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1. PREFACE

Fix poorly aimed stereo recordings!

Have you ever worked with stereo material that was not centered correctly? Pointing a stereo microphone a hundred percent accurately onto a sound source gets harder the further away the source is. RECENTER continuously analyzes the directionality of a stereo or M/S signal and rotates it to a given target angle in real-time - without narrowing the stereo width.

RECENTER is a stereo processor that rotates an incoming stereo signal to the center or a given angle without altering the stereo width. Having the incoming signal centered, you can narrow or widen the stereo image within RECENTER. For a better low frequency control you can mono the original signal below a set frequency. A multi-band processing option intelligently shifts more complicated signals.

Easily correct any stereo recording where the microphone angle was off, dynamically center a vocal artist that moved on stage during the performance or center and reposition whooshes, drive-bys and other hard directional effects. No more need for time-consuming corrective pan automation!

From the necessary quick fix to detailed stereo adjustment – RECENTER is at your service.

1.1. Minimum System Requirements

Windows 7 (64-bit), 4 GB Ram, Intel® Core™ i5
macOS 10.9, 4 GB Ram, Intel® Core™ i5
64-bit VST2.4 or AU host or Pro Tools 11

1.2. Installation

After downloading and opening the installer for the RECENTER plug-in please follow the on-screen instructions to install the RECENTER plug-in. Files will be copied into the common VST2.4, AU (macOS only) or Pro Tools plug-in folders on your computer. Your host should recognize the plug-in automatically with the next restart and you will be asked to register the RECENTER with your iLok account. If the host does not recognize the plug-in automatically, please follow these instructions for manual installation:

1.2.1. Windows

If your host does not recognize the plug-in, you might need to manually copy it to the host specific plug-in path. Please locate the plug-ins folder and copy the “RECENTER.dll” from C:\Program Files\BOOM Interactive\RECENTER to this host specific folder.

1.2.2. macOS

On macOS you will find the standard plug-in folders in the system library folders. The paths are as follows:

Audio Units (AU): /Library/Audio/Plug-Ins/Components
VST/VST3: /Library/Audio/Plug-Ins/VST and /Library/Audio/Plug-Ins/VST3
AAX: /Library/Application Support/Avid/Audio/Plug-Ins

AU and VST/VST3 plug-ins may be placed in the user’s library folders under as well:

USER/Library/Audio/Plug-Ins
1.3. iLok Registration

During the first start of your host after installation, the iLok registration window pops up. The RECENTЕR is licensed using the Pace iLok system. You need to have an iLok account in order to use the RECENTЕR, however setting up an iLok account is free on www.ilok.com. You will find all necessary information on how to setup an iLok account on www.ilok.com. You can either authorize your computer or a 2nd or higher generation iLok. A second-generation or third-generation iLok (iLok2 or iLok3) is a product of Pace that can be purchased directly from www.ilok.com or from any music retailer.

Please download the iLok Manager at www.ilok.com.

After your purchase, you automatically receive an order confirmation from us containing the download link for the installer plus a 30 digit long iLok activation code (i.e. 1234-1234-1234-1234-1234-1234-1234-12).

- To activate this license, open the iLok License Manager application.
- Either select the menu Licenses -> Redeem Activation Code or click on the small Redeem Activation Code Icon on the upper right of the application.
- You should then copy paste the entire code you received from us into the entry form. Select your iLok as the activation location to immediately activate the license on this iLok and confirm the location.
- Now you are ready to go. Here is a step by step tutorial for that: http://www.youtube.com/watch?v=1cOGCkRz5hk

2. QUICK START

Create a stereo track and, within it, place a sound which needs to be centered. Add RECENTЕR as insert effect to said track.

Depending on the type of source sound, your audio may now already sound perfectly centered while retaining its initial stereo feel thanks to RECENTЕR’s automatic real-time processing.

The stereo monitor in the middle will give you a good idea of where your signal is placed within the stereo image. If it needs further adjustment, the surrounding controls offer further tweaking options, which will be explained in more detail here.
3. GUI OVERVIEW

Just in case you will not read this again, there is one basic rule to keep in mind:

**Every white element in the interface is either a button, a knob or a numeric input and can be altered or pressed.**

Tool Tips will be displayed when hovering 3 seconds above any parameter.

3.1. HEADER, LOGO

![Logo](image)

Clicking on either logo will open a little About window, showing the people involved in the development of this plug-in.

3.2. STEREO MONITOR

The Stereo Monitor displays your signal’s current placement within the stereo spectrum, giving you instant visual feedback of what can be heard.

![Stereo Monitor](image)

In this example, the processed sound (OUT) is displayed as active, while the source signal (IN) is greyed out and in the background. That way, you can quickly make accurate comparisons between the original sound and the result.

3.2.1. IN / OUT TOGGLES

![IN OUT](image)

Choose which signal you’d like to view primarily:

- **IN**: View the unaltered, original signal. RECENTER often mirrors the sound’s movement in high detail visually, making it easier for you to identify the issue.

- **OUT** (Default): Displays the processed end result, including angle and width adjustments. Tailor the output signal exactly to your need with this visual aid.
3.3. UPPER CONTROLS

3.3.1. Intensity
Specifies the amount of correction. At 100% the plug-in will work at full capacity to center the stereo signal. Go above 100% to overcompensate and force the correct alignment where necessary.

3.3.2. Response
Determines the speed at which the plug-in corrects the signal. Lower values cause less artifacts, whereas higher values respond faster, as the Stereo Monitor will also show.

3.3.3. Mono Filter
If needed, the Mono Filter reduces all audio to mono below a certain threshold, which can be adjusted with this control. Turning it all the way down disables the filter.

3.3.4. Lookahead
Controls how far ahead the incoming signal is analyzed. Values above 0ms introduce latency but usually yield more robust results.

3.4. ANGLE & WIDTH

These two sliders let you make final adjustments to the already centered signal.

3.4.1. Angle
Rotates the signal to an angle you specify. This is 0° by default (center).

3.4.2. Width
Expands or reduces the final stereo width.

<table>
<thead>
<tr>
<th>0%</th>
<th>100%</th>
<th>200%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mono</td>
<td>Original stereo width</td>
<td>Highly widened stereo</td>
</tr>
</tbody>
</table>

By using negative values, you can invert the stereo image.
3.5. BOTTOM PANEL

3.5.1. MS Input
If you are working with a Mid-Side recording, activate this checkbox to enable automatic MS decoding. The signal will be converted to LR before being processed.

3.5.2. Multiband
Toggles multiband processing. While slightly increasing the plug-in’s CPU load, it can yield better results, especially when the signal features different directionality in different frequency ranges. Multiband mode operates with four frequency bands:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0Hz - 150Hz</td>
<td>150Hz – 1,200Hz</td>
<td>1200Hz – 5,500Hz</td>
<td>5500Hz – 20,000Hz</td>
</tr>
</tbody>
</table>

3.5.3. Output
Adjusts the final output volume of your signal.

4. TIPS AND TRICKS

4.1. Perceived vs. technical center
The technical center (as seen in the Stereo Monitor) may sometimes differ from the perceived center (what you hear). In that case, lower the Stereo Width and use the Angle parameter to pinpoint and move the signal to the perceived center.

You can also try modifying Intensity to over-/undercompensate for the detected source direction.

4.2. Headphones vs. speakers
Most applications require the signal to sound correct on both headphones and speakers. If possible, cross-check the result frequently on both systems, as factors like perceived center and stereo width usually vary depending on your monitoring device.

4.3. Mono Filter
Using the Mono Filter helps to get punchier and more defined low frequency responses.

4.4. Multiband
While Multiband mode utilizes more processing power, it is not always the best choice. Use your ears and best judgement to determine which option fits your input signal best.
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