong bass response, and better high frequency response than LPF1.
LPF3: Lowpass filter that has a bit less character than LPF 1 and 2, but has a sharper resonance.
LPF4: Lowpass filter with a bit more emphasis in the bass area.
LPF5: Lowpass filter with a more soft character.
LPF6: Lowpass filter with soft character, that has a more sharp resonance.
LPF7: Thin and sharp lowpass filter.
BPF1: Pretty basic bandpass filter.
BPF2: Bandpass filter with improved bass response and a strong, almost distorted character.
BPF3: Sharp bandpass filter.
BPF4: Bandpass filter that is even sharper than BPF3.
BPF5: Bandpass filter that is even more sharp than BPF4.
BPF6: Thin and sharp bandpass filter.
BPF7: Thin bandpass filter, that is a bit sharper than BPF6.
BPF8: Bandpass filter with a character, that is a bit distorted.
BPF9: Bandpass filter with a character, that is a bit distorted. A bit sharper than BPF8.
TUB1, TUB2, TUB3, TUB4, TUB5: Tube emulation filters with a very nonlinear and distorting response.

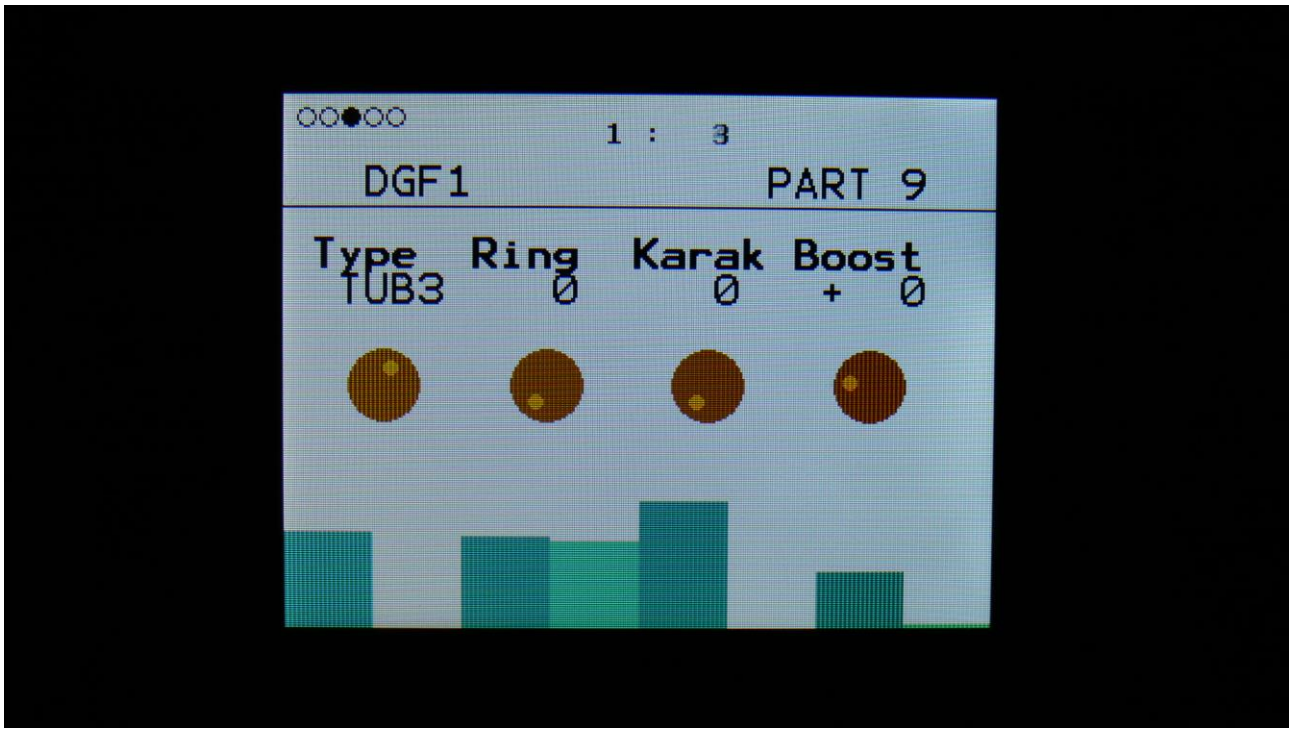


Cut: 0 to 511. Sets the cutoff frequency.

Reso: 0 to 511. Sets the amount of resonance applied to the filter.

Inp: 0 to 511. Sets the audio signal input level to the filter. Different characteristics can be obtained by adjusting this.

Mix: -256 to +255. Sets the mix between the audio input signal and the filter output signal. At +0 the input signal is passed through. At positive values, the filter output is added to the input signal. At negative values, an inverted version of the filter output is added to the input signal. At +255 and -256 only the output of the filter is heard.

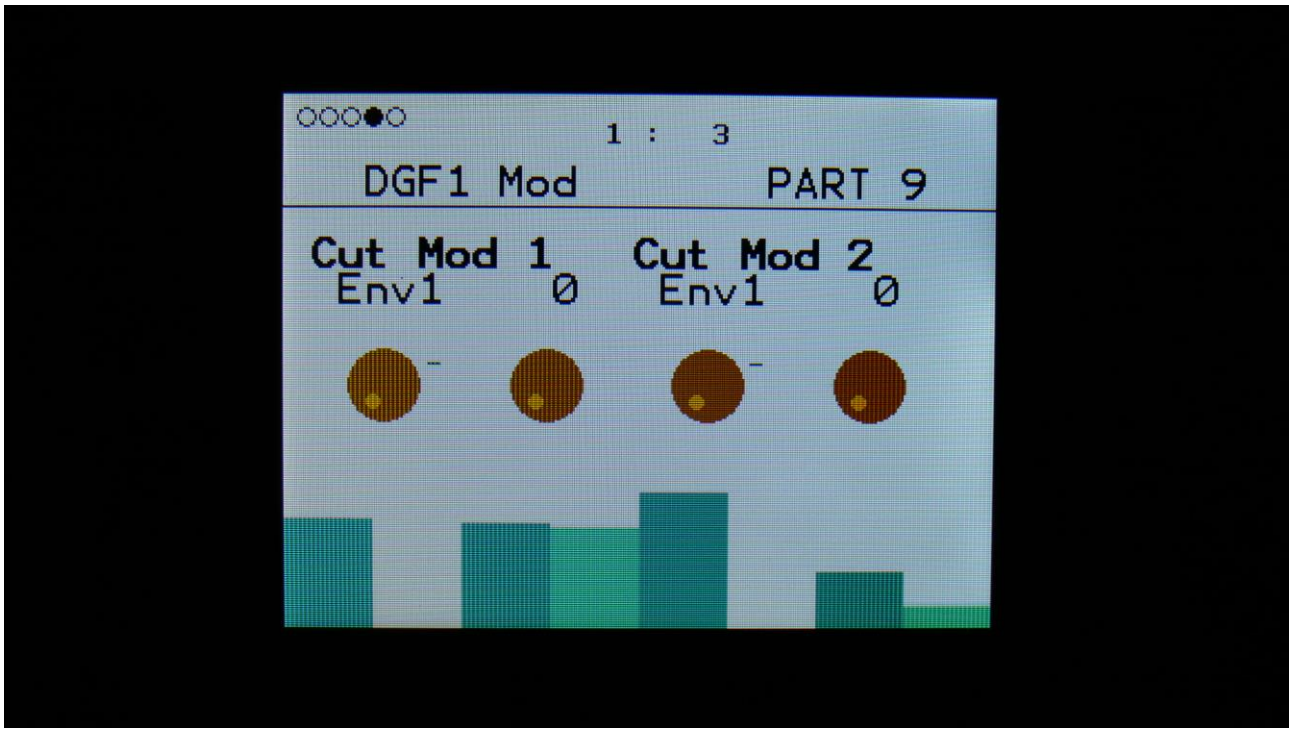


Type: Sets the filter type. See the list of filter types.

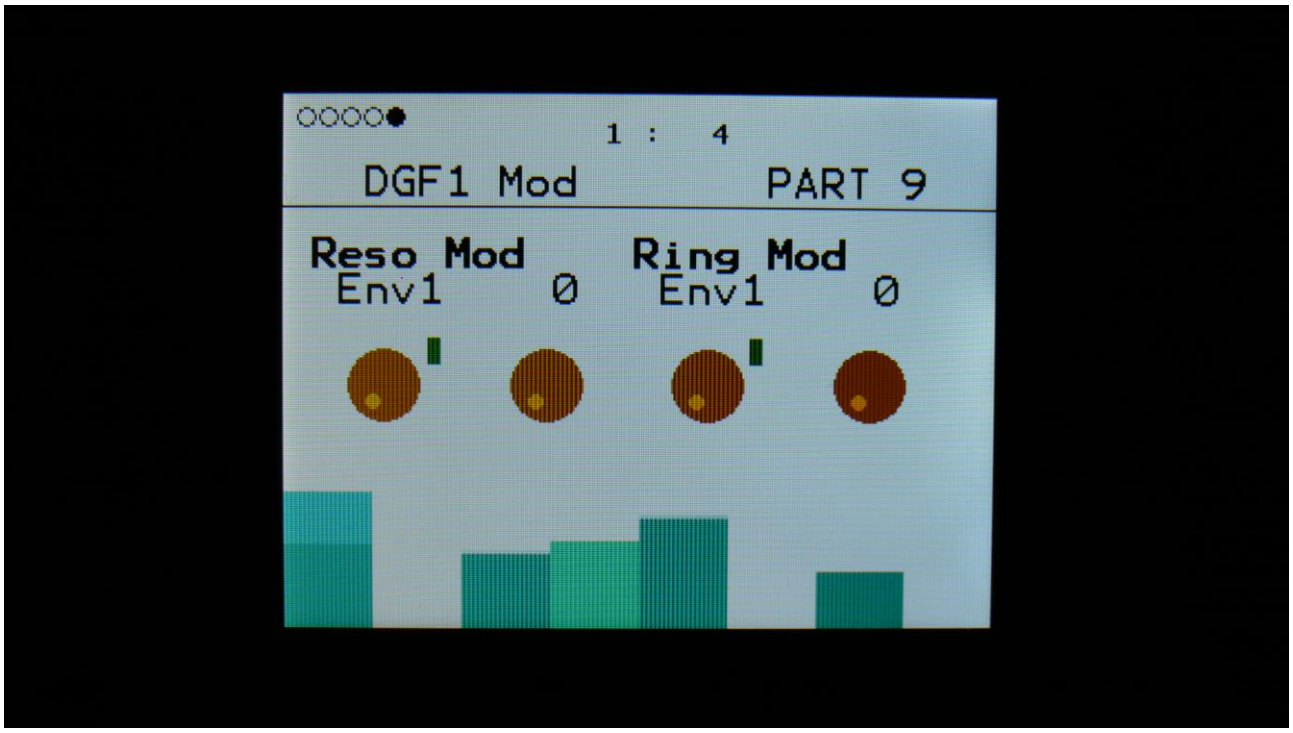
Ring: 0 to 511. Adds a ringing effect to the filter, which will, in most cases, make it sound more thin.

Karak: 0 to 511. Alters the character of the filter, and in most cases, adds a bit of distortion.

Boost: -128 to +383. Sets the filter output level. Negative values attenuates the signal level, positive values gains the signal level.



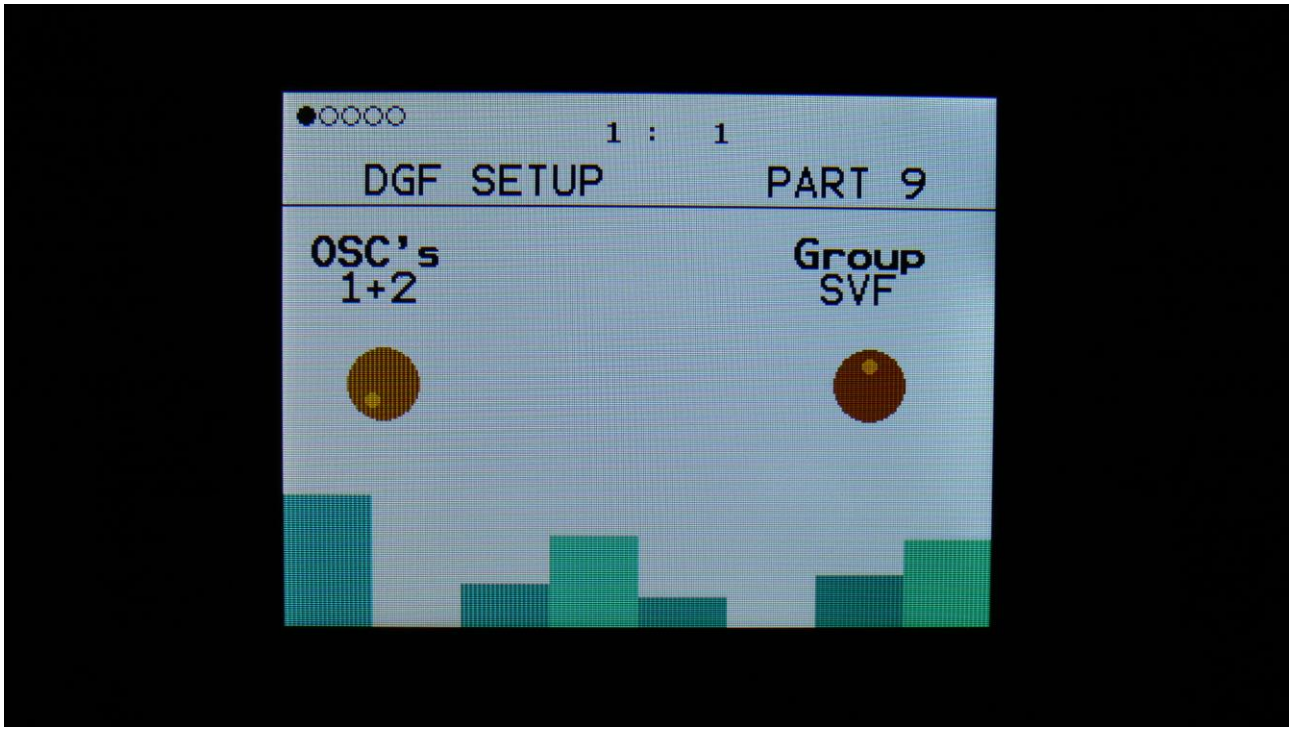
Cut Mod 1, Cut Mod 2: Select a modulation source and adjust the amount of modulation for the Cut parameter. The small VU-meter next to the modulation source selector, shows the output of the selected modulation source.



Reso Mod: Select a modulation source and adjust the amount of modulation for the Reso parameter. The small VU-meter next to the modulation source selector, shows the output of the selected modulation source.

Ring Mod: Select a modulation source and adjust the amount of modulation for the Ring parameter. The small VU-meter next to the modulation source selector, shows the output of the selected modulation source.

SVF filter group parameters



The following pages will describe the parameters that are available, when the SVF group of filters has been selected.

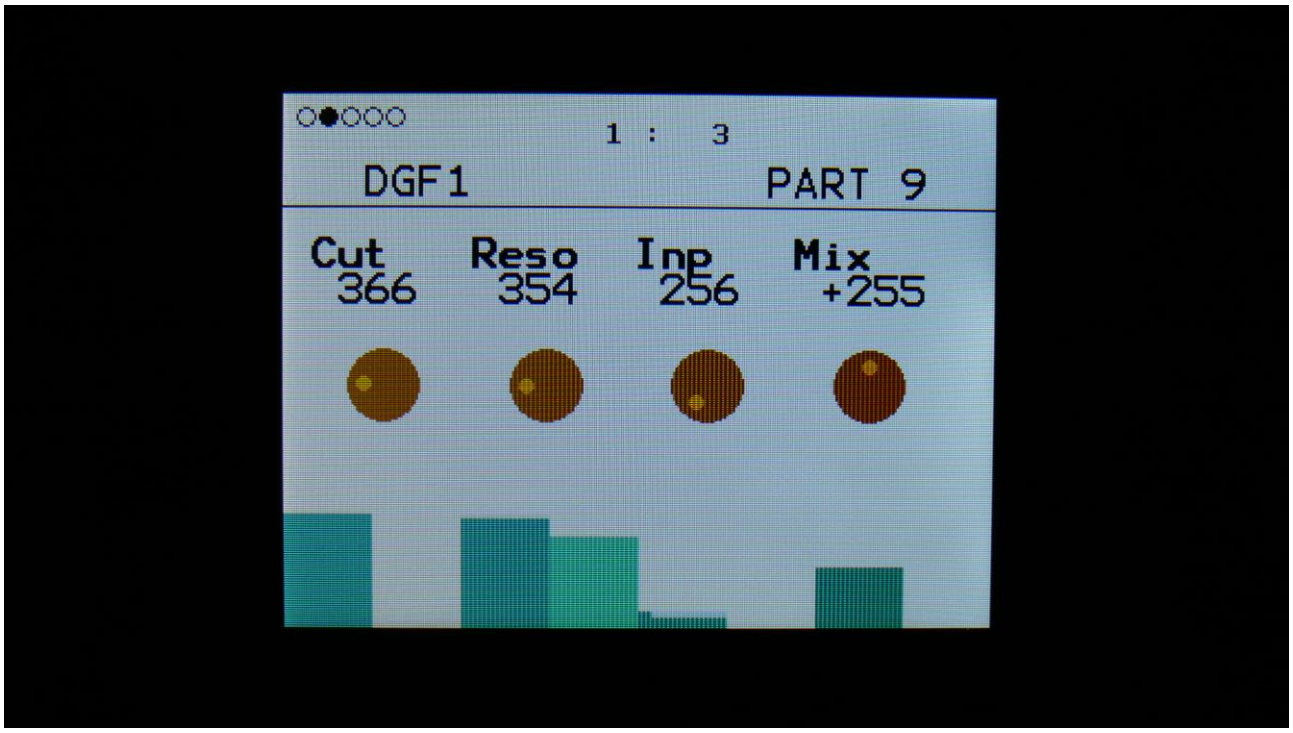
List of SVF Filter Types:

LPF: 12 dB lowpass filter.

BPF: 6 dB bandpass filter.

HPF: 12 dB highpass filter.

BEF: 6 dB band eliminate filter.

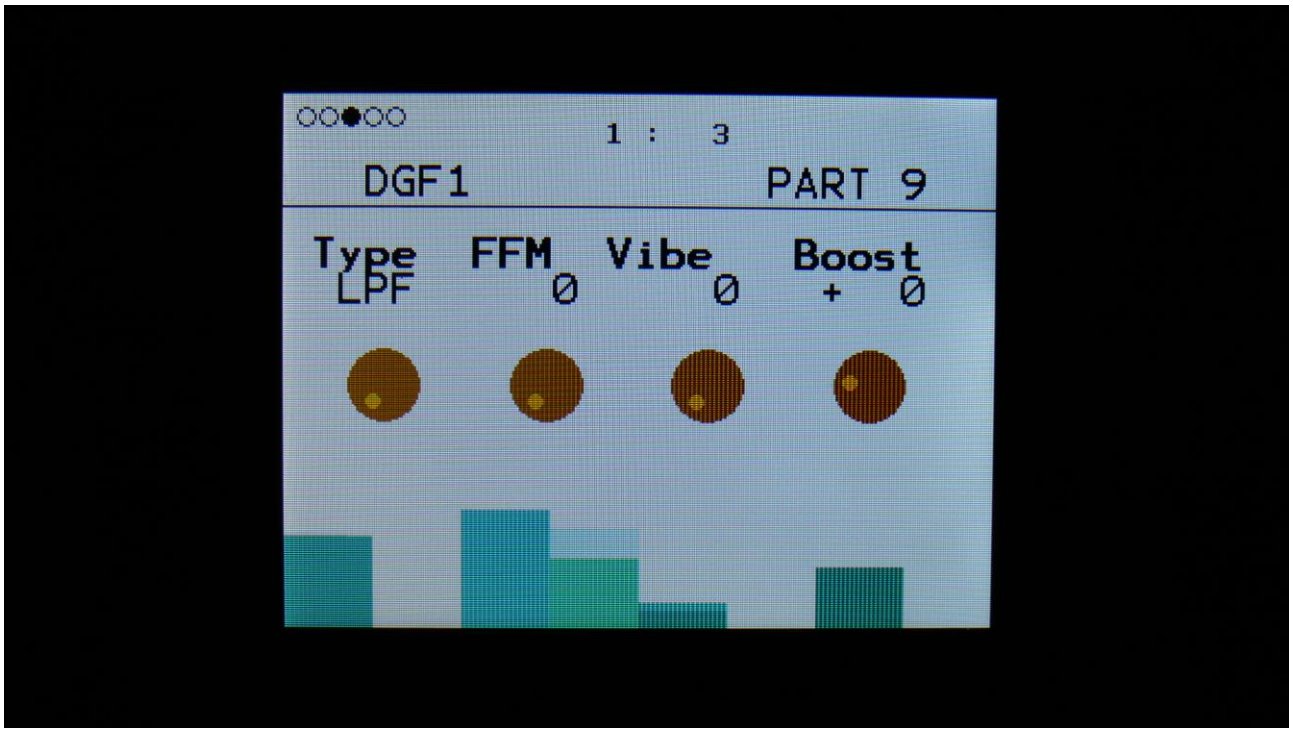


Cut: 0 to 511. Sets the cutoff frequency.

Reso: 0 to 511. Sets the amount of resonance applied to the filter.

Inp: 0 to 511. Sets the audio signal input level to the filter. Different characteristics can be obtained by adjusting this.

Mix: -256 to +255. Sets the mix between the audio input signal and the filter output signal. At +0 the input signal is passed through. At positive values, the filter output is added to the input signal. At negative values, an inverted version of the filter output is added to the input signal. At +255 and -256 only the output of the filter is heard.

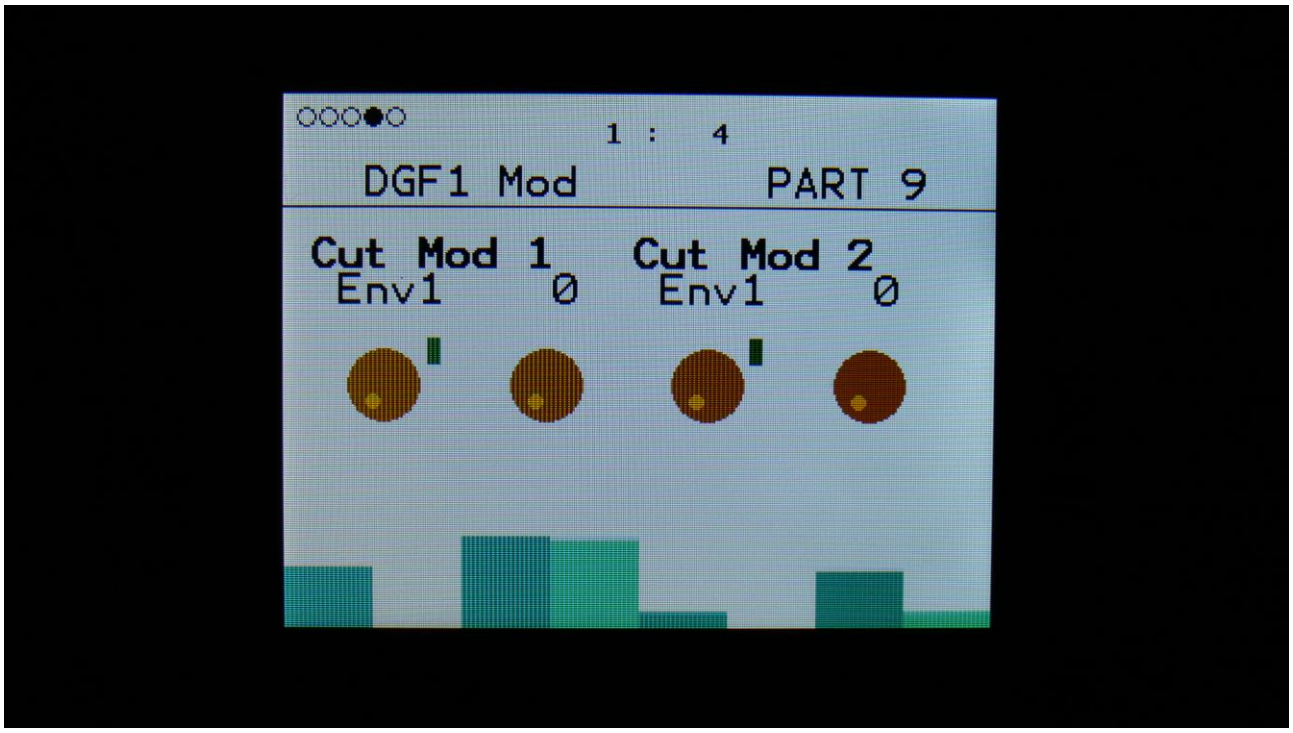


Type: Sets the filter type. See the list of filter types.

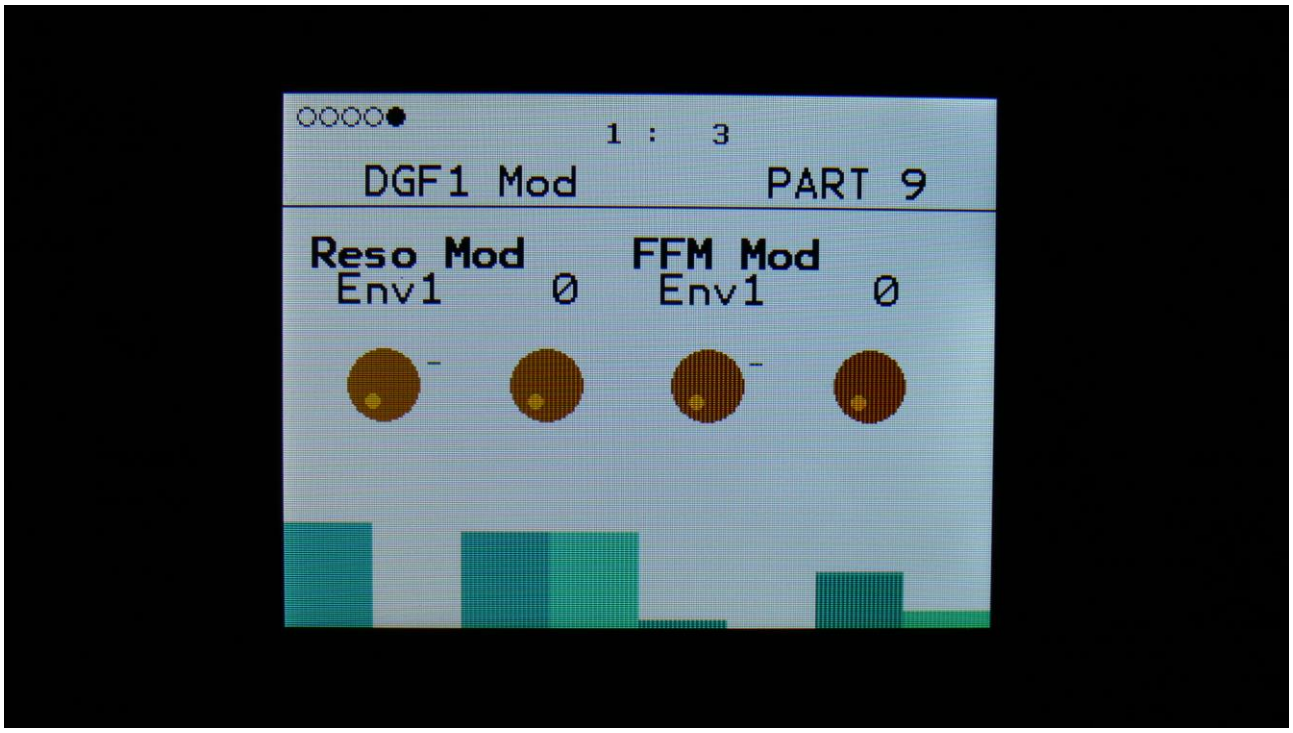
Filter FM: 0 to 511. On analog drum voices turning this up, makes Oscillator D (The digital oscillator) modulate the filter cut off frequency. On Synthesizer voices, Oscillator 2 will modulate the cut off frequency. On digital voices, Oscillator 1 will modulate the cutoff frequency.

Vibe: 0 to 511. Adds some nonlinear vibe to the filter character.

Boost: -128 to +383. Sets the filter output level. Negative values attenuates the signal level, positive values gains the signal level.



Cut Mod 1, Cut Mod 2: Select a modulation source and adjust the amount of modulation for the Cut parameter. The small VU-meter next to the modulation source selector, shows the output of the selected modulation source.



Reso Mod: Select a modulation source and adjust the amount of modulation for the Reso parameter. The small VU-meter next to the modulation source selector, shows the output of the selected modulation source.

FFM Mod: Select a modulation source and adjust the amount of modulation for the Filter FM parameter. The small VU-meter next to the modulation source selector, shows the output of the selected modulation source.

ReSampling

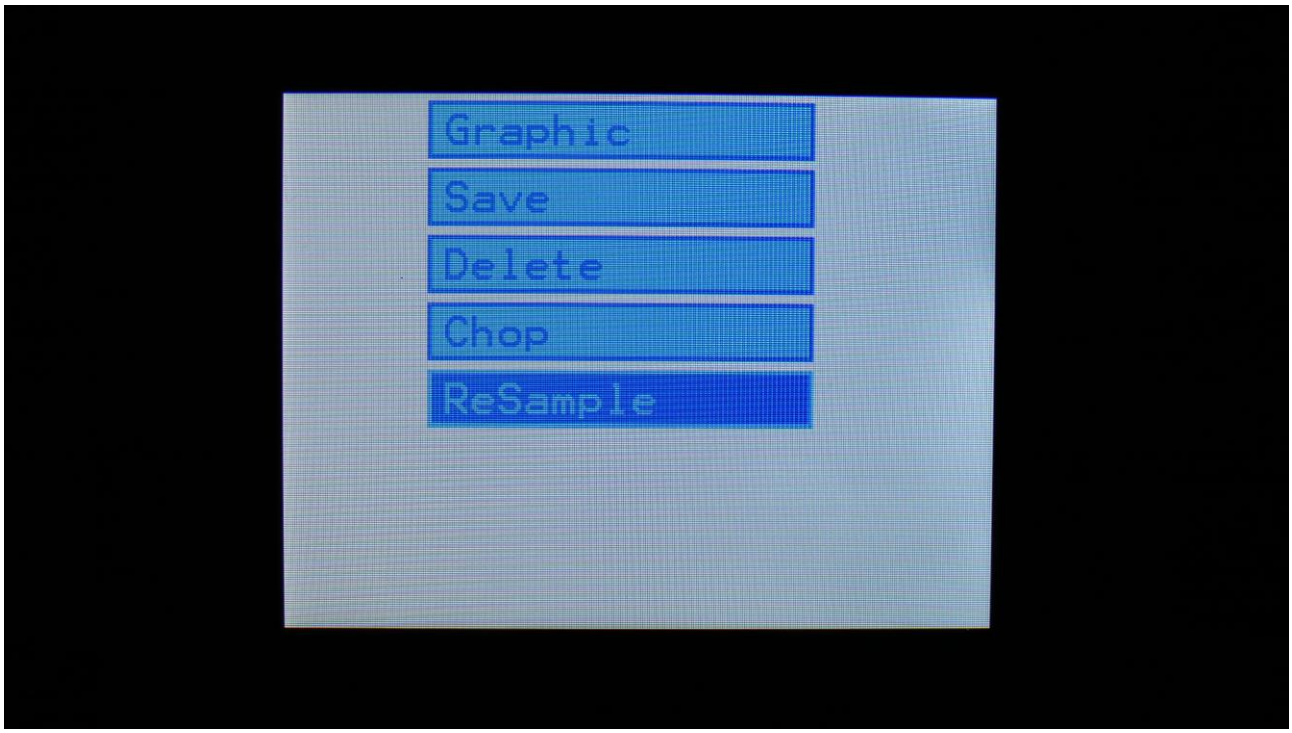
It is now possible to record the left output of SpazeDrum as a sampling. It is possible to set the sample recording length in number of bars, and it is also possible to make SpazeDrum insert chop points, while it is recording.

To enter the ReSample page, either:

-Push the Func/mute button so that it lights up, and push step button 12 (Samples) two times.

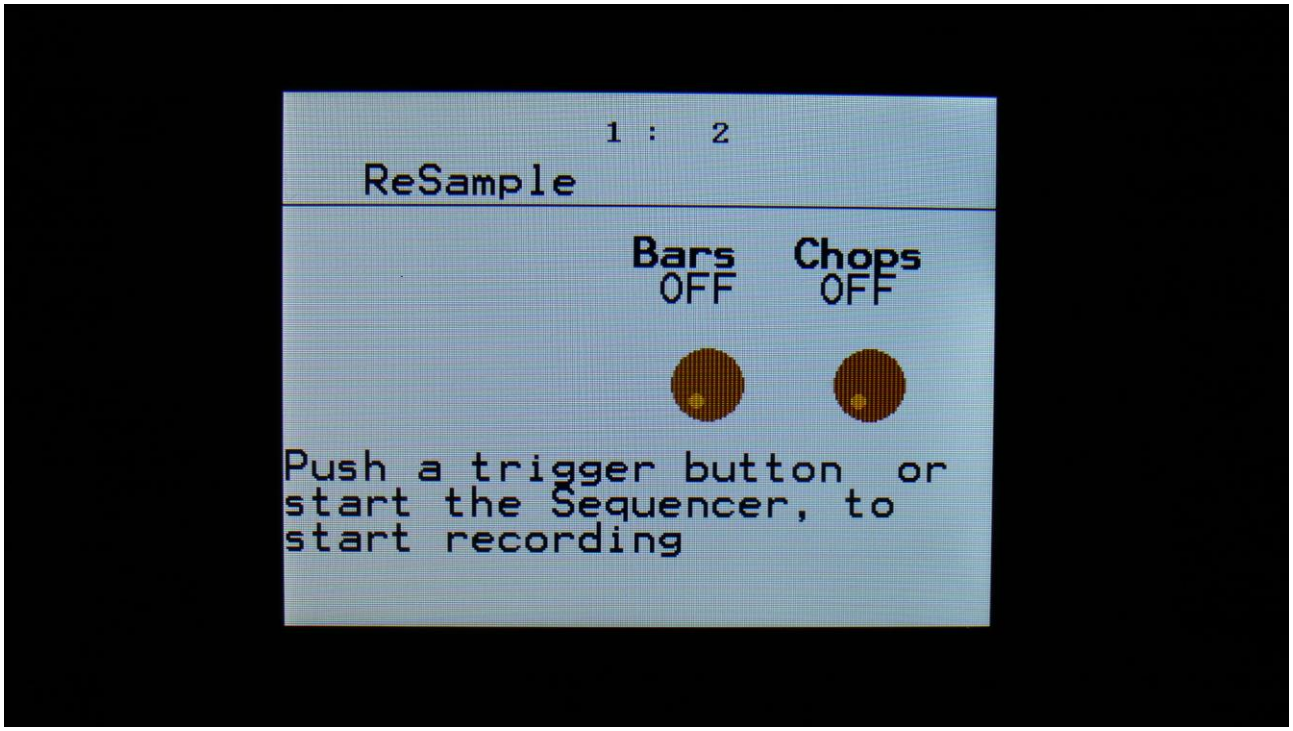
Or:

From the sample edit page, push the Edit button, so that the sample menu pops up:

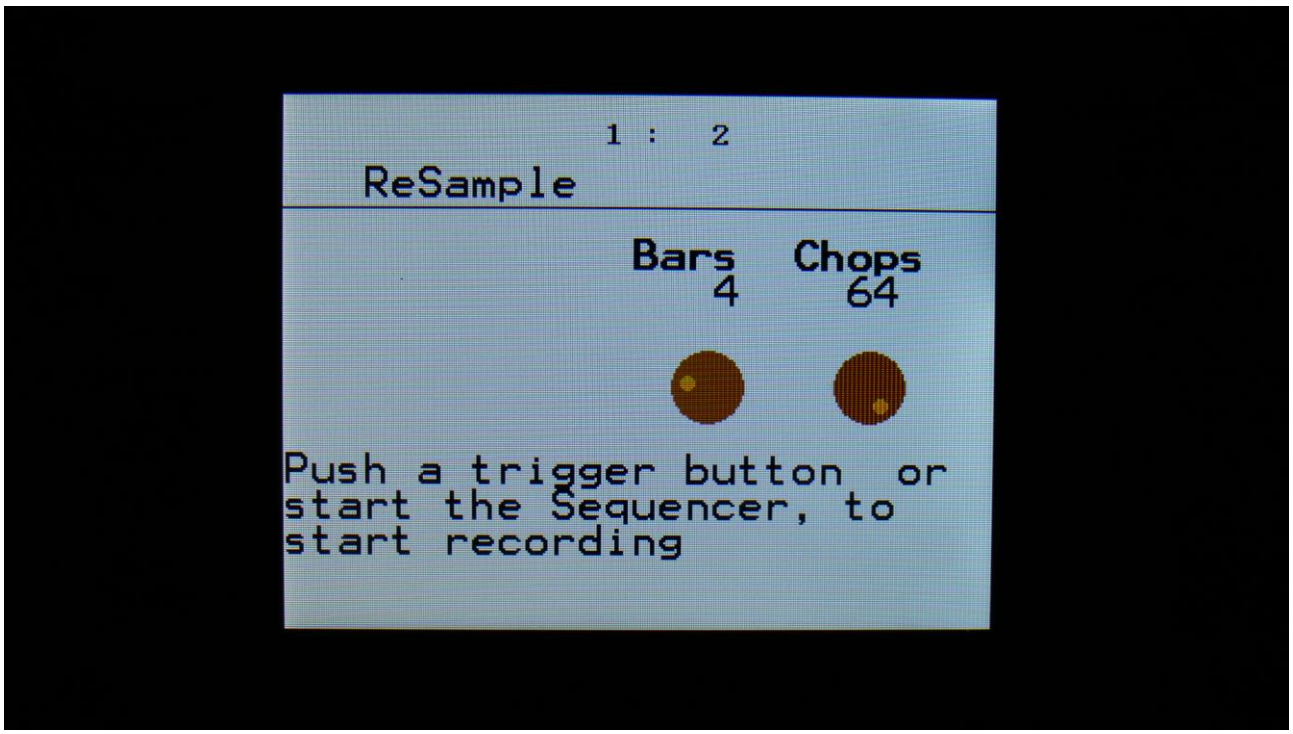


Select ReSample with the < and > buttons, and push the Edit button again.

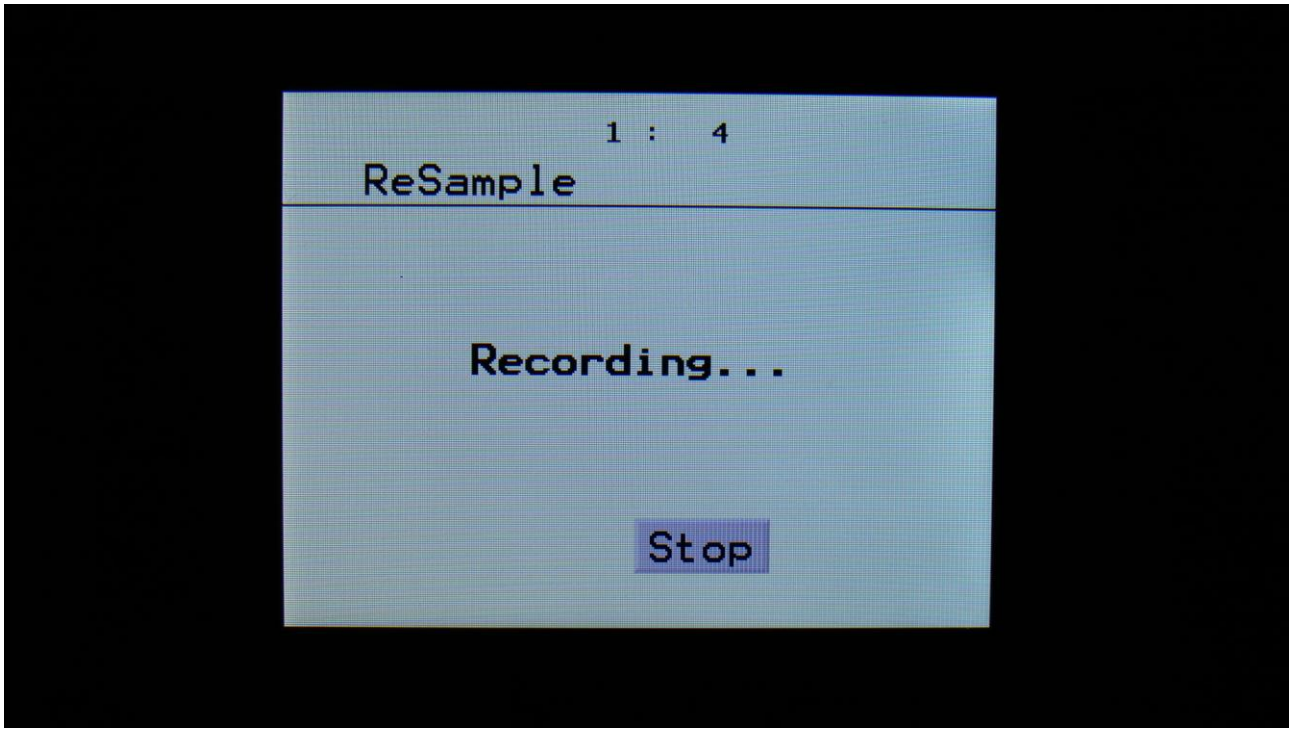
You should now have entered the ReSample page:



If you would like the sampling to be a specific number of bars, and/or if you would like chops generated while recording, set the desired values, using the Edit Knobs. If you want to manually stop the sampling, and don't need chop points, or will add chop points later, leave both settings to Off.



To start the Resampling, start the sequencer, or hit any of the 16 trigger buttons. Sample recording will now start:



When recording has started, you can leave the ReSample pages, by pushing the Exit button, and go tweak some parameters, while it is recording, if desired.

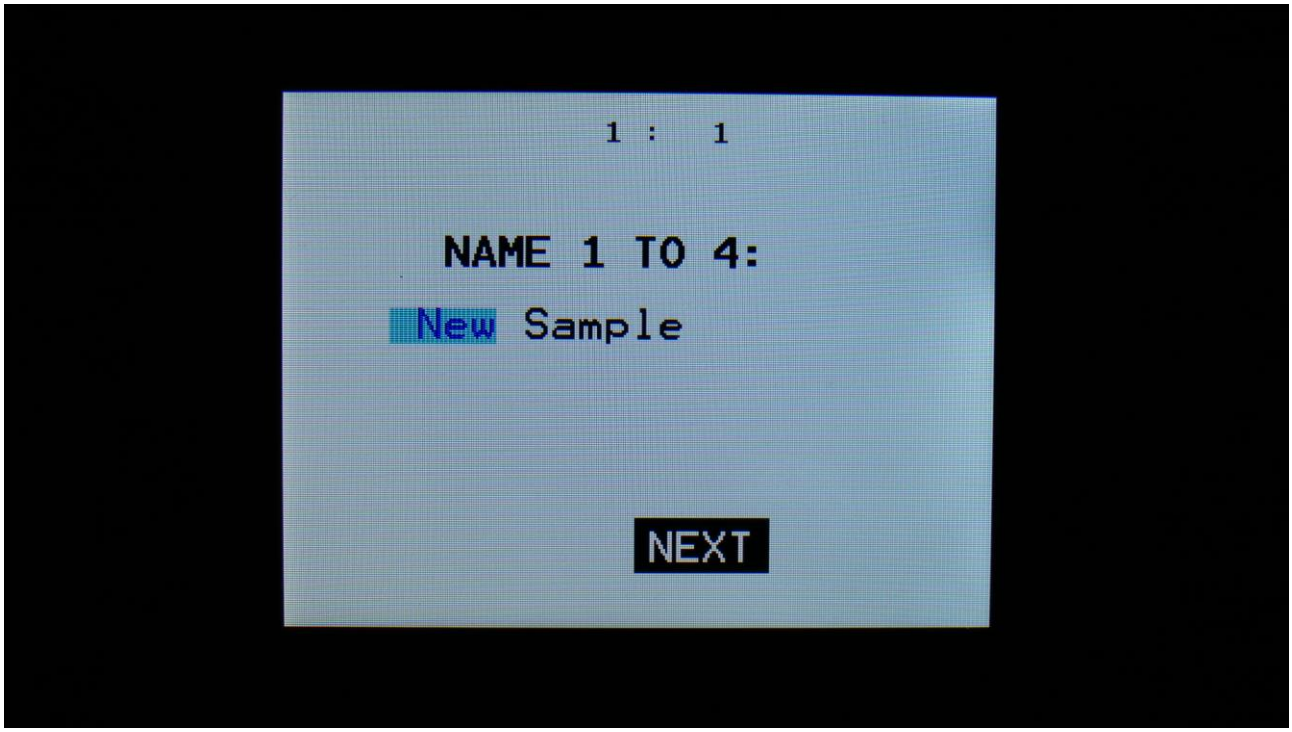
To stop sampling manually, you must go back to the ReSample page, and push the > button.

SpazeDrum will now jump to the audition/save page.

Push the > button to audition the sample, that you have just recorded.

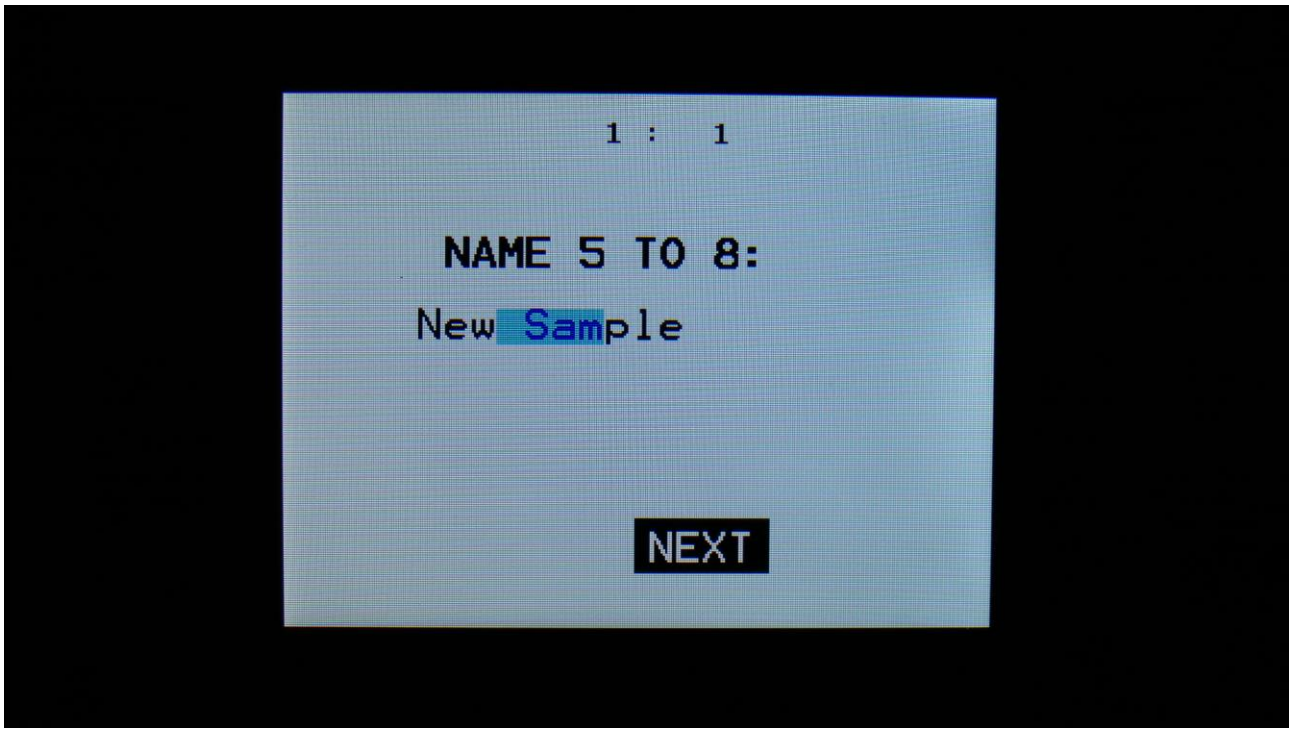
The audition box will turn black, while the sampling is playing back, and turn grey again, when it has stopped.

If you would like to keep the sampling, that you have just recorded, you must save it. From the audition/save page, push the < button.



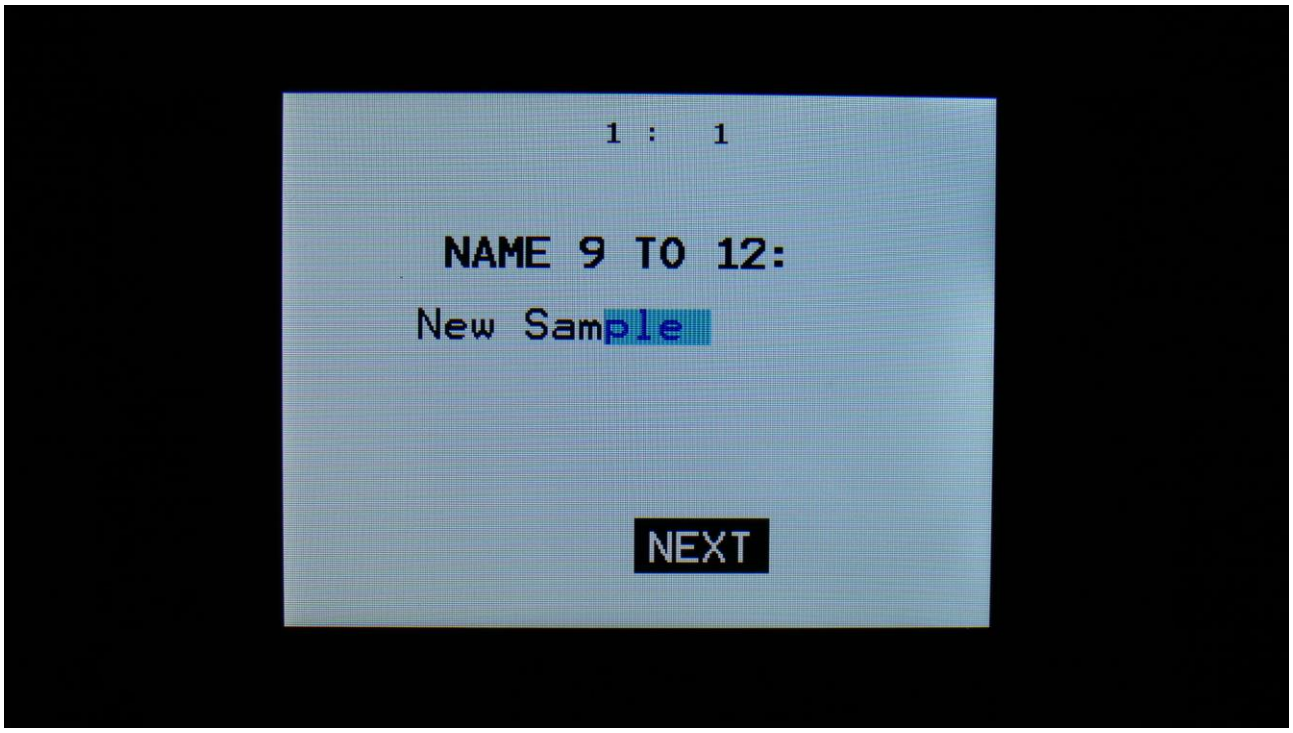
Input the first 4 characters of the name for the new sampling, using Edit Knob 1 to 4.

Push the > button, to go to the next 4 characters.



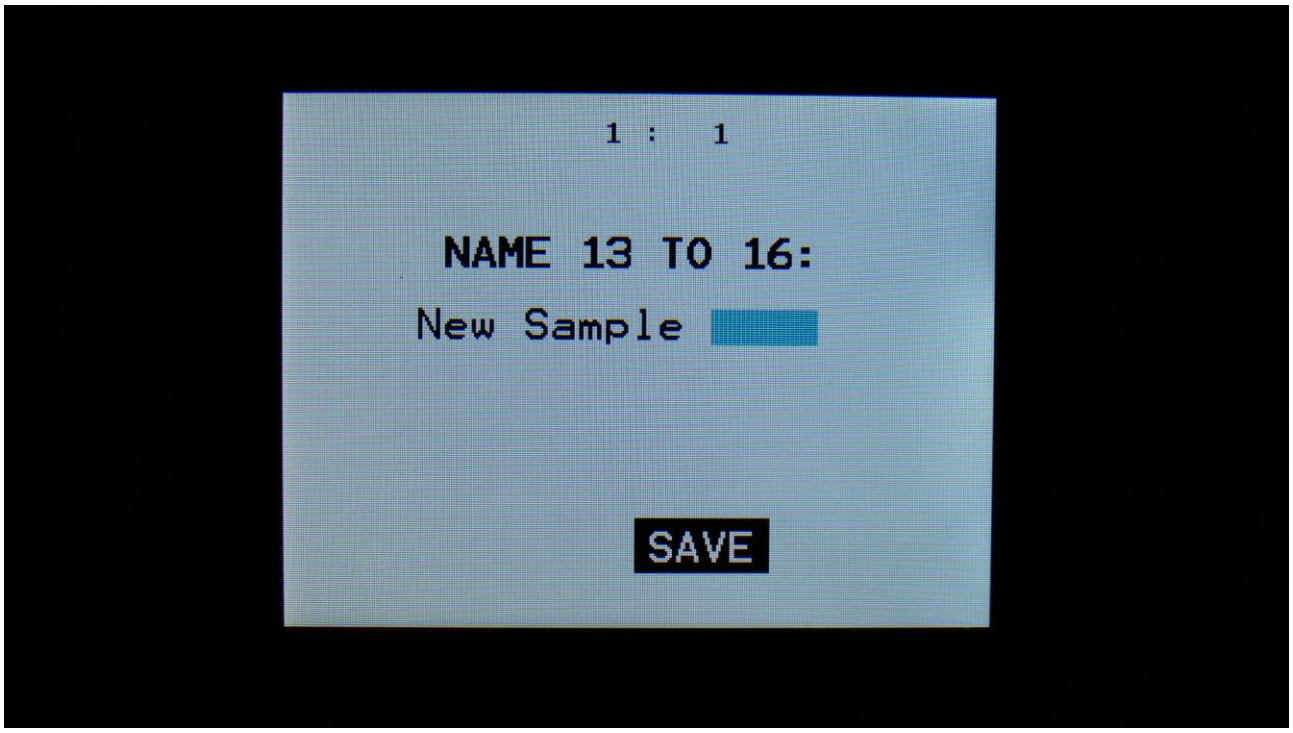
Input the next 4 characters of the name for the new sampling, using Edit Knob 1 to 4.

Push the > button, to go to the next 4 characters.



Input the next 4 characters of the name for the new sampling, using Edit Knob 1 to 4.

Push the > button, to go to the next 4 characters.

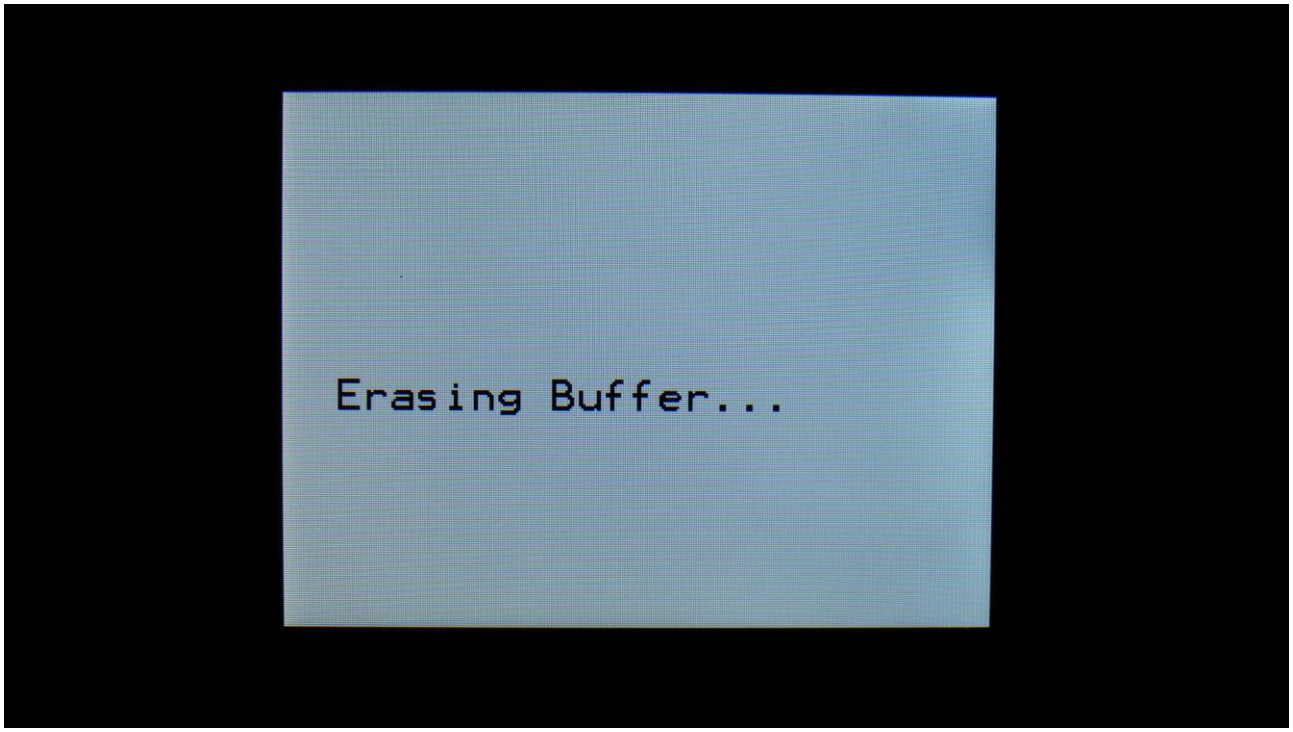


Input the last 4 characters of the name for the new sampling, using Edit Knob 1 to 4.

Push the > button, to save the sampling.

After the sampling has been saved, it can immediately be recalled on the Sample Edit pages, and on the 16 drum parts.

If you however do not wish to keep the sampling, push the Exit button. SpazeDrum will now erase the sampling, while the step button LEDs are running a sequence, and it is saying:



As soon as the sampling has been erased, it will exit from the ReSample pages.

PLEASE DO NOT TURN OFF YOUR SPAZEDRUM, WHILE IT IS ERASING OR WHILE AN UNSAVED SAMPLING IS HELD IN MEMORY. THIS MIGHT CAUSE THE FLASH MEMORY TO MALFUNCTION.

Metallic noise waveforms

On the analog percussion and the analog clap, 2 new metallic noise waveforms has been added, that can be used to modulate the analog oscillators, in addition to the other noise waves, to make these produce a wider range of sounds. These new oscillator types are particularly good for metallic/bell percussion and for snare drum sounds, when used together with the Buzz parameter.

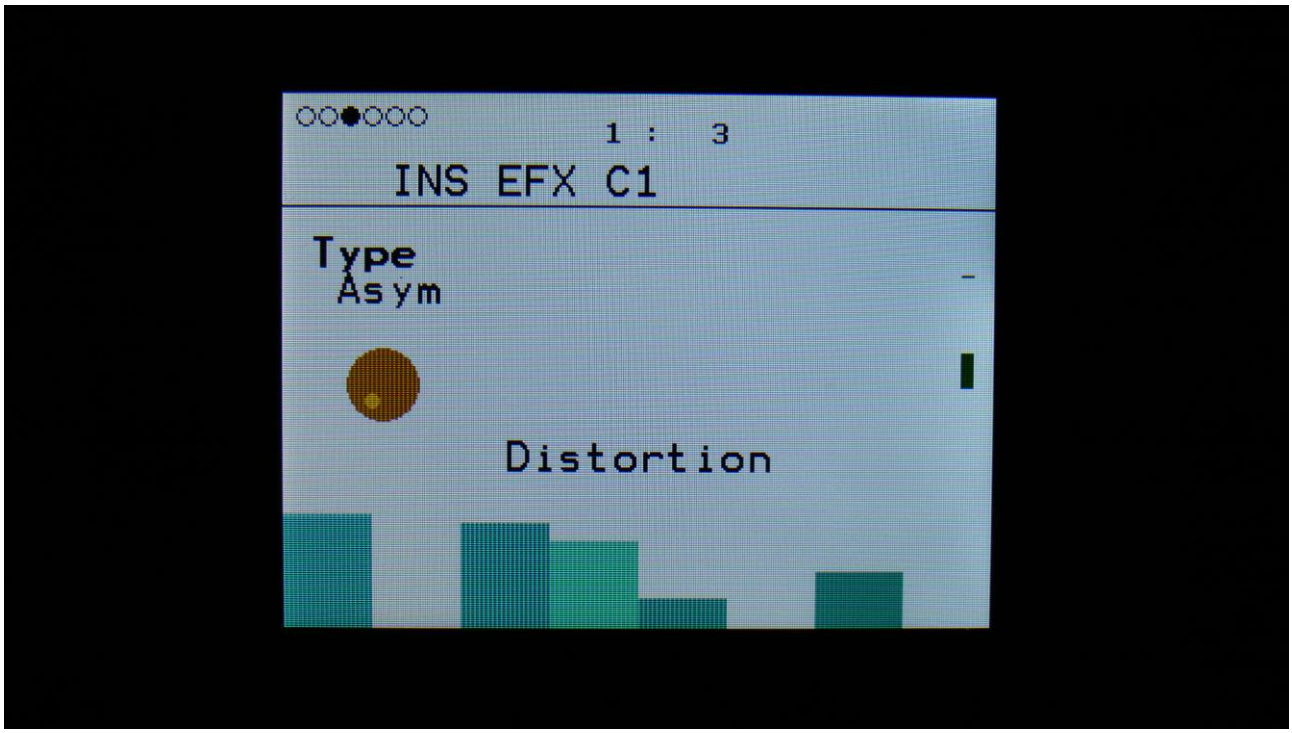
The metal noise waveforms can be selected, by setting the **NozWv** parameters on the Drum Oscillator pages to **Met** (Metal) or **RiM** (Ring modulated Metal).

When adjusting **NozPW**, the metal wave will generate metal waves in the lower range and metal noise waves in the upper range. The ring modulated metal waveform will generate different flavors of metal noise over the whole range of **NozPW**.

Asymmetrical Distortion

The Distortion insert effect has now got an extra asymmetrical variant.

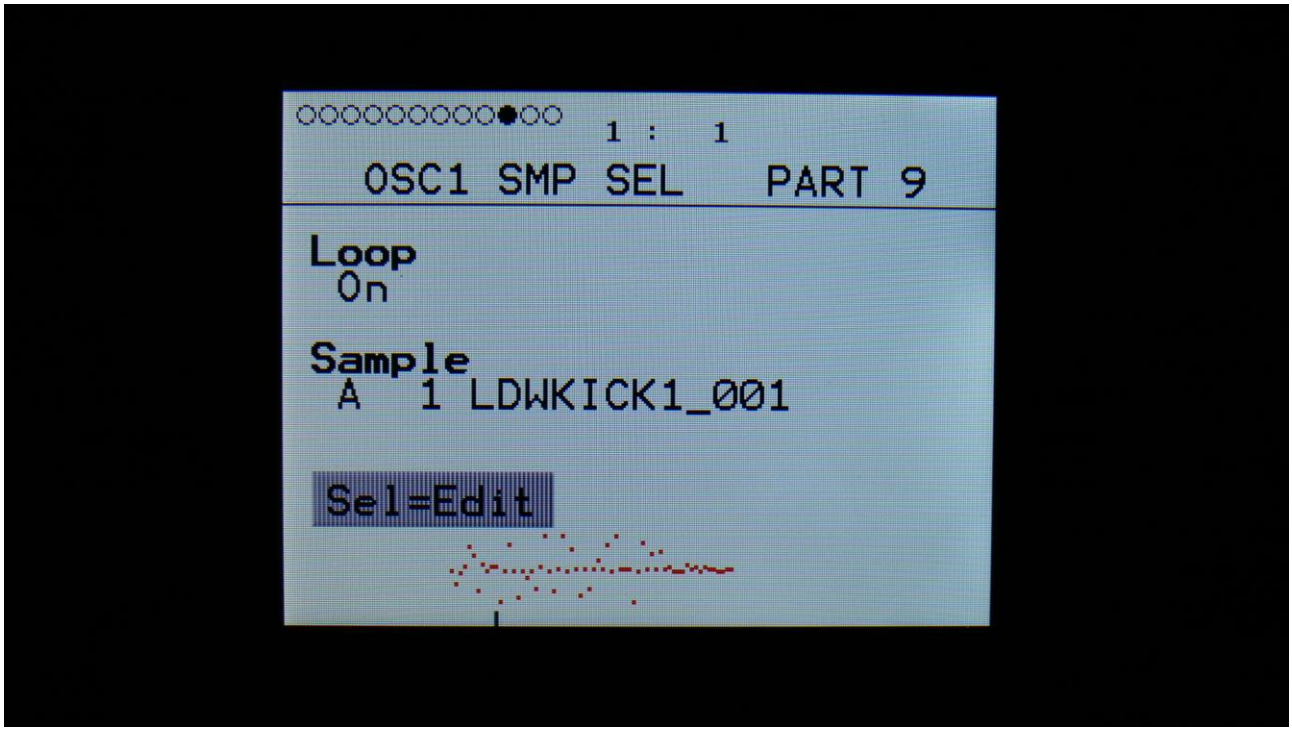
This will make a large amount of distortion, especially when keeping the input signal to it a bit low.



This can be selected by setting the **Type** parameter on the Distortion insert effect pages to **Asym**.

Sample Loop

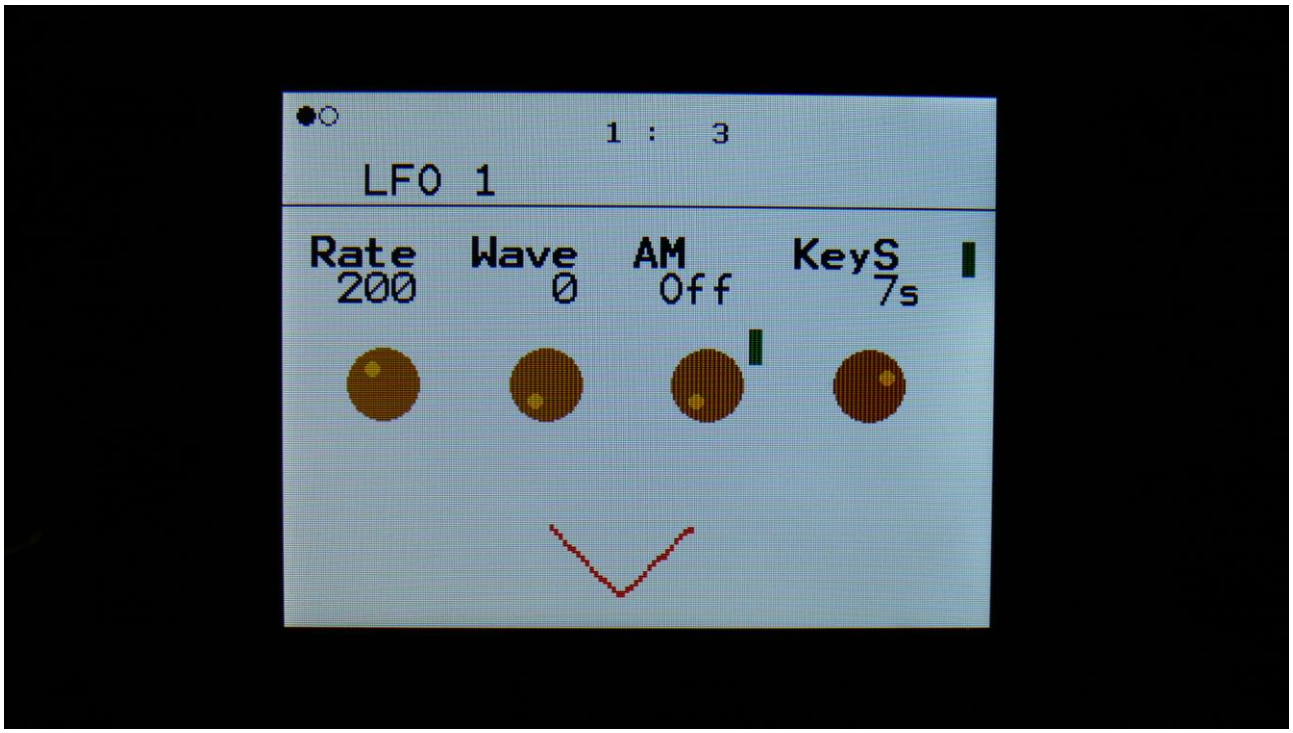
It is now possible to make the samplings used in the oscillators loop.



The Loop parameter has been added on the sample select pages for Oscillator 1, Oscillator 2 and Oscillator D, on both the analog and the digital voices.

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.



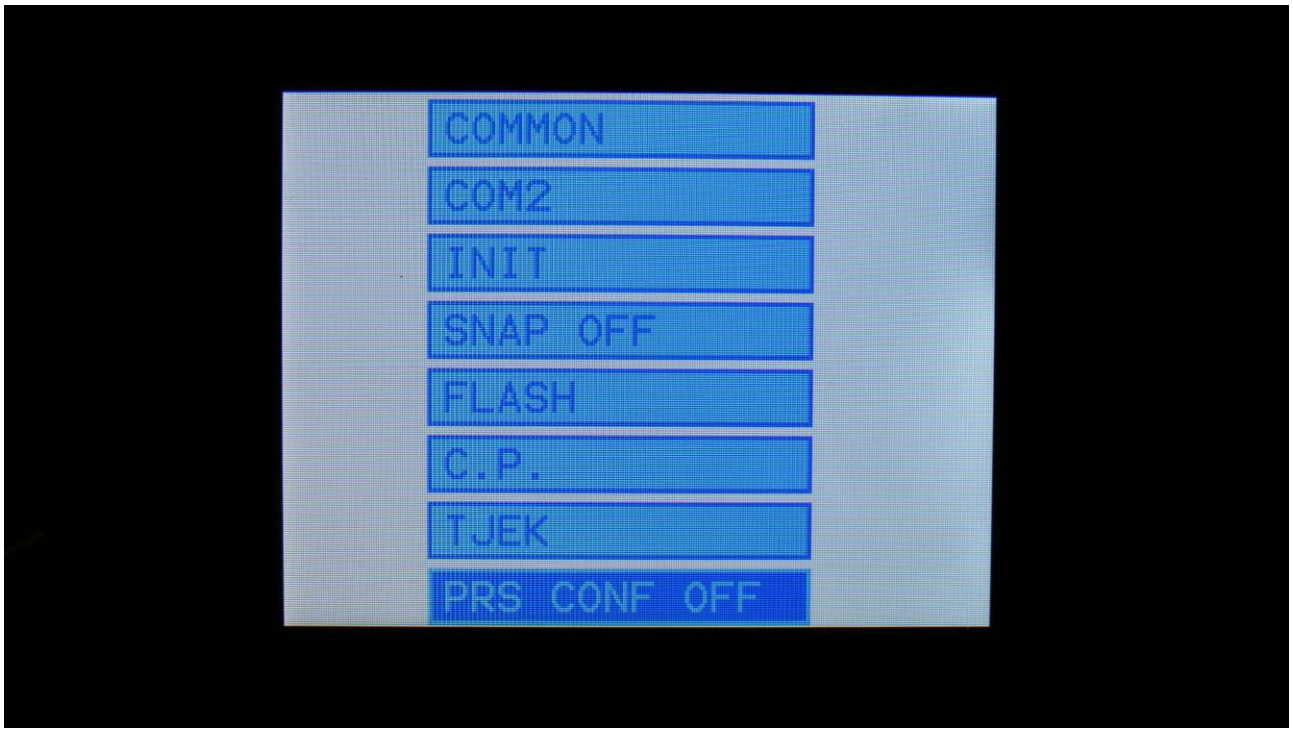
To put an LFO in one-time mode, on the LFO pages set the **KeyS** (Key Sync) parameter to any number that has an **“s”** after it (s for single cycle). The number before the **“s”**, tells which part will make the LFO restart.

Preset Change Confirm

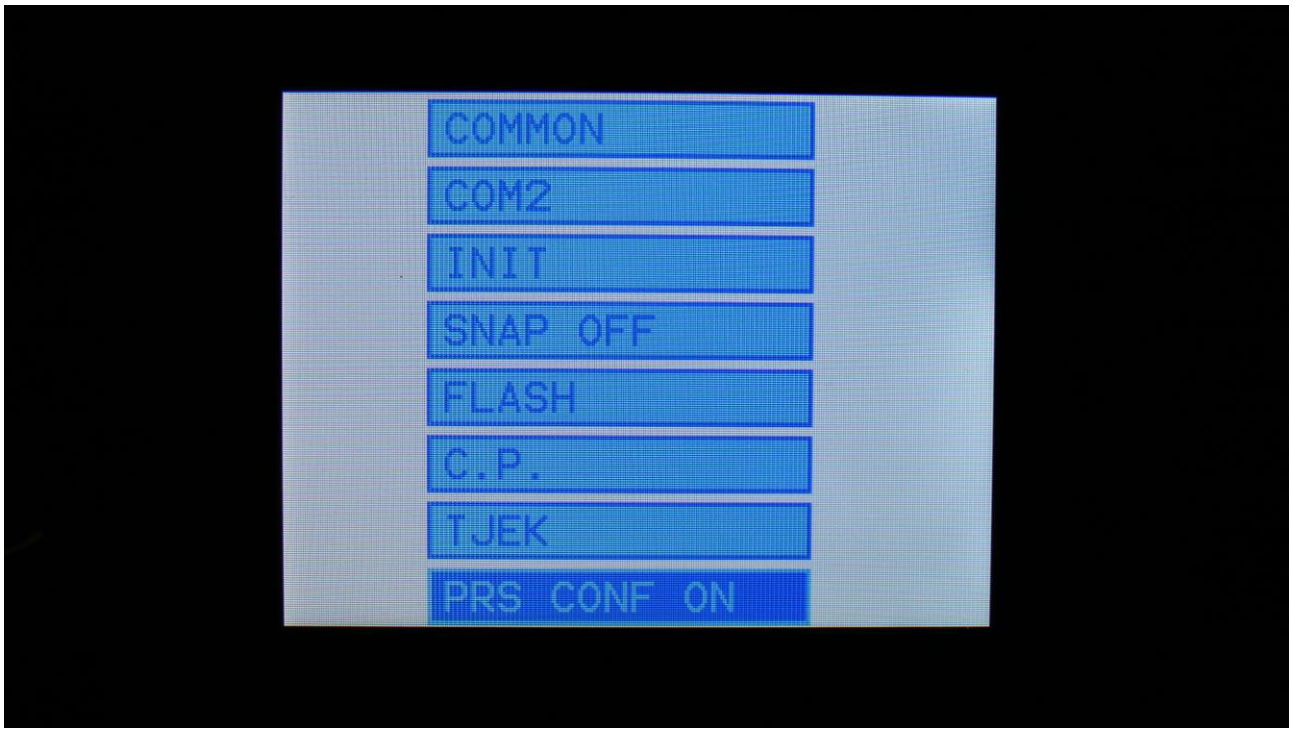
When changing the preset in earlier versions, by using the < and > buttons, SpazeDrum would change the preset, when the button was released, and note track 1 started over. Sometimes this could lead to unintended preset playback.

To prevent this, a preset change confirm function has been added. This can be switched on or off as desired.

To switch the preset function on or off, go to the Setup Menu page.



Select “PRS CONF OFF” in the bottom of this page, using the < and > buttons, and push the Edit button to change.


COMMON
COM2
INIT
SNAP OFF
FLASH
C.P.
TJEK
PRS CONF ON

When the preset change confirm function is on, and you change the preset, using the < and > buttons, SpazeDrum will now ask you to confirm, before it jumps to the new preset, by writing “CONF” on the Preset Select page”.

To confirm the preset change, push the Edit button. Now CONF will change to NEXT, until note track 1 starts over, and the preset change happens.

If you do not wish to change the preset anyway, simply push the Exit button, when it says CONF on the display. This will discard the preset change.

Song/Pattern Mode Change

When I was using the quick jump functions, to jump between various edit pages, I constantly managed to hit the Song button! This was really annoying!

So now step button 10 (Song) has to be held down for a couple of seconds, before SpazeDrum will jump between song and pattern mode.

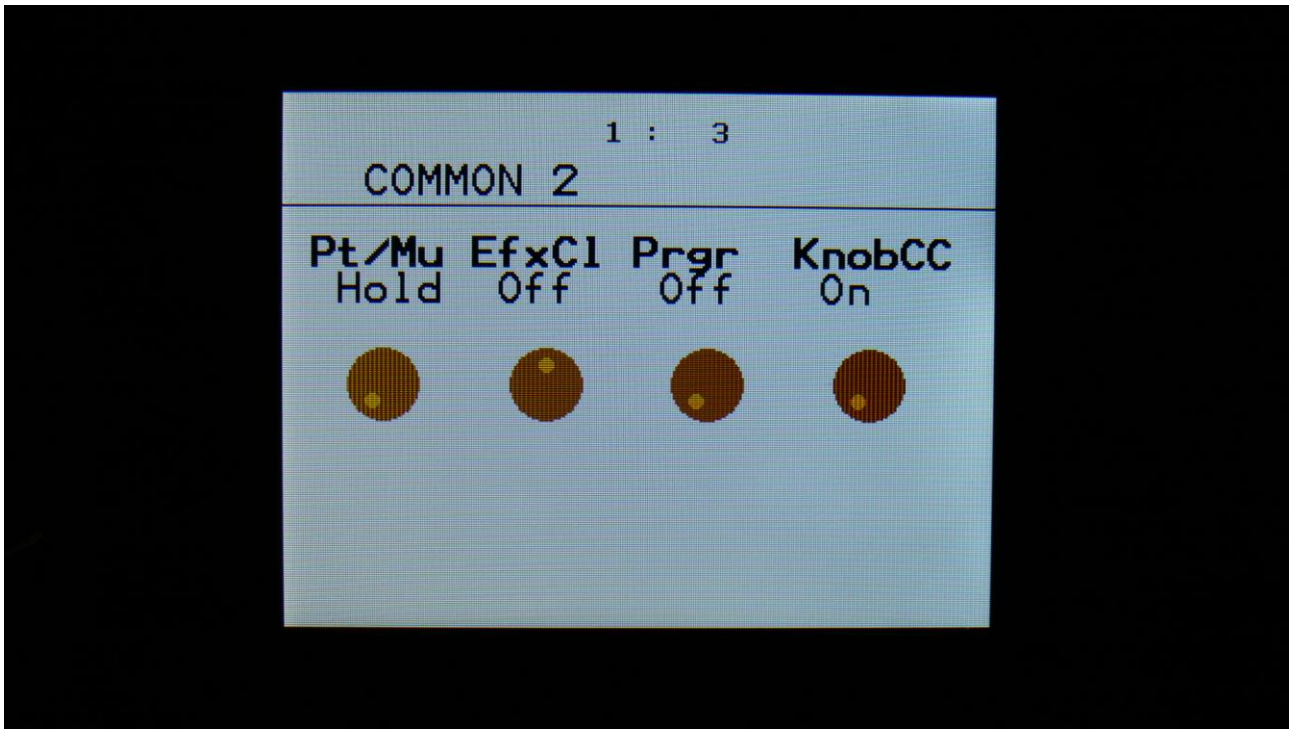
EFX buffer clear

When SpazeDrum 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.



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2020