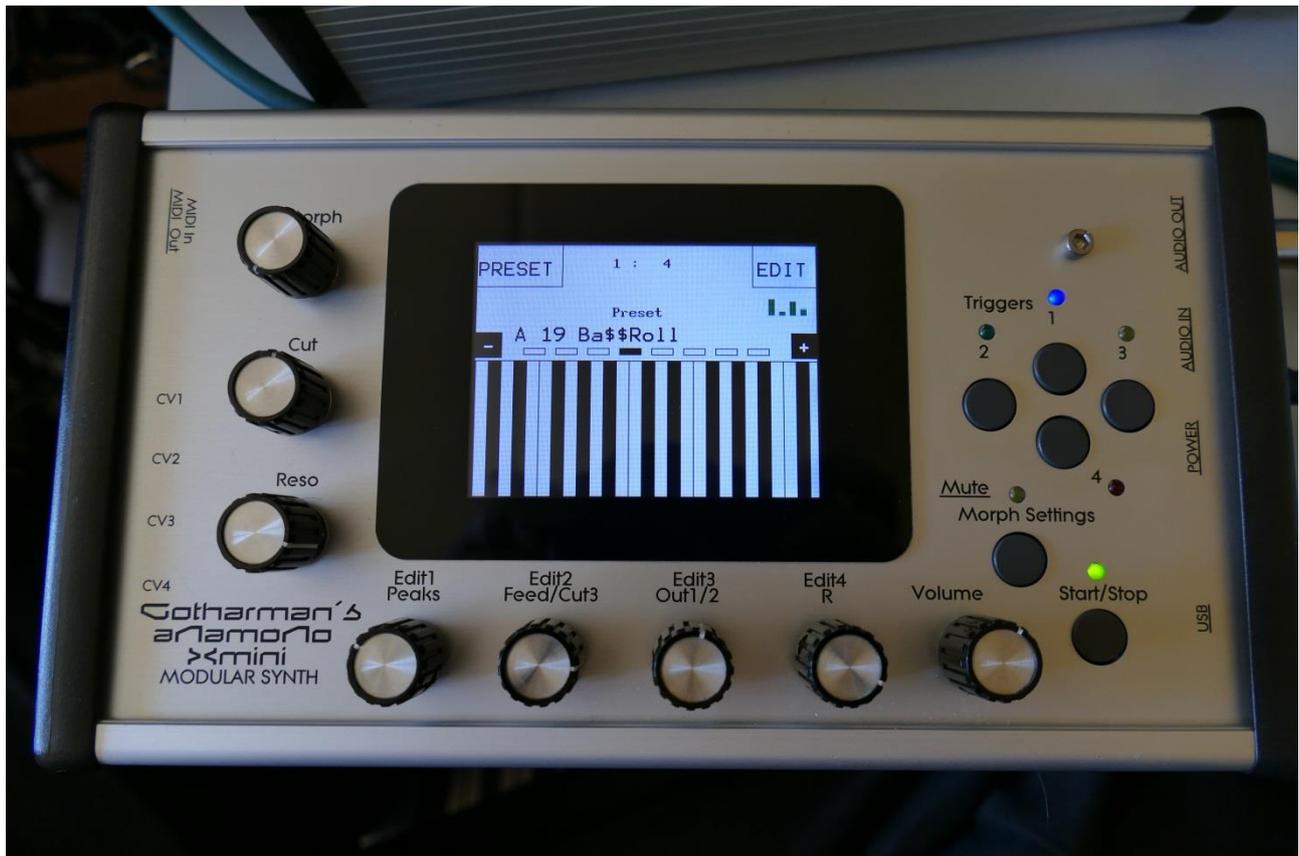


Gotharman's arAmoNo ><mini



Modular Synthesizer

Update Manual v3.35

New Navigation System –Faster to navigate!

Synth parameters Randomizer

Sequencer parameters Randomizer

Sequencer analog clock, start/stop and reset via the CV inputs

Controller track 1 to 8 on/off gate outputs to CV out's and modulation

Quantizing of Sequencer controller tracks to 1v/oct and 1.2v/oct

New touch based sample select system

Chop Edit parameters has been moved around, for a more logical setup

“Next” button added to chop edit

Sequencer Realtime Record quick start mode

USB exit moved to upper right corner

Sample and loop playback has been optimized

Touch Sequencer optimized

2 new smooth VCA modes

“Preview” function has been added to the Preset Select page

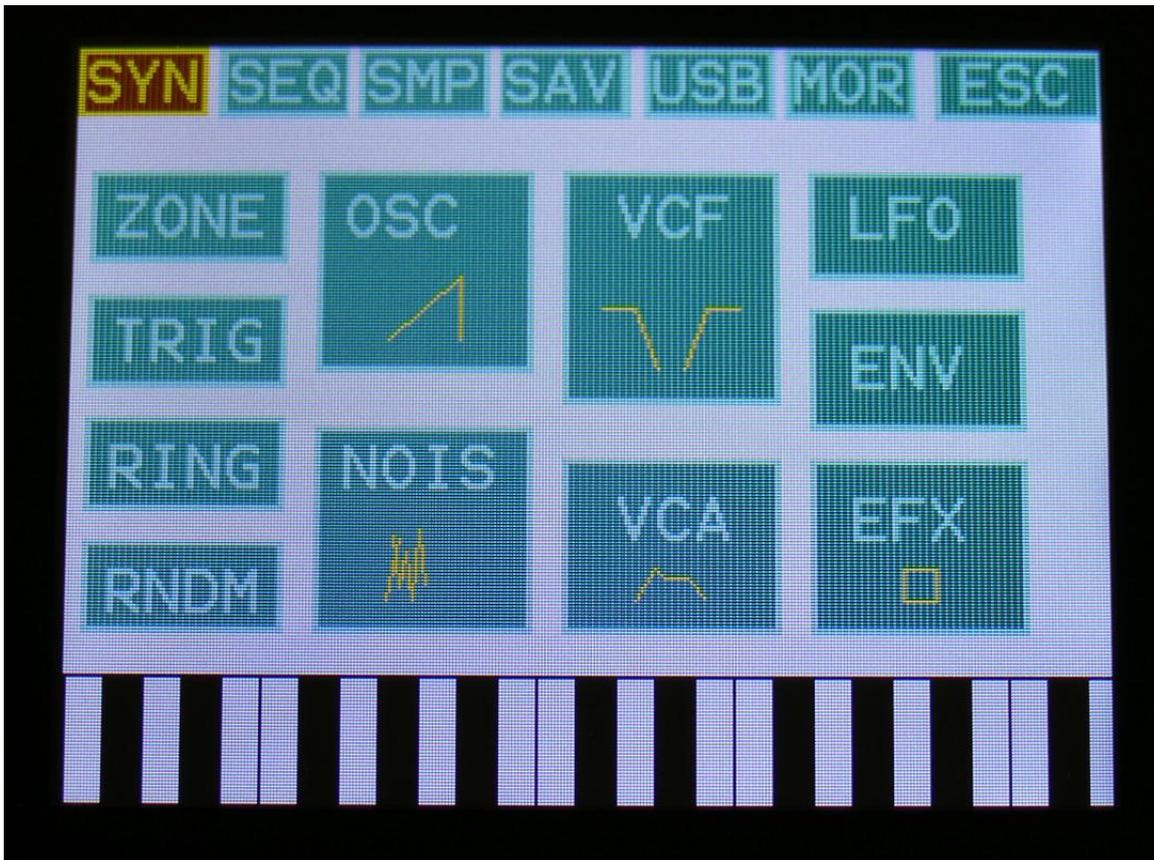
All Touch Keyboard controls are now available on the Preset Select page

Copy Sequencer Track

Bug Fixes

Earlier Updates

New Navigation System –Faster to navigate!



Anamono Xmini navigation system has now been improved in PolySpaze style.

In the top of the main Synth page, you will now find the 6 main edit groups and the ESC (escape) touch button. Touch any of these group buttons to access them, and touch ESC, to exit to the Preset Select page.

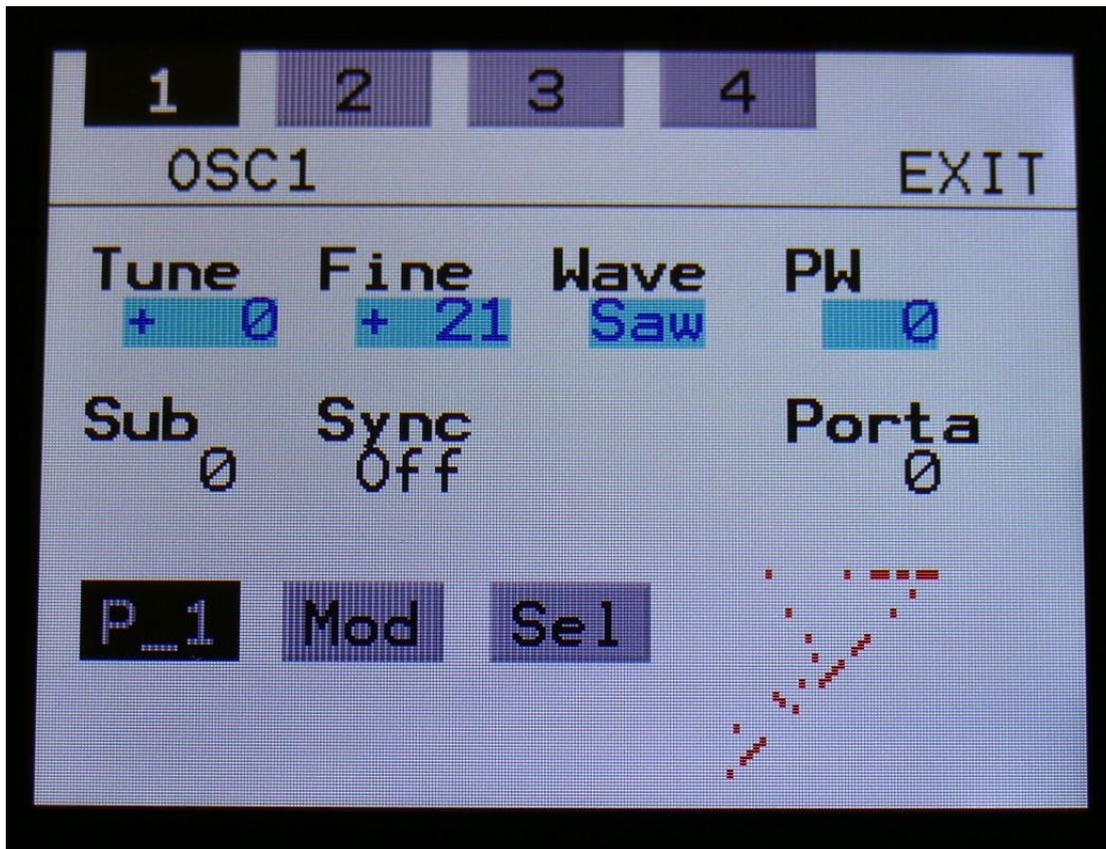
The touch button of the currently selected edit group is brown/yellow, while the buttons of the other groups are green.

The group of touch buttons, will be referred to as the “group select bar”.

Below the group select bar, you will now find the synth blocks. Touch any block, to access the parameters of it, and edit these. If a synth block contains more than one module (i.e. Oscillator 1-4, VCA1-4), it is now possible to select the modules inside the block on the edit pages, instead of having to jump forwards and backwards to select multiple modules.

In the bottom of this page, the touch keyboard is located.

Inside the Oscillator modules block:



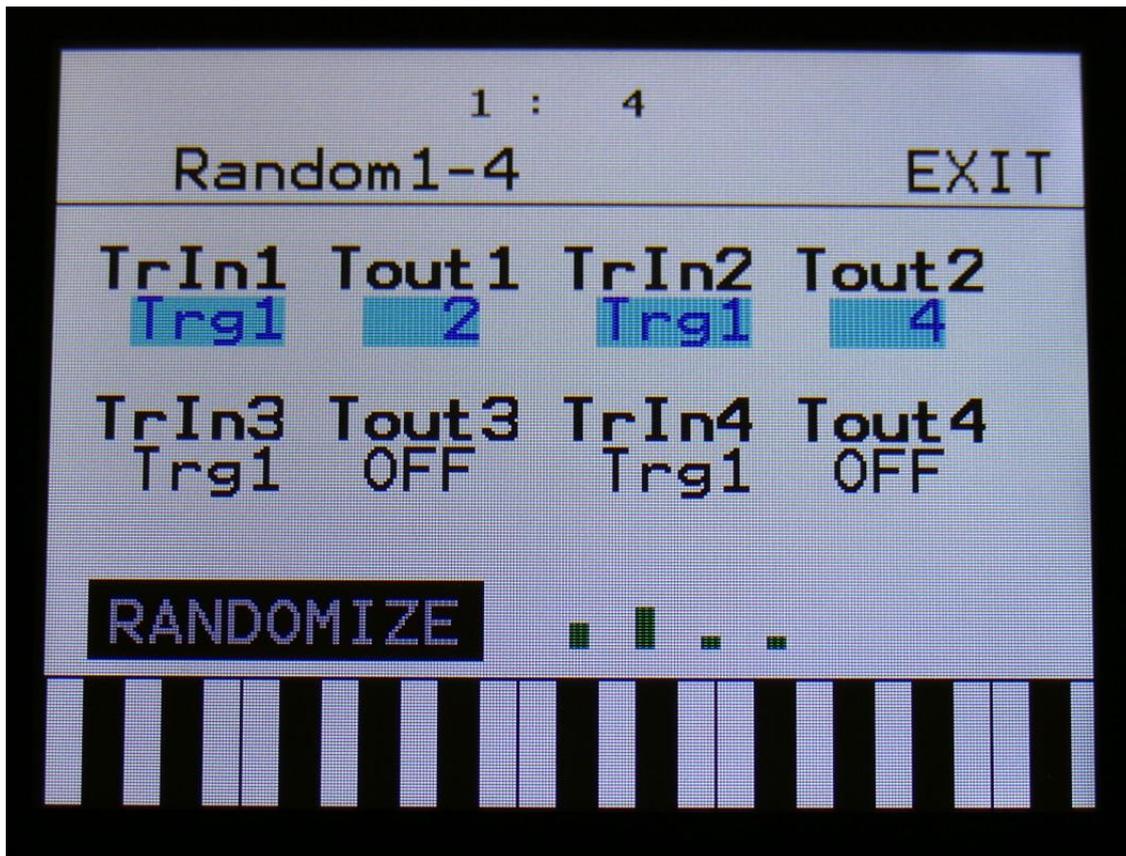
By touching the touch buttons in the top of the page, named "1", "2", "3" and "4", Oscillator 1 to 4 is selected.

The same system are applied to the VCA's, the Envelopes and the effects processors.

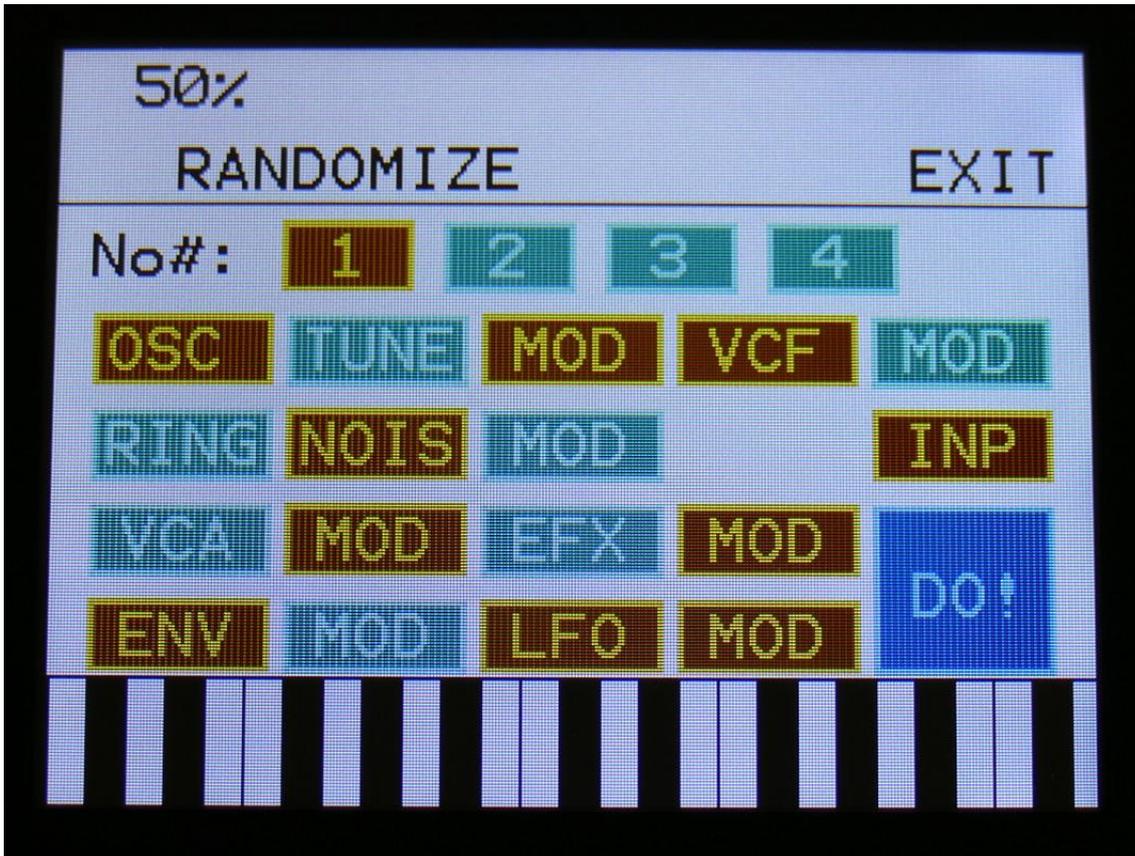
Synth parameters Randomizer

If you should ever need some new inspiration for sounds, or if you just want to surprise yourself with some sounds that you never even imagined, a parameter randomizer has been added.

To enter this, first enter the "RNDM" pages:



From here, hit the “RANDOMIZE” touch button, to enter the Randomizer page:



Switch the blocks on, that you would like randomized, simply by touching these, adjust the percentage, that it must maximum change the parameters, using Edit Knob 1, and hit “DO!”. For module blocks, that contains more than one module (i.e. Oscillator 1 to 4), select the module number by touching any of the numbers 1 to 4.

Green blocks are not randomized, brown blocks are.

Listen to the result.

If you like it, exit the randomizer page, and save the preset.

If you don't like the result, hit “DO!” again, and keep hitting it, until something comes up, that you want. Try with different percentage settings, and try to switch different blocks on and off.

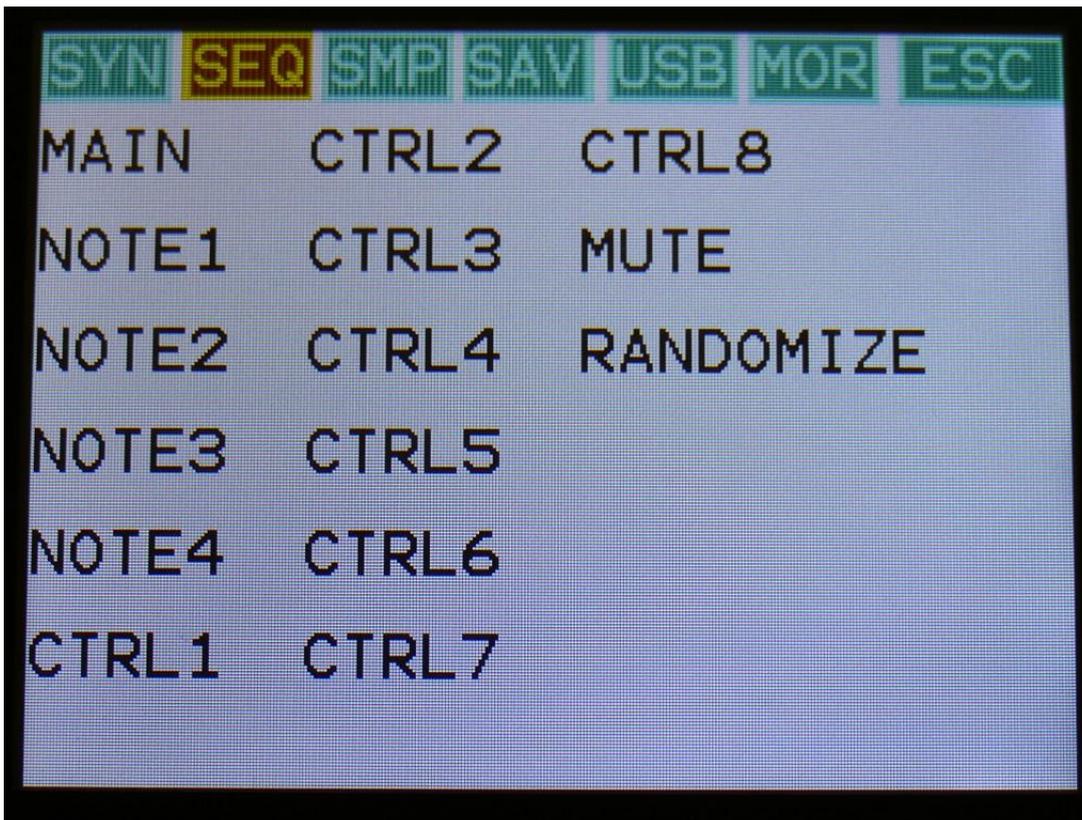
When the Randomizer page is entered, all parameters are stored into a temporary buffer, that are used for the randomization. So if you, for instance, first randomizes with 50%, and then with 20%, the result will be maximum 20% away from the initial parameter settings, when the Randomizer

page was entered. It does not first randomize 50%, and then randomize 20% on top of that. To randomize things further away, you must exit the Randomizer page, and re-enter it.

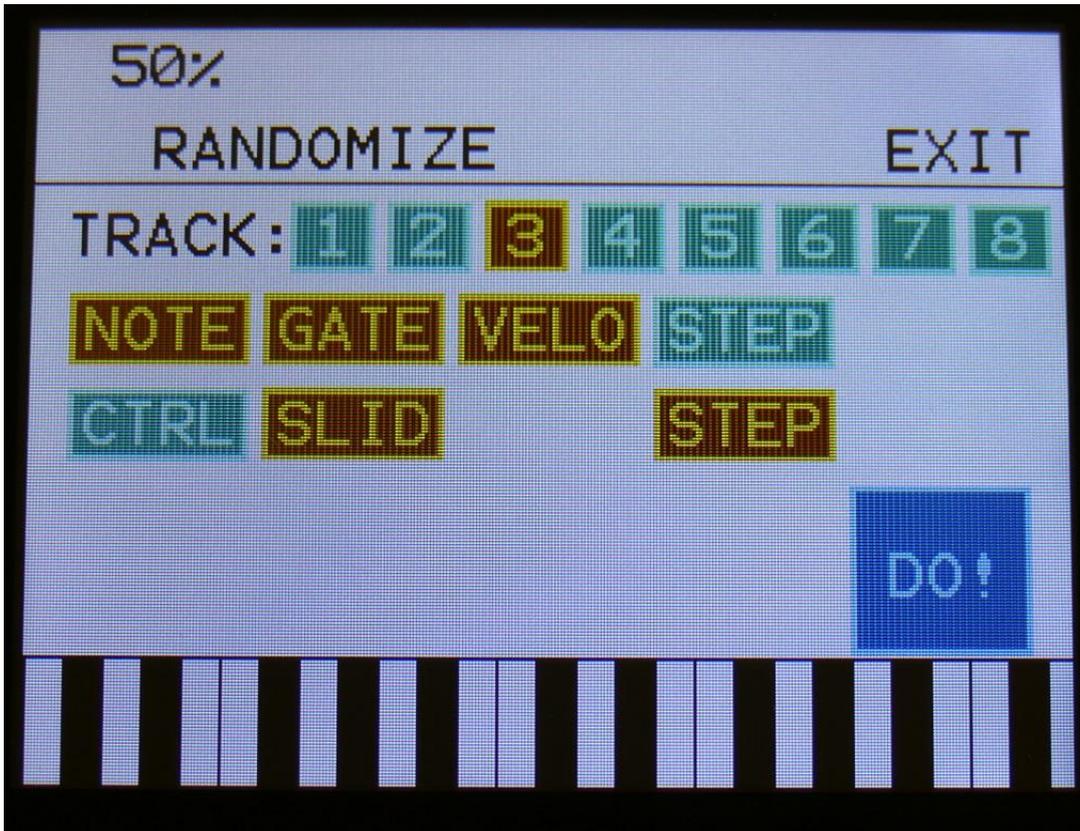
Sequencer parameters Randomizer

If you should ever need inspiration for new tunes, that you never ever would think off, a Sequencer Randomizer function has been added as well.

From the Sequencer overview page, hit "RANDOMIZE":



Now you will enter the Sequencer Randomizer page:



Select the track, that you would like to randomize, by touching any of the numbers 1 to 8, switch the sub-tracks on, that you would like randomized, simply by touching them, adjust the percentage, that it must maximum change the step values, using Edit Knob 1, and hit "DO!".

Green blocks are not randomized, brown blocks are.

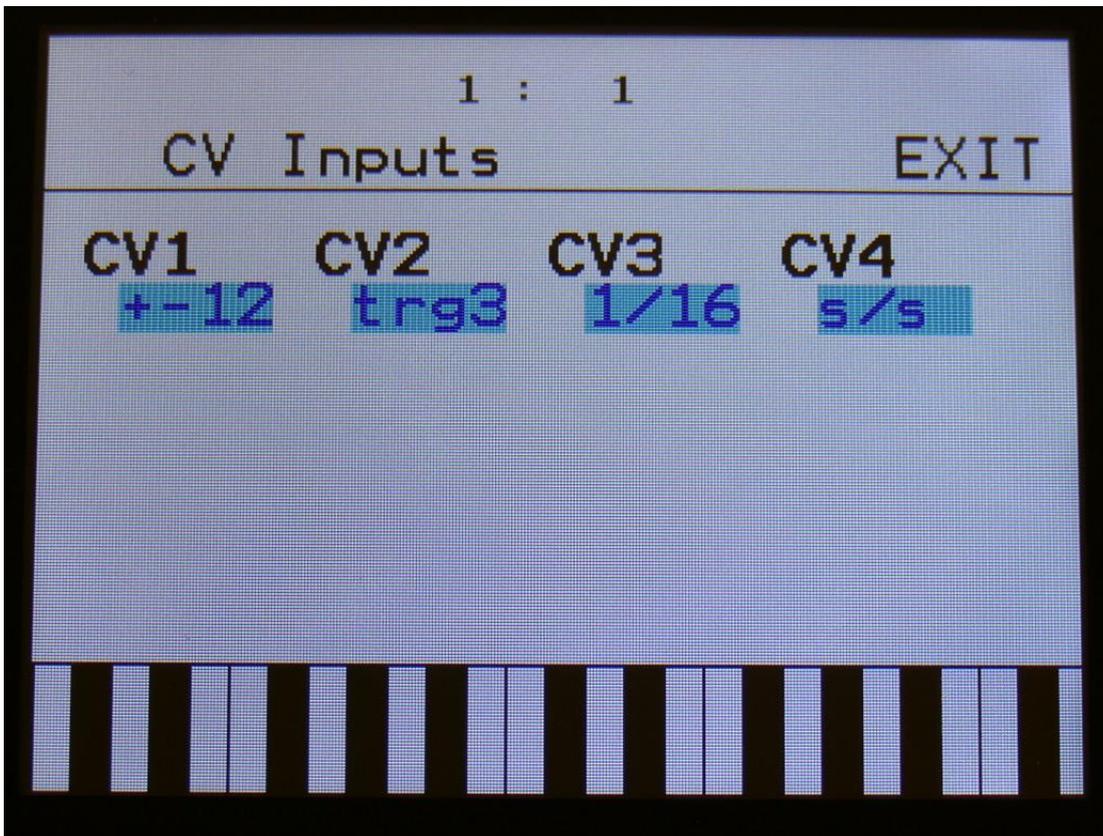
Listen to the result.

If you like it, exit the randomizer page, and save the preset.

If you don't like the result, hit "DO!" again, and keep hitting it, until something comes up, that you want. Try with different percentage settings, and try to switch different blocks on and off.

When the Randomizer page is entered, all parameters are stored into a temporary buffer, that are used for the randomization. So if you, for instance, first randomizes with 50%, and then with 20%, the result will be maximum 20% away from the initial parameter settings, when the Randomizer page was entered. It does not first randomize 50%, and then randomize 20% on top of that. To randomize things further away, you must exit the Randomizer page, and re-enter it.

Sequencer analog clock, start/stop and reset via the CV inputs



It is now possible to sync the Xmini Sequencer to analog gear.

In the CV input menu, simply set any of the CV inputs up to $1/32$, $1/24$, $1/16$, $1/12$, $1/8$ or $1/6$, according to the rate of the analog clock, you are inputting.

If setting a CV input to $1/32$, each clock pulse that it receives, will increment the sequencer with one $1/32$ step.

If setting a CV input to $1/16$, each clock pulse that it receives, will increment the sequencer with one $1/16$ step.

When any of the CV inputs is set to a clock division, the internal sequencer clock and any MIDI input clocks will be ignored.

If the ClkOut parameter in the COMMON menu is set to on, Xmini will output MIDI clocks, every time it receives an analog clock pulse. This MIDI clock will though not be straightened out, so if the clock CV input is set to $1/32$, Xmini will transmit 3 MIDI clock messages right after each other, and if it is set to $1/16$, it will transmit 6 MIDI clock messages right after each other.

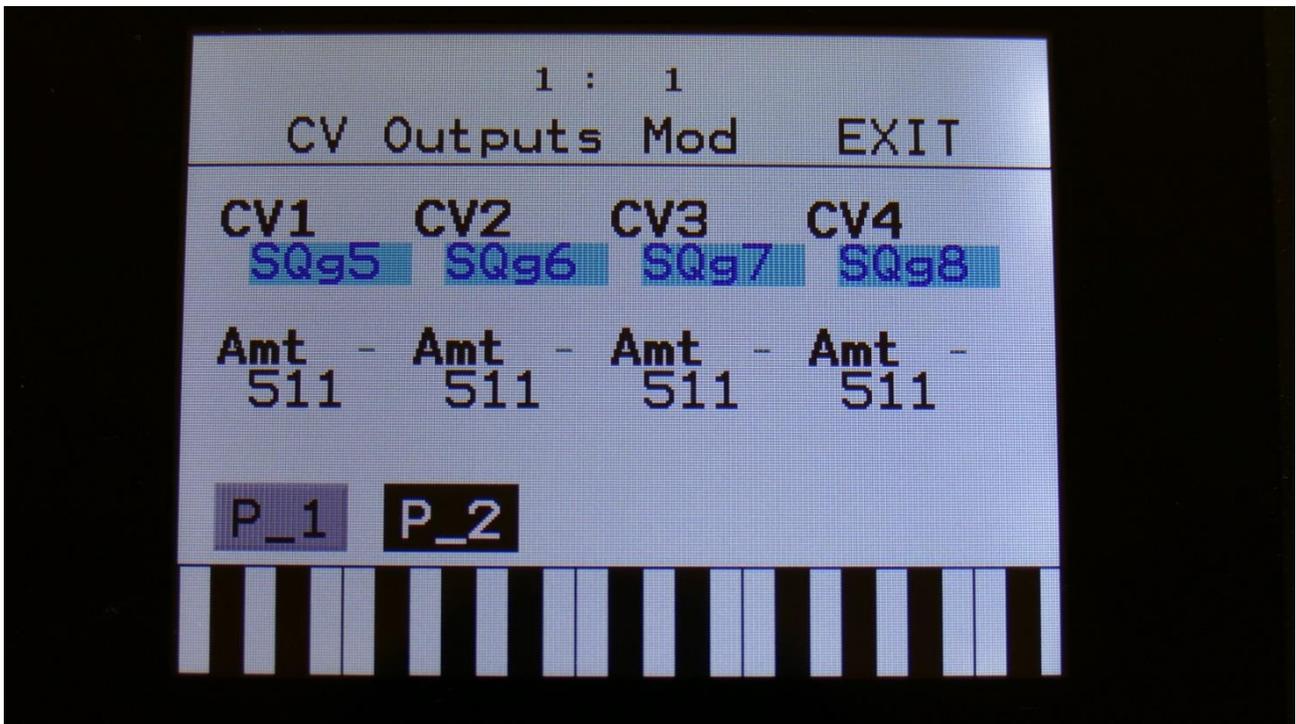
So when using Xmini as an analog clock to MIDI clock converter (which it isn't btw. IT'S A SYNTH!), it is recommended to set the clock input to 1/32, and not to sync anything to it, that has, or is set to, a resolution higher than 1/32.

It is possible to have more than one CV input set up to act as clock inputs, at a time, and they will all work at the same time.

Setting a CV input to s/s, will make the sequencer start or stop every time it receives a pulse or a gate on that input.

Setting a CV input to Rst, will make all tracks of the sequencer reset to their respective start step every time a pulse or a gate is received on that input.

Controller track 1 to 8 on/off gate outputs to CV out's and modulation



The on/off sub-tracks of Controller Track 1 to 8 has been added to the modulation sources.

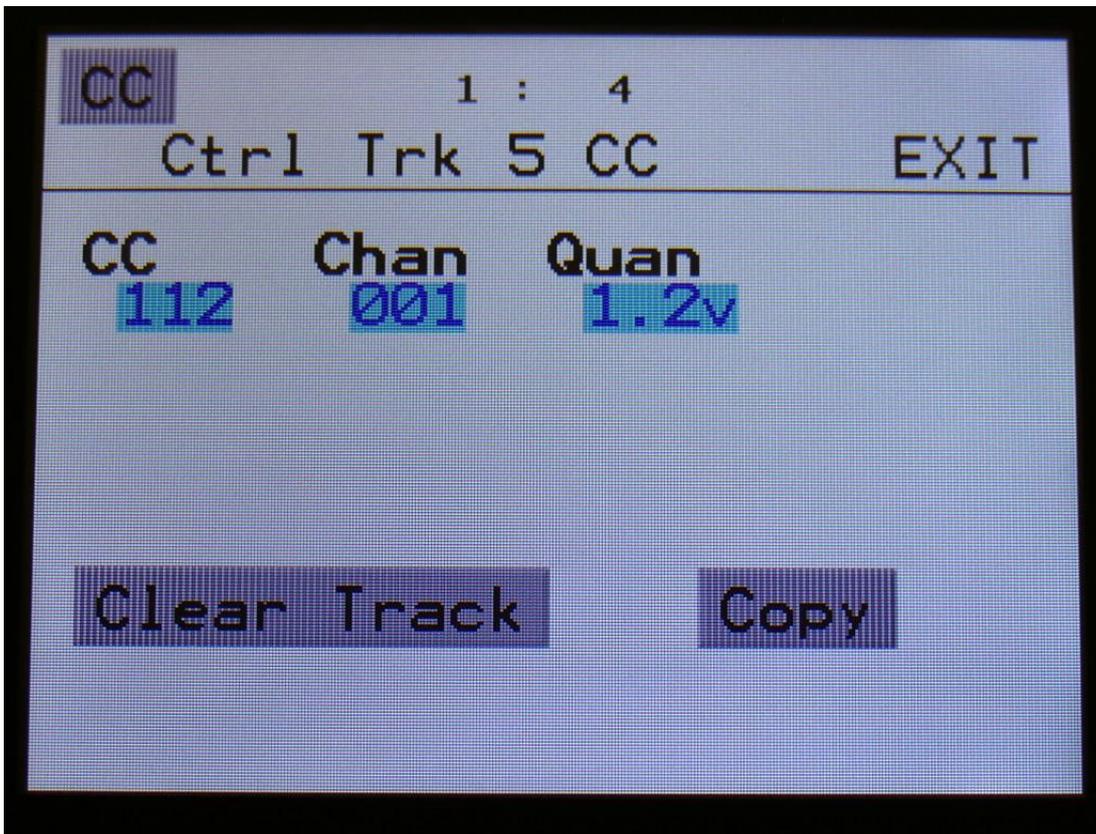
This was mainly done, to make it possible to use the on/off steps of the controller tracks, as an extra source of gates/triggers for the CV outputs, so you do not have to use the note tracks for this.

If you switch all steps of a controller track on, it can be used as a CV clock source.

All the internal parameters of Xmini that can be modulated, can also be modulated by these on/off tracks to, for instance, create gating effects.

To assign these subtracks as CV/modulation sources, select **SQg1, SQg2, SQg3, SQg4, SQg5, SQg6, SQg7** or **SQg8** as the source.

Quantizing of Sequencer controller tracks to 1v/oct and 1.2v/oct



An new parameter has been added to the Controller tracks CC pages: **Quan**.

This can be set to either Off, 1v or 1.2v, for each controller track.

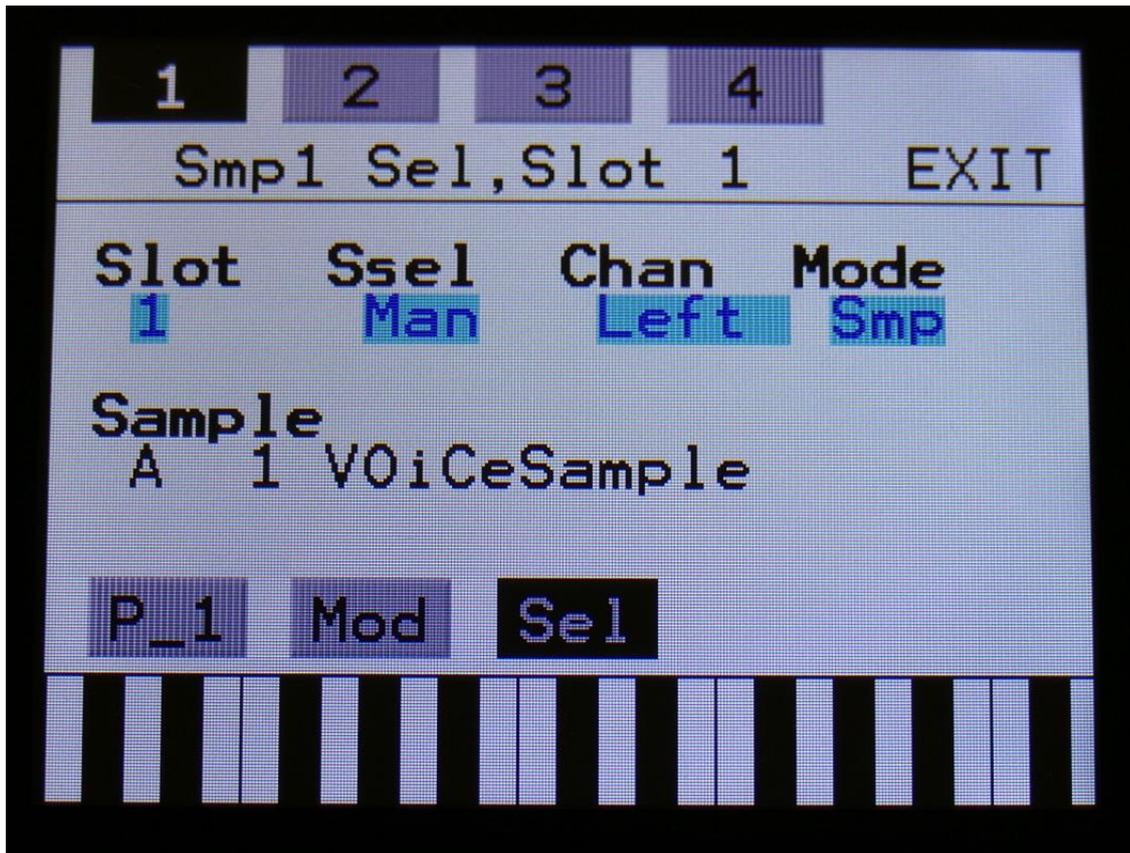
When set to 1v, the output of the controller track is quantized to 1V per octave, when assigned as a source for the CV outputs. When set to 1.2v, the output is scaled to 1.2V per octave.

When Quan is set to any other value than Off, the Slide subtrack does no longer function as slide, since the output is scaled. Instead the slides will create delays.

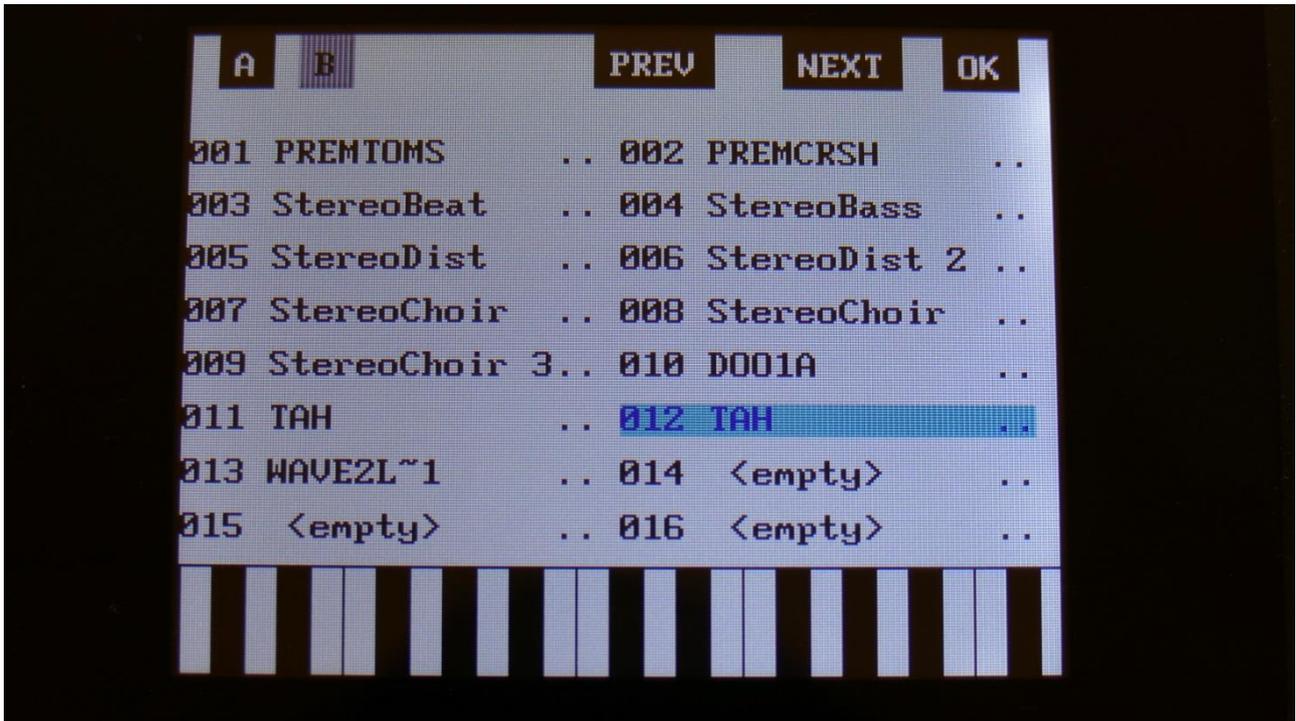
New touch based sample select system

In earlier Xmini firmware versions, sample select on both the Sample Edit page and on the Synth Sampler page, was done by turning knobs. This proved to be a bit impractical. Therefore I designed a new touch based sample select system, that appears to work better.

When on the Sample Edit page, or the Synth Sample Select page, touch the sample name:



Now a list of the samplings hold in the Xmini FLASH memory will appear:



Touch A and B to select sample bank A and B, touch PREV and NEXT to view the previous or next 16 samplings.

To select a sampling, touch the sample name.

When you have found the right sampling, touch OK to return to the Sample Edit/Synth Sample page.

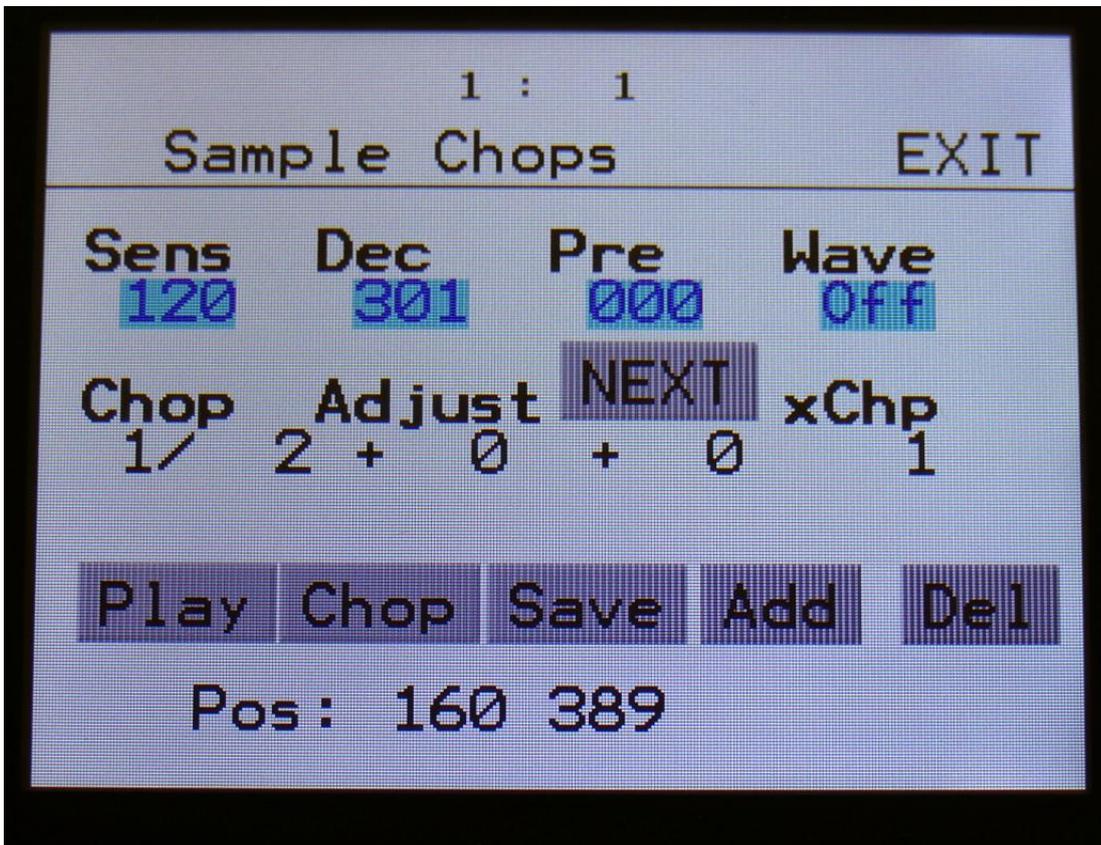
On the Sample Edit page, you will find a PLAY touch button in the bottom of the sample list.



Touch this to audition the selected sampling. While the sampling is playing back, the play button will stay black.



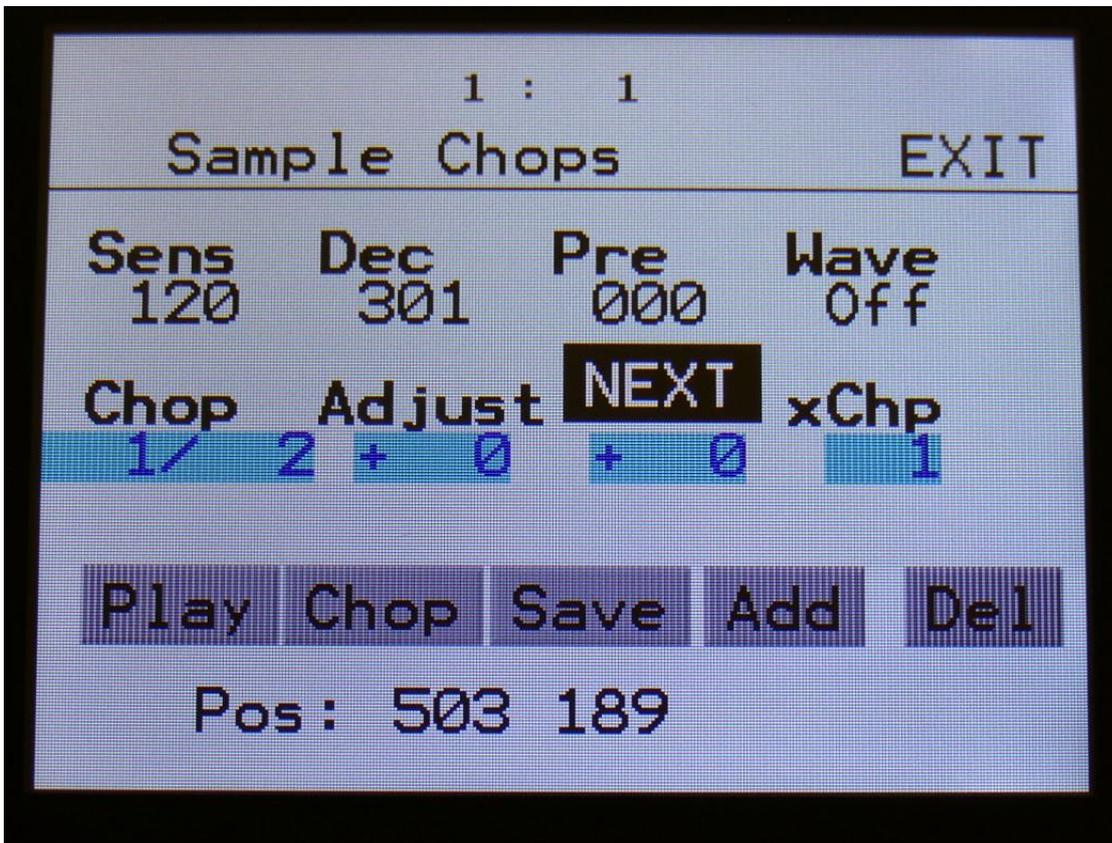
Chop Edit parameters has been moved around, for a more logical setup



The parameters on the Sample Chop Edit page has been moved a bit around, to make it easier to use.

Now all parameters, that is used for the analysis are in the upper row, and all parameters for test and playback of the analyzed chops are in the lower parameter row.

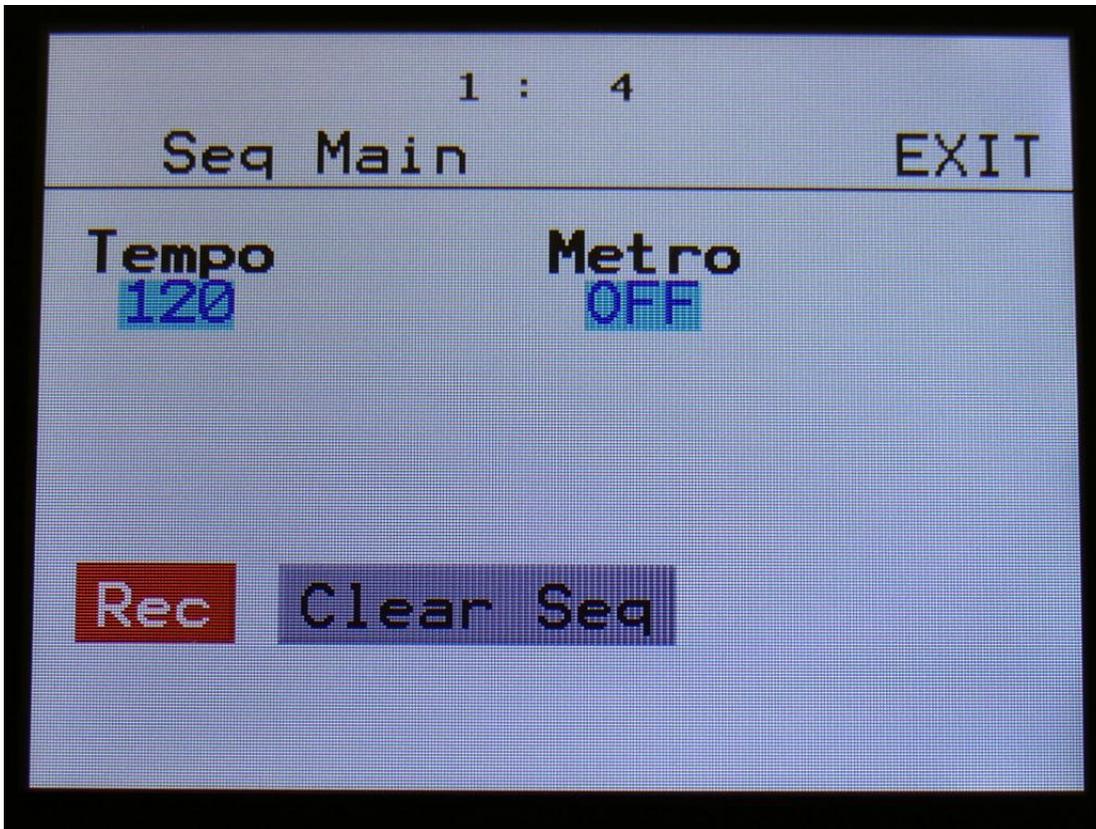
“Next” button added to chop edit



A “NEXT” touch button has been added to the sample chop edit page.

Touch this to activate/de-activate it. When it is activated (black), the two adjust parameters adjusts the next chop point, from the selected one, which is also the end point of the selected chop. This makes it easier to adjust loops.

Sequencer Realtime Record quick start mode



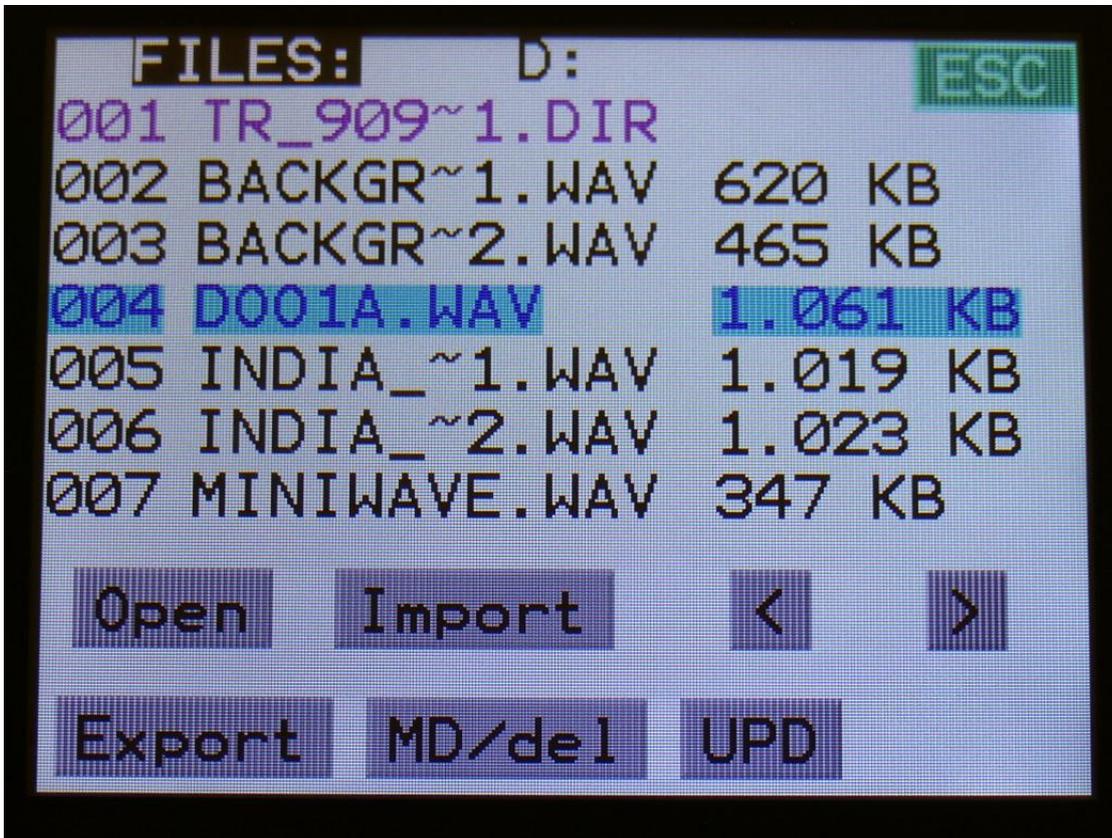
Sequencer realtime record can now be initiated by holding down the Morph Settings button, while pushing the Start/Stop button.

Realtime recording will be indicated by the Start/Stop LED flashing in beat with the metronome.

To stop realtime recording, hit the same button combination again.

You can, of course, still start/stop realtime recording by the REC touch button on the Sequencer Main page.

USB exit moved to upper right corner



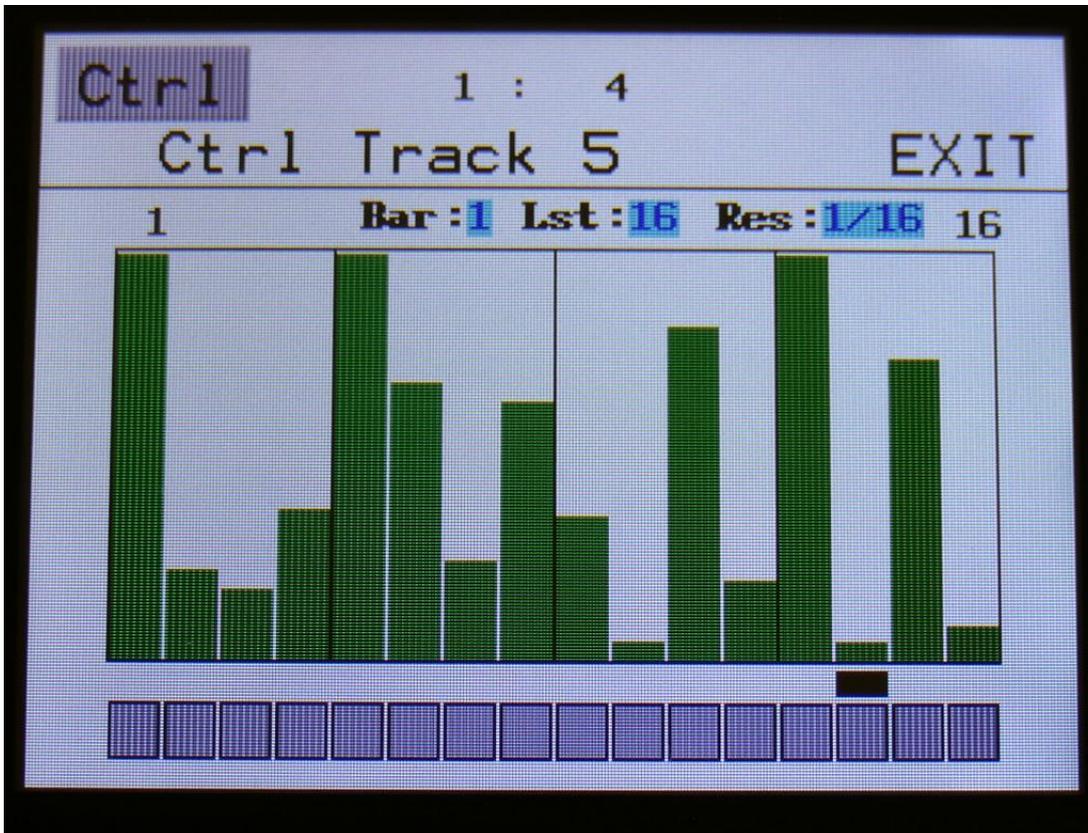
The Exit button has been removed from the lower right corner of the USB page. Instead an Esc touch button has been added in the upper right corner.

Now you will only have to touch the upper right corner, to exit from multiple pages.

Sample and loop playback has been optimized

The Xmini sample playback system has been optimized for more smooth play back.

Touch Sequencer optimized



The touch sense of the step on/off buttons has been optimized.

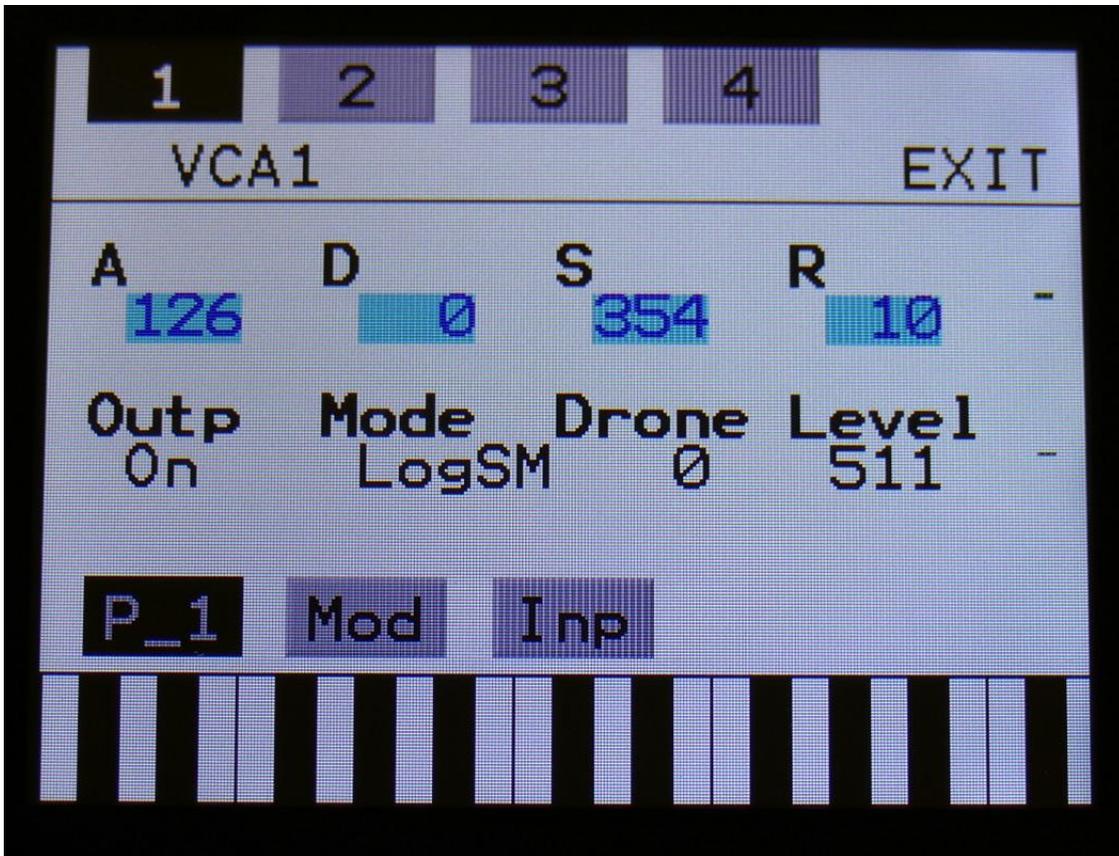
Furthermore a lock mechanism has been added.

If you touch the step on/off buttons first, and then slide your finger, only the states of the step on/off buttons will change. If you finger accidentally slips up in the step values area, no changes of these will happen.

If touching the step vaules area first, it will lock to this, in the same way.

To unlock, simply lift your finger from the display, and touch it again.

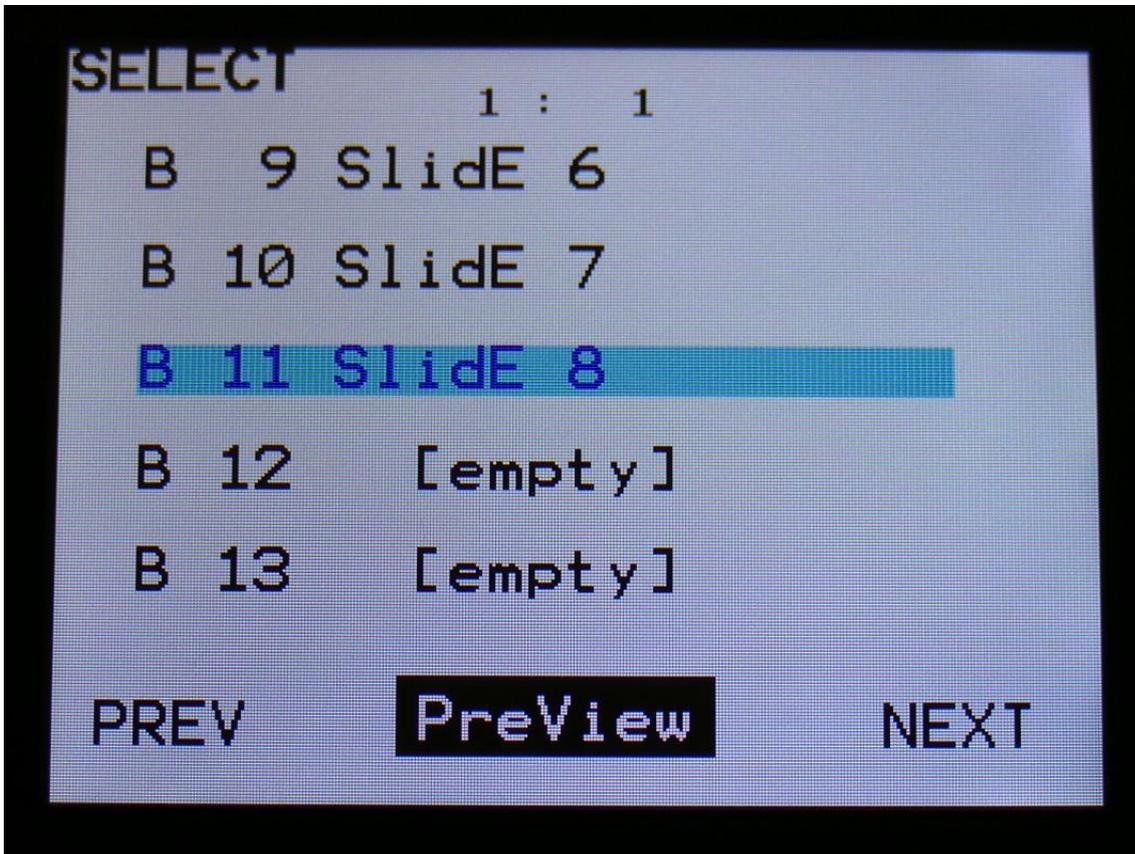
2 new smooth VCA modes



2 new VCA modes has been added, "linSM" and "LogSM".

When any of these 2 VCA modes are selected, the VCA will be completely smooth. This sounds more like many other synthesizers, than the usual Gotharman VCA's 😊

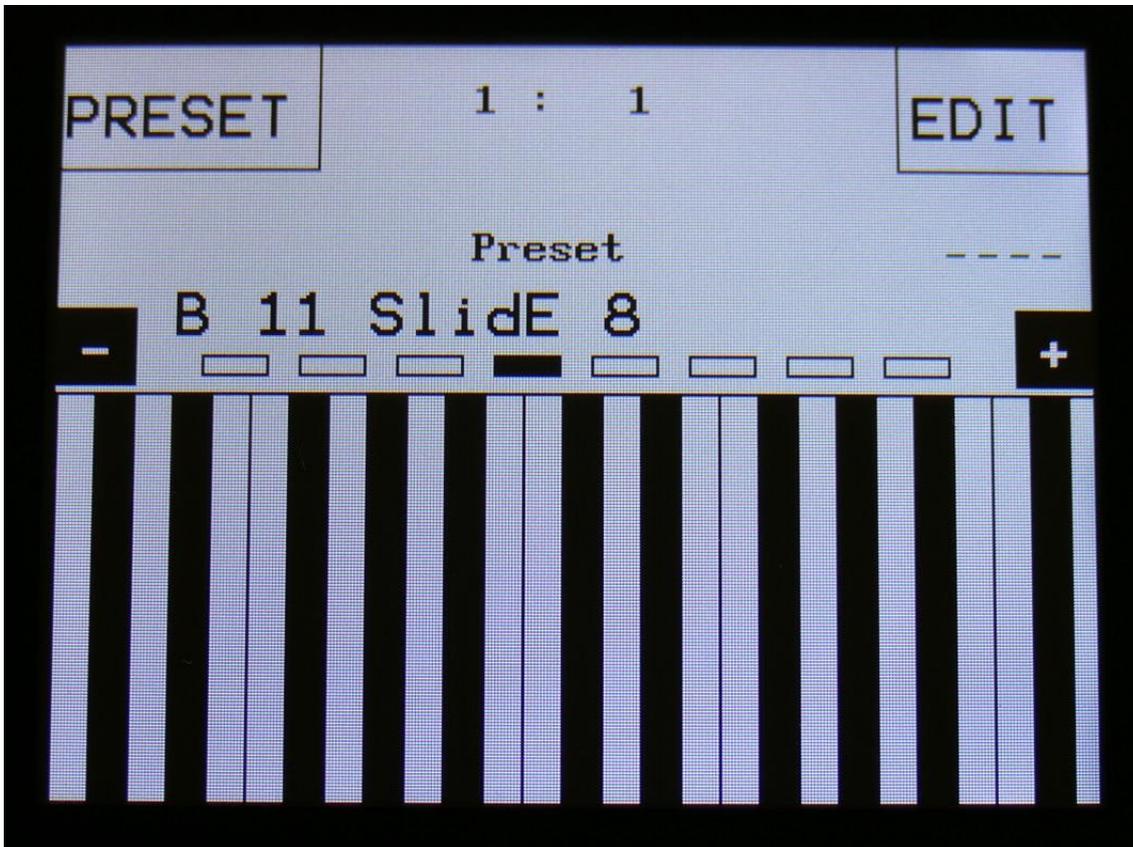
“Preview” function has been added to the Preset Select page



On the Preset Select page, touch “PreView” so it becomes black with white text, to make it active. Now you can preview presets, without Xmini going back to the main preset select page.

If the sequencer is running, it will still wait for track 1 to reach step 1, until it jumps to the next preset. This is indicated by the Start/Stop LED flashing.

All Touch Keyboard controls are now available on the Preset Select page



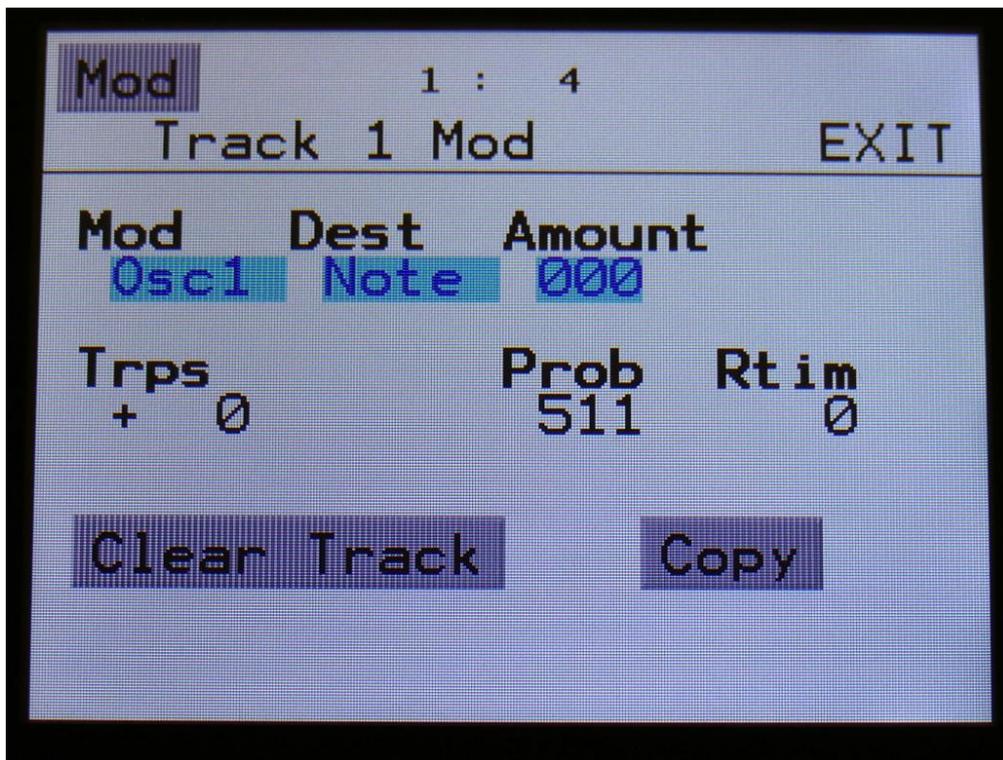
The -/+ touch buttons adjusts the size of the touch keyboard.

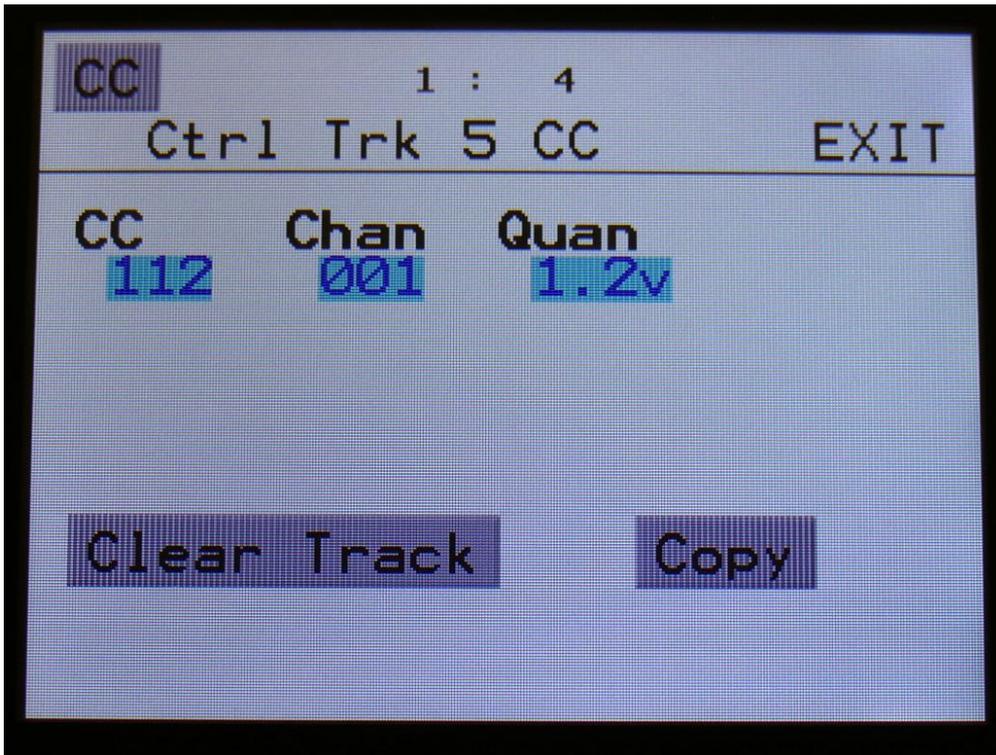
Touching any of the 8 rectangles just above the keyboard, selects the keyboard octave.

When playing the touch keyboard, it will lock to this, so you don't accidentally changes the settings. To adjsut the settings, you must lift your finger from the touch screen, and tap the settings.

Copy Sequencer Track

On the Note Tracks "Mod" page, and on the Controller Tracks "CC" page, a "Copy" touch button has now been added:



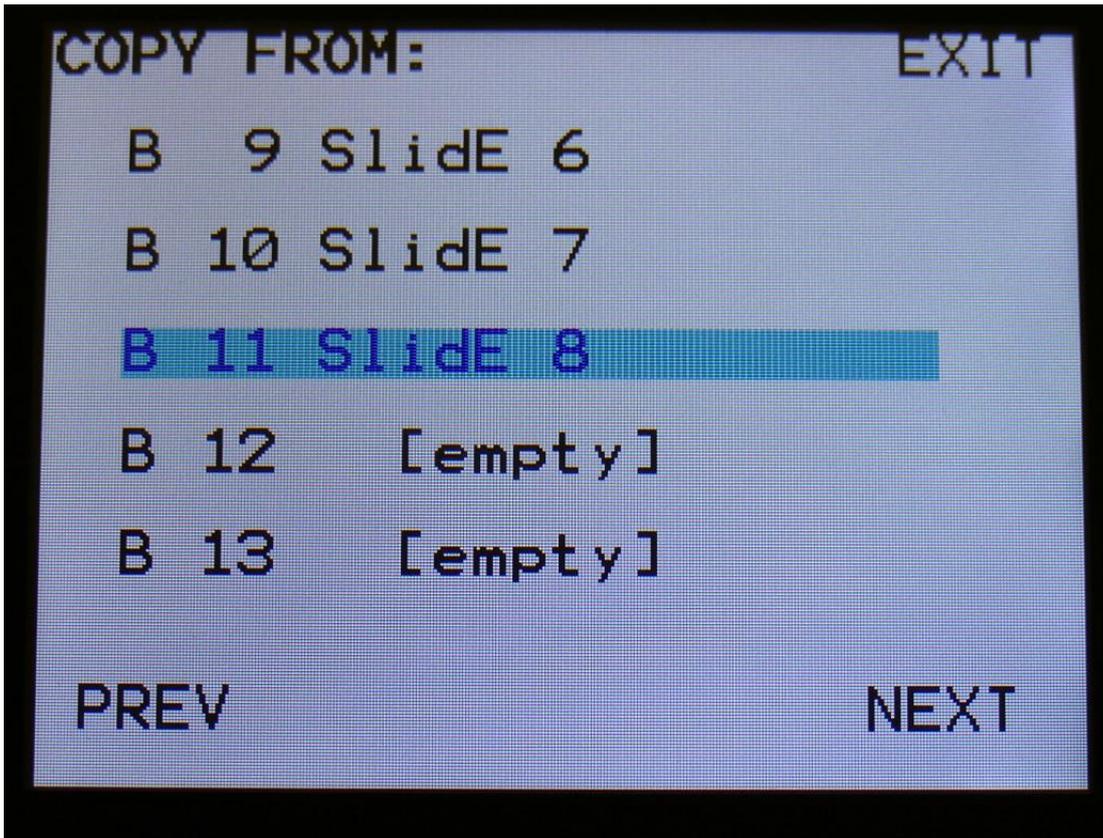


With the track copy function, it is possible to copy any note/controller track, from any preset, to the currently selected note/controller track.

It is only possible to copy a note track to a note track, and a controller track to a controller track.

To do so, hit the “Copy” touch button.

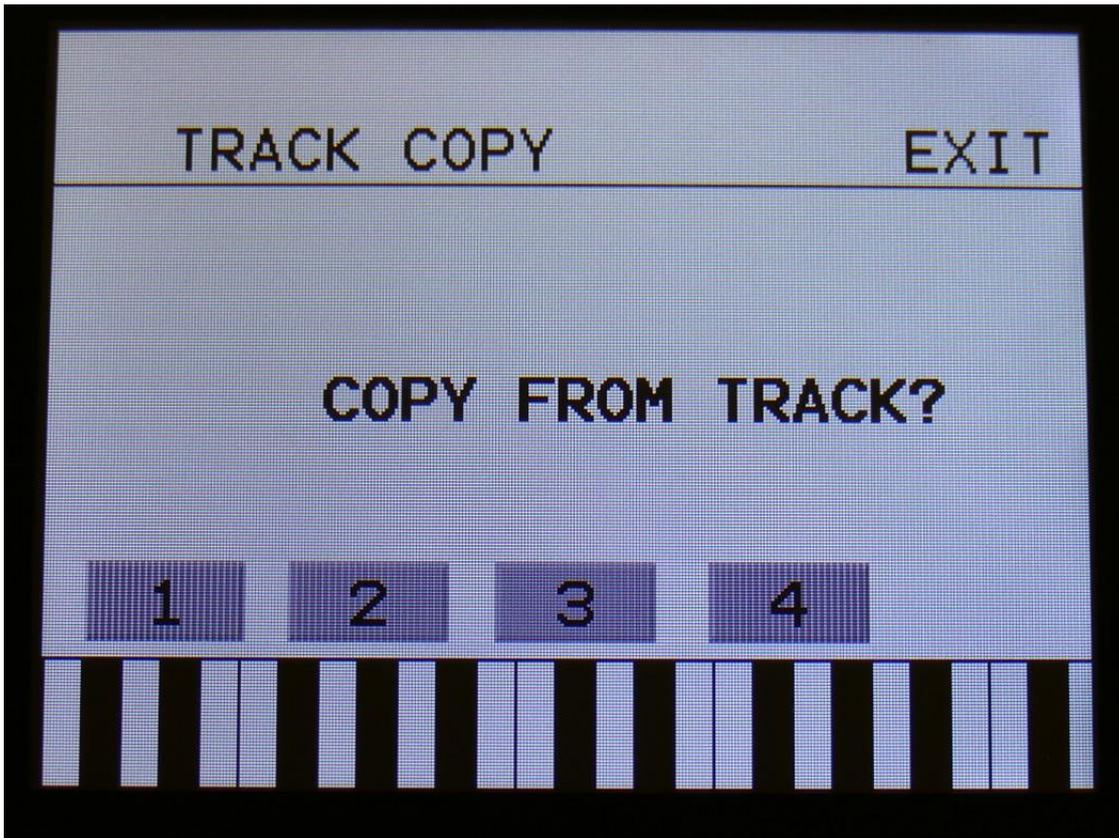
You should now enter this page:



Select the preset, that you would like to copy from. Five presets are shown at a time. Touch "PREV" or "NEXT", to view five higher or lower numbered presets.

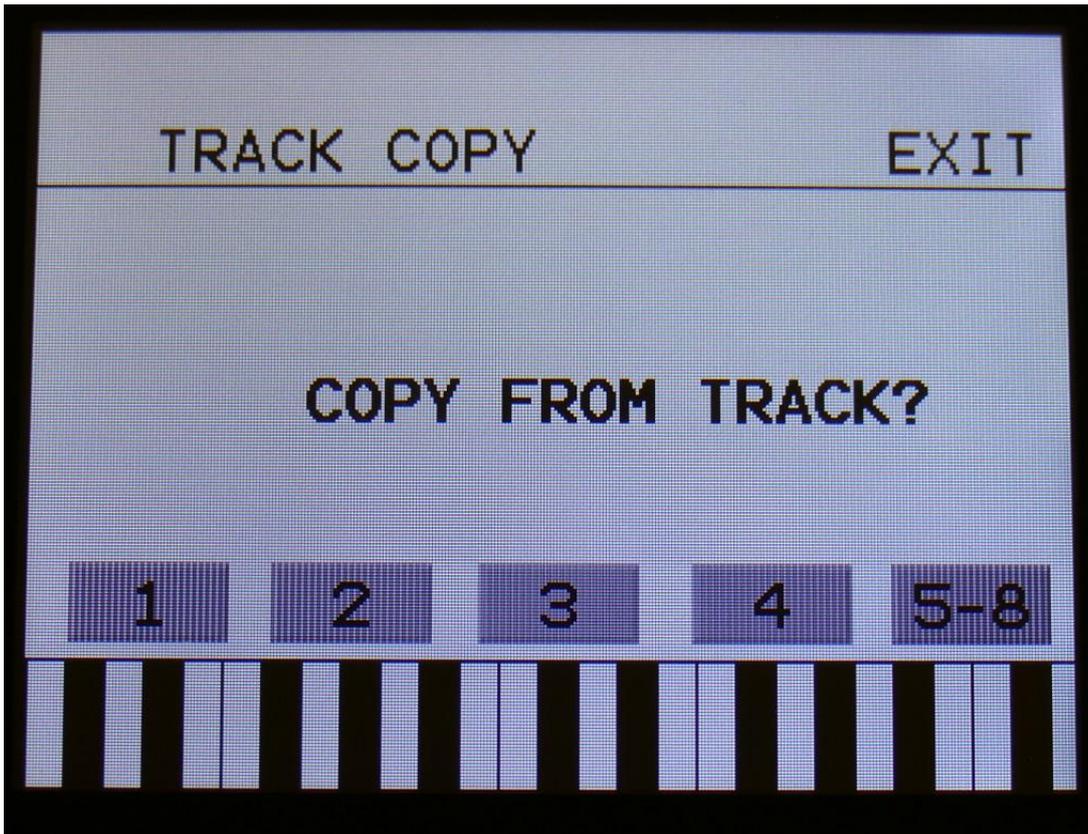
Touch a preset to select it. As soon as you select a preset, you will be directed to the next page.

If you copy a note track, the next page will look like this:



Touch the track number, you would like to copy from. As soon as you do that, the track will be copied, and you will return to the note Mod page.

If you copy a controller track, the page after the Copy From Preset page, will look like this:



If you would like to copy from track 1 to 4, simply touch the track number, you would like to copy from. As soon as you do that, the track will be copied, and you will return to the note Mod page.

If you would like to copy from any of the tracks 5 to 8, hit the "5-8" touch button first, and then touch the track number.

Bug Fixes

- CV outputs would sometimes reset to default value –Fixed.
- Sample Bank B number of samples/% used are now shown.
- Edit Knob 2-4 modulation assign did not work in some cases –Fixed.
- VCA output modulation were showing wrong modulation sources –Fixed.
- Very short samplings were imported and played back incorrectly –Fixed.
- CV output triggers were not working properly –Fixed.

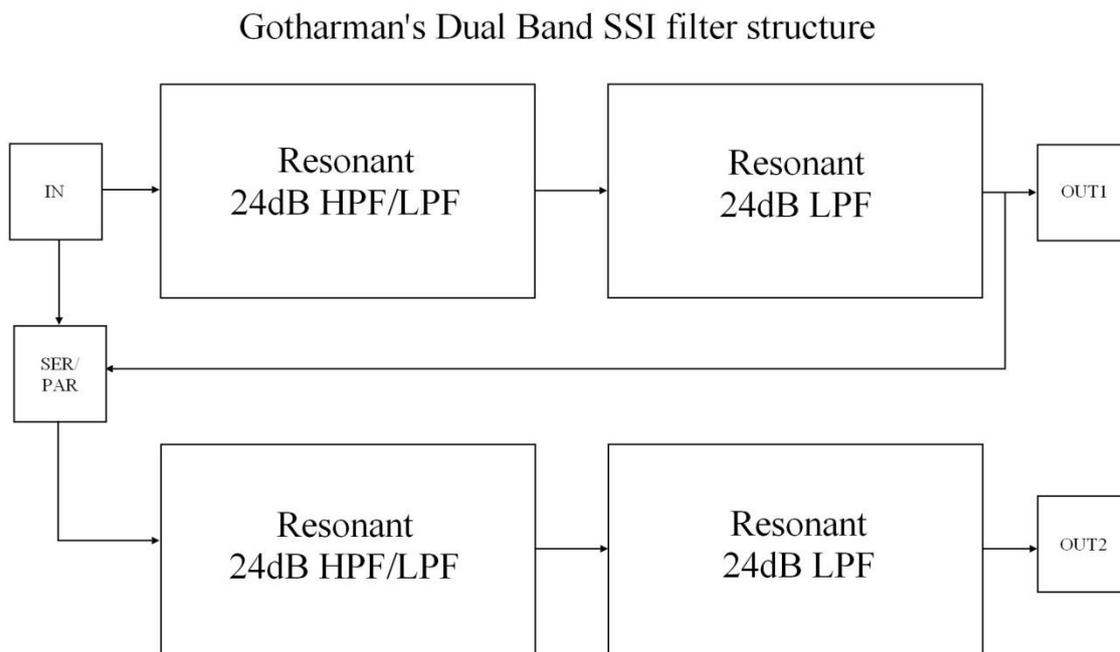
Earlier Updates:

Compatibility with the new VCF8 –Dual Band SSI Filter

After installing this update, it is possible to select the VCF8, Dual Band SSI Filter, in the filter settings menu, and the parameters of this filter will be shown on the analog filter pages.

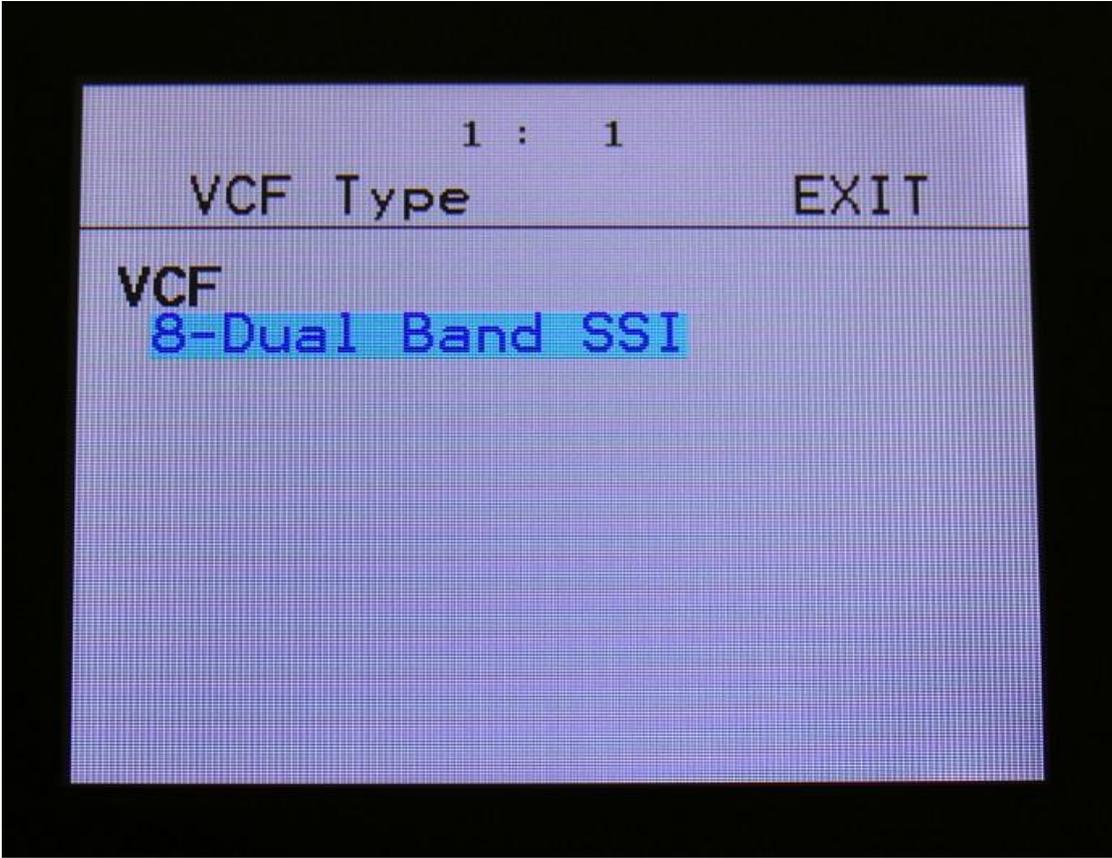
This filter has four analog 24dB resonant filters, two that are switchable between HPF and LPF modes and two that are always in LPF mode. This gives four resonant peaks in total, and makes this filter ideal for formant sounds. It is also great for bass sounds and a lot of other sounds. It is based on a bunch of the new great SSI2144 filter chip.

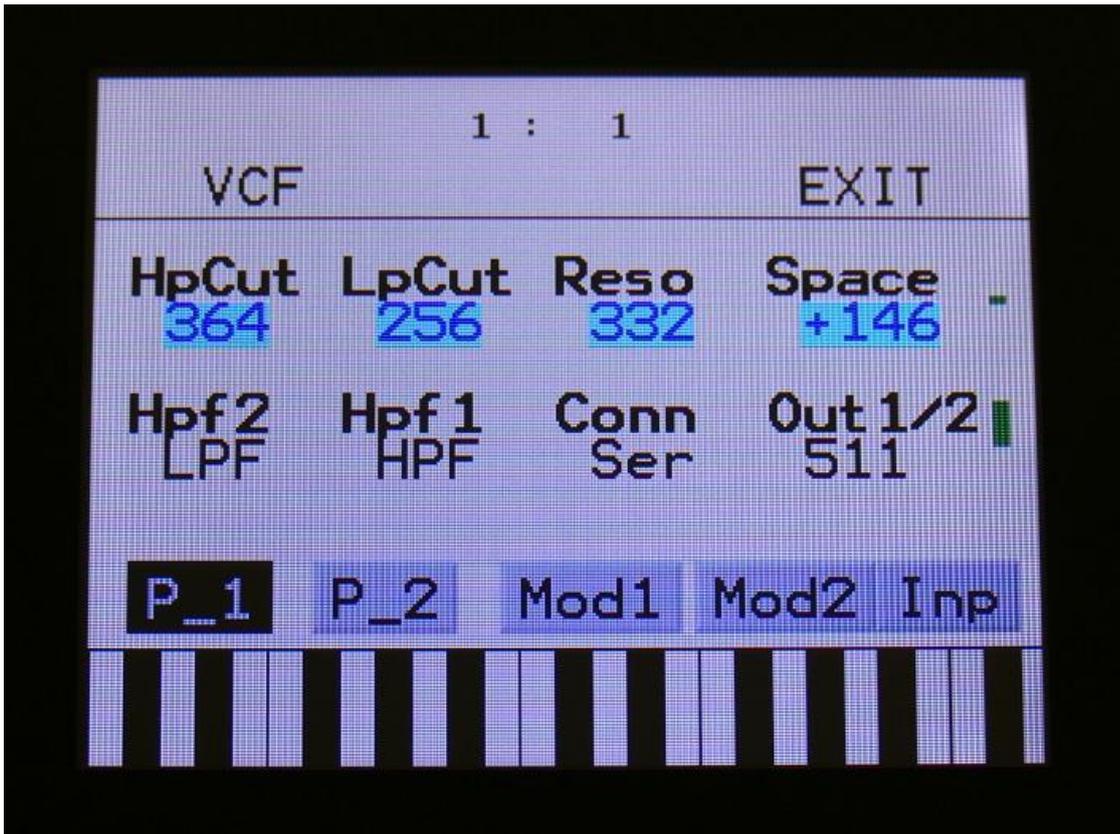
It is organized as two chains of HPF/LPF + LPF in series. The two chains can be connected in parallel or serial to each other, and they output to each of their filter output.



After you have installed this filter, you must set it up in the menu's, in order to make it work properly.

Go to "EDIT>More..>Filter Settings", and set the filter type to: 8-Dual Band SSI:





Parameters:

HpCut: HPF/LPF 1 and 2 filter cutoff frequency. Space between the 2 filters can be adjusted with Space.

LpCut: LPF 1 and 2 filter cutoff frequency. Space between the 2 filters can be adjusted with Space.

Reso: Filter resonance of all 4 filters.

Space: Space between the cutoff frequencies of the two filter chains.

HPF2: HPF2 filter mode HPF or LPF.

HPF1: HPF1 filter mode HPF or LPF.

Conn: Connection of the 2 filter chains. Ser (serial) or Par (parallel).

Out1/2: Mix between filter output 1 (HPF/LPF + LPF chain 1) and filter output 2 (HPF/LPF + LPF chain 2).

1 : 1

VCF Mod		EXIT	
HCut1	HCut2	Lcut1	Lcut2
Seq1	Env1	Osc1	Osc1
Amt	Amt	Amt	Amt
210	168	0	0
P_1	P_2	Mod1	Mod2 Inp



1 : 1

G-Ray		EXIT	
G-Ray	Mode	Feed	Input
0	Norm	0	Out1
LpCut	Space	Out2	Boost
Add	Feed	Nrm	+ 0
P_1	P_2	Mod1	Mod2 Inp



Import Multiple Samplings From Directory As one sampling with Chop points function

This new function will make it easier than ever, to get more than 256 samplings into your Xmini! Without splicing samples on a computer!

On your computer:

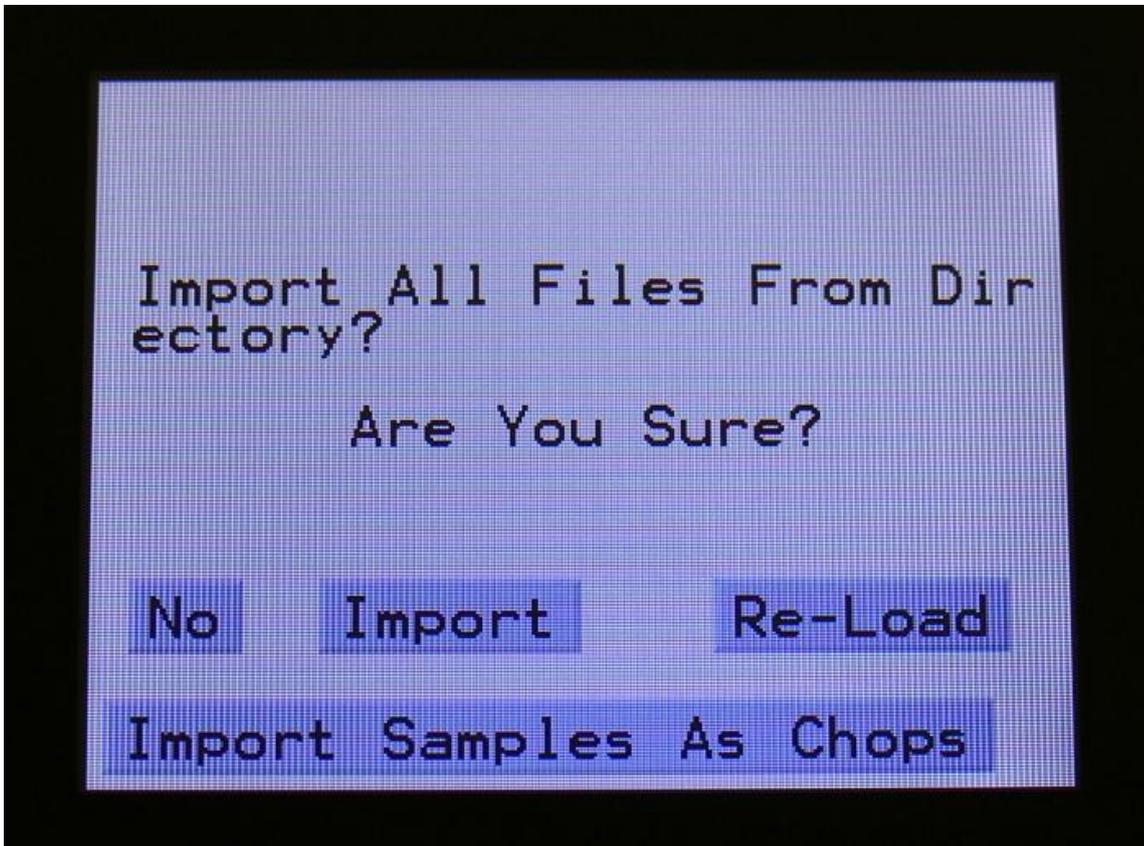
Make a directory (or folder) on an Xmini compatible USB drive. Name the directory with the name, that you want the sampling to have. Copy any single samplings you would like this sampling to contain, into the directory. Max 64 samplings.

Create multiple such directories, if desired.

Unmount the USB drive from your computer, and insert it in the Xmini USB port.

Enter the USB menu, select the directory you just created, and push "Import".

This screen will now show:



Touch "Import Samples As Chops".

Xmini will now create one sampling from all of the samplings in the selected directory, and insert a chop point at the start point of each sampling.

After the import is done, go to the sample edit page, select the sampling you just imported (named from the directory name), and enter the Chop edit page. You will now be able to hear each of the samplings, by selecting chops.

On the synth sampler pages, the procedure is the same. Select the sampling, and select the chop point. Modulate the chop point selection, to create great variation.

I have found this function especially useful, when working with acoustic drum samplings. There are many acoustic drum sample packs on the net, that has different variations of the same drum sound. Put all the variations of a sound in one directory, import as chops, and modulate the chop selection with velocity, random or any other modulation source, to make some great dynamic acoustic drum beats.

Sample slot select via keyboard splits

Each synth sampler has 4 sample slots, that can each play back their own sampling, and that has their own settings for Tune, Start, Length and Chop point.

To select which slot should play back, is possible by manual selection, by making a trigger select a specific slot, and by any modulation source.

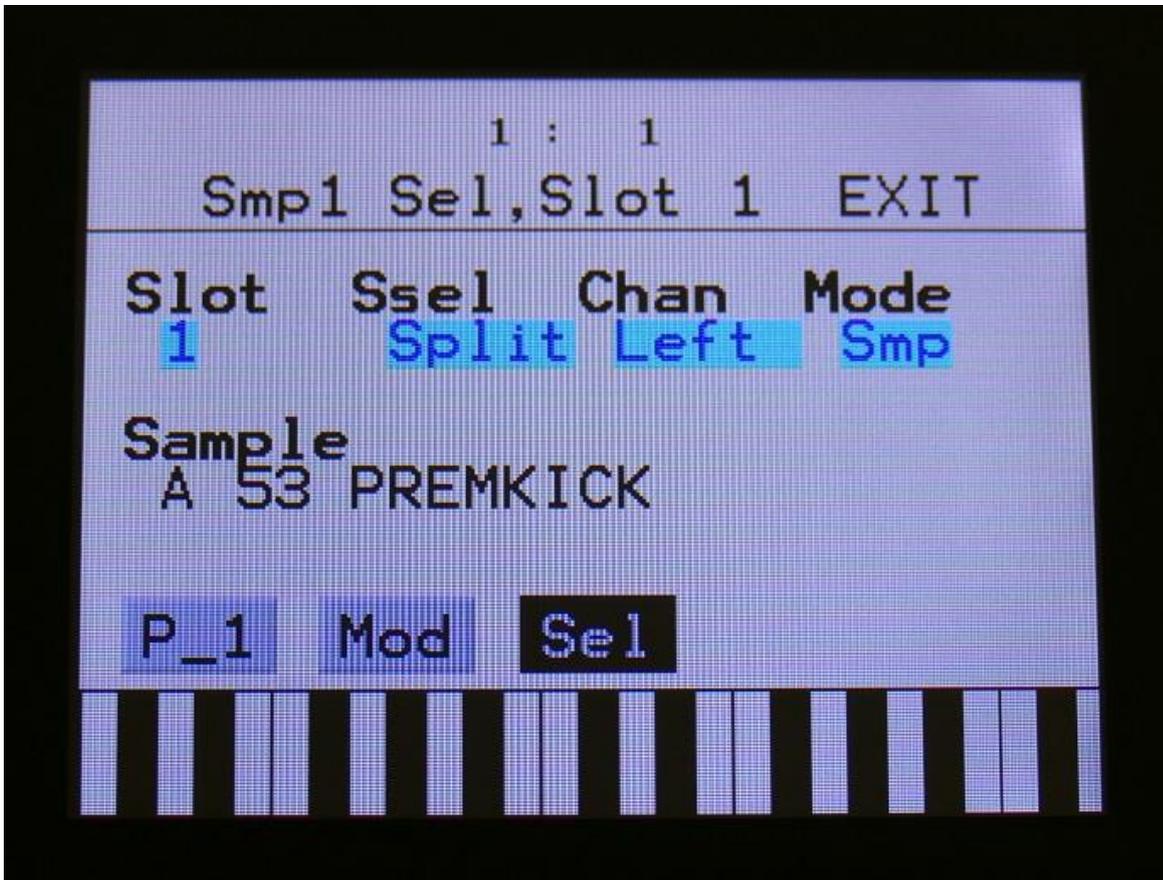
Now it is also possible, using keyboard splits!

Set up some triggers, to trig each of their synth sampler, for instance trigger 1 to sampler 1, trigger 2 to sampler 2 and so on...

In the Synth>Zones setup, set up a key range of at least 4 keys for each trigger.
IMPORTANT: The trigger MIDI transpose parameter **MUST** be set to +0. If not, the key range of the trigger will be transposed, and it can be a bit hard to figure out which keys selects what sample slots.

On the synth sampler pages, select different samplings for each of the 4 slots, of each of the 4 samplers.

On the Sample Select page of each sampler, turn Edit Knob 2 fully up, to select "Split" as the Slot Select source:



By playing a connected MIDI keyboard, you will now be able to make Xmini play back the different samplings selected in the slots, by hitting different keys.

The logic of the key splits:

-If the trigger you are using has a keyrange that is dividable by 4, each sample slot will have an equal number of keys. I.e. if the keyrange is one octave (12 keys), each slot will have 3 keys.

-If the trigger you are using has a key range, that is NOT dividable by 4, most keys will be assigned to slot 4. I.e. if the key range is 7 keys, slot 1, 2 and 3 will have each 1 key, and slot 4 will have 3 keys.

If you need to adjust the tuning of the samplings, please use the “Tune” and “Fine” parameters on the synth sampler pages. DO NOT use the trigger MIDI transpose setting, since this will just transpose the key range, and not the samplings.

Sample playback and chop engine has been optimized

Sometimes, especially when working with shorter samplings, the sample playback and the chop system became unstable. This could sometimes lead to interesting results, but most of the time it was just plain annoying.

Therefore the sample playback and chop system has now been completely redesigned for maximum performance and precision.

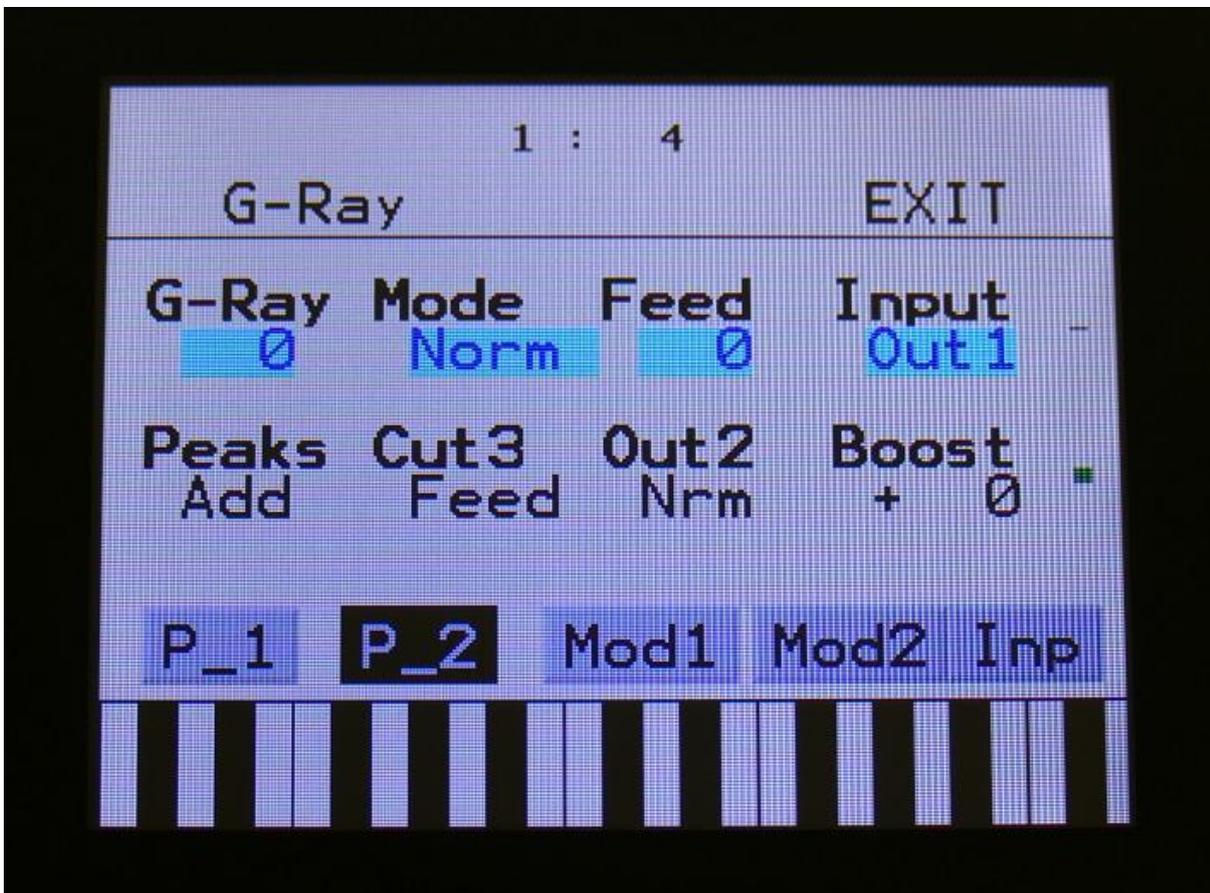
Because of this, you might have to redo your chop points.



Filter Boost parameter

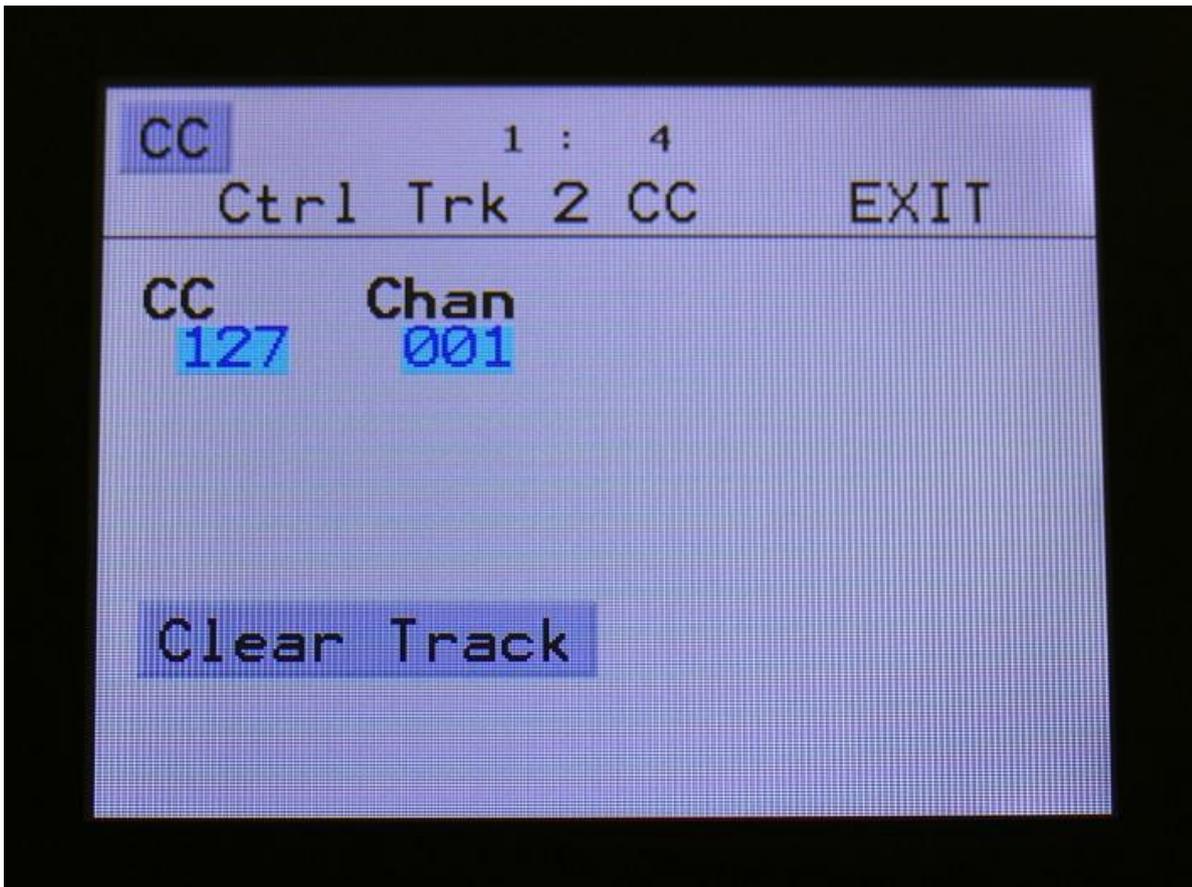
A Filter Boost parameter has now been added to the analog filter pages. The range of this is -128 to +383, with +0 being the neutral and initialized setting.

The new analog filter boards, SP Filter, Tubaz and SSI Filter, has a rather big variation in the output level, according to the setting of the Reso parameter. With the Boost parameter, it is possible to compensate for this. It is, of course, also possible to use this, just for adding a slight overdrive to the filter sound.



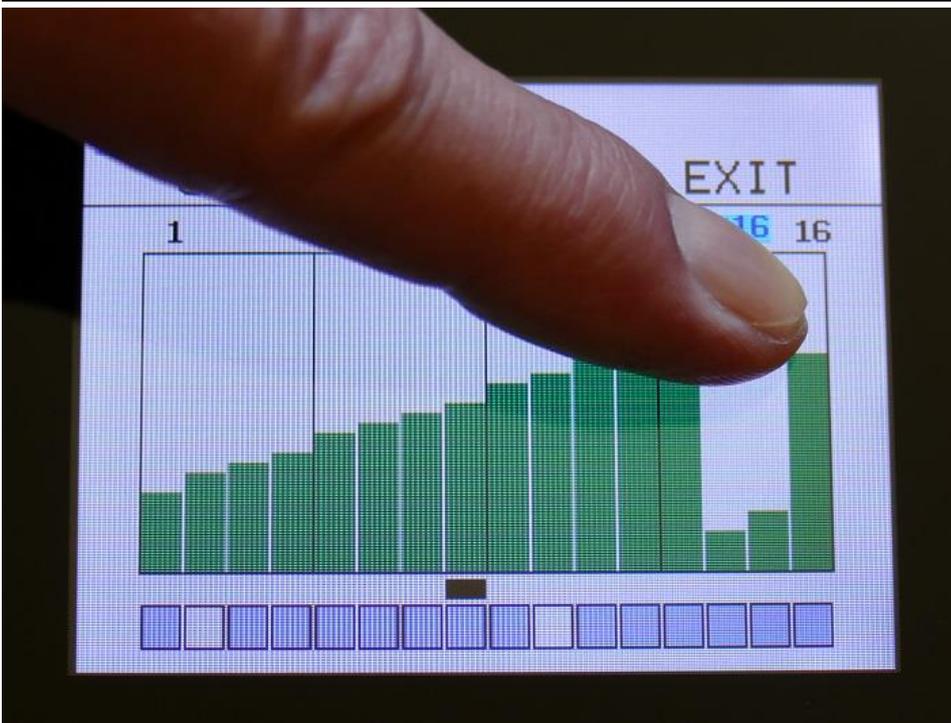
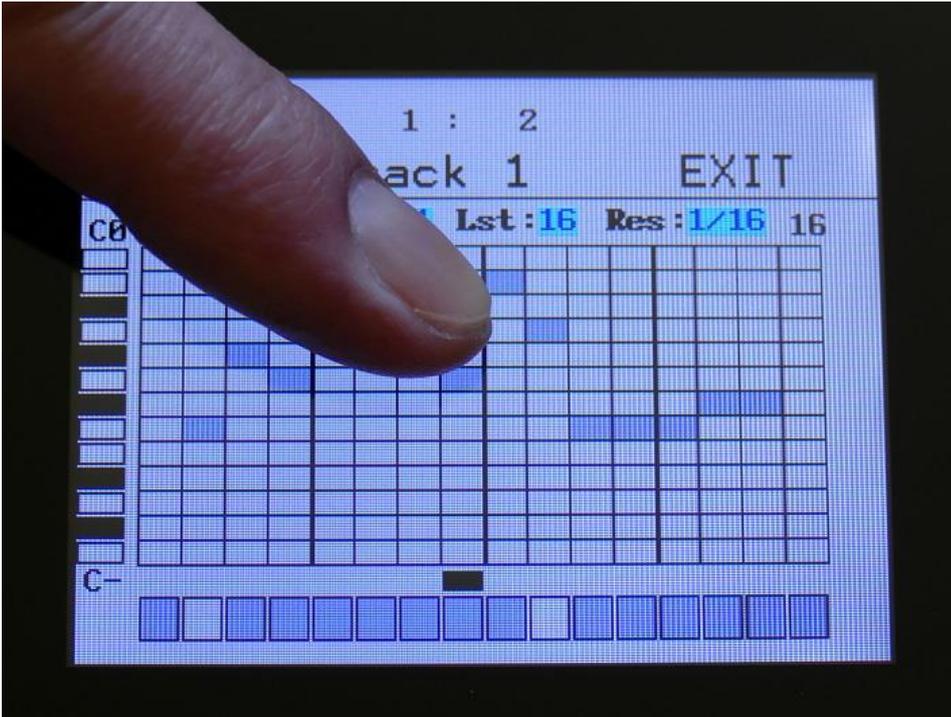
Controller tracks outputs MIDI CC 1 to 127

For some odd reason, I got the maximum CC number that a controller track could transmit, set to 63, when designing Xmini. This has now been changed, so each of the 16 controller tracks can be set to output MIDI CC 1 to 127.



Draw Sequencer Note and Controller tracks

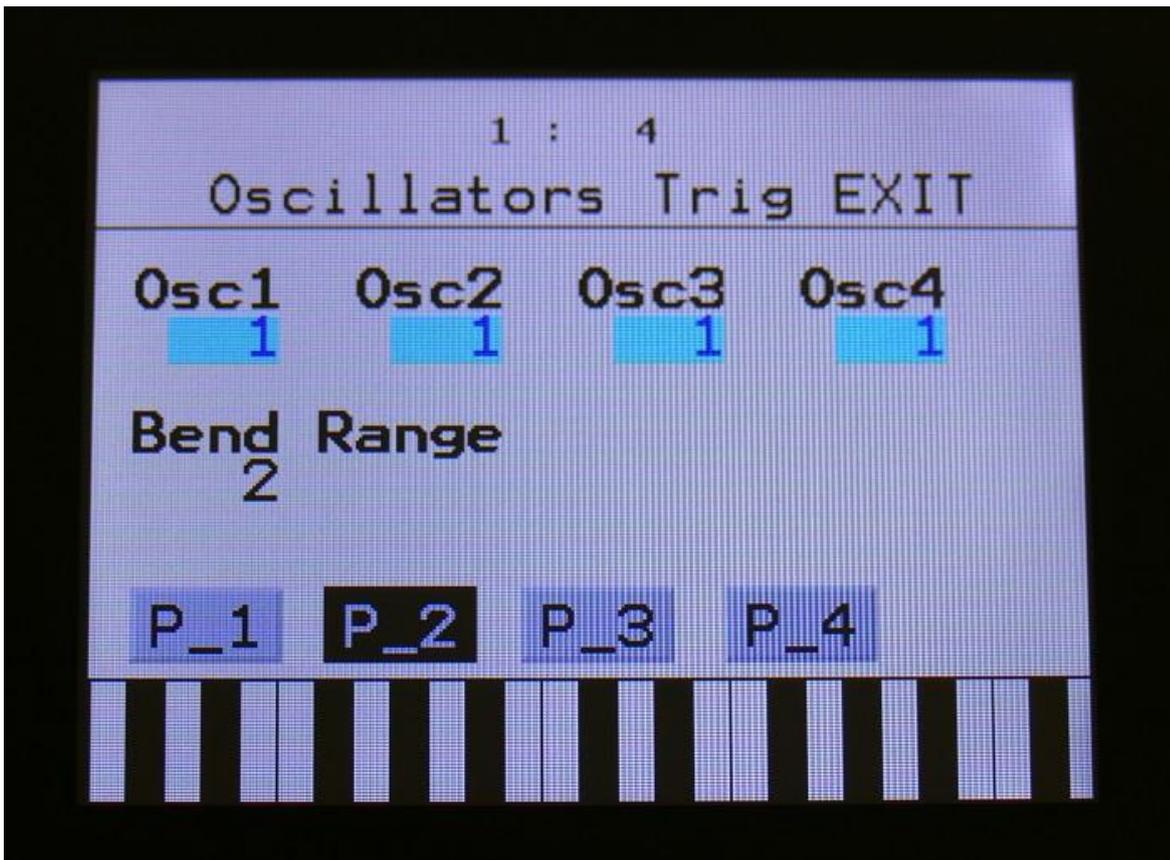
It is now possible to “draw” note sequences and step values on the Gate and Delay pages, and on all the Controller track pages, without lifting your finger from the screen.



Pitch Bend Range

It is now possible to set the Pitch Bend range (Oooops, forgot that in the first firmware version!).

Go to Synth>TRIG>P2:



Bug fixes:

Morph knob switch between Synth and Sequencer morph now works.

MIDI control of Quick Edit parameters now works.

With sample memory full, erasing or exporting the last sampling in a bank, would under certain conditions, make Anamono X freeze. This has now been fixed.

Sample loop does now work with sample chops.

Sometimes when exporting multiple samplings, the USB drive would issue a “Bad Command”, and the system would halt. Anamono X can now handle this, and will continue the export after such a fault.

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