User manual

M-118a

SYSTEM-100M 118a

BD   **SD**   **SEQ**

TRIG IN   ACC IN

TRIG1

BD OUT

TONE

5

0   10

DECAY

5

0   10

TUNING

5

0   10

TRIG IN   ACC IN

TRIG2

SD OUT

TONE

5

0   10

SNAPPY

5

0   10

DECAY

5

0   10

X   Y

10

5

0

TAP/RST   RST IN

TRIG1   TRIG2

ACC1   ACC2

CLK IN   CLK OUT

TEMPO

10

5

0

10   10

5   5

0   0

TUNE   DECAY
CV IN   CV IN

10   10

5   5

0   0

TUNE   DECAY
CV IN   CV IN

10   10

5   5

0   0

1   2
FILL
MOD IN

e-licktronic

INTRODUCTION

M-118a is a module equipped with three sections. A bassdrum and a snaredrum inspired by the famous Roland TR-808 Drum computer, and a two tracks trig sequencer inspired by the unique Mutable instrument GRIDS sequencer.
Many thanks to Emilie GILLET, creator of Mutable instruments, to let me use and customize his sequencer.

Bassdrum Section

Bassdrum accent input 0-10V normalized with **SEQ ACC1** output

Bassdrum Trig input 0-10V pulse normalized with **SEQ TRIG1** output

Flash when Trig signal appear

Bassdrum audio output

Control the bassdrum tone

Control the bassdrum decay

Control the bassdrum pitch

Control the level of input voltage from **DECAY CV IN**

Control the level of input voltage from **TUNE CV IN**

TUNE CV Input 0-10V

DECAY CV Input 0-10V

SYSTEM-100M 118a

BD
TRIG IN   ACC IN
TRIG1
BD OUT
TONE
5
0   10
DECAY
5
0   10
TUNING
5
0   10
10
5
0
TUNE CV IN   DECAY CV IN

SD
TRIG IN   ACC IN
TRIG2
SD OUT
TONE
5
0   10
SNAPPY
5
0   10
DECAY
5
0   10
10
5
0
TUNE CV IN   DECAY CV IN

SEQ
X   Y
10
5
0
TAP/RST   RST IN
TRIG1   TRIG2
ACC1   ACC2
CLK IN   CLK OUT
TEMPO
10
5
0
1   FILL   2
MOD IN

E-RICK

Snaredrum Section

Snaredrum accent input 0-10V normalized with SEQ ACC2 output

Snaredrum Trig input 0-10V pulse normalized with SEQ TRIG2 output

Flash when Trig signal appear

Snaredrum audio output

Control the snaredrum tone, mix between two oscillators. OSC1 Fccw and OSC2 Fcw

Control the snaredrum snappy effect, increase white noise level

Control the snaredrum noise decay

Control the level of input voltage from DECAY CV IN

Control the snare OSC1 tune and TUNE input voltage level CV IN when connected

TUNE CV Input 0-10V

DECAY CV Input 0-10V

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BD   SD   SEQ

TRIG IN   ACC IN   TRIG IN   ACC IN   X   Y

TRIG1   BD OUT   TRIG2   SD OUT

TONE   TONE

10

5

TAP/RST   RST IN

Lorem ipsum

DECAY   SNAPPY

TRIG1   TRIG2

ACC1   ACC2

CLK IN   CLK OUT

TUNING   DECAY

TEMPO

10   10   10

5   5   5

0   0   0

TUNE   DECAY   TUNE   DECAY   1   2
CV IN   CV IN   CV IN   CV IN   FILL
MOD IN

E-DICK

CONCEPT:
The sequencer is inspired by Mutable instrument GRIDS. It is a two-channel, algorithmic, rhythmic pattern generator based on data and models extracted from actual drum loops. Two steps are involved in the generation of the drum patterns:

    Step 1: Synthesizing a pattern from the drum map...
A collection of drum loops has been spatially organized and compressed into a two-dimensional map. Using interpolation techniques, any pair of X/Y coordinates can be translated into a rhythm, with smooth morphing from one rhythm into the other.

    Step 2: Sculpting the pattern
Once a rhythmic skeleton is read from the map, variations can be generated by controlling the note density of each of the two channels - gradually morphing the pattern from a sparse backbone to a frantic pattern.

(information taken from the manual of the Mutable instruments GRIDS module, thank you Emilie GILLET)

Sequencer Section

CV input controlling the map Y

CV input controlling the map X

Map Y coordinates *

Map X coordinates *

Pattern reset input, a 0-10V pulse reset the pattern

TAP/Reset button *

Sequencer trig outputs, 0-10V 2ms

Sequencer accent outputs, 0-10V pulse.

Sequencer clock input/output

Bicolor led, red blink on the beat *

Tempo control from 40 to 240 BPM. When turned fccw, the internal clock stops and the sequencer is waiting for a CLK IN pulse signal *

Note density/fill rate for 2nd channel

Note density/fill rate for 1st channel

CV inputs controlling the density/fill rate parameters.

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BD   SD   SEQ

TRIG IN   ACC IN   TRIG IN   ACC IN   X   Y

TRIG1   BD OUT   TRIG2   SD OUT

TONE   TONE   10   5   0

TAP/RST   RST IN

DECAY   SNAPPY   TRIG1   TRIG2

5   5   ACC1   ACC2

0   10   0   10   CLK IN   CLK OUT

TUNING   DECAY   TEMPO

5   5

0   10   0   10

10   10   10

5   5   5

0   0   0

TUNE   DECAY   TUNE   DECAY   1   2
CV IN   CV IN   CV IN   CV IN   FILL
MOD IN

E-DICK

(* advanced parameters)

Sequencer advanced parameters

Unplug all CV inputs and hold the TAP (reset) button for a second to adjust sequencer settings. The bicolor LED lights up green. This led indicate the value of the setting being modified by changing color. Refer to the diagram for a list of all available settings. Hold the TAP button again for a second when you are done.

SEQUENCER MODE:
The sequencer can also work as a plain euclidean sequencer.
Move X slider to set mode:
Euclidien => led is green ●
Drum seq => led is yellow ●

When euclidean sequencer mode is enabled, the MAP X / Y sliders have alternate functions,
Slider X/Y control the duration (number of steps) of the sequence, while the FILL knobs control the fill rate.

CLOCK OUT RESOLUTION:
Move Fill 1 slider to set clock output resolution. In Master clock, it change internal ppqn.
4 ppqn => led is red ●
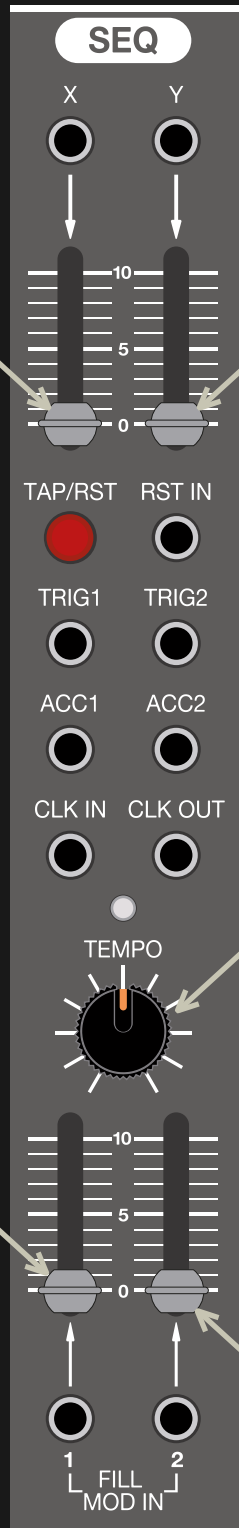8 ppqn => led is green ●
24 ppqn => led is yellow ●

In Slave clock, the clock out signal can be a division of the input clock signal
clk in /1 => led is off
clk in /2 => led is red ●
clk in /4 => led is green ●
clk in /8 => led is yellow ●

TRIG/GATE OUTPUT:
Move Y slider to set trig output:
TRIG 1ms => led is green ●
GATE => led is yellow ●

TEMPO CONTROL FUNCTION:
In sequencer setting mode the tempo knob is used to adjust CHAOS or SWING parameters depending Fill 2 slider position.
led is green => CHOAS ●
led is yellow => SWING ●

TAP BUTTON FUNCTION:
Move Fill 2 slider to set clock output resolution.
Tap to restart at the beginning of the sequencer
=> led is green ●
Tap to set the tempo
=> led is yellow ●

SEQ

X   Y

TAP/RST   RST IN

TRIG1   TRIG2

ACC1   ACC2

CLK IN   CLK OUT

TEMPO

1   FILL   2
MOD IN

TIPS AND TRICKS

1-When trig outputs are set to gate or you use external gate to trig drums, the bassdrum and snaredrum are trigged with a 2ms pulse due to a RC filter at the trig input of drums. That make bassdrum and snaredrum sounding differently.

2-When you use external signal to trig drum, the sequencer accent is still connected to drums accent and can cause unwanted effects. Simply plug a patch cable in ACC IN to disconnect accent signal coming from the sequencer

SPECIFICATIONS

-CONTROL
BassDrum TONE, DECAY, TUNING
SnareDrum TONE, SNAPPY, DECAY, TUNE
Control Voltage level BD TUNE, BD, DECAY, SD TUNE, SD DECAY,
   Map X, Map Y, FILL 1/2
Tempo : 40 bpm to 240 bpm
Tap reset button

-CONNECTION JACKS
Modulation input BD TUNE, BD DECAY, SD TUNE, SD DECAY,
   Map X, Map Y, FILL 1/2 (10Vp-p imp. greater that 10Kohm)
Trig, accent, reset and clock inputs (10V pulse)
BD and SD output (10Vp-p imp. less than 1Kohm)
Trig, accent and clock outputs (10V pulse)

-POWER CONSUMPTION
+15V +-1% 80mA
-15V +-1% 40mA

-DIMENSIONS
103(W)x230(H)x70(D)mm

-NET WEIGHT
530g