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Xtal Rêve visceral asmr reverie the sound of electricity feeding back on itself dispersing into ecstatic chaos

This synth has been designed so that it can be used intuitively. It is not necessary to understand the internal signal routing or know what every knob and switch does to get good results.

The following pages provide some technical details on the instrument.

With love, NX

#### Xtal Rêve has 4 main sections

These are:

- 4 slopes
- Rêve fuzz high gain circuit bent fuzz
- pattern generator
- audio mix

## 4 slopes

### configuration

The 4 slopes are labeled I, II, ZI, AII.

They are grouped in pairs. I and ZI make a pair and II and AII make the other pair.

ZI and AII are both sent to the audio mix and have their own volume knobs. I gates the volume of ZI and II gates the volume of AII.

### controls

Each of the 4 slopes has identical controls

- *2 speed control knobs*, 1 for the attack portion of the cycle and 1 for the decay portion of the cycle. These knobs will effect both pitch and shape of the slope wave.

- A 3 way *speed select switch* that determines the base frequency.

### A 3 way trigger state switch

Determines how the slope will be triggered.

- up position – sequential - every slope will be triggered by the end of cycle of the previous slope
- middle position – resting - the slope stays in a resting state, ready to be triggered by the touch sensors, the pattern generator, or an external sequencer or gate source
- down position – loop

### modulation routing bus

Every slope is also sent to a level control (to determine modulation intensity that it sends out) and a *modulation routing bus* (where modulation destinations are selected).

Slope I and II each have their own dedicated red dip switch for their *modulation routing bus* and a dedicated knob for the modulation level

ZI and AII share a level knob and a dip switch. AII's destinations are in the left 4 micro switches ZI's destinations are in the right 4 micro switches

# **Rêve fuzz**

#### controls

The fuzz circuit has an output volume knob and an input level knob.

There is a red *circuit bend* dip switch that controls *circuit bends* for gain, clipping and tone.

And (2) 3 way toggle switches that introduce *feedback bends*.

\*Note that in certain configurations having more than 1 of the *feedback bends* activated can cause the fuzz to go quiet.

### 3 sound sources can be sent into the fuzz

- an internally mounted contact mic picks up the actual sound of you turning knobs, hitting switches, and touching things.

- The sound of the slopes – selectable in the *right 4 switches* of the red *fuzz bus* dip switch.

The *fuzz bus* also passively mixes the slopes together which leads to a lot of really cool sounds.

\*Note that having 3-4 slopes passively tied together in certain configurations can sometimes cause the machine to go quiet or greatly reduce the range of the modulation level. If this is the case, remove some of the signals from the fuzz bus.

- External Audio- will override the other 2 signals

\*Bring a spring reverb return into the fuzz for wild feedback distortions.

#### fuzz power source

the fuzz can be powered by the main power source or from the slopes themselves.

The *left 4 switches* in the red *fuzz bus* dip switch allows you to choose which slopes will power the fuzz. Again this will passively mix the slope signals and so the same consideration applies if you combine more than 2 signals.

\*Note that the fuzz volume will be somewhat lower with slopes as power source.

### patterns

There are (2) 8 step pattern generators.

To write a pattern, touch the touch point for the associated pattern. It will loop the pattern until it is touched again.

Pattern I can be sent to slope I and ZI. Pattern II can be sent to slope II and AII.

To send the pattern generator to the slope, select the type of trigger you want to send in the red *trigger routing* dip switch.

You can send the pattern (or gate from an external source) to either a one shot trigger or looping trigger of each slope.

The looping trigger will make the slope loop for the duration of the gate.

# touch sensors

the 4 touch sensors at the bottom will loop the associated slope if the slope in question is not already triggered – ie in loop mode, or triggered by the some other source

# the mixer

At the far left of the unit's face, is the mixing section.

Xtal Rêve's signals will become intertwined through passive mixing / feedback / modulation before they reach the active mixer.

Still there is some degree of control over individual levels.

Level controls:

- fuzz/noise section
- zi and aii slopes

- the preamp - which if nothing is plugged in will instead give a volume control for the left oscillator

- bass cut/boost switch
- master volume.

# Ins / Outs

At the top of the unit's face there is a line level output, and a driver output, that allows you to drive headphones, an 8 ohm speaker, or a spring reverb - which can be returned to the main mix through the preamp or the fuzz input.

There are also individual inputs for triggering each slope from an external source and individual outputs for using the the slopes to effect other eurorack or cv enabled gear.

Use the *trigger routing* dip switch to determine how external gates will trigger the slopes. External sources will override the pattern generator.

# external audio

External audio can enter either through the fuzz or through the preamp

\*Preamp level is not effected by master volume. This allows for trails to be left on when using the headphone out as a spring reverb or effect send.

# Sync

Xtal Rêve's pattern generator can be synced to an external clock

### Power

Use the supplied 5v to 12v adapter with a standard 5v usb battery pack or phone charger.

Otherwise you can use with any 12v DC / CC center positive 2,1mm x 5,5mm adapter.

