



# E G - L F O

USER MANUAL

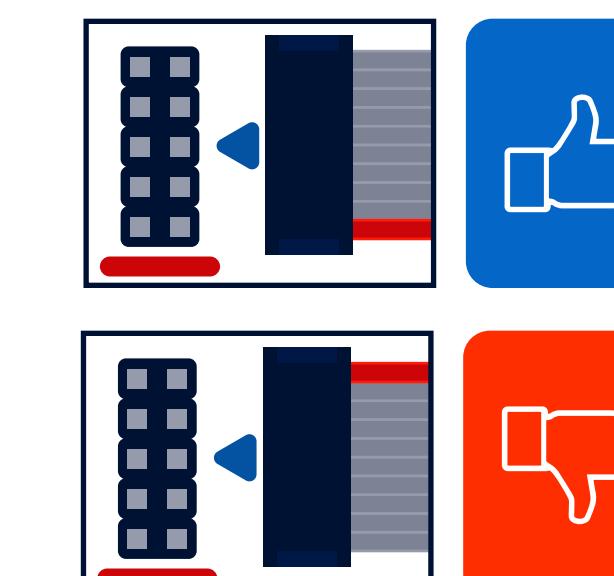
# **THANKS YOU**

*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

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- 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**

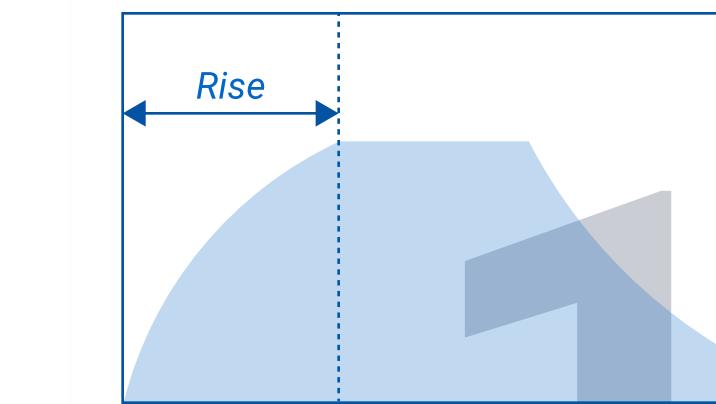
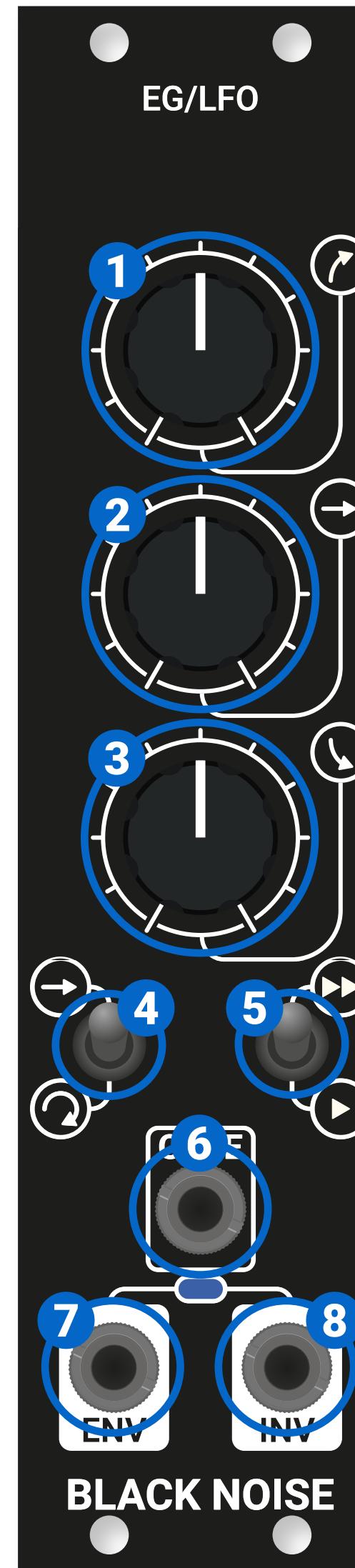
All our modules are secured against reversed power connection, however plugging you module backward may damage you power supply or other modules installed in your rack.

Backward connection are not covered by our warranty.

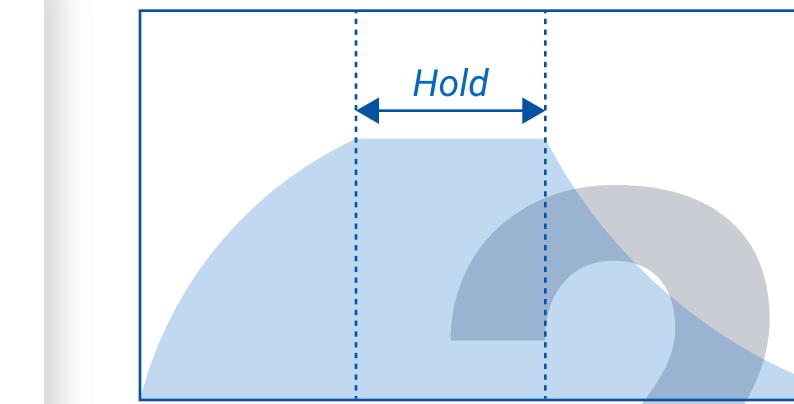
# OVERVIEW

## FRONT PLATE EG MODE

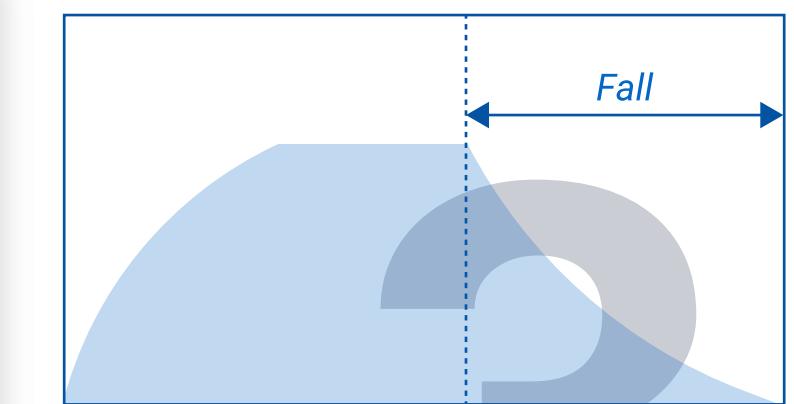
E G  
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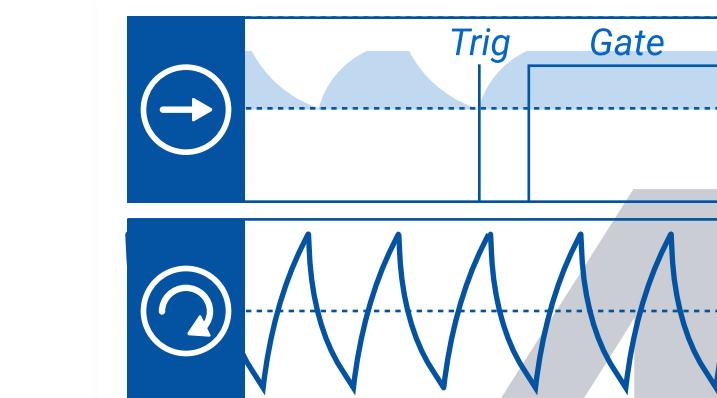
**RISE TIME**  
Control the time to envelope to rise.  
Rise time *LOW/HIGH* : 0-130ms/0-1.3ms



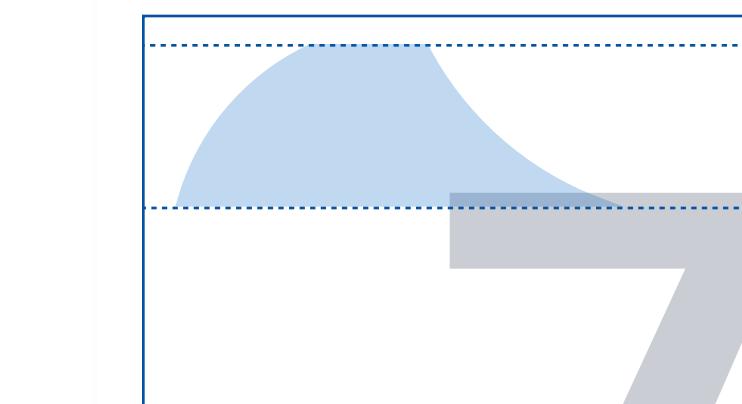
**HOLD TIME**  
Control the duration the envelope stay high.  
Hold Time (trig) *LOW/HIGH* : 0-75ms/0-750 $\mu$ s



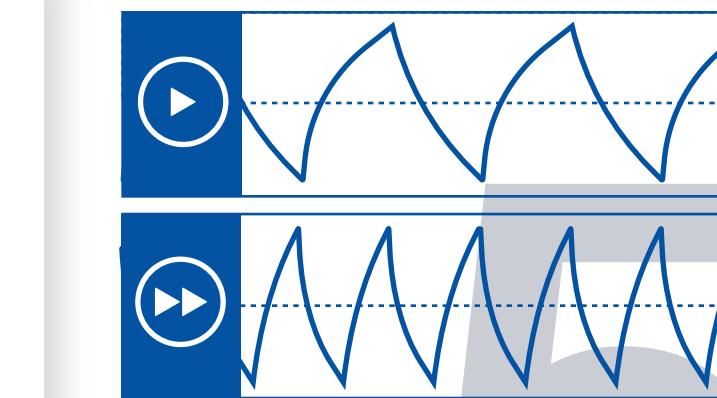
**FALL TIME**  
Control the time to envelope to fall.  
Fall time *LOW/HIGH* : 0-645ms/0-6.45ms



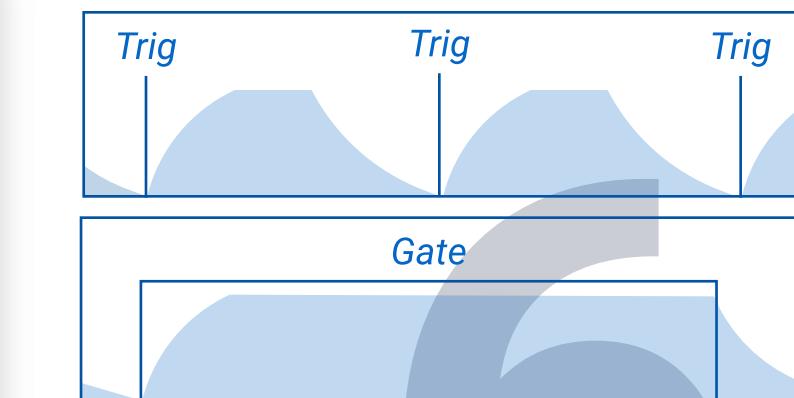
**EG/LFO MODE**  
④ Envelope mode  
⑤ LFO mode



**ENVELOPE OUTPUT**  
Output the envelope  
Envelope amplitude 0V/8V



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



**GATE INPUT**  
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

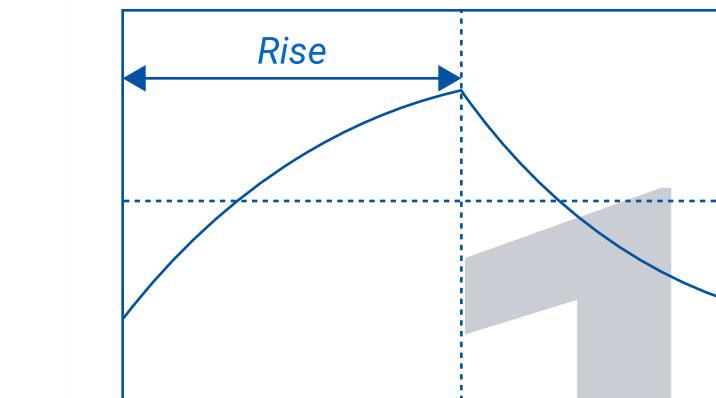
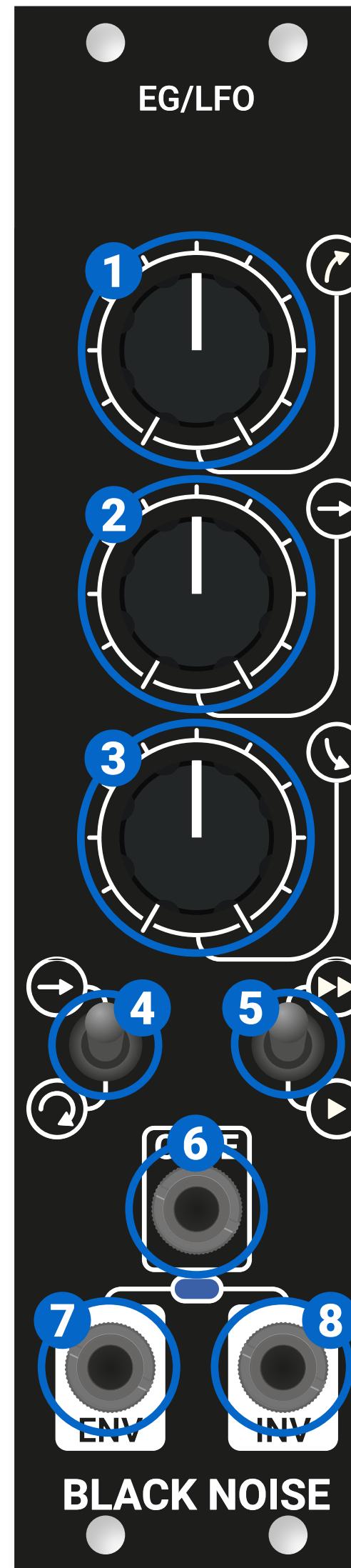
## GENERAL SPECIFICATIONS

- PANEL WIDTH : 6HP
- MODULE DEPTH : 20mm
- POWER CONSUMPTION :
  - +12V : 14mA
  - 12V : 12mA
  - +5V : 0mA

# OVERVIEW

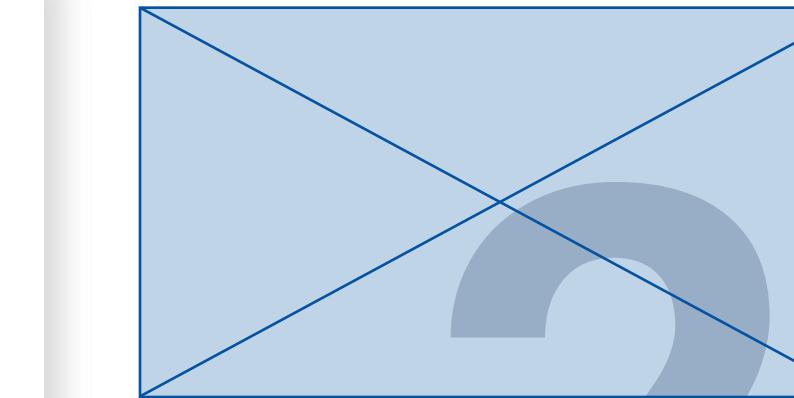
## FRONT PLATE LFO MODE

E  
G  
L  
F  
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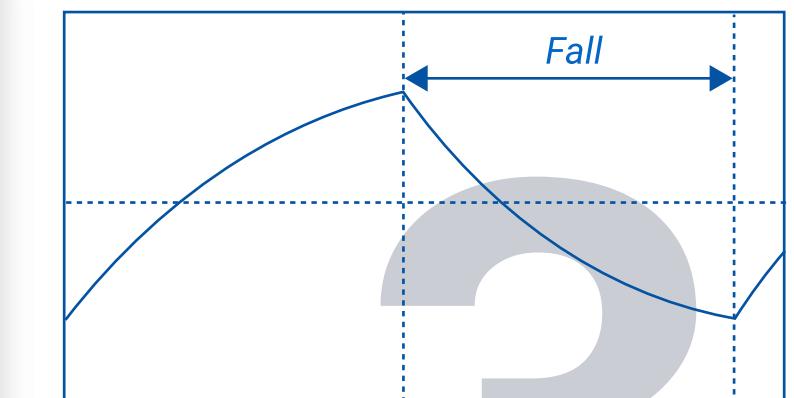
### RISE TIME

Control the time to LFO to rise.  
Rise time *LOW/HIGH* : 2.14-178ms/12 $\mu$ s-0.70ms



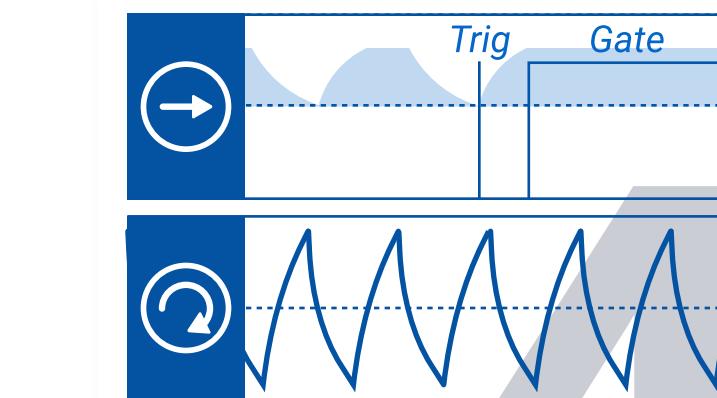
### HOLD TIME

HOLD control have no effect in LFO mode.



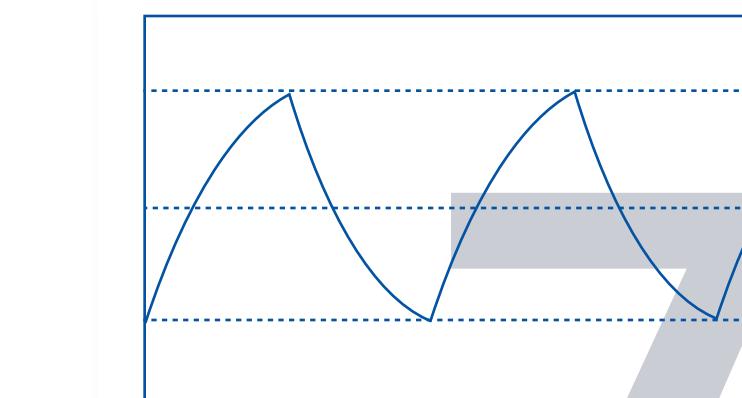
### FALL TIME

Control the time to LFO to fall.  
Fall time *LOW/HIGH* : 6.25-164ms/46 $\mu$ s-1.7ms



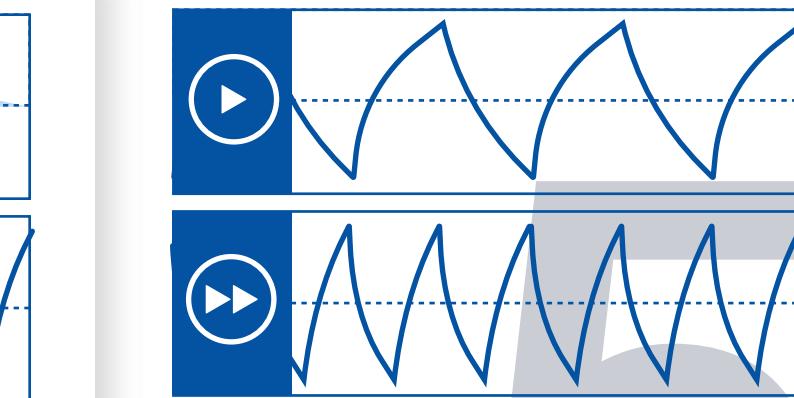
### EG/LFO MODE

- ④ Envelope mode
- ⑤ LFO mode



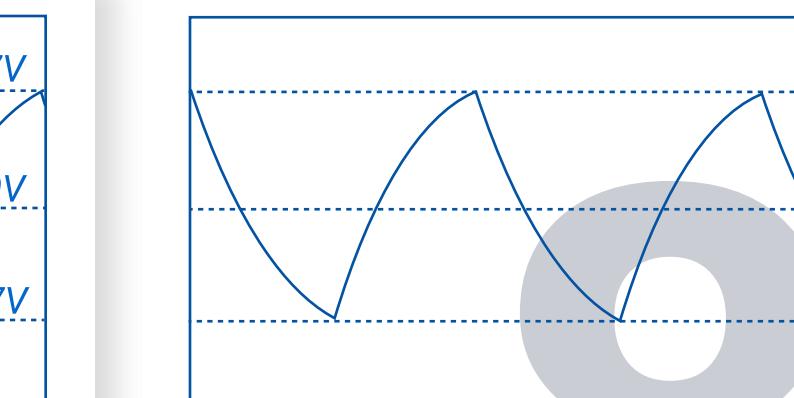
### LFO OUTPUT

Output the LFO  
LFO amplitude -7V/+7V



### SPEED RANGE

- ④ LOW speed : 3Hz - 161Hz
- ⑤ HIGH speed : 333Hz - 27kHz



### 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

## BACKPLATE SPEED EXPANDER

### OVERVIEW

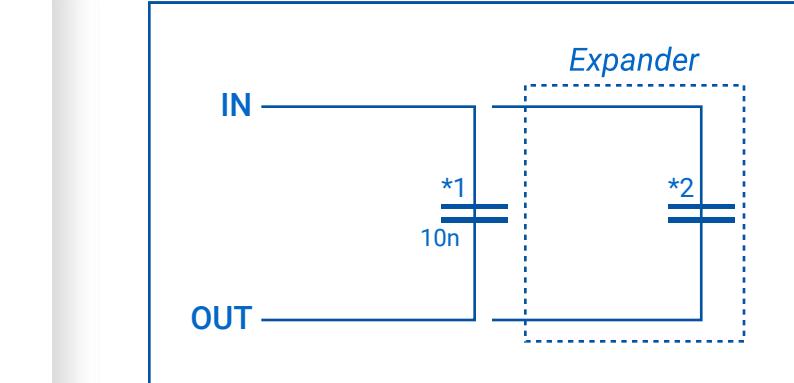
EG-LFO feature a speed expander allowing to change the time range of the EG and LFO.

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

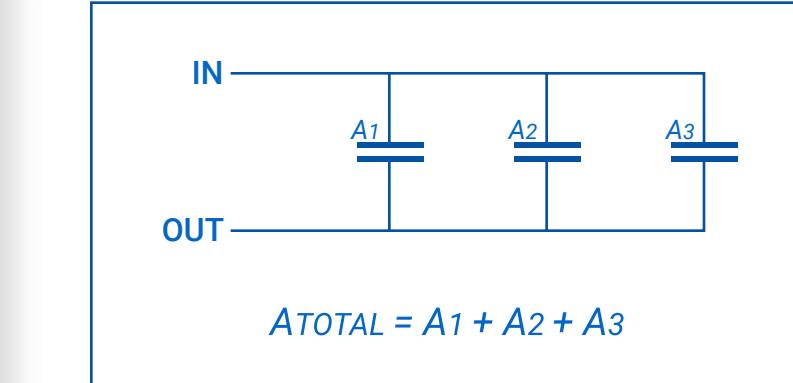
By default EG-LFO feature two speed range :

LOW (1 $\mu$ F capacitor) : 3Hz-161Hz

HIGH (10nF capacitor) : 333Hz-27kHz



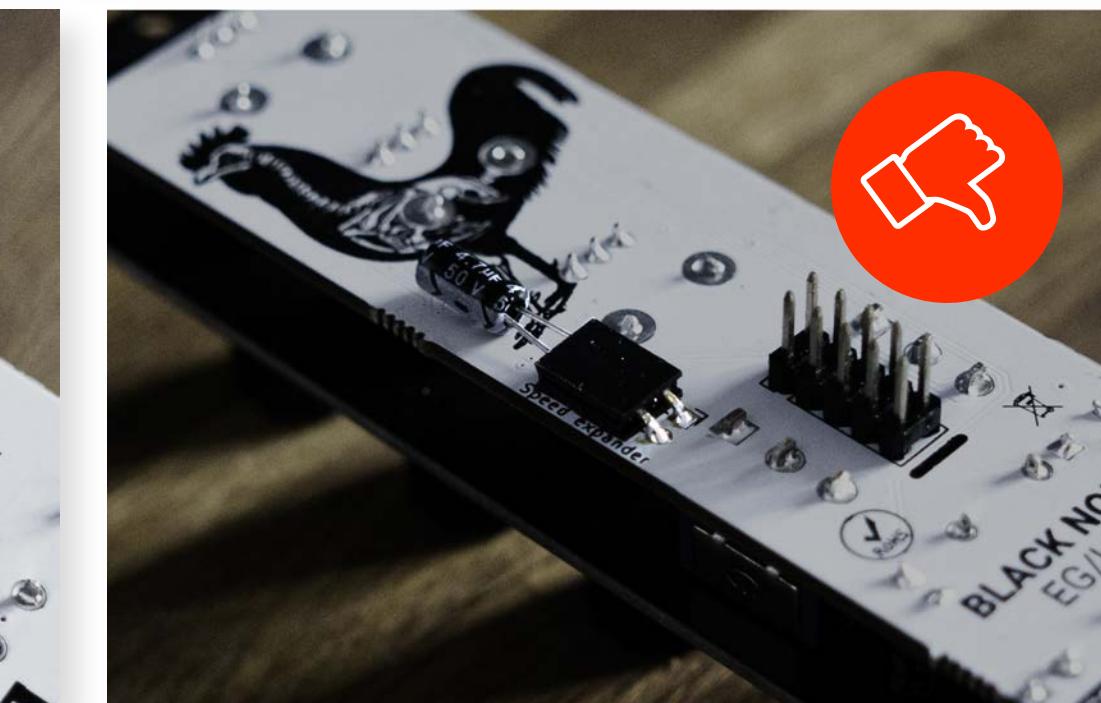
The speed expander is connected in parallel of the HIGH speed capacitor<sub>1</sub>. By Adding a capacitor in the speed expander<sub>2</sub> will be able to modify the speed range of the HIGH Speed mode.



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.**



**E G  
L F O**

# **WARRANTY**

*BLACK NOISE* guarantees its 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.