

# Gotharman's Little deFormer 3



## Granular Workstation

## Update Manual 13.60

-Modulation sources can now be selected by group

[Page 3](#)

-A User filter type with settable parameters has been added for your DIY projects 😊 [Page 5](#)

**Bug Fixes:**

-When turning the Seq Morph knob fully up, it would create some sort of random swing. This has now been fixed.

-Sometimes the transition between waveforms in the oscillators were not smooth. This has now been fixed.

-If audio busses were connected, adding effects and filters to the second audio bus in the chain, would not effect the first bus in the chain. This has now been fixed.

-When copying a Sequencer Controller track, the right track number would not always show on the Copy page. This has now been fixed.

## Modulation Sources Select

It has now been made much easier to select modulation sources 😊

When on a page, where you can select modulation sources, push and hold the Func/Mute button, while turning the knob, that will set the desired parameter. Now it will jump through the modulation groups (LFO, ENV, Random etc...).

After you have turned the knob, you can release the Func/Mute button again, and select the modulation sources group for all 4 parameters on a page. LD3 will stay in this mode, until a specific modulation source is selected, or until another edit page is selected.



To select a specific modulation source, within the selected group, simply push and hold the Steps/Part button, while turning one of the modulation source select parameters. Again, you can release the Steps/Part button, as soon as you have turned one of the parameters, and select the modulation source for each parameter. LD3 will stay in this mode, until you go back to select a group, or until another edit page is selected.



## User Filter Parameters

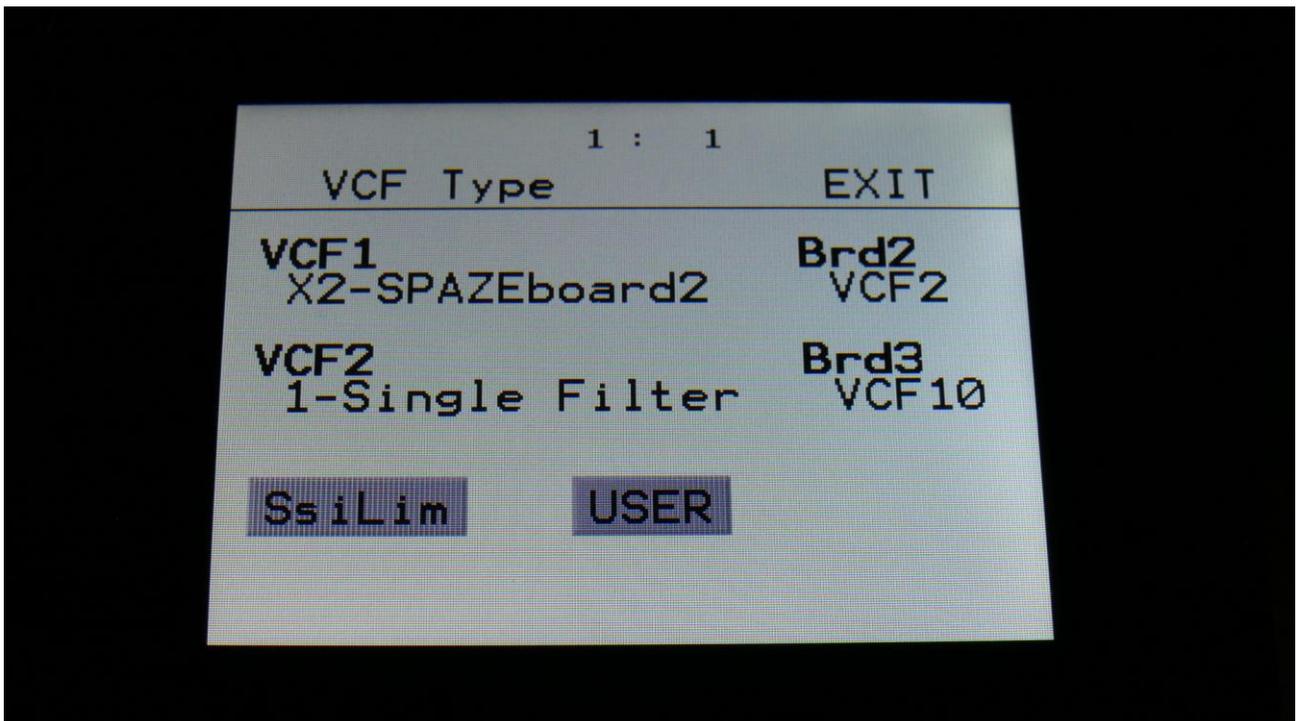
Since the analog filter board specs have now been released, and you are probably eager to connect your own filter design to your LD3, it has now been made possible, to name each parameter for your filter, so that you don't have to bother Gotharman with this ☺

It is also possible to set, if each parameter should work in inverted mode. This can save you from having to add inverter circuits to your design.

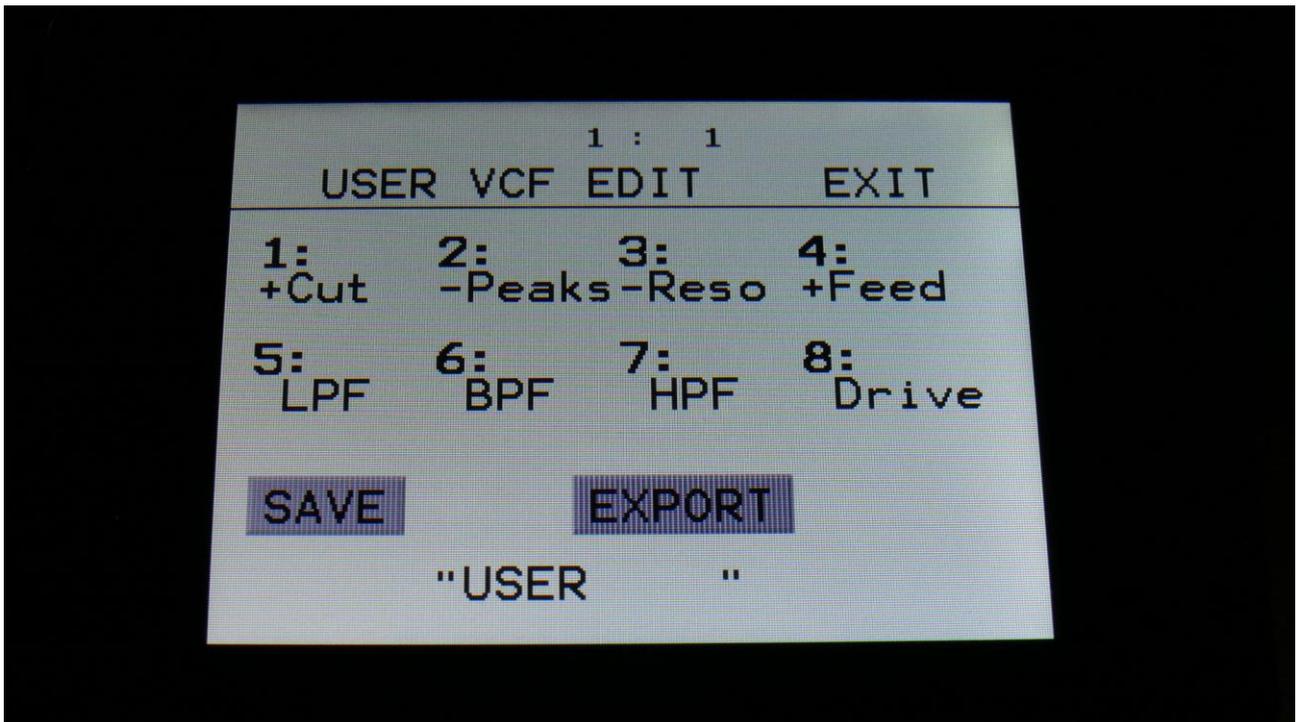
It is also possible to export and import the parameters as a file to a USB stick, so that you can share it with other users, if you decide to sell filter boards of your own design.

### Setting up the user filter

Go to the MOR>VCF TYPES page.



Here a new touch button, "USER", has been added. Touch this to enter the User filter pages.



On this page you will see an overview of the parameter names, for the User filter.

In the top of this page, you will find the 4 main parameters, numbered 1 to 4. These are the ones, that generates the 4 CV voltages. Turning Edit Knob 1 to 4, will set each of these parameters to work as normal or inverted, indicated by a + or a – just before the parameter name.

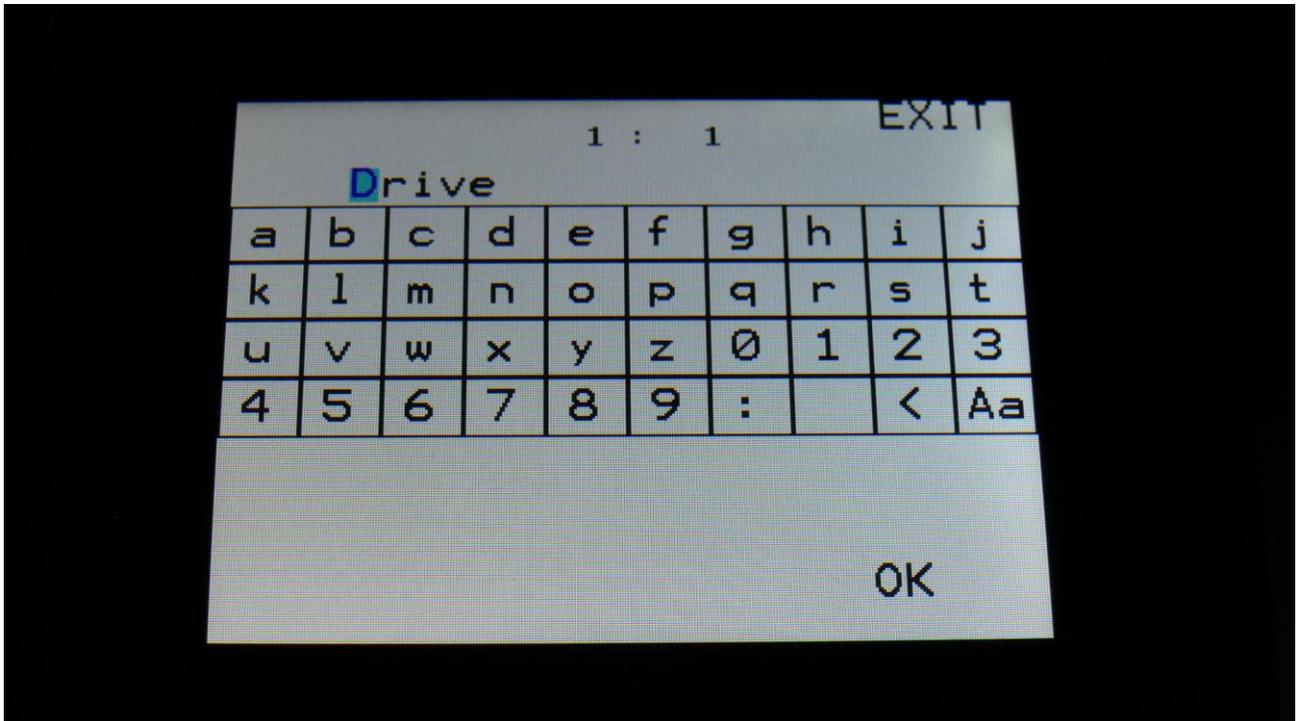
Parameter **1** will control the voltage sent to the “**Cut**” CV output, parameter **2** will control the voltage sent to the “**Peaks**” CV output, parameter **3** will control the voltage sent to the “**Reso**” CV output, and parameter **4** will control the voltage sent to the “**Feed**” CV output.

The VCF modulation sources will be named in the same way as these main parameters.

The lower row of parameters, numbered **5 to 8**, shows the parameter names for the 3 **digital switches** (5 to 7), and for the filter output **1 and 2 output balance** parameter (8).

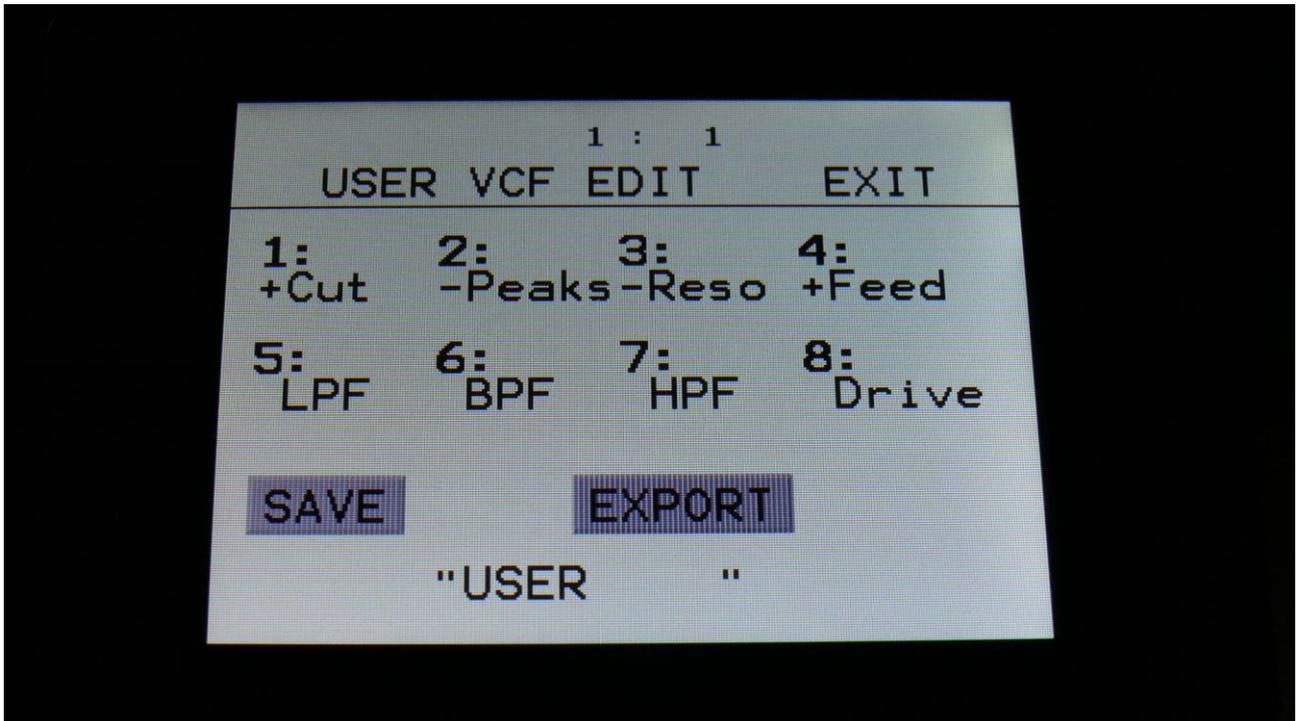
In the bottom of this page, you will find the name of your filter, which initially is “USER”.

To set the name for a parameter, simply touch the parameter name. The touch keyboard will now pop up.



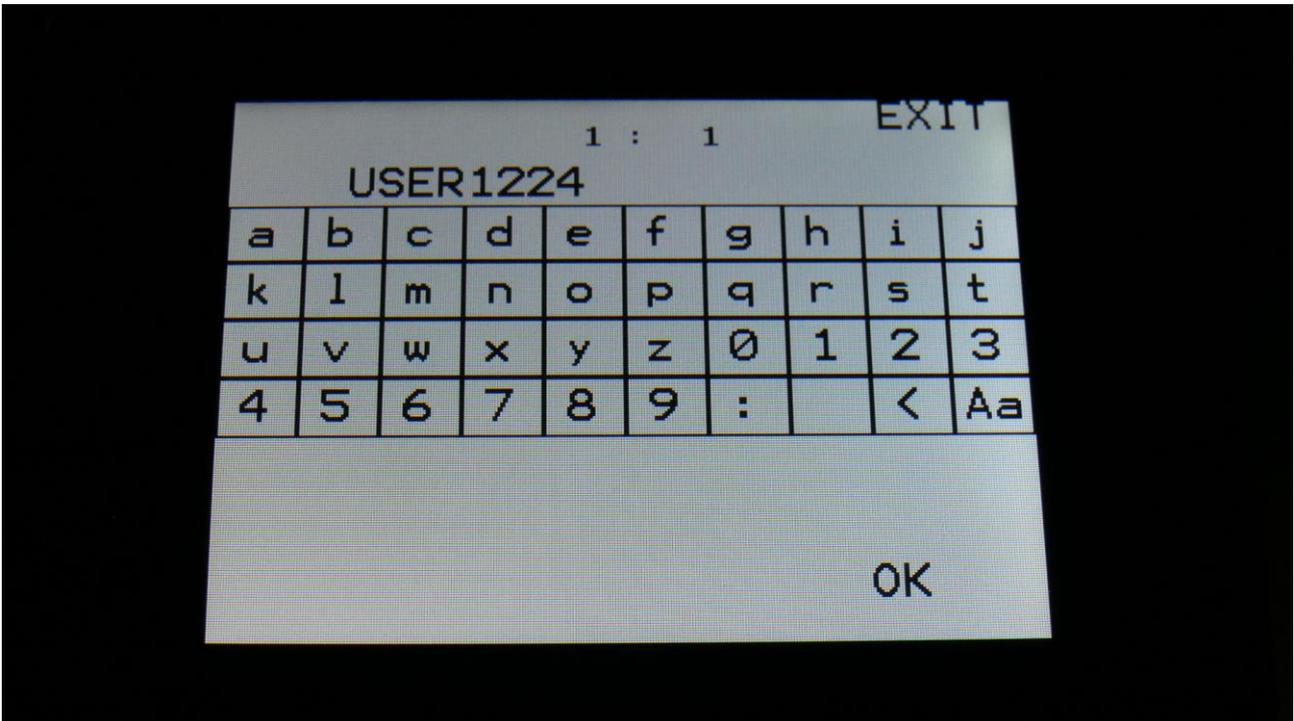
Punch in the name you find practical for this parameter, and touch OK, to return to the User filter page. The name of each parameter can be 5 characters long.

## Saving the User filter parameters



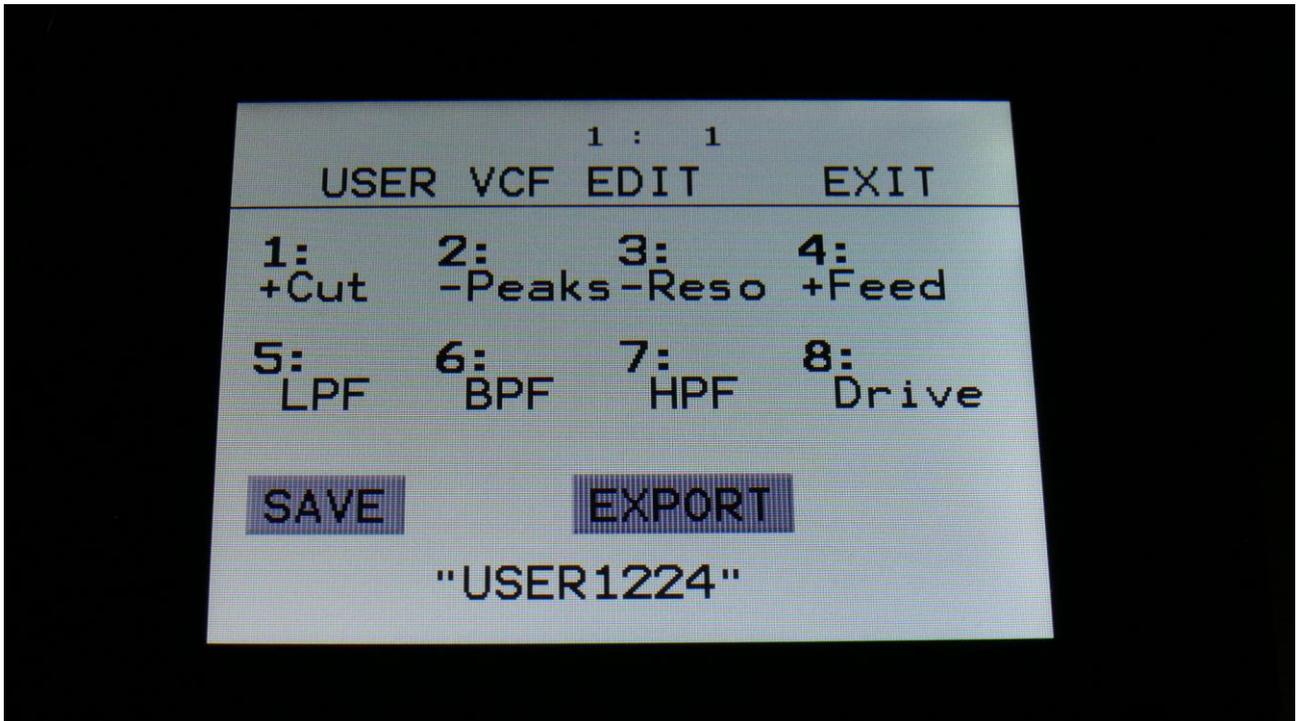
When you are done naming the parameters, and setting the normal/inverted switches, touch the SAVE button, to save the parameters. And don't worry if everything is perfect at this point or not. You can, at any time, return to the User filter setup page, and change the names and/or normal/inverted settings.

The touch keyboard will now pop up.



Punch in the name of your filter. This name can be up to 8 characters long. Touch OK to save, or EXIT to quit without saving.

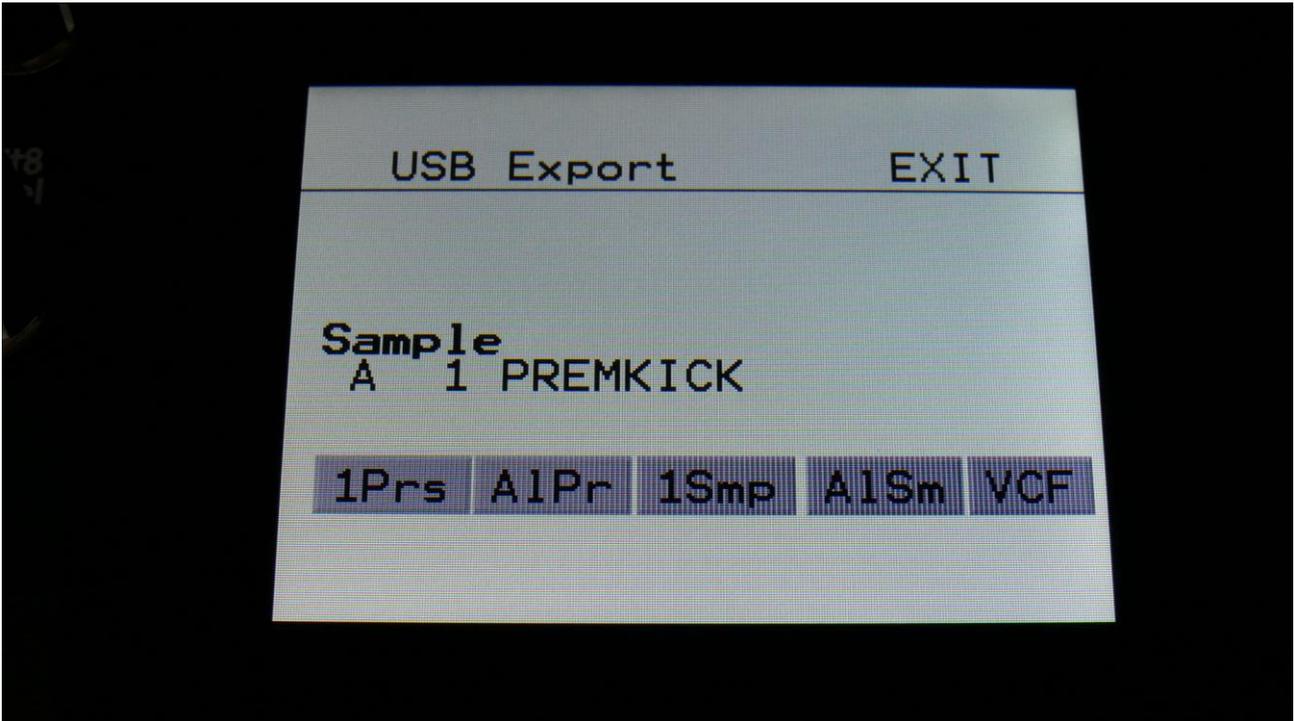
You are now back on the User filter page, and the name has changed.



## Exporting the User filter parameters to USB stick

It is possible to enter the USB export page directly from the User filter page, by touching the EXPORT button. It is also possible to enter this page, in the same way as you usually enter the USB pages.

An extra touch button has been added on the USB Export page, "VCF".



Touching the VCF touch button, will immediately export the saved User filter parameters to the currently selected folder of the connected USB drive. The file will be named the same as the user filter, with .VCF added as the ending. When the export is done, it will return to the main USB page.

Please notice, that if you enter the USB Export page directly from the User filter page, it will be located in the root directory of the connected USB drive, so you might want to hit Exit, and select the proper folder, before you export the file.

## Importing User filter parameters from USB stick

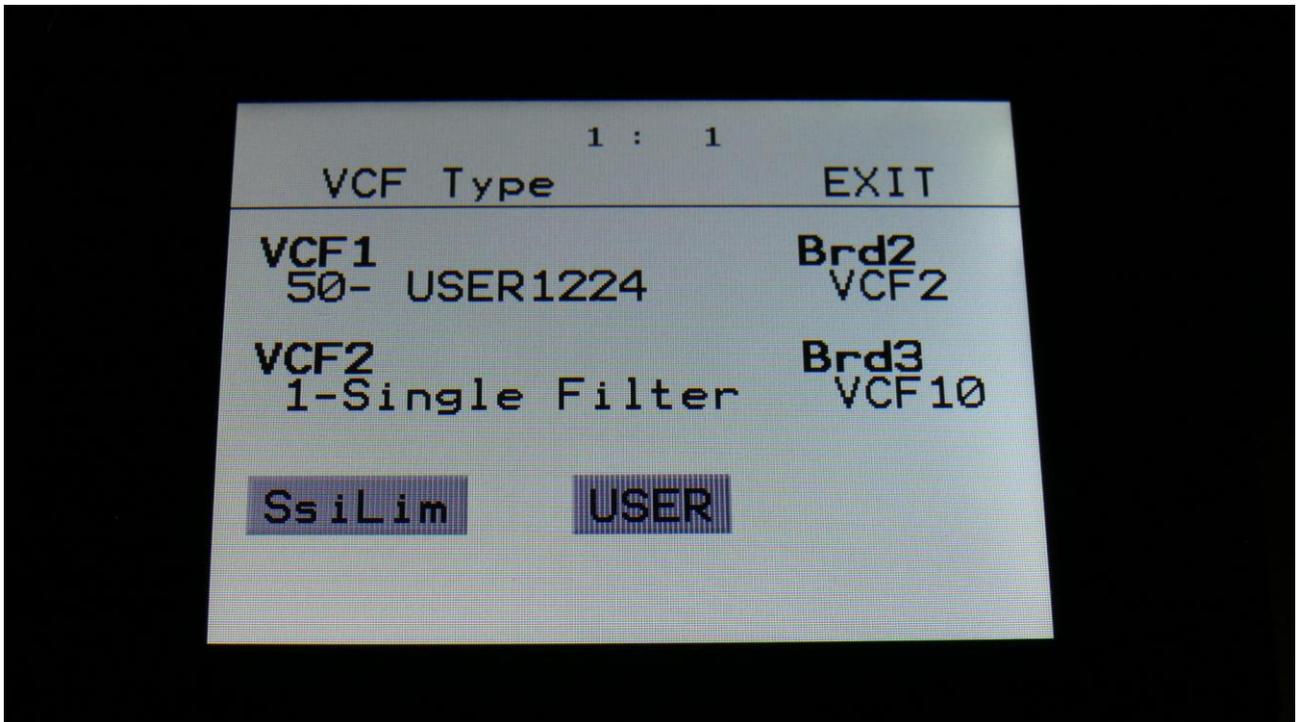


Simply select a .VCF file, and touch Import. The User filter file will now be imported and saved. If your LD3 already contained saved User filter parameters, these will be overwritten, so if you plan to use this, remember to export it first.

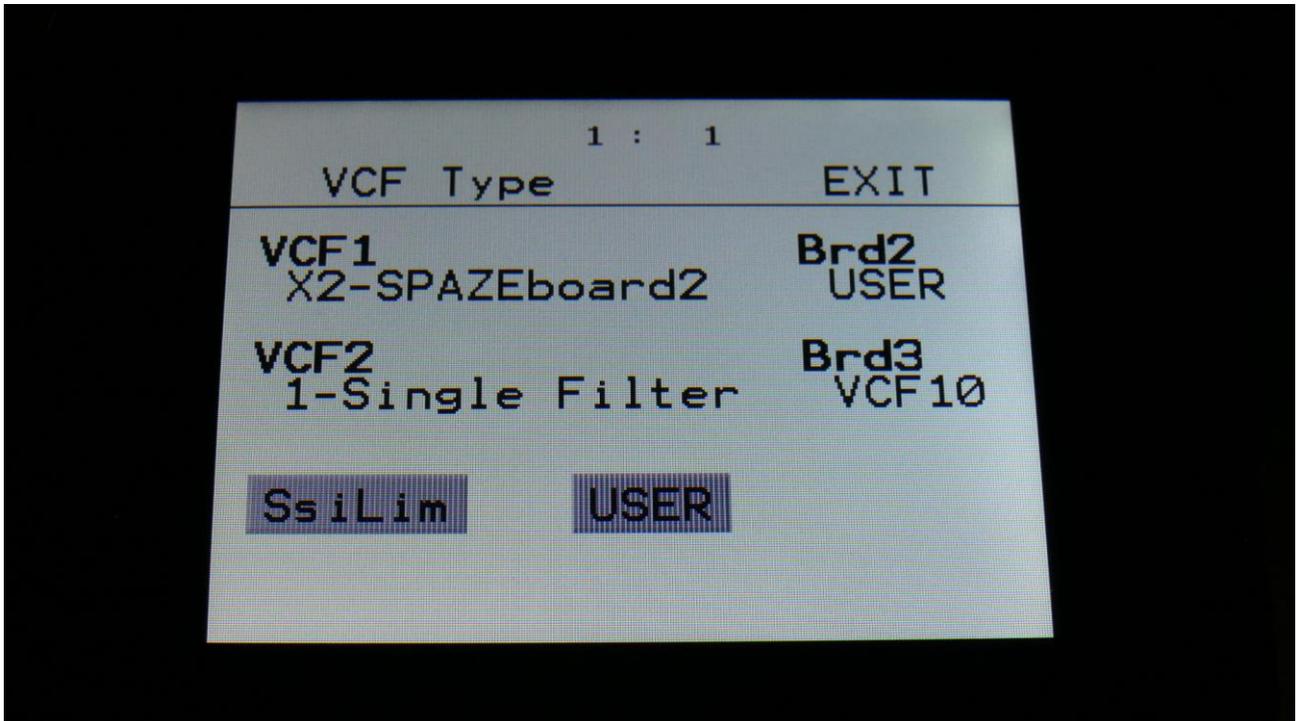
The VCF files can only be imported as single files. They can't be imported together with multiple files.

## Using the User filter

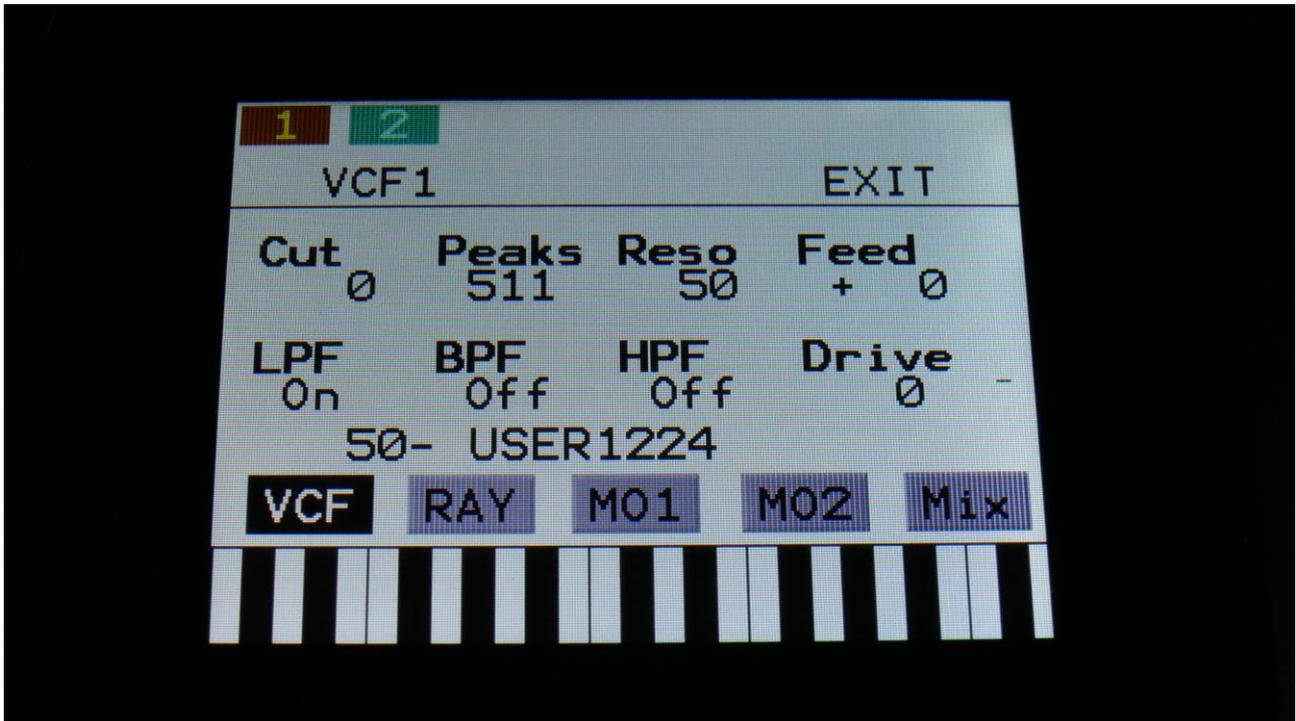
On the VCF TYPES page, simply select filter board number 50. 50 will be shown, together with the name of your filter.



If you have SpazeBoard2 installed, and you select the User filter as one of the filter boards, it will just show "USER", regardless of the filter name.

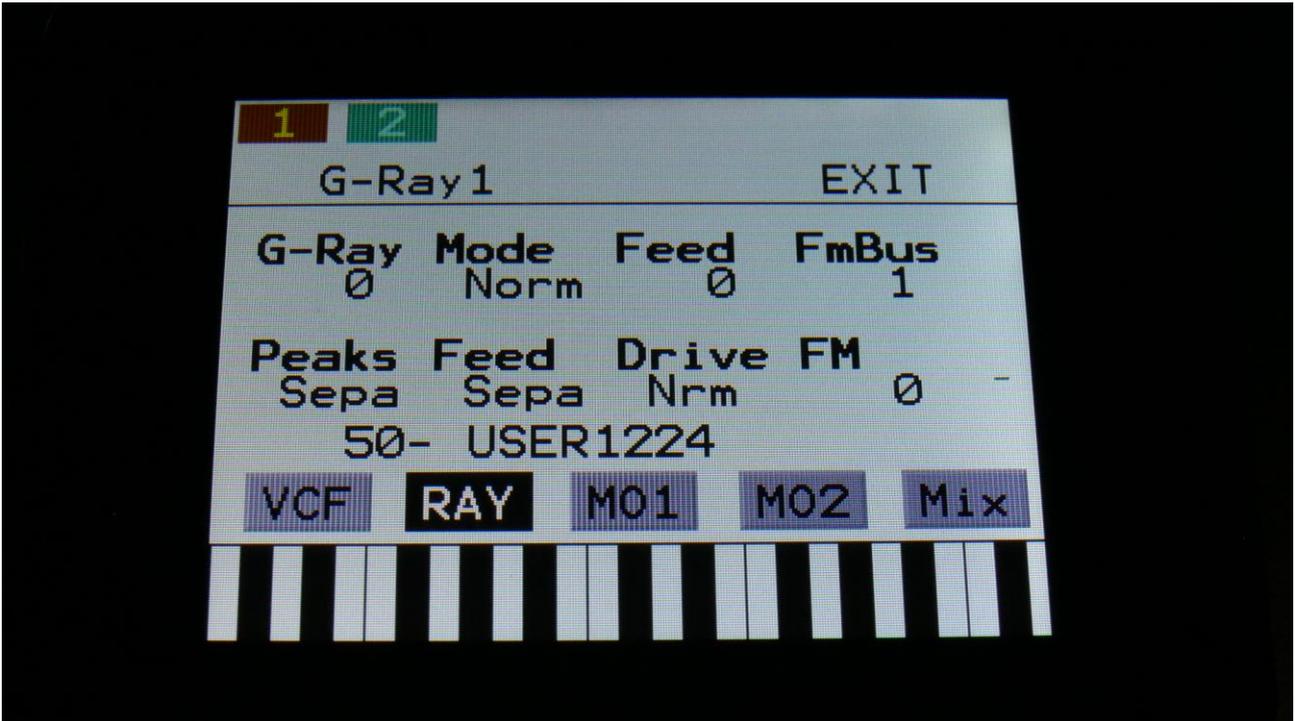


## The User Filter Parameters



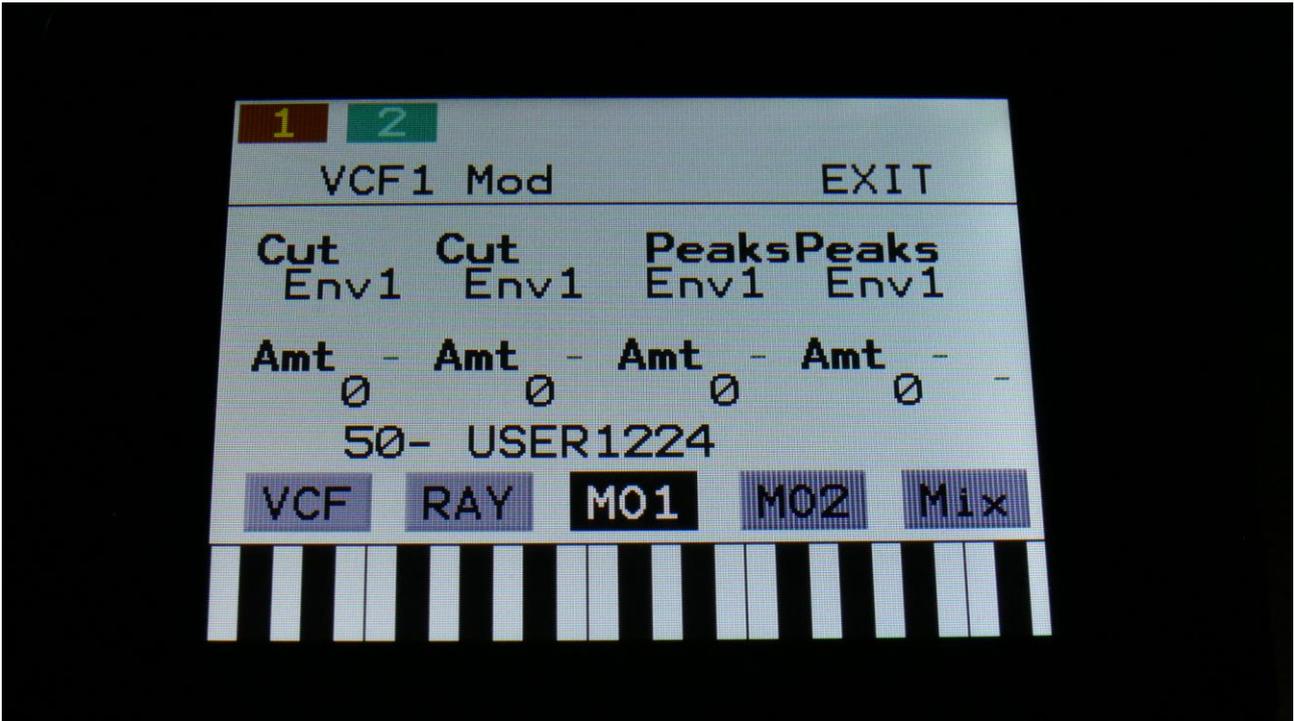
After you have selected the User filter on the VCF TYPES page, simply go to the usual VCFs synth edit page, to edit the parameters.

On this first page, the 8 main VCF parameters from the User filter setup page are shown, and can be edited.

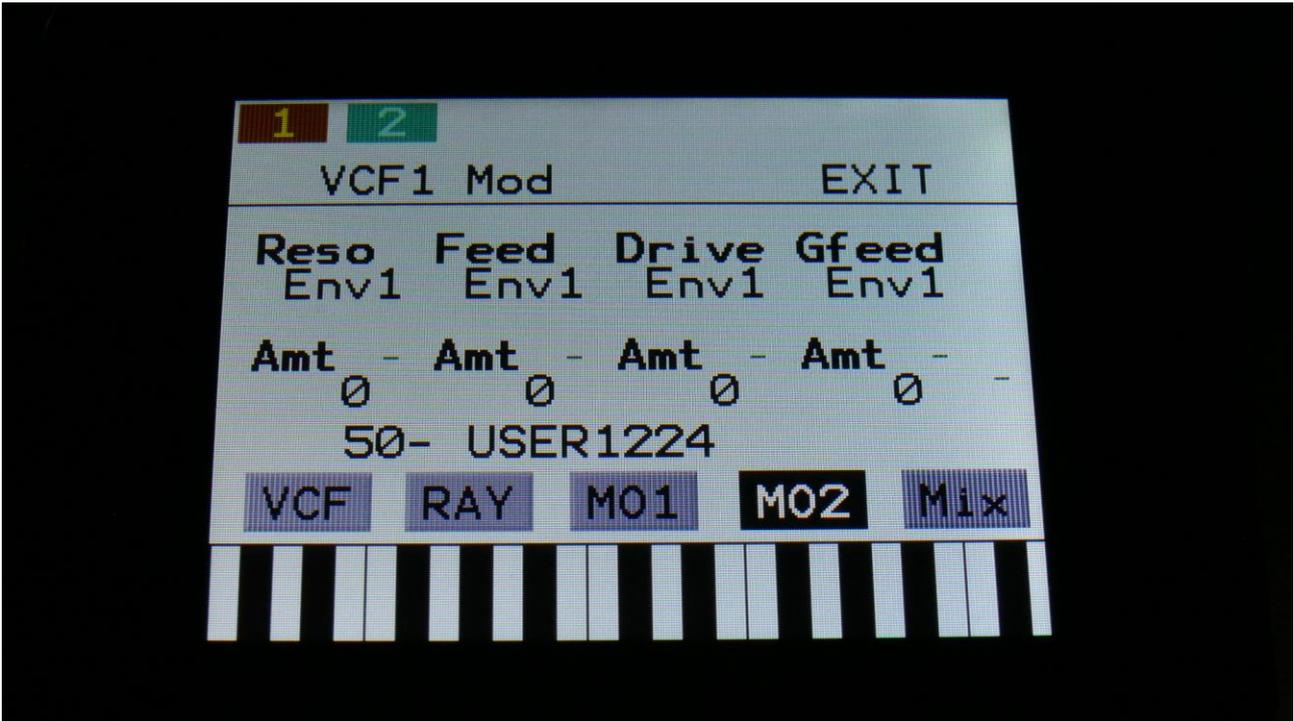


On the second VCF edit page (RAY), you will find the G-Ray and FM parameters as usual, plus you will be able to select how parameter 2 and 4 should interact with parameter 1 (the Peaks and Feed switches in this example) –These 2 parameters are not available with SpazeBoard2 installed. You will also be able to select, if audio output 2 of the filter, should be normal or inverted (the Drive parameter in this example).

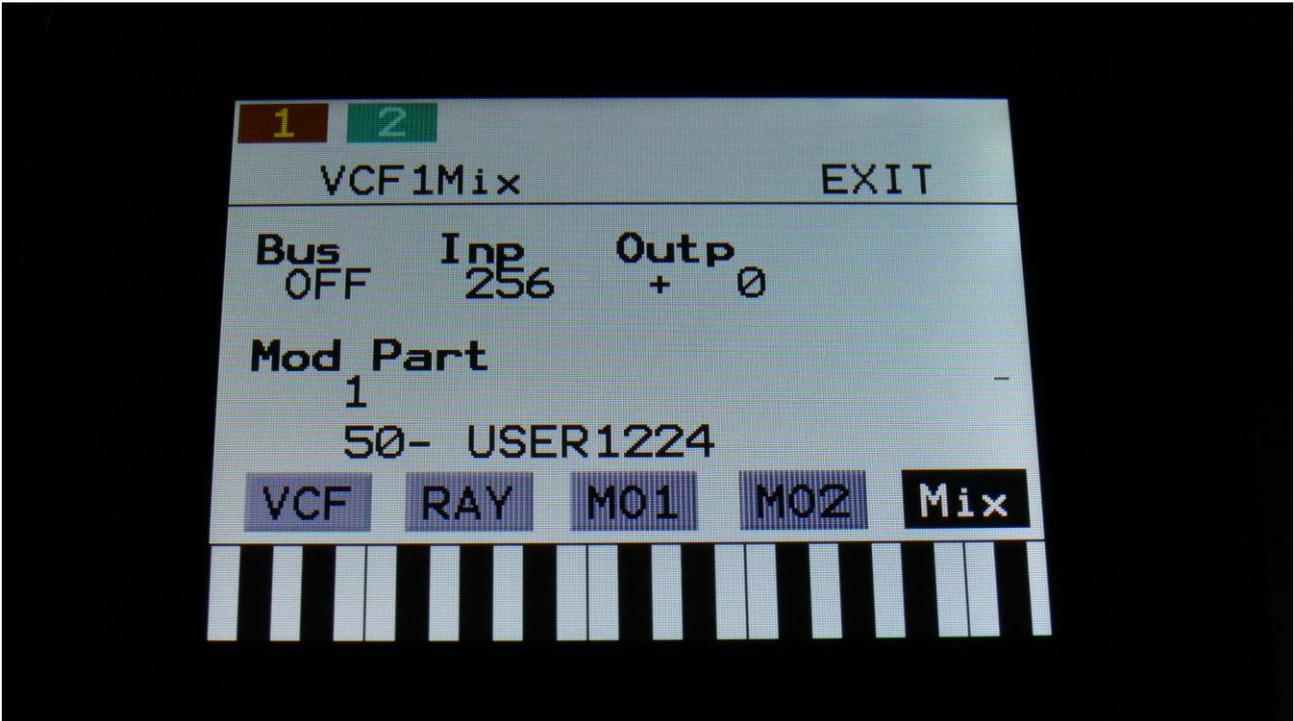
The G-Ray circuit will, of course, also work with your own filters.



On the third VCF page (MO1), you can modulate parameter 1 and 2, and the names of these are shown.



On the fourth VCF page (MO2), you can modulate parameter 3, 4, 8 and the G-Ray feedback parameter.



The fifth VCF page (MIX), is exactly the same as for any other filter board.

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