

**About This File**

This Help file contains context-sensitive help topics that are used by Sonic Foundry XFX 3.

Revised 2/10/2000

## Graph

This graph maps a period to an output gain level. The top of the graph shows where no output gain is applied. When the envelope is below the top of the graph, signals are attenuated (gain is less than 0).

With this in mind, it is possible to draw graphs to generate modulation, volume, and gapping effects by moving the envelope points. It is recommended that the center horizontal line be used as a starting point in order to simulate a balance of both gain and attenuation on the signal. Examples of common graph shapes are included as presets.

**Reset**

Click to reset all envelope points to a default position in the graph.

**Blend graph edges (on/off)**

Select this check box to smooth the transition between the start and end of the graph. Blending the edges if the graph can help eliminate clicks caused from an irregular graph.

**Dry out (-Inf. to 0 dB)**

Drag the fader to set the level of the unprocessed signal that will be mixed into the output.

**Wet out (-Inf. to 24 dB)**

Drag the fader to set the level of the processed signal that will be mixed into the output.

**Amplitude (-Inf. to 0 dB)**

Drag the fader to set the minimum gain of the modulated signal. This setting controls the range of the graph.

**Modulator frequency (0.1 to 5,000 Hz)**

Drag the slider to specify the frequency of the gain waveform that will be applied to the input signal. To achieve a slow tremolo, use a low frequency.



**Stereo pan (0 to 100 %)**

Drag the slider to offset the phase of the two channels' amplitude gain envelopes by the specified percentage. This creates a back-and-forth panning effect between the two channels.

**Note:** Panning is only available for stereo files.

**Low-pass start frequency (100 to 10,000 Hz)**

Select this check box and drag the slider if you want to filter high frequencies. Move the slider to the left to filter more high-frequency material and to the right to leave more high-frequency material. The results are a brighter or more muted sound.

## Graph

The graph shows the gain that will be applied to the input signal, depending on its level over time. The diagonal line, referred to as the No Gain line, indicates where the input and output levels are equal (a ratio of 1 to 1). When an envelope point is below the line, gain reduction occurs. This allows you to create a compression curve of your choice by adding points to the graph.

By adjusting the graph, you can generate compression, limiting, noise gating, and expansion effects by moving the envelope points manually. To view examples of common graph shapes, look at some of the included presets.

**Reset**

Click to reset all envelope points to a default position in the graph.

**Dry out (-Inf. to 0 dB)**

Drag the fader to set the level of the unprocessed signal that will be mixed into the output.

**Wet out (-Inf. to 24 dB)**

Drag the fader to set the level of the processed signal that will be mixed into the output.

**Positive/Negative**

Click to specify which graph you want to edit.

### Graph polarity edit mode

Choose a setting from the Graph polarity edit mode drop-down list:

- |  |   |
|--|---|
| <b>Individual</b>                        | Enables two distinct sets of envelope points.                         |
| <b>Synchronize</b>                       | Ties the positive and negative graph together.                        |
| <b>Mirror X, Mirror Y, or Mirror X/Y</b> | Creates opposing positive and negative points about the No Gain line. |

### Slew rate(1 to 100)

Drag the slider to control the rate at which a signal can change. Using a low slew rate means that the signal is not allowed to deviate very much at all, causing a bubbling effect. Low slew rates should be used on audio signals with headroom to keep clipping to a minimum.



**Low-pass start frequency (100 to 10,000 Hz)**

Select this check box and drag the slider if you want to filter high frequencies. Move the slider to the left to filter more high-frequency material and to the right to leave more high-frequency material. The results are a brighter or more muted sound.

## Graph

The graph maps a period of an output frequency modulation. The center horizontal line shows where the input and output frequencies are equal. When the envelope is above the horizontal center line, the frequency of the input level will be increased. When the envelope is below the center horizontal line, the frequency of the signal will be decreased.

By adding and adjusting points on the graph, you can create frequency modulation or pitch-shifting effects.

**Reset**

Click to reset all envelope points to a default position in the graph.

**Blend graph edges (on/off)**

Select this check box to smooth the transition between the start and end of the graph. Blending the edges if the graph can help eliminate clicks caused from an irregular graph.

**Semitones(.01 to 24.00)**

Drag the slider to set the maximum range of the vibrato.

**Output gain (-Inf. to 24 dB)**

Drag the fader to set the level signal after processing.

**Modulation frequency (0.1 to 1,000 Hz)**

Drag the slider to specify the frequency of the modulation period that will be applied to the input signal.

**Note:** Low frequencies (0.1 to 2 Hz) create fast pitch bends. Higher frequencies (15 Hz and up) modulate the sections so quickly that instead of hearing pitch changes, new sideband frequencies are heard.

**Flange**

Select this radio button to apply a flange effect. The flange effect is heard in many 60's and 70's recordings. It is the result of mixing a modulated delay signal with the original signal to create a sweeping sound.



**Phaser**

Select this radio button to apply a phasing effect. Phasing is similar to a flanging, except that instead of using a simple delay, frequencies are phase-shifted over time. When used on stereo files, strange effects on the stereo image are created.

**Wah-Wah**

Select this radio button to apply a wah-wah effect. The wah-wah effect consists of a band-pass filter which attenuates low and high frequencies in varying amounts over time.

**Dry out (-Inf. to 12 dB)**

Drag the fader to set the level of the unprocessed signal that will be mixed into the output.

**Wet out (-Inf. to 12 dB)**

Drag the fader to set the level of the processed signal that will be mixed into the output.

**Rate (0.1 to 20 Hz)**

Drag the slider to set the frequency, in Hertz, of the modulating signal. Low frequencies create slow, sweeping effects, while higher frequencies create effects that modulate more quickly.

### **Depth (1 to 100%)**

Drag the slider to set the depth of the effect:

- When the **Flange** radio button is selected, **Depth** determines the amount of frequency modulation applied to the signal.
- When the **Phaser** radio button is selected, **Depth** determines the range of frequencies that experience phase shifting.
- When the **Wah-Wah** radio button is selected, **Depth** determines the sweep range of the band-pass filter.

**Center frequency(100 to 5,000 Hz)**

Drag the slider to set the frequency around which the sweep of the Phaser and Wah-Wah effects is centered.

**Resonance(1 to 100 %)**

Drag the slider to control the amount of band-pass filtering (Wah-Wah) or phase shifting (Phaser) that takes place. When the **Resonance** setting is high, the range of frequencies processed is smaller, yet more pronounced.



**Gapper**

Click this radio button to insert silent sections in your file at the frequency you specify.

**Snipper**

Click this radio button to cut sections from your file at the frequency you specify.

**Frequency to gap/snip events (0.1 to 1,000 Hz)**

Drag the slider to set the frequency at which sections will be cut from or inserted into your file.

**Length of one event (.0001 to 1.0000 seconds)**

Drag the slider to set the length of the sections that will be cut from or inserted into your file.

**Fade edges of each event (1 to 50%)**

Drag the slider to fade the edges of cut or inserted events. You can use fading to prevent glitches.

**Percent of original**

Displays an estimated size of the file after processing.

**Operation(-5 to 5)**

Drag the slider toward 5 to enhance your signal (emphasize high frequencies), or toward -5 to smooth the signal (attenuate high frequencies).

