

# RePAN v1.1 User Manual

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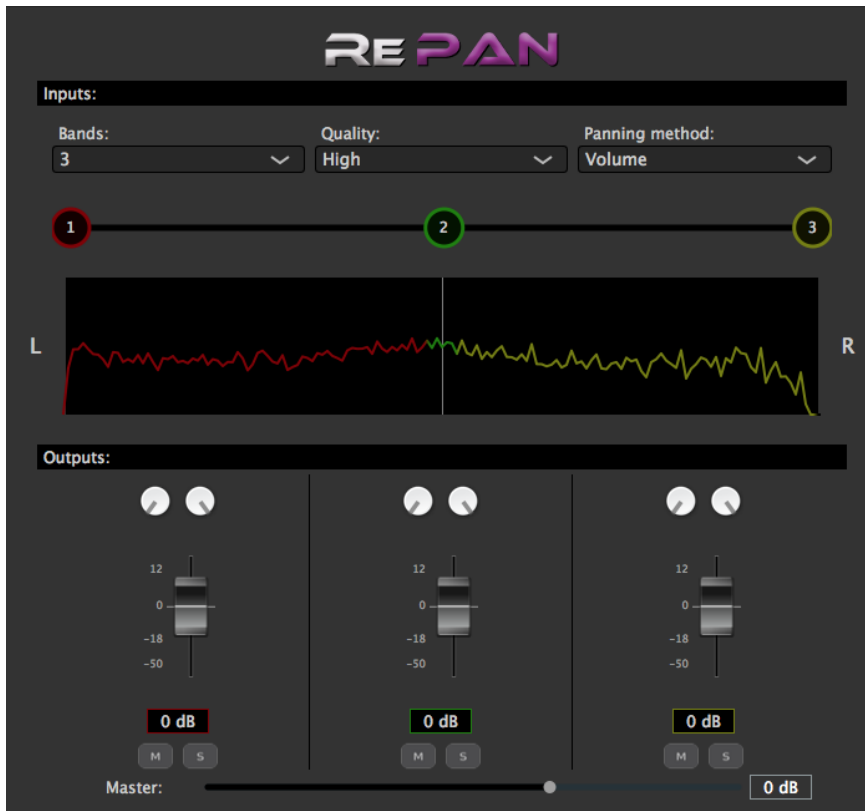
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# 1 Installation and Registration

RePAN is downloaded in a zip file. To use RePAN, extract the zip file and run the installer (*RePAN.dmg* for Mac, *RePAN Setup.exe* for Windows). The installer will copy the plugin files to your main plugin directories. Then open your DAW of choice and insert the plugin on a stereo audio track. On launching RePAN will then ask you for your PACE credentials and the associated licence code. Once these have been provided RePAN will then be activated for use. Note that RePAN uses iLok anti-piracy protection and so it is necessary to have an iLok account. The licence can be activated either on a modern iLok dongle or via iLok cloud.

# 2 Quick Start



*RePAN plugin interface*

RePAN is an audio plugin that separates audio sources depending on their spatial position in a mix. It is important to note that this plugin is designed to work on stereo mixes and that *it does not work on mono mixes*. RePAN takes the input stereo mix and divides its stereo field into several bands, each of which can be individually manipulated through

the output mixer of the plugin. The fastest way to understand the basics of RePAN is to apply the plugin on an audio track in your DAW.

On opening, RePAN divides the stereo field into 3 bands, positioned at left, center and right respectively. Muting the center band allows you to hear the left and right bands with the center removed while soloing the center band allows you to hear it in isolation. It is also possible to change the level and/or the pan position of a given band using the level slider and pan knobs for the band. RePAN also allows the user to adjust the spatial position of these bands in order to optimise the audio quality captured by the band. For example, if a vocal has been positioned slightly off-center, the position of the band can be adjusted to that of the vocal. It is also possible to adjust the number of bands used to split the stereo field, giving finer control over what can be captured by RePAN. The following sections explain the various parameters and controls available in the plugin in detail.

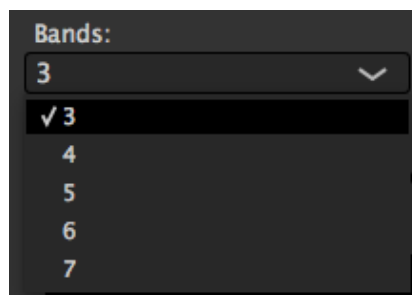
RePAN also allows the user to adjust the spatial position of these bands in order to optimise the audio quality captured by the band. For example, if a vocal has been positioned slightly off-center, the position of the band can be adjusted to that of the vocal. It is also possible to adjust the number of bands used to split the stereo field, giving finer control over what can be captured by RePAN.

The following sections explain the various parameters and controls available in the plugin in detail.

## 3 Inputs

The *Inputs* section of the RePAN plugin contains controls which determine how RePAN processes the input stereo audio, as well as a visualisation to aid with the separation/remixing process. These are explained in detail below. It should also be noted that the input parameters and controls are all fully automatable.

### 3.1 Bands

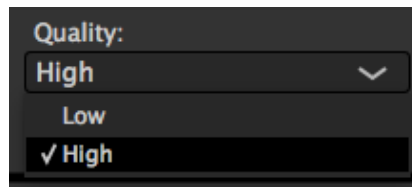


***Bands Menu***

RePAN works by dividing the stereo field into several different *Bands*. The number of bands used can be adjusted by the user from 3 - 7 bands.

The initial number of bands on opening RePAN is 3 and by default, these bands are spaced evenly across the stereo field, at left, center and right. However, there can be situations where there are more than 3 unique pan positions for sources in the mix, and so in these situations, the number of bands can be changed to match the number of pan positions. Increasing the number of bands can also be used to give greater control over the recovery of certain sources. It is important to note that changing the number of bands always results in the bands being spaced evenly over the stereo field, and previous changes to band positions will be lost on changing the number of bands.

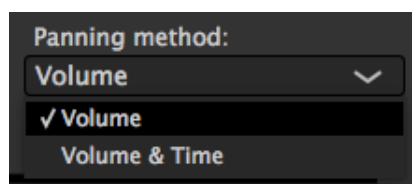
### 3.2 Quality



**Quality Menu**

This setting controls the audio *quality* of the separations returned by RePAN. The default setting is high, which gives the best possible audio quality. Most modern computers should be capable of running RePAN with ease at high quality. However, in cases where CPU power is limited, setting quality to low will reduce the amount of computation power required, while still giving reasonable separation results.

### 3.3 Panning Method



**Panning Method Menu**

By default, RePAN assumes that panning in the stereo field has been achieved by *Volume* or amplitude-based panning, such as is done by a standard pan knob. However, depending on how the material was recorded, or due to the presence of certain effects, there may be a time-delay associated with the apparent pan position of some of the sources. In such cases, better results can sometimes be achieved by switching the panning method to "Volume & Time" based panning.

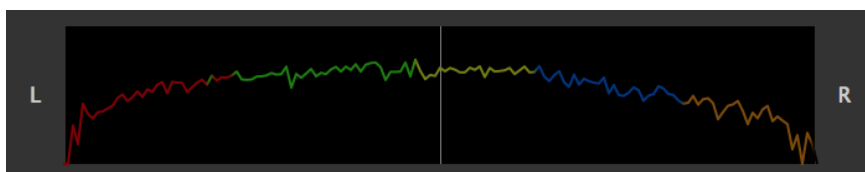
### 3.4 Band Position Sliders



**Band Position Sliders**

As noted above, by default RePAN positions the chosen number of bands so they are evenly spaced across the stereo field. However, the band positions may not match the actual positions of the sources in the stereo field. In this case, by clicking and dragging on a given *band position slider*, the centre position of a given band can be moved to match that of the actual source. An alternative use for these sliders is to increase the recovery of a given source by positioning a few bands close to the source position and then using these bands in combination to capture the desired source. When used in this way, the extra bands are used to widen the region of the stereo field captured when attempting to separate a given source. Note that any band position slider can be returned to its default position by double-clicking on the band position slider.

### 3.5 Spatial Energy Display



**Spatial Energy Display**

The *Spatial Energy Display* shows a time-varying display of the amount of energy coming from different points in the stereo field. This can be useful to help identify where sources are coming from in the stereo field. Note that the spatial energy display contains colour-coded regions which approximately indicate which band currently controls the energy coming from that point in the stereo field. When moving a band position slider during playback, the region controlled by the band will be seen moving in unison with the position of the band.

## 4 Outputs

The *Outputs* section of the RePAN plugin contains a mixer which controls the audio output of the plugin, as well as a master volume slider which controls the overall output level of the plugin. These are explained in detail below. It should also be noted that all mixer parameters are fully automatable.

## 4.1 Mixer



***Band Mixer Channel Strip***

Each band in the RePAN plugin has an individual channel strip which controls the audio output from a given band. Each band outputs a stereo audio signal and at the top of each channel, strip are 2 pan knobs. These are used to control the pan position of each channel of a given band's stereo audio signal. These can be used to change the spatial position of a band in the mix. For example, a vocal originally panned to the left could be repositioned to the center using these pan knobs. Double-clicking on a knob will reset it to its default position.

Below the 2 pan knobs is a volume slider which controls the level of the audio output by the band. This can be used to change the volume of the band, allowing it to be made louder or reduced in volume as desired by the user. Alternatively, clicking on the text box below the slider allows the user to input the desired level in db. The outline of the text box is colour-coded to match that of the associated band position slider. Double-clicking on the volume slider resets it to its default position.

Below the text box are mute and solo buttons for the band channel strip. These are independent for each band, and so it is possible to have multiple channels muted or soloed at once.

## 4.2 Master Volume Slider



***Master Volume Slider***

The *Master Volume Slider* controls the overall volume of the audio output of RePAN. Alternatively, the desired output level can be set by clicking on the text box next to the Master Volume Slider and inputting the desired value. Double-clicking on the Master Volume Slider will reset the slider to its default value of 0 db.