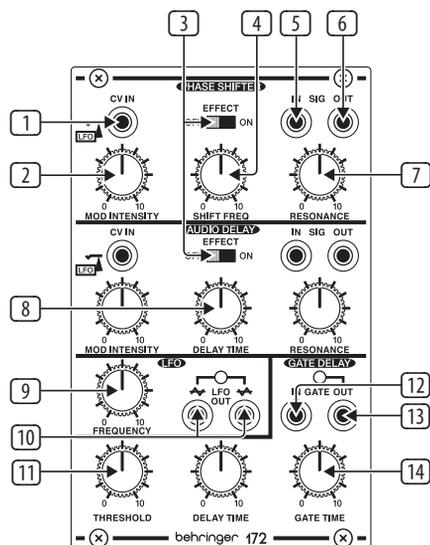


# Quick Start Guide

## SYSTEM 100 172 PHASE SHIFTER/ DELAY/LFO

Legendary Analog Phase Shifter/  
Delay/LFO Module for Eurorack

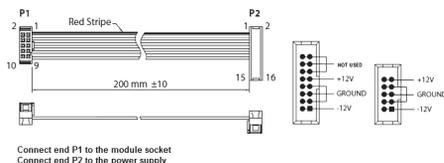
### Controls



- 1 **CV IN** – Accepts voltage from an external source to control or modulate the phase shifter frequency or audio delay time. If no jack is inserted the LFO can be used to modulate the effect.
- 2 **MOD INTENSITY** – Controls how much the effect is modulated by the LFO or external CV input.
- 3 **EFFECT ON/OFF** – Engages or disengages the effect section.
- 4 **SHIFT FREQ** – Adjusts the frequency of the phase shifter.
- 5 **SIG IN** – Accepts an incoming signal via 3.5 mm TS cable.
- 6 **SIG OUT** – Sends the signal from the effect section.

- 7 **RESONANCE** – Adjusts the amount of signal that is fed back through the effect.
- 8 **DELAY TIME** – Adjusts the time of the delay effect.
- 9 **FREQUENCY** – Controls the LFO output frequency.
- 10 **LFO OUT** – Sends the LFO signal as a triangle and inverted triangle wave.
- 11 **THRESHOLD** – Controls the input voltage level required to trigger the gate.
- 12 **GATE IN** – Accepts an incoming gate signal via 3.5 mm TS cable.
- 13 **GATE OUT** – Send the gate delay signal via 3.5 mm TS cable.
- 14 **GATE TIME** – Controls the gate length.

### Power Connection



The module comes with the required power cable for connecting to a standard Eurorack power supply system. Follow these steps to connect power to the module. It is easier to make these connections before the module has been mounted into a rack case.

1. Turn the power supply or rack case power off and disconnect the power cable.
2. Insert the 16-pin connector on the power cable into the socket on the power supply or rack case. The connector has a tab that will align with the gap in the socket, so it cannot be inserted incorrectly. If the power supply does not have a keyed socket, be sure to orient pin 1 (-12 V) with the red stripe on the cable.
3. Insert the 10-pin connector into the socket on the back of the module. The connector has a tab that will align with the socket for correct orientation.
4. After both ends of the power cable have been securely attached, you may mount the module in a case and turn on the power supply.

## Installation

The necessary screws are included with the module for mounting in a Eurorack case. Connect the power cable before mounting.

Depending on the rack case, there may be a series of fixed holes spaced 2 HP apart along the length of the case, or a track that allows individual threaded plates to slide along the length of the case. The free-moving threaded plates allow precise positioning of the module, but each plate should be positioned in the approximate relation to the mounting holes in your module before attaching the screws.

Hold the module against the Eurorack rails so that each of the mounting holes are aligned with a threaded rail or threaded plate. Attach the screws part way to start, which will allow small adjustments to the positioning while you get them all aligned. After the final position has been established, tighten the screws down.

## Specifications

### Inputs

Phase shifter signal input	
Type	3.5 mm TS jack, AC coupled
Impedance	70 k $\Omega$ , unbalanced
Max input level	+16 dBu
Phase shifter CV input	
Type	3.5 mm TS jack, DC coupled
Impedance	>50 k $\Omega$ , unbalanced
Max input level	+10 V
CV range	0 V to +10 V
Audio delay signal input	
Type	3.5 mm TS jack, AC coupled
Impedance	15 k $\Omega$ , unbalanced
Max input level	+20 dBu
Audio delay CV input	
Type	3.5 mm TS jack, DC coupled
Impedance	>70 k $\Omega$ , unbalanced
Max input level	+10 V
CV range	0 V to +10 V
Gate input	
Type	3.5 mm TS jack, DC coupled
Impedance	47 k $\Omega$ , unbalanced
Max input level	+10 V
CV range	0 V to +10 V

### Outputs

Phase shifter signal output	
Type	3.5 mm TS jack, DC coupled
Impedance	1 k $\Omega$ , unbalanced
Max output level	+18 dBu

Audio delay signal output	
Type	3.5 mm TS jack, DC coupled
Impedance	1 k $\Omega$ , unbalanced
Max output level	+16 dBu
LFO output	
Type	2 x 3.5 mm TS jacks, DC coupled
Impedance	1.2 k $\Omega$
Max output level	10 V p-p
Gate output	
Type	3.5 mm TS jack, DC coupled
Impedance	500 $\Omega$
Max output level	+5 V

### Controls

Phase shifter effect switch	Off / on
Phase shifter mod intensity	- $\infty$ to unity gain
Phase Shift frequency	200 Hz to 8 kHz
Phase shifter resonance	Off to maximum resonance
Audio delay effect switch	Off / on
Audio delay mod intensity	- $\infty$ to unity gain
Audio delay time	1 ms to 7 ms
Audio delay resonance	Off to maximum resonance
LFO frequency	0.02 Hz to 10 Hz
Gate Threshold	0.3 V to 5 V
Gate delay time	0.3 ms to 6 s
Gate time	0.3 ms to 6 s

### Power

Power supply	Eurorack
Current draw	60 mA (+12 V), 60 mA (-12 V)

### Physical

Dimensions	44 x 81 x 129 mm (1.7 x 3.2 x 5.1")
Rack units	16 HP
Weight	0.19 kg (0.42 lbs)

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