Noise Engineering — Numeric Repetitor

- Manual PDF

Noise Engineering Numeric Repetitor Manual (PDF)

Noise Engineering Numeric Repetitor – Cheat Sheet

Type: Rhythmic Gate Generator
Size: 8HP Eurorack
Depth: 0.8"
Power: 2x5 Eurorack, +12V: 50mA, -12V: 5mA

What is Numeric Repetitor?

A binary-arithmetic-based rhythmic gate generator. It outputs four related rhythmic patterns based on a selected core rhythm ("Prime") and up to three rhythm modifiers ("Factor") using multiplication and binary logic.

Quick Start

1. **Patch a clock (trigger/gate) to `BEAT`.**
2. **Patch `PRIME` and `PRODUCT 1-3` outputs to drum modules, envelopes, etc.**
3. Rotate the `PRIME` knob to pick a core rhythm; adjust `FACTOR 1-3` to create variations.

4. Patch CV or gates to `PRIME CV` or `FACTOR CV 1-3` for dynamic variations.
5. Optionally patch a reset (start of bar) pulse to `MEASURE`.

Controls and Jacks Reference

Label	Type	Function	Voltage Range
PRIME	Knob	Selects prime pattern (main rhythm)	-
PRIME CV	CV In	Modulates `PRIME` pattern selection	0–5V typical
FACTOR 1-3	Knobs	Selects variation factor for each PRODUCT output	-
FACTOR CV 1-3	CV In	Modulates each `FACTOR` knob	0–5V typical
SET	Toggle/ Switch	Selects bank of rhythms	-
BEAT	Trigger In	Clock input; advances step on rising edge	Standard gates/triggers
MEASURE	Trigger In	Resets sequence to start of measure	Standard gates/triggers
RST	Button	Pauses time; resets to start when released	-
PRIME	Gate Out	Main rhythm (core pattern gate)	0V (low), 6V (high)
	Gate Out		

Label	Type	Function	Voltage Range
PRODUCT 1-3		Three rhythm variations based on factors	0V (low), 6V (high)

Output Voltage

- All gate outputs are 0V (low) and 6V (high).
- Low impedance, compatible with most gate-driven modules.

Patch Suggestions

- **Basic:** Clock -> BEAT; PRIME/PROD1-3 -> Percussion Gates
- **Variation:** Use CV/gates on `PRIME` or `FACTOR` for related, evolving patterns (e.g., send a random gate or modulated LFO to a FACTOR CV input).
- **Measure Reset:** Trigger `MEASURE` to keep everything in sync with your main clock.
- **Creative CV:** Divide clock, use sequencers or random sources to modulate FACTOR or PRIME CVs for pattern variation.

Notes on Patterns

- 32 handpicked rhythmic patterns ("Primes")—all 16 steps, always start on step 1, musically valid (see manual for detailed grid).
- Each `FACTOR` applies different binary arithmetic for human-friendly variations.

Tips

- Turning FACTORs or applying CVs creates time offsets, fills, syncopations, and other pattern variations.
- Use SET bank switch for expanded pattern selection.