

# Altered State Machines — Eris

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- [Manual PDF](#)
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[Manual PDF: Eris 4x4 Matrix Mixer by Altered State Machines](#)

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## Eris 4x4 Matrix Mixer Cheat Sheet

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### Overview

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- **4x4 matrix mixer:** 4 inputs x 4 outputs, 12hp
  - **Mixes and routes audio or CV signals** (DC coupled)
  - Linear potentiometers control send level from any input to any output
  - Each channel can **amplify up to 4x** input (makeup gain/overdrive)
  - **Auxiliary input/output** with soft vactrol-based mute
  - Toggle switch (rear): Aux input gain (Unity/x2)
  - Suitable for mixing (audio, CV, FX send/return, feedback, modulation matrices)
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### Controls & Jacks Reference

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#### Inputs (Jacks)

- **Inputs 1-4 (Top Row, Left)**
- Accept **audio or CV** signals
- Typical modular range:  $\pm 10V$  (not specified, but standard for Eurorack, module is DC coupled)

- Each input may be summed to any output
- **Auxiliary Input**
  - Signal is summed with Output 1 before being routed to Aux Output
  - Gain: Switchable (Unity or x2 via rear toggle)
  - **Mute**: Vactrol-based soft mute (button or toggle on front panel)

## Outputs (Jacks)

- **Outputs 1-4 (Top Row, Right)**
  - Each receives mixed signal according to matrix settings
- **Auxiliary Output**
  - Sum of Aux Input and Output 1 (post-mix), subject to mute status

## Knobs / Potentiometers

- **16 Channel Level Knobs** (4 per input/output crosspoint)
- Each knob controls send level from one input to one output (linear response)
- Levels up to **4x** amplification of input signal

## Switches

- **Aux Input Gain Toggle (Back Panel)**
  - Selects between Unity Gain (1x) and high gain (2x) for Aux In
- **Aux Mute (Front Panel/Button)**
  - Soft vactrol-based mute for Aux Input (clickless)

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## Typical Use Scenarios

- **Basic 4-Input Mixer**: Route all to Output 1 as main mix.
- **FX Send/Return Matrix**: Send Outputs 2/3/4 to effects, return effected signals to Aux In.
- **Modulation Matrix**: Route various CV signals to different destinations.

- **Feedback Networks or Cybernetic Circuits**
  - **Kick Drum/Accent Mixing:** Use Aux channel for bringing in/out specific sounds.
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## Power / Specs

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- **Size:** 12 hp
  - **Current Draw:** +12V 17mA, -12V 3mA, 0mA 5V
  - **DC Coupled:** Handles audio & CV equally
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## Compliance & Limitations

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- **EU (RoHS):** Not currently shippable to EU (vactrol in Aux mute, RoHS version pending)
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## Quick Links

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- [Manual PDF](#)
  - [ModularGrid](#)
  - [Etsy Purchase](#)
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