# Cotharman's zaTurn



# Modular Synthesizer

# Update Manual 6.30

### **Table of Contents**

Bug Fixes	3
zaTurn PolyTouch	4
/othar8 Filter Board	5
Multi Filter Board	6
Filter Frame Sequencer	8
Nodule Quick Jump Buttons	9
Output Module Pan Modulation	10

### **Bug Fixes**

-When selecting effects in LINK poly mode, this would not always work as expected. This has now been fixed.

- +/- modulation select on Oscillator B did not work. This has now been fixed.

-Sequencer Note Tracks Layer B would always be recorded in mono mode, regardless of the settings. This has now been corrected.

### zaTurn PolyTouch



Because of the current global part shortage, some parts that were needed to produce zaTurn became unavailable. The display was among these parts. So in order to be able to still produce these, I had to redesign it.

The new display supports multi-touch (or poly touch), so it is now possible to play 4 notes directly on the touch screen keyboard, and it is possible to play the keyboard, while changing settings and pages.

Since I had to reprogram the display routines from the bottom anyway, I also did some redesign of the color schemes, and added 3D keys. These changes only apply to the PolyTouch model.

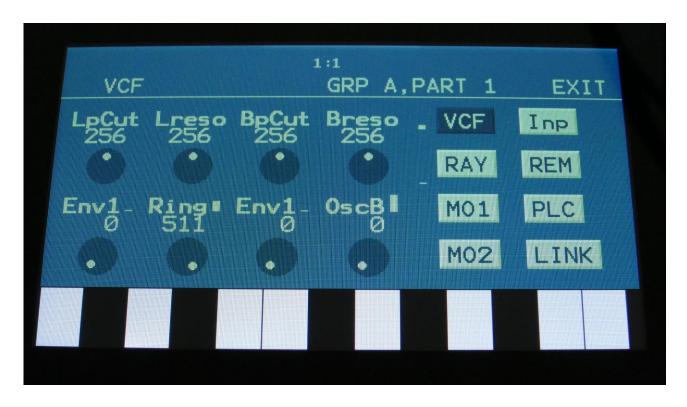
### **Vothar8 Filter Board**

The analog filters of the Gotharman's Vothar8 are now available on a polyphonic filter board for zaTurn. This board has 4 Vothar8 filters, each with a 12db lowpass filter and a 12db bandpass filter, connected in parallel. These are made completely with discrete parts. No filter chips used! A few modifications have been made, compared to the original Vothar8 filters:

-Reso can now self-oscillate.

-The distortion at higher input levels is gained a little.

zaTurn can hold the tunings for up to 4 analog filter boards, and it will show on the Preset Select page, which filter board were installed, when the preset was saved, to make it easier to work with several different filter boards.



The parameters are exactly the same as for the original zaTurn filters, only the sound is different.

### Multi Filter Board

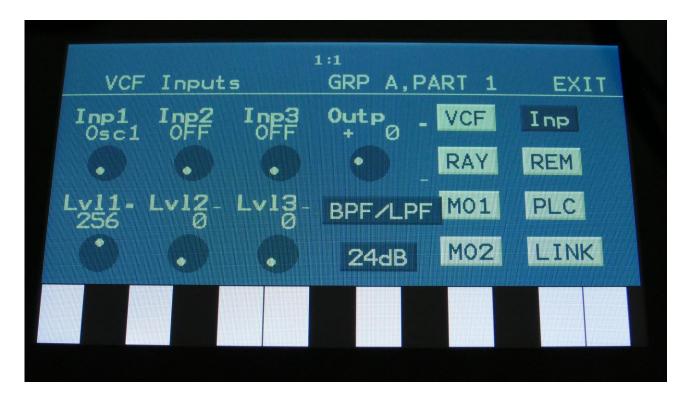
A new polyphonic analog Multi Filter Board is now available for Zaturn. This is based on the SSI2140 filter chip, and has the same character as the VCF10 filter board, with an added slope parameter for the lowpass filter.

This board has 4 filters, each with a lowpass filter with selectable slope (6, 12, 18 and 24 db), and a switchable 12db bandpass/highpass filter. When bandpass is selected, the LPF and BPF runs in parallel. When highpass is selected, the HPF goes into the LPF in serial.

zaTurn can hold the tunings for up to 4 analog filter boards, and it will show on the Preset Select page, which filter board were installed, when the preset was saved, to make it easier to work with several different filter boards.



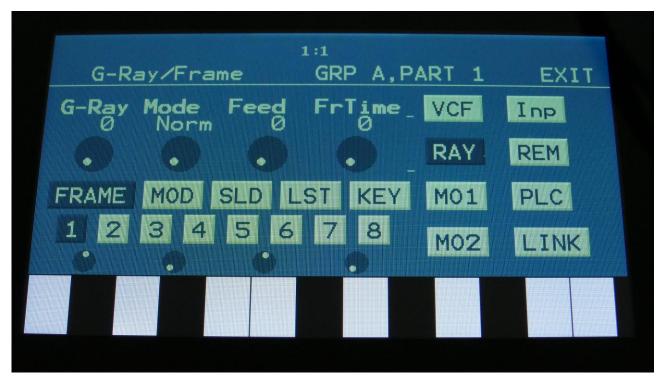
The parameters are exactly the same as for the original zaTurn filters, except for that the BPF can be switched to a HPF, and that the LPF slope can be set.



The new switches are located on the VCF Inputs page:

#### **Filter Frame Sequencer**

Some changes have been made to the Filter Frame Sequencer, to make it easier to use.



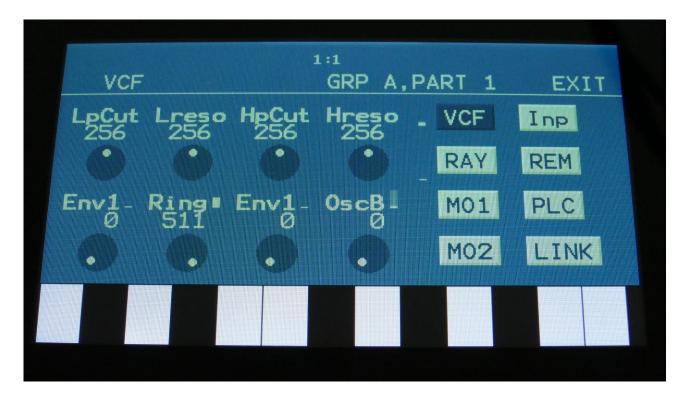
On the G-Ray/Frame page Edit Knobs 5 to 8 now adjust the Cut and Reso settings for the selected frame, so that you no longer have to jump back and forth between this page and the first filter page, for setting these parameters. Edit Knob 5: LPF Cut. Edit Knob 6: LPF Reso. Edit Knob 7: BPF/HPF Cut. Edit Knob 8: BPF/HPF Reso.

These settings are indicated by the 4 small knobs in the bottom of this page.

The functionality of the Cut and Reso parameters on the first filter page, have also been changed in Filter Frame mode.

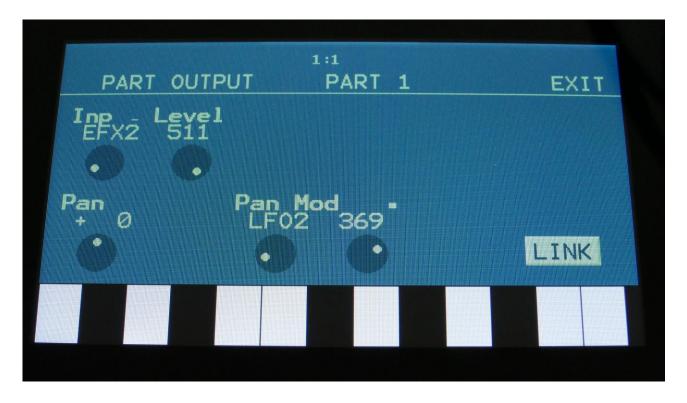
These are now setting an offset which affects all the filter frames.

#### **Module Quick Jump Buttons**



When using the Module Quick Jump buttons to jump between the modules, zaTurn would always jump to the first page of the module. It will no longer do this. Now it will just jump to the page that you selected, the last time that you accessed this module.

#### **Output Module Pan Modulation**



The 2 pan modulation parameters in the Output module have been moved one step to the right, so that Edit Knob 7 and 8 are now used for the pan modulation. This seems a bit more logical, than using Edit Knob 6 and 7.

Written by Flemming Christensen 2022