EG-LFO

USER MANUAL

THANKS YOU

Thanks for supporting BLACK NOISE.
Your module have been designed and assembled with love and care in France.
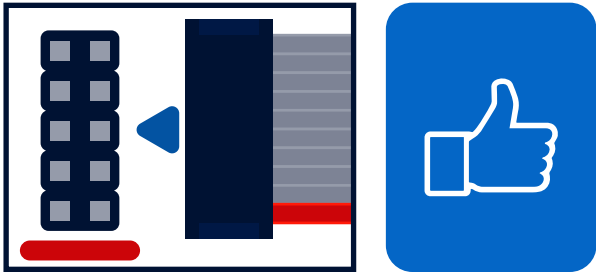We hope you will enjoy your module as much as we are.

INSTALLATION & POWER SAFETY

1 Disconnect you rack power from the main.

2 Align the red line from the power ribbon cable with the line draw next to the power connector on the module side.

3 Check again the polarity of the ribbon cable.

4 Check the polarity one last time.

5 Put *MODE* switch on *LFO*. *See overview page to locate MODE switch on the faceplate.*

6 Put *SPEED* switch on *HIGH* *See overview page to locate SPEED switch on the faceplate.*

7 Connect you rack power from the main.

8 Power you rack.

9 If the LED below *GATE* input light up you can pass on next step, else please contact us.

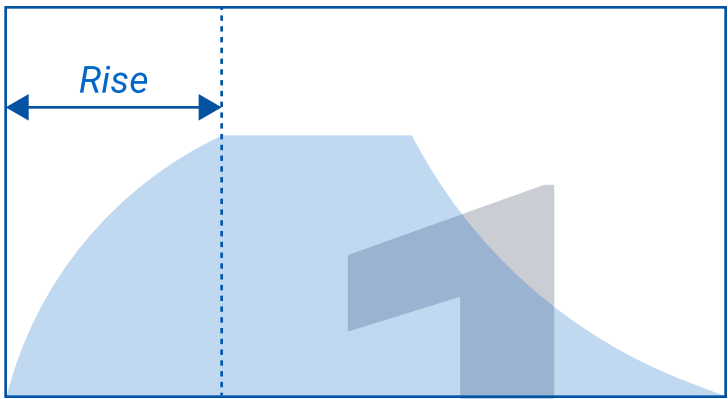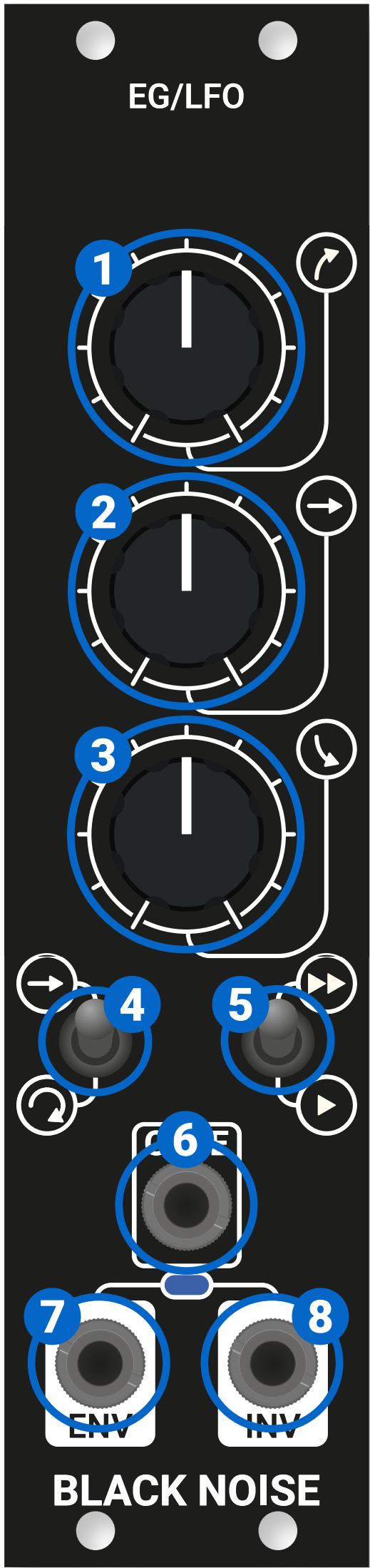**10** You can screw you module on your rack.

DISCLAIMER

All our modules are secured against reversed power connection, however plugging you module backward may damage you power supply or other modules installed in your rack.

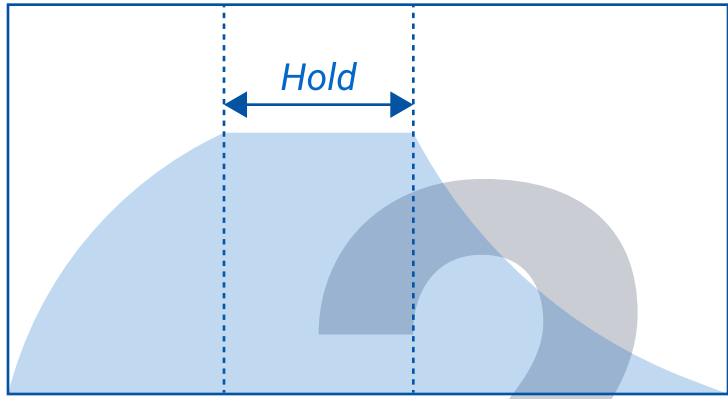**Backward connection are not covered by our warranty.**

EG LFO

FRONT PLATE
EG MODE

EG/LFO

1

2

3

4

5
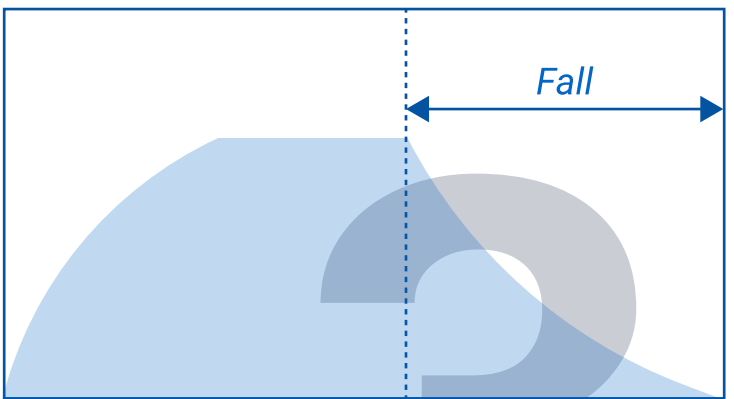
6

7 ENV

8 INV

BLACK NOISE

E G
L F O

RISE TIME
Control the time to envelope to rise.
Rise time *LOW/HIGH* : 0-130ms/0-1.3ms
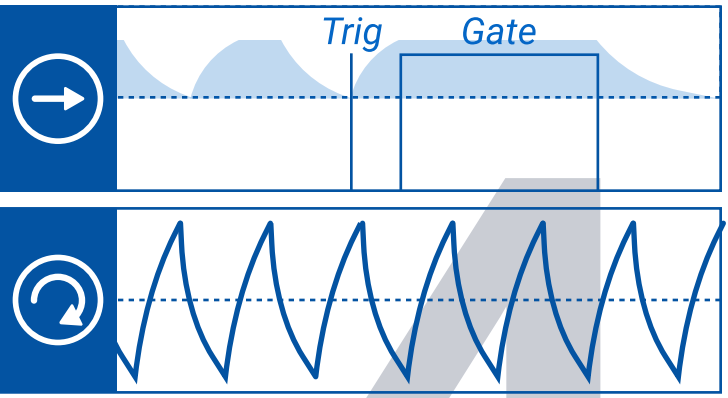
Rise

HOLD TIME
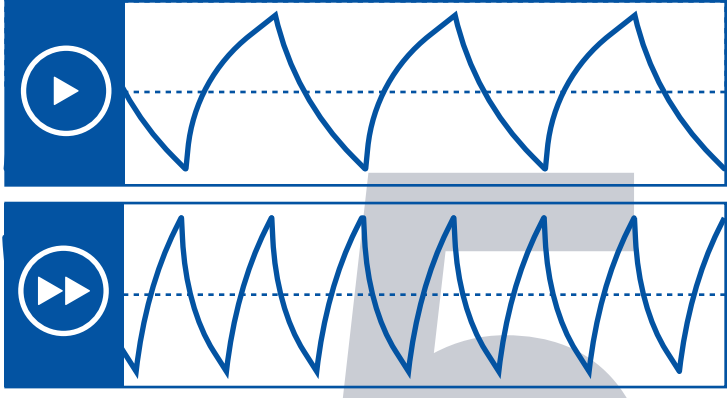Control the duration the envelope stay high.
Hold Time (trig) *LOW/HIGH* : 0-75ms/0-750μs

Hold

FALL TIME
Control the time to envelope to fall.
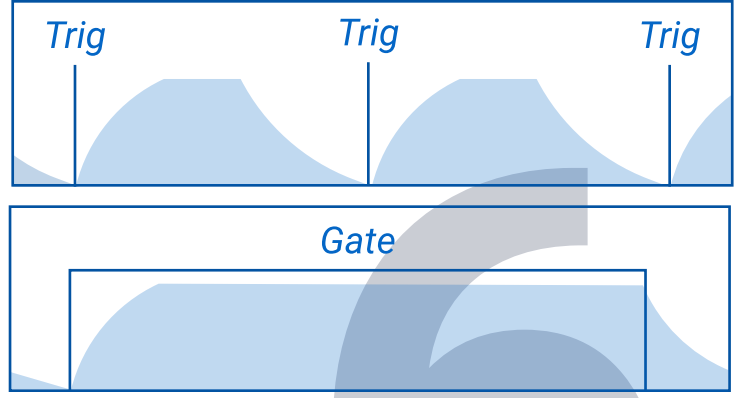Fall time *LOW/HIGH* : 0-645ms/0-6.45ms

Fall

EG/LFO MODE
Trig Gate

→ Envelope mode

↻ LFO mode

SPEED RANGE
▶ LOW speed : 3Hz - 161Hz

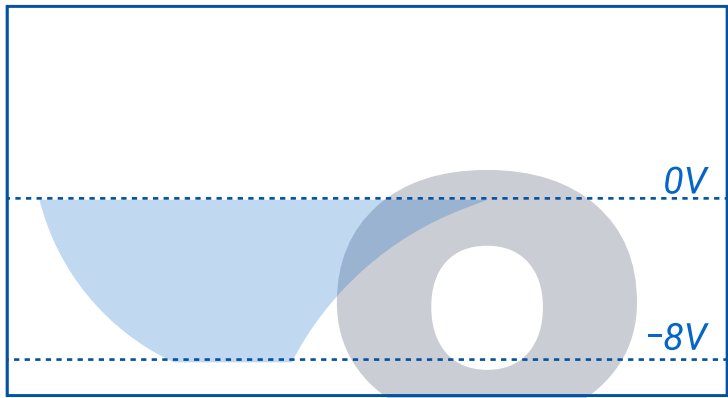▶▶ HIGH speed : 333Hz - 27kHz

GATE INPUT
Trig Trig Trig

Gate

TRIGGER : Trigger will start the envelope.
GATE : Gate will start the envelope and keep it high
as long as the gate length.
GATE INPUT LEVEL : 1.5V/10V
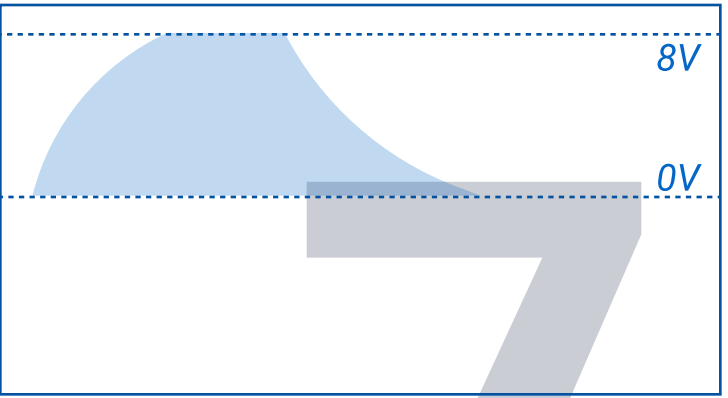
ENVELOPE OUTPUT
Output the envelope
Envelope amplitude 0V/8V

8V

0V

INVERTED OUTPUT
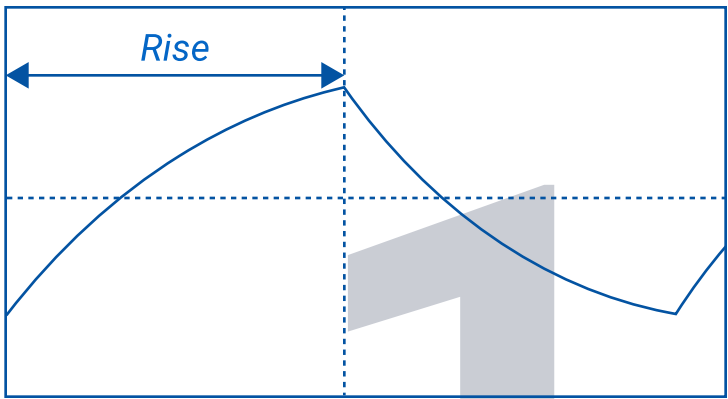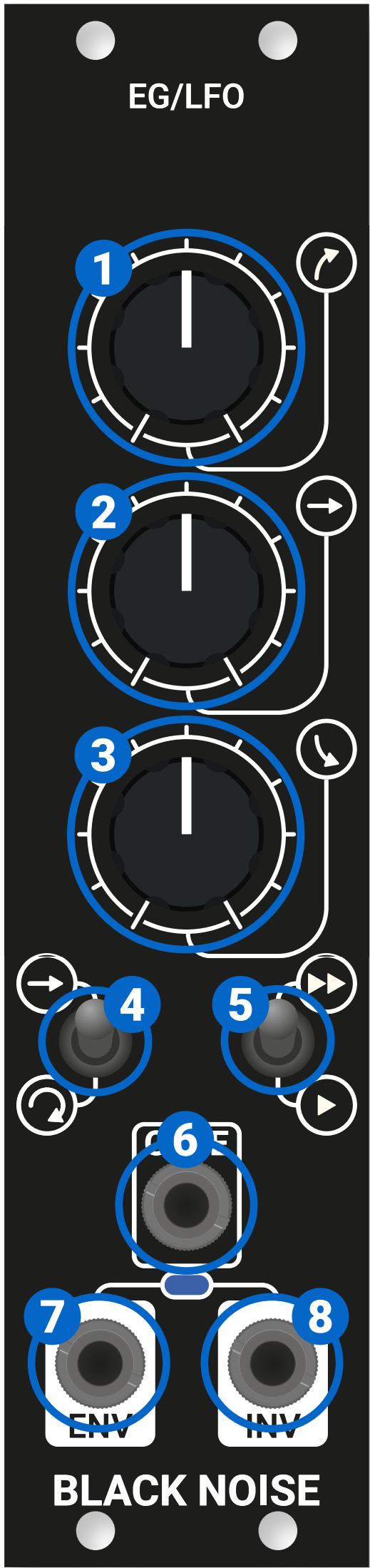Output the envelope inverted
envelope amplitude 0V/-8V

0V

-8V

GENERAL SPECIFICATIONS

PANEL WIDTH : 6HP

MODULE DEPTH : 20mm

POWER CONSUMPTION :
+12V : 14mA
-12V : 12mA
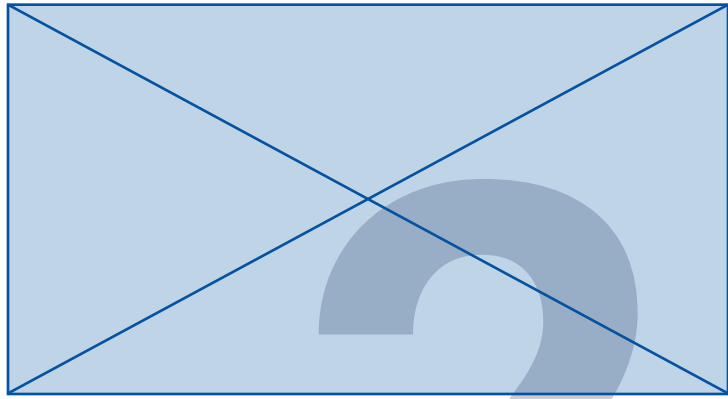**+5V : 0mA**

FRONT PLATE
LFO MODE
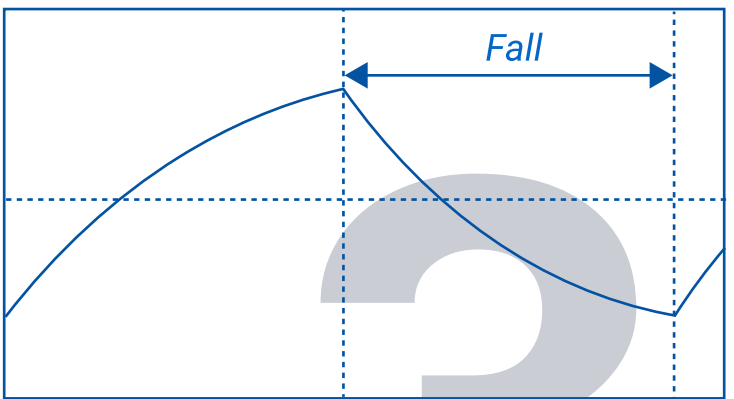
EG/LFO

BLACK NOISE

EG
LFO

1 — RISE TIME
Control the time to LFO to rise.
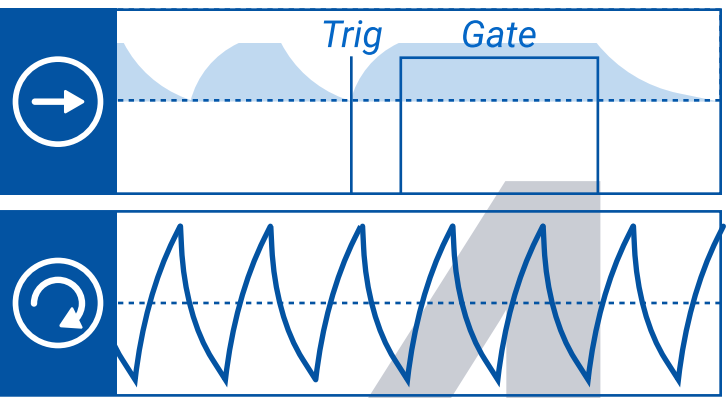Rise time *LOW/HIGH* : 2.14-178ms/12μs-0.70ms

2 — HOLD TIME
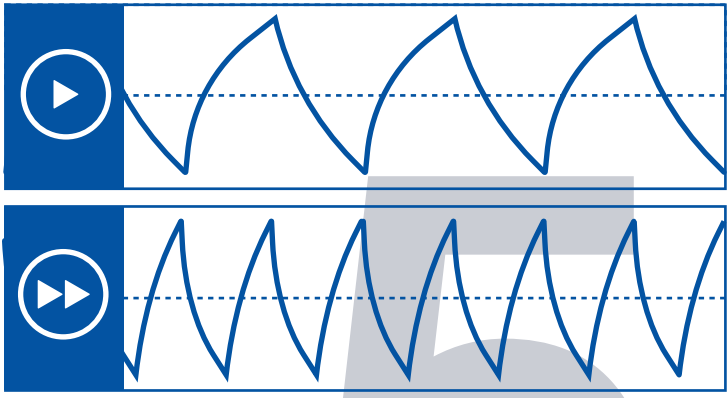HOLD control have no effect in LFO mode.

3 — FALL TIME
Control the time to LFO to fall.
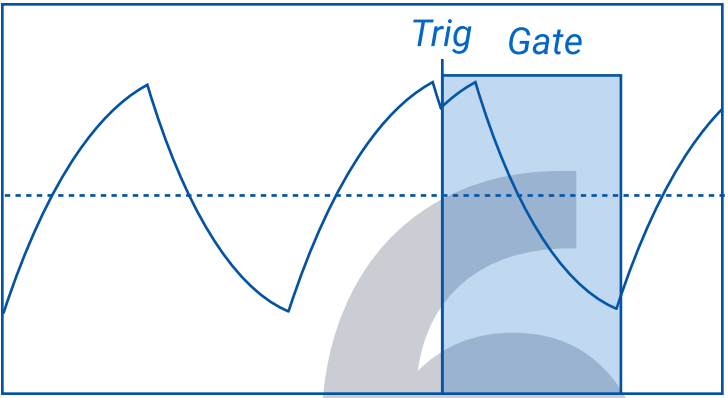Fall time *LOW/HIGH* : 6.25-164ms/46μs-1.7ms

4 — EG/LFO MODE
→ Envelope mode
↻ LFO mode

5 — SPEED RANGE
▶ LOW speed : 3Hz - 161Hz
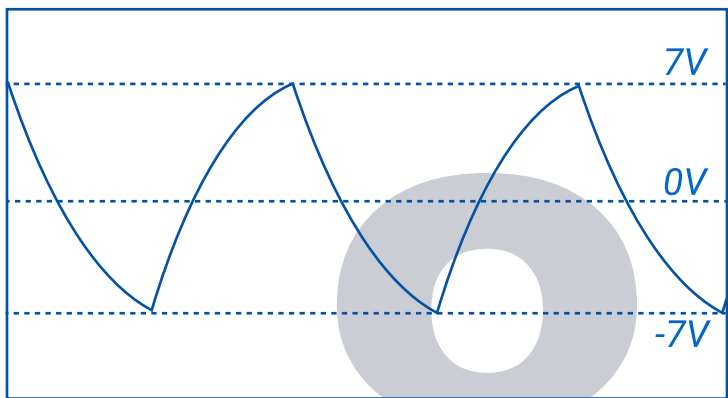▶▶ HIGH speed : 333Hz - 27kHz

6 — GATE INPUT
Triggers and gates will reset the LFO.
GATE INPUT LEVEL : 1.5V/10V
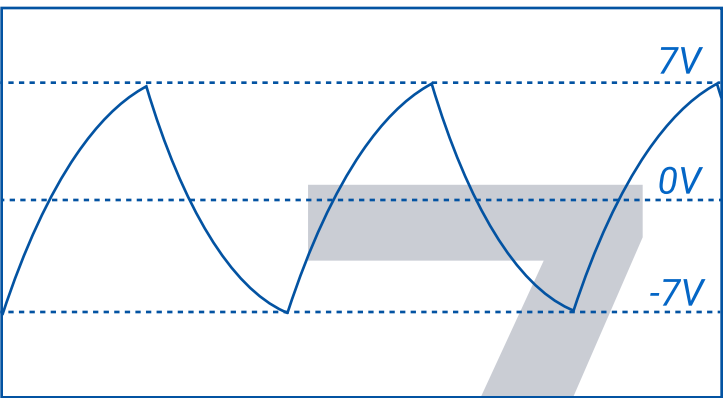
7 — LFO OUTPUT
Output the LFO
LFO amplitude -7V/+7V

8 — INVERTED OUTPUT
Output the LFO inverted
LFO amplitude -7V/+7V

GENERAL SPECIFICATIONS

PANEL WIDTH : 6HP

MODULE DEPTH : 20mm

POWER CONSUMPTION :
+12V : 14mA
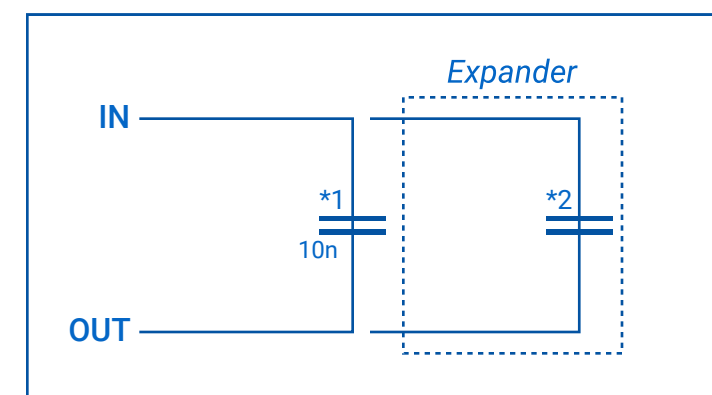**-12V : 12mA**
+5V : 0mA

OVERVIEW

EG-LFO feature a speed expander allowing to change the time range of the EG and LFO.

**The speed of Rise and Fall is achieved by a bipolar capacitor.**

By default EG-LFO feature two speed range :
LOW (1µF capacitor) : 3Hz-161Hz
HIGH (10nF capacitor) : 333Hz-27kHz


IN

Expander

OUT

*1
10n

*2

The speed expander is connected in parallel of the HIGH speed capacitor$_1$. By Adding a capacitor in the speed expander$_2$ will be able to modify the speed range of the HIGH Speed mode.

IN

A1   A2   A3

OUT

$A_{TOTAL} = A_1 + A_2 + A_3$
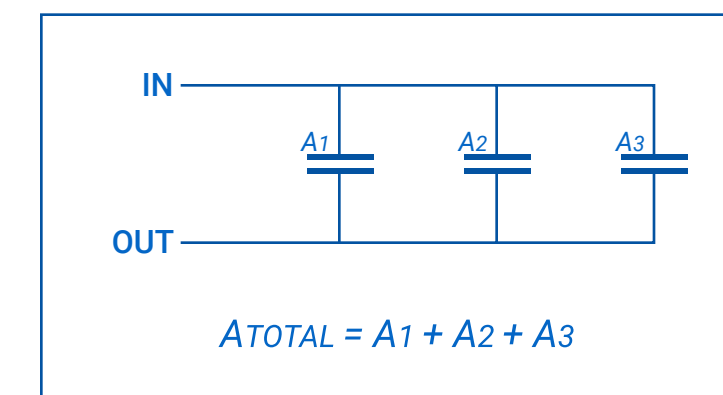
When placed in parallel capacitors value are added. If we add for example a 100n capacitor in the speed expander the total value will be
(10n *default HIGH speed capacitor* + 100n = 110n).
the speed range for a 110n capacitor will be near :
35Hz-4Khz

THE BIGGER THE CAPACITOR WILL BE

THE SLOWER THE SPEED RANGE WILL BE.

BE SURE TO USE BIPOLAR CAPACITOR OR THE MODULE WON'T WORK. YOU CAN USE ANY TYPE (CERAMIC, MIKA, FILM...) AS LONG AS THEY ARE BIPOLAR.
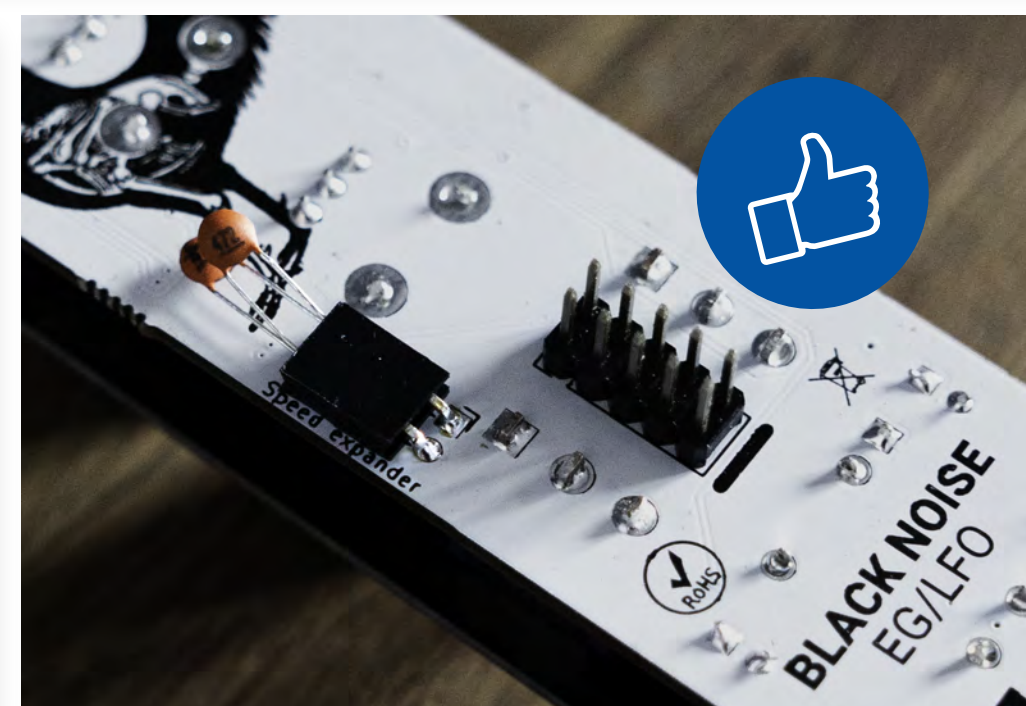
WARRANTY

BLACK NOISE guarantees is products to be free of defects in materials
or construction for a period of two years from the date of purchase.

Malfunction resulting from wrong power supply voltages, backwards
or reversed eurorack bus board cable connection, abuse of the product
or any other causes determined by *BLACK NOISE* to be the fault of the
user are not covered by this warranty, and normal service rates will apply.

During the warranty period, any defective products will be repaired
or replaced, at the option of *BLACK NOISE*, the postage to *BLACK NOISE-customer service* is on the
customer. The return of your module is on us.