

PRISM

The Pitch Designer



Operation manual

VirSyn Software Synthesizer

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1 Introduction

1.1 Welcome to PRISM

Congratulations and thank you for purchasing PRISM !

The multi-band pitch shifter PRISM takes a fresh approach to solve the problem of shifting the pitch of complex sound sources in realtime. Traditional frequency shifting shifts all frequencies in an input up by the same amount and thereby alters their harmonic relation and tends to produce inharmonic results. But it's perfect in dealing with transients. Pitch shifting on the other side sounds "right", but the transients go mad and the sound gets metallic and grainy especially on high down shiftings.

PRISM splits the spectrum in 27 bands and applies a different amount of frequency shifting to each band emulating a harmonic pitch shifting. This gives you perfect pitch shifting for all kind of drum sounds over a vast shifting range of +/- five octaves without disturbing the transients or introducing metallic distortions. With harmonic sounds you will get inharmonicities but it's much better behaved than pure frequency shifting. The extreme range of shifting gives you access to a vast field of unknown sonic territory.

The possibility to apply different shiftings on each band gives you exciting possibilities: Suppose you have a drum loop which is perfect, but the bass drum is a bit too high or too low to fit in your mix then you can easily get the bass drum shifted a bit down and the rest of the spectrum remains unchanged.

1.2 Installation PC

For proper operation of PRISM the PC system requirements are:

- ✍ **Intel Pentium 4 / Intel Core Duo / AMD Athlon 64**
- ✍ **Microsoft Windows XP 32bit or Vista 23/64bit or Windows 7 32/64bit**
- ✍ **min. 1GB RAM.**
- ✍ **VST2.4 / VST3 / RTAS compatible host sequencer.**

The link to the installation files are sent to you with the delivery e-mail of the product.

Product activation instructions:

An eLicenser protection key (USB dongle) from Steinberg Media Technologies GmbH is required in order to run PRISM. The Installation of PRISM will also install the eLicenser "eLicenser Control Center". You will find the application by navigating from the Windows task bar to "Start > Programs > eLicenser".

Launch this " eLicenser Control Center" a pplication and choose to download a license by clicking on the "Enter Activation Code" button. You will then be asked for an activation code. Enter the activation code noted in the delivery e-mail with cut© and paste.

The " PRISM " license will be automatically downloaded and installed on your eLicenser protection key.

1.3 Installation Mac

For proper operation of MATRIX the Mac system requirements are:

- ✂ **Intel Core Duo**
- ✂ **Mac OS X 10.5 / 10.6**
- ✂ **min. 1 GB RAM**
- ✂ **VST2.4 / VST3 / RTAS / AudioUnit compatible host sequencer.**

The link to the installation files are sent to you with the delivery e-mail of the product.

Product activation instructions:

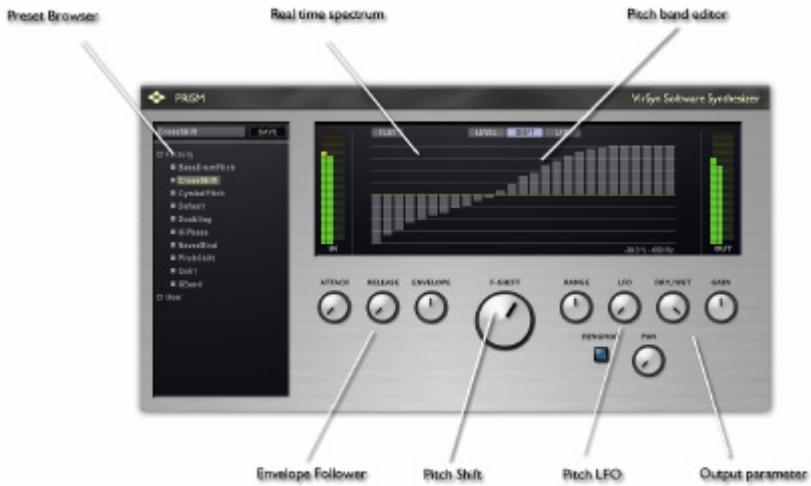
An eLicenser protection key (USB dongle) from Steinberg Media Technologies GmbH is required in order to run PRISM. The Installation of PRISM will also install the eLicenser "eLicenser Control Center". You will find the application in the "Applications" folder of Mac OS X.

Launch this "eLicenser Control Center" application and choose to download a license by clicking on the "Enter Activation Code" button. You will then be asked for an activation code. Enter the activation code noted in the delivery e-mail with cut© and paste.

The "PRISM" license will be automatically downloaded and installed on your eLicenser protection key.

1.4 Screen layout

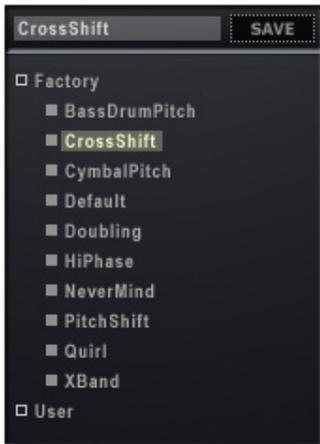
This is PRISM's main screen shown here for explaining the terms used for each user interface element:



1.5 Basic operation

1.5.1 Preset management

The preset browser gives you a structured access to the factory presets and your own creations.



The name of the selected preset is shown in the black window above the browser. If you want to save your own creation for later reuse you can change the name here and click on the “Save” button to the right of the preset name.

1.5.2 Preset file locations

The factory and user presets are stored in files with the extension “.fxp” in the following locations:

Mac OS X

Factory presets:

/Library/Application Support/VirSyn Software Synthesizer/PRISM/Presets

User presets:

/Users/Library/Application Support/VirSyn Software Synthesizer/PRISM/Presets

Windows

Factory presets:

\Document and Settings\All Users\Application Data\VirSyn Software Synthesizer\PRISM\Presets

User presets:

\Document and Settings\All Users\Application Data\VirSyn Software Synthesizer\PRISM\Data\Presets

2 PRISM inside

2.1 Main Parameters



Attack / Release / Envelope

An envelope follower extracts the volume envelope of the input signal. This envelope can be used to modulate the pitch shift, the modulation amount can be set from -100% to +100% with the Envelope knob. The Attack and Release parameter control the time characteristic of the envelope follower.

F-Shift / Range

F-Shift is the main pitch shifting parameter. The maximal shifting amount depends on the Range parameter and can be set from +/- 1 semitone to +/- 60 semitones (10 octaves). Please note that the effective pitch shifting for each channel also depends on the setting of the band parameters explained in the next section.

LFO

The LFO parameter controls the pitch modulation amount for the channel LFOs. These LFOs enable you to modulate the pitch shifting separately for each channel.

Ringmod

Uses ringmodulation instead of pitch shifting for more esoteric effects.

Pan

Uses the LFOs to modulate the Pan of each band.

Dry/Wet

Balance between the dry and pitch shifted part of the output signal.

Gain

Adjust the gain of the output signal in the range of +/- 40 dB.

2.2 Band parameter

The Filter section of PRISM contains 27 critical band filters to separate the input signal in channels which can be separately pitch shifted. The band filters have very steep slopes and therefore the shifting can be done with minimal influence on adjacent channels.

Level

The gain for each filter band can be changed with the blue sliders in the screenshot below. The exact gain value is shown as a status text in the lower right corner of the window. Each slider is also displaying the current level of the input signal per band.



Shift

Each band can have its own amount of pitch shifting applied. Please note that the effective pitch shift is determined by the setting of the *Range* and the *Shift* parameter in addition to the band specific settings made here.



LFO

The separate LFOs for each band allows to automatize the pitch shift in a simple way. Set here the LFO frequency for each band, the pitch shift amount can be set for all channels with the LFO knob.



Flat

With this button you can reset the currently displayed edit values to their respective default:

- Level:** set the gain for all bands to 0 dB for flat amplitude response.
- Shift:** set the shift value for all bands to 0 cent for no change in pitch.
- LFO:** set the LFO frequency for all bands to the value of the first band.