

# xoxos Phaser VST

Produced to satisfy my own inquiry, this VST parameterises the phaser effect to my own satisfaction. There are currently a large number of freeware phasers that have similar featuresets and lower cpu. Beyond aesthetic preference for the gui, this product offers the user a choice of which optimisations to perform.

Previously I had been unsatisfied with digital phaser implementations when comparing them to the tone of the analog phaser pedals my ears were accustomed to. I used a Maestro phaser pedal (famous for it's labeling) for several years. After conducting the investigation integral to software development, my current opinion is that the primary shortcoming of the software phasers I had tried otherwise is that I wasn't running enough noise into them.

There is little that can be done to detract from an elementary digital phaser algorithm - the signal runs through a series of modulated allpass filters (documented ubiquitously) with the output signal routed back to the beginning of the filter series. Small changes can be made, such as offsetting the cutoff (in allpasses, the frequency at which phase is offset by  $90^\circ$ ) of each filter stage. In my experimentation, this served to weaken the strength of the phasing more than adding character.

In this implementation, the signal is routable through 6 dB high and lowpass filters, 3 to 32 allpass stages, and modulation is offset in the right channel by  $0^\circ$  to  $360^\circ$ . The center and depth of modulation may be specified. The rate of allpass modulation may be tempo synced and the modulator may be manually reset to phase for recallable performance.

Computational options allow for the allpass coefficients to be approximated and for modulation to be calculated at a lower resolution. When optioning for both of these savings, cpu performance of xoxos Phaser VST is similar to the selection of freeware phasers. Otherwise, cpu resourcing may be several times more intensive. Of course, I am not sure what products employ what optimisation and approximation methods.

## Specifications:

### Modulation rate:

Unsynced:	74.47 seconds per cycle to 27.5 Hz
Synced:	1/16th note to 64 measures discretised at base 2 values

### Processing modes:

Cheap:	Approximated allpass coefficient calculation, low resolution modulation
Appx:	Approximated allpass coefficient calculation
Low:	Low resolution modulation
Exact:	Precise allpass coefficient calculation
OMG:	Precise allpass coefficient calculation, 2x oversampling

There's not much to say about this VST. If the gui is difficult to read, you may wish to reduce the brightness and contrast of your monitor. Doing so will consume less energy, create less strain on the eyes during long DAW sessions and perhaps allow you to view and in so doing, appreciate a wider selection of my gui graphics ;)

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xoxos Phaser VST was created with SynthEdit SDK - [www.SynthEdit.com](http://www.SynthEdit.com)

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