

HoRNet SpringVerb

SpringVerb is an algorithmic reverb plugin that recreates the physical interactions of a spring reverb.

This kind of reverb is very peculiar since it's obtained through electro-mechanic stimulation of springs at different tension, this movement is then converted back into electrical signal by some pickup.

The spring reverb was born together with plate reverb as a mean to create artificial reverberation in the 30s and was made popular by Hammond organs which adopted this kind of reverberation due to its small size. This factor also led to the adoption of spring reverbs from many guitar amplifier manufacturers and since then the sound of this kind of reverb has been part of recording history.

We approached the recreation of this peculiar sound implementing a mix of research papers and adding our own twist, with SpringVerb you can change every aspect of the spring themselves like the intrinsic vibration time (which determines the length of the reverb) the damping of the springs (which affects the decay time of the reverb). With the resonance and brightness controls you can change the self resonance point of the spring and the highest frequency it can reach (both of these controls also affect how the reverb propagates inside the spring)

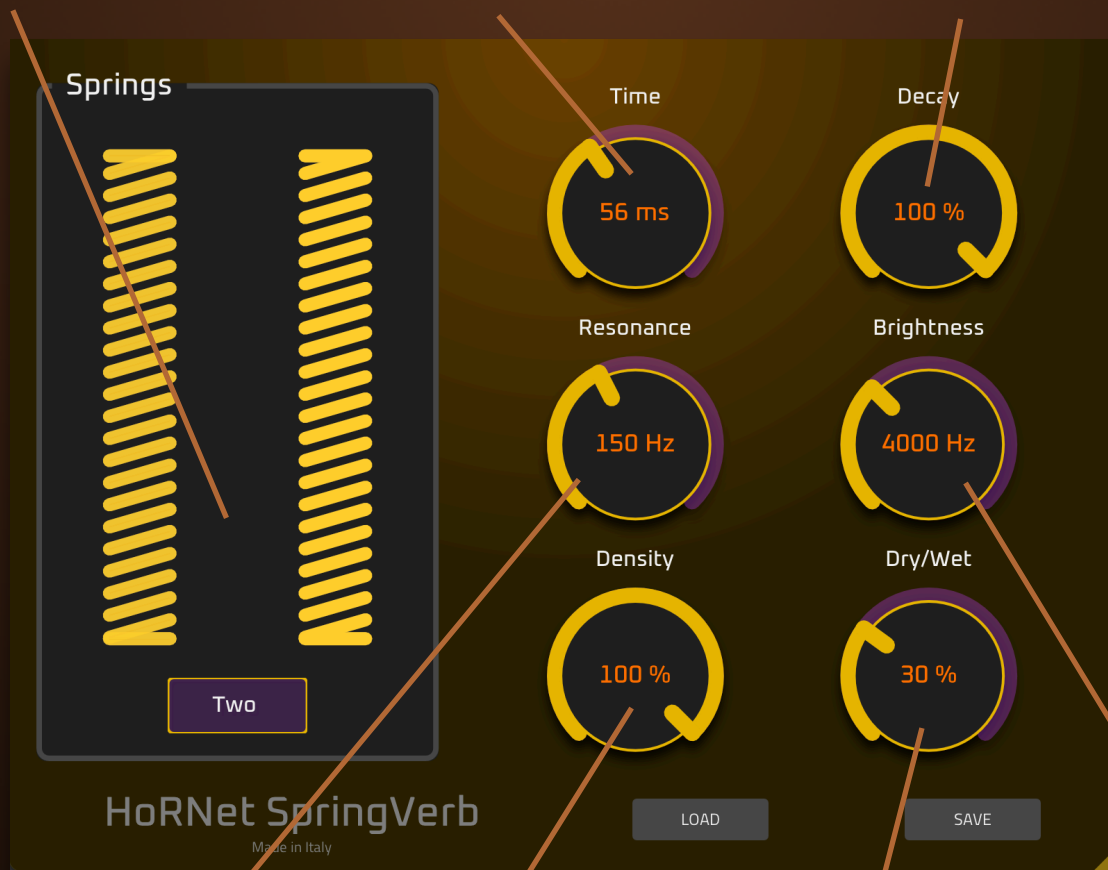
We also added a handy dry / wet mix control and a diffusion control (which is not a specific physical part of the spring behavior but helps us in getting different sounds, from more lush to more metallic ones)

Of course you can change the number of springs and this in turn changes the behavior of the reverb, in fact with one spring you only have a mono reverb and a very bouncy sound, with two springs you have a stereo reverb and with three springs you get a full and nice shimmering sound.

This box lets you choose the number of springs of reverb and also shows the audio level of each spring by lighting it up

Lets you adjust the reverberation time changing the spring delay time

Adjusts the spring vibration decay time shortening the reverb tail or making it longer



Changes the self resonance frequency of the spring moving the "body" of the reverb up and down in the frequency spectrum

Make the reverb more natural (100% setting) or more metallic (0% setting)

Lets you choose the balance between the dry unprocessed signal and the wet processed one

Changes the maximum vibration frequency of the spring making the reverb brighter or darker