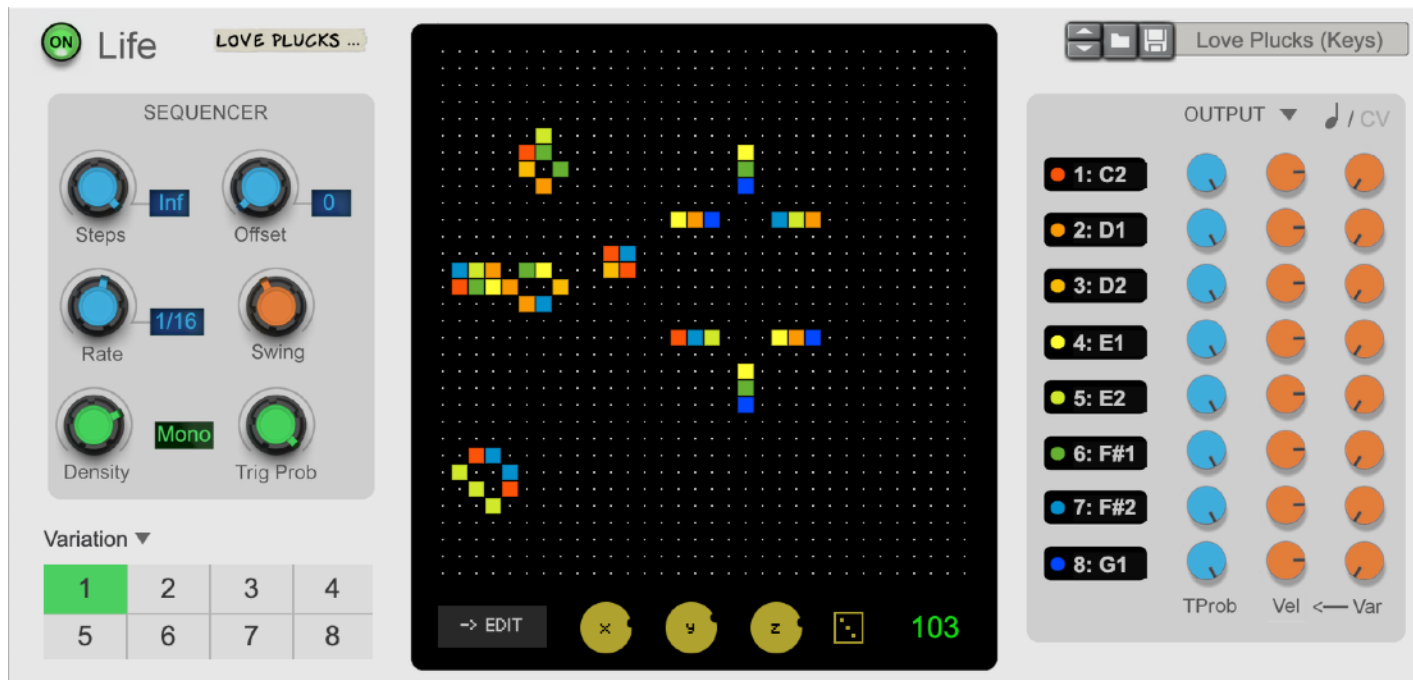# Life

Generative Sequencer Player

Rack Extension for Reason

What's New

Table of Contents

1. What's new 1.1.0

1.1 Game Rules and Edges Behaviour

Game Rules: in addition to Conway's original "Game of Life", there are 3 other popular game variants which use different rules for the survival and the birth of cells, and they are known as "High Life", "Seeds" and "Day and Night". Simply click in the display to open the menu and select a different rule. You'll find that each rule has its own characteristics and produces different results for the same initial cells configuration.
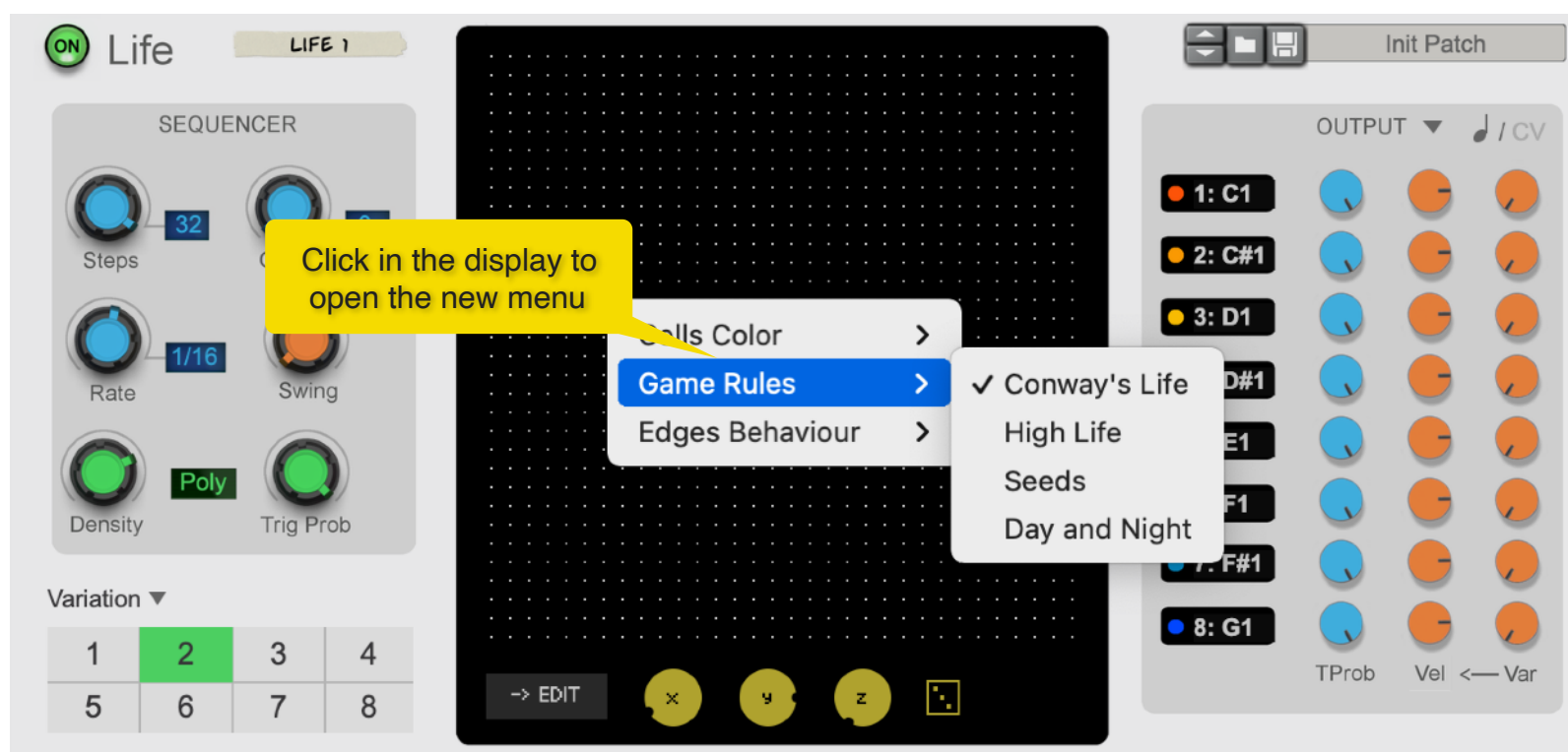
Edges Behaviour: there are also 3 different choices for how the edges of the matrix behave, which will influence the cell evolution.

The "Standard" behavior is the original implementation where cells at the edge effectively have a reduced number of potential neighbors, compared to cells inside the matrix (there are no neighbors outside of the matrix edges).

If the behavior is set to "Reflective", a cell at the edge of the matrix will have its neighbors mirrored right outside of it, thus making the cell have the same number of potential neighbors as cells inside the matrix.

If the behavior is set to "Conductive", a cell at the edge of the matrix will "feel" the effect of any neighbors on the opposite edge of the matrix, also making the cell have the same number of potential neighbors as cells inside the matrix.
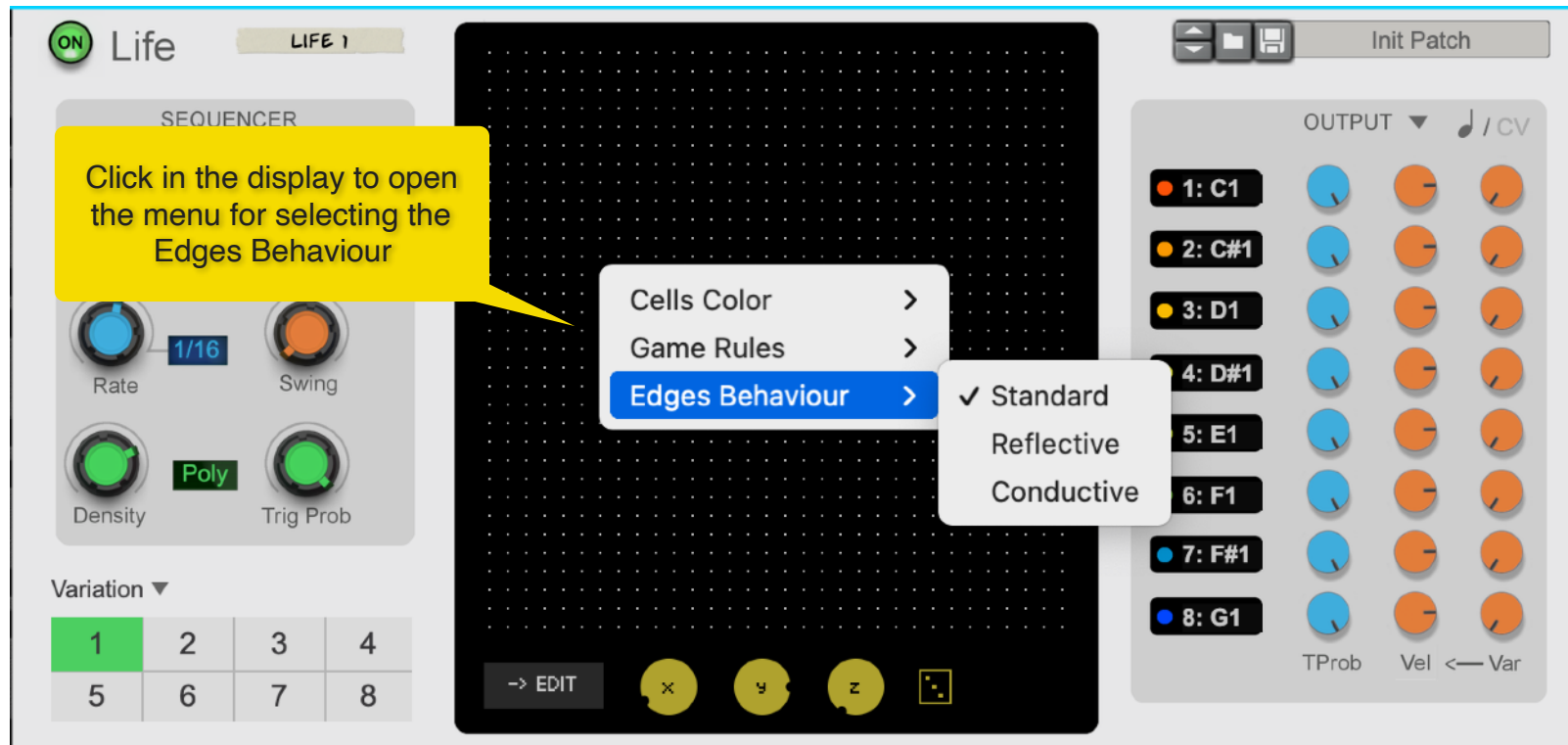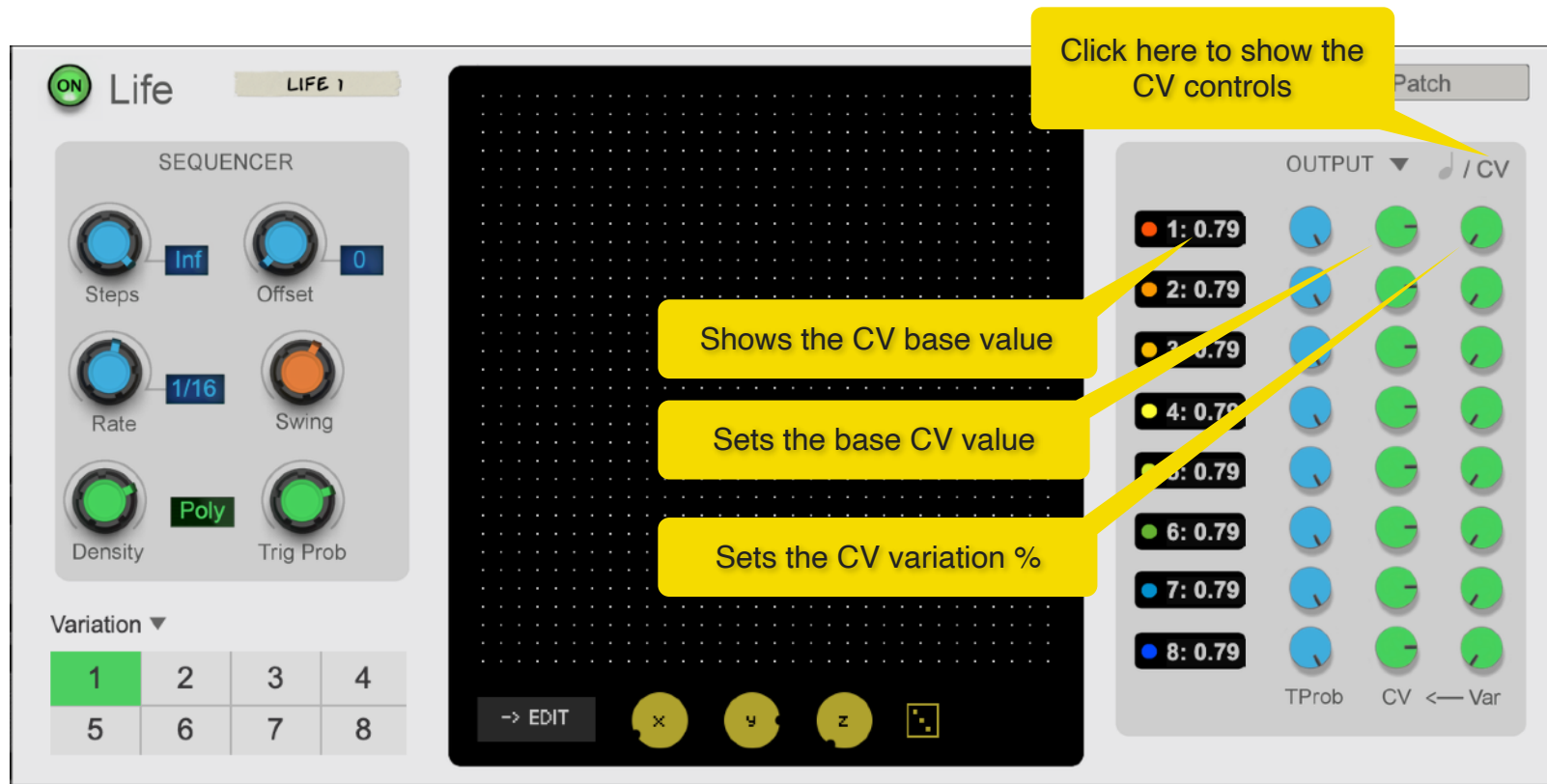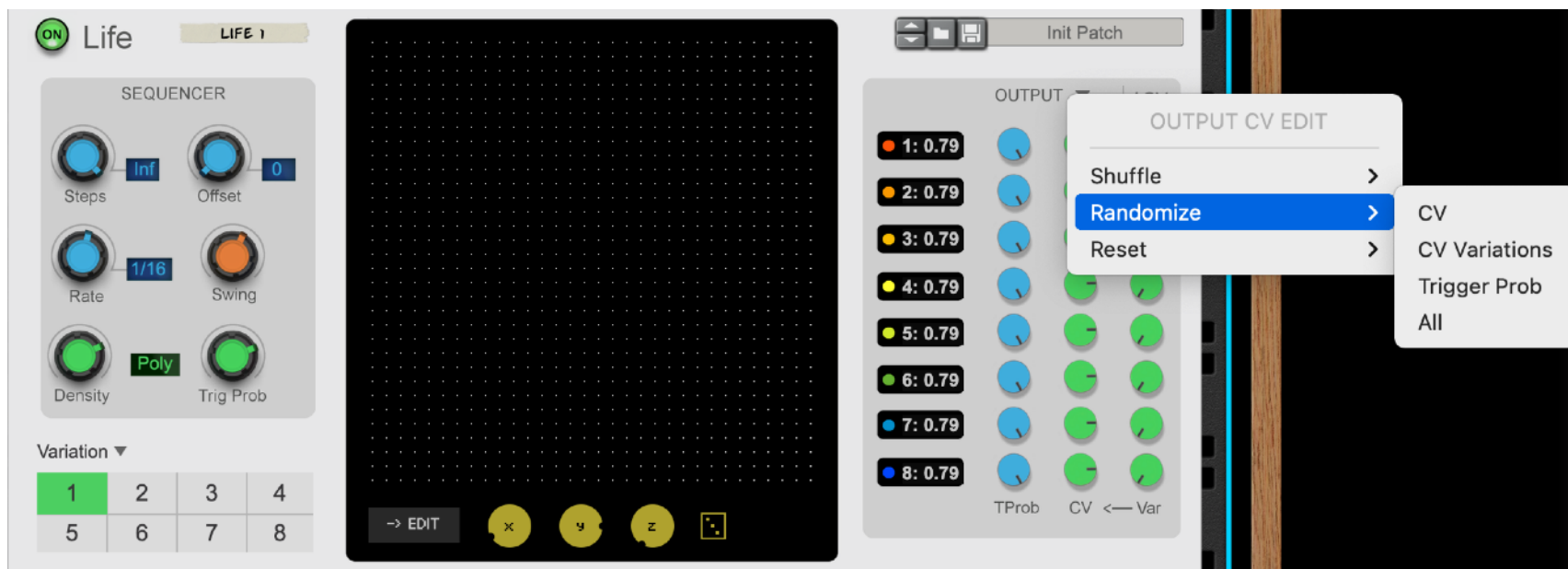
1.2 CV Modulation Outputs

Active cells can now output CV signals for modulation purposes. Along with Gate and Note CV, each cell color has an additional CV output jack in the back of the device.

CV Modulation Outputs
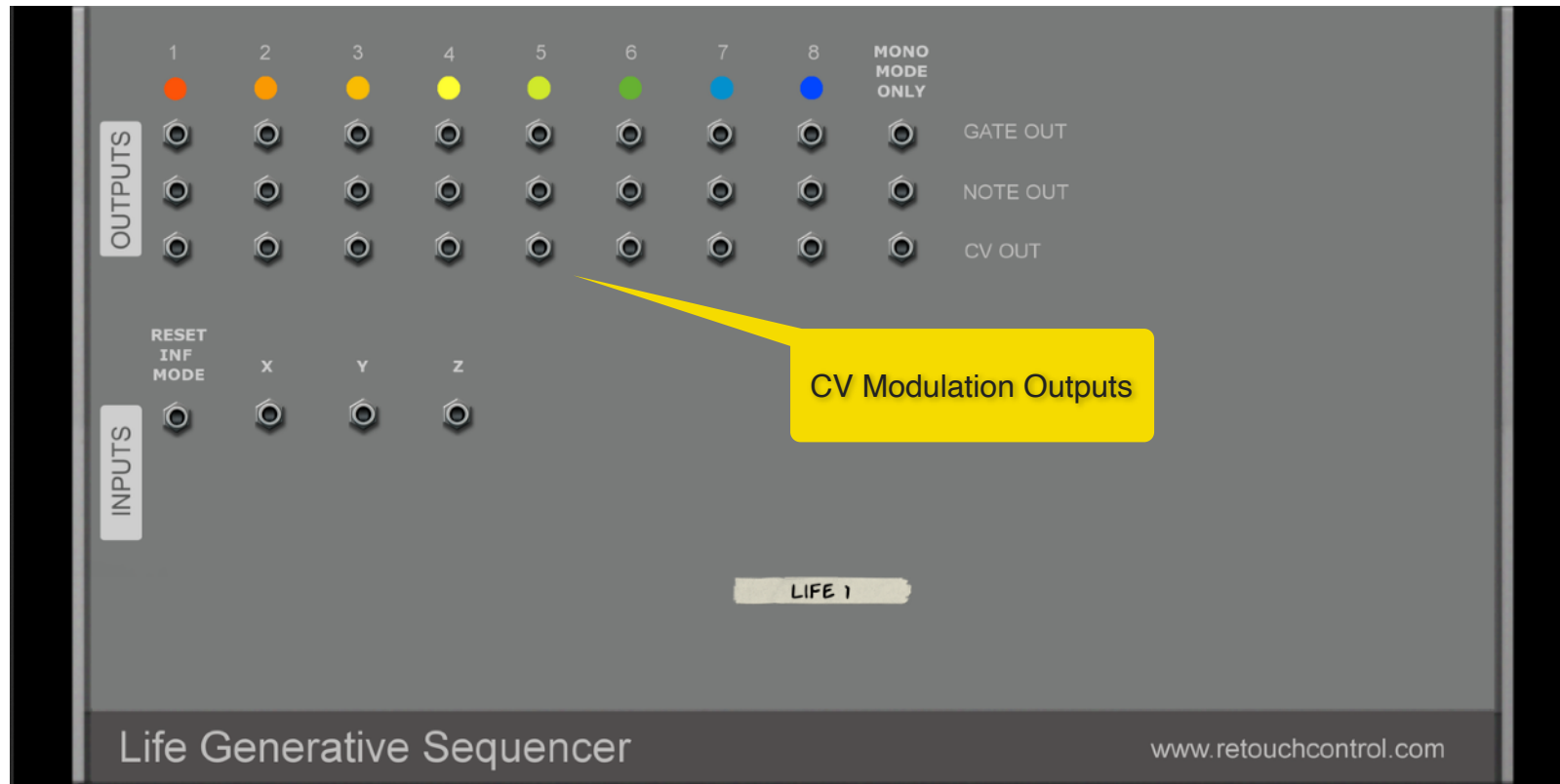
Each cell color has dedicated controls in the front of the device for setting the base CV value and any CV variation. There is a switch in the upper right corner of the Output section which allows access to the CV controls.

Click here to show the CV controls

Shows the CV base value

Sets the base CV value
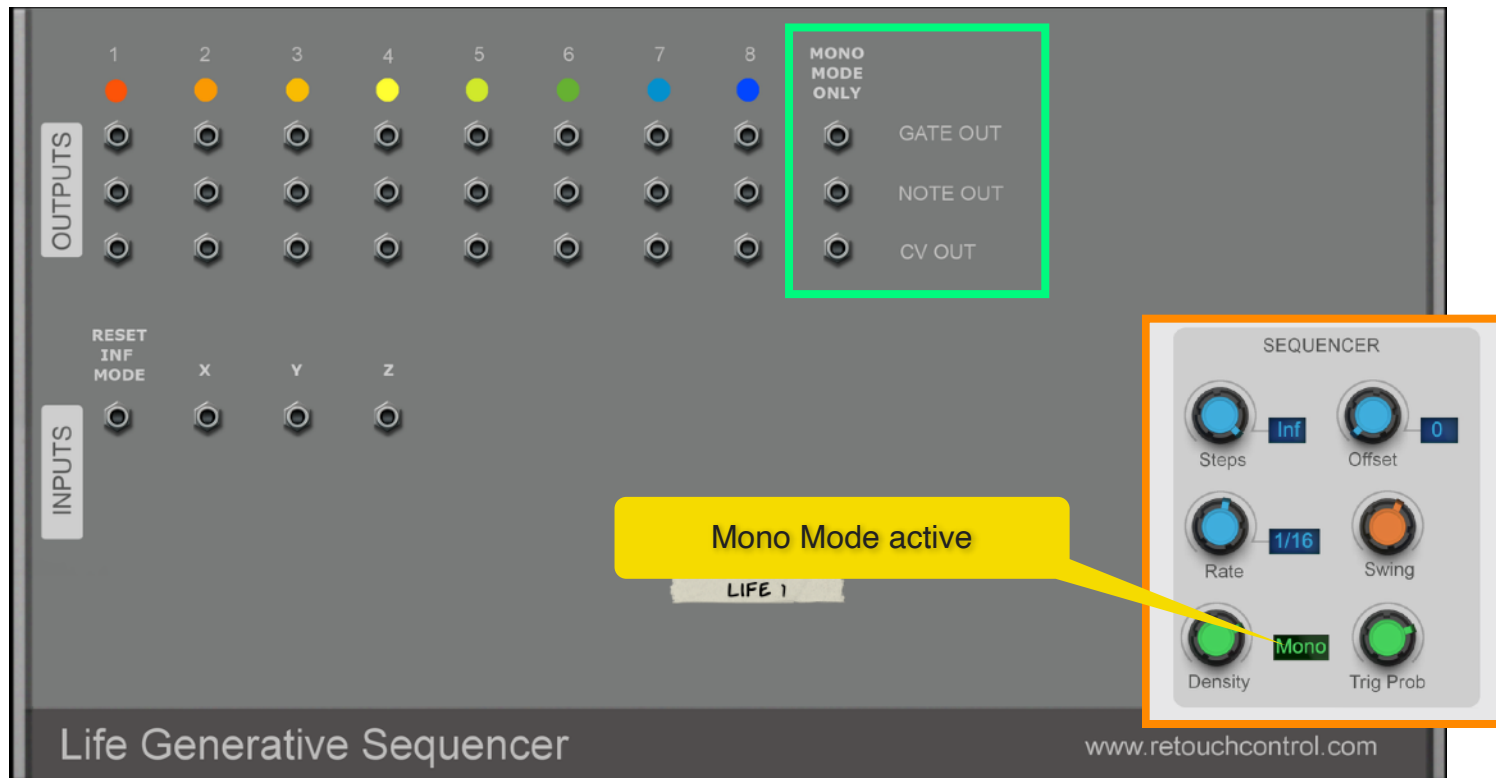
Sets the CV variation %

When CV is selected, the Output edit menu displays only information pertinent to the CV controls.

1.3 Mono CV Outputs

Gate, Note and CV modulation outputs which become active when the device is in "Mono" mode have been added to the back of the device. These effectively combine the single outputs of all cell colors.
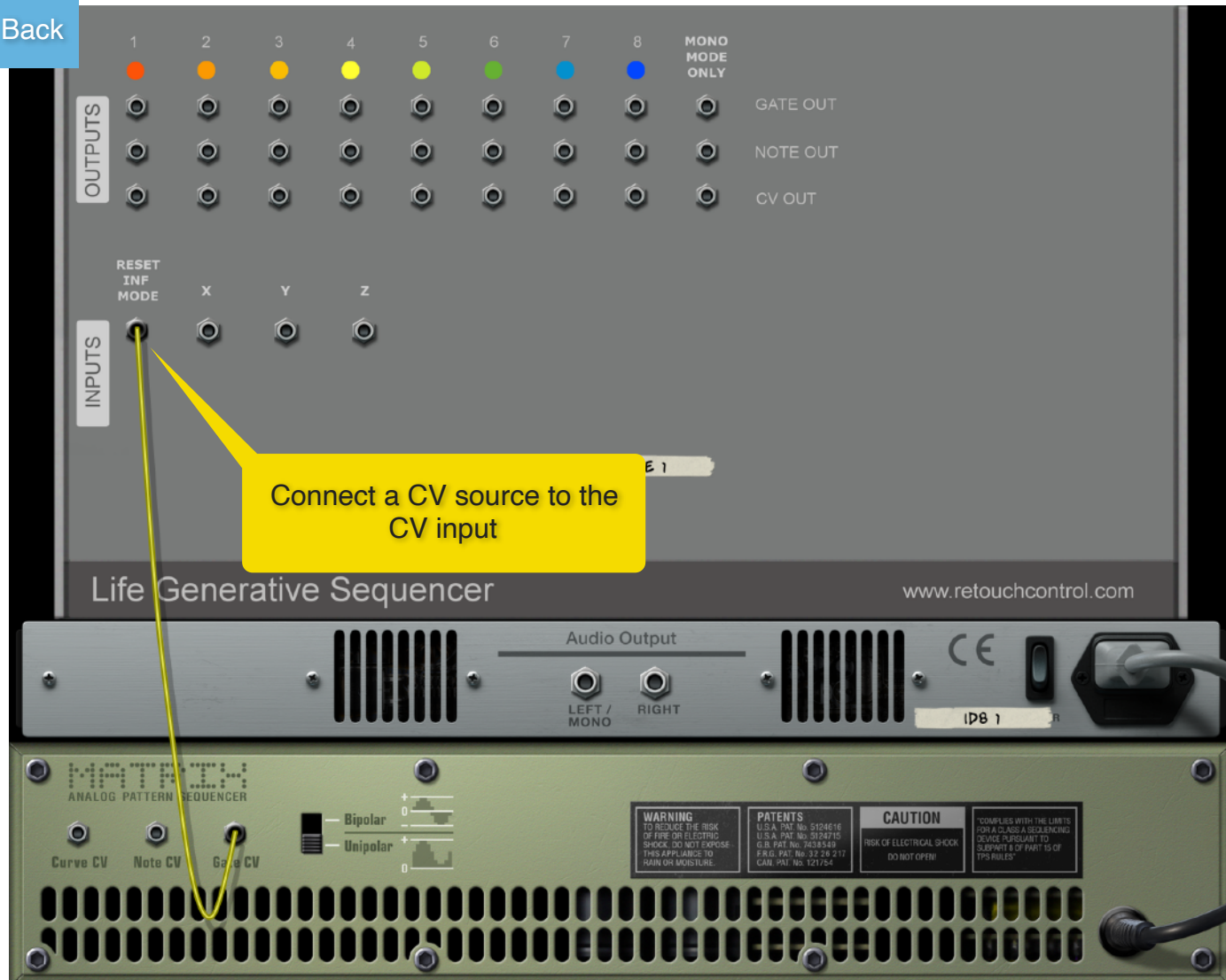
1.4 Inf Mode Reset

When the number of steps is set to "Inf", it is now possible to reset back to step 1 in two different ways. The first one is to simply click on the steps display.
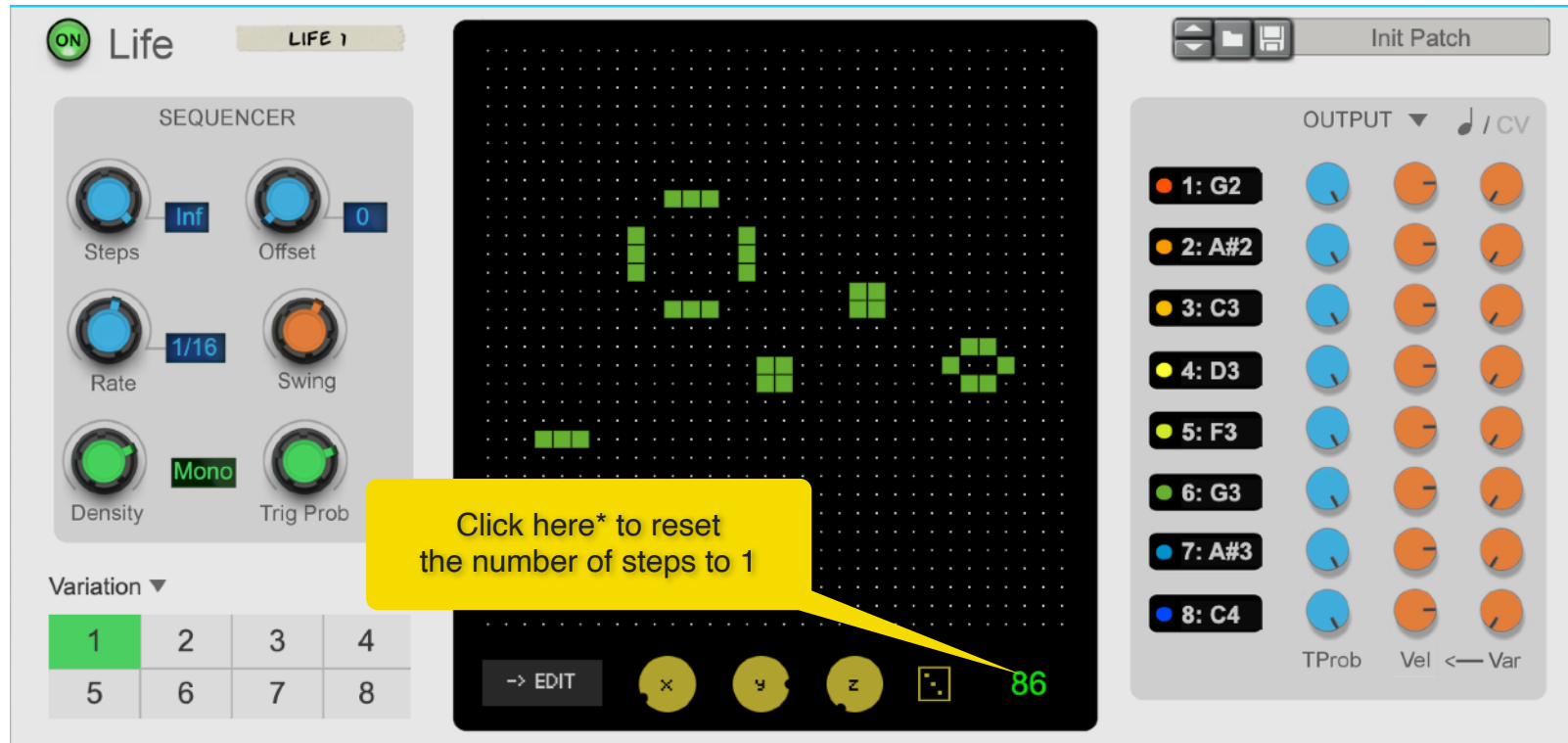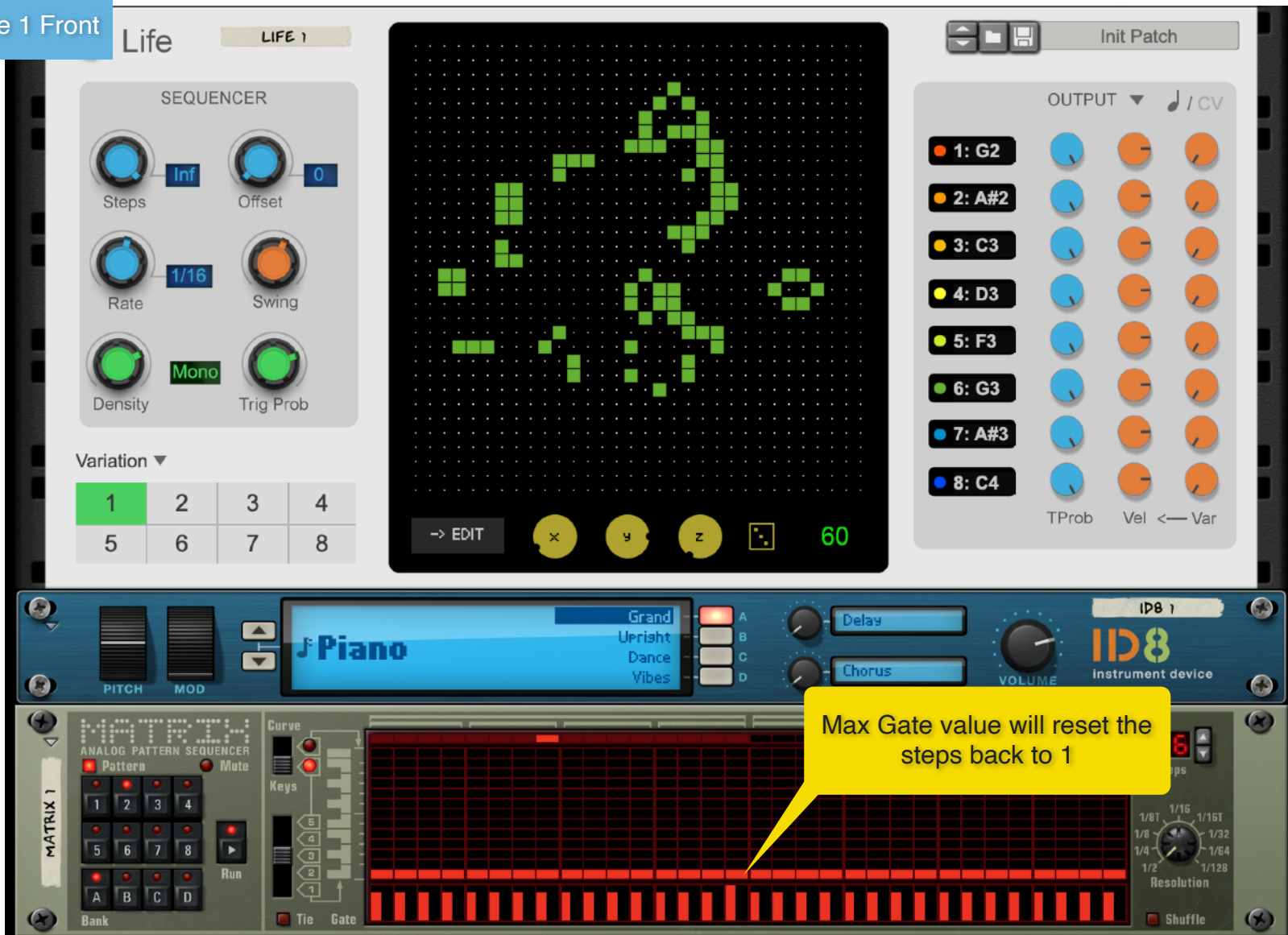
* *it is possible to assign the reset functionality to a MIDI button via Remote. The name of the remotable item is "Reset Sequencer".*

The second one is via the CV input in the back of the device. Any CV signal equal to its maximum value will reset the cell configuration and set the number of steps back to 1. By using a CV signal to reset the number of steps, it is possible to go beyond the limitation of the 32 steps and create sequences of an arbitrary number of steps.
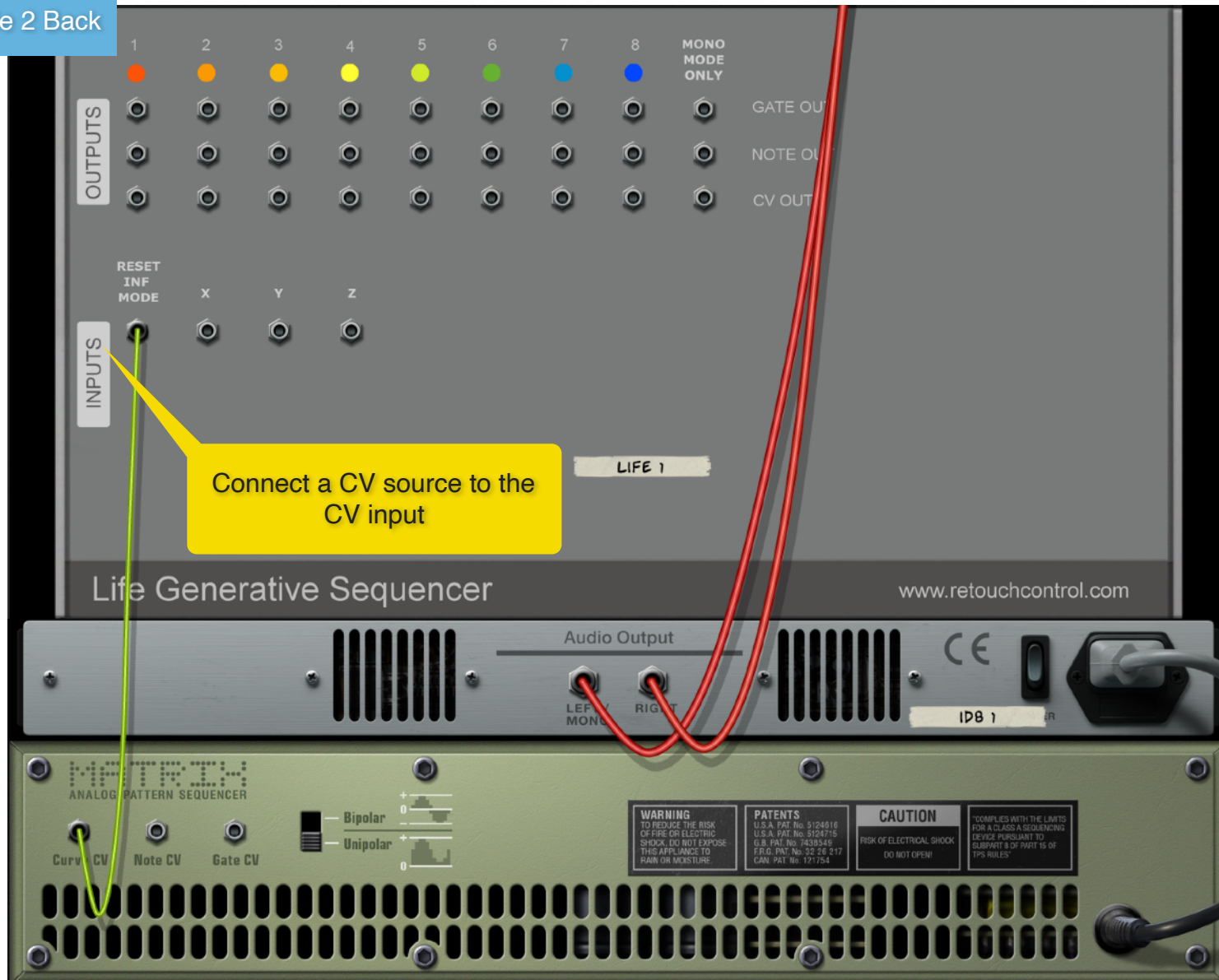

Example 1 Back

Connect a CV source to the CV input
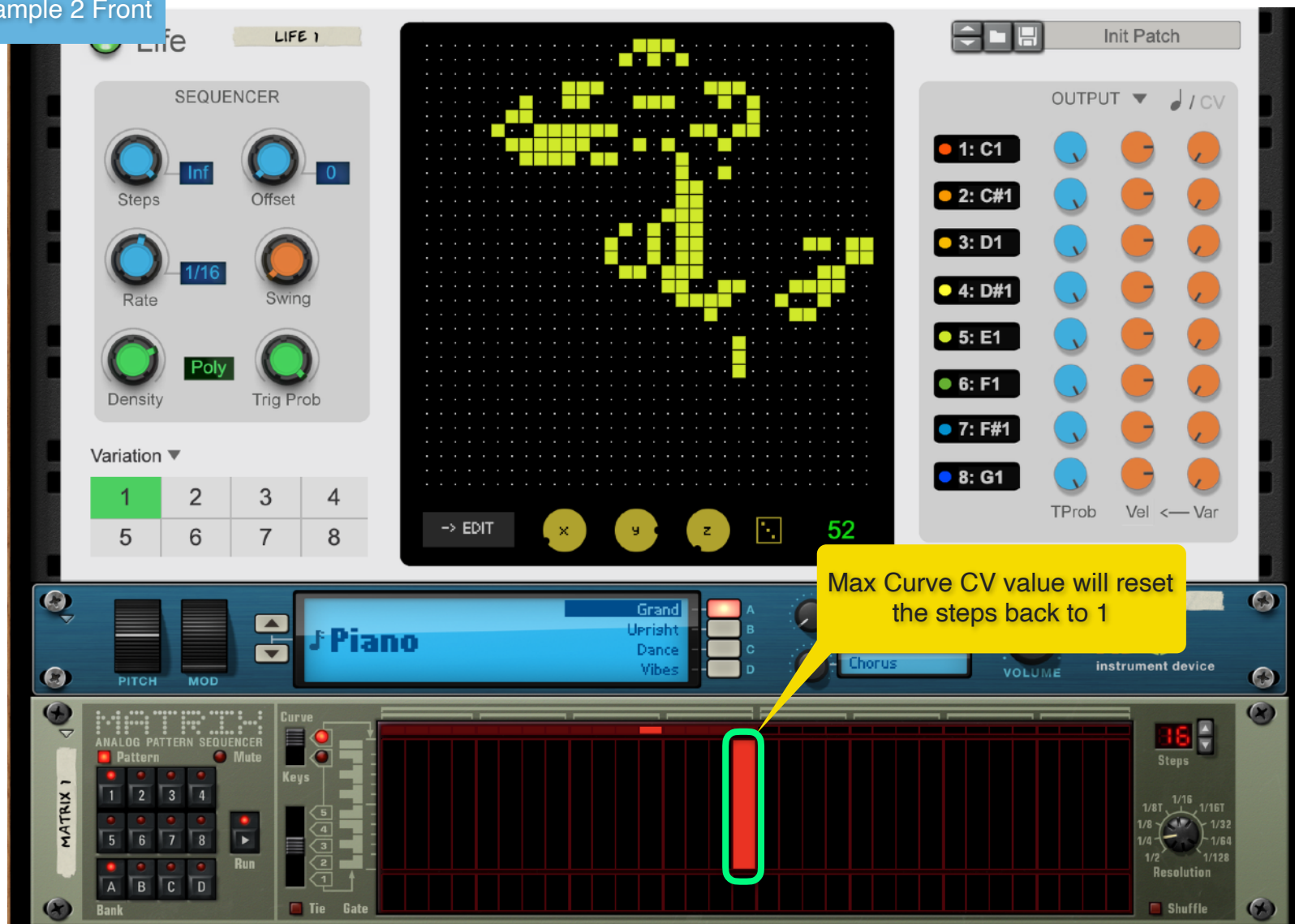
Max Gate value will reset the steps back to 1

Example 2 Back

1 2 3 4 5 6 7 8 MONO MODE ONLY

OUTPUTS

GATE OUT

NOTE OUT

CV OUT

RESET
INF
MODE   X   Y   Z

INPUTS

Connect a CV source to the CV input

LIFE 1

Life Generative Sequencer

www.retouchcontrol.com

Audio Output

LEFT/MONO   RIGHT

CE

IDB 1

MATRIX
ANALOG PATTERN SEQUENCER

Bipolar
+ 0 –

Unipolar
+ 0

Curve CV   Note CV   Gate CV

WARNING
TO REDUCE THE RISK
OF FIRE OR ELECTRIC
SHOCK, DO NOT EXPOSE
THIS APPLIANCE TO
RAIN OR MOISTURE

PATENTS
U.S.A. PAT. No. 5124616
U.S.A. PAT. No. 5124715
G.B. PAT. No. 7438549
F.R.G. PAT. No. 32 26 217
CAN. PAT. No. 121754

CAUTION
RISK OF ELECTRICAL SHOCK

DO NOT OPEN!

"COMPLIES WITH THE LIMITS
FOR A CLASS A SEQUENCING
DEVICE PURSUANT TO
SUBPART B OF PART 15 OF
TPS RULES"

Example 2 Front

Max Curve CV value will reset the steps back to 1

1.5 X, Y and Z CV Modulation Inputs

CV signals can now be used to modulate the values of the X, Y and Z knobs. Any incoming CV input signal is added to the current values of the knobs. To modulate the X, Y and Z parameters around their set value, in both the negative and positive direction, it is hence necessary to use bipolar CV signals.
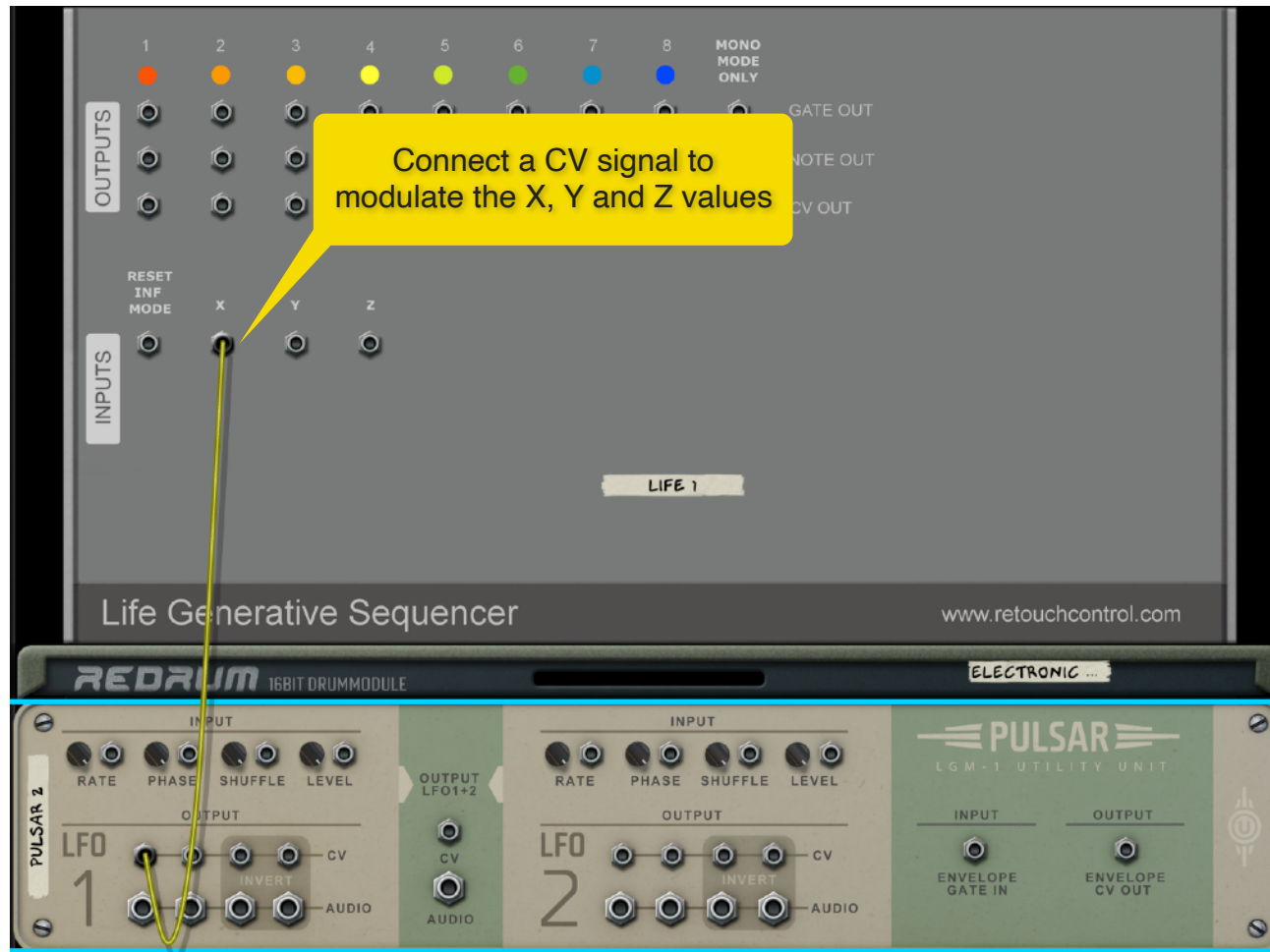
If any of the X, Y and Z knobs are modulated via CV, there is a red circle around the knob's label as shown below.

Red circle indicates that the knob is modulated via CV

Use bipolar CV signals to modulate in both negative and positive directions

1.6 Capture the current phase as the starting phase

At any point during the cells' evolution, it is possible to capture its state and save it as the starting point for another Variation or even for the same Variation. This is done by "Ctrl/cmd" + clicking on the target variation. For example, if Variation 1 is selected and you would like to capture the current phase of the cells as the starting point for Variation 2, simply "Ctrl/cmd" + click on the Variation 2 button as shown below.

Starting phase of Variation 2 has been copied from the current phase of Variation 1

"Ctrl/Cmd" + click on Variation 2 to copy the current phase of Variation 1 to the starting phase of Variation 2

**Tip**: "Shift"+ "Ctrl/Cmd" + click on Variation 2 to copy the current phase of Variation 1 and all its sequencer and output parameters to Variation 2

1.7 Optimized randomization of the start phase

The algorithm for creating random distribution of cells for the start phase has been improved. In addition, there is now a shortcut to access the randomization operation by "Shift" + "Alt" + clicking inside the matrix when in "Edit" mode. You can still access the "Randomize" option as well from the Edit menu (Ctrl/Cmd + click to open the Edit menu).
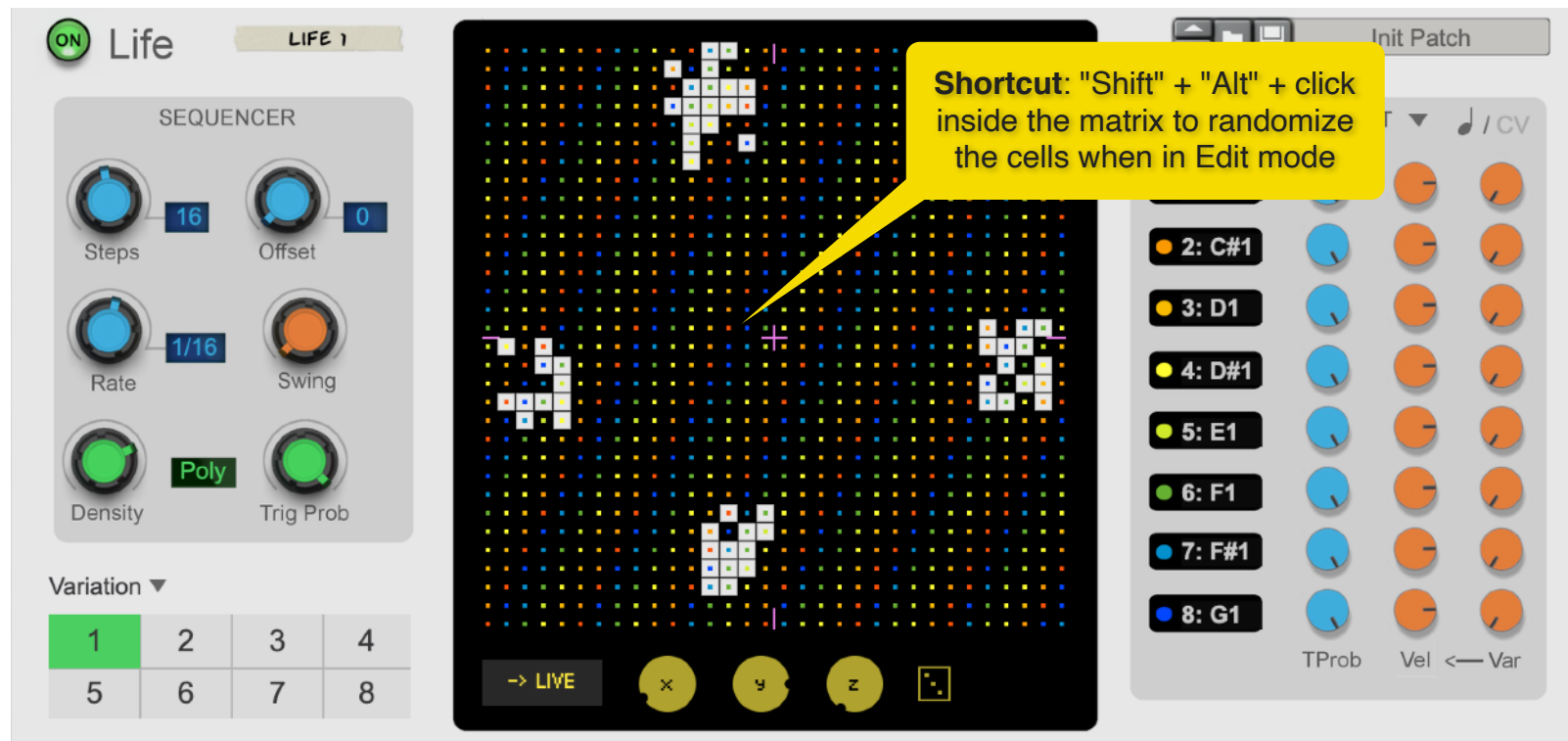
1.8 Expanded Automation parameter list

The parameters for the "Game Rules" and the "Edges Behavior" are now available in the automation list, and they can also be accessed from within a combinator device.

New parameters added to the automation list