M-142
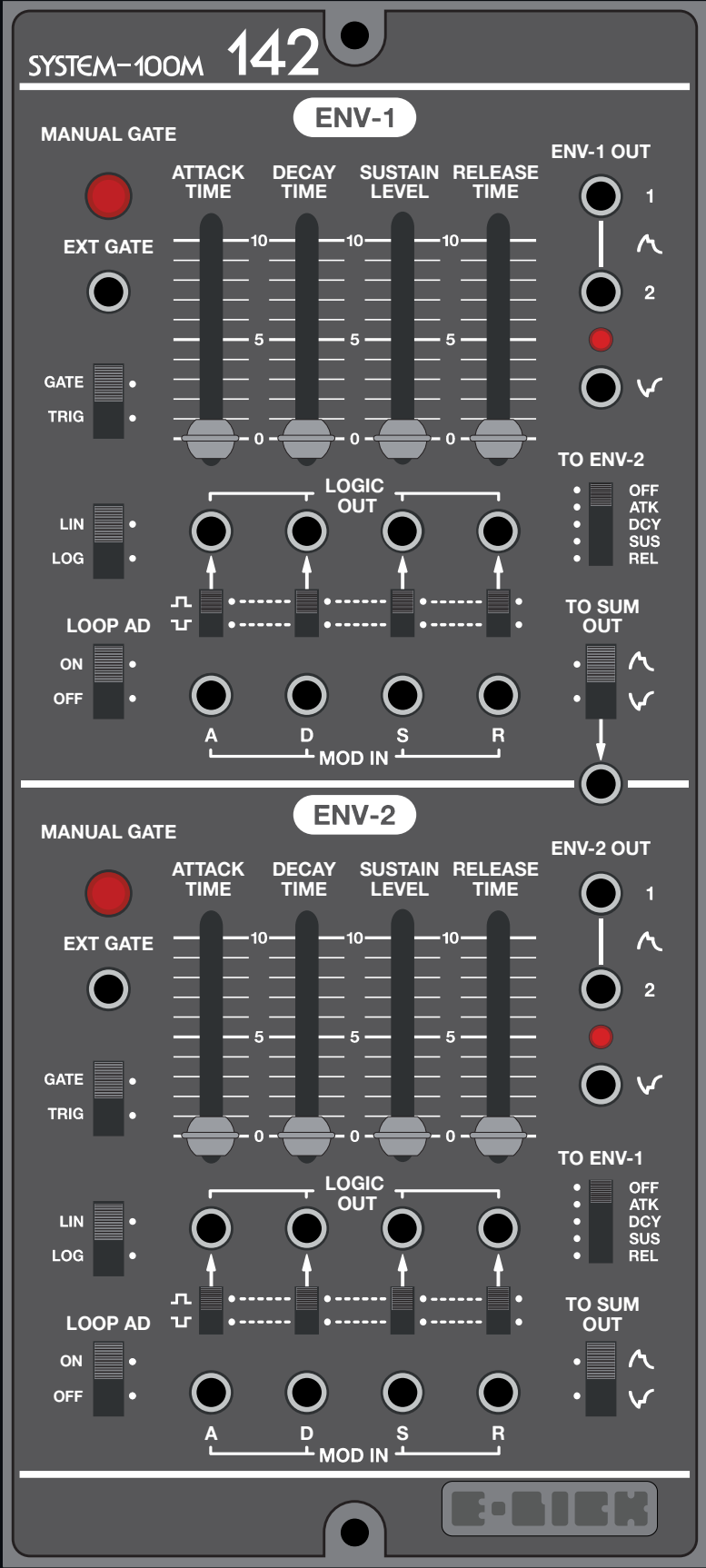
INTRODUCTION

M-142 is a dual voltage control envelope generator with logic state output but not only. You can configure each part of the module as a VCLFO or a 4-step sequencer, which has no less than 8 different configurations. An additional 9th configuration allows the entire module to be defined in one 8-step sequencer. Once configured, the module saves your last configuration and reloads it the next time you turn it on

ENV Mode

Output of the envelope, from the last jack, produces an inverted motion of the envelope's output

This button operates the envelope generator manually.

This jack is for external gate pulse input

These sliders determine, respectively, the attack time, decay time, sustain level and release time

In TRIG mode a trigger on the input will generate the attack and release sections of the envelope, while in GATE mode, as soon the Gate input is low, the release begins

Select between linear or logarithmic time transistion.

These outputs set a gate signal (0-10V) at each stage of the envelope (cf diagram)

Select between single cycle or loop mode

These switches set the polarity of the gate signal for each stage of the envelope

Voltage control input of each stage for the envelope

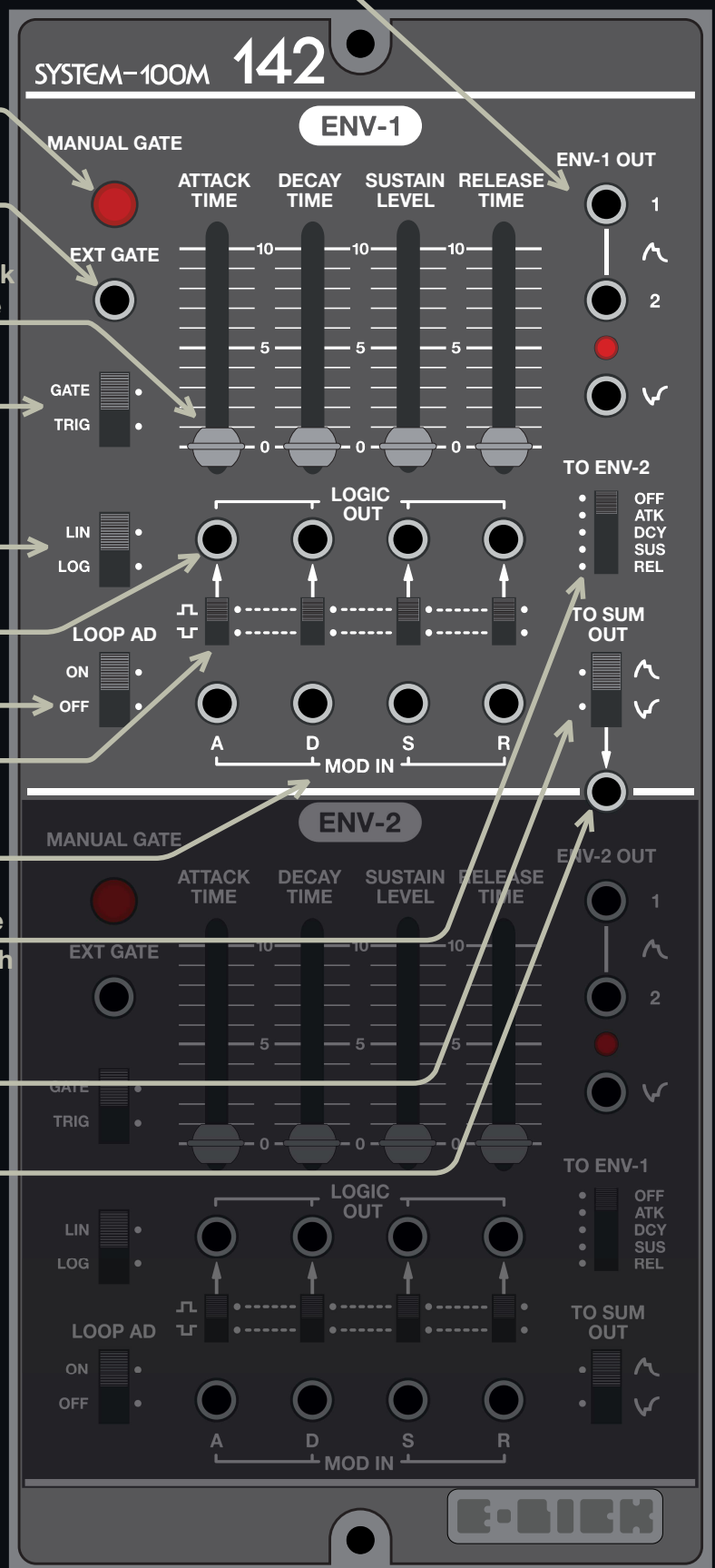**When both modules are set in envelope mode

Each envelope can trigger the other. This switch selects which stage will trigger the second envelope.

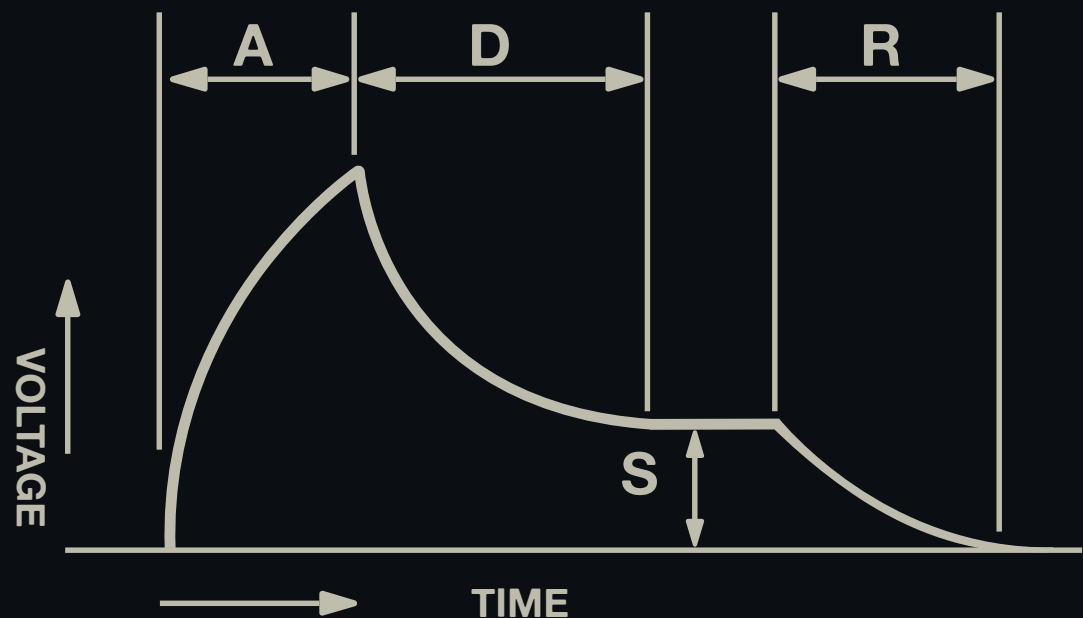This switch selects the polarity of the signal summed on the common output

This jack is the a common output of the summed signal from both envelope output

*The second envelope generator works like the first

**Be careful when setting the target on the other envelope, this could result in a undesirable effect. For example if you define ENV2 triggered by ENV1's attack and set ENV1 triggered also by ENV2's attack.

SYSTEM-100M 142

ENV-1

MANUAL GATE

EXT GATE

ATTACK TIME — DECAY TIME — SUSTAIN LEVEL — RELEASE TIME

10 — 10 — 10

5 — 5 — 5

0 — 0 — 0

GATE / TRIG

LIN / LOG

LOGIC OUT

LOOP AD

ON / OFF

A — D — S — R

MOD IN

ENV-1 OUT

1

2

TO ENV-2

OFF ATK DCY SUS REL

TO SUM OUT

ENV-2

MANUAL GATE

EXT GATE

ATTACK TIME — DECAY TIME — SUSTAIN LEVEL — RELEASE TIME

10 — 10 — 10

5 — 5 — 5

0 — 0 — 0

GATE / TRIG

LIN / LOG

LOGIC OUT

LOOP AD

ON / OFF

A — D — S — R

MOD IN

ENV-2 OUT

1

2

TO ENV-1

OFF ATK DCY SUS REL

TO SUM OUT

• **ENV (Envelope Generator)**

A   D   R

VOLTAGE

S

TIME

GATE ON   GATE OFF

Logic Outputs State

A   ON   OFF

D   OFF   ON   OFF

S   OFF   ON   OFF

R   OFF   ON

*The polarity of the logic state outputs depends on the position of the corresponding switch

Env advanced parameters

   Disconnect all CV inputs and hold both Manual Gate buttons for three seconds to enter function selection mode. Release the buttons; both LEDs will start flashing. Use each module's attack slider to select the desired function. The function is indicated by the flashing LED:

   🔴 -> Set the module in Envelope mode
   🟠 -> Set the module in 4-step Sequencer mode
   🟡 -> Set the module in VCLFO mode
   🟢 -> Set BOTH module in 8-step Sequencer Mode

   Press one of the two buttons to exit the function selection mode.

   You can set each module independently except for the 8-step sequencer, which uses the controls of both the upper and lower modules. The function of each switch, slider, and jack varies for each mode. Let's describe them.

4-step Sequencer Mode

Outputs of control voltage, the last jack produces inverted motion of the control voltage

This button is used as a TAP tempo when the sequencer is Master and it increments steps when the sequencer is slaved.

Clock input, a pulse increments by one step

Those sliders determine the CV for each step. Attack is for step 1, Decay for step 2 and so on...

Set the sequencer in Master or slave mode. GATE -> Master, TRIG -> Slave

This switch sets the scaling accuracy of the sliders: LIN -> 0 to 5V, LOG -> 0 to 2V

These outputs set a gate signal (0-10V). A output a gate on 1th step and R on 4th step D and S output a gate signal on each step

When set to ON, the sequencer direction is Ping-Pong
When these switches are active (up position) the corresponding step is repeated two times

Voltage control input for each stage of the sequencer. Can be used as quantizer input
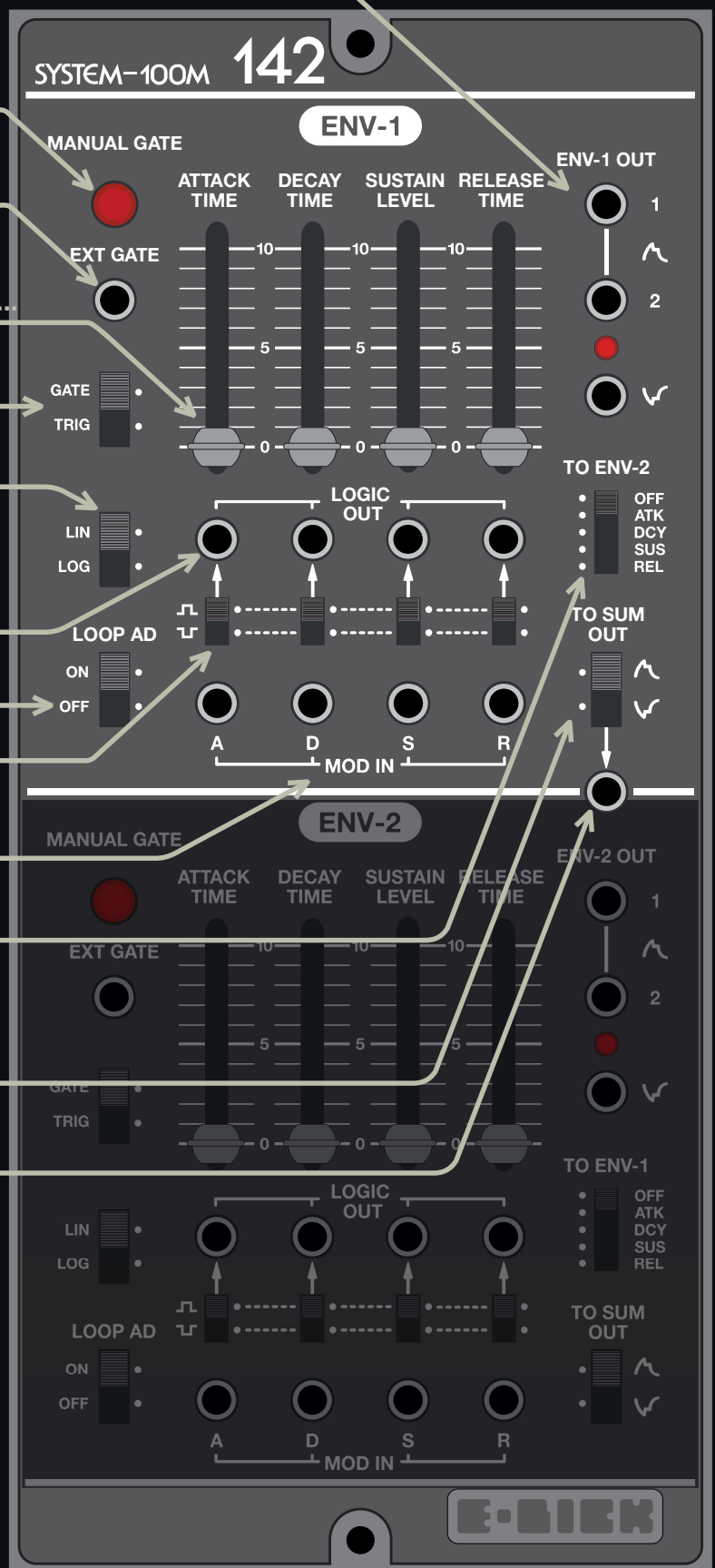
This switch selects the quantized note scale:
OFF -> free, ATK -> Major, DCY -> minor,
SUS -> Pentatonic and REL -> min Harmonic

This switch selects the polarity of the signal summed at the common output

This jack is the common output of the summed signal from upper and lower module

The LED shows the active step as follows:
- 🟢 -> Step 1
- 🟡 -> Step 2
- 🟠 -> Step 3
- 🔴 -> Step 4

SYSTEM-100M 142

ENV-1

MANUAL GATE

EXT GATE

ATTACK TIME

DECAY TIME

SUSTAIN LEVEL

RELEASE TIME

ENV-1 OUT

1

2

GATE
TRIG

LIN
LOG

LOGIC OUT

TO ENV-2
OFF
ATK
DCY
SUS
REL

TO SUM OUT

LOOP AD

ON
OFF

A   D   S   R
MOD IN

ENV-2

MANUAL GATE

EXT GATE

ATTACK TIME

DECAY TIME

SUSTAIN LEVEL

RELEASE TIME

ENV-2 OUT

1

2

GATE
TRIG

LIN
LOG

LOGIC OUT

TO ENV-1
OFF
ATK
DCY
SUS
REL

TO SUM OUT

LOOP AD

ON
OFF

A   D   S   R
MOD IN

G·DICK

*The second 4-step sequencer works like the first one

VCLFO Mode

Outputs of the LFO, the last jack produces inverted motion of the LFO output

This button is used to reset the phase of the LFO waveform in free mode. In one cycle mode when pressed, it generate one waveform cycle

Input that reset the phase of the LFO waveform in free mode. In trig mode, a positive pulse start one cycle of the waveform

A slider -> Frequency, D slider -> Amplitude, S slider -> Offset and R slider -> Waveshaping

Set the LFO in free mode or one cycle mode GATE -> Free, TRIG -> Trig

This switch sets the range of the LFO frequency LIN -> 10Hz to 200Hz, LOG -> 0.01Hz to 15Hz

These outputs set a gate signal (0-10V) on each quarter phase of the LFO waveform cycle

Digital noise generator switch (ON or OFF)

These switches set the polarity of the gate signal for each quarter phase of the LFO
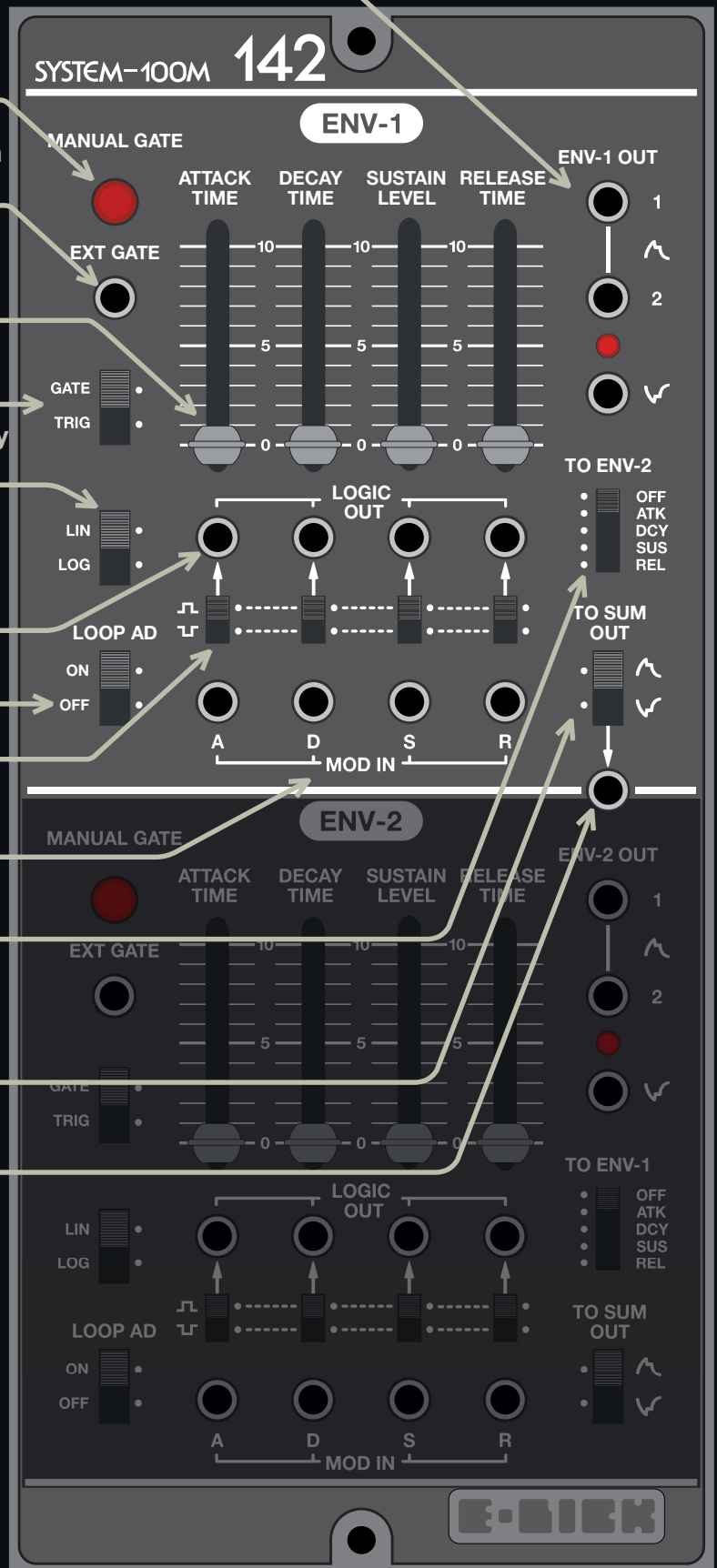
Voltage control input for each LFO parameter

This switch selects the LFO's waveform:
OFF -> TRI, ATK -> SAW, DCY -> INV SAW, SUS -> SIN and REL -> S/H

This switch selects the polarity of the signal summed on the common output

This jack is the common output of the summed signal from upper and lower module

*The second VCLFO works like the first one

SYSTEM-100M 142

ENV-1

MANUAL GATE

ATTACK TIME   DECAY TIME   SUSTAIN LEVEL   RELEASE TIME

ENV-1 OUT

EXT GATE

GATE
TRIG

TO ENV-2
OFF
ATK
DCY
SUS
REL

LIN
LOG

LOGIC OUT

TO SUM OUT

LOOP AD

ON
OFF

A   D   S   R
MOD IN

ENV-2

MANUAL GATE

ATTACK TIME   DECAY TIME   SUSTAIN LEVEL   RELEASE TIME

ENV-2 OUT

EXT GATE

GATE
TRIG

TO ENV-1
OFF
ATK
DCY
SUS
REL

LIN
LOG

LOGIC OUT

TO SUM OUT

LOOP AD

ON
OFF

A   D   S   R
MOD IN

8-step Sequencer Mode

This button is used as a TAP tempo when the sequencer is Master and it increments steps when the sequencer is slaved.

Clock input, a pulse increments by one step

These sliders set the CV for each step. Attack is for step 1, Decay for step 2 and so on, up to 8 step, which is lower modules's Release slider

Set the sequencer in Master or slave mode. GATE -> Master, TRIG -> Slave

If «repeat» selected: LIN -> 3x, LOG-> 2x
Then if «skip» selected: LIN -> 2x, LOG -> 1x
Work on steps 1 to 4

These outputs set a gate signal (0-10V) for each steps

When ON, active steps are repeated, otherwise are skipped (rate selected by LIN/LOG)

These switches active the step (up position) for the selected function (repeat or skip)

Voltage control input for each stage of the sequencer. Can be used as quantizer input
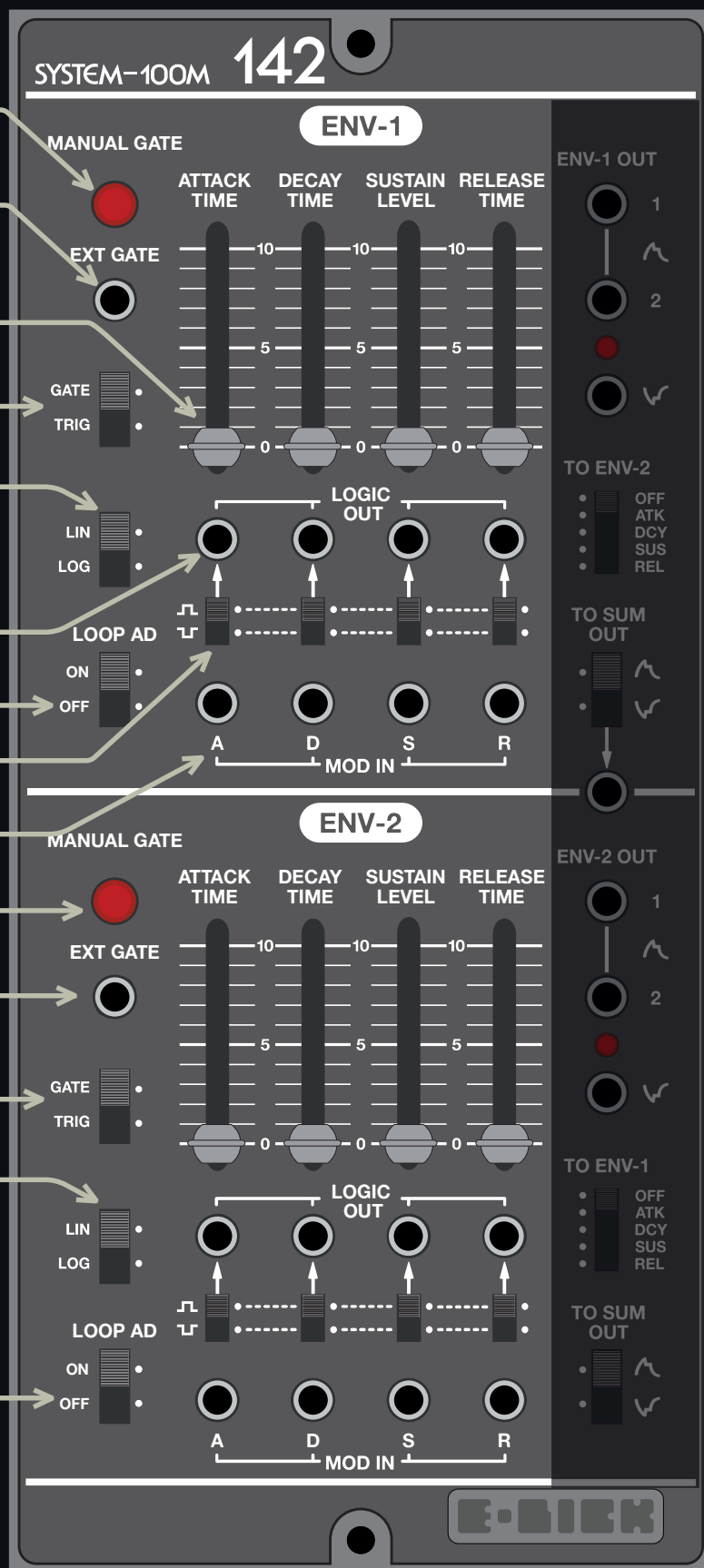
This button is used to reset the sequencer

A pulse on this input reset the sequencer

This switch sets the scaling accuracy of the sliders: LIN -> 0 to 5V, LOG -> 0 to 2V

This switch functions similarly to the upper switch but only affects steps 5 to 8

This switch functions similarly to the upper switch but only affects steps 5 to 8

SYSTEM-100M 142

ENV-1

MANUAL GATE
EXT GATE
GATE / TRIG
LIN / LOG
LOOP AD
ON / OFF

ATTACK TIME   DECAY TIME   SUSTAIN LEVEL   RELEASE TIME
10   10   10
5   5   5
0   0   0

LOGIC OUT

A   D   S   R
MOD IN

ENV-1 OUT
1
2

TO ENV-2
OFF
ATK
DCY
SUS
REL

TO SUM OUT

ENV-2

MANUAL GATE
EXT GATE
GATE / TRIG
LIN / LOG
LOOP AD
ON / OFF

ATTACK TIME   DECAY TIME   SUSTAIN LEVEL   RELEASE TIME
10   10   10
5   5   5
0   0   0

LOGIC OUT

A   D   S   R
MOD IN

ENV-2 OUT
1
2

TO ENV-1
OFF
ATK
DCY
SUS
REL

TO SUM OUT

8-step Sequencer Mode

SYSTEM-100M **142**

ENV-1

MANUAL GATE

EXT GATE

ATTACK TIME
DECAY TIME
SUSTAIN LEVEL
RELEASE TIME

GATE
TRIG

LIN
LOG

LOGIC OUT

LOOP AD

ON
OFF

A   D   S   R

MOD IN

ENV-1 OUT
1
2

TO ENV-2
OFF
ATK
DCY
SUS
REL

TO SUM OUT

ENV-2

MANUAL GATE

EXT GATE

ATTACK TIME
DECAY TIME
SUSTAIN LEVEL
RELEASE TIME

GATE
TRIG

LIN
LOG

LOGIC OUT

LOOP AD

ON
OFF

A   D   S   R

MOD IN

ENV-2 OUT
1
2

TO ENV-1
OFF
ATK
DCY
SUS
REL

TO SUM OUT

E·RICK

Outputs of control voltage, the last jack produces inverted motion of the control voltage

The LED shows the active step as follows:
- 🟢 -> Step 1
- 🟡 -> Step 2
- 🟠 -> Step 3
- 🔴 -> Step 4

This switch selects the quantized note scale:
OFF -> free, ATK -> Major, DCY -> minor,
SUS -> Pentatonic and REL -> min Harmonic

Not used in 8-step sequencer mode

Outputs of the Gate signal, the last jack produces inverted motion of the Gate signal.

The LED shows the active step as follows:
- 🟢 -> Step 5
- 🟡 -> Step 6
- 🟠 -> Step 7
- 🔴 -> Step 8

This switch selects the sequencer direction:
OFF -> Forward, ATK -> Backward,
DCY -> Pendulum, SUS -> Ping-Pong
and REL -> Random

S

SPECIFICATIONS

-CONTROL
Attack Time (1.5ms - 7.5sec)
Decay Time (4ms - 15sec)
Sustain Level (0 - 10V)
Release Time (4ms - 15sec)
Manual Gate Button
Gate Selector: GATE/TRIG
Curve selector: LIN/LOG
Loop selector
Target to second Envelope selector
Logic state selector x4
Polarity selector

-CONNECTION JACKS
External Gate input (over 3V Imp: over 10kOhm)
Env output x2 (Imp: less than 1kOhm)
Inverted Env output (Imp: less than 1kOhm)
Logic state output x4 (Imp: less than 1kOhm)
ATTACK CV Input (0-10V)
DECAY CV Input (0-10V)
SUSTAIN CV Input (0-10V)
RELEASE CV Input (0-10V)
Summed output (Imp: less than 1kOhm)

-INDICATOR
Rate indicator dual color LED

-POWER CONSUMPTION
+15V +-1% 60mA
-15V +-1% 30mA
+22V +-5% 0mA

-DIMENSIONS
103(W)x230(H)x52(D)mm

-NET WEIGHT
500g