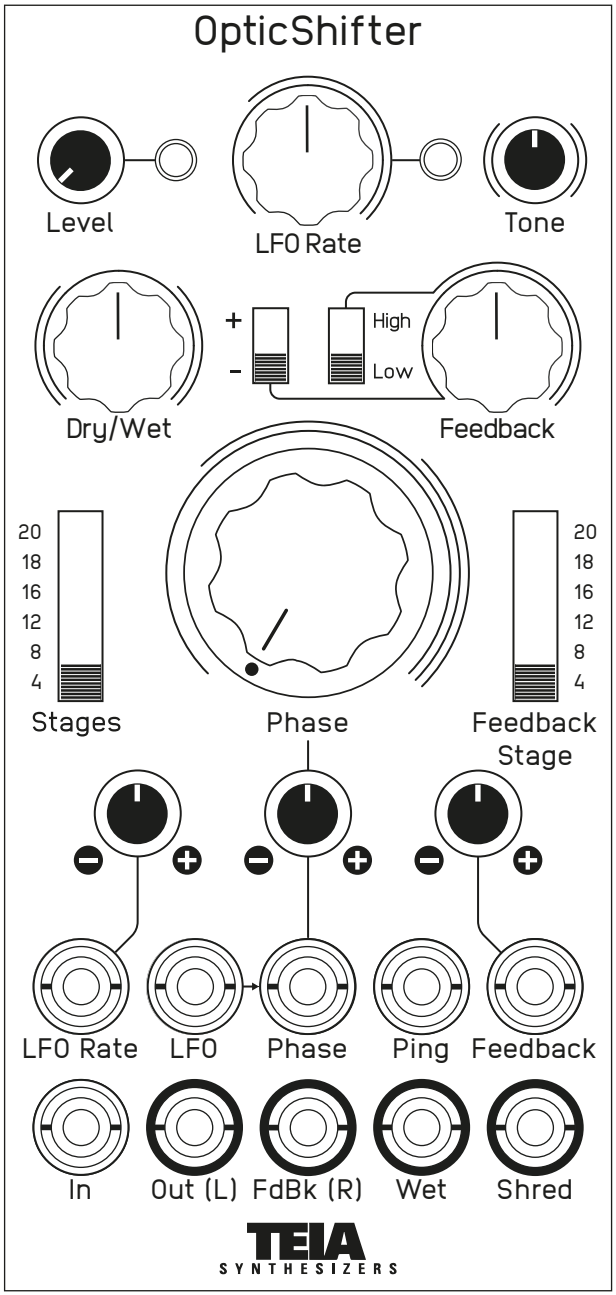

OpticShifter

20 Stages Optical Phaser

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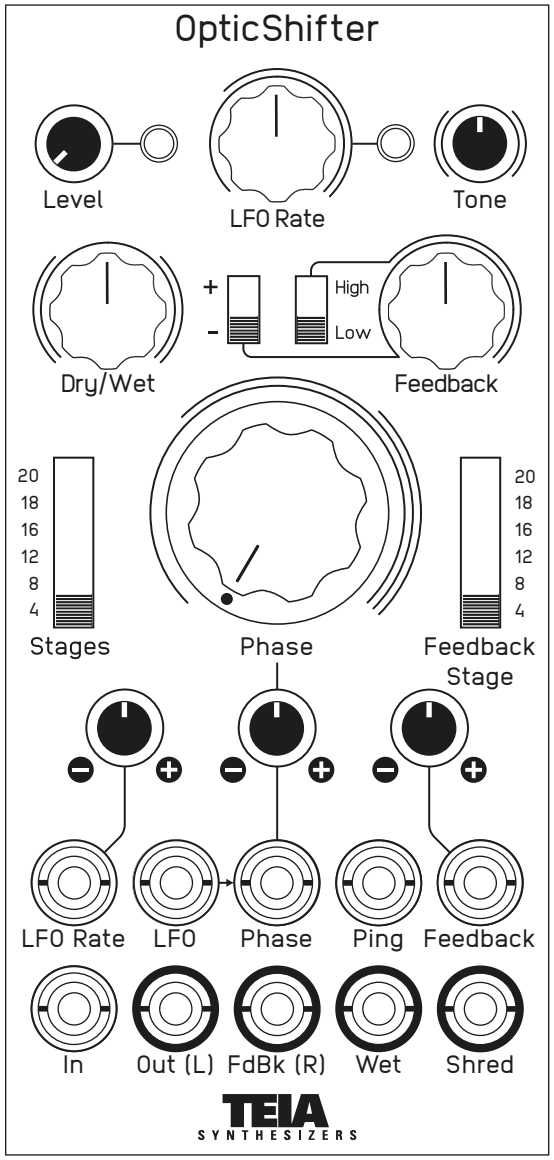
SYNTHESIZERS



Overview

OpticShifter is a 20-Stage Phaser with flexible feedback and pole selection. Drawing inspiration from classic 70's era phase shifters, it combines vintage charm with modern versatility. Whether you're aiming for subtle movement or dramatic swooshing and whooshing, from phasing to vibing, OpticShifter creates an immersive Phase Shifting experience.

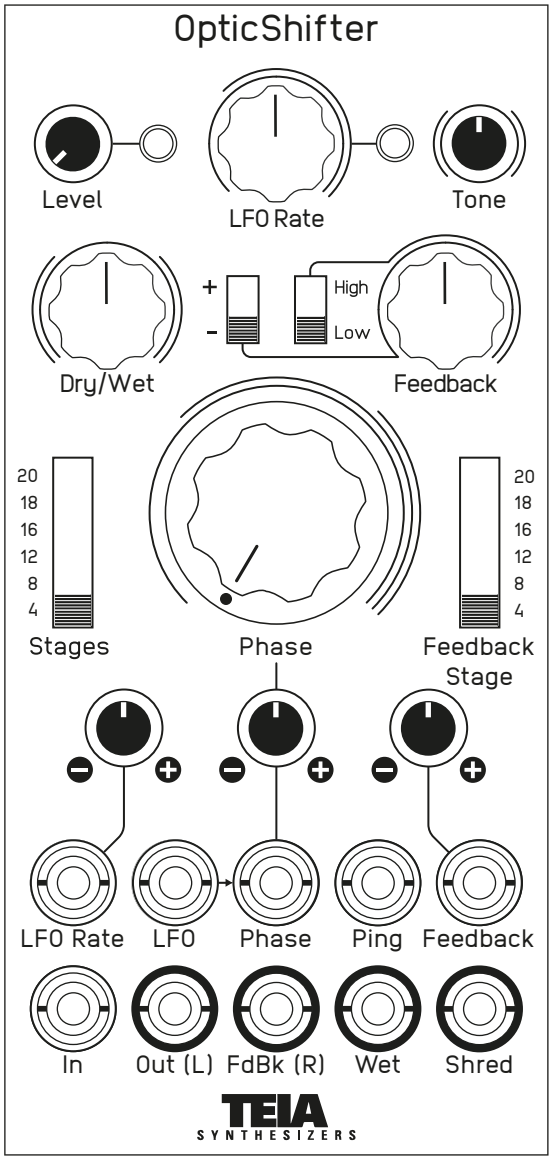
OpticShifter's core consists of nothin less than 20 All-Pass Filter stages in series, featuring two independent switches: one to select the number of stages (4, 6, 8, 12, 16, 18, or 20) and another to choose the specific pole from which the Feedback (Resonance) originates. Additionally, it includes a Feedback knob and a voltage-controlled feedback CV input. You can also set the feedback polarity and select the feedback magnitude with dedicated switches.

There is a dry/wet knob and a pre-phaser tilt EQ knob to control the overall tone, allowing you to blend the effect with the original signal and shape the tonal characteristics before phasing. The module also features an input level knob with a clipping LED monitor to ensure optimal signal levels and prevent distortion. An internal triangular voltage-controlled LFO is available to control the phase offset, which can be bypassed to allow control via an external source. The phase CV input features a hyper triangle shaper, ensuring the phase offset control, including that from the internal LFO, is shaped to a hyper triangle.

OpticShifter has a main output that corresponds to the number of stages selected, providing the primary phasing effect. Additionally, there is an output for the feedback stage chosen. This setup can be used to create pseudo stereo effects, with the main output acting as the left channel (L) and the feedback output serving as the right channel (R), allowing for a wider, more immersive stereo field.

OpticShifter also includes two additional outputs. The Wet output provides only the wet (effected) signal. The Shred output delivers a heavily distorted version of the wet signal, based on an opamp comparator design, offering an aggressive texture to your sound.

OpticShifter also features a ping input, allowing you to excite the all-pass filters with any clock signal (LFO, Triggers, etc.) to trigger the filter’s natural resonance. The result is a percussive or bell-like sound determined by the filter's settings, such as the cutoff frequency and feedback.



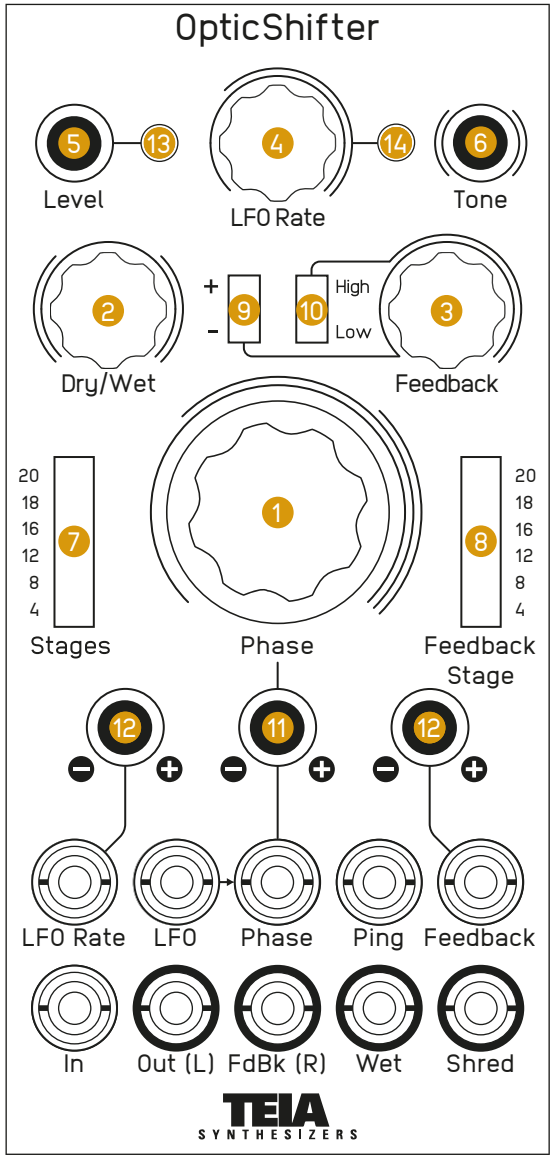
Overview

Features:

- 20 Stages/Poles Optical Phaser
- Phase offset control knob with Voltage Controlled input
- Feedback/Resonance control knob with Voltage Controlled input
- Selectable number of Stages
- Selectable Feedback Origin Stage
- Internal Triangular LFO
- LFO frequency knob with Voltage Controlled input
- Hyper triangular control voltage converter
- LFO output
- Pre-Phaser tilt EQ knob (Tone)
- Input Level knob
- Feedback polarity switch
- Feedback magnitude switch
- Main Phaser output, Pseudo-Stereo Left output
- Feedback/Resonance path output, Pseudo-Stereo Left output
- Wet only output
- Shred output, heavy distortion based on a comparator
- Ping input for percursive sounds

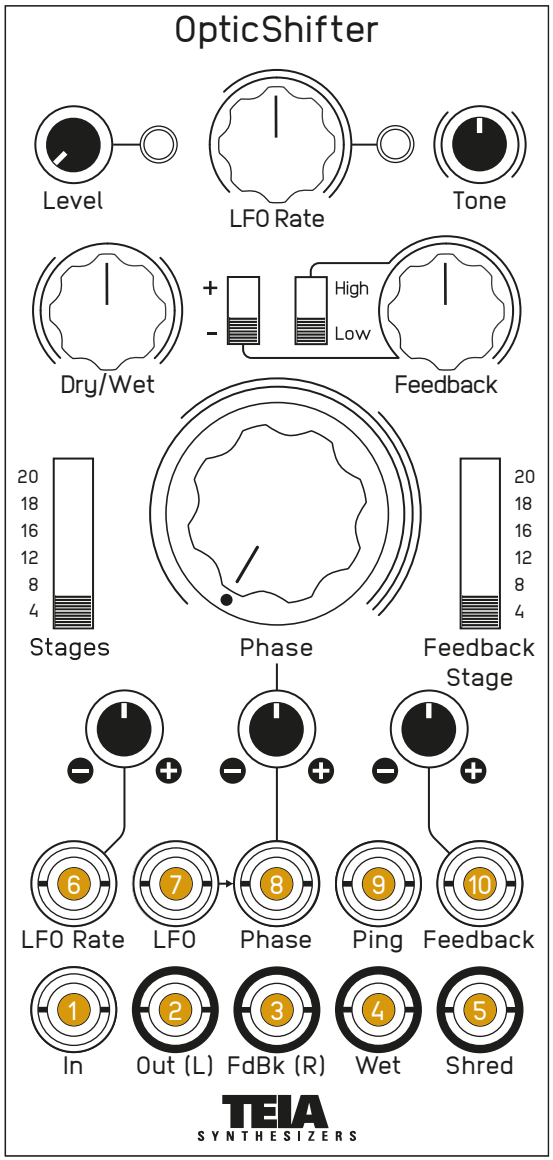
Specs:

- Width: 12HP
- Depth: 42mm, Skiff Friendly
- Power consumption: 110mA +12, 100mA -12
- Eurorack Format
- Doepfer power connection



Panel Interface

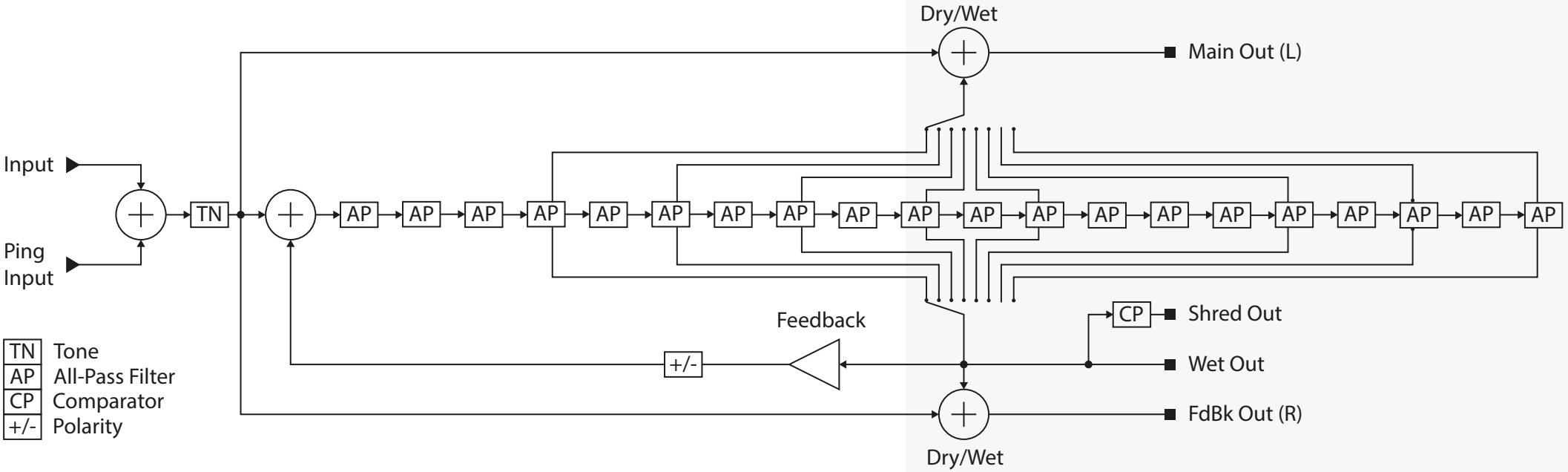
1. Phase offset knob.
2. Dry Wet mixer knob
3. Feedback knob (Resonance)
4. Internal LFO frequency
5. Input Level knob
6. Pre-Phaser tilt EQ
7. Number of Stages/Poles selection
8. Feedback Origin Stage Selector
9. Feedback polarity
10. Feedback magnitude
11. Phase offset LFO Amount and external CV Attenuator-Inverter knob
12. CV Attenuator-Inverter knobs
13. Clipping monitor LED
14. LFO frequency monitor LED



Inputs and outputs

1. Audio Input
2. Main output, Pseudo-Stereo Left output
3. Feedback path output, Pseudo-Stereo Right output
4. Wet signal only output
5. Comparator based distortion output
6. Internal LFO voltage controlled frequency input
7. LFO output (triangle)
8. Phase offset modulation input
9. Ping Input for percursive sounds
10. Feedback voltage controlled input

Diagram


Dry/Wet
Main Out (L)
Input
Ping
Input
TN
AP
Feedback
+/-
CP
Shred Out
Wet Out
FdBk Out (R)
Dry/Wet
TN Tone
AP All-Pass Filter
CP Comparator
+/- Polarity

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