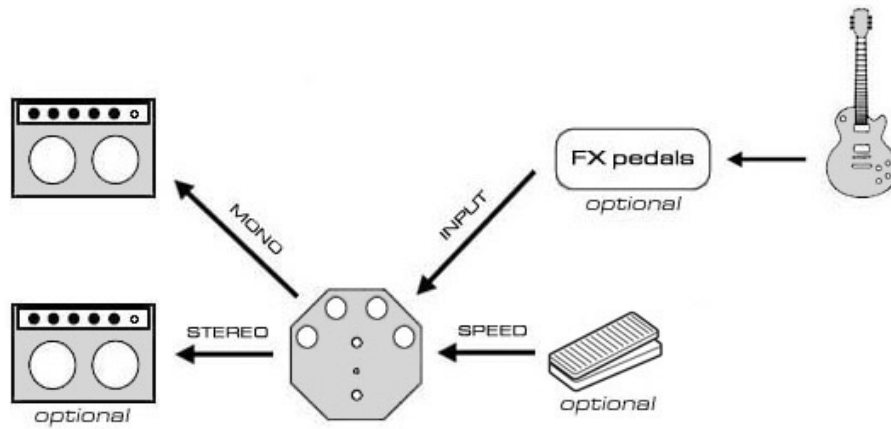


Siegmund Doppler Vibe Instructions

Your guitar can be plugged in straight into the effect and the outputs connected to one or two amplifiers or any device with high impedance input.

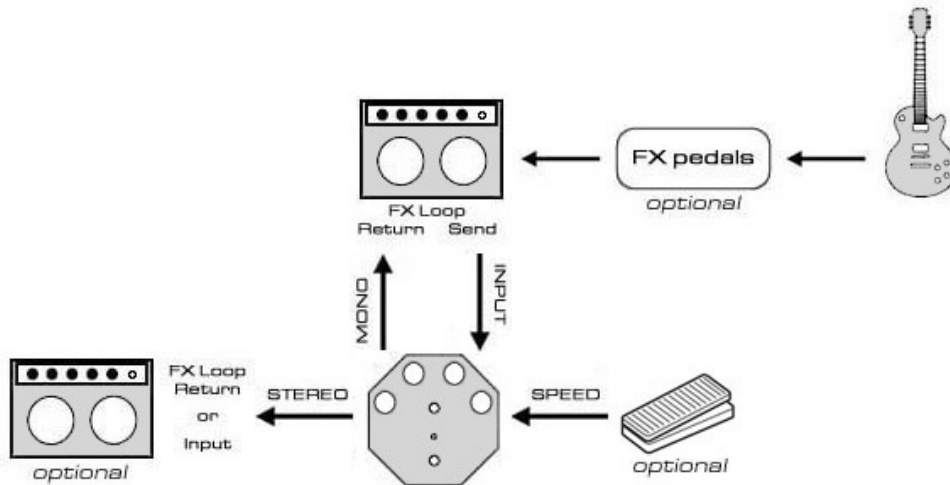
A clean boost or overdrive pedal after the guitar and before the effect gives the oscillator a stronger signal to work with.



The Doppler Vibe works well with amps that have a Series FX loop placed between the preamp and power amp.

With two amps the STEREO output can be connected to the second amp's return jack or in front of the amp.

With a Parallel FX loop the Mix knob of the amp and the INTENSITY knob of the effect are balanced for the desired sound.



Signal Processing

The signal at the input goes into the TONE control and allows the player to boost the brighter or darker side of the Doppler shift frequency spectrum, which is neutral in the center setting.

The BALANCE control combines both frequency ranges for the Mono output mode and allows balancing the output volume of each side of the Doppler effect.

Both TONE and BALANCE emphasize either side of the Doppler effect, making the overall tone brighter or darker.

By turning them in opposite directions, the effect remains in balance, giving a true Doppler pitch shift vibrato.

Emphasizing one side with both knobs shifts the effect balance and gives more of a tremolo in the selected frequency range.

The INTENSITY knob controls the strength of the vibrato, pulsing both Doppler frequency sides alternately.

Output volume increases with higher settings. A stronger input signal allows higher settings without cutting off the signal between the pulses.

The SPEED knob controls the rate of the pulse and the FAST/SLOW toggle switch gives a slower or faster sweep range.

The LED pulses with the vibrato speed.

When plugging another cable into the STEREO jack, the output signal is automatically divided into an **Asymmetrical Frequency Soundstage™** with the BALANCE knob taken out of the circuit.

The MONO jack now plays the brighter side of the signal and the STEREO jack the darker portion. The overall sound and Doppler effect can now be balanced with the TONE control and with each amplifier's volume and tone controls.

For the strongest Stereo Doppler pitch shift effect, the brighter signal amplifier should have less bottom end with smaller speaker(s) and the darker signal amplifier enhanced bottom end with larger speakers, but both with matching output volume. Additional effects can be added to each amp, creating interesting 3D stereo sounds in the room or for recording.

When switching off the effect with the footswitch, only the vibrato turns off, but TONE and BALANCE knobs are still active with the mono output and no BALANCE control in the stereo mode.

The footswitch is deliberately not true-bypass, because the circuit adds at least 10 dB gain, enhancing the overall sound. Bypassing the effect entirely would give a noticeable signal drop and tone settings change.

With the vibrato off, the unit becomes a Mono-to-Stereo-Splitter with an **Asymmetrical Frequency Soundstage™**. The extra gain provides a strong signal, required for each amp when the guitar signal is downloaded by the two inputs.

The optional foot control pedal connects to the SPEED jack, taking the pedal's SPEED knob out of the circuit. You can use any short or long patch cord or guitar cable of any length.

Additional notes about the stereo mode and speaker phase

When we don't know if an amp is in or out of phase at the speakers with the input, a speaker cable phase/polarity switch can be used to toggle two amps speakers phase/polarity, when used in stereo with one guitar.

To determine if two amps are in or out of phase with each other, face both amp speakers in the same direction and press the footswitch to turn the vibrato off. Adjust tone settings on both amps for full range and listen to both amps with the phase/polarity switch IN or OUT.

Speakers in phase sound warmer with more bottom end.

Speakers out of phase sound thinner with less bottom end.

For the strongest Stereo Doppler pitch shift effect, both amps speakers should be out of phase. Different size speakers and opposite frequency tone settings for each amp will further enhance the effect while eliminating out-of-phase cancellations.

Summary

Together with the variable speed foot control pedal and the Intensity, Tone and Balance knobs and one or two amplifiers and using the effect right after the guitar or after preamps and other effects and in a series or parallel FX loop, there are countless of different variations of sounds possible. Add to that microphones and a mixing console and it all gets multiplied again.

The stereo mode is an added treat.

The best guitar sound arguably comes from two differently set up amps played at the same time.

The Doppler Vibe effect in stereo gives this setup a whole new feel, as the sound seems to travel from one speaker to the other in a loop, creating a chorus effect.

It's time to play and make music and give the listener and player a greater dimensional musical experience from only a guitar and a couple of tubes, producing a Doppler Effect that enhances your guitar sound with pure acoustical physics.

Enjoy!
Chris Siegmund