

Trixy XR

Gate Sequencer XR

Rack Extension for Reason

DOODOV

Owner's manual



Trixy XR front panel

Trixy XR is Trixy X extended for patching. It is the same 32-step gate sequencer – velocity, ties, per-step timing and probability, variable length, the Matrix resolutions, Random and seven colour schemes – with three additions:

- **Clock modes.** Run from the song tempo, from its own RATE (0.1 Hz up to 2 kHz), or from an external clock.
- **Audio Out.** The gate as a sample-accurate audio signal, for rates the CV output cannot follow.
- **Step mutes and Step CV.** 32 automatable mutes on the front, and 32 CV inputs on the back that switch steps and scale their velocity.

Quick start

1. Create Trixy XR in the rack. It is a CV device: the gate itself makes no sound.
2. Flip the rack (Tab) and connect **Gate Out** to a gate input – a drum channel's Gate In on Redrum or Kong, an envelope trigger, or an instrument's Sequencer Control Gate input.
3. Press Play on the transport, or RUN on Trixy XR. The first 16 steps play at 1/16.
4. Click and drag in the lower row of the display to shape the pattern; drag along the top strip to use all 32 steps.

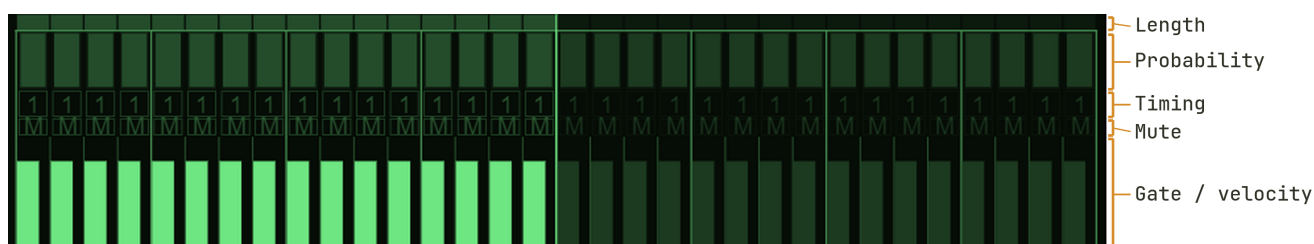
How a step plays

Each of the 32 steps holds five things: whether it is on, its **velocity** (the height of the bar), whether it is **tied**, its **timing** and its **probability**.

An active step sends a gate from **Gate Out**. The gate level carries the velocity, so a velocity-sensitive instrument plays louder or brighter on taller bars. A normal gate lasts half a step, as on the Matrix. A tied gate lasts the whole step and runs straight into the next one without a gap, so the instrument hears one long note instead of two.

Timing changes how long the step lasts: **1** is one step at the current Resolution, **1/2** is half as long and **2** is twice as long. Mixing them gives you dotted feels, quick double hits and patterns that drift against the bar line. **Probability** is the chance, from 0 to 100 %, that the step actually fires each time the playhead reaches it. It is rolled once as the step begins.

Editing on the display



The Trixy XR display: 32 steps, each with probability, timing, mute and gate/velocity. The top strip sets the loop length and shows the playhead.

Everything on the display is edited with the mouse. Every edit is undoable and is named in the Undo menu.

Where	What it does
Gate row - click	Turns the step on at the velocity of the point you clicked. A click never turns a step off.
Gate row - drag	Paints velocity across steps as you move. Drag down to the bottom of the row to turn steps off; this paints too.
TIE on, or Shift held	Clicking and painting in the gate row writes tied steps. With TIE off, clicking a tied step makes it a normal step again.
Timing row - click	Cycles 1/2 → 1 → 2. Shift-click returns the step to 1.
Probability row	Click or drag to set 0–100 % from the height. Shift-click returns the step to 100 %.
Length strip	Click or drag along the top strip to set the last step of the loop. Steps past the end are dimmed.
Steps box	Click the arrows for ±1 step, or drag the number up and down.
Mute row - click	Mutes or unmutes the step; the M lights when muted. Right-click for Remote override and automation.
Resolution	Turn the knob, or click one of the nine labels around it to jump straight to that value.

New devices start with the first 16 steps on at a velocity of about 80 %, all at timing 1 and probability 100 %, and Resolution at 1/16.

Front panel

Control	Function
RUN	Starts and stops Trixy XR independently of the transport. The lamp above it shows when it is running.
TIE	When on, clicks and paint strokes in the gate row write tied steps.
FREE	Switches from SYNC to FREE: the steps run at RATE instead of the song tempo.
RANDOM	Writes a new pattern (see <i>Random</i>).
AMOUNT	How much of the pattern RANDOM changes, 0–100 %.
RATE	FREE speed, 0.1 Hz to 2 kHz (steps per second).
COLOR	Colour scheme of the display, buttons and lamp.
Steps	Loop length, 1 to 32. Arrows for single steps, or drag the number.
Resolution	Step length against the song tempo: 1/2, 1/4, 1/8, 1/8T, 1/16, 1/16T, 1/32, 1/64 and 1/128. The active value is lit.

Running and sync

Trixy XR starts and stops with the song: **Play** on the transport starts it from step 1 at the current song position and **Stop** stops it. In SYNC (see *Clock modes*) the steps follow the song position, so the pattern stays locked to the tempo; when the song position jumps back (a loop or a relocate), the pattern starts again from step 1.

RUN starts and stops Trixy XR on its own. With the transport stopped, it runs at the song tempo, which is handy for building a pattern without playing the song. Pressing Stop on the transport also stops it, even if the transport was already stopped. The lamp above RUN is lit whenever the sequencer is running.

Changing the length, the step timing or the Length CV while running never pushes the sequence out of time: a shorter loop simply wraps sooner and a longer one carries on. Nothing is skipped or played twice.

Clock modes

Trixy XR has three clock sources. The caption under the Resolution knob shows which one is active, and the Resolution labels dim when Resolution is not in use. In every mode, RUN, the transport and Run In still decide whether the sequencer is running.

Mode	Behaviour
SYNC	The default (FREE off, nothing in Clock In). Steps follow the song tempo at the chosen Resolution.
FREE	Press FREE. Steps run at RATE, independently of the tempo, from 0.1 Hz to 2 kHz; the value is shown in hertz (steps per second) under the knob, e.g. <i>Free 12.5 Hz</i> . Rate CV shifts it by up to ± 5 octaves, within 0.05 Hz to 4 kHz overall. Reset In restarts the pattern at step 1.
EXT	Connect a cable to Clock In ; this overrides SYNC and FREE and the caption reads <i>Ext Clock</i> . Each rising edge moves the pattern on by one step. The step length comes from the time between the last two clock pulses, so a 1/2 step lasts half a clock, a 2 step spans two clocks and a normal gate is half the measured interval. At the start, and after a Reset, the pattern waits for the next clock pulse to play step 1.

Clock In is read once per processing block of 64 samples. That is ample for clocks from other sequencers, clock dividers, LFOs or logic devices, but it is not meant for audio-rate clock signals; use FREE for those speeds.

Audio Out

Audio Out carries the same gate as Gate Out, but as an audio signal calculated for every sample. Its level is the step velocity (full velocity gives a full-scale signal). Gate Out is a CV and can only change once per 64-sample block, so above a few hundred hertz in FREE it can no longer follow the individual gates; Audio Out stays exact at any rate.

At audio rates the pattern becomes a waveform: the rhythm turns into a pitched tone whose timbre depends on the gates, ties, velocities and timing, and Random reshapes the sound. At slow rates Audio Out gives clicks and pulses that can feed audio devices directly.

The signal is unipolar (0 to +1) and therefore carries a DC offset. Start with the mixer channel turned down and use a high-pass filter where the DC matters.

Step mutes and Step CV

The **M** row mutes individual steps. A muted step is silent, but its velocity, tie, timing and probability are kept, so unmuting brings it back exactly as it was. The 32 mutes are ordinary parameters: they can be automated, mapped with Remote and controlled from a keyboard or control surface, which makes them useful for live muting.

Step CV In 1-32 on the back give each step its own input. An unconnected input has no effect. A connected input multiplies the step's velocity by the CV (0 to 1): 1 plays the step as set, lower values play it softer, and 0 or below turns it off. Patch gates from another sequencer to switch steps on and off, or LFOs and envelopes to move their velocity.

Every step makes its decisions once, as it begins, in this order: a waiting Random is applied, then the mute, then the Step CV, then the probability roll. None of them cuts a gate that is already sounding.

Random

RANDOM writes a new pattern. **AMOUNT** decides how much of it changes: at 100 % every step is re-rolled, at 80 % each step has an 80 % chance of being re-rolled and otherwise keeps its settings, and at 0 % nothing changes.

A re-rolled step gets a new on/off state (even odds), a new tie (about one step in three is tied), a new velocity (mostly in the middle of the range) and a new probability (mostly between 60 and 100 %). Step timing and the loop length are never changed by Random.

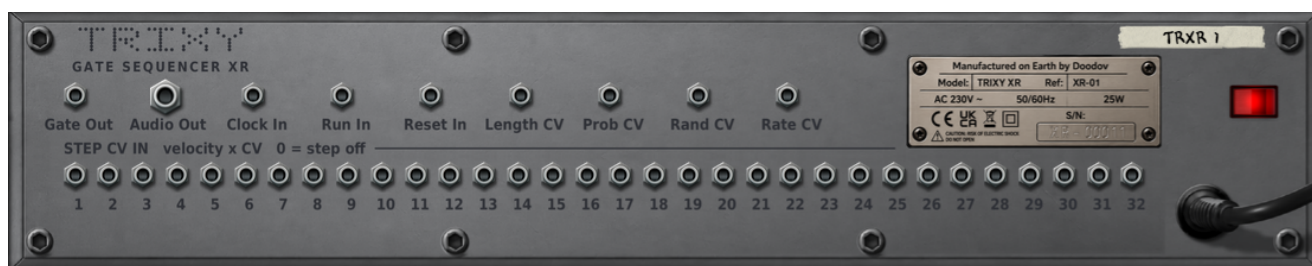
While the sequencer runs, a Random request waits for the start of the next step, so the pattern always changes cleanly on a step. Triggering faster than the steps, for example with a fast LFO on **Rand CV**, gives at most one new pattern per step. While stopped, Random applies straight away.

Keeping a result. A random pattern plays and shows immediately, but it is not yet stored in the song. The first click you make anywhere on the display keeps it: the Undo menu shows *Keep Random Pattern*, and from then on it is saved with the song. If you save the song without touching the display, the last pattern you edited is the one that is saved. Press RANDOM again before clicking to try another result.

Color

COLOR picks one of seven schemes: Red, Green, Blue, Yellow, Pink, Grey and Violet. The display, the buttons and the lamp all follow. It is purely visual and saved with the song, which helps when several Trixy XR devices sit in the same rack. The default is Green.

Back panel



Trixy XR back panel

Socket	Function
Gate Out	The gate. Its level carries the step velocity (0 to 1).
Audio Out	The same gate as an audio signal, exact to the sample (see <i>Audio Out</i>).
Clock In	External clock. Connecting a cable switches the clock to EXT (see <i>Clock modes</i>).
Run In	While this CV is high, Trixy XR runs. When it is low, RUN and the transport decide as usual.
Reset In	A rising edge sends the playhead back to step 1 immediately.
Length CV	Bipolar. 0 keeps the front-panel length; positive values lengthen the loop up to double (at most 32 steps), negative values shorten it, down to 1 step at full negative.
Prob CV	Bipolar. Scales every step's probability: 0 leaves them as set, full negative silences all steps, full positive doubles them (capped at 100 %).
Rand CV	A rising edge does the same as pressing RANDOM.
Rate CV	Bipolar. Shifts the FREE rate by up to ± 5 octaves.
Step CV In 1–32	One input per step (see <i>Step mutes and Step CV</i>).
Thresholds	Run In, Reset In, Rand CV and Clock In count as high above 0.2, so any gate or trigger source works.

Automation, Remote and saving

RUN, TIE, RANDOM, AMOUNT, COLOR, Steps and Resolution, FREE, RATE and the 32 step mutes (*Step 1 Mute* to *Step 32 Mute*) can be automated and mapped with Remote. The step contents themselves are edited on the display and are not automation targets. Trixy XR has no patches: its pattern and settings are saved with the song.

Specifications

Type	CV device (gate sequencer), 2U
Steps	32, variable length 1-32
Resolution	1/2, 1/4, 1/8, 1/8T, 1/16, 1/16T, 1/32, 1/64 and 1/128
Per step	On/off, velocity, tie, timing (1/2, 1, 2), probability 0-100 %
Clock	SYNC (song tempo), FREE 0.1 Hz-2 kHz with ± 5 octaves of Rate CV, EXT (Clock In)
Inputs	Clock In, Run In, Reset In, Length CV, Prob CV, Rand CV, Rate CV, Step CV In 1-32
Outputs	Gate Out (CV), Audio Out (mono, audio rate)