boz-n

DIGITAL LABS

Pan Knob2

User's Manual

Background

Thank you for purchasing Pan Knob. This plugin came out of a little bit of frustration when it comes to the way panning sound in headphones. It always bothered me that something can sound fine in loudspeakers, but so uncomfortable in headphones. It's even more annoying when you realize that most people listen to music in headphones. So why do we still use traditional panning? Beats me.

Pan Knob fixes this issue by creating a smarter panning algorithm. Rather than panning all frequencies to one side or the other, it pans the high frequencies more extremely than the low frequencies, making it sound more like it would sound in more life, even in headphones. This gives you the option of using this plugin exactly the way you would a traditional pan knob without having to worry about what it will sound like in headphones.

It makes it so you can pan things wherever you want without having to worry about certain instruments sounding odd on their own, or sound like certain tracks are coming from inside your ear. Though simple, it's been a game changing plugin for me, and I hope it offers you the same.

- Boz Millar

System Requirements

Mac: 10.13 or higher
Windows: XP or higher

RAM: 2GB

Hard Drive Space: 150mb

Available Formats

This plugin is available in 64 bit versions of each format. It is available in the following formats:

Mac	VST2, VST3, AU, AAX Native
Windows	VST2, VST3, AAX Native

Installation

Download and run the installer. During the installation, you can choose which formats you would like to install.

Registration

The first time you run Pan Knob 2, it will ask you for your username and serial number. You can find this information in your downloads page. If you do not have a serial number and you would like to demo the plugin you can press "Continue Trial" to use the plugin in trial mode.

Downloads page URL: https://www.bozdigitallabs.com/my-account/downloads/

Trial Mode

When Pan Knob 2 is in trial mode, you can use all of the plugin's functionality. The only difference is that it will not save its settings when you close and reopen the plugin. The preset save function is also disabled, but the default presets will still load.

Top Bar

Presets

Pan Knob 2 comes equipped with its own preset menu. To save a preset, just hit the 'Save' icon next to the preset menu, type the name of the preset and hit *enter*. If you enter a name of an existing preset, the old preset will be overwritten.

Presets can be organized into sub menus by sorting them into folders in your finder/explorer window. Note that the preset menu only supports one layer of sub folders, so if you put presets inside a folder that is inside a folder, the preset scanner will not find them.

Presets are shareable across formats, computers and operating systems. This means that if you save a preset in your DAW in OSX, you can send that preset file to a friend who uses a different DAW on Windows and it will work exactly the same.

For convenience, you can scroll through the presets by hitting the next/previous buttons.

Default Settings: You can customize the default settings of the plugin. If you want to change the default settings of the plugin, right-click the "Save Preset" icon.

Undo/Redo

You can click the undo/redo buttons to step through the changes you have made to the plugin.

About
Open up the *About* page where you can access this user manual and other information about the plugin.

Notepad
This is a simple text box that lets you put notes for your plugin. In a complex mix, it's easy to forget why you added an effect. This lets you write a short description to keep your project organized.

Extended Notepad
Click the "down" arrow in the notepad header to expand a larger notepad where you can write more detailed notes if necessary. Click the "up" arrow to close this window.

Plugin Enable
This switch enables/bypasses the entire plugin.

The Controls

For quick reference, Pan Knob provides a short description of each control when you hover your mouse over any knob or button. This manual will give you a more in depth understanding of what these controls do.

Quick but important note: Panning is, by definition, a stereo process. Therefore this plugin will only work if your DAW is processing your track in stereo. The plugin reports two possible setups to the DAW 1) Mono In, Stereo Out and 2) Stereo In, Stereo Out. Some DAWs will see this configuration and automatically adjust the track to process in stereo. Others will not. If it doesn't, you will need to explicitly tell your DAW that the plugin needs to work in stereo. Each DAW has its own way to do this, so you'll need to check your DAW's manual. You will know right away if your DAW is processing the track in Mono because the Pan knob will just act like a volume knob.

Pan

This is a pan knob. It does exactly what you would think a pan knob should do. Turn it left, the sound goes left. Turn it right, the sound goes right.

Automation Note: Your automation lane will likely be opposite to what your DAWs pan automation lane will be (up is Right, down is Left). This is because automation lanes are specifically flipped for the DAWs internal pan pot to make the left up and the right down. Unfortunately, there's no good way around this when the pan control is coming from a plugin.

Swap

This quick button swaps the position of the pan knob. For example, if the pan knob is set to 25% R, clicking the swap button will set it to 25% L. Obviously nothing will happen if it's set to center.

Mono

Some of the pan methods could have an effect on your mono summed output. Use this button as a quick check to make sure the summed mono output still sounds ok.

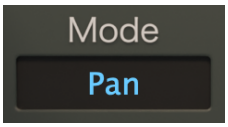
Pan Methods

Pan Knob 2 offers two different types of panning. Volume and Delay (or both at the same time). Each method provides a very different sound. Understanding the pros and cons of each method will help you to know the best choice for your application.

Volume

This is your typical pan algorithm, probably exactly the way your DAW does it. It pans your sound by adjusting the volume on the left and right channels. Turn down the right channel, you hear the sound coming from the left. Pretty basic stuff. But it has a few options to give you a bit more control over how it does this.

Mode



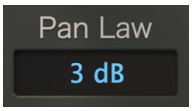
You can toggle between *Balance* and *Pan*. This only affects stereo tracks. If you are panning a mono track, you will get the same results whether you select *Balance* or *Pan*.

Pan: When set to Pan, the pan knob takes content from the right channel and pans it over to the left channel. For example, if you have a doubled vocal track with one vocal panned left and the other panned right (I'm talking traditional panning here), setting this plugin to *Pan* and bringing it to the left will make both vocals play out the left channel.

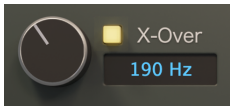
Balance: This is how pan knobs typically behave on stereo content. If we take the above situation (stereo tracked vocals) and pan it to the left in *Balance* mode, it will only turn down the right channel.

Law

This lets you choose your panning law. Choose whichever sounds most natural to you. Just keep in mind that the panning function can change the level of the track depending on which law you have chosen. For example, when set to -6dB, panning 100% to either side will turn the volume up by 6dB. When set to linear, there is no boost when panning.



X-Over



This is where things get good. When the X-Over is disabled, the pan knob acts as a normal (dumb) pan knob. When you engage the X-Over, it gives a very gradual crossover to the panned sound, so that only the high frequencies are fully panned, leaving the low frequencies centered. This causes the pan to sound way more natural in headphones, but will make very little difference in the way the pan sounds in loudspeakers.

To engage the X-Over control, you can either click the power button or just drag the knob.

Delay

In addition to adjusting the volume like a normal pan control, Pan Knob lets you apply a very small delay to one channel. To understand why this works, think about how a sound wave hits your head. If the sound is coming from the left, it will hit your left ear first before traveling around your noggin and reaching your other ear. The delay is small (about half a millisecond) but that small delay is what our brain uses to determine where sounds are coming from.

Note: When applying a delay to one channel, it will introduce comb filtering when summing to mono. Check your mix

Max Delay

This is the value of the delay that will be applied when you pan to 100%. As you adjust the Pan control, the actual delay will adjust accordingly. When Pan is set to center, there will be no delay applied. A typical head is about 7 inches wide, which means a typical delay will be .5ms when coming from the side. You can increase the max delay to account for fat headed people.

Note: For the most realistic sounding panning on headphones, you can use a combination of both volume and delay with a crossover. The combination of the two will not just give you left and right control, but also distance. To enable both modes, click the middle mode button.

Credits

Plugin concept and design: Boz Millar
Graphic design: Boz Millar

Contact

If you ever run into issues or have any questions, you can send an email to support@bozdigitallabs.com.