Switch 8 to 1

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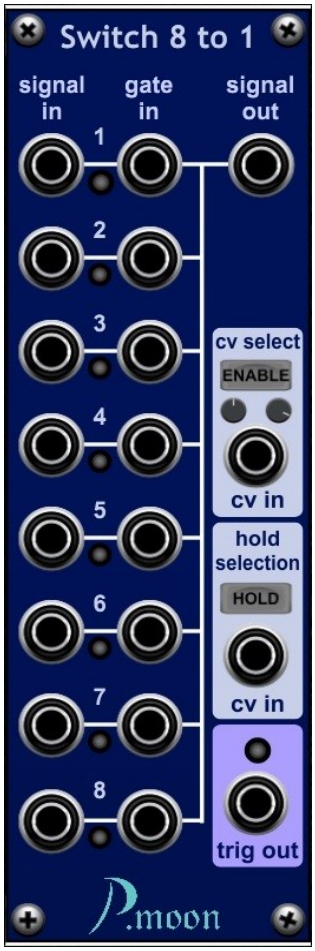

This module switches eight input signals to one output jack. Selection is done either by GATE signals or a CV voltage.
A TRIG out pulse occurs when a valid selection changes. (Outputs 1 to 8)

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.

Input jack for any signal voltage. (-10 to +10 V).

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 input 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:

Vdiff = (cvMax – cvMin) / 8

For default knob values *Vdiff* will be

Vdiff = (4 – 0) / 8 = 0.5 V

Channel #1 will be selected when

Vdiff < CV < 2 x Vdiff