

# Spring2 VST

Modeled Spring Reverb Effect by xoxos

Spring2 uses conventional signal processing techniques to model the well-known spring reverb effect. This version is intended as a compromise between what is possible and what is sensible. Significantly more cpu power would be required to achieve closer emulation using this method, especially to model the dispersive characteristics more accurately.

The model consists of up to three springs that run in parallel with no emulation of mechanical coupling, producing a clean, idealised sound that would perhaps have been desirable before the advent of digital audio. A gentle nonlinearity is applied before the spring model which increasingly colours lower frequencies when overdriven.

The spring itself is modeled using two separate algorithms - a primary model with a lowpass effect, and a secondary, full spectrum model of signals at -30dB. An **economy** mode is available which disengages the full spectrum component.



Each spring has a **time** parameter which is set in milliseconds (0-50ms). The overall **decay** time is set in seconds (0-20s). Each spring also has a **frequency** parameter (2-6kHz) which corresponds to both a lowpass effect and the dispersive frequency. Higher settings emulate thinner springs.

The **dry** signal can be cancelled for use as a send effect. Note that the setting of both dry and economy parameters are unaffected by program changes.

My thanks to A for inspiring me to investigate this topic again! :)