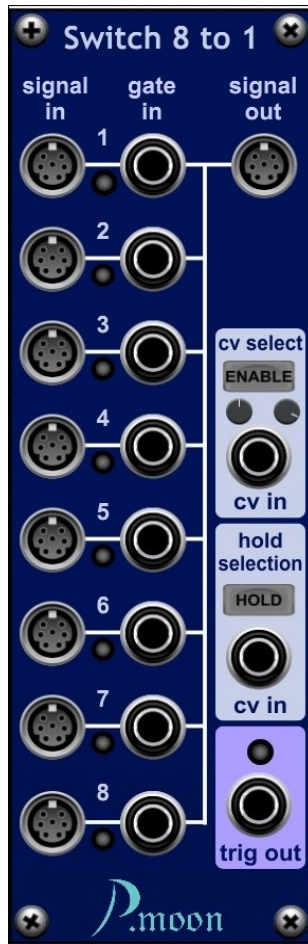


Poly Switch 8 to 1

Version b, 2023-03-15



This module switches eight poly input signals to one poly output jack. Selection is done either by GATE signals or a CV voltage.

A TRIG out pulse occurs when a valid selection changes. (Outputs 1 to 8)

With disabled HOLD function the *signal out* jack delivers same voltage as is received at selected *in* jack, as long as selection is active. When selection gets inactive, output delivers no (zero) voltage.

When HOLD function is enabled, *signal out* voltage stays at that value, that was in the moment at the selected *in* jack, when selection became inactive. So **Switch 8 to 1** can be used as eight channel sample & hold device.



If **ENABLE** is toggled on, input selection is done by **cv in**, else by **gate** inputs.

Two small knobs are used to set minimal and maximal CV. For selection of a distinct channel, maximum should be set a little higher than highest voltage in order to safely exceed threshold for that channel.

default knob values:

cv Min 0.0 V

cv Max 4.0 V

Example for default setting:

cv < 0.5 V	no input selected*)
0.5 V <= cv < 1.0 V	input 1 selected
1.0 V <= cv < 1.5 V	input 2 selected
:	
4.0 V <= cv	input 8 selected



An ON voltage (>2.5 V) selects corresponding **in n**.

If more than one gate jacks get an ON voltage, only the input with the highest number will be selected.



LED indicates input selection.



Poly input jack for any signal voltage.



a) Equals **signal in** voltage of selected signal input, otherwise 0 V.

b) When **HOLD** is active: static voltage, that was sent to the last selected input jack in the moment, when selection disappeared.



Toggled button enables hold function.

An ON voltage (>2.5 V) enables hold function.



Sends a 1 msec pulse (5.0 V) when an output selection changes. There will be no pulse, when no output gets selected.

*) With activated HOLD function and falling CV, input #1 will stay selected even at much lower CV voltage than **cv Min**.

Internally step voltage for a selection from one channel to next is calculated as:

$$V_{diff} = (cvMax - cvMin) / 8$$

For default knob values V_{diff} will be

$$V_{diff} = (4 - 0) / 8 = 0.5 V$$

Channel #1 will be selected when

$$V_{diff} < CV < 2 \times V_{diff}$$