



REF

Manual written by Alessio Santini and Simone Fabbri.

Manual Version 1.1 (10/2013)

Product Version 1.0 (05/2013)

[www.k-devices.com](http://www.k-devices.com) - [sales@k-devices.com](mailto:sales@k-devices.com)

©K-Devices, 2013. All rights reserved.

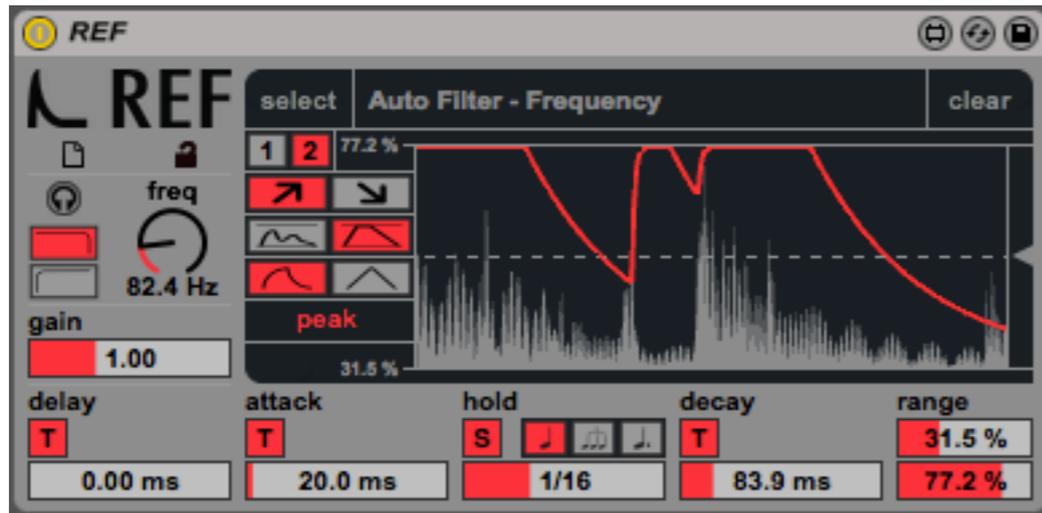
# Index

1.This is REF	4
2.License	5
3.Installation	5
4.Interface Overview	6
4.1.Input Area	6
4.2.Envelope Area	7
4.3.Time Area	8

# 1. This is REF

Thank you for choosing REF!

REF is a Max For Live audio device focused on following envelopes in a rad creative way.



The pack downloaded contains, in addition to REF device, a copy of this manual, which can help you to better understand this software and its potential.

This document will guide you through a complete overview of the product. After reading it, you should be able to use it on perfect, so we recommend that you take the time to read this guide in its entirety.

Ableton Live 9 and the Max For Live add-on are required (refer to our website to know which are the Live version supported for every released version): REF is a Max For Live instrument and works both on Mac OS® X and Windows®.

REF is currently available as single product.

Thanks to the Max For Live total integration, you will find a description for each REF parameter in the Live Info View, and you can easily automate each parameter inside Live.

We suggest to follow K-Devices via [Facebook](#), [Twitter](#), [Google ±](#), or sign up our [Newsletter](#), in order to keep you updated about future updates.

K-Devices

## 2. License

Installing the device on your computer means that you have read and agree K-Devices End-User License Agreement. You have a copy of it downloaded with the software.

## 3. Installation

To install the device double click on the .alp file contained in the downloaded package. Device, presets, and Ableton Live Lessons will be automatically installed.

REF device will be installed in the Ableton Live Library: you can find it in “packs” tab of the Live 9 browser.

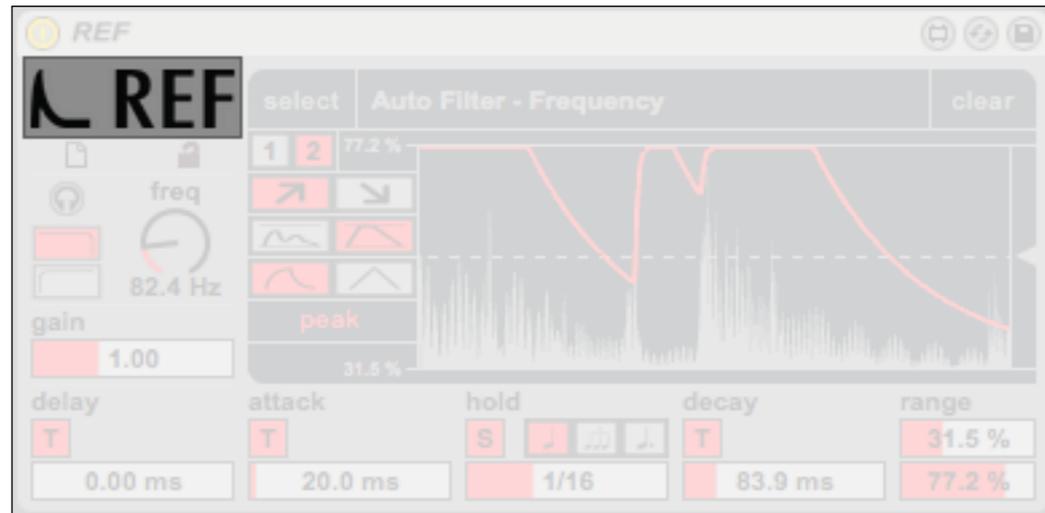
### **Note**

*In some situation, Ableton Live 9 recognizes the pack as “Ableton Live 8 compatible”: in this case, you’ll be advised that the pack will be installed in legacy mode.*

*The pack is optimized for the newest version: it’s fully compatible with Ableton Live 9. You’ll find it in your Packs followed by the word “legacy”.*

## 4. Interface Overview

REF button shows the about window, which includes software version and links to K-Devices website and social networks.

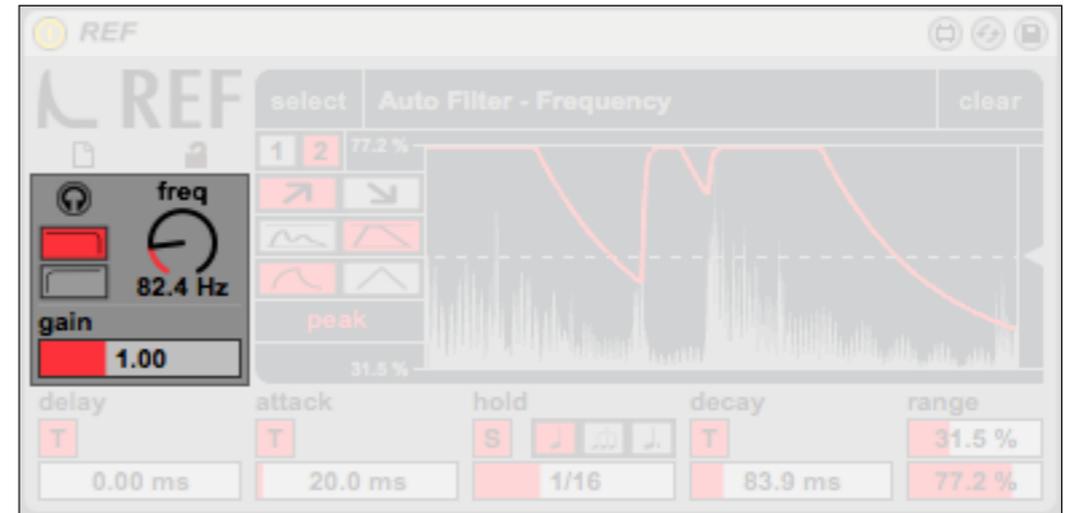


The interface is composed by three main areas:

- Input Area;
- Envelope Area;
- Time Area.

## 4.1. Input Area

Input Area manages audio signals, preparing to scan the amplitude for the envelope generation.



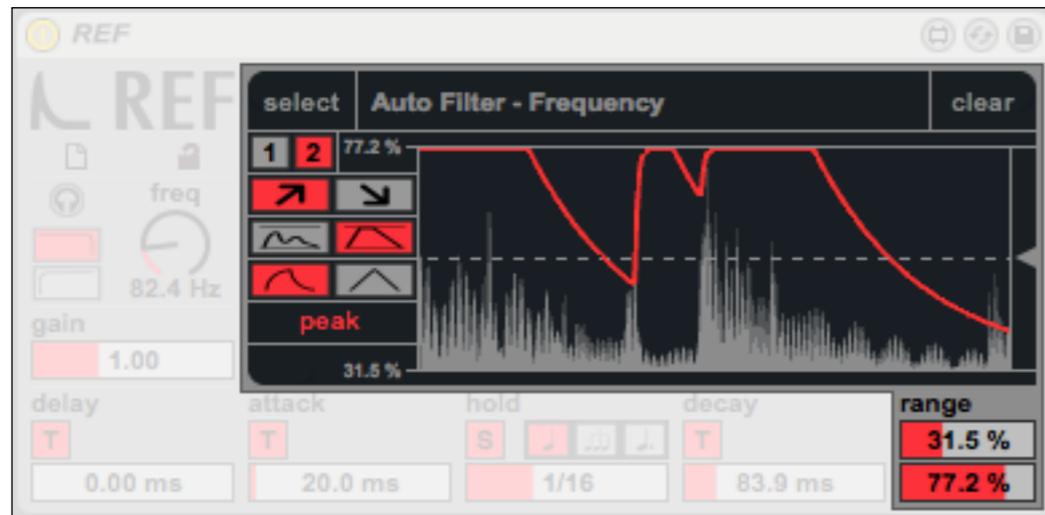
First you can filter your input signal.

Both L+R channels are summed then filtered with a 18 dB/Octave crossover: then you can choose the higher or lower band using the **filter mode** switch. You can set the crossover frequency using the **freq** knob.

The **headphones** button lets you listen to the filtered signal, otherwise the unmodified audio signal comes out from REF.

**Gain** adjusts the amplitude for the filtered signal and prepares it for the envelope generation: it multiplies the signal per 0.5~2.

## 4.2. Envelope Area



According to the Time Area (see [Time Area](#) paragraph), the Envelope Area includes all the tools you need for a creative envelope follower signal.

Click on the **select** button on the top area and then click the parameter that you want the envelope follower to control.

The **clear** button unlinks REF from the controlled parameter.

The switch **1 / 2** lets you choose different zoom level for the display.

The gray triangle on the right of the display is the **threshold**. It works as a compress threshold: you set a level, the incoming signal beyond that level causes a trigger (in this case the envelope starts). Then, as soon the signal falls below the threshold another signal is sent to stop the envelope.

You can even choose between **relative** and **absolute** modulations.

In **absolute** mode ( $\triangle$ ), when triggered, the envelope goes from 0 to 1.

In **relative** mode ( $\overline{\wedge}$ ), when triggered, the envelope goes from 0 to the actual signal level and follows it.

If you are going to use attack and/or decay times (see [Time Area](#) paragraph) then you can have a **linear** or **logarithmic** modulation: use  $\frown$  for logarithmic and  $\wedge$  for linear mode.

REF works in both **peak** and **rms** mode: in **peak** mode the envelope follows on perfect the amplitude of the signal; **rms** mode calculates a sort of average between each amplitude level and creates a brand new envelope from these average values.

If you wish to **scale** the envelope amount just use the two sliders in the bottom right: the higher one is the **minimum level**, the lower one the **maximum level**. Setting a lower value for the maximum level the modulation is translated into negative.

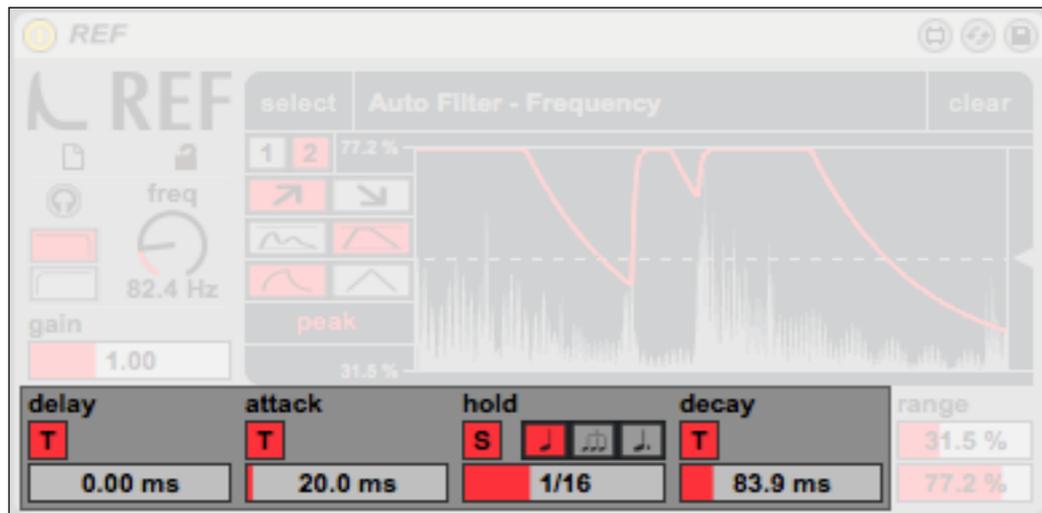
If you want to instant reverse the modulation, keeping the actual range just click on  $\nearrow$  or on  $\searrow$ : the first is the **positive** mode and the second is the **negative** mode. You can map this switch and easily invert the modulation on the fly!

Ranges are displayed even in the top and bottom left of the display, so you can reach and see values quickly.

## 4.3. Time Area

In the Time Area you can set time modulations for the envelope generation.

- the **triple box** that appears only in Sync mode lets you choose between three mode for the value notes: in order normal, triplets and dotted).



It's easy to understand what these parameters are for:

- **delay**: delays the envelopes of the desired time;
- **attack**: sets the time needed for the envelope to reach the maximum;
- **hold**: hold the signal at the higher latest level for the time set by hold (if a new higher value arrives, then hold restarts);
- **decay**: sets the time needed for the envelope to reach minimum.

All these parameters uses the same interface:

- the **T / S** switch (time / sync) lets you choose between absolute time in ms or synchronized note values;
- the **time slider** below is used to set time or note values;