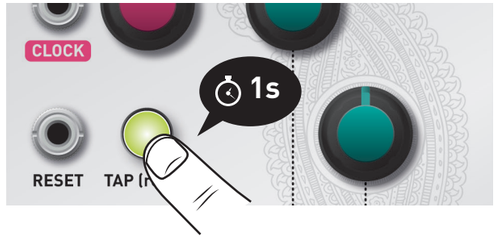
Advanced settings



Unplug all CV inputs and **hold the TAP (reset) button** for a second to adjust Grids' settings. Refer to the **diagram on the next pages** for a list of all available settings. The 3 LEDs indicate the value of the setting being modified. Hold the TAP (reset) button again for a second when you are done.

Online manual and help

The full manual can be found online at
mutable-instruments.net/modules/grids/manual

For help and discussions, head to
mutable-instruments.net/forum/

Please refer to the online manual for detailed information regarding compliance with EMC directives

Advanced settings diagram

Sequencer mode

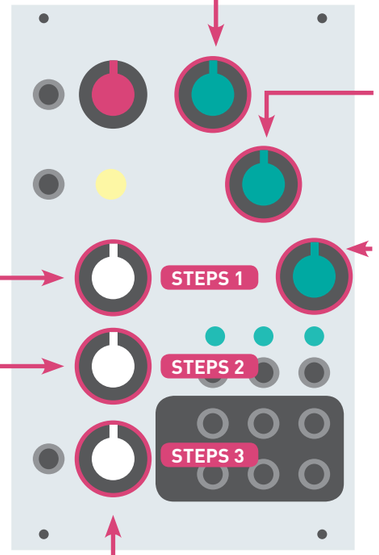
Grids can also work as a plain euclidean sequencer.

- ○ ○ ○ Grids is yet another euclidean sequencer
- ● ● ● Grids is back to drumming duties

When euclidean sequencer mode is enabled, the MAP X / Y / CHAOS knobs have alternate functions, (STEPS 1-3) as shown in red on the panel – they control the duration (number of steps) of the sequence; while the FILL knobs control the fill rate.

Trig / Gate output

- ○ ○ ○ Outputs are 1 ms triggers
- ● ● ● Outputs are gates



Clock resolution

- ● ○ ○ 4ppqn
- ○ ● ○ 8ppqn
- ○ ○ ● 24ppqn

Tap button function

- ○ ○ ○ Tap to restart at the beginning of the sequence
- ● ● ● Tap to set the tempo

Chaos knob function

- ○ ○ ○ Pattern randomness amount
- ● ● ● Internal clock swing

Outputs configuration

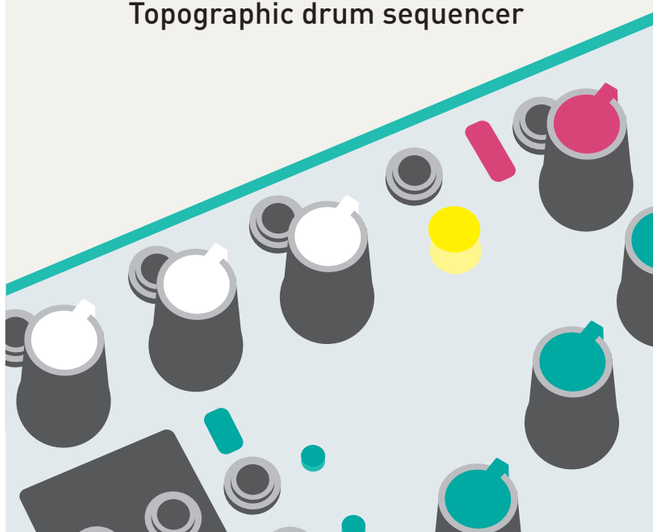
Grids can output either: three individual accent tracks (one per instrument); or a **global accent track**, a **clock** signal (received on the clock input or internal, whichever is used), and a **reset trigger** sent at the beginning of the pattern.

- ○ ○ ○ ACC 1 / ACC 2 / ACC 3
- ● ● ● ACC / CLK / RST

Mutable Instruments

Grids

Topographic drum sequencer



Installation

Grids requires a **-12V / +12V power supply** (2x5 pin connector). The ribbon cable connector must be aligned so that the red stripe of the ribbon cable (-12V) is on the same side of the module's power header as the "Red stripe" marking on the board.

The power consumption is as follows:
-12V: 1mA; +12V: 25mA

Concept

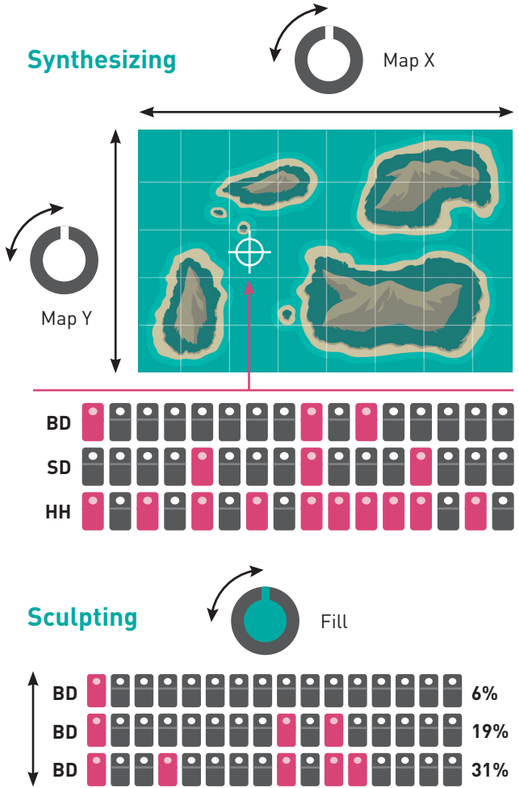
Grids is a 3-channel, algorithmic, rhythmic pattern generator based on data and models extracted from actual drum loops. Two steps are involved in the generation of the drum patterns:

Step 1: Synthesizing a pattern from the drum map...

A collection of drum loops has been spatially organized and compressed into a 2-dimensional map. Using interpolation techniques, any pair of X/Y coordinates can be translated into a rhythm, with smooth morphing from one rhythm into the other.

Step 2: ... and sculpting it

Once a rhythmic skeleton is read from the map, variations can be generated by controlling the note density of each of the three channels - gradually morphing the pattern from a sparse backbone to a frantic pattern.



Front panel

Controls

A. **Tempo**, from 40 to 240 BPM. When turned fully counter-clockwise, the internal clock stops and the tempo is controlled by clock pulses received on the CLOCK input (1).

B. **Tap** to set the tempo. Tap just once to revert to the tempo set by A.

C1, C2. **Map X** and **Y** coordinates.

D. Pattern **humanization** amount. Note that this knob can be reassigned to control the swing amount of the internal clock too.

E1, E2, E3. Note **density/fill** rate for each of the 3 sequencer channels.

Inputs and Outputs

1. External **clock** input.

2. Pattern **reset** input.

3. 4. 5. CV inputs controlling respectively the map X/Y and **humanization** (or **swing**) parameters.

6. CV inputs controlling the **density/fill** rate parameters.

7. 8. Three **trigger** outputs and three **accent** outputs.