

D O V E



1. INTRODUCTION

Introducing our latest breakthrough in sound engineering: :

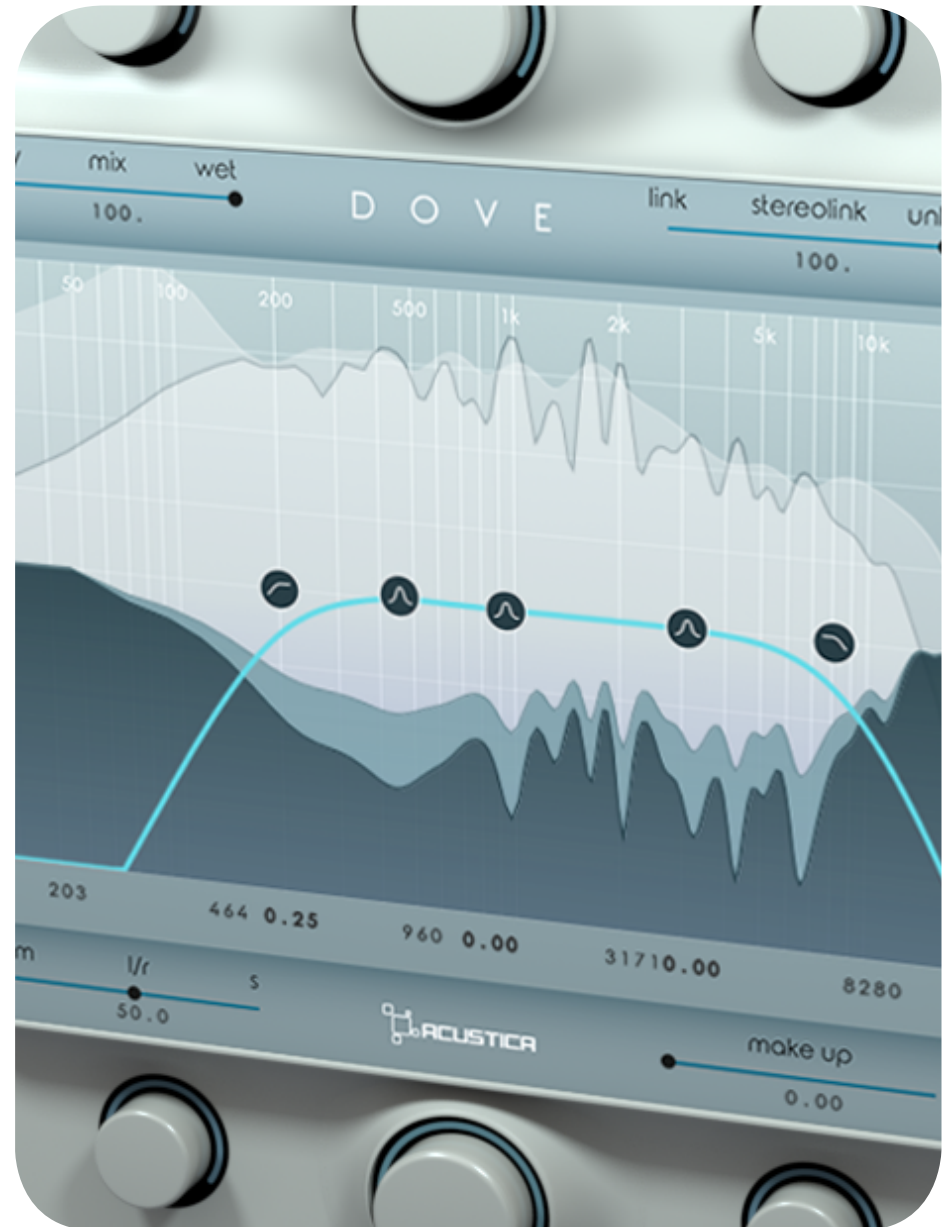
Dove, the ultimate **Dynamic Harmonics Compressor / Suppressor and De-Harsher.**

It stands as a genuinely intelligent and user-friendly multiband spectral compressor, designed to swiftly pinpoint and address issues, providing unmatched precision in molding your mix to achieve a refined and polish sound.

After years of dedicated research, we are thrilled to introduce a groundbreaking new product category in the Acustica domain. We acknowledge the significant achievements of our competitors in the field of such a plugin, but we are eager to emphasize that our vision for this product has been different from what the market offers today. Specifically, we aim to create an innovative and user-friendly tool, designed to deliver immediate results through a new algorithmic approach, culminating in an authentic product, not a common clone.

It's based on a black-box process allowing real-time visualization of the dynamic process without degrading the sound or signal. It should be used judiciously to correct problems that would otherwise be intractable or necessitate considerable time and expertise to amend. With its advanced spectral processing, Dove skillfully manages harmonic content, ensuring every component finds its rightful place in the auditory scene and it can gently refine a mix through a creative process with astounding precision.

Dove was created with the aim of streamlining the workflow for everyone from amateur musicians to professional mixing and mastering engineers. Its intuitive user interface offers crucial parameters that can be adjusted to augment clarity, refine details, remove harshness, dispel muddiness, enhance the proximity effect, and eliminate undesirable frequencies using our advanced harmonic suppressor functionality.





In Giancarlo Del Sordo's words:

"Our product was primarily developed as a Harmonics Compressor as well as a Suppressor. To put it succinctly, while one of the the most popular competitor plugin functions like a Swiss Army knife, ours aligns more with the precision of a katana. Beyond merely removing harmonics, it is designed to pinpoint specific areas of the spectrum, especially harmonics and signals that require correction or modification, and applies a targeted dynamic action to these. From this perspective, our product is not merely a competitor but establishes itself in a new category.

Furthermore, it wouldn't make much sense for us to directly compete with a product that has been on the market for years and is valued for its specific qualities. It's not our style to create a plugin that merely corrects issues. We view these as technical tools, whereas our essence lies in developing 'colored' tools that, in some way, reflect our connection to the hardware market.

Certainly, this product can also tackle technical issues. However, our primary goal was to offer dynamic control and, above all, ensure the highest possible quality, aiming to prevent signal degradation that might result from spectral processing. Some of our competitors might rely almost exclusively on spectral analysis.

Our approach involves creating a process that mirrors our modus operandi, starting with constructing an impulse response that matches the desired correction, then employing techniques observed in other products, like the dynamic application of correction, akin to a dynamic equalizer with all its parameters and operational modes. This functionality can be disabled, for instance, by setting the Reduction control to its maximum, thus eliminating the dynamic action.

The ability to be dynamic is what allows us to preserve sound quality, fluctuating between the completely 'dry' original signal and a processed sound, which is our main strength. The processed sound is generated through FIR filters, meaning that, in this context, oversampling is unnecessary, and we are completely free from aliasing in signal processing. Naturally, dynamic action can introduce aliasing or other artifacts, which is why we considered oversampling; however, the removal process tends to be cleaner compared to a spectral system."

1.1. COMPANY

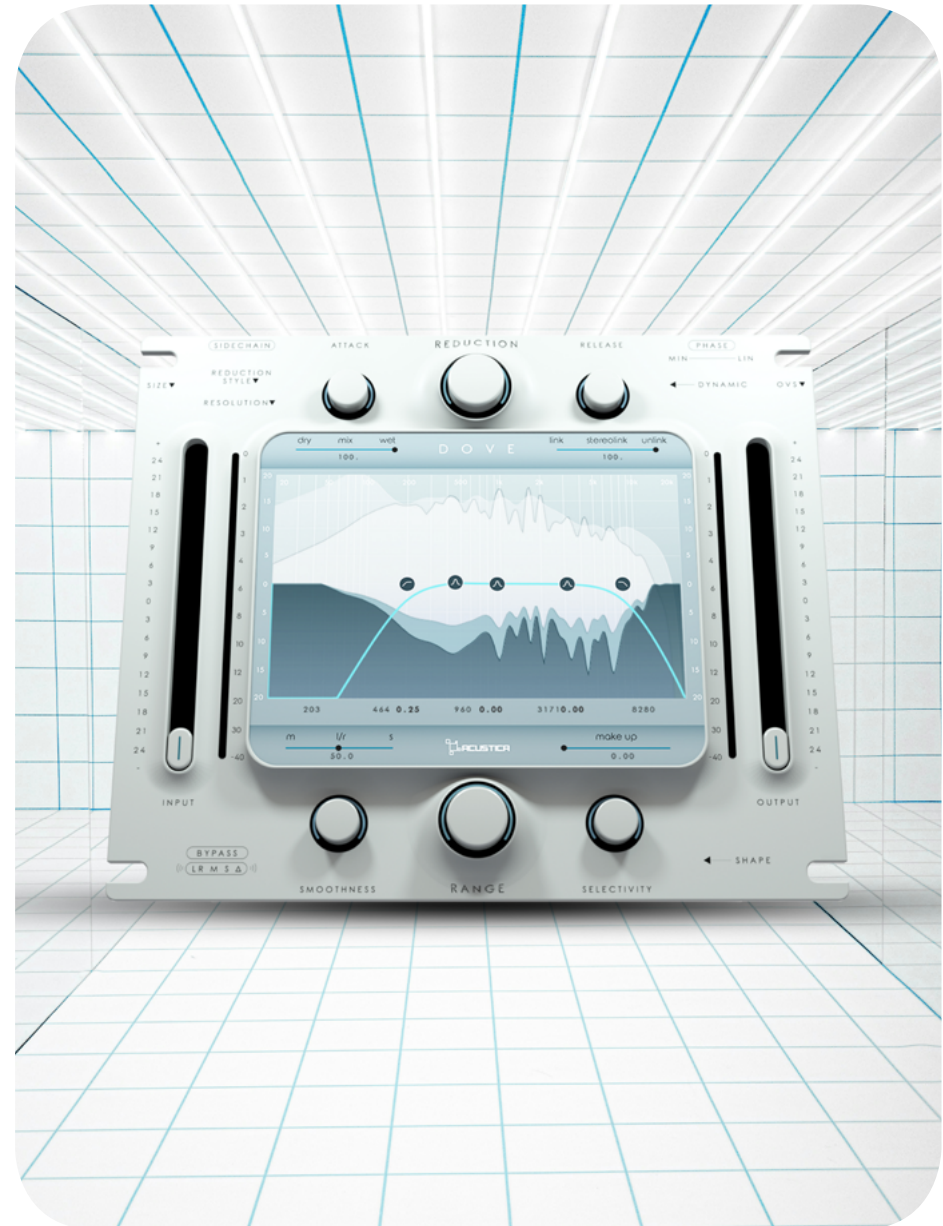
Founded in 2007, Acustica Audio, is committed to making the sound and quality of analog recording studios accessible to all. Our aim is to bring the excellence of analog sound into the digital world, merging tradition and innovation. We challenge preconceptions about audio devices, relying on our ears and science to explore new dimensions of sound.

With products like Dove, we analyze and integrate the best features of both analog and digital instruments, pursuing the goal of superior sound quality. Our passion drives us in the search for solutions that exceed the limitations of digital, whilst always keeping an ear close to the needs of our users.

1.2. TECHNOLOGY

In true Acustica style, Dove is based on convolution, dynamically applied to the signal, ultimately introducing intervention in an impulse response to which the convolution operator is applied. The main feature of this mode is to ensure very high audio quality since FIR filters, by definition, do not add aliasing to the signal. Given we are dealing with FIR filters of a dynamic component, a small amount of aliasing may be introduced, but it is negligible in our context. The dynamic part, on the other hand, is applied as if the object were a sort of dynamic equalizer, ensuring that artifacts are extremely limited and moderated even in this case. This is because the signal remains mostly on the dry part. To ensure maximum precision, we have included an oversampling algorithm, although in the case of dynamic compressors, the amount of aliasing introduced is generally modest.

Therefore, Dove is designed to achieve a certain level of cleanliness. Alternative techniques would involve the use of filter banks, which generally tend to muddy the phase response or are limited in intervention, or FFT spectral processing, which can sometimes have problems due to the way the FFT window is performed and the numerical precision involved. In addition to this, since we trace everything back to the impulse response, we have been able to integrate the processing with a selection of processing that varies from minimum phase to linear phase, but also includes all the intermediate nuances selectable with a control.



1.3. DOVE

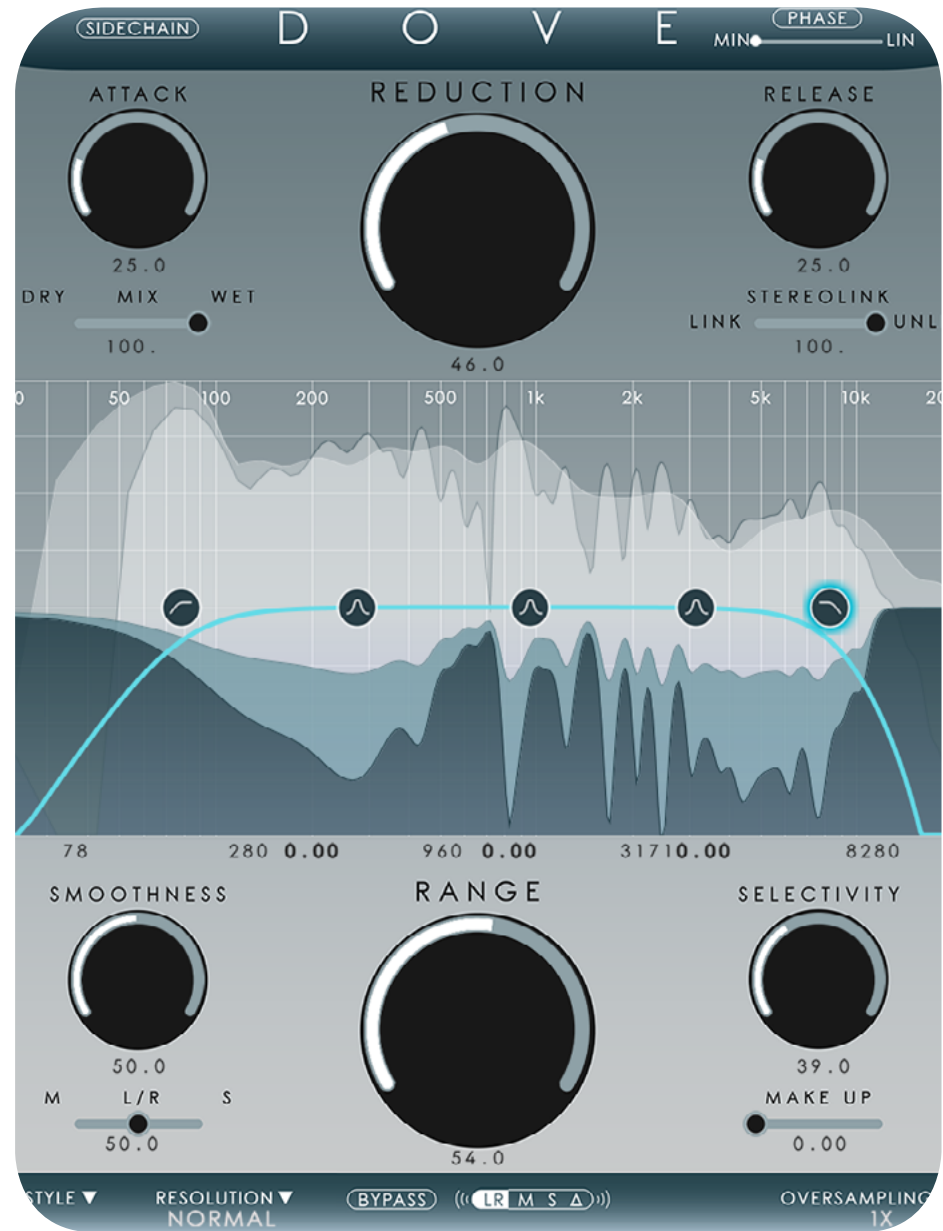
Dove represents the first of its kind Acqua plugin suit, that features a potent Dynamic Harmonics Compressor / Suppressor and a De-Harsher in a single plugin. It is available in VST2, VST3, AU and AAX formats for use with all major DAW software such as Live, Cubase, Logic, Pro Tools, etc.

This innovative processor allows for swift and accurate adjustments that would typically be unattainable or necessitate extensive time and expertise to rectify. Utilizing a 'black-box' creative approach, Dove aims to elevate your audio, employing strategies akin to the brain's adjustments in suboptimal auditory environments.

Equipped with sophisticated spectral processing, Dove adeptly controls harmonic content, ensuring that every sound element is precisely positioned within the audio landscape. It can subtly refine a mix with extraordinary accuracy, utilizing an advanced application to define the number of dynamic EQ bands up to 1/256 octave. Dove achieves a harmonious balance in your mix or recording in mere seconds, consequently, it's time to say goodbye to overpowering tones, resonant bass, cluttered mids, and harsh highs.

1.4. PRODUCT GENESIS: THE BIRTH OF A NEW APPROACH

Our approach is to provide not just a tool exclusively dedicated to problem correction or fixing but a tool that can be used creatively. This is why we decided to handle the dynamic part through processing based on some of the most famous hardware dedicated to dynamic compression, for example, some FET and VCA machines used in all recording studios, but also to manage the same intervention curve of the sidechain with an analog emulation of a hardware equalizer. The idea behind Dove is to have an instrument that is extremely musical in the way the intervention is applied and even fun in the way it operates. Most importantly, it manages the harmonics of an audio track's spectrum in what we hope can be perceived as the most innovative way possible, somewhat like compressing using a compressor. Unlike spectral methods for managing this compression, we are leveraging techniques used in our most famous products, which are considered among the best in the audio landscape for the perceived audio quality.



1.3. FEATURES

- Two different plugins to choose from ('Dove flat' and 'Dove 3D').
- Blend control from Linear phase filter to Minimum phase filter.
- De-Harshing functionality.
- Powerful range control acting over the entire frequency spectrum.
- Graphical visualization of the audio spectrum and interactive EQ display.
- Four Sensitivity modes to choose from.
- High quality oversampling, up to 8x.
- Listening modes (Δ , LR, M, S).
- Resizable and responsive GUI.
- Factory Presets available.

1.4. WHAT YOU GET

Dove is an Acqua plugin suite that includes a total of **6 different plugins**, consisting of:

- **Dove** (standard version with 3D GUI)
- **Dove Flat** (standard version with Flat GUI)
- **Dove LP** (Linear phase EQ version with 3D GUI)
- **Dove LP Flat** (Linear phase EQ version with Flat GUI)
- **Dove ZL** (ZL version with 3D GUI)
- **Dove Flat ZL** (ZL version with Flat GUI)

Dove includes two different GUI to choose from:

- **DOVE**: plugin version based on a 3D 'Acustica's classic-style' GUI.
- **DOVE 'Flat'**: plugin version based on a 2D 'modern-style' GUI.

If you are an 'analogue-lover', you can work with Acustica's classic style interface; if you want to experience something never seen before here, choose the 2D modern interface (Dove flat).

- Dove (flat or 3D GUI) is also available in two different options related to the functionality of the linear phase filter:
 - **DOVE**: equipped with a linear phase activation button and a Blend control capable of mixing from the linear phase filter, mixed, to the minimum phase filter.
 - **DOVE LP**: The plugin version lacks the Phase button (which is active by default) but has only the blend control, which allows the linear phase filter to be mixed with the minimum phase filter.

Each plug-in included in the Dove suite except for the LP versions comes in a "Standard" version and an alternative "ZL*" version, which operates at *zero latency and is thus suitable for use when tracking, at the cost of extra processing resources.

NOTE: Choose the GUI you prefer at the outset. The plugin will not automatically replicate the settings if you change the GUI at work started.



Dove



Dove LP



Dove Flat



Dove Flat LP



2. GUIDELINES

The use of the product is very intuitive.

In the lower section of the plugin, a maximum intervention range is set, corresponding to the height of the peaks. A selectivity parameter determines the number of bands, varying from the precision of a third of an octave to a 250th of an octave, thereby surpassing the performance of many, if not all, competitors.

There is also a smoothness parameter that adjusts the width of the intervention bell curve. It's crucial to pay attention to this parameter because, while the upper graph shows that the range establishes the maximum value of the excursion, the actual excursion is determined by the top part. A reduction control sets how much the intervention will reduce the signal, and this action is depicted in the graph not only by the maximum peak but also by a colored area indicating the dynamic action in progress, along with the attack and release controls.

Regarding the routing, it's straightforward: there's a dry/wet signal path and a make-up control before the dry/wet, allowing for compensation in case of significant reductions. A stereo link control, by default, indicates a completely unlinked signal, a detail that will be made clearer in the graphics with the addition of a small label. It's also possible to process the signal by deciding which part, either the mid or the side, to prioritize.

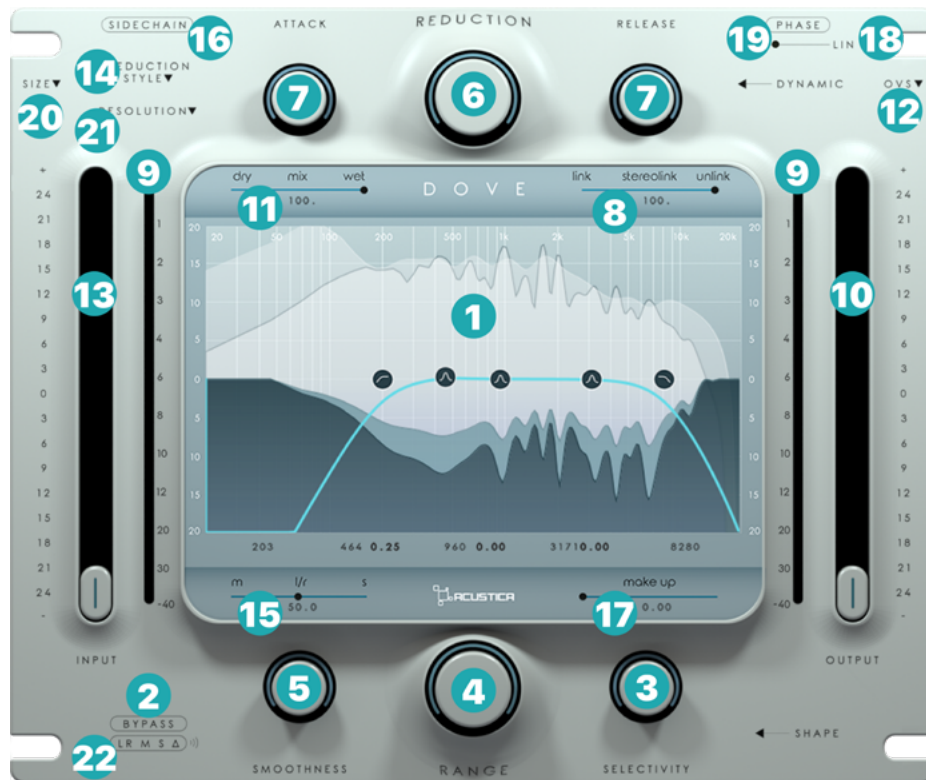
Lastly, there are input and output controls. The dynamic part includes a control that allows selecting the plugin's model, and it can also be set in a different mode from the minimum phase through the phase button. If this is not adequately compensated by the sequencer, one can opt for the plugin's linear phase version. Activating this button, a slider appears, allowing the choice of whether the signal should operate in minimum phase, linear phase, or an intermediate phase mode, introducing an innovation in this type of product. An external sidechain can be enabled.

As for the processing, the behavior is similar to that of other competitors, as there is a sidechain with an equalization curve that allows emphasizing specific parts of the signal desired in the intervention calculation. The presence of high-pass and low-pass filters is crucial in this stage, as they limit the intervention region. These controls are mouse-sensitive, just like in our latest product, *Green*, so the mouse wheel adjusts the equalizer's Q.



3. DEVICE OVERVIEW

Dove (Flat and 3D versions) offers a wide range of controls while maintaining an intuitive user interface. Here is a detailed overview of the controls available on the front panel, each marked with a specific identifier for easy location in the plugin's graphics:



1. Display: Provides immediate visual feedback on the plugin's operations and allows for easy and intuitive adjustments on each band.

2. Bypass: Temporarily deactivates the plugin's effect on the signal.

3. Selectivity: determines how selective Dove is based on the suppression operation you want to achieve by going to define the number of dynamic EQ bands up to 1/256 octave. Note: Increasing the selectivity also increases the number of bands, resulting in greater CPU consumption.

4. Range: sets the maximum dynamic range in which the plugin can operate.

5. Smoothness: Adjusts the amplitude (width) and smoothness within the specified range and in which the plugin operates.

6. Reduction: determines the amount of reduction applied.

7. Attack and Release: Determines the time constants for the plugin's attack and release.

8. Stereo link: synchronizes the gain reduction applied across both channels, ensuring that both the left and right channels receive the same amount of gain reduction.

9. Metering: Shows input and output levels in peak - RMS, the type of metering varies between 3D and Flat version.

10. Output: Adjusts the output level of the processed signal.

11. Mix: Allows blending the original (dry) signal with the processed (wet) signal.

12. Oversampling (OVS) Menu: This menu allows you to change the oversampling rate to improve the audio quality, increasing the sampling frequency of the plugin and minimizing aliasing artefacts: - The 1x mode bypasses the oversampling functionality. - The oversampling mode increases the sampling frequency of the compressor being processed by a fixed multiple of 2x 4x 8x.

13. Input: Optimizes input gain level.

14. Reduction Style Menu: It offers a choice of various compressor models inspired by the iconic hardware, from Hard more aggressive definitely to Soft models, they are more transparent and less visible.

Model List:

VCA HARD – SAND

VARI MU SOFT – EL REY

DIODE HARD – GOLD

DIODE SOFT – GOLD

VARI MU SOFT – MAGENTAC1

VARI MU SOFT – MAGENTAC2

OPT HARD – MAGENTAD1

FET HARD – MAGENTAD2

FET HARD - NICKEL

15. Mid-Side Processing: Manages separate processing for the mid and side components.

16. Side-Chain Filter: Applies a side-chain filter to the plugin for more refined frequency control.

17. Make-up: After compression, up to 20dB of additional make-up gain can be added.

18. Phase Control: adjusts the behavior from linear phase, mixed, to minimum phase and vice versa.

19. Phase button: enables the slider below that can adjust the behavior from linear phase to minimum phase and vice versa.

20. Size: Adjust the whole plugin-GUI size. Choose between 3 magnifications (1x - 1.5x - 2x) from the top left SIZE dropdown menu. Once the desired size has been selected, the plugin must be removed and re-loaded in order to apply the new size. This action affects the currently selected plugin. New instances of the same plugin will open with this size.

21. Resolution Menu: This menu has 3 different options (Normal, Mega, Giga) to choose from and allows you to increase the resolution level of the plugin action, the higher the resolution the better the processing quality at the expense of CPU consumption.

These controls are designed to ensure a smooth and customizable user experience while simultaneously guaranteeing high sound quality and unprecedented flexibility in the limiting process.

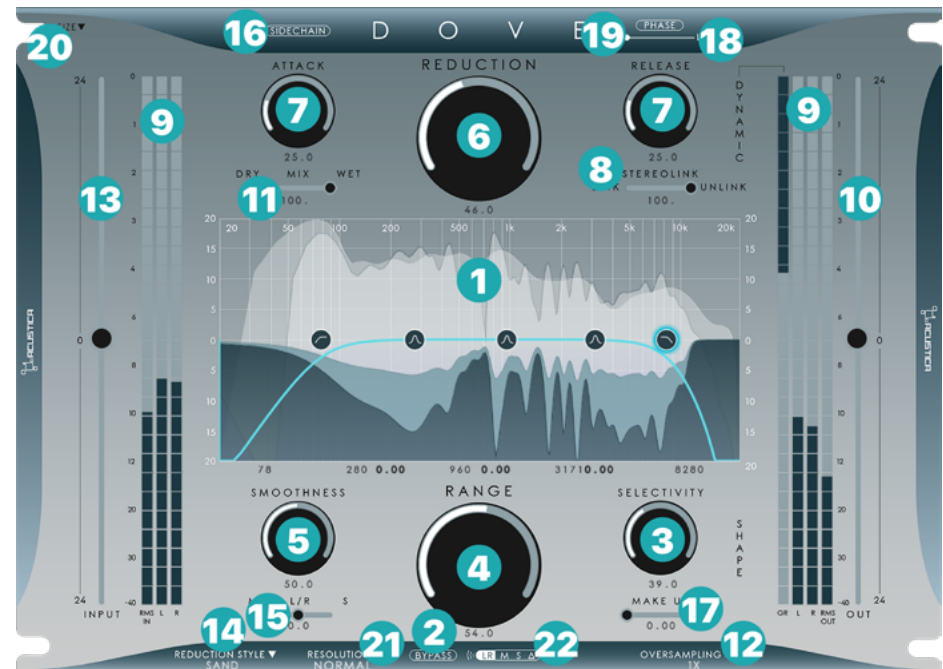
22. Listening modes:

- LR: Default listening.

- M: Listen to only the centre of the soundstage (Mid component).

- S: Listen to only the edges of the soundstage (Side component).

- Δ: Listen to the difference between original signal and processed signal.



3.1. FIRST STEPS

To facilitate the optimal use of Dove, following the previously described suggestions and integrating new directions provided, here is a schematic and detailed walkthrough, similar to a culinary recipe, which includes direct references to the numbered controls discussed:

1. Analyze the signal visually by adjusting the range setting until the potential reduction curve becomes distinct and consistent.
2. Enhance the reduction parameter to ensure the frequencies identified by the plugin are significantly reduced, making the effect clearly audible, even to an exaggerated extent during this preliminary setup phase.
3. Initiate delta monitoring to observe the differences introduced by your adjustments.
4. Apply shape to the control signal with maximum amount of reduction.
This is a crucial distinction: your goal is to target specific ranges of undesirable frequencies, either to mitigate or accentuate their presence within a particular frequency band.
5. While maintaining delta monitoring, fine-tune the attack and release settings and if necessary further adjust reduction. Select the most effective style to accurately shape the dynamic response of the targeted signal segment.
6. Switch off the delta function to evaluate the overall result.
7. Fine-tune the reduction parameter to precisely target and remove the unwanted elements of the signal, ensuring no further adjustments to attacks and releases. Moreover, carefully refine the smoothness and selectivity parameters to achieve a higher level of control accuracy.

By following this modified procedure, you will be able to make the most of Dove's features, ensuring optimal sound quality for your audio material.



What's new?

Fire The Dove (Commercial A003 - Trial A002 releases) is now available!

Fire The Dove (Commercial A003 - Trial A002 releases) is now available!

Two new standalone plugins named Fire The Dove* and Fire The Dove MT* have been added to the DOVE suite, available in Aquarius as separate install.

These plugins seamlessly integrate the powerful features of DOVE into simplified tools, offering the same functionalities with fewer controls and an incredibly intuitive workflow. Experience impressive ease of use and efficiency with these tools of unparalleled caliber.

*Fire The Dove & Fire The Dove MT are part of the DOVE suite and are free updates for current DOVE owners.

4. HOW TO DOWNLOAD, INSTALL, AND AUTHORIZE YOUR PRODUCTS

Acustica Audio products can be downloaded, installed, and authorized using the Aquarius Desktop application. The Aquarius Desktop application is a free standalone application that will manage every step in an automatic way without user intervention.

Download Aquarius Desktop Application www.acustica-audio.com/pages/aquarius

4.1. HOW TO DOWNLOAD A PRODUCT IN AQUARIUS DESKTOP APPLICATION

To download a product using the Aquarius Desktop application go to the purchase page and select the product and format (VST2, VST3, AAX, AU) to install. In case you can't find your product on the purchase page use the search page.

4.2. HOW TO INSTALL A PRODUCT IN AQUARIUS DESKTOP APPLICATION

The installation is done automatically by the Aquarius Desktop application after the download. As the Aquarius Desktop application creates a temporary file of the downloaded products, known as the stage area, at the moment you want to reinstall a product it will not be necessary to download it again.

4.3. HOW TO AUTHORIZE A PRODUCT IN AQUARIUS DESKTOP APPLICATION

The authorization is done automatically by the Aquarius Desktop application after the product installation. You can manage your authorizations using the Aquarius Web Service.

Click [HERE](#) or a complete installation user guide.

5. SYSTEM REQUIREMENTS

Modern computers are powerful enough to run many plugins at once.

However, our technology requires more resources than algorithm-based software, so we recommend optimizing your system to work with high CPU loads and low audio latency.

Before starting the installation process, please confirm that your system meets the minimum system requirements to run the plugins please consult the following link: <https://app.box.com/v/AASYSTEMREQUIREMENTS>

6. CUSTOMER CARE

To contact Acustica Audio, always use the single point of contact, which is this help-desk portal: <https://acusticaudio.freshdesk.com/>

We do not provide official assistance via social networks, public forums, or email accounts.

For troubleshooting and issue reporting, check the available solutions in the knowledge base.

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DOVE

