BODE BARBERPOLE PHASER™

OPERATING INSTRUCTIONS SW 8101

SUPPORT SERVICE SYSTEMS MODULES
pure
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BODE SOUND CO.
SYNTH-WERK™
THE SPIRIT OF TRUMANSBURG
– EST. 2013 –

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After plugging the power cord into the power outlet and turning on the instrument, the LED above the power switch should light up. Likewise, the yellow LED above the (UP & DOWN pushbutton) should light up. Additionally the green LEDs (GO-indicators above the INFINITE UP and INFINITE DOWN pushbuttons) alternately light up. The frequency of this alternation is indicative of the frequency of the local oscillator LFO-1 (see down below). To connect the instrument to the system in which it will be used, connect the signal source to the SIGNAL INPUT and the monitors (stereo) to the outputs OUT A and OUT B.

1 The level control above the SIGNAL INPUT covers a range of approximately 40 dB with a minimum input voltage of 150 mV RMS. The OVERLOAD LED responds to a level about 8 dB below the input circuits overload tresholds. User discretion is advised, as very sharp resonance peaks may occur in the following circuitry, which might not be detected by the OVERLOAD circuit.
A CONTROL INPUT next to the signal input is used for entering special control functions, which will be described later.

2 The COMB FILTER NO. OF PEAKS SELECTOR determines the number of resonance peaks that will move through the audio range. All positions from 3 to 9 of the rotary switch respond to the modulation effects controlled by LFO-2, which will be described in more detail.

The MOVEMENT MODES include the following functions…

3-1 The UP & DOWN movement of the resonances, similar to common phasers, with the width of UP & DOWN motion controlled by the 3-position toggle switch to the left of the pushbutton. It can be set to MAX, MED or MIN.
For most applications the MED position is recommended. As indicated earlier, the UP & DOWN movement of the resonance frequencies is indicated by the green GO LEDs.

3-2 Pressing the INFINITE UP button causes the READY LED to light up immediately, and the GO LED lights up when the circuit starts in the UP tuning mode. The speed of the UP detuning is controlled by the RATE control of LFO-1 on the right side of the MOVEMENT MODE controls. The illusion of infinity is enhanced at slow rates.

3-3 When pressing the INFINITE DOWN button, the corresponding READY LED will light up, followed by the GO LED at the start of the down motion, which occurs at the same rate set by the RATE control of LFO-1.

3-4 Pressing the FREZZE button stops the motion immediately until it is reactivated by the INFINITY UP or INFINITY DOWN button.

4-1 The UP/DOWN & FLIP pushbutton activates additional modulation, superimposed on the filter slides controlled by LFO-1. The frequency of this additional modulation is determined by the RATE control of LFO-2, and the modulation depth is controlled by its AMOUNT control. The waveshape is selected by the UP/DOWN FLIP switch (triangular for UP/DOWN, square wave for FLIP). A wide variety of modulation effects can be created, depending on the settings of the LFO-2 RATE, AMOUNT and waveform.

4-2 The PAN-OUT A/OUT B pushbutton has two functions. When inoperative, the output signal at OUT A is controlled by the MIX A control and the FEEDBACK control (described later). The output signal at OUT B is controlled by MIX B. When activated, both OUT A and OUT B receive the signal controlled by MIX A and the FEEDBACK control.
Additionally, the stereo panning is activated with the amount of left-right modulation (amplitude modulation) controlled by LFO-1's AMOUNT control.

5 The above deseribes the control functions for LFO-1 and LFO-2.

6 The PHASING controls include the MIX A and MIX B controls as well as the FEEDBACK control. With the FEEDBACK control set to the left position (CCW) and the MIX controls in the right position (CW), the instrument's filter operate as notch filters, similar to phasers. The tone shaping effect becomes more dramatic when the PAN-OUT A/OUT B button is activated.

7 An OUTPUT LEVEL switch is provided for use in systems where the instrument is followed by either low gain, high input level or high gain, low input level amplifiers. The maximum undistorted output levels are +11.5 dBm and -8.5 dBm, respectively.

This instrument has been designed for use with a wide variety of program signal sources. Program material with a high content of overtones is generally preferred, though not essential. For signals with less harmonic overtone content, a special distortion circuit, labelled FUZZ, is located under the NO. OF PEAKS selector. It can be used with the human voice and, unlike common FUZZ circuits, produces a consistent amount of harmonic distortion over a 60 dB range.

The modulation effects provided by LFO-2 can be extended by control functions entered from an external low frequency oscillator into the CONTROL INPUT next to the SIGNAL INPUT. When the control source is plugged in, LFO-2 is disabled, but its AMOUNT control is still active. By entering, for instance, a sawtooth wave, an infinite staircase function can be created.

A FLIP modulation, normally generated by LFO-2, can be triggered by entering a V-trigger function into the respective input jack on the rear of the instrument (this overrides LFO-2). Again, LFO-2's AMOUNT control remains functional Another jack on the rear of the instrument allows a V-Trigger sync pulse to be sent from LFO-2 to the outside for Flip-Function synchronisation.

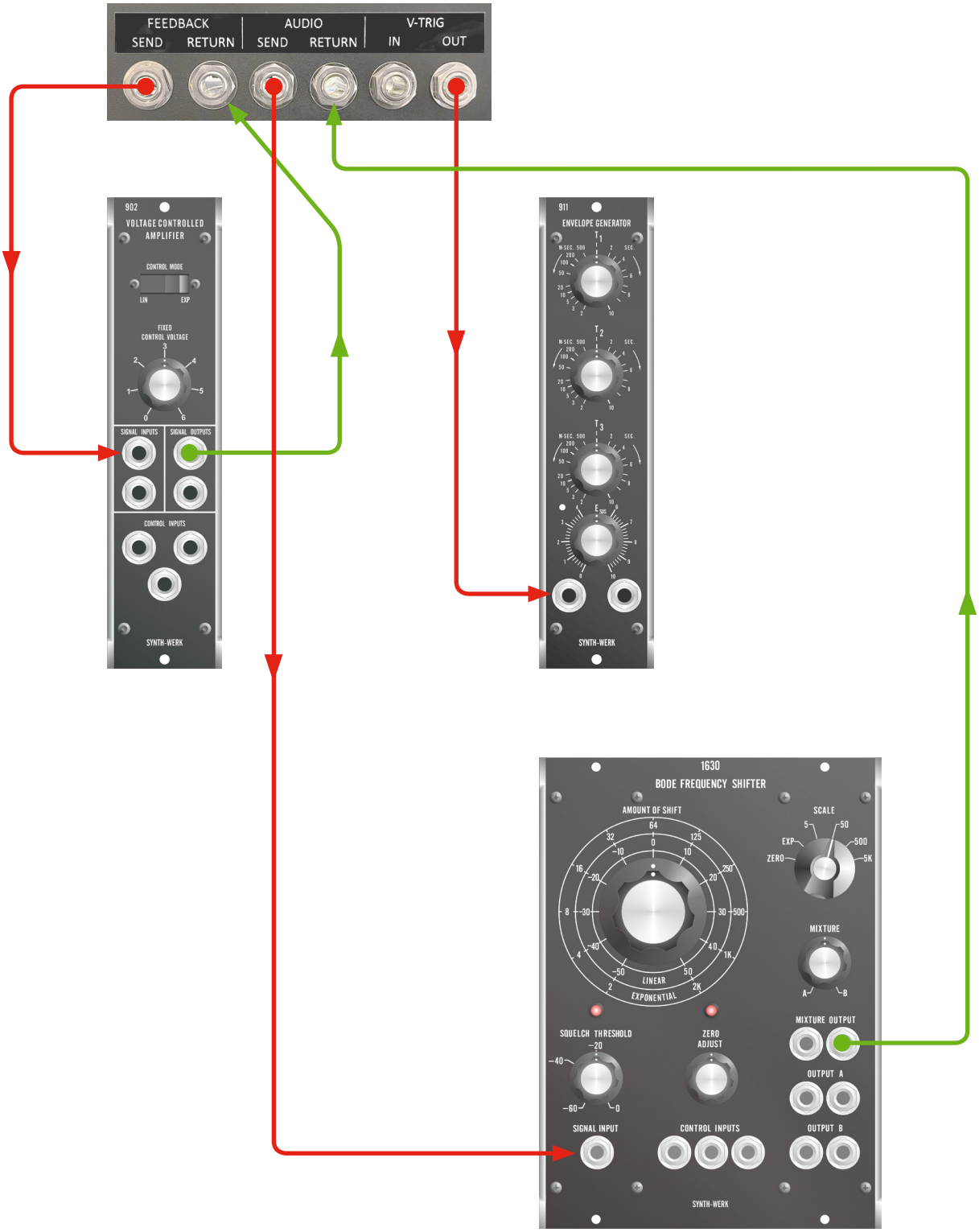
These instructions provide basic guidelines for getting acquainted with this unique sound modification device. Further discoveries will come with practice.

In this latest version of the **SW BARBERPOLE PHASER**, which was intended to be the final version, but was never commercially available, we implemented Harald Bode's ideas as documented in his archive and noted in his diary. The **SW 8101** version has been developed according to Bode's vision.
In this version, the FEEDBACK control works differently from our Bode prototype. You now have the option to insert additional devices, such as the **SW 735** or **SW 1630 BODE FREQUENCY SHIFTER**, into the FEEDBACK loop or audio path A.
This opens up entirely new possibilities and is a step further into the "Klangumformer" vision of Harald Bode.
Experimenting with various external instruments or modules offers new dimensions in the sonic universe and leads to unique sound sound possibilities in your productions.

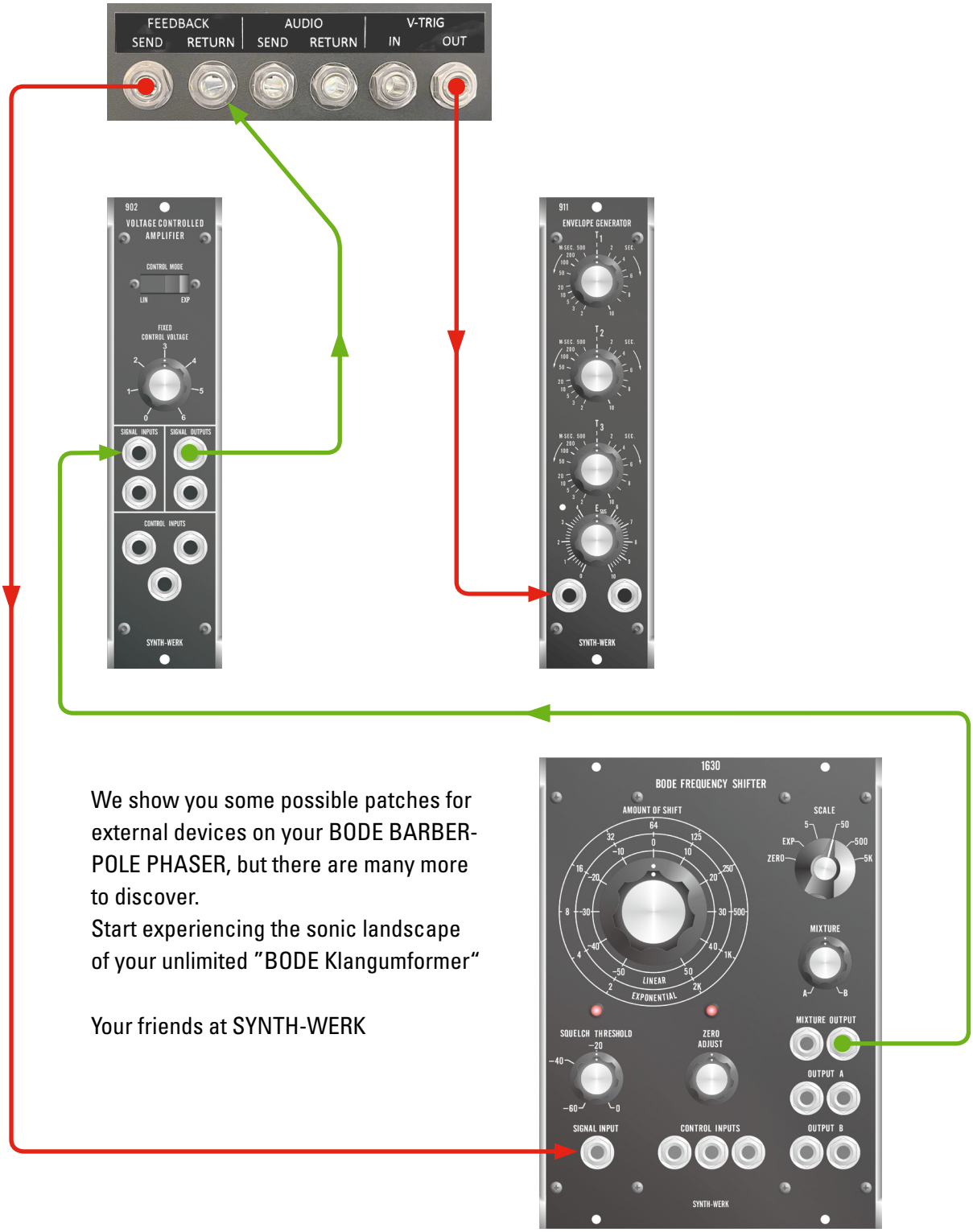
You can find the "send" and "return" sockets on the back of the **SW BODE BARBERPOLE PHASER** along with a V-Trigger Input and output.

For example, inserting an **SW 902** VCA into the FEEDBACK loop allows for new resonant filter peaks since there are a regular output on the **SW 902** and one with 180 degree different phase (to be used). By controlling the gain, you can achieve various different resonance peaks. Of course, combining this with an additional phaser or frequency shifter in the same path or in the audio path will unlock new sonic dimensions.

EXTERNAL DEVICES – EXAMPLE I



EXTERNAL DEVICES – EXAMPLE II



We show you some possible patches for external devices on your BODE BARBER-POLE PHASER, but there are many more to discover.
Start experiencing the sonic landscape of your unlimited "BODE Klangumformer"

Your friends at SYNTH-WERK

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