Slope Gen

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Slope Gen is a slope CV generator. Rising and falling slope may have same or different duration from one millisecond up to ten minutes.

In *cycle* mode **Slope Gen** can work as VLFO (= very low frequency oscillator).

1. Conventions

- Gate CV have static function. Common levels are 0 ("off") and 5 volt ("on"). Any voltage until 2.5 v will be interpreted as "off". Input jacks are placed on light blue areas.
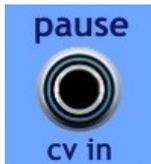
- Regular CV may have any value from -5 to +5 volt. Areas around input and output jacks are coloured grey.

- Trigger CV are commonly meant to be pulses. Any level change from 0 to +5 volt is valid as trigger pulse. Trig jacks are on pink areas.
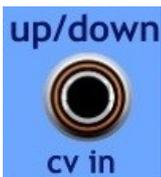
2. Controls and connectors

up/down cv in
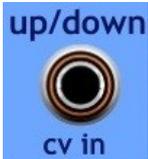
An "on" CV will activate up slope or allow cycle operation.

pause cv in

While CV is "on", slope stops at actual value.

reset cv in

A pulse sets slope to zero instantly. Then operation continues as before reset.

up/down cv in

CYCL off: "On" CV enables up slope.

CYCL on: "On" CV enables LFO operation.

600 s
60 s
6 s
0.6 s
range

These slider switches determine, which ranges slope adjust knobs will work with.

3.00   3.00
0   1   0   1
up time   **down time**

Displayed Time is calculated by multiplying range with knob value.

Time adjust Knobs.

range: 0.00 to 1.00

default: 0.50

At 0.00 knob position, time will be at minimum 0.001 s.

cv in

Slope time can be adjusted by CV too. A CV form -5 to +5 volt is valid.

0
-1   1
cv amount

CV amount knob determines, how much voltage at *CV in* can influence slope time. Internally CV is normalized. That means, a CV from -5 to +5 equals a -1 to +1 value for calculation. This value is added to knob value.

If sum is out of range 0 to 1, it will be clipped.

So this formula is used for time calculation:

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time = range x (timeknob + (CV * amount/5))
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When this button is toggled on, both slopes use same parameters. Down slope range switch, knob and CV in jack become disabled. They will follow up slope controls, which work as "masters" now.

When *CYCL* button in toggled on, cycle mode will be activated. In *cycle* mode up slope starts again, when down slope has reached bottom. So **Slope Gen** can work as VLFO (= very low frequency oscillator), when *up/down CV in* gets an "on" signal. With no cable connected to *up/down CV in* VLFO runs freely.

Slope CV out jack delivers slope voltage.

When arrow up button is toggled on, up slope will rise from 0 to +5 volt, down slope falls from +5 to 0 volt.

When arrow down button is toggled on, up slope will fall from +5 to 0 volt, down slope rises from 0 to +5 volt.

5. Example presets

PM Slope Gen - beach 1.voltagepreset
PM Slope Gen - beach 2.voltagepreset
PM Slope Gen - laser harp.voltagepreset
PM Slope Gen - mandolin 1.voltagepreset
PM Slope Gen - mandolin 2.voltagepreset
PM Slope Gen - pad 1.voltagepreset