Noise Engineering
Integra Solum
Dual multi-mode clock divider / trigger generator

Overview

Type	Rhythm Modifier
Size	8HP Eurorack
Depth	.8 Inches
Power	2x5 Eurorack
+12 mA	90 mA
-12 mA	35 mA

Integra Solum is a dual rotating clock divider with 16 trigger outs in two sets of eight. The two sides can be clocked or reset independently or a single input and/or reset normals to both sides. IS switches between three modes and an encoder adjusts the offset of each side. Bonus modes add randomization options.
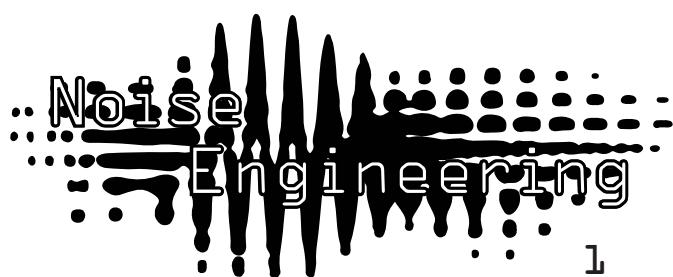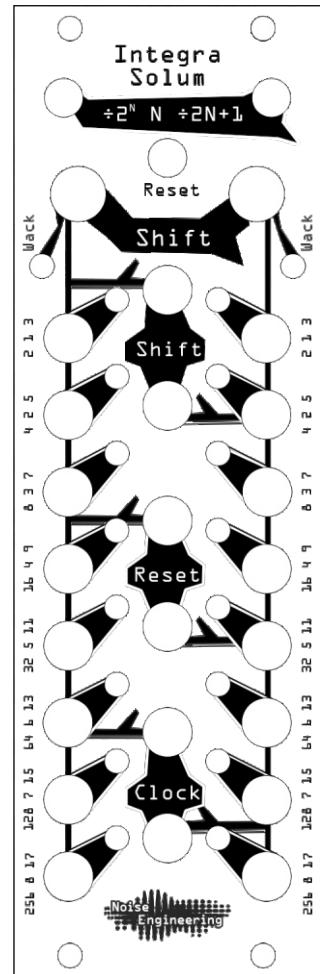
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Interface

CLOCK

The clock input responds to a rising edge at about 3.3v. The inputs are normalled to each other, so connecting one clock will drive both divider sections; alternatively, each section can be clocked individually. The outputs are updated with a latency of about 70 μs.

RESET (INPUT AND BUTTON)

Optional inputs to the reset jack reset the state of the divider. While depressed, the reset button pauses the processing of all clocks. Once released, it resets the input on the first clock following release of the switch.

SHIFT (INPUT AND KNOB)

This knob / cv will "rotate" the outputs: jack 2 becomes the first output in the cycle, followed by jack 3, etc.

MODE SWITCH (/2^N, N, /2N+1)

The mode switch sets the divider mode. There are 3 basic modes: divide by powers of two, sequence of eight, and divide by odd numbers.
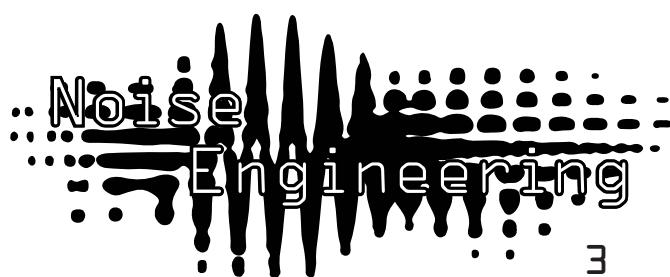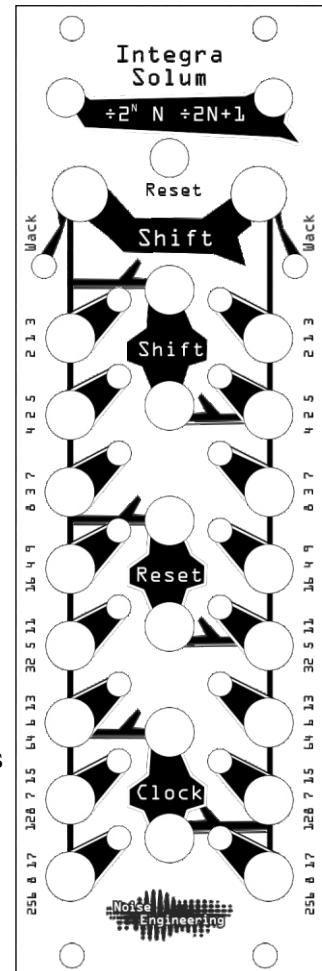
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WACK MODE

To toggle between WACK mode and regular mode on one side, depress and hold OFFSET knob and then press RESET. To enter WACK mode on both sides simultaneously (if both sides are in regular mode), depress and hold both knobs, then press reset. These functions are described in the MODE section.

In WACK mode, each of the modes behaves differently:

$/2^N$: this setting becomes probabilistic divide by two. In this mode, there is a 50% chance that a trigger will generate at each step. In this mode, clocks change, on average, the same as in $/2^N$, but randomly so.

N: In this setting, a single random trigger is generated at each step.

/2N+1: The 8 triggers outputs are activated independently at each step: for every input rising clock edge, each output has a 50% chance of going high (triggering).
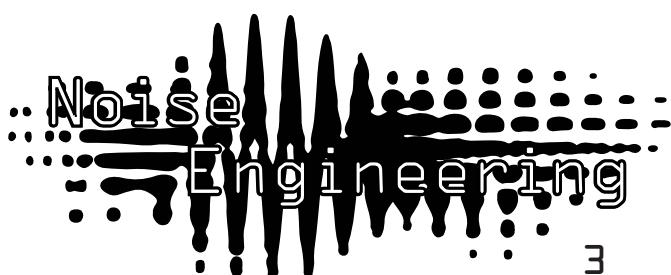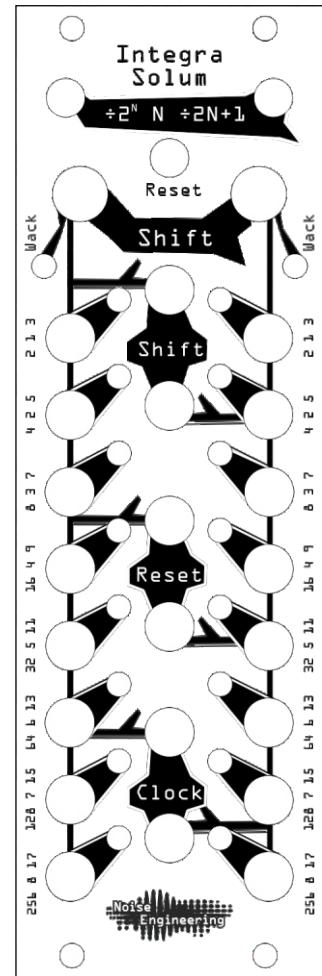
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Patch Tutorial

Patch a clock to either clock input on Integra Solum. It will normal to both sides. Patch the outputs to trigger and/or CV inputs on other modules. Play with offsets and switches to get variation in trigger order.

I/O Voltages

Integra Solum triggers at approximately 3.4 V. Outputs range from 0–5 V.

Special Thanks

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