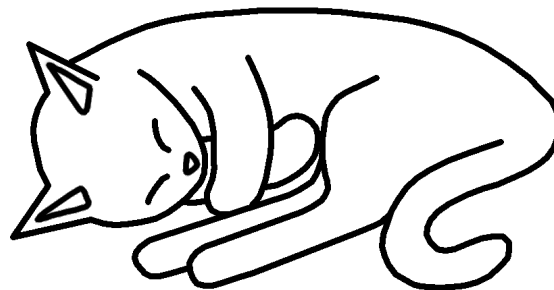


# MIDWAY

Modulated Median  
Filter



sleepyCat

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[www.davissprague.com](http://www.davissprague.com)

# MIDWAY

WWW.DAVISSPRAGUE.COM

sleepyCat

LEFT

SIZE

WAVE

RATE

MODULATION

☒ LFO ☐ SELF  
SOURCE

☒ READ ☐ SIZE  
DESTINATION

RIGHT

SIZE

WAVE

RATE

MODULATION

☒ LFO ☐ SELF  
SOURCE

☒ READ ☐ SIZE  
DESTINATION

LMOD

MIX

RMOD

LINK

MIX RATE

1.00

WET

# MIDWAY IS A VST/AU PLUG-IN THAT

implements a novel filter type called a median filter, as described in Will Pirkle's *Designing Audio Effect Plug-Ins in C++*. The essence of the filter is that it buffers an arbitrary number of input samples and selects the median value. This produces a resonant bit-crusher sound, which is rather unique.

To make the filter more useful, Midway implements routable modulation in both the filter and the output.

Crush was programmed using the RackAFX development environment. The GUI was constructed in the RackAFX GUI Designer, with images edited in GIMP and KnobMan.

# CONTROLS

## DESTINATION

This toggles the modulation destination on the median filter. The options are read, which modulates the value that is actually chosen from the array and size, which modulates the size of the array that the values are being stored in.

## LINK

This switch toggles the stereo link option, which forces the left and right controls to match one another whenever one is changed.

## LMOD/RMOD

Short for Left MODulation (or Right MODulation), this button toggles whether the filter is being modulated at all.

## MIX

Mix toggles whether the dry/wet mix modulation is active.

## MIX RATE

The mix rate control adjusts the rate of the LFO that modulates the dry/wet mix ratio.

## RATE

Controls the frequency of the LFO that can be routed to modulate the median filter.

## SIZE

Modifies the number of samples the median filter sorts through to determine which sample to produce. Changing the size creates a sound similar to that of a resonant low pass filter sweep. It is important to keep in mind, however, that higher sizes require significantly more processing power.

## SOURCE

Source toggles what is modulating the median filter. The options are LFO, which routes a low frequency oscillator to the selected destination, and SELF, which routes the output of the plug-in back to modulate the median filter.

## WAVE

This knob allows the user to select one of four waveforms (sine, triangle, sawtooth, and square) to modulate the median filter.