Gotharman's zaTurn

Modular Synthesizer

Update Manual 3.77

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VCF Frame Sequencer added

The filter frame sequencer from our mighty Vothar 8 has now been added to zaTurn ☺

This will allow you to program 8 "frames" of filter settings, and let the frame sequencer morph through these. Morph time and stepped/smooth transition can be set for each step.
It is possible to morph the Cut and Reso parameters only, or to include G-ray Feed, Output Level and modulation amounts as well.

The Morph Times can be modulated by any source.

A filter frame sequence can be free running or key synced.

Each of the 4 analog filters has their own frame sequencer.

And, of course, the frame sequencers have 2 layers of parameters that can be morphed between.

How to set up a frame sequence

The Filter Frame Sequencer is located on the VCF G-Ray page.
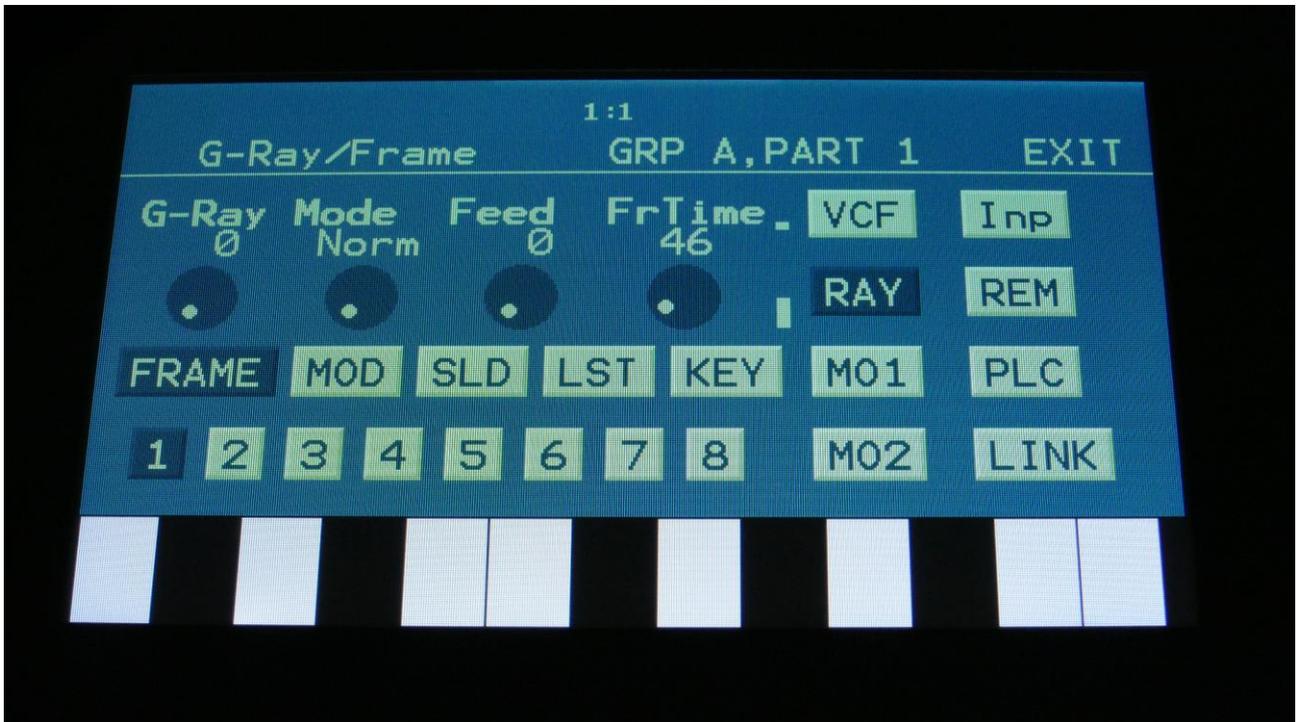
Touch the **FRAME** button, so that it turns dark blue. The frame sequencer has now been activated, and you will hear the sound of the first filter frame (make sure that **"1"** is dark blue).

Now touch the VCF button, to go to the main VCF page.

Adjust the **LpCut, Lreso, BpCut and Breso** parameters to obtain the desired sound for the first filter frame.

Now let's add the second filter frame.

Touch the RAY button, to go back to the filter frame page.
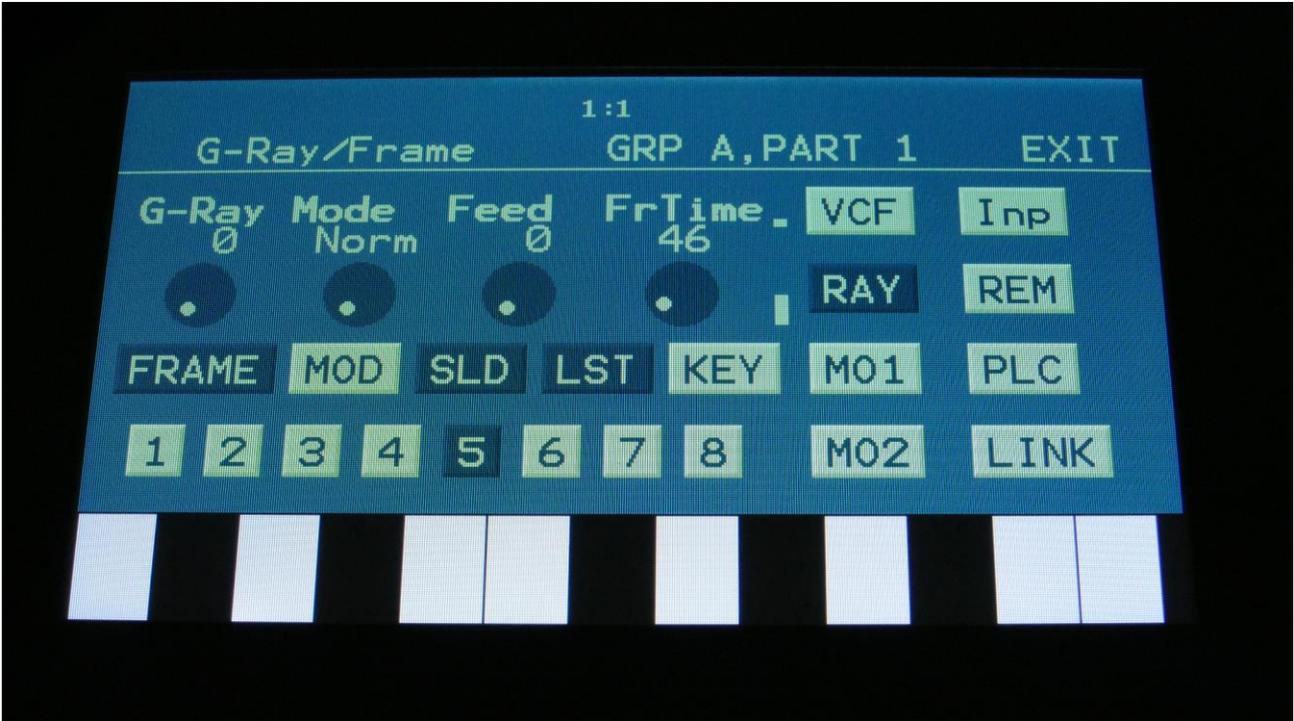
Touch the **LST** button (Last Step), so that it turns dark blue.

Now touch **"2"**, so that this turns dark blue. You have now set the last step, to be filter frame 2.

Touch the **LST** button again, so that it turns white.
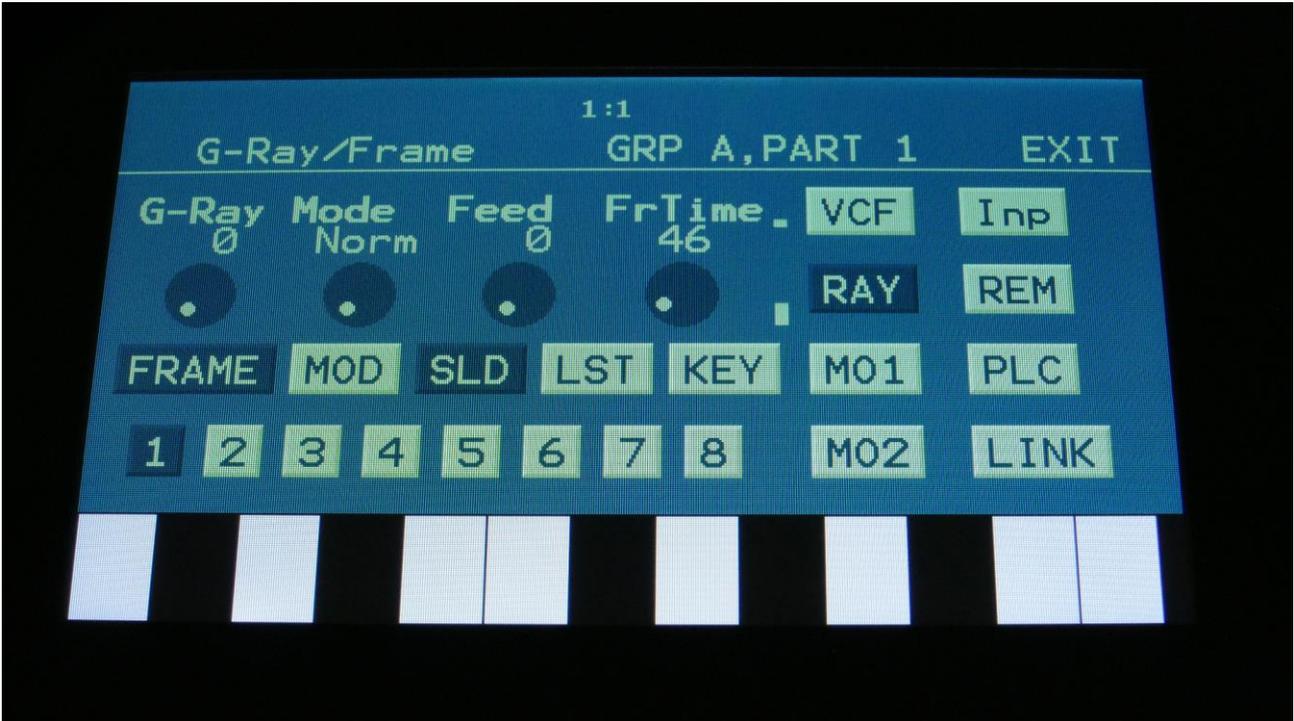
With frame one still selected, you might now want to adjust the frame 1 time, using the **FrTime** parameter, and to touch the **SLD** (Slide) button, to make the frame sequencer slide smoothly from frame 1 to frame 2.

Now touch **"2"** to select frame 2, set **SLD** and **FrTime** as desired, and go to the main VCF page, to adjust the filter parameters for frame 2.

Repeat this process, to set the parameters for the other frames (up to 8).

You can, of course, also just go to the parameter Randomizer page and select VCF, to get the filter frames randomized, instead of setting things up yourself.
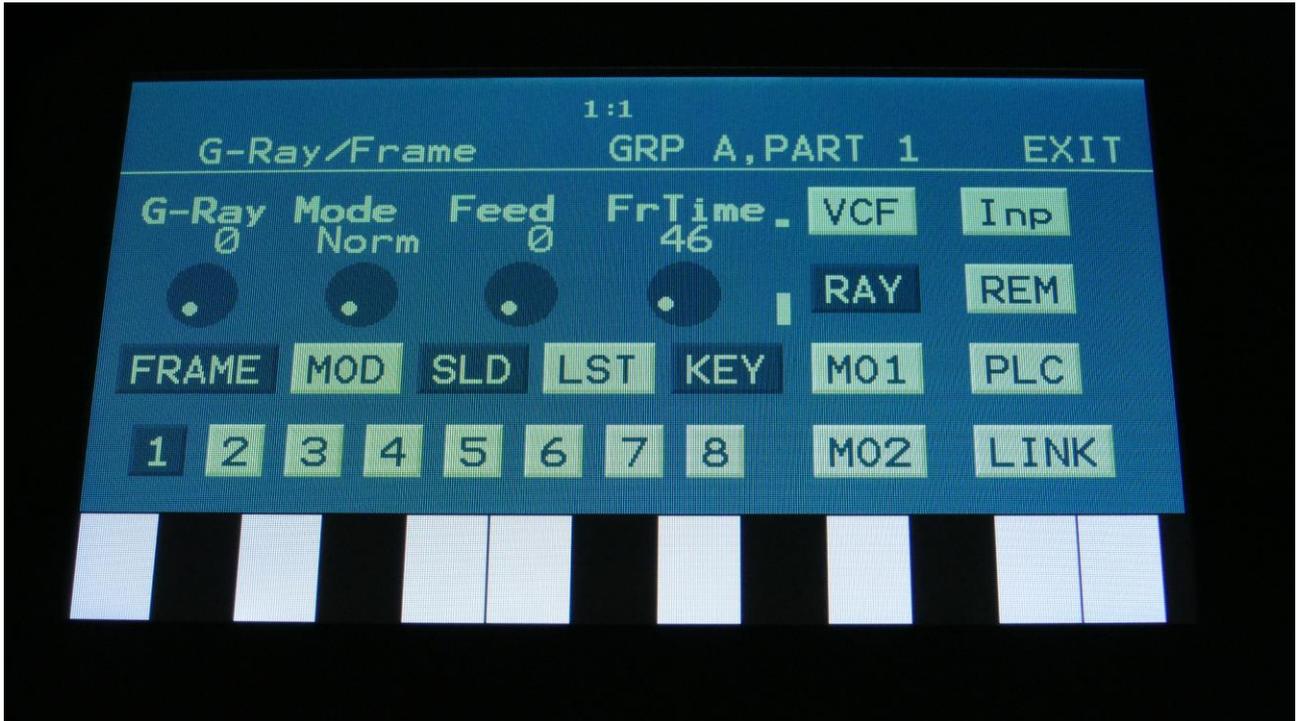
To make the frame sequence restart every time you hit a key, touch the **KEY** button, so that this turns dark blue.
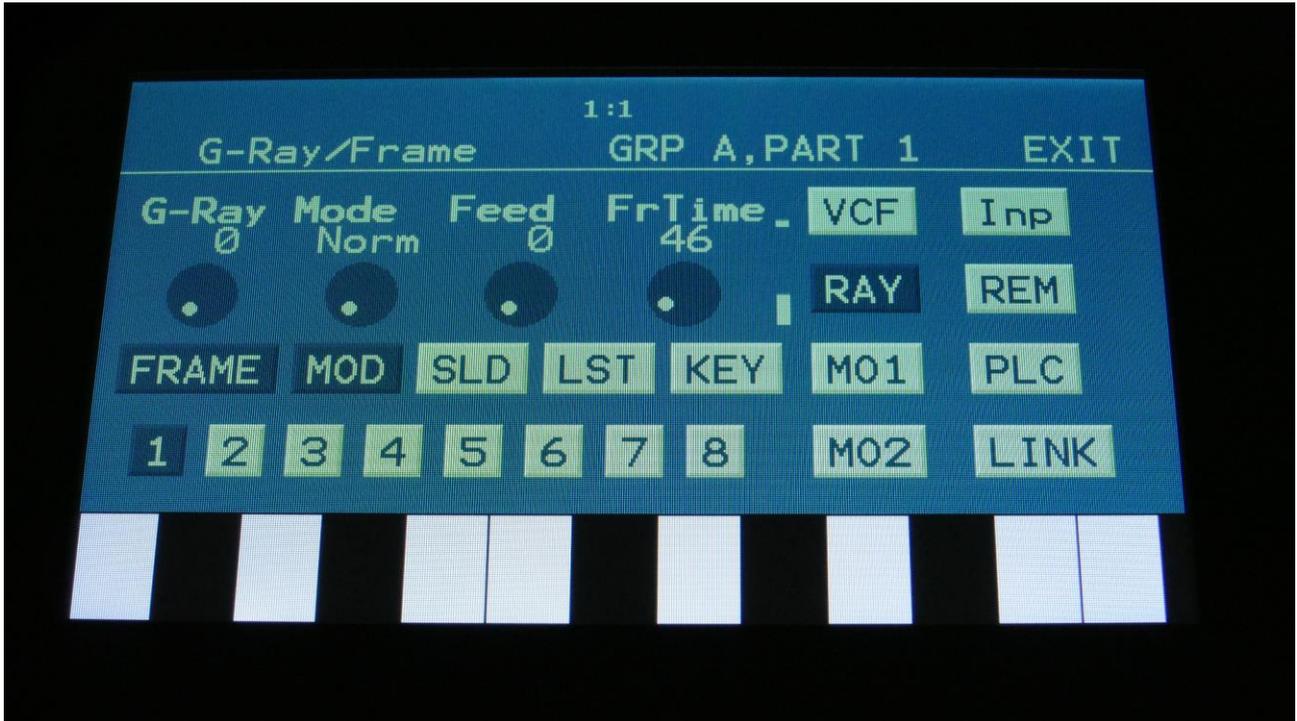
To make even more advanced filter frame sequences, it is also possible to include the G-Ray Feed, Outp, and all modulation amount parameters in each frame. To do so, hit the **MOD** button, so that it turns dark blue.

When the **MOD** button is white, the G-Ray Feed, Outp and modulation parameters can be adjusted as usual, and will affect all the filter frames at the same time.

Frame Sequencer Time Modulation

The time it takes the frame sequencer to move from one frame to the next, can be modulated.
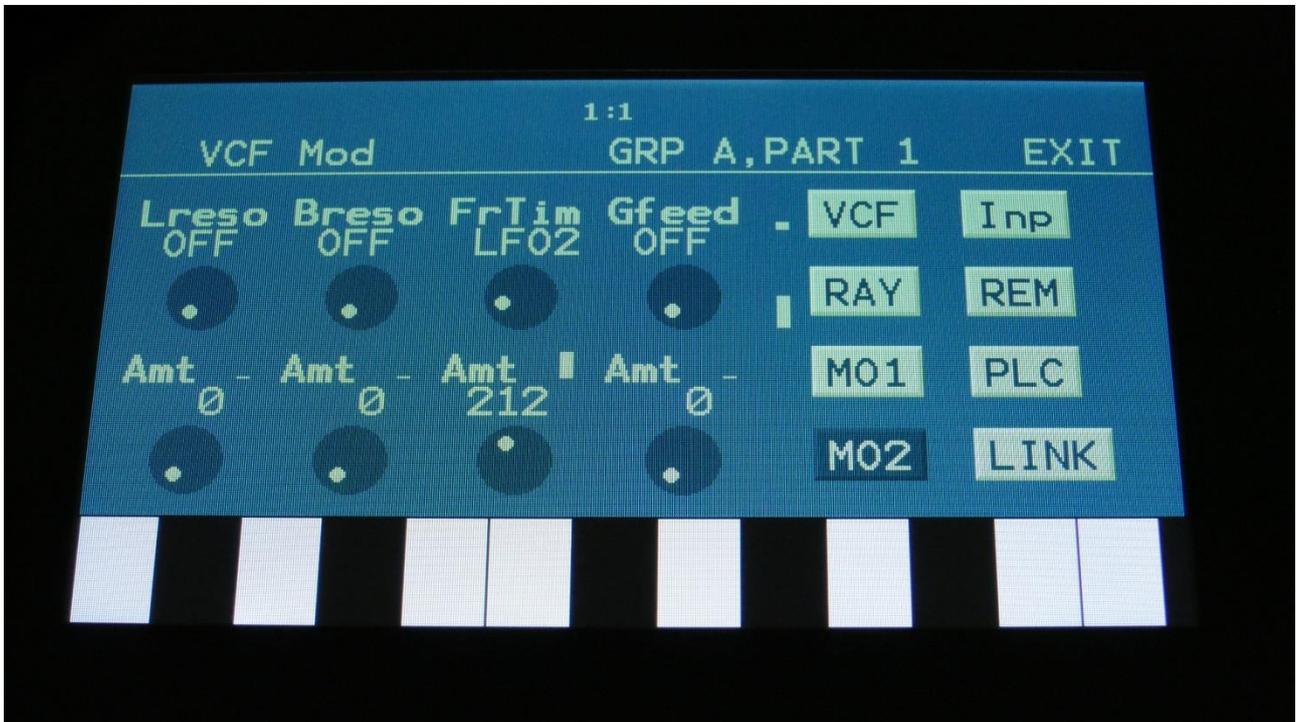
On the VCF MO2 page, you will find the **FrTim** parameter. Setting this up to a modulation source, and turning up the amount, will make it modulate the frame transition times.

LFO's can now trigger parts and sequencer
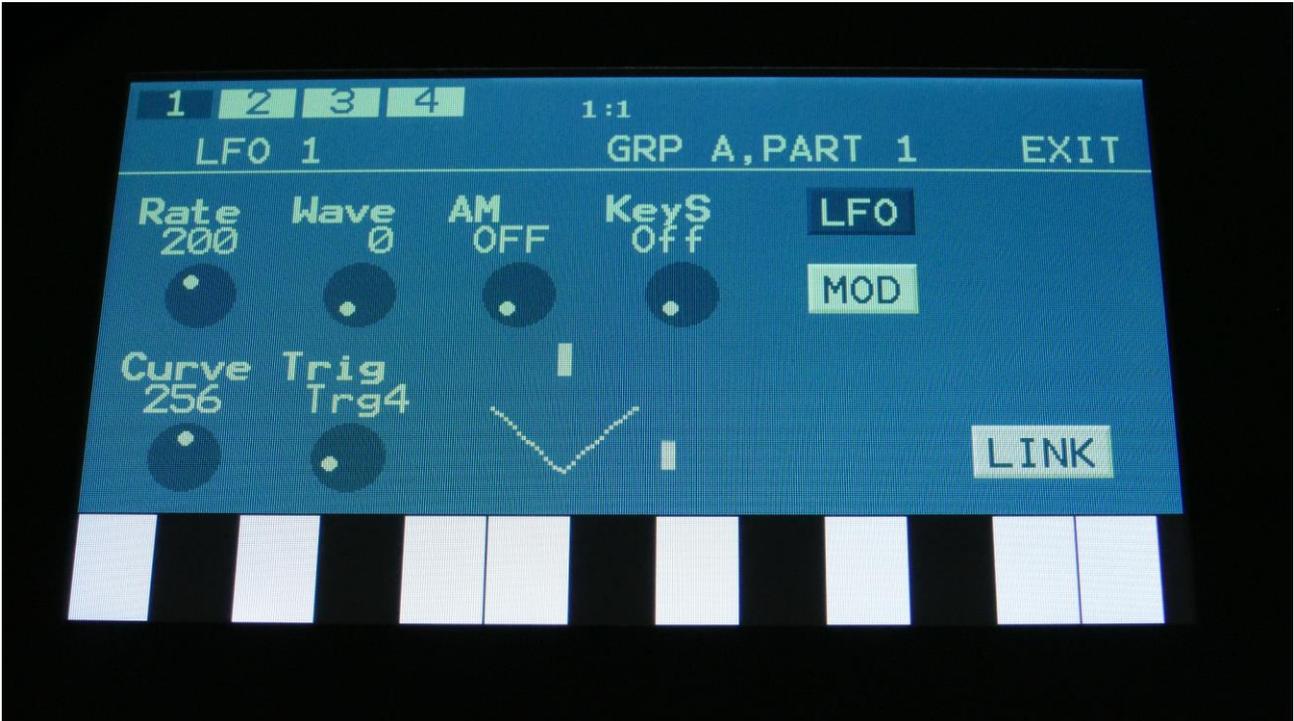
A **Trig** parameter has been added to the LFO 1 and 2 pages in each group.

This parameter can be set to:

Off: Does nothing.

Trg1 to Trg 8: The LFO will trigger Part 1 to 8.

1/32, 1/24, 1/16, 1/12, 1/8, 1/6: The LFO will clock the internal sequencer. Every time the LFO raises above its center value, the sequencer will increment 1/32, 1/24, 1/16, 1/12, 1/8, 1/6 step, as selected. The internal sequencer clock, and any MIDI clock will be ignored. MIDI clock will still be transmitted, if the ClkOut parameter in the COMMON menu is set to on.

s/s: The LFO will make the sequencer start or stop every time its output raises above the center value.

Rst: The LFO will make all tracks of the sequencer reset to their respective start step every time its output raises above the center value.

Controller tracks smooth on/off per step
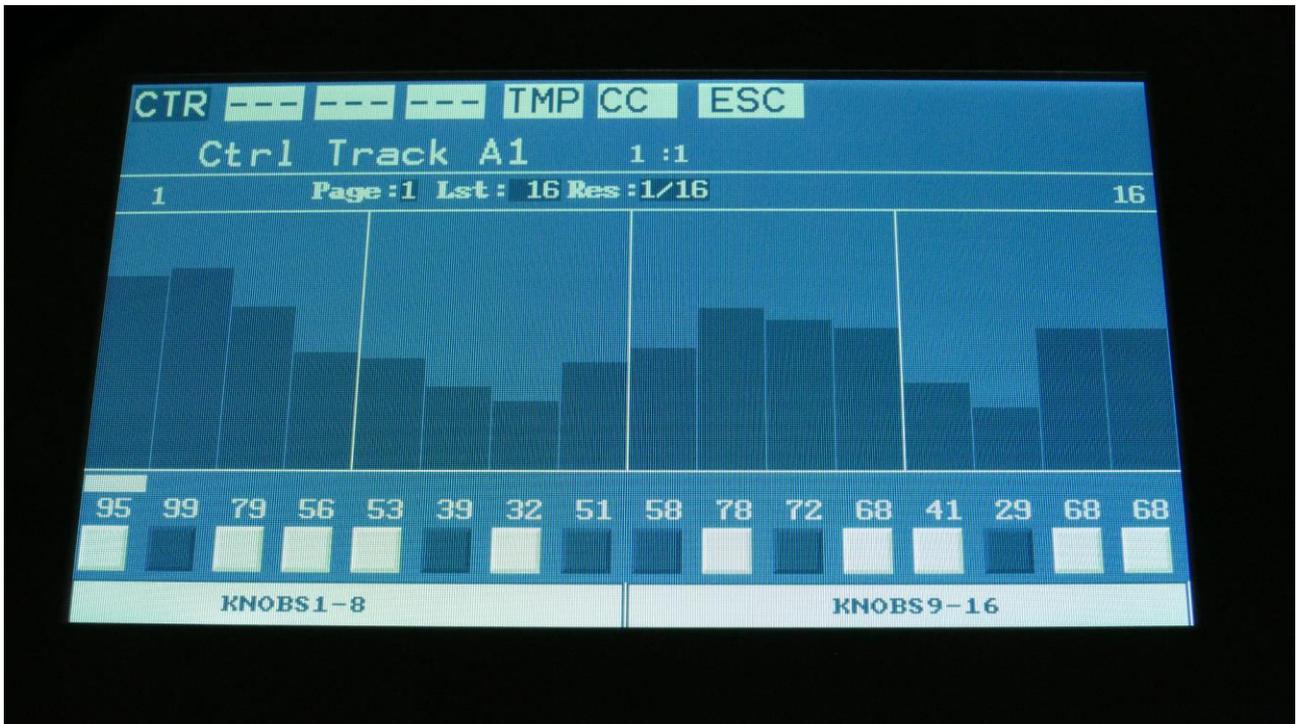
An extra row of boxes have been added to the controller track pages. By touching these, smooth can be set on (dark blue box) or off (white box) for each step.

It is still possible to just turn the Smooth parameter on, to add smoothing to all steps at once.

Note Tracks Steps On/Off shown on display
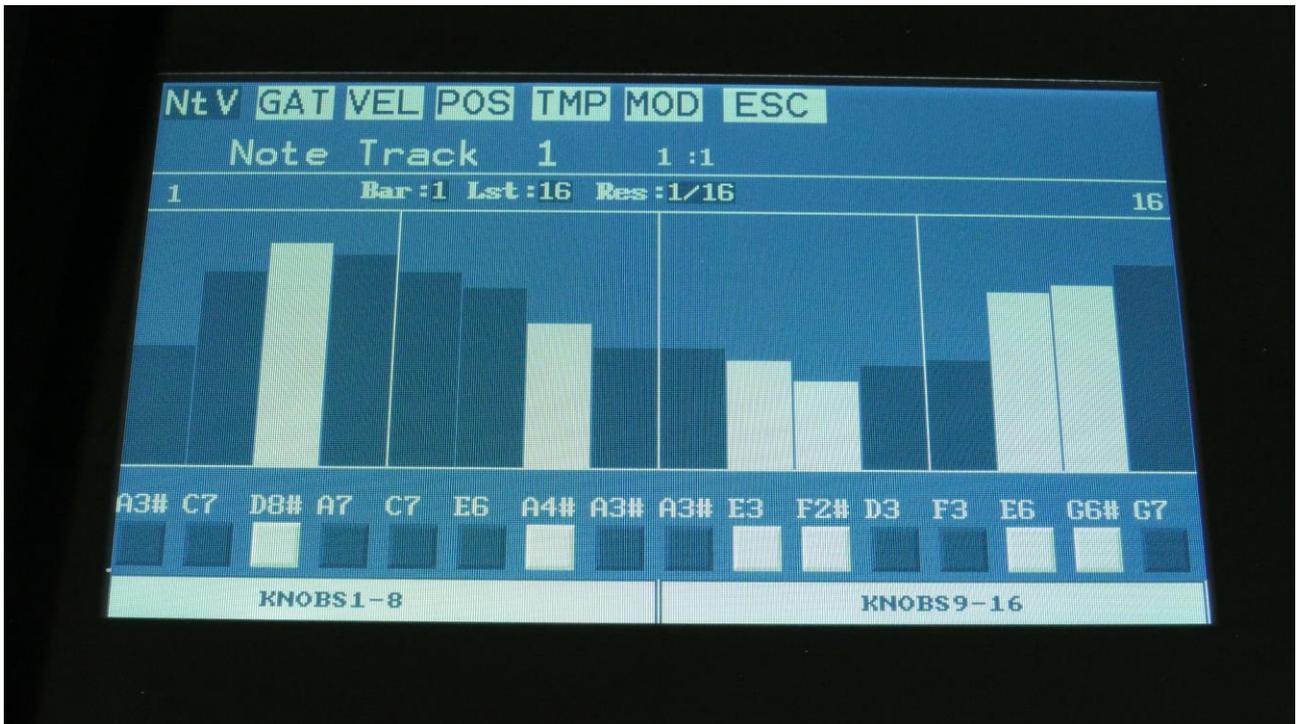
The note tracks steps ons/offs are now shown as boxes right below the note values. Every time you touch one of these boxes, the step will toggle between on(dark blue) and off (white).

Sequencer step values are now shown in whole numbers
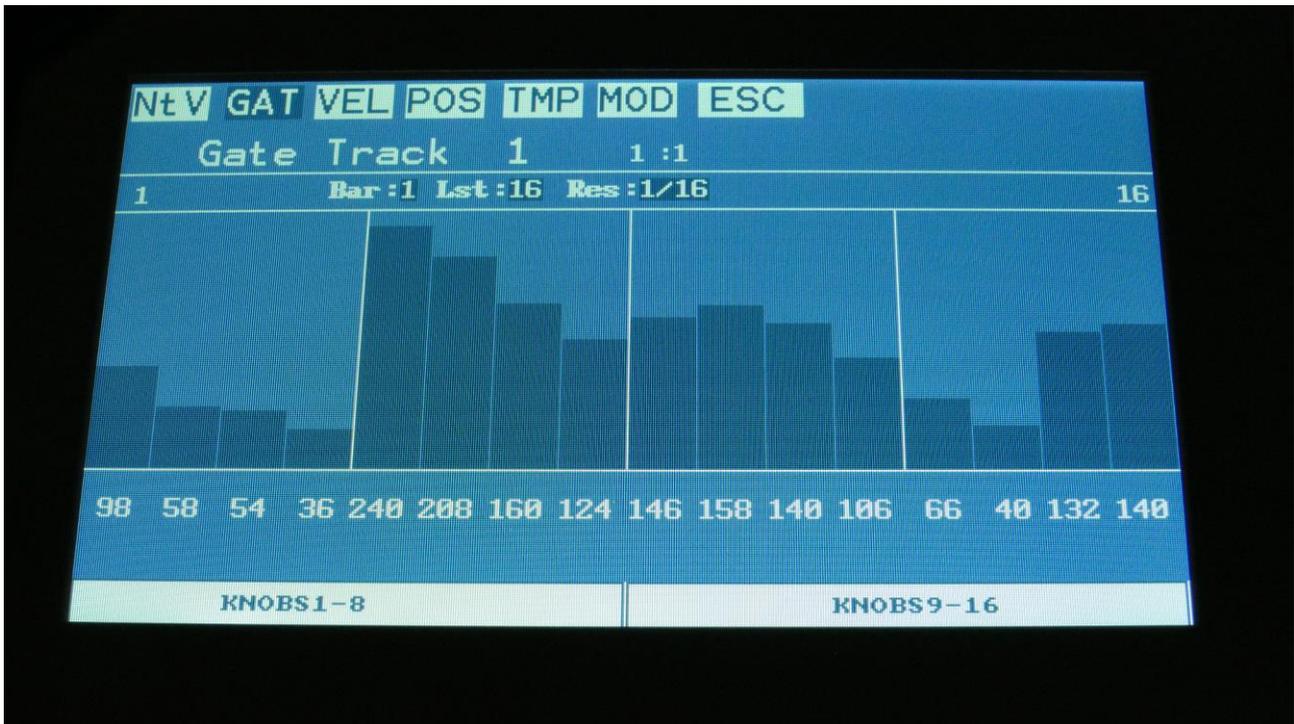
Using the extra space on the zaTurn display, the values on the sequencer pages are now shown as whole values, instead of adding a line under the numbers, when they were above 100.

On the note values page, a "#" is shown after the note value, when this is a black key.

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