

# Kairatune 1.2 Reference Manual



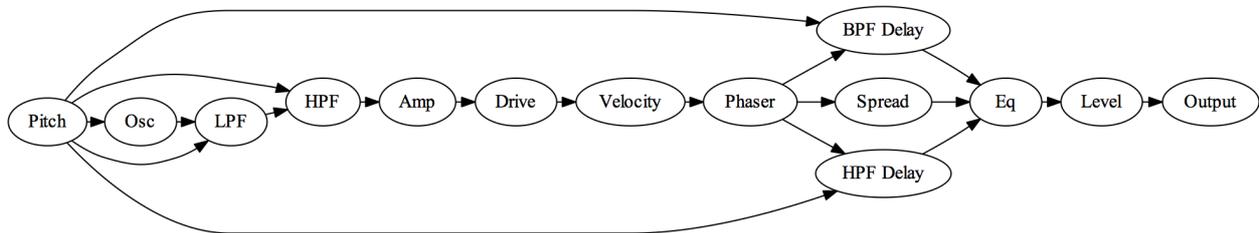
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Kairatune is a virtual instrument available as VST and AU plugin for Windows and OS X. Kairatune is copyright © 2011 by Futucraft Ltd and is available as free download. Please visit <http://futucraft.com/kairatune> for the latest version of Kairatune and more information.

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## Signal Flow



## Tone Generator

### Oscillator Section



Oscillator section controls the shape of the waveform used in Kairatune's tone generator. The shape of the waveform can be tweaked from simple sawtooth or square wave, known from classical analog synthesizers, to complex and vivid multi oscillator waveforms.

The waveform, low cut and trim parameters control the elementary characteristics of the oscillator.

The multi section allows to mix in four additional oscillators with similar characteristics. The relative phase and tune of the oscillators can be set to produce a variety of sounds and modulated for vivid timbre. The spread parameter increases the left/right separation of the additional oscillators.

The mass section enables additional modulation, producing a sense of massiveness to the sound.

WAVE	Sawtooth/square wave balance
LOW	The level of the lowest harmonic i.e. the amplitude of the fundamental frequency
TRIM	The output level of the oscillator section
MULTI	The level of additional oscillator
SPRD	Stereo separation of the additional oscillators
PHASE	The phase separation of the oscillators
DTN	The separation in the tuning of the oscillators, modulates the relative phase
TRIG	Reset oscillator phase and modulation when a note is played.
MASS	The amount of fine tune modulation of the additional oscillators
RATE	The rate of the fine tune modulation of the additional oscillators
VARI	Adds variation to the modulation rates of the individual oscillators

## Pitch Modulation and LFO Sections



The pitch section controls the basic tuning of the instrument as well as some pitch modulation effects.

The vibrato and trill effects have parameters to control how the modulation depth evolves in time when a note is played.

For the duration of DELAY the depth is zero and no modulation is applied. During FADE the modulation reaches full depth and is held there for the duration of HOLD, after which it fades out during another FADE. The modulation depths are specified by the VIBRA and TRILL parameters.

The LFO effect behaves similarly, but unlike vibrato and trill, the LFO is not dedicated only

to pitch modulation. The LFO pitch modulation depth is specified by the LFO parameter.

The pitch envelope section controls how the pitch glides when a note is played. The DEPTH parameter controls the interval to glide. The TIME parameter controls the duration to reach the note. The interval may be positive resulting in a downwards glide, or negative resulting in an upwards glide.

The LFO source is shared among the PITCH, AMP, LPF and HPF sections. The amount of modulation is controlled separately by the LFO parameter in each section.

TUNE	Tuning (shift for semitone precision)
GLIDE	Glide controls the rate at which pitch changes when successive notes are played without releasing the previous note before playing the next.
BEND	Pitch bend depth
ENV TIME	Pitch envelope time
ENV DEPTH	Pitch envelope depth up/down
VIBRA	Modulation depth (hold shift for precision, turn left for inverse)
TRILL	Modulation depth (hold shift for precision, turn left for inverse)
LFO	LFO depth (hold shift for precision, turn left for inverse)
RATE	Modulation rate (hold shift for precision)
SYNC	Tempo sync on/off
TRIG	Reset modulator phase when a note is played.
DELAY	Delay before modulation starts (hold shift for precision)
FADE	Fade in/out time after delay/hold (hold shift for precision)
HOLD	Duration of full depth modulation (hold shift for precision)

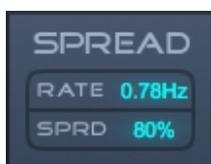
## Amplitude Section



The amplitude section controls the amplitude envelope, amplitude LFO modulation and drive. The LFO parameter controls the amount of modulation from the shared LFO source.

LFO	LFO depth
DRIVE	Drive level
SYNC	Envelope tempo sync on/off
ATK	Attack time (hold shift for precision)
HLD	Hold time at peak (hold shift for precision)
DCY	Decay time (hold shift for precision)
SUS	Sustain level
REL	Release time (hold shift for precision)

## Spread Section



The spread section produces variation in the spatial perception of the sound. The sound appears to move from side to side at the specified rate and width.

RATE	Stereo spread modulation rate
SPRD	Stereo spread modulation width

## Filters

### LPF Section



The lowpass filter's cutoff frequency is always tuned relative to the current pitch. The cutoff tuning can be modulated by envelope, spread and the shared LFO source.

The SPRD parameter controls the amount of left/right separation of the cutoff frequency. The spread modulation rate is synchronized with the spatial spread section above.

TUNE	Cutoff relative to pitch (hold shift for octave steps)
RES	Resonance at cutoff frequency
LFO	LFO depth (hold shift for octave steps, turn left for inverse)
ENV	Envelope depth (left for inverse, hold shift for octave steps)
SYNC	Envelope tempo sync on/off
ATK	Attack time (hold shift for precision)
HLD	Hold time at peak (hold shift for precision)
DCY	Decay time (hold shift for precision)
SUS	Sustain level
REL	Release time (hold shift for precision)
SPRD	LPF stereo spread width

## HPF Section



The high pass filter's cutoff frequency is always tuned relative to the current pitch. The cutoff tuning can be modulated by envelope and the shared LFO source.

TUNE	Cutoff relative to pitch (hold shift for octave steps)
RES	Resonance at cutoff frequency
LFO	LFO depth (hold shift for octave steps, turn left for inverse)
ENV	Envelope depth (left for inverse, hold shift for octave steps)
SYNC	Envelope tempo sync on/off
ATK	Attack time (hold shift for precision)
HLD	Hold time at peak (hold shift for precision)
DCY	Decay time (hold shift for precision)
SUS	Sustain level
REL	Release time (hold shift for precision)

## Effects and Mixing

### Delay Section



The delay section runs two delay units in parallel, a high pass filter delay and a bandpass filter delay. The high pass filter precedes the delay unit in the signal chain of the high pass delay whereas the bandpass filter follows the delay unit within the feedback chain of the bandpass delay.

The cutoff frequencies of the filters are always relative to the current pitch. The HPF cutoff is above the current pitch by the interval set by the tuning. The BPF cutoff oscillates around the tuning.

L	Left channel delay time
R	Right channel delay time
SEND	Delay send level
HPF	Cutoff relative to pitch
BPF	Cutoff relative to pitch
FB	Delay feedback level
SYNC	Delay tempo sync
ON/OFF	Delay section on/off

### Equalizer Section



The equalizer section has two units. The mode can be selected from the list independently for both units. The Q and GAIN parameters have effect only in certain modes.



TYPE	Lowpass, high pass, bandpass, notch, peak, low shelf, high shelf
FRQ	The cutoff/center frequency of the equalizer
Q	The bandwidth of the filter when applicable
GAIN	The gain of the filter when applicable
ON/OFF	Equalizer section on/off

## Phaser Section



The phaser effect's sweep is controlled by the modulation rate and frequency range. The DEPTH parameter controls the intensity of the phaser. The additional intensity i.e. the amount of feedback is controlled by the FB parameter.

DEPTH	Mix level
RATE	Sweep rate
FB	Feedback level
RANGE	Sweep range minimum and maximum frequencies
ON/OFF	Phaser section section on/off

## Master Section

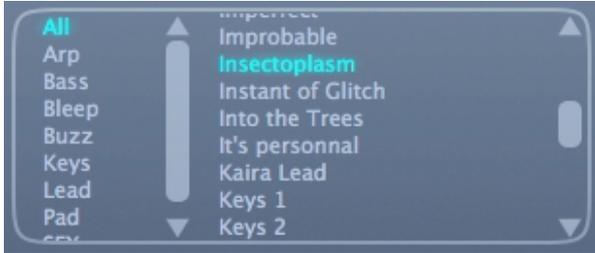


The master section controls the output level. The TRIM parameter controls the the current preset's output level and the VELO parameter controls the velocity sensitivity of the current preset's output level. The TRIM and VELO parameters are recalled for each preset. The LEVEL parameter controls the plugin's output level regardless of the current preset.

LEVEL	Master level of the plugin instance
TRIM	Output level of the current preset
VELO	Velocity sensitivity of the current preset

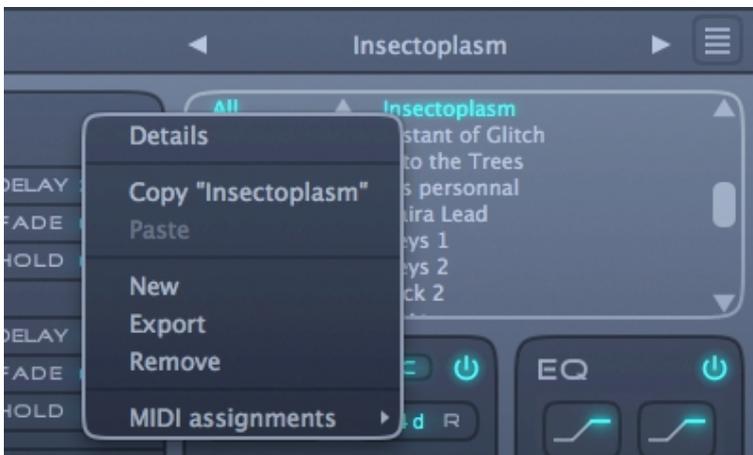
## Configuration and Settings

### Preset Manager



The preset manager provides an easy interface to browse for preset sounds. The presets can be filtered by selecting a category to narrow down the list of available presets.

The preset manager has some features that are only accessible by right-clicking on the preset list.



**Copy** and **Paste** options lets you duplicate and copy a preset across instances of Kairatune. The **Paste** option always appends the set of presets instead of replacing the current preset.

**New** option simply adds a new preset with default parameter values and with the name "Init".

**Export** option lets you save the preset as a *ktpreset* file.

**Remove** option simply removes the preset.

**MIDI assignments** sub menu lets you copy, paste or clear the MIDI assignments of the current preset.



**Details** option displays a preset detail editor that lets you modify the preset name and category and add other supplemental information to the preset. Double clicking on a preset name also displays the detail editor.

## Configuration Menu



The button on the upper right corner opens a configuration menu. Through the configuration menu you can load or import presets from various file types and export the current set of presets as a *ktbank* file.

**Load** option replaces the current set of presets.

**Import** option appends the current set of presets.

You can import *ktpreset* single preset files and load or import *ktbank* preset bank files exported from Kairatune version 1.2. You can import single preset *FXP* files and load or import *FXB* preset bank files generated with prior versions of Kairatune.

**Restore factory presets** replaces the current set of presets with the built in presets.

**Remove all presets** option clears the current set of presets.

If you want Kairatune to start up with a custom set of presets, you can configure the current set to anything you want and set that as the default. After you've set the default, any new Kairatune instances will launch with the new default set of presets.

## MIDI Learning and Assignment



The MIDI learn menu opens by right-clicking on a control. The menu provides options for assigning a MIDI controller to the parameter by learning. In short, MIDI learning means that you instruct Kairatune to listen to MIDI controllers and assign the first controller it receives

to control the selected parameter. The three different variations let you assign the control to the specified sub ranges of the parameter's values.



After you've assigned a controller you will see a separate sub menu for each assigned controller. The sub menu provides options to further modify the controller range or remove the assignment.

## More Information

- Developer website: <http://futucraft.com>
- Video Manual: <http://futucraft.com/kairatune-video-manual/>
- Facebook: <https://www.facebook.com/Futucraft>
- Twitter: <https://twitter.com/futucraft>
- Support forum: <http://www.kvraudio.com/forum/viewforum.php?f=233>
- Support email: [support@futucraft.com](mailto:support@futucraft.com)