Pana
Natural Panner

Welcome!

This is the user manual for **Pana**, a panning effect plug-in available for iPad (Standalone and AUv3) and Mac & Windows (AU/VST/AAX). It has been designed and developed by Klevgrand, a small studio in Stockholm, Sweden.

[Get the iOS version at the App Store](#)

[Get the AU / VST / AAX version at klevgrand.se](#)

LICENSING (DESKTOP ONLY)

Until unlocked, the plug-in will output 1 second of silence now and then. To unlock the full version, click the Demo label (top left corner) and type/paste your license key.
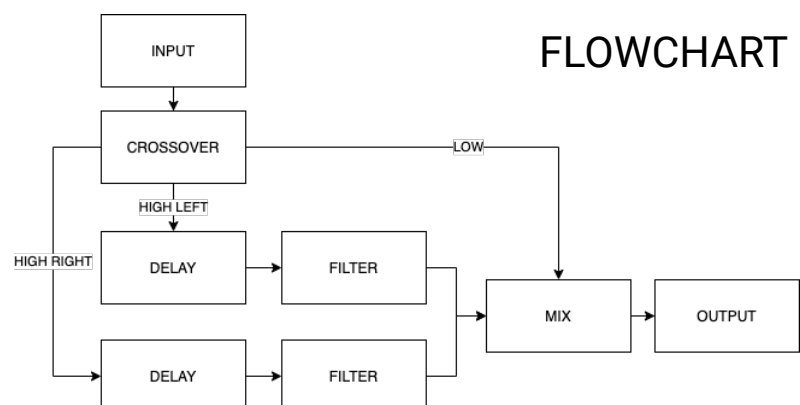
INTRODUCTION

Panning an audio signal can be done in several ways, where the most common is to alter the volume on one channel. This is a CPU efficient way (and many times the best) to achieve a sense of positioned audio. Almost all DAWs and mixing consoles have this feature built-in.

Another way is to add a short delay to one of the channels - the Haas method. This renders a richer sound, but can also make a natural sound sounding unnatural.

A more sophisticated way is to apply a low pass filter to one of the channels. This maintains the audio energy on both channels, but at the same time makes it sound positioned - works very well on transient rich sounds like drums or other percussive instruments.

Pana uses both the delaying and filtering methods combined to achieve natural positioning. This makes this plugin a versatile tool for most types of sounds - and keeping these features in one plug-in makes a great mixing experience. On top of all there's also a crossover filter that makes it possible to leave the low end frequencies 100% untouched to remain the bass centered.

Note: Pana is designed to work with mono like input signals. Though any source is accepted, a too wide stereo signal would probably not produce the desired result.

FLOWCHART

User Interface

1. SIZE

Adjusts micro delay times to emulate the size of a person's head.

2. ROLLOFF

Sets the steepness and frequency of the opposite channel's filter (if panned left, the right channel will be filtered)

3. PAN KNOB

Sets the panning amount and shows the output levels. Note that this parameter is like a macro of Rolloff and Size, and a maximum panning value will process the opposite channel's audio stream with the set values in Rolloff and Size.

4. CROSSOVER

The internal frequency splitter's frequency. Frequencies below the selected value won't get processed.

5. STEREO BUTTON

Press and hold for mono checks

6. PAN LOCK

Locks the pan amount when browsing/loading presets

7. CORRELATION METER

All to the right (green) - Left and right signals are in phase

Middle - Wide stereo

All to the left (red) - Indication of possible phase issues.

8. PRESETS

Click the preset title to open the preset dialog. Click the arrows to quickly browse through the preset list without opening it.

9. Presets category

Factory presets are organized in categories, choose a category to view the presets. Your saved presets will be located in the "User Presets" category.

10.Presets

Click a preset to load it.

11.Save preset

When a user preset has been modified, this button is available. It will save the preset to current state.
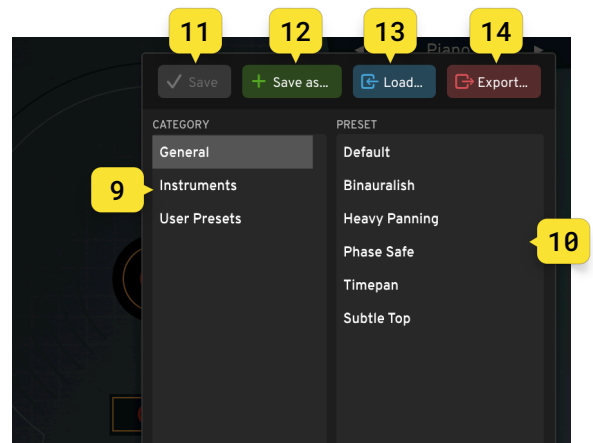
12.Save as…

Click to save the current state into a new user preset.

13.Load…

Click to load a preset from an external file.

14.Export…

Click to export a preset into an external file.

Specifications / System requirements

Mac	Windows	iOS
64 bit AU/VST/AAX plug-in	64 bit VST/AAX plug-in	AUv3 plug-in
macOS 10.10+ OpenGL	Windows 7+ with SP1 or higher	iPad Air 2 or better iOS 13+

KLEVGR.