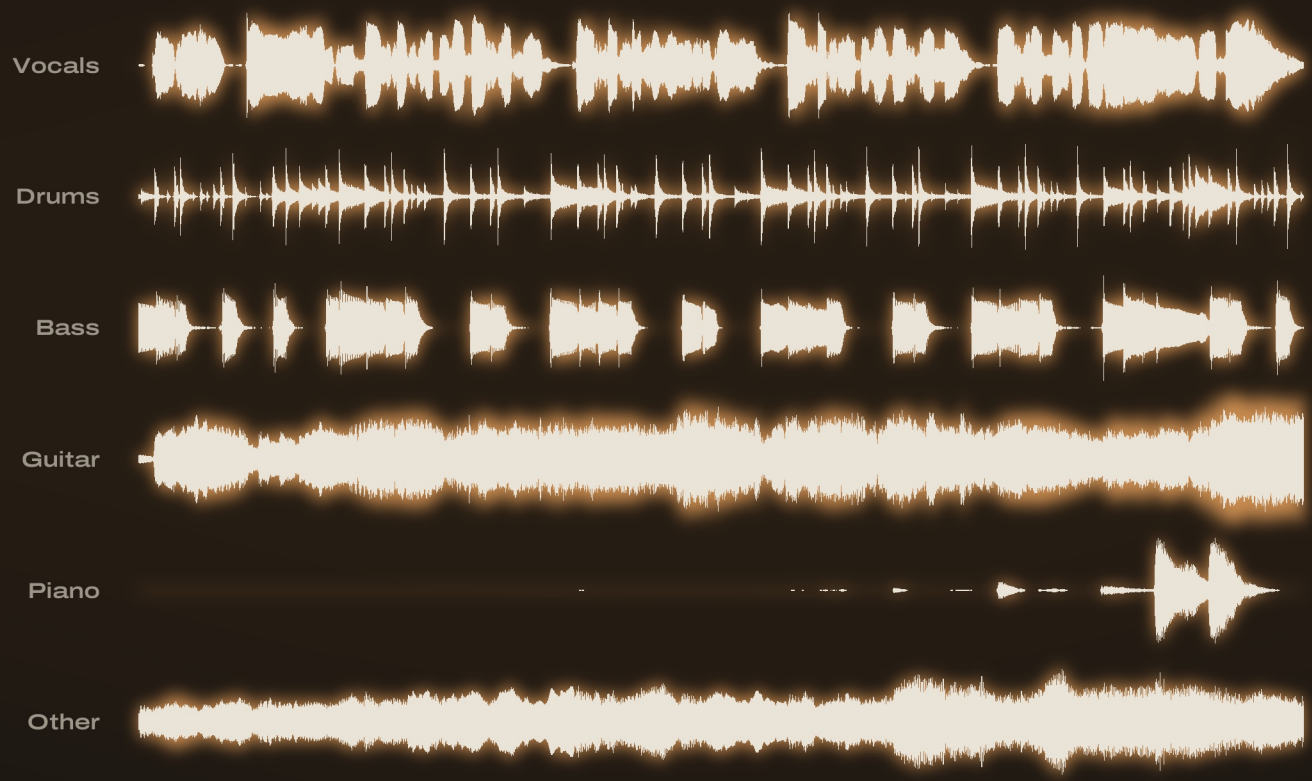
RE SPACE

REVERB REPLACER

USER'S GUIDE



WaveMachine Labs

Version 1.0.0

ReSpace User's Guide

Version 1.0.0

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Document revision 1.0.0, November 2026

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CHAPTER 1

Welcome to ReSpace

ReSpace changes the room a recording was made in. You can keep the performance you love and give it the space it should have had.

A vocal recorded in a boxy bedroom, a drum kit that rings in a muddy rehearsal space, a guitar with a plate baked into it: once the room is in the recording, it usually stays there. ReSpace takes it back out. It works on a whole mix or on a single track, and you hear the result as you work.

What ReSpace does

ReSpace works in three stages, and each one builds on the last.

1. **It separates the parts.** Give ReSpace a finished mix, and it splits the song into six parts: **Vocals**, **Drums**, **Bass**, **Guitar**, **Piano** and **Other**. A single recorded track, such as a vocal or a drum kit, is treated as one part.
2. **It removes the room.** For every part, ReSpace lifts out the reverb it was recorded with. What remains is the dry sound of the voice or the instrument.
3. **It gives each part a new room.** Each part starts with a new room automatically chosen to match the original's size and volume as closely as possible. From there, you pick any of the 500 rooms in the library, shape it, and hear the change as the song plays.

When the sound is right, you print a new mix, or each part on its own. If you plan to add reverb elsewhere, you can also export the dry parts, ready for your own effects.

ReSpace processes your audio on your own computer, and your songs are never uploaded. Once ReSpace is activated, it works without an internet connection.

Two ways to work

ReSpace comes as a standalone application and as a plug-in for your DAW. Both have the same room editor, so what you learn in one carries over to the other.

The ReSpace app	Open a song or a stem from your disk. ReSpace separates the mix into parts and lists them at the left of the window, so you can give each part its own room. When you are done, export a new mix, the parts, or both.
The plug-in	Put ReSpace on a track in your DAW. It works on that one track, with your DAW playing and bouncing the result. It can record the track and process it for the best quality, or remove the reverb live as the track plays.

Fixing a room you had to record in

Many recordings are made in a bedroom, a spare room or an office, because that is where there is space to set up. A small room without acoustic treatment leaves its sound on everything recorded in it: boxy reflections, a short ring, and a voice that sounds farther from the microphone than it was. Podcasts and voice-overs have the same problem.

ReSpace removes that room from the recording. With **Removal amount** at **High**, it takes out even the short, close reflections of a small room, and **X-High** takes out more still, for a very boxy room. What remains is the dry voice or instrument. What comes next is up to you.

A better room	Give the part a room that flatters it: a plate or a hall for a sung vocal, or a real studio space from **Rooms** or **Ambience** for an instrument. It sounds as if it had been recorded there.
No room at all	Turn the room switch off, and the part plays dry. For a podcast or a voice-over, this gives a clean, close voice.
One shared space	Guests recorded in different rooms can all get the same small room, so they sound as if they sat at one table.

How this guide is organized

If you want to hear ReSpace right away, start with **Chapter 3, Quick Start**. It walks through a first song in the app and a first track in your DAW, and it takes about five minutes.

Chapter 4 is a tour of the window, and the chapters after it follow the order you will usually work in. You bring in a song, listen and compare, then choose and shape the rooms before you export. Chapter 13 covers the plug-in in your DAW, and Chapter 15 helps when something does not work as you expect.

Throughout the guide, names you see on the screen are printed in **bold**, as they appear in ReSpace.

CHAPTER 2

Installing and Activating

What you need

Item	Requirement
Computer	A Mac with Apple silicon or an Intel processor
Operating system	macOS 13 Ventura or later
Disk space	3 GB free on your system drive to install, plus room for the songs you process (Chapter 14 explains the cache)
Plug-in formats	AU, VST3 and AAX (for Pro Tools), with ARA 2 support
Internet	Needed to activate ReSpace or start the free trial. After that, ReSpace works offline.

ReSpace uses your computer's graphics processor when that is faster, and its main processor otherwise. How long processing takes depends on the computer. Before you start, the **Process** dialog estimates it for you, and every Mac gives the same result.

Installing ReSpace

1. Open **Install ReSpace.dmg**, then double-click **Install ReSpace.pkg** inside it.
2. Follow the installer. It shows the license agreement and asks for your administrator password.
3. When the installer says it has finished, close it. You can eject the disk image and delete it.

The installer puts everything in place at once, every plug-in format and the app included. These are the places it uses.

What	Where
The ReSpace app	`/Applications/ReSpace.app`
Audio Unit (AU)	`/Library/Audio/Plug-Ins/Components/ReSpace.component`
VST3	`/Library/Audio/Plug-Ins/VST3/ReSpace.vst3`
AAX (Pro Tools)	`/Library/Application Support/Avid/Audio/Plug-Ins/ReSpace.aaxplugin`
Rooms and support files	`/Library/Application Support/WaveMachine Labs/ReSpace/`

Your own settings, presets and processed songs are kept in your user Library, in `~/Library/Application Support/WaveMachine Labs/ReSpace/`. Installing an update leaves them alone.

> **TIP**
> If your DAW was open while you installed ReSpace, quit it and open it again so it finds the new plug-in.

Activating your license

ReSpace is licensed to your ReSpace account, the email address and password you use at respaceplugin.com. You sign in once on each computer. After that, ReSpace keeps working without an internet connection.

The first time you open ReSpace, the activation window covers it. Until you sign in or start a trial, ReSpace plays your audio as it is.

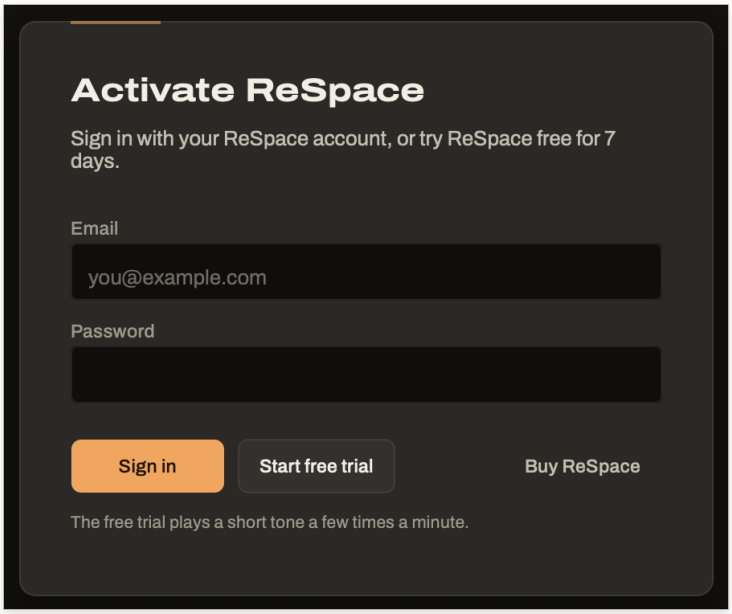


Figure 1. The activation window.

1. Open the ReSpace app, or open ReSpace on a track in your DAW.
2. Type the email address of your ReSpace account in **Email**, and your password in **Password**.
3. Click **Sign in**.

When the activation succeeds, the window says “ReSpace is activated.” Click **Close** to start working. If you have not bought ReSpace yet, **Buy ReSpace** in the same window opens the purchase page in your web browser.

If something goes wrong, a red line under the fields explains what happened. A typing mistake gives “Activation didn’t work. Check your email and password.” If ReSpace cannot reach the activation server, check your internet connection and try again.

Starting a free trial

The trial lasts seven days, with everything switched on. There is one difference. While the trial runs, ReSpace plays a short, quiet tone a few times a minute.

1. In the activation window, click **Start free trial**. The signup page opens in your web browser.
2. Sign up on that page.
3. Click the link in the email you receive. The trial starts by itself.

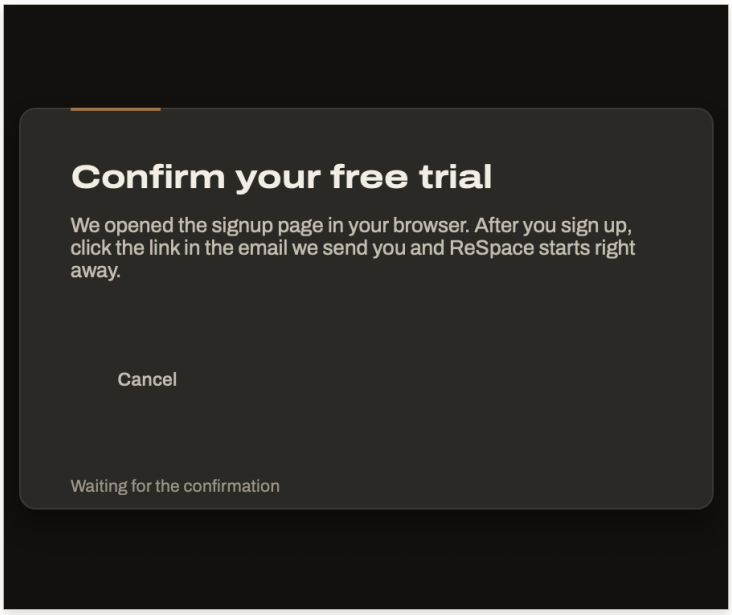


Figure 2. Waiting for you to confirm the trial.

Each time you open ReSpace during the trial, the window shows how many days are left. Click **Continue trial** to carry on working, or sign in if you have bought ReSpace in the meantime.

When the trial ends

At the end of the trial, the window reads “Your free trial has ended.” Your sessions are safe, and ReSpace plays your original audio unchanged until it is activated. To activate it, sign in with the account you bought ReSpace with.

> **NOTE**
> Without an activation or a running trial, ReSpace does not process audio and its rooms are not available. The original sound always plays, so a track is never silenced.

Checking your license

To see your license at any time, click the gear at the top of the window to open **Settings**. The **LICENSE** card shows “Activated,” the days left in a trial, or “Not activated.” Its button opens the activation window.

Updating ReSpace

ReSpace looks for a newer version each time you open its window. When one is out, **Update available** and the new version’s number appear at the right, just above the waveform. The same notice is at the bottom of the **Settings** page.

1. Click **Update available**. The download page opens in your browser.
2. Download the installer for your computer.
3. Quit your DAW and the ReSpace app, then run the installer. It replaces the version you have.

Your license, settings, presets and processed audio stay as they are. Looking for a newer version needs an internet connection. Without one, ReSpace shows no notice and works as usual.

CHAPTER 3

Quick Start

This chapter gets you from a song to a new sound in a few minutes. The first walk-through uses the app, and the second uses the plug-in in your DAW.

Your first song in the app

1. Open the ReSpace app. Drag a song from the Finder onto the waveform area, or click **Choose a file**.
2. ReSpace reads the file, then opens the **Process** dialog. Make sure **Full Mix** is selected, with all six parts checked, and click **Process**.
3. Watch the waveform fill in as ReSpace works. A box over it shows the progress and the time left.
4. Press the **Space bar** to play. Each part now has a new room, chosen to suit it.
5. Click **Original** at the top of the window to hear the song as it was, then **ReSpace** to hear it with its new rooms.
6. Click a part in the list at the left, then click the room's name to open the room browser. Use the **Up** and **Down** arrow keys to try rooms while the song plays. Press **Return** to keep one.
7. When you like what you hear, click **Export**, choose what to save, and click **Export** again.

Your first track in a DAW

1. Insert ReSpace on an audio track, the way you add any effect.
2. In the ReSpace window, click the round record button at the left of the waveform. It starts to flash.
3. Play the track in your DAW, from the start of the part you want to change. ReSpace records it as it plays.
4. Stop the DAW. ReSpace processes what it recorded, and the waveform shows its progress.
5. Play the track again. The recorded stretch now plays with its new room.

To change the room, click its name, just as in the app. Chapter 13 explains recording in more detail. It also covers Live mode, which removes the reverb as the track plays, and ReSpace in DAWs that support ARA.

> **NOTE**
> In REAPER, ReSpace reads the track's clips by itself, so you see a **Process** button where other DAWs show the record button. Click **Process** instead of recording. Chapter 13 explains how it works.

Where to go from here

- To learn your way around the window, read **Chapter 4**.
- To choose rooms quickly, see **Chapter 7**, which covers the room browser, search and similar rooms.
- To shape a room, see **Chapter 8**.
- To clean up the tone, see **Chapter 9** for the EQs and **Chapter 10** for the transient shaper.

CHAPTER 4

A Look Around the Window

ReSpace keeps everything in one window. This chapter names its parts and shows how its controls work, so the rest of the guide can refer to them.

The parts of the window

The figure shows the ReSpace app with a song processed into six parts. In a DAW, the window is the same except for a few things that the DAW does instead, such as playing and exporting. Chapter 13 shows the plug-in's window.



Figure 3. The ReSpace window. The numbers match the list below.

1 **Process again, Choose another file** **Process again** opens the Process dialog for the song you have, to change your choices. **Choose another file** brings in a different song.

2 **Play and clock** Starts and stops playback (or press the **Space bar**). The clock shows the playhead's position and the song's length.

3 **Original / ReSpace** Switches between the song as it was recorded and the song with its new rooms.

4 **Output** The level of everything ReSpace plays. Drag the number up or down.

5 **LIMIT** The output limiter's light. It glows red when the limiter catches a peak. Click it to turn the limiter on or off.

6 **Undo and redo** Take back a change, or make it again.

7 Export	Saves a new mix, the parts, or both, as audio files.
8 Settings	Opens the **Settings** page, with the cache, the license and a few preferences.
9 Waveform	The whole song. Its top half shows the original recording and its bottom half the result. Click to move the playhead, or drag across it to loop a section.
10 Parts	One row for each part of the song. Click a row to edit that part's room. Each row has mute and solo buttons and its own level.
11 Room row	The part's new room. The switch at its left turns the room on and off. Click the room's name to open the room browser, or use the arrows to step through rooms. The star marks a favorite.
12 Pages	The room editor's four pages: **EQ**, **Transients**, **Reverb** and **Reverb EQ**.
13 Picture	Changes with the page. On **Reverb**, it draws the new room's decay over the outline of the room that was removed.
14 Mix and Original room	How much of the new room you hear, and how much of the original room is put back.
15 Controls	The page's controls. On **Reverb**, they are grouped as **Time**, **Character** and **Space**.

What the colors mean

ReSpace uses color for one thing only, which is the room. Once you know the three colors, every picture in the window reads the same way.

Color	Means	Where you see it
Amber	The new room	The bottom half of the waveform, the decay picture, the **Mix** dial, the **Reverb EQ**
Blue-gray	The original room, the one recorded with the part	The top half of the waveform, the dashed outline on the decay picture, the **Original room** dial
Off-white	The dry sound of the part itself	The core of each waveform, the part's own **EQ** and the **Transients** page

Each sound is drawn as an off-white core with its room glowing around it. When you give a part a bigger room, its glow in the waveform grows too, even before you press play.

The four pages of the room editor

The room editor works on one part at a time. Its four pages follow the path the sound takes, from left to right.

EQ	The part's own tone, before any reverb. See Chapter 9.
Transients	The attack and sustain of the part's own notes and hits. See Chapter 10.
Reverb	The new room and its shape. This is the page ReSpace opens on. See Chapter 8.
Reverb EQ	The tone of the new room alone. The dry part is untouched. See Chapter 9.

A small dot after **EQ**, **Transients** or **Reverb EQ** tells you that the page is changing the sound. The **Mix** and **Original room** dials stay at the right on every page.

Using sliders, dials and switches

Sliders

Most controls are sliders, each a label with its value at the right and a thin line under them. The filled part of the line shows the setting.

- **Drag** anywhere on a slider to change it. Dragging right or up raises the value.
- **Hold Shift** while you drag for fine changes.
- **Drag the small mark** on the line to move the value exactly with the pointer.
- **Click the value** to type one, then press **Return**. You can type units too. On a time control, “1.2s” means 1,200 milliseconds.
- **Double-click** a slider to put it back to its default.
- **Turn the mouse wheel** over a slider to nudge it. Hold **Shift** for finer steps.

Dials

The two dials work like the sliders. Drag up or right to raise the value, hold **Shift** for fine changes, use the wheel to nudge, and double-click to reset.

Switches

A switch shows its choices side by side, such as **Low**, **Medium** and **High**. The choice that is on is lit. Click another one to change it.

> **TIP**
> Every control has a tooltip. Rest the pointer on a control for a moment to read what it does.

Undo and redo

ReSpace remembers your last 500 changes. Use the arrows in the header, or press **Cmd-Z** to undo and **Shift-Cmd-Z** to redo. The arrow’s tooltip names the change it will take back, for example “Undo Size change.”

Each gesture is one step. A whole drag counts once, however long it lasts, and so does a whole visit to the room browser, however many rooms you try. In the app, undoing a change also selects the part it belonged to, so you can see what happened.

A few settings are about listening rather than the sound itself, so they are left out of the history. These are solo, the **Original** / **ReSpace** switch, **Output**, the output limiter and **All rooms**. In a DAW, the mode and the reverb removal strength are left out too.

Changing the window’s size

Drag the grip in the window’s bottom right corner to make ReSpace larger or smaller, from 75 to 160 percent. The window keeps its shape as it scales. ReSpace remembers the size you choose and opens at it the next time, in the app and in every DAW.

Keyboard shortcuts

Key	What it does
Space bar	Play or stop (in the app)
1 to 6	Select a part: Vocals, Drums, Bass, Guitar, Piano or Other (in the app)
F	Open the room browser

Key	What it does
Up and Down arrows	In the room browser, try the previous or next room
Return	In the room browser, keep the room and close
Escape	Close the Settings page, a dialog or the room browser
Cmd-Z	Undo
Shift-Cmd-Z	Redo
Delete	On the EQ's Advanced view, remove the selected band

Some DAWs keep certain keys for themselves. If a shortcut does nothing in your DAW, use the mouse instead.

CHAPTER 5

Bringing In a Song

In the ReSpace app, a song becomes six parts with new rooms in two steps. ReSpace reads the file, then processes it with the choices you make in the Process dialog.

Adding a song

When the app has no song, its waveform area reads **Add a song**. There are several ways to bring one in.

- Drag an audio file from the Finder onto the waveform area. It lights up to show it will take the file.
- Click **Choose a file** in the middle of the waveform area.
- With a song already loaded, click **Choose another file** at the top right of the waveform.
- Open the file with ReSpace from the Finder, for example with **Open With**.

ReSpace reads WAV, AIFF, FLAC, MP3, M4A, CAF and Ogg Vorbis files. A song keeps its own sample rate, and a mono file becomes stereo. Files shorter than half a second are too short to process.

Your file is never changed. ReSpace makes its own copy in its cache folder and works on that. While it reads the file, the waveform shows “Reading” and the song’s name.

> **TIP**
> You can bring in a finished mix or a single stem. A mix is split into its parts. A stem, such as a vocal or a drum bus, can be processed as one part, which is faster and keeps it whole.

The Process dialog

As soon as the file is read, the **Process** dialog opens. Its choices decide what ReSpace separates and how much reverb it takes out.

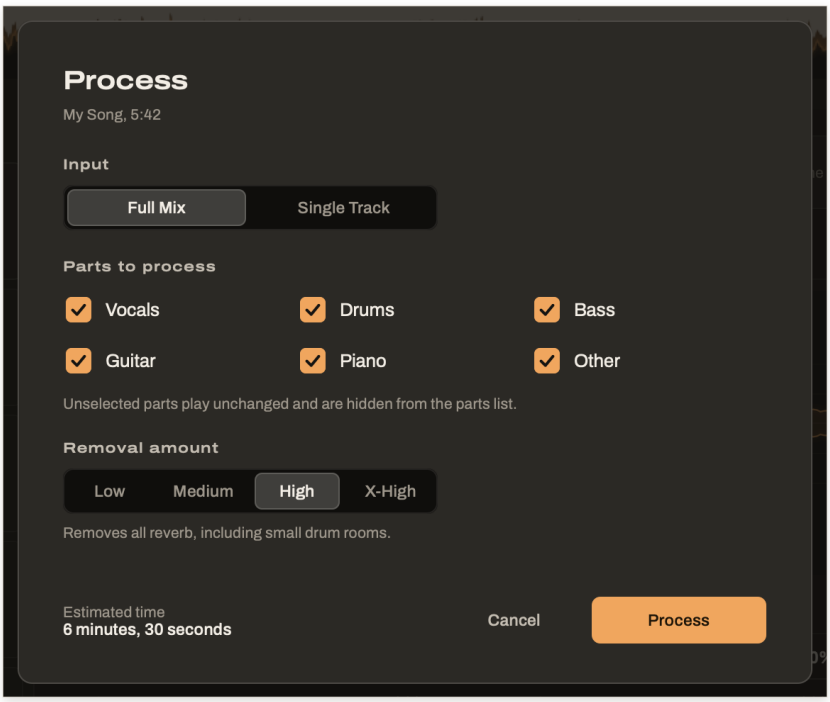


Figure 4. The Process dialog.

Input — Choose **Full Mix** for a whole song, which ReSpace splits into parts. Choose **Single Track** when the file is one instrument, such as a vocal, a drum kit or a guitar. ReSpace then processes the whole file as one part, and nothing is separated.

Parts to process — With **Full Mix**, check the parts you want to work on. The parts you leave unchecked play unchanged with the rest, and they are left out of the parts list.

Removal amount — How much of the recorded reverb to take out. The next section explains the four choices.

Estimated time — How long processing should take on this computer.

Click **Process** to start. If you click **Cancel** instead, ReSpace lets the song go and the window is empty again.

The estimate improves as you use ReSpace, because it learns from the songs this computer has processed. The very first time, the dialog may say “Measuring this computer’s speed…” for a little while. Processing also takes longer when other applications are busy with the graphics processor.

Choosing how much reverb to remove

Choice	What it removes
Low	Removes halls, plates and long rooms; keeps short rooms.
Medium	Also removes medium rooms; keeps small rooms and ambience.
High	Removes all reverb, including small drum rooms.
X-High	Removes even more of a small room’s ring. Drum hits can soften a little.

High is the default, and it gives you the most freedom, because almost all the space you hear afterward is the space you choose. When a recording has a small room you like, such as the tight ambience of a drum kit, choose **Medium** or **Low** to keep it. The new room then plays on top of what stays.

X-High goes further than **High**. It takes out about twice as much of the ring that follows a drum hit, and more of the boxy sound of a small room, so it suits a vocal or a voice recorded at home. In return, it can soften the attack of drum hits a little and shorten cymbals, so compare it with **High** on drums.

> **TIP**
> With the **Original room** dial, you can put back as much of the removed room as you like after processing, part by part. Chapter 8 explains it.

While ReSpace processes

Progress shows right in the waveform. The song lights up from the left as ReSpace works through it. A box in the middle shows the percentage, the current stage and the time left.

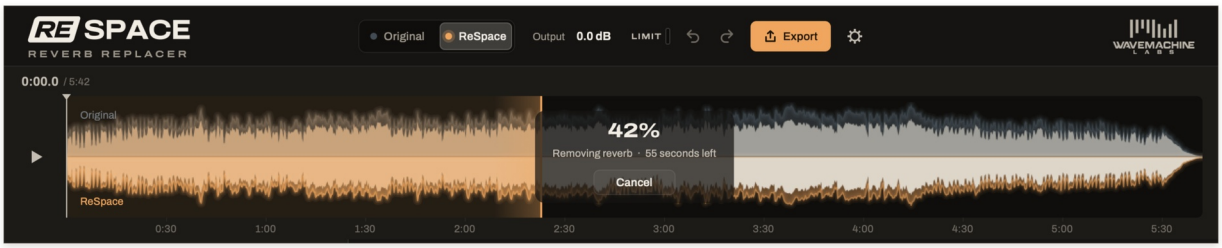


Figure 5. Processing in progress.

A full mix goes through these stages in order: “Reading the audio,” “Loading,” “Separating the parts,” “Removing reverb” and “Saving.” A single track skips the separation.

To stop, click **Cancel** under the time left. A song that had not been processed yet is let go, and the window is back to **Add a song**. A song you were processing again stays as it was, with its earlier result.

When processing is done

The parts list at the left shows each part that was processed. Every part already has a new room, chosen to suit the part and to match the size of the room that was taken out. Its **Mix** is set so the new room sits at the level of the original. Press play, and you hear the song in its new rooms right away.

Parts you did not process are not listed, but they still play, unchanged, so the song stays complete. The list reminds you of this when some parts are missing.

Processing a song again

To change your choices, click **Process again** at the top right of the waveform. The **Process** dialog opens, with all six parts checked.

The app processes the song again each time, so it takes the usual time. It doesn’t keep results from one run to the next: when you quit, the song and its processed parts are let go. Clicking **Cancel** in the dialog keeps what you have.

Working with a single track

A file processed as **Single Track** appears as one part, named **Track**. ReSpace removes its reverb without separating anything, so there are no parts to choose. Everything else works as it does for a song: the part has its room, its **Mix** and its own pages. Exported files are named after it, for example “My Song Track dry.wav.”

Opening the app again

The app always opens empty, ready for a new song. It doesn't bring back the song you worked on last, so export what you want to keep before you quit.

What isn't part of a song stays: your room presets and EQ presets, your favorite and recent rooms, the impulse responses you loaded, and the settings that apply everywhere, such as the cache folder. In a DAW it works differently: the project saves each track's room, settings and takes, as Chapter 13 explains.

CHAPTER 6

Listening and Comparing

Most of your time in ReSpace is spent listening. This chapter covers playing, looping and comparing in the app, and the parts list where you balance the parts and their rooms.

Playing the song

Press the **Space bar**, or click the play button at the left of the waveform. The clock above it shows the playhead's position in minutes, seconds and tenths.

To move the playhead, click anywhere on the waveform. When a song reaches its end, ReSpace lets the rooms ring out, then stops and goes back to the start.

Looping a section

Drag across the waveform to loop the stretch you drew. The playhead jumps to the start of the loop, and playback goes round and round it without a gap. The rooms ring on across the turn, as they would in a real space.

To change the loop, drag the small handles under its edges. Double-click the waveform to clear it. The caption above the waveform reminds you of both.

Zooming in

Turn the mouse wheel over the waveform to zoom in or out around the pointer. To move along a zoomed view, scroll sideways or hold **Shift** while you turn the wheel. You can also drag with the right mouse button. While the song plays, the view follows the playhead.

Reading the waveform

Once a song is processed, the waveform has two halves. The top half, labeled **Original**, is the recording as it was, with its room in blue-gray. The bottom half, labeled **ReSpace**, is the result, with the new rooms in amber.

The bottom half follows your changes even when nothing is playing. When you give a part a longer room or raise its **Mix**, its glow grows in the picture.

Comparing with the original

The switch at the top of the window plays either the song as it was recorded or the song with its new rooms. Click **Original** to hear the recording untouched, and **ReSpace** to hear your work. The change is smooth, so you can switch while the song plays and compare the same moment.

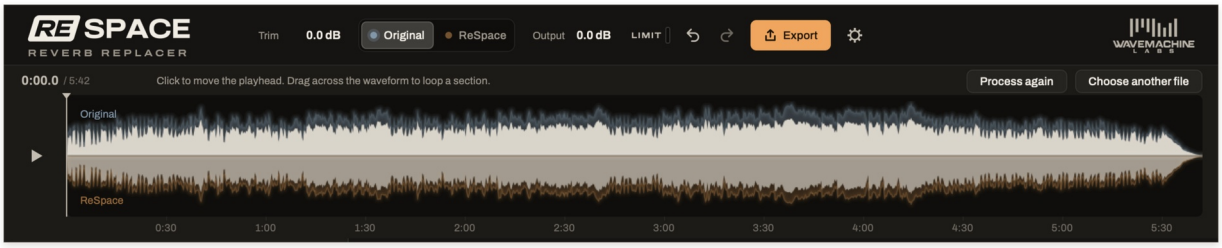


Figure 6. Original selected: the top half of the waveform is brighter.

> **TIP**
> Compare at matching loudness. A new room that is louder than the old one can sound better just because it is louder. Double-click a part's **Mix** dial to match its room to the level of the original room.

The parts list

In the app, each processed part has its own row in the list at the left of the window. Click anywhere on a row to edit that part in the room editor, or press the keys **1** to **6**. The selected part is raised and marked with an amber bar.

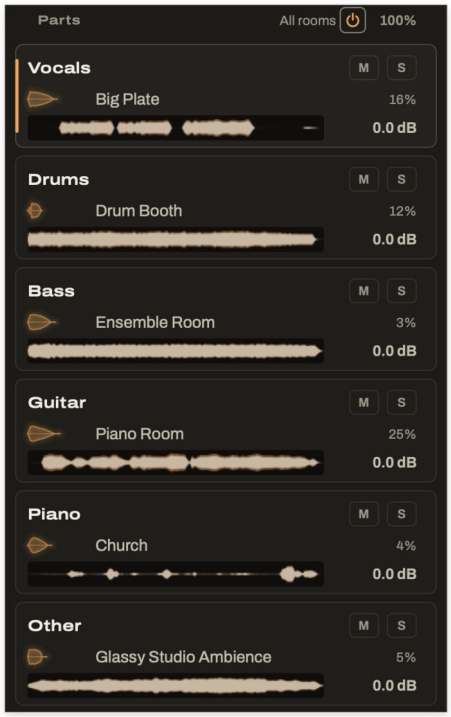


Figure 7. The parts list.

Each row shows the part's room and its **Mix**, the part's own small waveform and its level. When a part's room is switched off, its row reads "Off."

M and S — Mute and solo. Hold **Option** while you click to mute or solo every part at once, or to clear them all.

Level — The part's volume, from silent to +12 dB. Drag the number up or down, hold **Shift** for fine changes, and double-click it for 0 dB.

All rooms

At the top of the parts list, **All rooms** works on every part together. Its power switch turns every new room off and on, which is a quick way to hear the dry parts. Beside it, a percentage scales every part's **Mix** at once.

At 100 percent, each part plays as you set it. Drag the number down to make every room quieter, or up to 200 percent to double them. Double-click it to go back to 100 percent. Because it scales each **Mix**, the balance you set between the parts stays the same.

Output and the output limiter

Output, at the top of the window, sets the level of everything ReSpace plays, from -24 dB to +12 dB. Drag the number up to raise it or down to lower it, and hold **Shift** for fine changes. Double-click it to go back to 0 dB.

A limiter at the very end of ReSpace keeps the output from clipping. It is on by default. Below its ceiling, just under 0 dB, it does nothing at all, so a song that never reaches the top passes through untouched.

Its light, the word **LIMIT** with a small meter beside it, shows what it is doing. When the limiter catches a peak, the meter fills red from the top, and the word warms toward red when it works hard. Click the light to turn the limiter off or on. The tooltip shows how many decibels it is taking off. You can also switch it in **Settings**.



Figure 8. The LIMIT light at rest, limiting lightly, limiting hard, and switched off.

> **NOTE**
> Exported files are not passed through the output limiter. If your mix runs hot, turn **Output** down before you export, or export 32-bit float files, which cannot clip.

CHAPTER 7

Choosing a Room

ReSpace comes with a library of 500 premium MoReVoX impulse response rooms from multi-platinum sound engineer and designer Sabino Cannone, ranging from small studio booths to cathedrals, plates, springs and special effects. This chapter shows how to find the right one quickly, while the song plays.

How each part's first room is chosen

When ReSpace processes a song, it gives every part a room that suits that kind of instrument. Vocals tend toward plates and halls, drums toward rooms, and guitars toward springs and rooms. Among those, it picks the one whose decay is closest to the room it took out.

The part's **Mix** is then set so the new room sits at the level of the original one, and **Original room** starts at 0 percent. The result is a song that sounds about as spacious as before, only in better rooms. From there, you can change anything.

A part that was recorded completely dry gets the usual room for its instrument, at its usual level.

The room row

The row at the top of the room editor shows the selected part's new room.

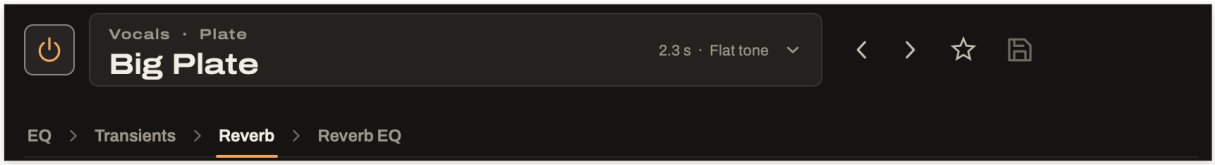


Figure 9. The room row and the four pages.

Room switch — The power switch at the left turns the part's new room on and off. With the room off, you hear the dry part at full level. The room you chose is kept, so turning the switch back on brings it back as it was.

Room box — The room's type and name, with its decay time and tone at the right. In the app, the part's name comes first. Click the box to open the room browser.

Arrows — Step to the previous or next room in the library, one at a time.

Star — Marks the room as a favorite, so you can find it again in **Favorites**.

The tone is a quick guide to how a room sounds. "Bright tone" means a room with plenty of high frequencies, "Dark tone" a warm, softer room, and "Flat tone" one in between.

Opening the room browser

Click the room box. The browser opens below the waveform, with the part's current room selected in its category. If the song is playing, it keeps playing, so you can try rooms right away.

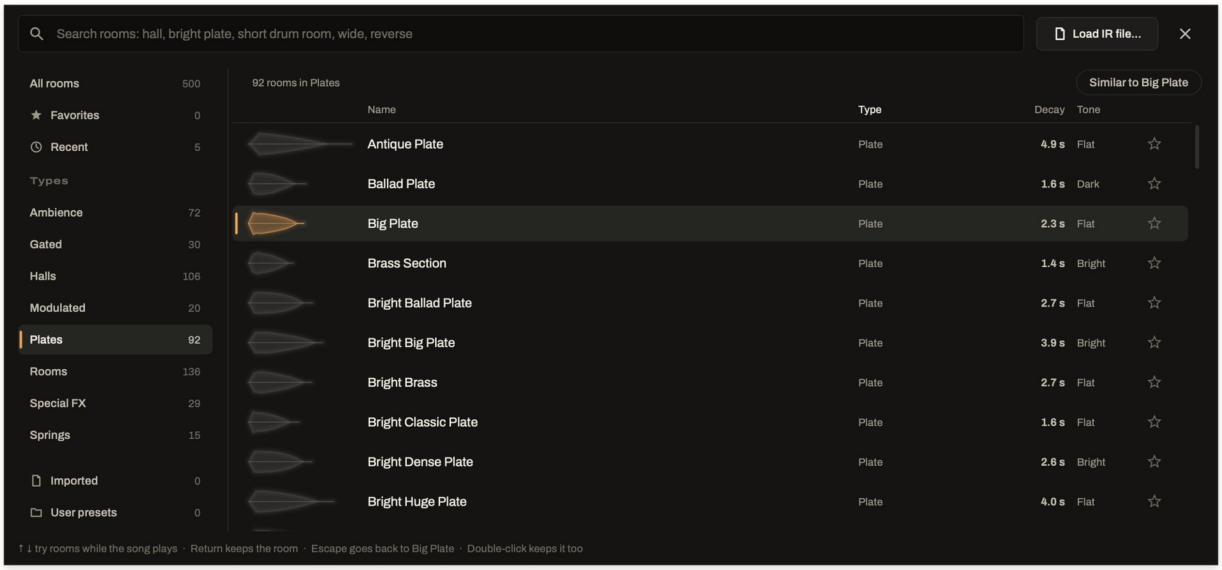


Figure 10. The room browser, open on the Plates category.

Trying rooms while the song plays

Click any room to hear it on the part at once. The browser stays open, so you can click the next one, and the next. With the keyboard, the **Up** and **Down** arrow keys step through the list and play each room as you land on it. **Page Up** and **Page Down** jump a screen at a time.

When you hear the room you want, press **Return** or double-click it. The browser closes and the part keeps that room. Clicking the × at the top right also closes the browser with the room you are on.

Changed your mind? Press **Escape**. The browser closes and everything goes back to how it was when you opened it, the room and its settings included. The line of hints along the bottom of the browser names the room Escape returns to.

> **NOTE**
> A whole visit to the browser is one step in the undo history, however many rooms you try. To go back to the room you had before the visit, click undo.

Browsing by category

The categories at the left of the browser sort the library. Each one shows how many rooms it holds.

Category	What it holds
All rooms	The whole library of 500 rooms
Favorites	The rooms you have starred
Recent	The last rooms you kept from the browser
Ambience	Short, close spaces that add life without an audible tail (72 rooms)
Gated	Rooms cut off sharply, the classic big drum sound (30)
Halls	Concert halls and large spaces with long, smooth tails (106)
Modulated	Rooms with gentle movement in their tails (20)
Plates	Plate reverbs, dense and bright, the studio classic for vocals (92)
Rooms	Real rooms of every size, from booths to live rooms (136)

Category	What it holds
Special FX	Unusual and creative spaces (29)
Springs	Spring reverbs, as in guitar amplifiers (15)
Imported	Impulse responses of your own (see the last section of this chapter)
User presets	Rooms you have shaped and saved (Chapter 11)

The room list

Each row shows a room's name, its type, its decay time and its tone, with a star at the right to make it a favorite. Click a column's title to sort by it. Click **Decay** again to reverse the order, from the longest room to the shortest.

The small picture at the left of each row is the room's fingerprint, its decay drawn the same way for every room. A short ambience is a small wedge and a large hall a long plume, so you can see a room's size before you hear it. The room the part is playing has an amber bar at its left.

Searching for a room

Type in the search field at the top of the browser to narrow the list as you type. ReSpace matches your words against the rooms' names and types, and against words that describe how they sound. Every word you type must match, so "bright plate" finds plates with a bright tone, and "short drum room" finds short rooms with drum in the name.

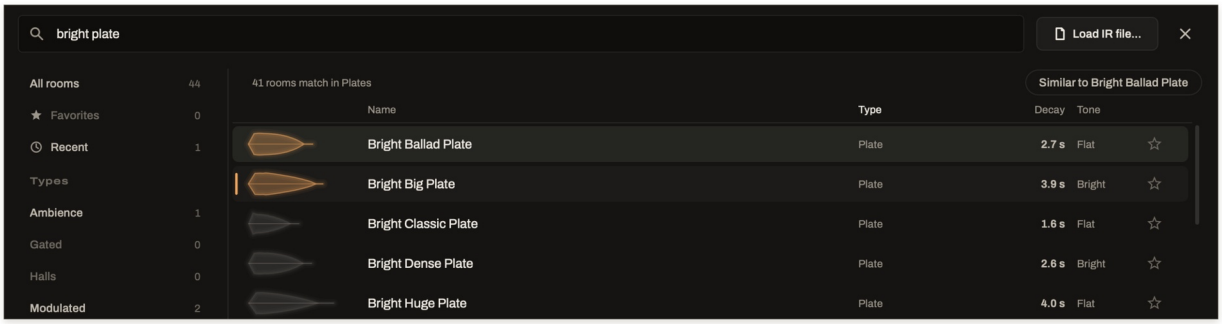


Figure 11. Searching for bright plate.

Words	Find rooms that are
short, tight, small	Under about 0.6 seconds
medium	About 0.6 to 1.6 seconds
long, big, large	About 1.6 to 3.5 seconds
long, huge, epic	3.5 seconds and longer
bright, airy	Bright in tone
dark, warm	Dark in tone
wide	Very wide in stereo
narrow, mono	Close to mono
reverse, swell	Reversed, or swelling into the sound

Add “favorite” to a search to look only among your favorites. As you type, ReSpace highlights the best match without playing it. Press **Return** to hear it and keep it, or use the arrow keys to try the others. When nothing matches, the browser suggests fewer or simpler words.

Finding similar rooms

When you find a room that is close to what you want, ReSpace can show you the rooms that sound most like it. Select the room, then click the chip at the top right of the list, which reads **Similar to** and the room’s name.

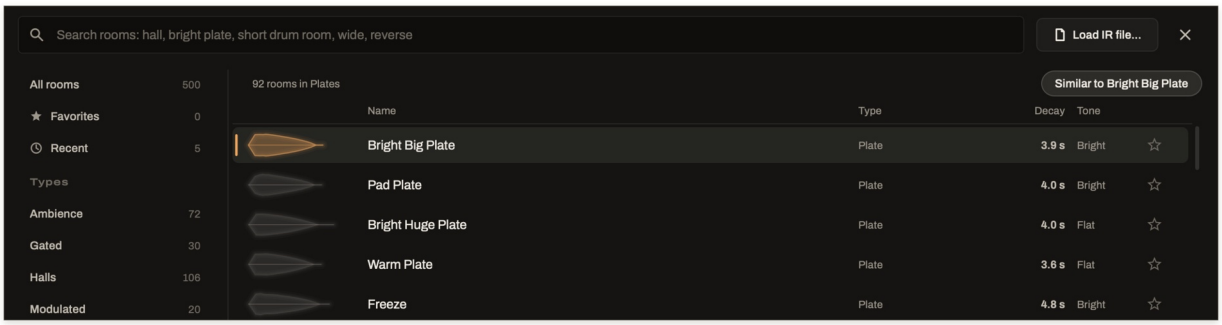


Figure 12. The list ordered by how close each room sounds to Bright Big Plate.

The list reorders with that room first and the closest rooms after it. ReSpace compares the way the rooms actually sound, such as how long each range of frequencies rings, how dense and wide the room is, and its color. Rooms with different names and types can turn out to be neighbors.

Click the chip again to go back to the usual order. To explore further, select another room in the list. The chip then offers rooms similar to that one.

Favorites and recent rooms

Click the star beside a room, in the list or in the room row, to add it to **Favorites**. Click it again to take it out. Your favorites are shared by every copy of ReSpace on the computer, in the app and in every DAW.

Recent lists the rooms you have kept from the browser lately, with the newest first.

Using your own impulse responses

Besides the library, ReSpace can play any impulse response you have, such as a recording of a real space or a reverb from another collection.

1. Open the room browser and click **Load IR file...** at the top right.
2. Choose a WAV, AIFF or FLAC file.
3. ReSpace measures it, lists it under **Imported**, and plays it on the part.

Imported files are measured like the library’s rooms, so they get a fingerprint, a decay time and a tone, and you can search for them and star them. Any sample rate works. ReSpace uses the first 40 seconds of a file, and a mono file plays on both sides.

> **IMPORTANT**
> ReSpace plays an imported file from where it is on your disk and does not copy it. If you move or delete the file, the room box reads “File not found.” Keep your impulse responses in a folder you will not move.

CHAPTER 8

Shaping the New Room

Every room in the library can be reshaped to fit the song. The **Reverb** page shows the room's decay as a picture you can drag, with all its controls laid out below.

The decay picture

The picture draws the new room as an amber glow that fades over time from left to right. Its height is the room's level, so a long room makes a long glow. As you raise the part's **Mix**, the glow gets brighter.

Behind it, a dashed blue-gray outline shows the room the part was recorded in, as ReSpace measured it around the playhead. The outline moves as the song plays. It grows when a passage starts and shrinks away in silence, so you can see the original space at every moment and set the new room against it.

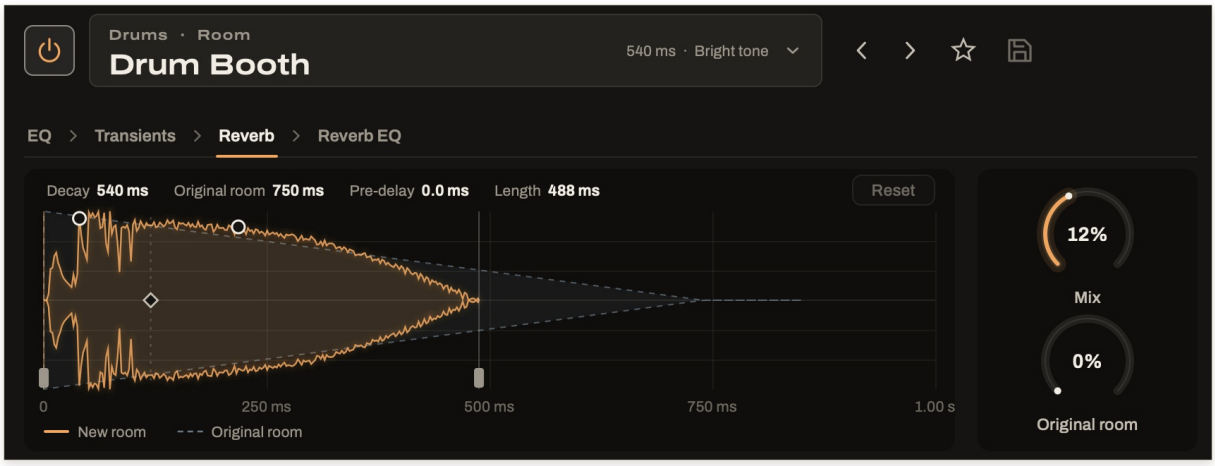


Figure 13. The drums in Drum Booth, over the outline of the room they were recorded in.

The readouts above the picture give the numbers. **Decay** is how long the new room takes to fade, and **Original room** the same for the measured room at the playhead. **Pre-delay** and **Length** match the controls of the same names. A legend under the time line names the two shapes.

When the room is switched off, the picture stays, gray and unlit, so you still see the shape you will get back.

Shaping the room on the picture

Small handles on the picture let you shape the room with the mouse. Each one moves a control, and the controls below move with it.

Handle	Where it is	Drag it to change
Pre-delay	A tab on the time line where the room starts	**Pre-delay**, sideways
Attack	A circle near the top, at the start of the room	**Attack**, sideways
Early / late	A diamond on the dashed line between the early and late parts	**Early / late**, up for early, down for late
Decay	A circle on the curve	**Decay**, sideways
Length	A tab on the time line where the tail ends	**Length**, sideways

Hold **Shift** while you drag for fine changes, and double-click a handle to reset its control. Turning the mouse wheel anywhere over the picture changes **Decay**. A hint by the pointer shows the value as you move.

Mix and Original room

The two dials at the right of the room editor set how much room you hear in total. They stay in place on every page.

Mix — How much of the new room you hear. Up to 50 percent, the room rises while the dry part stays at full level. Above 50 percent, the dry part gets quieter, until at 100 percent you hear the room alone. Double-click the dial to set the new room to the level of the original room again.

Original room — How much of the room that was removed is put back. At 0 percent it is gone completely, and at 100 percent the part sounds as it was recorded. Double-click the dial for 0 percent.

> **TIP**
> To keep some of the character of the original recording, try a little **Original room** under the new room. It brings back the closeness of the real space while the new room provides the size.

The Time controls

Pre-delay — A short gap between the dry sound and the start of the room, from 0 to 500 milliseconds. A little pre-delay keeps a vocal clear of its reverb. Default 0 ms.

Size — Stretches the room larger or smaller, from 50 to 200 percent. A bigger room has longer, darker reflections, as a bigger space would. Default 100 percent.

Decay — How long the room rings, from 25 to 400 percent of its own decay. Longer settings continue the room's tail naturally. Default 100 percent.

Length — How much of the tail to keep, from 5 to 100 percent. The rest fades out smoothly. Default 100 percent.

Attack — Fades the room in over up to 300 milliseconds, instead of starting it at once. A slow attack lets the start of each note through clean. Default 0 ms.

The Character controls

Damping — Makes the high frequencies die away faster than the rest, like a room with soft furnishings. From 0 to 100 percent. Default 0 percent.

Bass decay — Makes the low frequencies ring longer or shorter than the rest, from 50 to 200 percent. Turn it down to keep a room from booming. Default 100 percent.

Early / late — The balance between the room's early reflections and its late tail. "Early 100" leaves only the early reflections, which give a sense of space without a tail. "Late 100" leaves only the tail. Default "Even."

Reverse — Plays the room backward, so it swells into each note. Click the switch to turn it on. Default off.

The Space controls

Width — The room's stereo width, from mono at 0 percent to extra wide at 200 percent. Default 100 percent, the room as recorded.

Ducking	Turns the room down while the part plays and lets it back up in the gaps. From 0 to 100 percent. Ducking keeps a busy vocal clear and lets the room bloom between phrases. Default 0 percent.

Resetting the reverb

The **Reset** button at the top right of the picture puts the room's eleven controls back to their defaults, from **Pre-delay** to **Ducking**. The room itself stays, as do **Mix**, **Original room**, both EQs and the transient shaper. Reset is one step, so undo brings your settings back.

What happens when you change rooms

When you choose another room, ReSpace starts it fresh, with its eleven controls at their defaults. Your **Mix**, **Original room**, the part's level, the EQs and the transient shaper always stay as they are.

If you would rather carry the room's settings over to the next room, open **Settings** and set **When you change rooms** to **Keep**. That way, a pre-delay or a damping setting you like follows you from room to room.

CHAPTER 9

The EQs

Each part has two equalizers. One shapes the part's own sound, and the other shapes only its new room.

Two EQs, two jobs

	EQ page	Reverb EQ page
Changes	The part's own sound, before the room	Only the new room. The dry part is untouched.
Use it to	Clean up or brighten the part itself	Make the room darker, thinner or brighter so it sits well in the mix
Drawn in	Off-white, like the dry sound	Amber, like the new room

Both EQs work the same way, with up to eight bands each. Behind the curve, a live picture of the sound moves as the song plays. On the **EQ** page you see the part as the EQ leaves it, and on **Reverb EQ** the new room as it comes out.

Each EQ has two views. **Simple** gives you four tone controls, while **Advanced** lets you place up to eight bands of any kind. Both views edit the same EQ, so you can start in one and finish in the other. Switch between them with the **Simple** and **Advanced** buttons under the graph.

The Simple view

The Simple view has four knobs, which cover most of what a room ever needs.



Figure 14. The Reverb EQ's Simple view: a low cut at 200 Hz, less low end and a high cut at 7 kHz.

Low cut	Takes the lows out under the frequency you set, from **Off** up to 1 kHz. It cuts at 12 dB per octave.
Low	Turns the lows up or down by up to 12 dB, with a gentle shelf around 300 Hz.
High	Turns the highs up or down by up to 12 dB, with a gentle shelf around 4 kHz.
High cut	Takes the highs out over the frequency you set, from 1 kHz up to **Off**. It cuts at 12 dB per octave.

Drag a knob up or right to raise it, and hold **Shift** for fine changes. To type a value, double-click the number, then enter something like “120,” “1.2k” or “off.” Double-click anywhere else on the knob to set it back to where it does nothing.

The four knobs also appear as handles on the graph. Drag a cut sideways or a shelf up and down. Click anywhere on the graph, and the nearest control jumps to that spot, so you can draw the tone you want directly.

When the EQ has bands the Simple view does not show, such as bands you added in the Advanced view, a note at the top right of the view says how many. Click it to see them in the Advanced view. They play either way.



Figure 15. The part’s own EQ in the Simple view: a low cut at 80 Hz and a little more top.

The Advanced view

The Advanced view lets you place up to eight bands of any kind, anywhere from 20 Hz to 20 kHz. Each band is a numbered dot on the graph and a row in the list under it.



Figure 16. The Reverb EQ's Advanced view with four bands.

Adding a band

Click the graph where you want a band, and keep the mouse button down to drag it into place. A click near the far left adds a low cut, a click near the far right adds a high cut, and a click anywhere else adds a bell. You can also click **Add band**, which places a bell where there is the most room.

Changing a band

- **Drag a dot** sideways to change its frequency and up or down to change its gain. Hold **Shift** for fine changes.
- **Turn the mouse wheel** over a dot to make the band narrower or wider. On a cut, the wheel changes the slope.
- **Right-click a dot** to choose another kind of band, to bypass the band, or to delete it.
- **Double-click a dot** to remove the band. You can also select it and press **Delete**.

The band list

Each row of the list shows one band with its number, a switch to bypass it, its type and its values. Drag a value up or down to change it, or click it to type a new one. Click the trash can to remove the band, or click the type to choose another.

On a cut, click the slope to step through 12, 24 and 48 dB per octave. Double-click a value to put it back to its default.

The kinds of band



Figure 17. Choosing a band's type.

Type	What it does	Its settings
Bell	Boosts or cuts around a frequency	Frequency, gain up to ±24 dB, Q (width)
Low shelf	Turns everything below a frequency up or down	Frequency, gain, knee
High shelf	Turns everything above a frequency up or down	Frequency, gain, knee
Low cut	Removes everything below a frequency	Frequency, slope of 12, 24 or 48 dB per octave
High cut	Removes everything above a frequency	Frequency, slope of 12, 24 or 48 dB per octave
Band cut	Takes a range of frequencies out evenly, with steep sides	Center frequency, depth up to -60 dB, Q (width)

> **TIP**
> A **Band cut** on the **Reverb EQ** is a precise way to keep a room out of one range, for example around the kick drum, so the low end stays tight while the rest of the room stays full.

EQ presets

ReSpace includes twenty EQ curves for common jobs. To open them, switch to the **Advanced** view and click **Presets**.

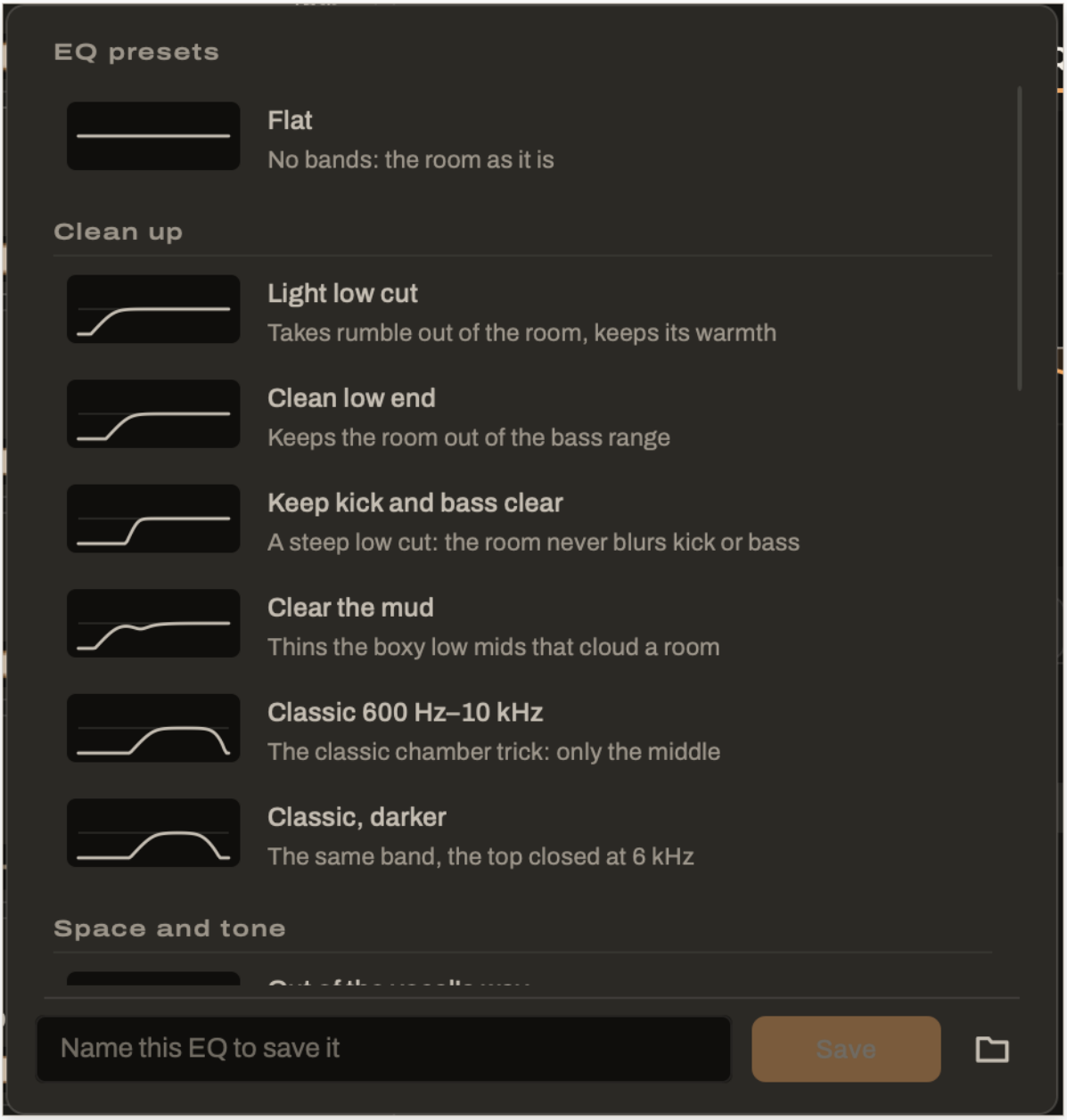


Figure 18. The EQ presets.

Click a preset to load it. The list stays open, so you can click the next one and compare, or use the **Up** and **Down** arrow keys. Press **Return** or click outside the list when you are done. A preset replaces all the bands of that EQ, and undo brings the earlier ones back.

Group	Preset	What it is for
Clean up	Light low cut	Takes rumble out of the room, keeps its warmth
	Clean low end	Keeps the room out of the bass range
	Keep kick and bass clear	A steep low cut: the room never blurs kick or bass
	Clear the mud	Thins the boxy low mids that cloud a room
	Classic 600 Hz–10 kHz	The classic chamber trick: only the middle

Group	Preset	What it is for
	Classic, darker	The same band, the top closed at 6 kHz
Space and tone	Out of the vocal's way	Lowers the room where the words are
	Soften the esses	Dips the S and T range so consonants don't splash
	Darker, further back	Softens the top so the room sits behind the part
	Bright and airy	A modern sheen on top, the esses held back
Per part	Vocals	Clean lows, out of the words, a softer top
	Drums	Kick dry, cymbal wash down, the snare's crack kept
	Drums, dark	A dark room for the snare, the kick kept dry
	Bass	Depth without losing the low end
	Guitar	Clean lows, presence dipped, a softer top
	Piano	Clean lows, less boxiness, a softer top
Character	Warm plate	Rounds off a bright plate's metallic top
	Old digital	The 10 kHz ceiling of early studio reverbs
	Vintage dark	Just the low middle, for choirs and ballads
	Telephone	A thin, boxy phone-line room

Flat, at the top of the list, removes every band.

Saving your own EQ presets

At the bottom of the presets list, type a name in the field that reads "Name this EQ to save it," then click **Save**. Your preset appears under **Your presets**, ready to load in any session and on either EQ. Saving under a name you have used before replaces that preset, and the button then reads **Replace**.

To delete one of your presets, point at it and click the trash can that appears. It goes to the Trash. The folder button beside **Save** shows the folder your presets are kept in. Each preset is one small file, so you can copy them to another computer.

Resetting an EQ

The **Reset** button at the top right of each EQ page removes every band of that EQ, and only that one. Undo brings the bands back.

CHAPTER 10

The Transient Shaper

The **Transients** page shapes the part's own notes and hits before they reach the room. It makes their attacks harder or softer and their sustain longer or shorter.



Figure 19. The transient shaper on the drums: more attack, less sustain.

The picture plays a single demonstration hit through your settings. The solid shape is the shaped hit and the dashed line the hit untouched, so you see the change before you hear it. Drag the two handles on the picture up or down, or use the sliders under it.

Attack Makes the start of each note or hit stronger (up) or softer (down), from -100 to +100 percent. Above 0, it also adds a touch of presence.

Sustain Makes what rings on after each note or hit longer and louder (up) or shorter (down), from -100 to +100 percent.

At 0 and 0, the default, the shaper leaves the part exactly as it is. **Reset** puts both back to 0.

> **TIP**
> Turning **Sustain** down is a good way to tighten a part that still rings after its room was removed, such as a drum kit. A new room then has a clean, dry sound to work with.

CHAPTER 11

Room Presets

When you have shaped a room you like, save it as a preset. You can then use it on any part, in any song, in the app or in your DAW.

What a preset keeps

A room preset holds the room and everything you did to it. That means the room's eleven controls, the **Reverb EQ**, the part's own **EQ** and the transient shaper. It does not hold **Mix**, **Original room** or the part's level, because those depend on the song.

Saving a room preset

Click the **Save as preset** button, the disk icon at the right of the room row. ReSpace saves the preset at once and names it after the room, for example "Big Plate (User)." The room box then shows the preset's name.

The button is grayed out until you change something, such as a reverb control, an EQ or the transient shaper.

Renaming a room preset

While a part plays one of your presets, right-click its name in the room box. Type the new name and press **Return**. If the name is already taken, the field's outline turns red, so choose another one.

Using a room preset

Your presets are listed in the room browser, under **User presets**. Click one to hear it on the part, the way you try any room. The part's **Mix** stays as it was. Press **Return** to keep the preset, or **Escape** to go back.

To rename or delete a preset in the browser, right-click it. A deleted preset goes to the Trash, and a part that was playing it keeps its sound.

Where room presets are kept

Each preset is a small file in `~/Library/Application Support/WaveMachine Labs/ReSpace/Room Presets`. Every copy of ReSpace on the computer shares them. You can copy them to another computer that has ReSpace. A preset made from one of your own impulse responses needs that file to be on the other computer too.

CHAPTER 12

Exporting

In the ReSpace app, **Export** saves your work as audio files: a new mix, each part with its room, or the pieces for mixing elsewhere. In a DAW you bounce the track instead, as Chapter 13 explains.

Exporting your song

1. Click **Export** at the top right of the window.
2. Check the kinds of file you want.
3. Choose **24-bit WAV** or **32-bit float WAV**.
4. To save somewhere other than the folder shown, click **Choose folder**.
5. Click **Export**.

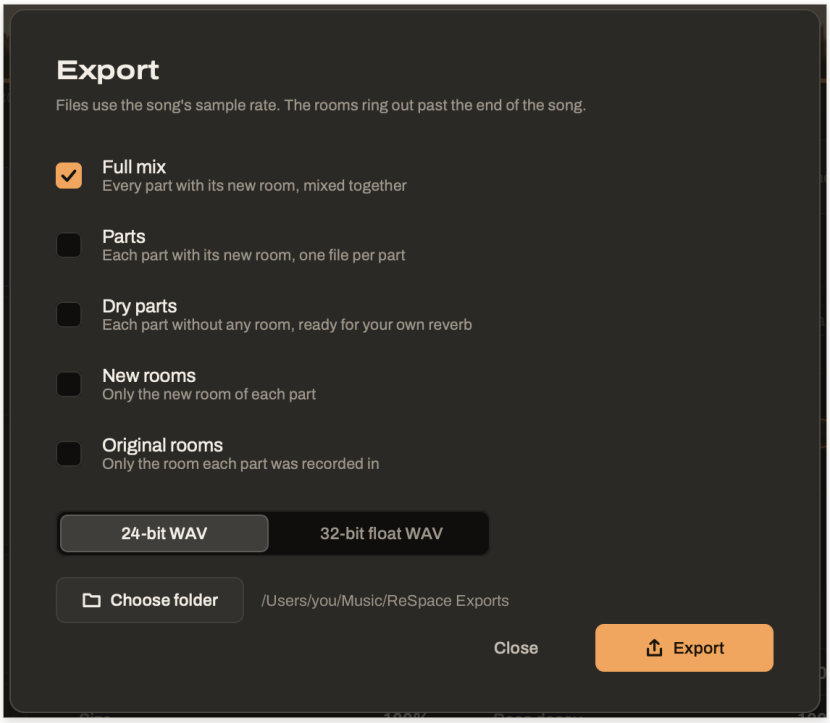


Figure 20. The Export panel.

A bar shows the progress, and **Cancel** stops the export and removes the files it started. When it is done, ReSpace tells you how many files it saved. **Show in Finder** takes you to them.

What you can export

Choice	What you get	File name
Full mix	Every part with its new room, mixed together	“My Song ReSpace mix.wav”
Parts	Each part with its new room, one file per part	“My Song Vocals.wav”
Dry parts	Each part without any room, ready for your own reverb	“My Song Vocals dry.wav”
New rooms	Only the new room of each part	“My Song Vocals new room.wav”

Choice	What you get	File name
Original rooms	Only the room each part was recorded in	“My Song Vocals original room.wav”

Every file is a stereo WAV at the song’s own sample rate. ReSpace saves to the **ReSpace Exports** folder in your Music folder unless you choose another.

What is in the files

- **Full mix** includes the parts you did not process, so the song is complete, and it follows **Output**.
- Each part’s level, mute and solo are applied, so the files match what you hear. A muted part gives silent files.
- **Full mix**, **Parts** and **New rooms** run past the end of the song, so the rooms can ring out.
- **Dry parts** keep the part’s own EQ and transient shaper, without any room.
- **Original rooms** are the rooms exactly as ReSpace removed them.
- Only processed parts get files of their own.

> **TIP**
> Export **Dry parts** and **New rooms** together to balance each room yourself in your DAW. Place all the files at the same start time, the start of the song.

CHAPTER 13

Using ReSpace in Your DAW

As a plug-in, ReSpace works on one track at a time, with your DAW doing the playing and the bouncing. The room editor is the same as in the app.

Adding ReSpace to a track

Insert ReSpace on an audio track, the way you add any effect. It comes as an AU, a VST3 and an AAX for Pro Tools, listed under WaveMachine Labs. ReSpace takes a stereo or a mono track and always plays back in stereo.

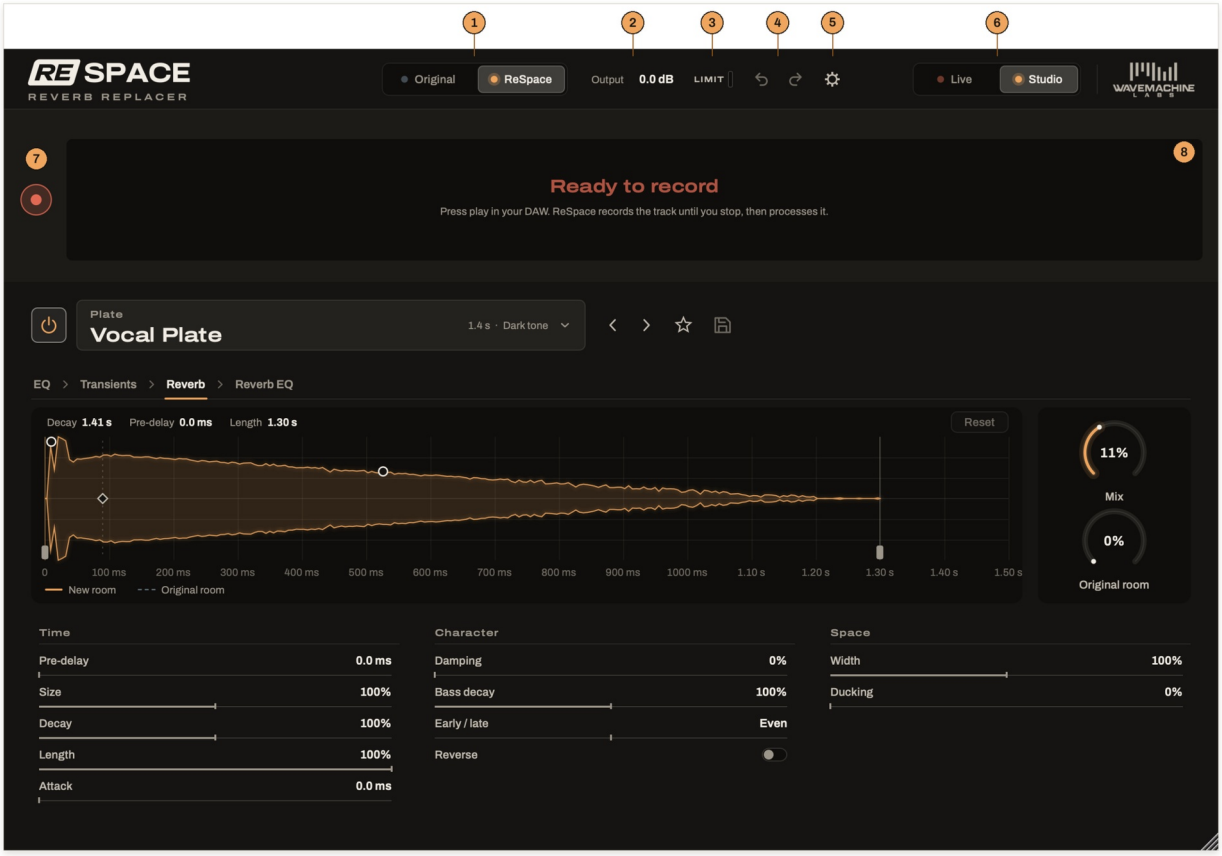


Figure 21. ReSpace on a DAW track, ready to record.

1 Original / ReSpace	Compare the track as recorded with ReSpace's result.
2 Output	The level of everything ReSpace plays.
3 LIMIT	The output limiter's light. Click it to turn the limiter on or off.
4 Undo and redo	Take back a change, or make it again.
5 Settings	Opens the **Settings** page, which in a DAW also holds the reverb removal strength.
6 Live / Studio	Chooses how ReSpace works on this track. The next section explains both.
7 Record	Records the track as your DAW plays it (in Studio).

8 Waveform Shows what ReSpace has recorded and processed, and tells you what to do next.

There is no parts list in a DAW, because ReSpace works on the track as one part. There is also no **Export** button, since you bounce the track from your DAW.

Choosing Live or Studio

The switch at the top right chooses how ReSpace takes the room out of the track.

	Studio (Best quality)	Live (Lower quality)
How it works	You record the track into ReSpace. It processes the recording, then plays the result in place.	ReSpace removes the reverb as the track plays. There is nothing to record.
Quality	The cleanest removal	Removes less of the reverb
Delay	Practically none	About a third of a second, which your DAW makes up for
Computer	Works hard while it processes, then lightly	Works the whole time the track plays
Best for	Mixing, and anything you want to sound its best	Trying ideas quickly, and tracks that keep changing

Studio is the default. You can switch at any time, and it is best to do it with the transport stopped. Takes you record in Studio are kept while you work in Live, and they play again when you switch back.

Recording a take

In Studio, ReSpace works from its own recording of the track. You record the part you want to change, and ReSpace processes it as soon as you stop.

1. Click the round record button at the left of the waveform. It flashes, and the waveform says **Ready to record**.
2. Start playback in your DAW. ReSpace records the track as it plays, and you hear the track as it is while it records.
3. Stop the DAW, or click the record button again. ReSpace processes the take right away, and the waveform shows its progress and the time left.
4. Play the track. The stretch you recorded now plays with its new room.

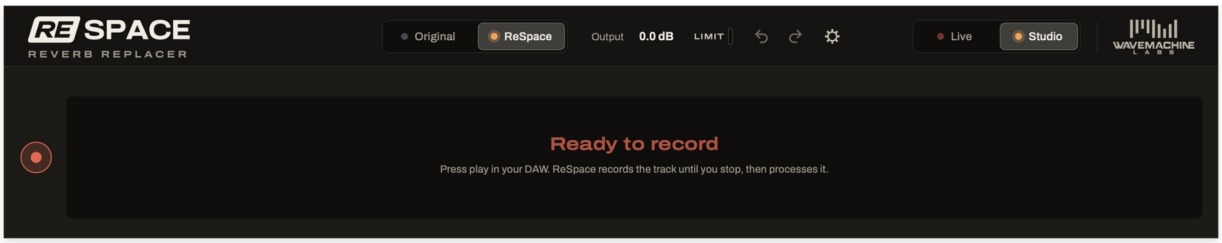


Figure 22. Ready to record.

To cancel before you start playing, click the record button again. A take needs at least a second of audio, so a shorter one is refused with a message.

The first time a track is processed, ReSpace gives it a room suited to the track, at the level of the room it removed. Later takes keep the room and settings you have chosen.

> **NOTE**
> A take also ends when your DAW's playhead jumps, for example when you click elsewhere or a loop goes round. The take keeps everything recorded up to that point.

How takes play back

Each take stays where you recorded it on the timeline. Record another stretch elsewhere, and both play. Recording over part of an earlier take replaces just the stretch you recorded again.

Outside your takes, the track plays exactly as it is, without a new room. In the waveform, the processed stretches are tinted, and the ruler under them shows your DAW's time.

> **IMPORTANT**
> Inside a take, ReSpace plays its own copy of what it recorded. If you edit, replace or re-record that stretch of the track in your DAW later, record it into ReSpace again so it hears the new audio.

Recording in a loop

Looping is a quick way to work. Set a loop in your DAW and start the recording. The take ends where the loop goes round, and ReSpace processes it while the loop keeps playing. From the next pass on, you hear the loop with its new room, so you can shape the room as it repeats.

Starting over

To remove every take from a track, open **Settings** and find **This track** in the **CACHE** card. Click **Clear…**, then **Move to Trash**. ReSpace moves the track's recordings and their processed audio to the Trash. The track then plays as it is, ready for a new recording.

Removal amount on a track

In a DAW, the four **Removal amount** choices from Chapter 5 are in **Settings**, under **REVERB REMOVAL**. The choice belongs to the track. In Studio, changing it processes your takes again. In Live, you hear the change right away.

All four choices work in Live, **X-High** included. As in Studio, **X-High** leaves less of the room in the pauses than **High** does.

Working in Live mode

With **Live** selected, the waveform area reads **Live**. Play the track, and ReSpace takes the room out as it plays. Every control works as usual, and you hear each change immediately.

Live delays the track by about a third of a second. ReSpace tells your DAW about the delay, and your DAW makes up for it on playback, so the track stays in time with the others. The delay is too long for monitoring while you record, so use Live on tracks that are already recorded.

On some computers, ReSpace tunes itself to the processor the first time you use Live. The waveform says "Tuning for this computer," and the track plays as it is for a moment. This happens only once.

Live keeps working the whole time your DAW runs the plug-in, even with the transport stopped, and each Live track adds its own load. If the computer falls behind, the track plays as it is for a moment until ReSpace catches up. It never goes silent.

If your computer can't keep up with Live

Live has to finish its work on each slice of sound before the next one arrives. A computer that can't do that is told so: the waveform area says "This computer can't keep up with Live. (error 603)." While the message shows, parts of the track play as they are, with their original reverb, whenever Live falls behind. The message goes away once Live has kept up for five seconds.

Studio does not depend on the computer's speed. If the message keeps coming back, use Studio on that track. A slower computer only takes longer to process a take, and the result is the best ReSpace can make. To give Live more room instead, try these:

- Use Live on fewer tracks at once. Every Live track does the full work.
- Close other applications that keep the processor busy.
- On a laptop, plug in the power adapter and turn off any low-power or battery-saver mode.
- Raise your DAW's buffer size if the message appears only when the project is busy.

Most computers from the last several years keep up with Live. Older processors, and low-power ones with fewer than four cores, may not.

> **NOTE**
> In Live, ReSpace does not measure the room it removes, so the decay picture has no dashed outline of the original room.

Using ReSpace with ARA

Some DAWs support ARA 2, a way for a plug-in to read a track's audio directly. In those DAWs, ReSpace reads the track's clips by itself, so there is nothing to record. Instead of the record button, the waveform has a **Process** button.

In REAPER

Add ReSpace to a track as a track effect, using the VST3. The window shows the whole track, with each clip in its place, and fills in as REAPER shares the audio. If it asks you to "Press play once so your DAW shares this track's audio," start playback for a moment.

1. Click **Process** to process everything on the track that is not processed yet.
2. To process only a stretch, drag across the waveform first, then click **Process**.

Processed stretches are tinted, and the rest of each clip plays as recorded. Clicking the waveform moves REAPER's playhead. Moving a clip keeps its processing. If you lengthen a clip into audio that was not processed, that audio plays as recorded until you click **Process** again.

Live mode works in REAPER too, on a track effect.

In Pro Tools, Cubase, Nuendo and Studio One

These DAWs give ReSpace to clips through their own ARA menus. Pro Tools lists it in the track's **Elastic Audio / ARA** plug-in selector. For Cubase and Nuendo, apply it to an event as an extension, and in Studio One, add it to an event.

ReSpace then opens in the DAW's editor pane, laid out side by side to fit the pane's wide shape. When you open it in a separate window, it uses the usual layout.



Figure 23. ReSpace laid out to fit a DAW's editor pane.

Live mode is not available in these DAWs' ARA mode. To use Live there, insert ReSpace on the track as a regular effect instead.

In Logic Pro

Logic Pro uses ReSpace as a regular AU effect, so you record takes as described earlier in this chapter. Live mode works as usual.

Automating ReSpace

Most of ReSpace's controls appear in your DAW's automation lists, named after the part and the control. On a DAW track, the controls that matter are the ones whose names begin with **Vocals**, such as "Vocals mix" and "Vocals decay." ReSpace treats a track as a single part and gives it that part's controls, whatever the track holds.

You can automate each room control, **Mix**, **Original room**, the level, the room switch and the transient shaper, as well as **Output**, the compare switch and the output limiter. The room itself, the EQ bands, the mode and the reverb removal strength cannot be automated.

> **NOTE**
> When ReSpace works through ARA in Pro Tools, Cubase, Nuendo or Studio One, its settings belong to the track and are not automated.

Bouncing and freezing

Bounce or freeze a track with ReSpace as you would with any effect. The processed takes play in place, and the new rooms ring out past the end of the region. Bounces faster than real time work in both modes.

Saving your project

Your DAW project saves everything about ReSpace on the track, including the room, its settings, the EQs, the mode and the list of takes. The recorded and processed audio itself is kept in ReSpace's cache folder, which Chapter 14 describes.

> **IMPORTANT**
> Keep ReSpace's cache while you are working on a project. If the cache is cleared, or you open the project on another computer, the takes are missing and the track plays as it is.
> To get them back, record those stretches again. With ARA, ReSpace reads the clips again and you process them again.

CHAPTER 14

Settings

Click the gear at the top of the window to open the **Settings** page. To close it, click the gear again, click **Back**, or press **Escape**.

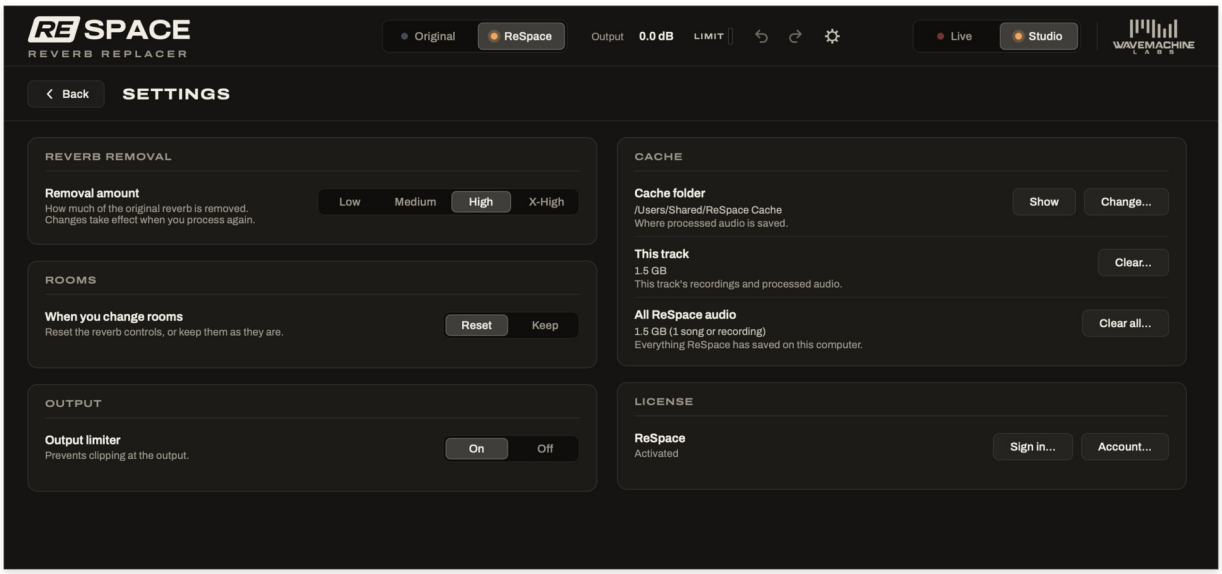


Figure 24. The Settings page in a DAW.

The settings

Card	Setting	What it does
REVERB REMOVAL	**Removal amount**	How much of the original reverb is removed: **Low**, **Medium**, **High** or **X-High**. Shown in a DAW only; the app asks in the **Process** dialog.
ROOMS	**When you change rooms**	**Reset** starts each new room at its defaults. **Keep** carries your reverb settings over to the next room.
OUTPUT	**Output limiter**	**On** keeps the output from clipping. **Off** lets peaks through.
CACHE	**Cache folder**	Where ReSpace keeps the songs and takes it has processed. **Show** opens it in the Finder. **Change...** chooses another folder.
	This track	The disk space this track's recordings and processed audio take. **Clear...** moves them to the Trash. Shown in a DAW only.
	All ReSpace audio	The disk space of everything ReSpace has saved on this computer. **Clear all...** frees it.
LICENSE	**ReSpace**	Whether ReSpace is activated or in its trial. The button opens the activation window.

When you change rooms and the cache folder apply to ReSpace everywhere on the computer. The other settings belong to the song in the app, or to the track in a DAW.

The bottom of the page shows the version of ReSpace you are running. When a newer one is out, **Update available** appears there with its number. Click it to open the download page (Chapter 2, Updating ReSpace).

Managing the cache

While you work, every song you process and every take you record is kept in the cache. It holds a copy of the audio and the parts ReSpace made from it. A DAW project plays its takes from there. The app keeps a song only while it is open, and lets its files go when you quit or choose another file. A song processed into six parts can take a gigabyte or more, so the cache grows quickly while you work. **All ReSpace audio** shows how much it holds.

To keep new results on a larger drive, click **Change…** and choose a folder there. Songs processed earlier stay where they were made and keep working.

In a DAW, each track keeps its recordings in a folder of its own inside the cache. When you have finished with a track, click **Clear…** beside **This track** to move only that track's audio to the Trash. Other tracks and other projects are not touched.

To free everything at once, click **Clear all…** beside **All ReSpace audio** and confirm. ReSpace asks before it does anything, then moves the saved songs and takes to the Trash. Whatever is open in ReSpace at that moment is kept.

> **IMPORTANT**
> **Clear all…** also removes the takes recorded in your other DAW projects. Those tracks then play as they are until you record them again. Use it only when you have finished with those projects, or bounced them.

CHAPTER 15

Troubleshooting

When something does not work as you expect, start here. ReSpace's error messages end with a number in parentheses, and the table below says what each one means and what to do.

Common questions

The room browser says the rooms are not available

The library opens only when ReSpace is activated or in its trial. Sign in, or start the free trial, as Chapter 2 describes. If ReSpace is activated and the browser still says so, reinstall ReSpace to put its rooms back.

I hear a short tone a few times a minute

That is the free trial. The tone stops as soon as you sign in with a ReSpace license. Audio that ReSpace processed during the trial keeps the tone, so process that song again. On a DAW track, open **Settings**, clear the track's recordings under **This track**, and record the take again.

ReSpace plays the track unchanged

- Check that **ReSpace**, not **Original**, is selected at the top of the window.
- Check that the part's room switch is on, and that its **Mix** is above 0.
- In a DAW in Studio, ReSpace changes only the stretches you have recorded. Record a take first.
- When ReSpace is not activated, or the trial has ended, it plays the original audio unchanged.

Processing takes longer than expected

Processing speed depends on the computer, and the first song on a new computer can take a little longer. Other applications that use the graphics processor, such as video editors and games, slow it down, so close them while ReSpace works. The estimate in the **Process** dialog improves as ReSpace learns how fast your computer is.

In Live, the track plays out of time

Live delays the track by about a third of a second, and your DAW has to make up for it. Check that your DAW's plug-in delay compensation is turned on. Live is not meant for monitoring while you record.

In Live, the room is still there for a moment after playback starts

Live works from what it has just heard. When playback starts it has heard nothing yet, so for the first second or two it removes less of the room, most of all when playback starts in the middle of the music. After that it removes the room as usual. This is how Live works on every computer. **Studio** has no such start, because it works from the whole recording.

ReSpace says this computer can't keep up with Live

Live needs more processing power than the computer has free at that moment, so parts of the track play with their original reverb. Switch the track to **Studio**, which works on any computer, or see "If your computer can't keep up with Live" earlier in this chapter for ways to give Live more room.

My takes are missing when I reopen a project

The takes' audio lives in ReSpace's cache. If the cache was cleared, or you opened the project on another computer, record those stretches again.

An exported file is clipping

Exports are not passed through the output limiter. Turn **Output** down and export again, or choose **32-bit float WAV**, which cannot clip.

A keyboard shortcut does nothing in my DAW

Some DAWs keep keys for themselves. Use the mouse for that action, or click inside ReSpace's window first so it has the keyboard.

Error messages

Number	What the message says	What to do
101	ReSpace's processing engine isn't installed.	Reinstall ReSpace.
102	ReSpace isn't activated on this computer.	Sign in or start the free trial (Chapter 2).
102	ReSpace's processing engine couldn't start, or the installation looks altered.	Reinstall ReSpace.
103	Processing stopped.	Process again.
104	Processing stopped unexpectedly.	Process again. If it keeps happening, restart the computer.
105	ReSpace couldn't open the processed audio.	Process the song or the take again.
106	The processed parts don't match the audio's sample rate.	Process again.
107	This analysis has no processed parts.	Process again with at least one part checked.
108	Nothing of this clip has been processed.	Click **Process**.
109	A processed stretch doesn't match the clip's sample rate.	Process the clip again.
110	Processing stopped responding.	Process again. Close other demanding applications first.
201	ReSpace can't read the file.	Use a WAV, AIFF, FLAC or MP3 file.
202	The file is too short.	Use a file at least half a second long.
203	ReSpace can't write to its cache folder.	Free some disk space, or choose another cache folder in **Settings**.
204	The audio for this session is no longer on this computer.	Add the song again.
205	The recording was too short.	Record at least a second of the track.
301	ReSpace couldn't prepare this stretch of the clip.	Click **Process** again.
302	The DAW stopped sharing this audio while ReSpace was reading it.	Play the track once, then click **Process** again.
401	Nothing to export yet.	Process the song first.
402	The rooms took too long to prepare.	Export again.
403	ReSpace couldn't write the files to the folder.	Choose another folder, or free some disk space.
501	Couldn't read the file as audio.	Use a WAV, AIFF or FLAC impulse response.
502	Couldn't save the EQ preset.	Check that your disk has space and your user folder is writable.

Number	What the message says	What to do
503	File not found.	Put the imported impulse response back where it was, or load it again.
504	Reinstall ReSpace to put its rooms back.	Reinstall ReSpace.
602	Live couldn't start.	Check that ReSpace is activated or in its trial, then switch to Live again.
603	This computer can't keep up with Live.	Use Studio on this track, or free up the processor: fewer Live tracks, other applications closed, the power adapter plugged in.

Sending a log to support

If support asks you for a log, ReSpace can write one. Create a folder named **respace** on your Desktop, then use ReSpace as you did when the problem happened. Within a few seconds, ReSpace starts writing a file called `respace.log` in that folder. Send that file to support, then delete the folder to stop the log.

The log records only numbers, such as timings and settings. It contains no names, file paths or audio.

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