

Hold **SHIFT** and place two fingers on the touchpad. Clock routing, quantisation, voltage ranges, tuning and system settings all live here – if something isn't immediately available via the buttons, it's probably in the menu. Hold your finger on an option to see an explanation of that parameter via scrolling text.

SPECIFICATIONS

Power	+12V: 350mA, -12V: 20mA
	+12V: 140mA, -12V: 20mA, +5V: 450mA
	Power consumption can vary depending on brightness and persistence settings
CV outputs	Configurable, -5 / 10 V
CV inputs	+ 10 V
Width	22 HP (main), breakout 3U/4HP or 1U/22HP
Depth	32 mm

MIDI

Each X and Y output transmits over its own channel, available via USB-C on the rear of the module for USB MIDI Plug and Play, or via IN4 and output 4G as TRS MIDI (configurable via jumpers on the rear).

When both pitch and temporal quantisation are enabled, Trails transmits MIDI Notes. Otherwise it sends high-resolution MIDI CC.

UPDATING & SUPPORT

Trails continues to evolve. The latest firmware, documentation and manuals are available at bela.io/trails. Updates are performed over USB-C using a web browser.

WARRANTY

Trails is covered by a two-year warranty against defects in materials and workmanship. This does not cover damage caused by incorrect use – including but not limited to incorrect power connection, excessive voltage, or exposure to extreme heat or moisture.

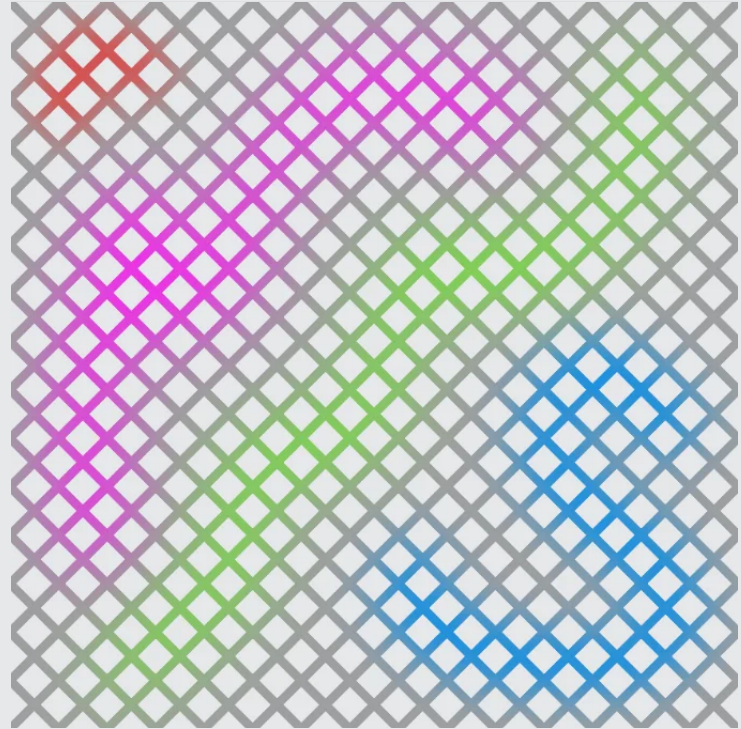
The warranty covers replacement or repair. Contact us before returning a module: info@bela.io.



bela.io/trails
Firmware, full manual & support

TRAILS

Quick reference sheet



FOUR STATES

Trails records movement and transforms it in different ways, across four states selectable via a rotary switch.



INPUT captures gestures. **ADAPT** reshapes them non-destructively. **METER** changes their relationship with time. **FADER** replaces gesture with direct control and automation.

RECORDING IN INPUT STATE

Every touch on the pad is automatically recorded and produces live CV. You choose whether it is looped, triggered, split into rhythms, quantised to a scale. By default your gesture will begin playing back as soon as you lift your finger.

Without a clock, recording duration is determined by how long your finger is down. With a clock, recording begins and ends on cycle, so loops always remain synchronised (see Step for a definition of cycle).

Tap **REC** and draw on the touchpad to arm recording so you can lift off your finger multiple times during the recording. Tap **REC** again to stop recording at the next cycle boundary. Hold **REC** to overdub on top of an existing gesture (hold **REC** + tap **UNDO** to punch in silence). Hold **SHIFT** to lock the touchpad and perform without changing what has already been recorded.

Tap **PLAY** to pause or resume. A paused channel can be interacted with on the touchpad and holds its last value. **SHIFT** + **PLAY** resets the playheads to the beginning and starts playing.

The Touch Bar can control many different things. In **INPUT** it can be assigned to *Step Density*, *Gate Width*, *Smoothing*, *Volume* or *Portamento*. Hold **SHIFT** and touch the bar with two fingers to choose.

CHANNELS

Each channel stores one recording (up to 40 seconds) and produces independent X, Y and Gate outputs.

Tap a channel button to solo it: that channel becomes active, all others become inactive. Tap it again to return to all channels active. Active channels are available for editing and visualised on the display; inactive channels continue to play and produce outputs, but cannot be modified and are not visualised. Hold a channel button to activate or deactivate it individually, without affecting the others.

Hold a function button, then tap a channel button for a corresponding action: **SHIFT**+**CH** mutes, **SCALE**+**CH** toggles pitch quantisation, **UNDO**+**CH** clears the channel, **STEP**+**CH** toggles temporal quantisation, and **PLAY**+**CH** toggles looping.

STEP

Tap **STEP** to govern a channel's rhythm: **length** sets how many clock pulses make up one cycle (default 8), **repeats** sets how many cycles the recording contains (*AUTO* lets Trails decide). Vertically scroll the numbers to change, tap **STEP** to apply the changes and hear it or tap **SHIFT** to apply and exit.

For more complex rhythmic structures tap **STEP** again to move to the next page where you can control the ratio between output steps and input ticks of the clock. The top number is **output steps** per cycle, bottom is **input ticks** of the clock per cycle. **4:4** puts one step on every input clock. **3:4** spreads three steps across four input clocks. **1:8** puts one step every eight input clocks: a divider. **8:1** puts eight steps within a single input clock: a multiplier.

Different step counts across channels create polyrhythms. Different cycle lengths create polymeters.

SCALE

Pitch and time quantisation are independent, and are toggled in the menu, or via the function buttons explained above. Pitch quantisation is configured per channel and per axis, so one axis may follow a scale while the other remains completely continuous. Press **SCALE** to choose which notes are available; press it again to transpose the entire scale. **SHIFT** + **SCALE** lets you pick between preset scales.

ADAPT STATE

ADAPT reshapes a recording without overwriting what's underneath. Pinch to scale and reposition the gesture in two dimensions; toggle **SHIFT** and you can now spin to rotate it about its centre. Each transformation can be performed live, recorded into its own buffer, and layered on top of the original gesture. The Touch Bar applies waveshaping here, bending the pathway into curves and intersections difficult to draw by hand.

METER STATE

METER lays each channel out as a timeline spanning the full width of the touchpad. Tap to move the playhead, hold to pin it, drag to scrub. Hold **SHIFT** and tap the bar with two fingers to choose: *Start/End* (the default) sets a loop's beginning and end points. *Speed* adjusts the speed of the gesture relative to the clock and resyncs on release; *Nudge* pushes the pattern backwards or forwards by a single step at a time.

FADER STATE

FADER represents the XY elements of your gesture as 8 vertical faders, which can be controlled directly and overdubbed like in INPUT. The Touch Bar has the same multi-functions as in INPUT.

Hold **SHIFT** in **FADER** to leave the gesture behind and enter the Faderbank: eight faders, eight presets which can be navigated on the bar, each storing a full set of positions – step through presets one at a time with a trigger into **IN1**, or tap **STEP** to scan continuously with a ramp in **IN2**, and the bank becomes a macro controller animated from outside the module. Slew is controllable with **PLAY** + bar position or via **IN3**.