



gEight

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gEight contains eight equal signal gate channels which can be controlled by buttons or CV.

Each channel can be used independent of others or linked to preceding channel. Controls of linked channels cannot be operated. At linked channels, CV input jacks and ON/OFF toggle buttons become inactive. CV mode switch will go into state of preceding channel mode. Same is with gate state.

Master CV and buttons allow simple set or reset of all channels that are in toggle mode.

Signal flow

Each gate contains **Signal Input** and **Signal output** jacks. If input jack is connected, it's value will be sent to output jack, when gate is ON (open), otherwise output sends 0 volts.



Gate control

Gate control is done in two CV modes: **static** and **toggle**.

In **static** mode, voltage value at **Gate On/Off CV In** determines, if gate is on or off. Gate opens at a CV higher than 2.5 volts.

In **toggle** mode gate is controlled by a simulated **flip-flop** circuit. Commonly such a circuit offers three inputs

- **S** (set),
- **R** (reset),
- **C** (clock)

and at least one output

- **Q**.

In **gEight** module green toggle buttons and **Gate On** CV input jacks represent **S**, while red toggle buttons and **Gate Off** CV input jacks serve as **R**.

Voltage at **Gate On/Off CV input** jacks is used as clock **C**, that toggles flip-flop on or off each time CV exceeds 2.5 volts.

CV input jacks and buttons in **Master On** and **Master Off** are internally connected to equivalent jacks and buttons of all channels, that are in toggle mode.

LINK function

Link function is offered in order to reduce cabling. A linked channel will be controlled by it's preceding channel. At a linked channel any CV at input jacks will don't have any effect. Mode switch cannot be changed. Toggle buttons only visualize state.

Examples



Example 1 – Link groups, toggle mode

Channels 2 to 4 are linked to Channel 1. Because Ch1 is in toggle mode, Ch 2 to 4 are in toggle mode too.

On and off toggle buttons of master channel are visible and usable.

On linked channels toggle buttons are replaced by placeholders.

Channel 5 to 8 link group according to ch 1 to 4 link group.



Example 2 – Link groups, static mode

Channels 2 to 4 are linked to Channel 1. Because Ch1 is in static mode, Ch 2 to 4 are in static mode too.

Because of static mode, all on and off toggle buttons of this link group are replaced by placeholders.

Channels 6 to 8 are linked to Channel 5. Because Ch 5 is in static mode, Ch 6 to 8 are in static mode too.

Because of static mode, all on and off toggle buttons of this link group are replaced by placeholders.



Example 3 – linked and single channels, mixed modes

Channels 2 to 4 are linked to Channel 1. Because Ch1 is in static mode, Ch 2 to 4 are in static mode too.

Because of static mode, all on and off toggle buttons of this link group are replaced by placeholders.

Channel 5 and 6 are a link group in toggle mode. On linked channel 6 toggle buttons are replaced by placeholders. [https://p-moon-modules.de/presets/PM_gEight_example_1 - 2x4 toggle gate.voltagepreset](https://p-moon-modules.de/presets/PM_gEight_example_1_-_2x4_toggle_gate.voltagepreset)

Both channel 7 and 8 are working independent in toggle Mode.

Example presets:

[PM_gEight_example_1_-_2x4_toggle_gate.voltagepreset](#)

[PM_gEight_example_2_-_8_to_2x_4_switch_static.voltagepreset](#)

[PM_gEight_example_3_-_8x_on_off_gate_linked.voltagepreset](#)

[PM_gEight_example_4_-_8x_on_off_gate_master.voltagepreset](#)

[PM_Sequencer_6.voltagepreset](#)