KNIGHT'S GALLOP

Quick Start Guide

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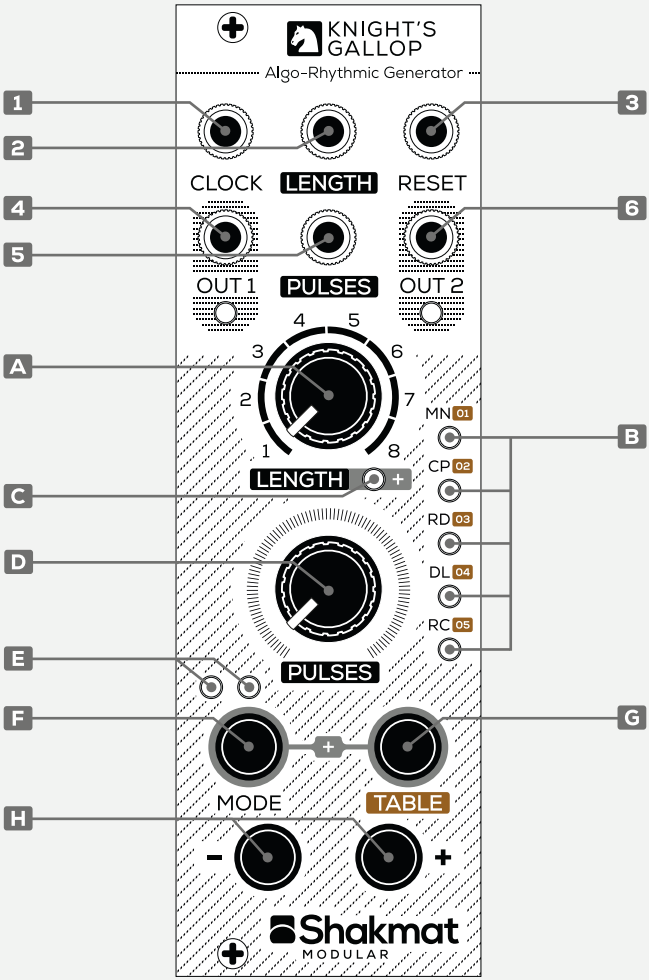
Introduction

Two outputs and five different rhythmic flavors multiply by a load of "algo-rhythmic" processing to result in a practically infinite number of poly-rhythms. That's the fundamental formula that produces the Knight's Gallop principle: a dual trigger generator providing sequences according to tables and modes.

The source tables contain patterns such as the Euclidean polyrhythms, and the modes allow the user manipulate and mangle those patterns according to different algorithms. As the module has two outputs, it is a very powerful instrument to create diversified and instantaneous polyrhythms.

1 Clock input
2 Length CV input
3 Reset input
4 Trigger Out 1
5 Pulses CV input
6 Trigger Out 2

A Length potentiometer
B Modes & Tables LEDs
C Length+ LED
D Pulses potentiometer
E Sub-modes LEDs
F Mode button
G Table button
H +/- Shift buttons


KNIGHT'S GALLOP
Algo-Rhythmic Generator
1
2
3
CLOCK
LENGTH
RESET
4
5
6
OUT 1
PULSES
OUT 2
A
4
5
3
6
2
7
1
8
MN 01
B
LENGTH
+
C
CP 02
RD 03
D
DL 04
RC 05
E
PULSES
F
G
+
MODE
TABLE
H
−
+
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Basics

First of all, the module needs to be fed by a clock signal via its **Clock input 1.** The sequence generated by **Out 1 4** is determined by four parameters : **Table type B, Length A, Pulses D & Shift H .**

The **Length potentiometer A** adjusts the sequence length from 1 to 8 steps. By pressing the **Mode F & Table buttons G** together, the length range can be set from 1-8 to 9-16 steps, while in 9-16 range, the **Length+ LED C** is on.

The **Pulses potentiometer D** sets the number of hits in the sequence. Turned fully counter clockwise it mutes the outputs and as the potentiometer is turned clockwise, the number of hits distributed across the sequence increases.

Length & pulses parameters also have dedicated **CV inputs 2 5.**

The shift parameter can be adjusted with the **-/+ Shift buttons H.** Press **+** once to shift the sequence one step forward and **–** to shift it one step backward.

The module also has a **Reset input 3,** allowing to restart the sequence at its first step.

Tables

The module contains 5 tables with different feelings. To know which table is used, press the **Table button G.** The **Mode & Table LEDs B** indicates the selected table number by blinking. To navigate through the tables keep the **Table button G** pressed and use the **+/- Shift buttons H.**

Here is a list of the tables with a short explanation, please refer to the online user manual for a more detailed description.

01. Divider Sequences

This table is constituted of sequences made of different clock dividers leading to straight, military patterns.

02. Classic Euclidean

The classic Euclidean feeling, the algorithm creating the sequences places pulses accross them with the most constant distance between each hit.

03. Revised Euclidean

The Euclidean patterns sometimes lead to groove-killer sequences. So we reviewed hit by hit all these patterns to bring a revised and never boring version of the well-known Euclidean feeling.

04. Anti Euclidean

As Euclidean patterns lead to almost identical distances between pulses, Anti Euclidean patterns have been built up with the principle of inter pulses distance maximization.

05. Split Sequences

As the Pulses value increases, the algorithm generating this table first fills up the first half of the sequence with a classic Euclidean feeling and then fills up the second part with a slightly different groove.

Modes & Sub-modes

As **Out 1** 4**, Out 2** 6 is also generating patterns according to the table type and the length, pulses and shift values but those patterns are modified by algorithms determined by the selected mode & sub-mode.

The **Mode LEDs** B show the current mode. To navigate through the modes press the **Mode** F **& +/- Shift buttons** H**.**

Each mode contains several Sub-modes, to navigate through them, press the **Mode button** F**.** The Sub-mode is shown by the **Sub-modes LEDs** E**.**

Here is a list of the modes & sub-modes with a short explanation. For more informations, please refer to the full online user manual or check the cheat sheet where all the tables, modes & sub-modes are summed up.

MN. Main mode

Allows to feed **Out 2** 4 with a trigger at each first step of the sequence, or with a non-shifted, inverted or backward version of the sequence feeding **Out 1** 6**.**

CP. Compute mode

As **Out 1** 4 is generating a "L" long sequence with "P" pulses in it, **Out 2** 6 provides another sequence withdrawn from the same table but with different length and pulse density.

RD. Random mode

Adds randomness to **Out 2** 6 from auto-fill (the module has a certain probability to read an associated sequence) to a probabilistic trigger generator.

DL. Dual Mode

Allows to set **Out 1** 4 and **Out 2** 6 independently.

RC. Rec Mode

Allows to record sequences played with the **+/- Shift buttons** H**.** Turned fully clockwise, the **Pulses potentiometer** D will cause both outputs to roll on every step.

Installation

The Knight's Gallop requires a standard 2x5 pin eurorack connector. Make sure the red stripe on the ribbon cable is oriented on the -12V side of the board.

Technical Information

Size: 8 hp
Depth: 25 mm
Current Draw: 22 mA @ +12V / 0 mA @ -12V
Input Voltages: 0 - 5V
Output Voltages: 0 - 5V

Credits

Product design and engineering:
François Gaspard

Product and brand design:
Steve Hackx / MadeInside™

Beta Testers:
Hugo "Ucture" Ficher, Bj_gzp, Supercrysalis, Harold Osica, Mudd Corp & Nicolas Ripit.

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