

SPH-1, spatial phaser

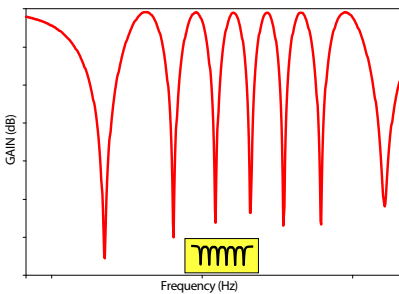
The SPH-1 is a 14-stage stereo image phaser. It consists of two identical voltage controlled all-pass filters with seven notches stretched over the whole audio range which ensures constant phasing effect. The all pass filters are combined with original audio signals resulting in an almost constant gain and phase shift of 2400 degrees across the entire audio range (see diagrams below).

Additionally, the phasing effect remains almost constant even in saturation mode. Phasing (SPECTRUM) is controlled by modulating low frequency oscillator (MOD RATE, MOD LEVEL) and by external signals (SPECTRUM CV, and separate SPECTRUM LEFT, RIGHT).

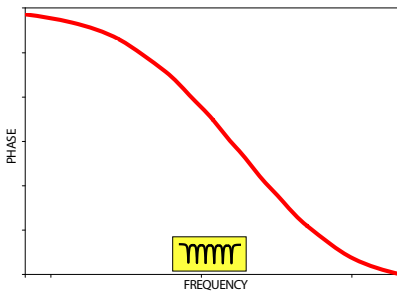
The low frequency oscillator's rate can be modulated by external signal (RATE CV, RATE CV INPUT). There are three audio inputs; LEFT & RIGHT and a combined input for both phasers SUM AUDIO. The audio outputs are provided by output socket labeled AUDIO, LEFT, MIX (mixed left and right phaser) and RIGHT.

Outputs are revealed by white surrounds.

The FEADBACK knob controls the amount of multi resonance for both phasers up to self-oscillating. The SPATIAL/ROTATING switch couples phaser between two different stereo images.



Frequency response for phasing units



Phase response for combined phasing units and original signal

Performances

RATE	from 40sec's to 20msec's
Audio frequency range	10Hz to 22kHz
Maximal input/output audio signal	20 Volts p-p
Current consumption	30mA
Dimensions	128.4mm (H), 70.6mm (B) 3 HE, 14TE

