

iZotope Trash Filters for Wwise

Introduction

The iZotope Trash Filters effect for Wwise provides three separate filters that are perfect for shaping the tone of an audio sample or track. Each filter section has controls for fine tuning that filter's parameters as well as controls for its LFO (low frequency oscillator). The various filter types are also able to cover a broad set of in game scenarios; this makes the Trash Filters effect great for use as a mixing tool as well as for creating a variety of creative sounds.

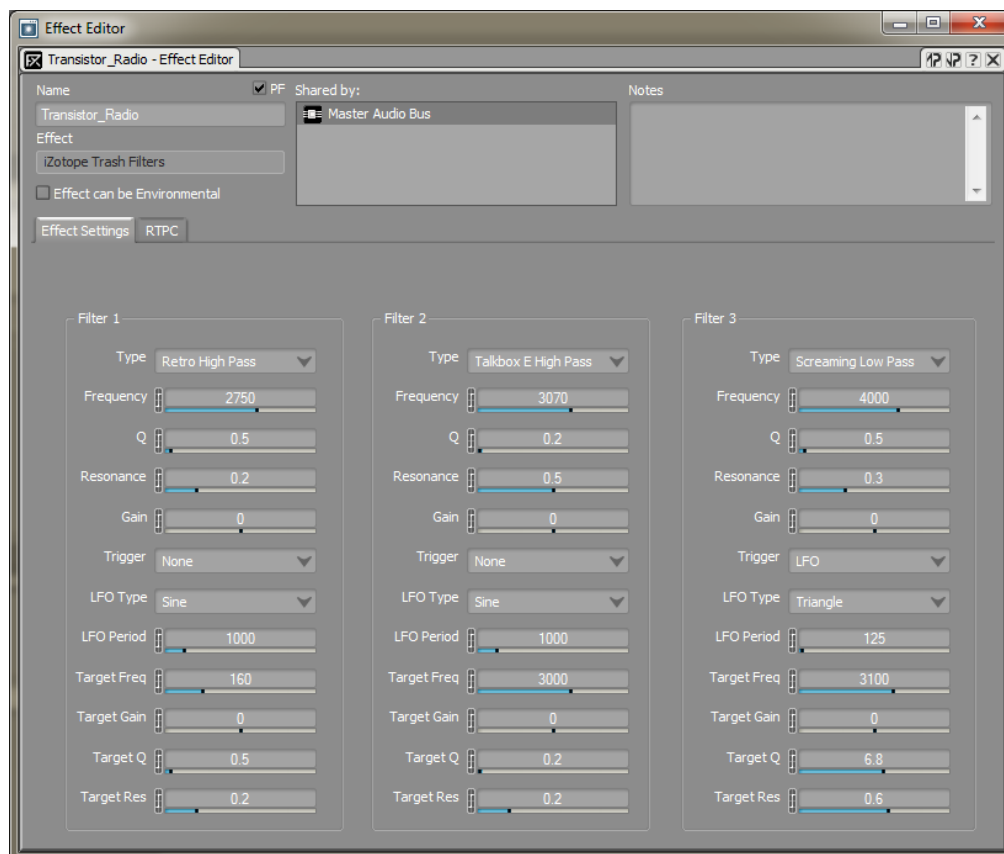


Figure 1 - iZotope Trash Filters for Wwise

Filters

The dropdown menu labeled "*Type*" at the top of a filter section contains High Pass, midrange (Band Pass or peaking filters), and Low Pass filters. The filter type can also be set to "None" which will bypass it completely.

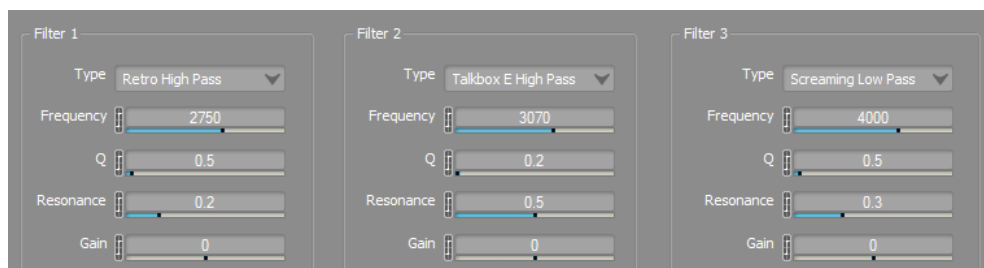


Figure 2 - Filter Controls

Each filter type is modeled after a specific style of analog filter. All filter types are affected by the *Frequency* control, but only a subset will respond to *Q*, *Resonance* or *Gain*, as seen in Table 1.

Table 1 - Enabled Filter Controls by type

Filter Type	Q	Gain	Resonance
Clean Pass	X		
Shelf	X	X	
Peak	X	X	
Rez			X
Saturated			X
Talkbox			X
Synth			X
Retro			X

Sweeping Filters

In addition to normal filtering, the iZotope Trash Filters effect can provide "sweeping" filter effects. These are controlled by an LFO (low frequency oscillator) meaning the sweeps are based on a timed period.

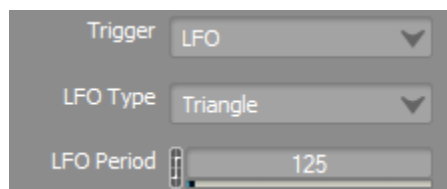


Figure 3 - Basic LFO Controls

To create a sweeping LFO filter, set the base filter parameters and select LFO from the *Trigger* dropdown menu. Using the *LFO Type* dropdown menu, select one of several waveforms (ex. sine, square, and triangle) to set the shape of the controlling sweep. The period (or speed) of the sweep can also be set with the *LFO Period* control, where smaller periods are faster sweeps, and the period is in milliseconds.

The rest of the controls determine the target destination for the sweep. A filter can sweep in *Frequency*, *Gain*, *Resonance*, and *Q*; any parameter that can be set on a filter can be used as a "target destination" for a sweep. For example, it's possible to have a filter that sweeps up and down in frequency, one that sweeps to become wider and narrower, or any combination of the 4 parameters.

To set a target destination for the filter sweep, simply adjust the controls for the desired target parameters. The filter will then sweep to that target from the base controls set in the upper portion of that filter's section.

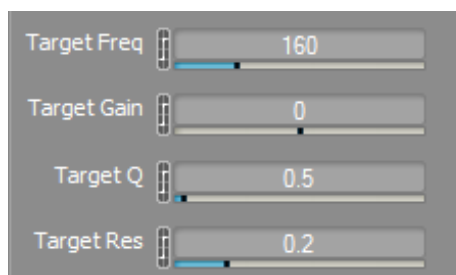


Figure 4 - LFO Target Control

Interface Element	Description	
Type	Selects the type of filter used in each of the three sections. The filter choices are:	
	None Clean Lowpass Clean Highpass Clean Bandpass Classic Low Shelf Classic High Shelf Classic Peak Warm Synth Lowpass Straight Synth Lowpass Screaming Lowpass Retro Lowpass Retro Highpass Retro Bandpass Drumsynth Lowpass Rez Lowpass Rez Highpass Rez Bandpass Saturated Lowpass	Saturated Bandpass Saturated Highpass Saturated Screaming Peak Talkbox A Lowpass Talkbox A Highpass Talkbox A Bandpass Talkbox E Lowpass Talkbox E Highpass Talkbox E Bandpass Talkbox I Lowpass Talkbox I Highpass Talkbox I Bandpass Talkbox O Lowpass Talkbox O Highpass Talkbox O Bandpass Talkbox U Lowpass Talkbox U Highpass Talkbox U Bandpass
Frequency	The base cutoff frequency of the selected filter. Default value: 40 Range: 20 to 20000 Units: Hz	
Q	The base Q or Bandwidth of the selected filter. Default value: 0.5 Range: 0.2 to 12 Units: None	
Resonance	The base amount of Resonance of the selected filter. Default value: 0.2 Range: 0 to 1 Units: None	
Gain	The base Gain of the selected filter. Default value: 0 Range: -30 to 30 Units: dB	

Trigger	<p>The Trigger that enables filter oscillation.</p> <p>Default: None Types: None, LFO</p>
LFO Type	<p>The type of waveform or shape of oscillation the filter follows when the LFO is enabled.</p> <p>Default type: Sine Types: Sine, Square, Sawtooth Up, Sawtooth Down, Triangle</p>
LFO Period	<p>The Period of oscillation of the LFO waveform controlling the filter sweep.</p> <p>Default value: 1000 Range: 50 to 8000 Units: milliseconds</p>
Target Freq	<p>The Target Frequency for the oscillating filter to sweep to, from the base cutoff Frequency.</p> <p>Default value: 160 Range: 20 to 20000 Units: Hz</p>
Target Gain	<p>The Target Gain for the oscillating filter to sweep to, from the base gain of the filter.</p> <p>Default value: 0 Range: -30 to 30 Units: dB</p>
Target Q	<p>The Target Q or Bandwidth for the oscillating filter to sweep to, from the base Q of the filter.</p> <p>Default value: 0.5 Range: 0.2 to 12 Units: None</p>
Target Res	<p>The Target Resonance for the oscillating filter to sweep to, from the base Resonance of the filter.</p> <p>Default value: 0.2 Range: 0 to 1 Units: None</p>