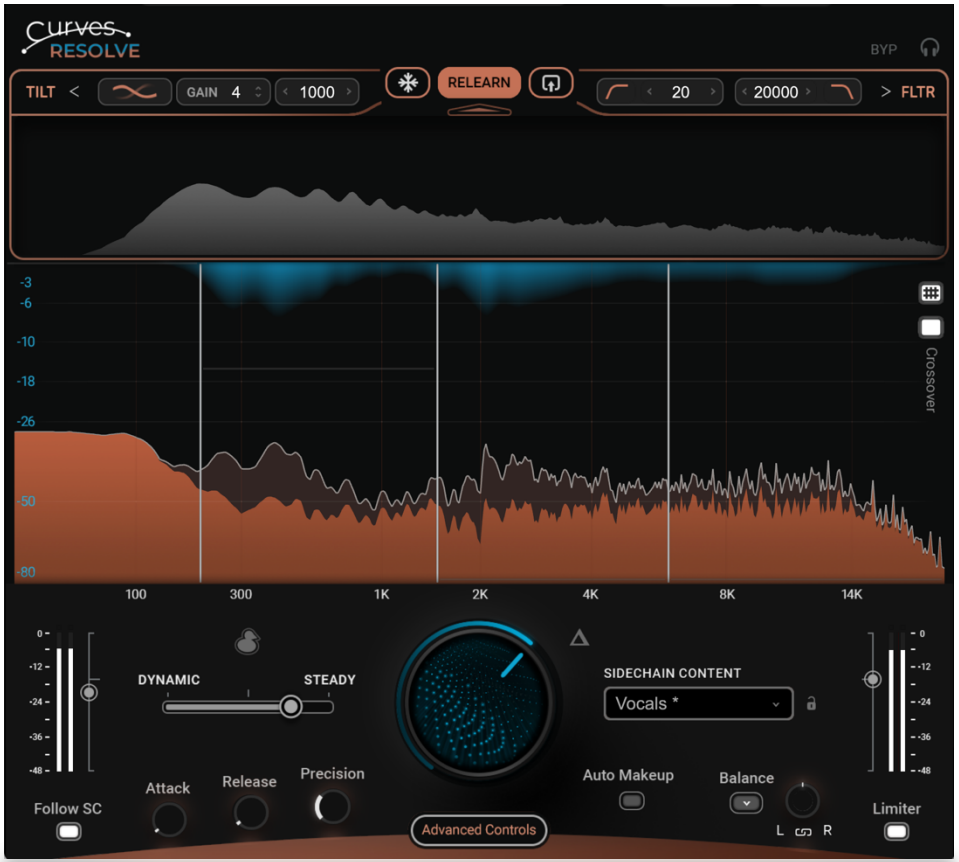
Curves Resolve

Resolve the conflicts. Reveal the music.

User Guide



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Introduction

Curves Resolve is a precision frequency-unmasking tool designed to reduce masking and spectral clashes between instruments, vocals, and other mix elements. Powered by hundreds of real-time sidechain-driven processors, Resolve intelligently makes space in your mix without compromising clarity or tone.

Whether you're clearing room for vocals in a dense arrangement, isolating kick and bass, or enhancing dialogue in post-production, Resolve delivers transparent, musical results in both static and dynamic workflows. With the added ability to learn from the sidechain input and freeze dynamic curves, Resolve offers both dynamic and "learned" processing workflows for flexibility and accuracy.

Quick Start

This Quick Start guide takes you through the basics of resolving spectral clashes and competition between tracks. Follow these steps to achieve optimal results. Aside from the controls described in this Quick Start guide, there are numerous controls that you can use to further refine the processing.

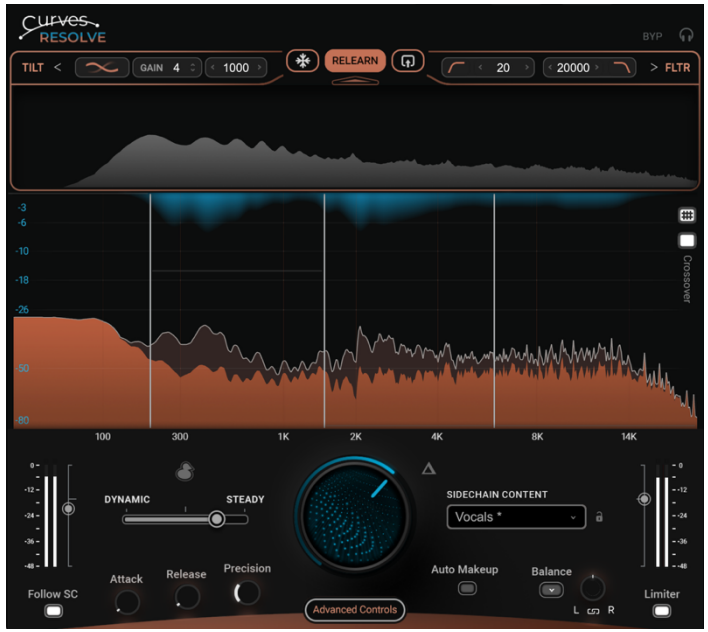
The following examples describes making space for a ***Lead Vocal*** channel in a dense ***Music Track,*** but the principal is the same for other use cases:

1. **Insert** Curves Resolve on the track that you want to process—in this case, the ***Music Track***.
2. **Route** the ***Lead Vocal*** track to the sidechain input of the ***Music Track***. You can route more than one track, and even group/aux tracks can be routed.
   Note: Resolve processes via an active sidechain. It also displays a message letting you know about it on instantiation, which goes away by itself once sidechain is routed.
3. Turn the **Main knob** to hear and see what Resolve is doing. You'll be able to see the attenuation of frequencies in blue, coming down from the top section.
4. Select a **Sidechain Content** option from the drop-down menu—in this case, **Vocals**.
5. Optional: Click **Learn** to average the sidechain over a short period of time to create a static profile. This action will turn on the **Dynamic / Steady** slider—a very important and helpful feature of Resolve, allowing you to control the nature of the reduction. While Dynamic processing is faster and more responsive, it can lead to artifacts at higher reduction values, so a mix of both Dynamic and Steady is usually the best.
6. Tweak the **three adjustable crossover filters** and the **four per-band controls** to accurately adjust the processing within the bands.
7. Use the **SC Tilt controls** and **SC Filters** to change how Resolve "hears" the sidechain audio. This affects the processing and allows you to control the amount, shape and frequencies. You can also adjust the advanced controls, including **Attack**, **Release**, **Precision** and **M/S processing** for total control over the processing.

Tooltips can help you navigate the interface quickly. Hover over a control to display the control name and/or brief instructions about its use at the top of the window.

Interface and Controls

There are four processing sections, each with its own purpose and controls:



Side Chain Controls

Graphic Controls

Main Panel Controls

Advanced Panel Controls

The **Sidechain Section** shows and controls the audio coming into the plugin, which informs Resolve's process that this is the audio you want to make room for. Here, you can sculpt the sidechain's frequency tilt and limit the sidechain frequency range. You can also create static sidechain models by using Learn/Freeze.

The **Graphic Display** shows the input/output signals and the reduction. It's divided into four adjustable bands that help you focus signal attenuation. Band faders let you adjust the amount of reduction for each band.

Main Panel Controls are the most important controls, with the greatest impact. They globally affect Resolve's overall process. Along with a Dynamic / Steady mixer and a Ducker mode, there is a Delta monitor (for hearing the audio that's being reduced from the signal) and a drop-down menu from which you can select what kind of content is coming in through the sidechain input.

Advanced Panel Controls enable you to fine-tune the processing, including make-up gain, attack/release, precision, stereo modes (for M/S), limiter, and a Resolve-specific control (Follow SC).

Sidechain Controls

This panel adjusts the sidechain before it is applied to the Resolve track.

1 SC Display

Shows the sidechain audio Resolve is listening to, after frequency tilting and bandwidth filtering.

2 SC Tilt Section

Applies tonal weighting to the sidechain signal. It only shapes how Resolve listens to the SC audio without changing it (in case it is also a part of your production/mix).

3 *Three Tilt Curves*

Natural (seesaw style, tilts both low/high), Hi-Tilt emphasizes treble, Lo-Tilt emphasizes bass. Click the toggle button to cycle through the options.

Click on the Tilt arrow to expand or collapse the SC Tilt controls.

4 *Tilt Gain*

Sets the amount of tilt pivoting.

5 *Tilt Anchor Frequency*

Defines the frequency pivot point for tilt processing. Frequencies below the anchor are tilted opposite of those above it.

Range: 300 Hz to 3000 Hz

6 SC Filters

HPF and LPF to band limit the sidechain signal.

Range: 20 Hz to 20,000 Hz; slope: 24, 48, 72 dB/octave

Click the arrow next to the word **Filter** to expand or collapse the SC Filters controls.

7 Freeze

Captures a small snapshot of the incoming SC audio. To freeze, play the audio and click **Freeze**  at the desired moment. The button will blink. To revert to the previous learn state (if exists), click **Freeze** again to unfreeze the sidechain. If a previous Learn does not exist, unfreezing will disable the Dynamic / Steady slider (since it requires a 'Learned' profile to function).

Use Case: Use Freeze to capture a specific moment from the SC audio in cases when you feel a long learn is too soft and you want the sharpness of a certain moment within the sidechain audio. Keep in mind that the reduction will be much harsher on the Steady side of the slider.

8 Learn

Averages the SC over a period of time. Use when you want steadier and softer processing. Play audio and click the Learn button. During the first seconds of learning, ***Abort*** will flash. It will be replaced by ***Stop*** once Resolve has collected enough audio to make a valid steady curve of the sidechain audio. You can then click Stop to end the learning process.

Use Case: Ideal for steadier processes and contents that are largely sonically stable.

9 Scan File

This is the same process as Learn, but rather than capturing audio from the SC Control Panel by listening to it in real time, you can browse for an audio file on your system or drag-and-drop an audio file onto the SC panel to instantly scan it and create a steady SC curve.

Supported formats: WAV, AIF, AIFF, OGG, FLAC, MP3

10 Bypass

Bypasses plugin processing while retaining state and latency.

11 SC Audition

Solos the audio coming from the sidechain.

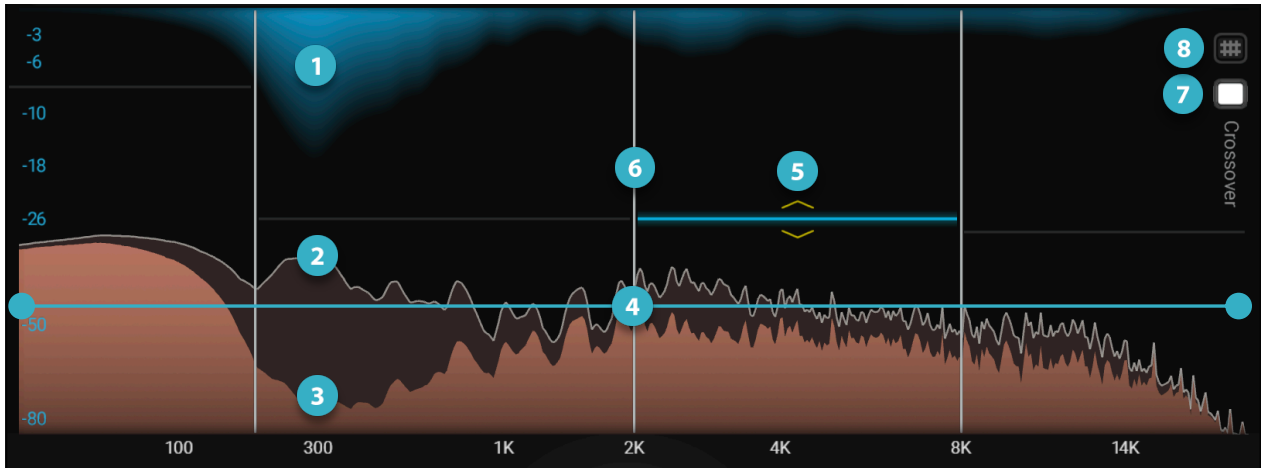
Main Graphic Panel

The **Main Graph** is the visual centerpiece of the plugin; it displays activity across the frequency spectrum. It's designed to provide intuitive, detailed insight into how the plugin is unmasking frequencies and how it reacts to sidechain input.

Frequency Spectrum Display

Horizontal (X) axis spans from 20 Hz (left) to 20 kHz (right), representing the audible frequency range.

Vertical (Y) axis represents gain reduction intensity at each frequency (-80 dB to 0 dB).



1 Reduction

The reduction graph moves in real time, showing how much reduction occurs and in which frequencies. It is a representation of how the plugin is reacting to the sidechain signal. Peaks in the reduction curve (which appear upside-down) represent frequencies where the most reduction and unmasking occur.

2 Input Signal

3 Post-process Signal (Output)

4 Bands

The graph is segmented into four bands divided by three movable crossover points. Each zone corresponds to one of the Band Gain controls. Each can be soloed, bypassed, or delta-monitored via its associated controls.

5 *Band Reduction Controls*

Adjusts the strength of reduction in each band individually. 100% = normal; 0% = no process; 200% = double processing (maximum) per band.

Range per band: 0 to 200%

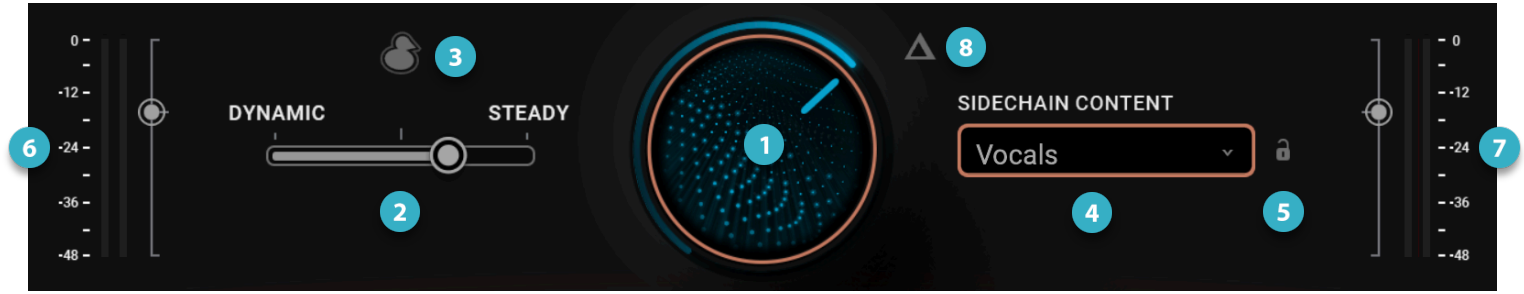
6 *Crossover Controls*

Adjusts the crossover frequencies of the boundaries of the four bands. These movable crossovers allow you to focus Resolve processing in specific frequencies. Click and drag to reposition crossover frequencies.

7 Hide/Show Crossovers

8 Hide/Show Gridlines

Main Controls



1 Main Knob

Controls the global intensity of the process. It is the most fundamental control. At 0%, there's no process and at 100%, maximum gain reduction is applied on the masked frequencies.

Use Case: Start with lower values and gradually increase until you hear and see the reduction. Use in tandem with per-band gain to target specific zones. This knob reacts differently when the plugin is in Ducker mode.

Range: 0% (no process) to 100%

2 Dynamic / Steady Slider (Unmask / Wide, in Ducker mode)

Allows you to mix between the **Dynamic** real-time sidechain audio processing and the **Steady** fixed snapshot created by Learn (or Freeze). This mix influences the focus, sharpness, and overall nature of the processing. The default value is set automatically after the first learn, and thereafter it is fully adjustable and automatable.

Range: 0% (fully Dynamic/Unmask) to 100% (fully Steady/Wide).

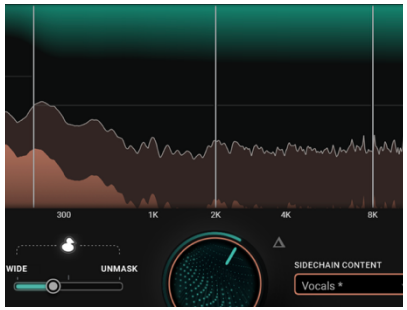
Use Case:

While 0% (fully Dynamic) is recommended for most use cases, learning and then using the slider to gradually introduce steadiness to the sidechain signal adds softer processing to the mix, while adding less artifacts. At steadier settings, the process resembles a traditional dynamic EQ rather than a dynamic unmasking effect (which relies on the ever-changing SC audio).

3 Ducker Mode

The Ducker mode works best when you want full-range reduction instead of frequency-specific. It's perfect for making room for vocals/narration/voiceover that need to clearly cut through a mix, rather than be nestled with it.

In this mode, the Dynamic / Steady slider becomes **Wide / Unmask**:



Wide (Ducking) Treats the sidechain as equal gain on all frequencies, ducking the input evenly across the spectrum for a smooth, full-range pushdown.

Unmask treats the SC the same way, but dynamically analyzes the input to reduce only where masking occurs, combining classic ducking with frequency-aware transparency.

4 Sidechain Content

Use this drop-down menu to have Resolve optimize its processing based on your SC audio content (e.g., vocals, drums, bass, kick). Resolve will automatically change certain plugin parameters to provide you with the best starting point for the selected SC content.

Select the option that best describes what's coming through the sidechain from the drop-down menu and Resolve will provide you with an ideal starting point.

The parameters that may change are based on the selected menu item, which include:

- All crossovers
- All process amounts within the bands
- Tilt type, tilt gain and tilt anchor frequency
- HPF and LPF frequency
- Attack, release and precision
- Ducker on/off and Wide/Unmask slider

5 Sidechain Content Lock

Allows you to switch between presets without having the relevant controls change as you switch.

6 Delta

Auditions only the audio that is being attenuated from the signal, allowing you to listen to the masking frequencies.

Use case: Essential for transparency checks and tonal changes. The button flashes blue when activated.

7 Input Trim

Adjusts the level of the input signal before processing. Helps set the internal gain structure. Use Input Trim if the incoming signal is too hot or too quiet relative to sidechain.

Range: -inf dB to +24 dB

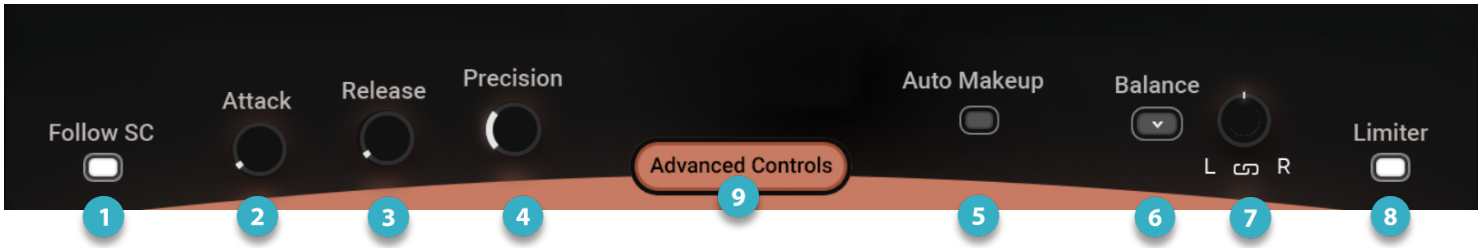
8 Output Trim

Controls post-processing output level. Useful to match level or drive into downstream processors.

Range: -inf dB to +24 dB

Advanced Controls

The Advanced controls help shape the sound, usually once you are happy with the attenuation and unmasking. Most of these are familiar dynamics processor controls, and you can find them on all other Curves series plugins.



1 Follow SC

When toggled off, reduction occurs even without an incoming sidechain signal—similar to how regular dynamic EQs work.

Use Case:

On: Responsive unmasking (e.g., vocals over guitars). Critical for avoiding “holes” in the musical arrangement (in other words, to reduce only when there’s conflict).

Off**:** Persistent masking reduction (e.g., reverb shaping even when vocals rest). Similar to how a dynamic EQ works.

Range: On or Off, Default: On

2 Attack

Defines how quickly attenuation begins when sidechain signal appears:

- Fast (0 to10 ms): Rapid response, fewer transients.
- Medium (30ms to 80 ms): Preserves transients, fast-acting process.
- Slow (>100 ms): Avoids pumping in ambient sources.

Range: 0 to 1000 ms

3 Release

Defines how quickly attenuation stops after sidechain disappears. Longer release smooths transitions.

Range: 0 to 1000 ms

4 Precision

Controls the Q of the resolve bands—how narrow or wide each cut is. Higher = more surgical; lower = smoother. Set carefully to avoid phase or resonance issues.

Range/Options: 0 to 100

5 Auto Make-Up Gain

Measures the RMS of the input and applies dynamic makeup gain based on the amount of gain reduction or boosting, ensuring the output RMS closely matches the input RMS.

Range/Options: On or Off

Default: Off (unlike Equator and AQ)

6 Stereo Modes

Determines stereo processing behavior.

Studio component (**Balance** drop-down menu)

- **Linked:** Processing occurs according to the summation of Left and Right channels.
- **Split:** Processes L and R individually for precise control in stereo-rich mixes. Stereo Sidechain input is not supported in Pro Tools.
- **M/S:** Controls the output processing amount between the Mid and the Side according to the sidechain input's Mid/Sides content. Useful for stereo width attenuation or centering vocals.

Live component (**Process Channel** drop-down menu)

- **Linked**: Processing occurs according to the summation of Left and Right channels of the sidechain signal.
- **Mid**: Processing occurs according to the Mid content of the sidechain signal.
- **Side**: Processes the signal according to the Side content of the sidechain signal.
- **Left**: Processes according to the Left side of the sidechain signal.
- **Right**: Processes according to the Right side of the sidechain signal.

7 Stereo Balance (stereo component only)

Shifts focus of reduction toward Left/Right or Mid/Side. Useful for fixing panned masking issues or adjusting stereo shape dynamically. Not available on the live component.

Range: -100 to +100

8 Limiter

Engages true-peak limiting at the output and prevents overs and clipping. Recommended when boosting Output Trim.

Range: On or Off (-0.1 dB ceiling)

9 Advanced Controls Panel View/Hide