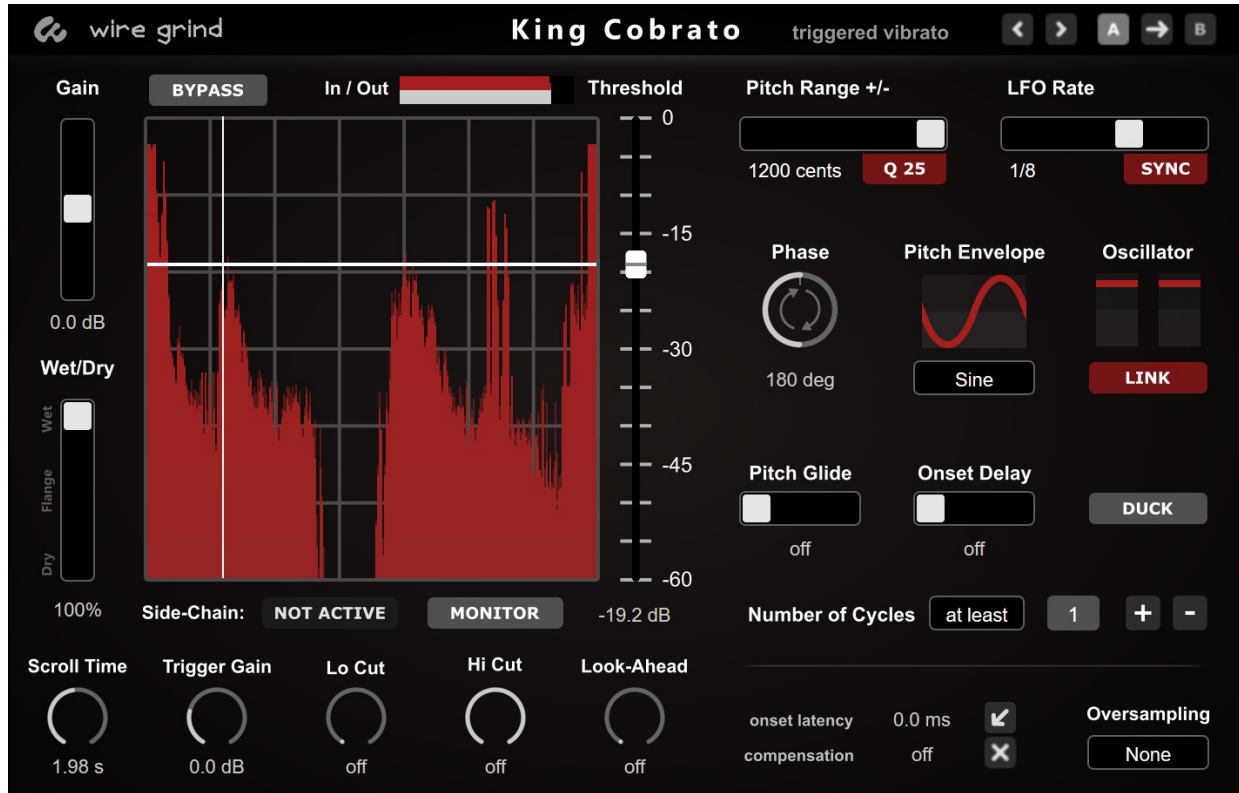


Wire Grind

# King Cobrato

## User Manual



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# Overview

King Cobrato is a VST vibrato effect from Wire Grind. Its features include a threshold-triggered LFO, precise pitch adjustments, 13 oscillators, ducking, sidechaining, controls to limit/force LFO oscillations, and chorus & flanging effects.

## Features

### Precision Pitch Control

King Cobrato can be adjusted to produce just the right amount of pitch variation. Using this intuitive perceptual control, pitch range can be adjusted up to  $\pm 1200$  cents, or  $\pm 1$  octave.

### An LFO Triggered by Signal Level

The oscillator switches on and off whenever the incoming signal level crosses the threshold. This can make it very easy to synchronize the oscillations with musical notes, even when they occur at some unusual or unknown time.

### Set The Number of Oscillations

Tell Cobrato the "*number of cycles*" it should do after each trigger. There are also three cycle modes ("*at least*," "*at most*," and "*exactly*") that apply different rules to the number. The relevant control parameters are shown in the below image.

### Phase Control

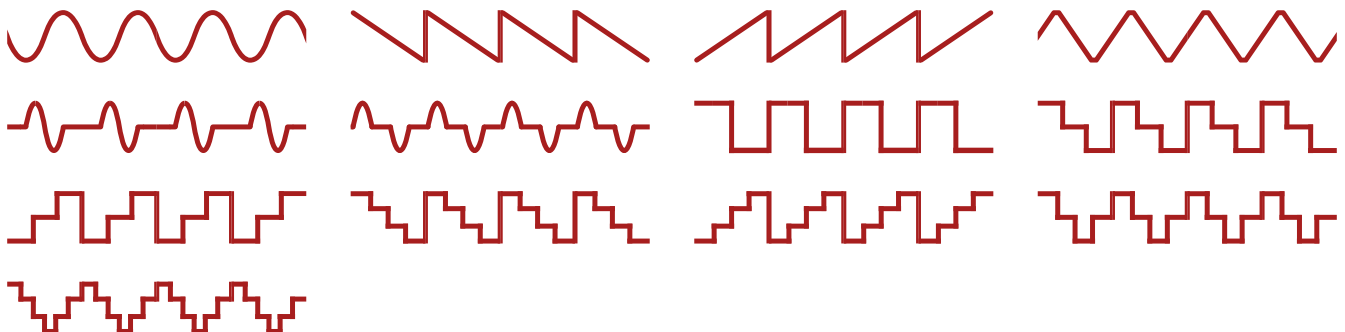
Tweak your sound by adjusting the point on the waveform where the oscillations begin.

### Sidechain-Ready

King Cobrato has a sidechain that works a lot like a compressor's sidechain. There are many ways to use this feature. One possibility is to trigger modulation on a droning pad sound by feeding a percussion track in the sidechain input.

### Thirteen Waveforms

Cobrato may have waveforms that are familiar looking. However, these waveforms modulate pitch rather than depth. It also includes multiple exotic waveforms



## Ducking

Cobrato can duck the effect too. Ordinarily, the oscillator becomes active whenever the control signal exceeds the threshold. With ducking, it becomes active when the control signal drops below the threshold.

## Chorus & Flanging Too

To get flange and chorus sounds, set the wet/dry to 50%. We would suggest starting off with a moderate LFO rate, and a pitch range of about 50 cents. Compared to flanging sounds, chorus sounds will tend to use higher settings for *Pitch Range*.

## Highly Automatable

Get a creative edge by automating King Cobrato's parameters. Its algorithm is designed to handle real-time parameter changes as smoothly as possible.

## Anti-Aliasing

Vibratos can cause aliasing! King Cobrato will suppress it by oversampling to a rate that's 8x, 16x, 24x, or 32x that of standard audio (44.1kHz or 48kHz).

## Other Features

- Signal-triggered oscillations
- Pitch-range adjustment up to  $\pm 1$  octave
- 13 pitch envelopes
- Sidechaining
- Ducking
- LFO cycling controls
- Chorus & flanging effects
- LFO onset delay
- Lookahead
- Pitch gliding
- Linked & independent channel processing
- trigger signal scope
- Strong trigger signal filtering
- Oversampling up to 32x
- Trigger signal scope
- Undo / redo
- A / B settings banks

## Demo Version Limitations

There are two differences between the demo versions the full versions:

- The demo version is unable to save settings.
- The demo version periodically ads a tone of chirp sound to the output.

# Installation

This program comes with a set up application that will guide you through the process. You will likely need to unzip or extract the download package before running. With some computer setups, you will also need to close any running audio applications.

# Uninstall

The program can be removed using Windows' add/remove utility.

# System Requirements

## Operating System

Windows versions 7 through 11.

## Supported Host Programs

A program supporting 64-bit VST3 effects plugins is required.

## Internet Access

Access to the world wide web is required during installation. If the plugin is being installed on an offline computer, a small amount of data will need to be copied from one computer to the other.

# Specifications

## Supported Sample Rates

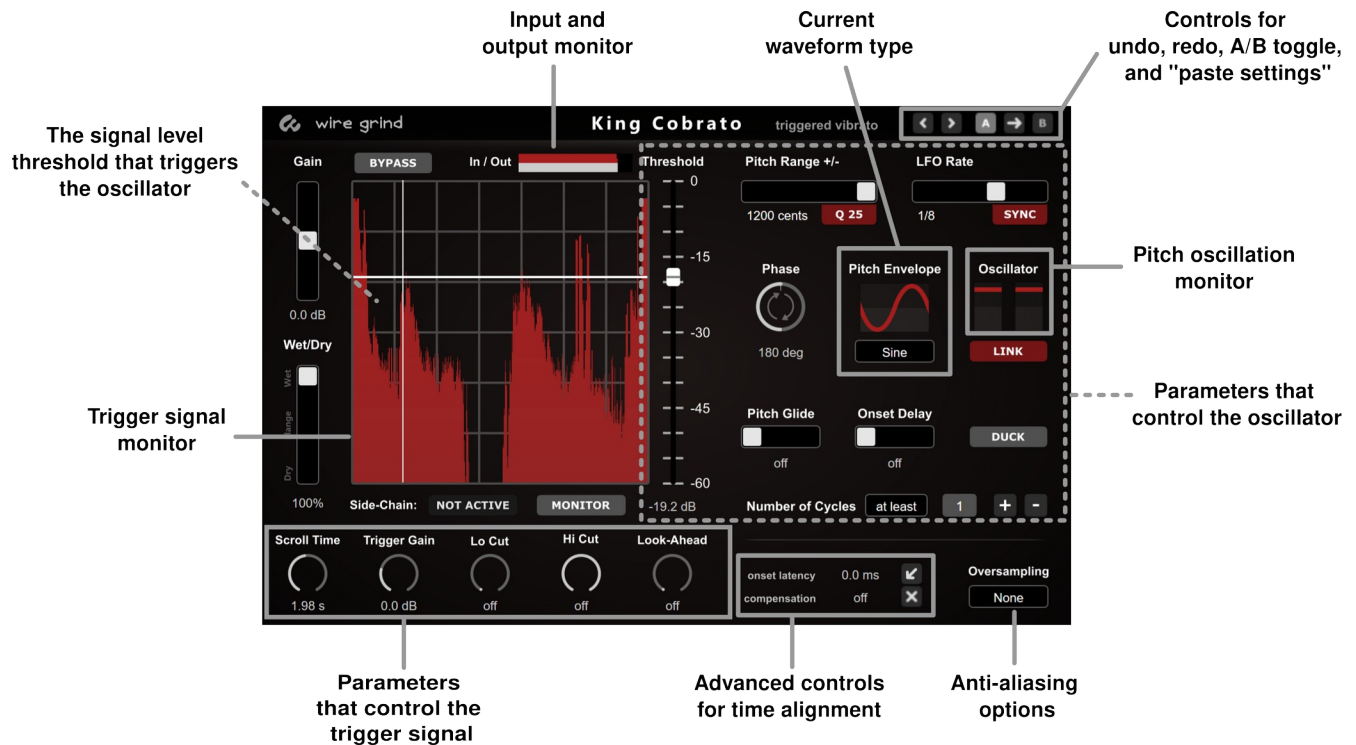
All features are supported for the following sample rates: 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192.0kHz.

At other sample rates, the oversampling feature will be non-functional. Additionally, non-listed sample rates have not been tested. If in doubt, please try the free demo version.

## Plug-in Format

VST3, 64-bit

## Software Interface At A Glance



## Software Interface Details

### Bypass

When bypass is active, the input audio is passed directly to the output for monitoring. The scope and the gain meters will continue to operate as normal. To completely stop the plugin, check if your DAW host program has an option to disable plugins.

### Compensation Time

Using extreme pitch changes in combination with a low oscillator frequency causes the signal to be delayed. The delay at note onset can be removed by setting "compensation" to be the same as the onset latency. Compensation works similarly to "look-ahead." The delay at note onset depends on the phase parameter, and it will be zero for at least one phase setting.

## **Duck**

Normally, the software will begin to modulate when the input signal exceeds the level set by the threshold parameter. When duck is enabled, the process is inverted. The effect oscillates when the input signal fall below the threshold.

## **Hi Cut**

Sets an upper roll-off frequency for filtering the trigger signal.

## **In/Out**

This displays the levels of the input and output signals. If you are using an external side-chain, the input will differ from what is displayed on the scope.

## **Link**

This button determines whether or not the channels are modulated in unison. When enabled, modulation will begin on all channels whenever the threshold is exceeded on any channel. When disabled, each channel operates independently of one another.

## **Lo Cut**

Sets a lower roll-off frequency for filtering the trigger signal.

## **Look-Ahead**

This parameter will cause the effect to “look into the future” to detect level changes. This information is then used to apply an envelope to the present.

## **Monitor**

When engaged, the control signal becomes the output. In normal operation, the output is the processed input signal. When side-chaining, the output is the auxiliary input.

## **Number of Cycles**

This parameter as three mode options.

This parameter gives the number of oscillator cycles. Is also includes a mode setting that tells the effect how to use that number. The mode settings are described below.

### **At least**

When the threshold amount is exceeded, the oscillator will do at least the given number of cycles.

### **At most**

When the threshold amount is exceeded, the oscillator will do at most the given number of cycles.

### **Exactly**

When the threshold amount is exceeded, the oscillator will do exactly the given number of cycles.

### **Onset Delay**

This parameter delays the onset of oscillations. It can be used to allow transients through prior to the oscillations. You may have other uses for it as well.

### **Onset Latency**

Altering pitch sometimes means that some of the input has to be known ahead of time. The “onset latency” parameter displays the time delay between the input signal and the onset of the effect. It is a read-only parameter. See the description for the “Compensation Time” parameter for information about how to correct for onset latency. Tip: For many pitch envelopes, for example “Sine,” “Saw Down,” “Saw Up,” and “Triangle,” the onset latency will already be zero when the phase parameter is set to the default 180 degrees. For all other waveforms, there’s another phase setting where the latency will be zero.

### **Out Gain**

The amount of gain applied to the output signal.

### **Oversampling**

This parameter sets the strength of the plugin anti-aliasing algorithm. When testing King Cobrato, we observed pretty good results using the lowest oversampling setting.

### **LFO Rate**

This sets the frequency of the pitch modulator. See also “SYNC.”

### **Phase**

This parameter sets the location along the waveform where the oscillation begins. The default phase value of 180 degrees will keep the onset delay time to be zero for the following oscillators: sine, triangle, downward saw, and upward saw.

### **Pitch Envelope**

Pitch envelopes describe perceptual characteristics of the effect's output.

## **Pitch Glide**

This parameter makes sudden pitch changes more gradual.

## **Pitch Range**

This sets the maximum amount of pitch change. The max range amount is  $\pm 1200$  cents, or  $\pm 1$  octave. See also “Q 25.”

## **Q 25**

This button toggles pitch range quantization. When red, pitch is adjusted in 25 cents increments. A semi-tone has 100 cents, and an octave has 1200 cents. When gray, pitch can be adjusted in less than 1 cent increments.

## **Scope**

This feature visualizes the levels of the trigger signal after being filtering, look-ahead, and mid-side processing has been applied. The scope shows the highest and lowest signal levels over time. Sometimes the scope may appear to only show single signal level. This happens under the following circumstances: The highest and lower signals are the same level, the signal is mono, the scope is displaying either a “mid” or “side” signal.

The solid horizontal line show the threshold while the dotted lines show the upper and lower edges of the knee.

## **Scroll Time**

This parameter sets how fast the scope scrolls.

## **Side-Chain**

Shows the status of the the side-chain. If the side-chain is being used, the box to the right turns red and reads “active.” When not in use, the box will be gray and read “not active.” Side-chaining turns on automatically whenever your DAW is configured to use it.

When speaking about side-chains, the terms “internal” and “external” are often used. These two terms are synonymous with “not active” and “active,” respectively.

## **Sync**

This button toggles the units used by the oscillator frequency control. When gray, the frequency is given in Hz. When blue, the frequency is given as a note length. Note lengths are calculated using tempo information from your host program.

## **Threshold**

When the control signal level is above the threshold, the gate opens. When the control signal level is below the threshold, the gate closes.



### **Trigger Gain**

This parameters adjusts the gain of the trigger signal. While it will impact envelope detection, it will not alter the level of the output.

### **Wet/Dry**

This parameter mixes the effect signal with the original signal. Vibrato effects are created by setting the parameter to 100% wet. By setting wet/dry to around 50%, flanging and chorus effects can also be produced. It is suggested that new users first try a moderate setting for “LFO Rate” along with a “Pitch Range” setting of about 50 cents.