Mutable Instruments — Grids

- Manual PDF

Mutable Instruments Grids Manual (PDF)

Mutable Instruments Grids Cheat Sheet

Overview

Grids is a 3-channel clock-driven trigger generator designed to create and morph rhythmic drum patterns. It interpolates between learned rhythms on a 2D map (X/Y), with adjustable density ("fill") and randomization ("chaos"). 3 outputs are typically for BD (kick), SD (snare), and HH (hi-hat), but can be patched freely.

Panel Controls

Label	Control Type	Description
A	Knob	Internal clock rate: 40–240 BPM (fully CCW disables internal clock; expects external clock)
B	Button	Tap/Reset: Tap twice for tempo, tap once to unlock CLOCK knob. Flashes on beat.
C1	Knob	Map X: Selects X-position on rhythm map (CV-controllable 0–5V)

Label	Control Type	Description
C2	Knob	Map Y: Selects Y-position on rhythm map (CV-controllable 0–5V)
D	Knob	Chaos: Amount of randomization/ghost notes (CV-controllable 0–5V)
E1	Knob	Fill 1 Density (BD): Channel 1 density (CV-controllable 0–5V)
E2	Knob	Fill 2 Density (SD): Channel 2 density (CV-controllable 0–5V)
E3	Knob	Fill 3 Density (HH): Channel 3 density (CV-controllable 0–5V)
	3 LEDs	Indicate clock resolution, tap/reset, swing, euclidean mode, triggers/gates, and output layout (in options mode)

Input & Output Jack Reference

Jack	Type	Function	Voltage Range
CLOCK	Input	External clock input; active if INT clock off (A fully CCW).	0–+5V (higher OK)
RESET	Input	External reset (pattern start)	0–+5V (higher OK)
MAP X	CV Input	Modulate X position (C1)	0–5V (sum with knob)

Jack	Type	Function	Voltage Range
MAP Y	CV Input	Modulate Y position (C2)	0–5V (sum with knob)
CHAOS	CV Input	Modulate Chaos randomness (D)	0–5V (sum with knob)
FILL 1	CV Input	Modulate Fill 1 density (E1)	0–5V (sum with knob)
FILL 2	CV Input	Modulate Fill 2 density (E2)	0–5V (sum with knob)
FILL 3	CV Input	Modulate Fill 3 density (E3)	0–5V (sum with knob)
TRIG 1	Output	Channel 1 trigger (BD)	+5V, 1ms default
TRIG 2	Output	Channel 2 trigger (SD)	+5V, 1ms default
TRIG 3	Output	Channel 3 trigger (HH)	+5V, 1ms default
ACC 1	Output	Channel 1 accent	+5V, 1ms pulse
ACC 2	Output	Channel 2 accent	+5V, 1ms pulse
ACC 3	Output	Channel 3 accent	+5V, 1ms pulse

Note: Under alternate output configuration, ACC outputs can be set to ACC/CLK/RST (see Options below).

Quick Start

1. **Connect outputs:** TRIG 1, 2, 3 to drum modules.
2. **Set clock:** Use internal clock (A knob) or patch external clock to CLOCK input (A fully CCW).
3. **Select rhythm:** Use C1 (Map X) and C2 (Map Y) to pick a rhythm base.
4. **Set density:** Use E1, E2, E3 to control pattern fill for each channel.
5. **Chaos:** Turn D knob for probabilistic ghost notes/variation.
6. **Accent:** Feed ACC outputs to modules for accents.

Options Menu (hold TAP/Reset button for 0.5s, unplug CV inputs!)

- Cycle through settings by turning the specified knob. LEDs indicate mode.

Function	Control	LEDs On	LEDs Off
Clock Resolution	E1	4, 8, 24 ppqn (LEDs show selection)	
Tap Tempo/ Reset Mode	E2	Tap sets TEMPO	Tap resets pattern
Swing (internal clock only)	E3	CHAOS sets Swing	CHAOS is randomization
Euclidean Mode	C1	Grids pattern generator	Euclidean sequencer
Trig/Gate Output	C2	Gates (length = clock hi duration)	1ms triggers
	D	ACC/CLK/RST	

Function	Control	LEDs On	LEDs Off
Alt ACC Outputs			ACC1/2/3 (default accent outs)

Power / Installation

- 16HP width, ribbon cable: -12V/+12V (2x5)
- Power: −12V rail = 1mA, +12V rail = 25mA
- **Red stripe** must match board marking ("Red stripe")

Modulation Summary

- **All major params (Map X, Map Y, Chaos, Fill 1/2/3) are CV-controllable (0–5V). Sum with panel setting.**
- **CLOCK/RESET expects typical eurorack 0–5V logic.**
- **Outputs (TRIG, ACC):** +5V logic, 1ms (trigger) or gate (if option set).

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