ReBeat

User's Guide

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Introduction

Welcome to ReBeat, a revolutionary AI-based drum separation tool trained from the ground up for discrete drum stem separation. While many stem separators attempt to handle full mix separation (vocals, guitars, etc.), we trained ReBeat to focus exclusively on drum tracks, resulting in unprecedented clarity and control over your drum mixes.

Traditional stem separators often struggle with the complex nature of drum tracks. By leveraging our experience with drum recording while developing Drumagog, we used thousands of hours of in-house drum recordings for our custom training set. As a result, ReBeat is able to separate a drum track (or a full mixed track) into seven distinct stems: kick, snare, hi-hat, toms, ride, crash and "other". The "other" category contains any audio that doesn't fit into the other stem categories.

Whether you're fixing balance issues in a recorded drum performance, fixing bleed issues in existing drum stems, creating remixes, or simply wanting more mixing flexibility, ReBeat provides the tools you need to achieve professional results.

Getting Started

System Requirements

Before installing ReBeat, ensure your system meets the following requirements:

Windows:

Windows 10 or later
Minimum 16GB RAM
1GB available hard drive space
Compatible DAW for plugin versions (VST3 and AAX)
Intel i5/AMD equivalent or better processor (recommended)

Mac:

macOS 11 (Big Sur) or later
Supports both Intel and Apple Silicon processors
Minimum 16GB RAM
1GB available hard drive space

Compatible DAW for plugin versions (VST3, AU and AAX)

Available Formats

ReBeat comes in multiple formats to suit your workflow:

Standalone application - Perfect for batch processing and stem export
VST3 plugin - Compatible with most modern DAWs
AU plugin - For Mac-based DAWs like Logic Pro and GarageBand
AAX plugin - For Pro Tools integration

Feature Overview

- Automatically separates drum tracks into Kick, Snare, Hi-hat, Toms, Ride and Crash
- All the processing is done on your computer – no cloud service needed.
- Independent volume control for each stem
- Mute and Solo buttons
- Drumagog drum-replacer included for kick and snare stems
- MIDI Output on Kick and Snare
- Look-ahead noise gate
- Transient shaper for boosting or reducing attack and sustain
- Automatically syncs with your DAW tracks
- Provides separate stem bus outputs (Pro Tools only)
- Comes with a comprehensive Drumagog sample library

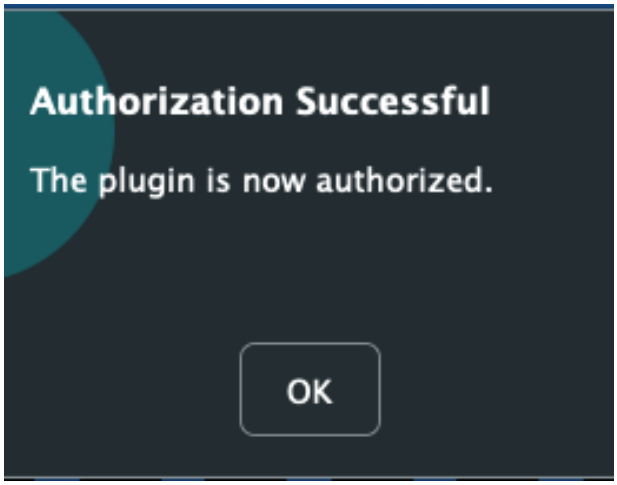
Using ReBeat

Authorizing

The first time you open ReBeat in your DAW or the standalone version, the authorization window will automatically appear.

The Email and Password that you will use to unlock ReBeat will be the same credentials that you use to access into your account at ReBeatApp.com and drumagog.com.

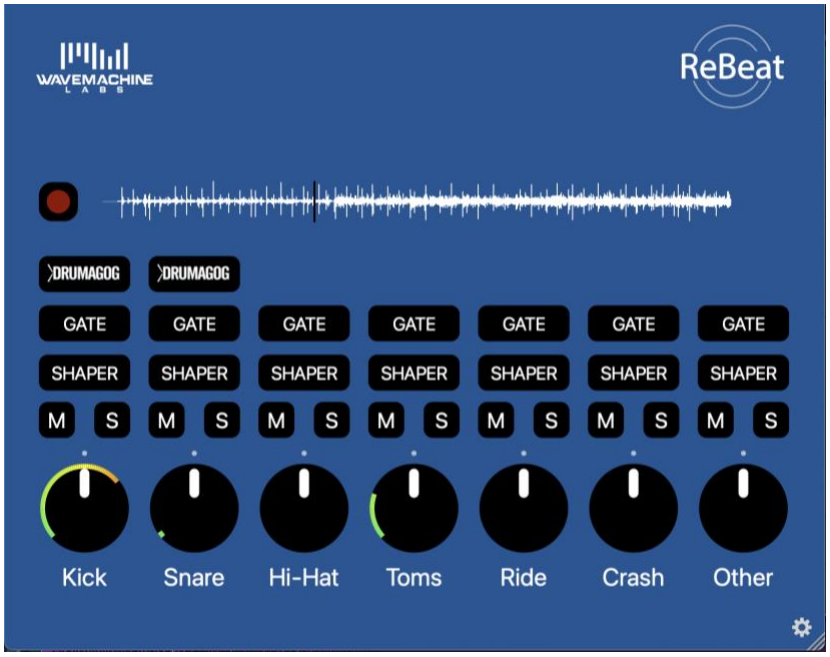
When you put in the correct authorization information, you will receive a “success” message.



If you have not yet purchased ReBeat, you can click the ‘Start Trial’ button to start your 14-day free trial. During the trial version there will be an audible beep throughout your playback from ReBeat. Close and re-open the app once you are ready to authorize it.

Plugin Version

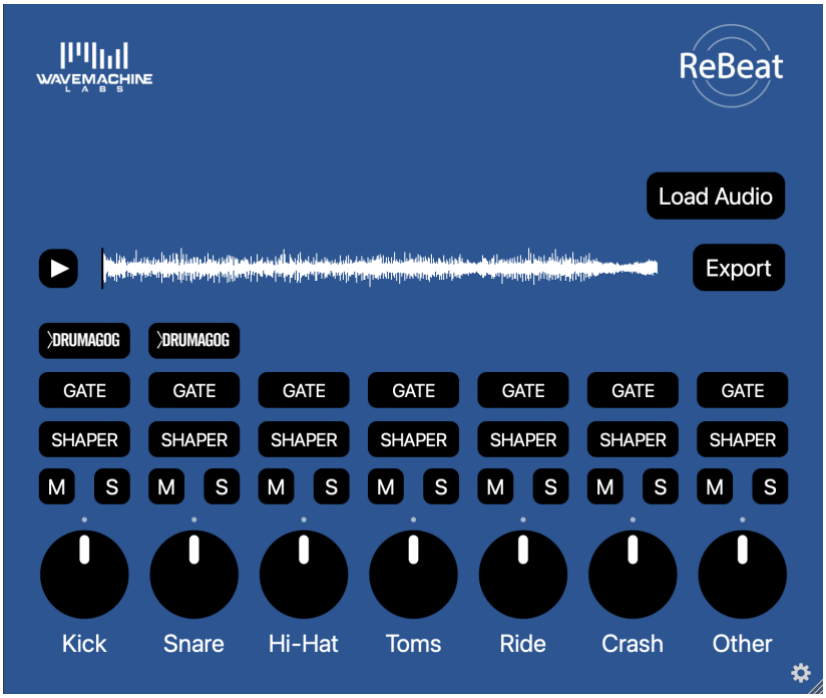
The plugin version of ReBeat is designed to integrate seamlessly with your DAW workflow. Here's a detailed guide to getting started:



1. Insert ReBeat on your drum track in your DAW.
2. Rewind your DAW to the start of the drum section.
3. Press the record button in ReBeat (red circle). It will flash, indicating that ReBeat is in “record ready” mode.
4. Start playback in your DAW.
5. Allow the entire drum section to play through.
6. Stop your DAW when finished.
7. ReBeat will automatically begin processing. Depending on the length of your audio, this may take several minutes.
8. Wait for the progress bar to finish. Once completed, you will see a waveform appear in ReBeat’s plugin window.
9. Now, whenever you play the audio in your DAW, ReBeat will play your drums stems in sync.

Standalone Version

The standalone version offers additional functionality for working outside a DAW environment:



1. Load the ReBeat application from your Applications (Mac) or Program Files (PC) folder.
2. Click the "Load Audio" button
3. Navigate to your audio file (supported formats- WAV, AIFF, MP3).
4. Processing will begin automatically. Depending on the length of your audio, this may take several minutes.
5. After processing is finished, press the play button to play back your stems
6. You can click inside the waveform to jump to another location in the audio file.

Looping in the Standalone Version

The standalone version of ReBeat supports looping. To set up a loop, simply drag onto the waveform with the mouse. This will define a region (shown as a grey highlighted area on the waveform). Whenever playback reaches the end of the defined region, it will loop back to the beginning of the region.

Zooming

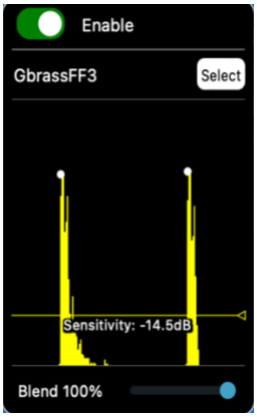
The standalone version also supports zooming on the waveform. To zoom, just move the mouse cursor to the waveform and use the mouse wheel to zoom in or out.

Exporting Audio

The standalone version has several options for exporting your stems. In the settings page ('gear' icon in the lower right corner), you can control whether to export raw stems or processed stems as well as choosing to export a stereo mixed track along with the stem files.

Effects

Drumagog Drum Replacer



ReBeat includes Drumagog, the state-of-the-art drum replacer on the kick and snare stems. Drumagog automatically replaces the drums with your choice of other drum samples. Drumagog enables endless sonic possibilities by allowing you to either fully replace or augment the original stems. Drumagog comes with a comprehensive sample library of Gog files (Drumagog's proprietary multisample format), and you can also load your own WAV or AIF files. It features a blend control to adjust the mix between the original stem and the replaced sample, and on samples that support it, adjustable room levels.

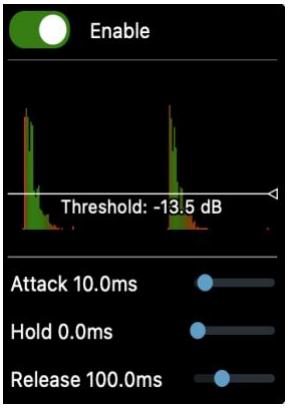
Drumagog also provides a MIDI output, allowing you to trigger external virtual instruments every time the kick or snare is heard.

Using Drumagog

1. **Enable Drumagog** using the switch at the top.
2. **Choose a sample** by pressing the 'Select' button and choosing a compatible drum sample.
3. **Start playback** and adjust the triggering level using the sensitivity control.

Each time Drumagog triggers, it will show a white trigger circle on the real-time waveform. You can adjust the blend control (and room levels for samples that support them) on the bottom of the window.

Look-ahead Gate



The Gate in ReBeat is a powerful look-ahead noise gate designed to give you control over the dynamics in your drum stems. By analyzing the incoming signal, the gate allows you to remove unwanted noise, tighten up performances, and shape the overall sound of your drums. The look-ahead functionality ensures that the gate opens and closes seamlessly, even with fast transients, making it ideal for both live and electronic drum tracks.

Using the Gate

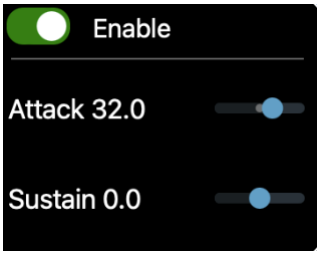
1. **Enable the Gate**: Click the enable switch.
2. **Adjust the Threshold**: The threshold determines the level at which the gate opens. Lower the threshold to allow quieter sounds through or raise it to block softer noise.
3. **Fine-Tune the Dynamics**:

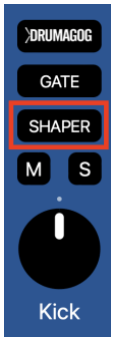
- **Attack**: Controls how quickly the gate opens after the signal exceeds the threshold. A faster attack is ideal for sharp transients like snare hits, while a slower attack can soften the onset of the sound.
- **Hold**: Sets the minimum time the gate remains open after the signal drops below the threshold. Use this to prevent the gate from closing too quickly on sustained sounds like toms or cymbals.
- **Release**: Determines how quickly the gate closes after the hold time expires. A slower release can create a more natural fade-out, while a faster release tightens the sound.

4. **Visualize the Effect**: The real-time waveform display shows the incoming audio signal, with green sections indicating audio passing through the gate and red sections showing audio being blocked. Use this visual feedback to fine-tune your settings.

The Gate is particularly useful for cleaning up bleed from other drum mics in acoustic drum recordings or for isolating specific elements in electronic drum loops. Experiment with the settings to find the perfect balance for your mix.

Transient Shaper





The Shaper in ReBeat is a transient shaper designed to give you control over the attack and sustain characteristics of your drum stems. Whether you want to add punch to a kick, emphasize the snap of a snare, or reduce the resonance of a tom, the Shaper allows you to sculpt the dynamics of your drums with precision.

Using the Shaper

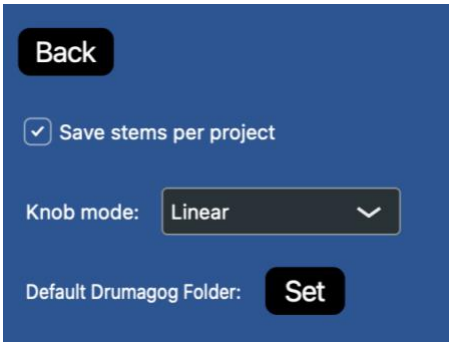
1. **Enable the Shaper**: Click the enable switch at the top.

2. **Adjust the Attack**: The Attack slider controls the initial transient of the sound. Moving the slider to the right increases the attack, making the sound punchier and more aggressive. Moving it to the left reduces the attack, softening the transient.
3. **Adjust the Sustain**: The Sustain slider controls the tail of the sound. Moving the slider to the right increases the sustain, making the sound longer and more resonant. Moving it to the left decreases the sustain, tightening the sound and reducing resonance.
4. **Return to Default**: Double-click on the sliders to return them to their default (center) position, which represents no shaping.

Practical Applications

- **Kick Drum**: Increase the attack to make the kick punch through the mix, or reduce the sustain to tighten the low end.
- **Snare Drum**: Boost the attack for a sharper crack, or reduce the sustain to minimize ring or resonance.
- **Hi-Hats and Cymbals**: Use the Shaper to control the brightness and decay of high-frequency elements.
- **Toms**: Adjust the sustain to emphasize or reduce the natural resonance of the toms.

Managing Stem Audio Storage



In order for ReBeat to work successfully, it needs to store your stems in a location on your hard disk. ReBeat provides two modes for storing stem audio, giving you flexibility in managing your hard drive space and workflow. These modes can be configured by checking or unchecking the **Save Stems Per Project** option in the settings page.

When **Save Stems Per Project** is checked, it creates a dedicated folder for each instance of ReBeat you are using. This ensures that every DAW project retains its own unique set of stems,

making it ideal for working on multiple projects simultaneously or revisiting older sessions. However, this mode requires more hard drive space, as each project's stems are stored separately. Additionally, if you delete a project from your DAW, the associated ReBeat folder will not be automatically removed, so you may need to manually delete these folders to free up space.

When **Save Stems Per Project** is unchecked, ReBeat saves all stems in a single folder, overwriting previous recordings when new stems are processed. This mode is more space-efficient and is recommended if you plan on bouncing or freezing your ReBeat tracks after processing. While this mode is convenient for quick workflows, it's important to note that stems from previous projects will be lost when you start recording new audio into ReBeat.

Choosing the right storage mode depends on your workflow and storage needs, so consider how you manage your projects and disk space when configuring this setting.

Keep in mind that the folder where ReBeat stores its data is not located in your actual project folder, as ReBeat has no way of knowing the location of your DAW's project folder. The data is stored in a special folder:

Mac: ~/Library/Application Support/ReBeat/Audio
PC: /Users/(your name)/AppData/Roaming/ReBeat/Audio

Using Individual Bus Outputs in Pro Tools

ReBeat supports individual stem bus outputs in Pro Tools, allowing you to route each drum stem to its own audio track for additional mixing and processing.

To use this feature, first insert ReBeat on a track containing your drum audio. After processing the track, create up to seven additional audio tracks in Pro Tools—one for each stem (Kick, Snare, Hi-Hat, Toms, Ride, Crash, and Other). On each of these new tracks, set the input to **Plugin > ReBeat > [Stem Name].** For example, assign the Kick stem to one track, the Snare stem to another, and so on. Once the inputs are assigned, enable **Input Monitoring on each track (the "I" icon)** to hear the audio. Now, when you play your session, each stem will be routed to its respective track, giving you full control over each stem

If you need individual stem files for use in other DAWs or projects, consider using the standalone version of ReBeat to export the stems directly.

Frequently Asked Questions (FAQ)

General Questions

What file formats does ReBeat support?
ReBeat supports WAV, AIFF, and MP3 file formats. These formats can be loaded into the standalone version for processing. For the plugin version, ReBeat works directly with audio tracks in your DAW.

Does ReBeat require an internet connection to process audio?
No, all processing is done locally on your computer. ReBeat does not rely on cloud-based processing, ensuring faster performance and greater privacy.

Can ReBeat process full mixes, or is it limited to drum tracks?
While ReBeat is optimized for drum tracks, it can process full mixes. However, the results may vary, as the AI is specifically trained to isolate drum elements. Non-drum sounds may be grouped into the "Other" stem.

Installation and Compatibility

What are the system requirements for ReBeat?
Windows:
Windows 10 or later, 16GB RAM, 1GB of free hard drive space, and an Intel i5/AMD equivalent or better processor.

Mac:
macOS 11 (Big Sur) or later, 16GB RAM, 1GB of free hard drive space, and support for both Intel and Apple Silicon processors.

What plugin formats are supported?
ReBeat is available as a VST3, AU, and AAX plugin, making it compatible with most modern DAWs, including Pro Tools, Logic Pro, Cubase, Ableton Live, and more.

How do I install ReBeat?
Download the installer from the our website, run the installation file, and follow the on-screen instructions.

Does ReBeat have a trial version?
Yes, after installing you can activate a 14-day trial by pressing the Start Trial button. In trial mode you will hear an audio beep in the stem audio every few seconds.

Does ReBeat work on ARM-based and Intel Macs?

Yes, ReBeat is fully compatible with Apple Silicon (M1/M2) Macs, as well as Intel-based Macs.

Using ReBeat

How do I export stems in the standalone version?
After processing, click the **Export** button. In the settings, you can choose to export raw stems, processed stems (with effects applied), and/or a stereo mixed track.

What happens if I move the DAW transport to a section that wasn't recorded by ReBeat?
ReBeat will not play audio for sections that weren't recorded during the initial capture phase. The waveform display will appear grayed out in these areas. To resolve this, ensure the entire section of the drum track is recorded into ReBeat.

Troubleshooting

Why is ReBeat not producing any sound?
Ensure that the DAW transport is within the range of the recorded audio. If the waveform appears grayed out, the transport is outside the recorded section. Rewind to the recorded portion to hear the stems.

Why do my cymbal stems sometimes cut off when other instruments play?
This is a common occurrence in stem separation due to how audio spectrum sharing works. When multiple instruments play at the same time (like a snare and a cymbal), they compete for energy across the frequency spectrum. When a loud transient occurs (like a kick or snare hit), it momentarily uses up most of the available energy in the spectrum, leaving little room for other sounds like cymbals. This effect is most noticeable with cymbals because they have long decay times and occupy a wide frequency range. When a loud drum hit occurs, the cymbal decay may appear to "duck" or decrease in volume temporarily. This is not a flaw in the separation process, but rather an inherent limitation of how audio energy must be distributed among the stems.

Why are my stems clipping?
Check the volume knobs for each stem. If the knob wiper flashes red, it indicates clipping. Reduce the stem volume to avoid distortion.

Why are my stems missing after switching projects?
If you're not using **Save Stems Per Project** mode, any stems from previous projects are overwritten when new stems are processed. Switch to **Save Stems Per Project** in the settings page to retain stems for individual projects.

For more information visit ReBeatApp.com

Citations

ReBeat is based on custom-built demixing architecture and makes use of MIT-licensed technology. We are grateful to the following individuals and companies for their contributions to the open source community:

Roman Solovyev (ZFTurbo) (Music Source Separtion Training)

Hybrid Transformers for Music Source Separation (Demucs)

Hybrid Spectrogram and Waveform Source Separation (Demucs)