

# Mutable Instruments — Branches

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• [Manual PDF](#)

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[Branches Manual \(PDF\)](#)

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## Mutable Instruments Branches – Cheat Sheet

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Dual Bernoulli Gate

**Purpose:** Route incoming triggers/gates to one of two outputs with voltage-controllable probability, or as a toggle/latchable switch.

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### Input/Output & Controls Reference

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| Label       | Type        | Description   | Voltage Range         |
|-------------|-------------|---|-----------------------|
| IN (1, 2)   | Input Jack  | Trigger/gate input (Section 2 normalled to Section 1) | Standard trigger/gate |
| PROB CV (2) | Input Jack  | CV for probability control (per section)              | 0V–5V                 |
| OUT A (3)   | Output Jack | Trigger/gate output "A"                               | +5V                   |
| OUT B (4)   | Output Jack | Trigger/gate output "B"                               | +5V                   |

**Knob:**

- **Probability Knob (A):** Adjusts probability between outputs A and B (higher = more to A).
- Counterclockwise: Output B only
- Center: 50/50 random
- Clockwise: Output A only

**Button:**

- **Switch (B):**
  - Quick press: Toggle "Toggle Mode" (output flips only when tails).
  - Hold (>1s): Toggle "Latch Mode" (output stays high until next trigger on opposite output).
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## Modes

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- **Classic (Bernoulli) Gate:**
    - Each input trigger randomly routed to OUT A or OUT B based on probability knob/CV.
    - In extremes, acts as a VC switch.
  - **Toggle Mode:**
    - Outcome decides whether to keep outputting to the same jack, or flip to the other.
  - **Latch Mode:**
    - OUT A or OUT B stays high (+5V) until the other output is activated.
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## Power and Other Specs

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- **Power:** +12V: 10mA, -12V: 1mA
  - **Connect power cable so the red stripe (-12V) matches the marked side on the PCB!**
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## Useful Links

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- [Branches Full Manual](#)
- [Mutable Instruments Forum](#)

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