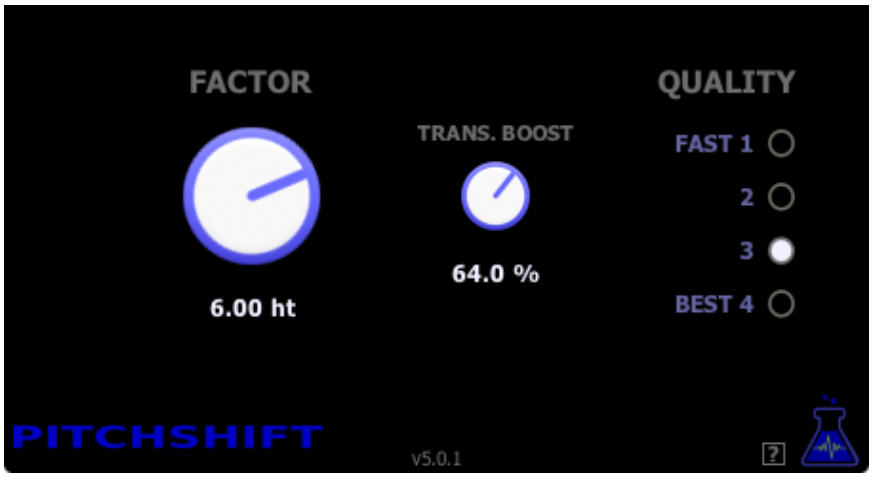
PITCHSHIFT

plugin version: 5.0.5
manual version: 2.5

www.bluelab-plugs.com

DESCRIPTION

PitchShift is a plugin that changes the pitch of a sound, from one octave below to one octave above the original sound. The plugin is designed internally to avoid the usual drawbacks of this kind of processing.



INTERNAL DESIGN

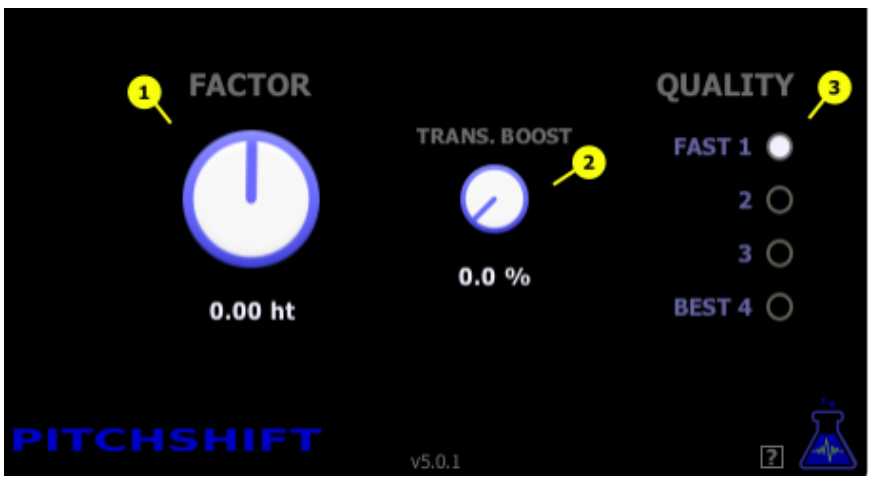
Firstly, the phases are managed to get a maximum of accuracy on the result frequencies, to avoid the "phasing" drawbacks that are associated with this kind of processing.

Secondly, a transient boost parameter make possible to increase the transients, which are usually diminished with most of pitch shift processing methods. This recovers the attenuated attacks after pitch shifting.

Thirdly, a quality parameter is used to increase the quality of the processing by analyzing the signal more accurately before changing the pitch of the sound. This avoids problem such as "metallic noises", that are common with this kind of processing.

Finally, a method is used for stereo sounds to keep consistency between both channels.

USAGE



The **FACTOR (1)** parameter sets the pitch factor, measured in half tones and cents (hundredth of half tones). For example, when set to -12.00ht the pitch of the sound is decreased by one octave. When set to 12.00ht, the pitch is increased by one octave. When set to 1.50ht, the pitch of the sound is increased by one half tone and 50 cents (i.e 1.5 half tones). When set to 2.00ht, the pitch is increased by one tone.

The **TRANS. BOOST (2)** parameter recovers the transients (attacks) which have been attenuated after pitch shifting. When set to 0%, the transients remain unchanged, whereas when set to 100% the transients are amplified at a maximum.

Note: When set to a value near the maximum, the **TRANS. BOOST (2)** parameter can increase the transients more than in the original sound, and even make the sound saturate if the transients are boosted too much. This parameter has to be set carefully !

Note: When the **TRANS. BOOST (2)** parameter is set to 0, the transient boost processing is not made, to save some processor resources.

The **QUALITY (3)** parameter defines the quality of the processing.
The values of this parameter goes from 1 (fast processing), to 4 (best quality).
When set to the value **1**, the plugin uses a minimum of resources, avoiding overloading too much the DAW.

At the contrary when set to the value **4**, the quality of the processing is at the maximum. The signal is analyzed with a maximum of accuracy and the processing is made on the most detailed data.

This last value is recommended for an offline processing (bounce) because it uses more resources.

The more the parameter is increased, the better is the quality of the processing, and the more we suppress some possible drawbacks such as “metallic noises” that could have been heard using the minimal quality.

Finally, on sounds with a strong attack (for example rhythmic guitar chords), the attack will be saved better when using a high quality.

Note: If we want to have more amplitude for the sound modification, for example if we want to go up to 4 octaves above the original sound, we can insert several **PitchShift** plugins one after the other. For example to increase the sound pitch by 4 octaves, we can use two **PitchShift** plugins with a **FACTOR (1)** value of 2.00ht.