

**LUCA
PRETOLESI**

DIAMOND 
DYNAMIC
SATURATOR



 **ACUSTICA**

Luca Pretolesi

 **STUDIODMI**

1

INTRODUCTION

Thank you for purchasing the **Diamond Dynamic Saturator**. To get the most out of your new plugin, please read this user manual carefully.

1.1

OVERVIEW

Studio DMI and **Acustica Audio** present the "Diamond Dynamic Saturator". The newest addition to the Diamond Series of plugins is the perfect emulation of the color and tone combinations of Luca Pretolesi's favorite hardware saturation units and workflow in a single plugin.

1.2

KEY FEATURES

Diamond Dynamic Saturator **highlights functions** such as:

- Dual saturation stage.
- NEW 'Hyper' saturation tech.
- High quality linear-phase filters.
- Mid-side mode.
- Expansion with 3 levels of density (bypassable).
- High quality low-shelf filter (post saturation).

2

DIAMOND DYNAMIC SATURATION

2.1 INTRODUCTION

Acustica surprises their faithful users with an incredible release, this Black Friday, make your work shine with the Diamond Dynamic Saturator.

The Diamond Dynamic Saturator is the brand new Acqua plugin (VST/VST3/AAX/AU) in the Diamond series, a powerful saturation product carefully designed for a fast audio mixing workflow based on our 'Hyper' Saturation technology.

This high-performance plugin is the perfect choice for those seeking an innovative Saturator with a distinctive sound, ease of use and an analogue feel above all, perfectly comfortable anywhere in your mix and suited for master bus applications.

Diamond Dynamic Saturator's best use is for drum and stereo bus processing and is inspired by working on Drake's "Massive" and Diplo and Miguel's "Don't Forget My Love".

Thanks to its special features, it aims to soon become a standard and a state-of-the-art tool for the pro-audio industry providing the most accurate digital representation of the Studio DMI signature sound, combining specific features of several hardware devices into a single, awesome product, capable of excellent performance and sound quality.

In Luca Pretolesi's words:

"Dynamic Saturator was the last piece of the puzzle in the Diamond series of plugins. We've done EQ, we did compression limiting and so the next step was saturation."

"Dynamic Saturator was heavily inspired by working on Drake's album "Honestly Nevermind". Working on the album we used a lot of analog saturation on the drum bus and the stereo bus using hardware and custom gear and from there, we created the plugin version."

2.2 **NEW 'HYPER' SATURATION**

Saturation manifests itself as a combination of harmonic distortion and soft-knee compression. Vacuum Tube preamplifiers and tape machines naturally saturate every track imparting a distinct sound character that consists of gentle distortion, compression of the dynamic range and a slight increase in low frequencies. Today, we describe this type of sound as warm, colored, and analogue.

Thanks to our new 'Hyper' Saturation technology, Acustica can offer in the digital domain, even truer and more convincing saturation than before, emulating the sound of analogue recording equipment in powerful plugins with low CPU consumption, preserving sound quality, while ensuring better stability and ultimately providing the 'ultimate' saturation.

2.3 **ABOUT STUDIO DMI**

The Studio of Digital Music Innovation (Studio DMI) is the embodiment of GRAMMY® nominated Mixing & Mastering engineer Luca Pretolesi.

Logging more than 30,000 hours of studio time and over 25 years of experience, Luca has established himself, the Studio DMI brand and the world class Studio DMI facility in Las Vegas, NV USA as an unrivalled movement in sound engineering with a signature style that is coveted by some of the biggest names in music.

2.4 **WHAT IS A "ZL" PLUGIN?**

Acustica plugins come in two versions: ZL (zero latency) and a regular version. While the ZL version does not introduce any latency to your system, the standard version does.

This buffer varies in size for each plugin and helps reduce the CPU and system load of your computer significantly. For this reason, we recommend that you use a ZL instance when tracking.

Basically, both plug-in instances are identical, but the current Acqua engine can work either with or without an audio buffer. The idea behind a ZL instance is to give you the option to run an Acqua Effect with minimal latency, which is useful for tracking or direct monitoring.



3 **OPERATION**

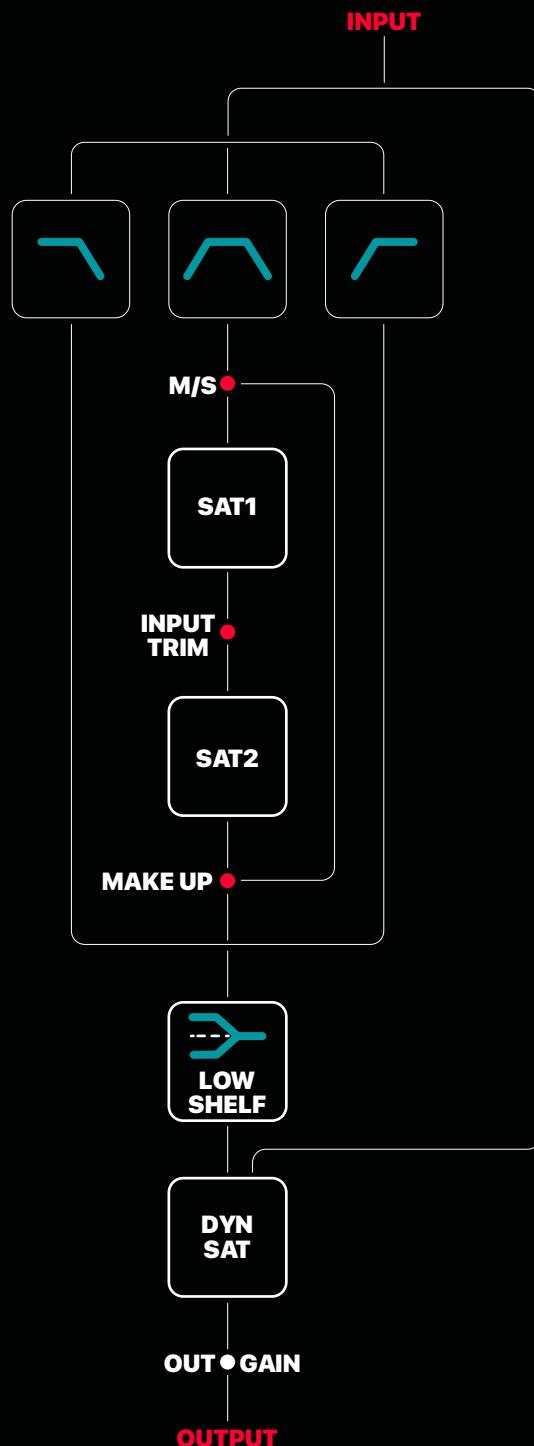
Diamond Dynamic Saturator is the brand-new plugin in the Diamond series of Acqua plugins, a collection of simple Studio DMI's signature tools specifically designed to quickly enhance and improve your music production, mixing and mastering.

At a glance...

- The Diamond Dynamic Saturator allows a chain of two saturators to be dynamically applied to a specific frequency range.
- When both filters are active only the mid-band is processed by Saturators 1 and 2 while the high and low band remain unchanged.
- Before entering Saturator 1 the signal is encoded in MID-SIDE via the M-S knob, which for the first time in an Acustica Acqua plugin is continuous. You can view the mid-side output level of the Saturator 2 with the meters provided.
- At the output of Saturator 2 you can increase the level of the processed signal using the makeup knob.
- The signals of the high mid and low bands are then summed and are equalized by a low shelf.
- The processed signal and the input signal are mixed by a dynamic daturator controlled by the expansion knob, there are 3 types of dynamic saturator, characterized by 3 types of different "Density" of saturation. The modes differ in attack/release times and ratio curves.

The graphical user interface is laid out in the most straightforward, user-friendly manner.

Below there's a block scheme that represent the flow of the plugin.



3.1 CONTROLS



- **Diamond symbol:** Bypasses (Lamp OFF) the plugin.
- **Byp:** Bypasses (Lamp ON) the Dyn Eq component.
NOTE: By enabling this bypass, Output functionality is preserved.
- **Input Trim:** A one-slider internal gain structure control linking the input and output gain stages with an inverse law. The control sets the input level from -24dB to +24dB of the plugin, it only affects Saturation 2's internal level, increasing its harmonic content.
- **Output:** Sets the output level of the plugin. Range: -24 dB / + 24 dB.
- **Low Shelf:** A low-shelf filter with +/- 6 dB Gain, fixed cutoff frequency at 150 Hz.
- **Saturation 1:** A continuous knob, range: 0% to 100%. This control controls the tube model Saturation 1, turn it up to increase its distortion. Be careful, it can give an instrument some analogue character, adding warmth, or it can literally 'punish' the signal with extreme saturation, becoming very aggressive; use it wisely!
- **Saturation 2:** A continuous knob, range: 0% to 100%. This control controls the tube model Saturation 2, turn it up to increase its distortion. From subtle and clean, high mastering-grade tubes to juicy or even broken tube sound.

- **Linear phase:** When the Linear Phase button is engaged, multi-band crossover filtering is done using linear phase filtering making multi-band processing much more suitable for mastering purposes.

- **Hi Xover:** Sets the high crossover frequency from 9 kHz to 20 kHz. Allowing the signal to pass from the selected frequency in the range 9 kHz to 20 kHz down, blocking the higher frequencies.

- **Hi Xover bypass:** Bypasses (Lamp OFF) the Hi Xover.

- **Lo Xover:** Sets the low crossover frequency from 1kHz to 7kHz. Allowing the signal to pass from the selected frequency in the range 1kHz-7kHz down, blocking the lower frequencies.

- **Lo Xover bypass:** Bypasses (Lamp OFF) the LO Xover.

- **Expansion:** This knob controls the threshold and the sensitivity of the Dyn Eq. Increasing the expansion the Dyn Eq will increase the amount of processed signal.

- **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 4x mode increases the sampling frequency of the compressor being processed by a fixed multiple of 4x.
- The 8x mode increases the sampling frequency of the compressor being processed by a fixed multiple of 8x.
- The 16x mode increases the sampling frequency of the compressor being processed by a fixed multiple of 16x.

- **Density:** There are 3 types of dynamic Eq characterized by 3 types (1-2-3) of a different "Density" of saturation. Range: From most dense (1) to less dense (3).

- **M/S:** This Mid Side knob is able to gradually blend between 2 modes of operation: Mid and Side in an all-in-one expressive control of your stereo image.

NOTE: Totally left: M (MID)-> saturation is applied to the center of your soundstage. Totally right: S (SIDE)-> saturation is applied to the edges of your soundstage.

• **Make up:** This compensates for the saturator's gain. Gain range: from -12 dB to +12dB.

• **Static:** Press this to listen the processed signal, disable it to listen the original signal.

• **M (Mid) meter:** Displays the output level of the plugin Mid component. Range IN: -64dB to +10dB.

• **S (Side) meter:** Displays the output level of the plugin Side component. Range IN: -64dB to +10dB.

• **Exp (Expansion) meter:** Displays the amount of expansion of the plugin.

• **Sch (Sidechain) meter:** Displays the level of the processed sidechain signal.

• **Magic eye lamp (Input Left):** Shows the input signal level of the Left channel of the plugin.

• **Magic eye lamp (Output Left):**
Shows the output signal level of the Left channel of the plugin.

• **Magic eye lamp (Input Right):**
Shows the input signal level of the Right channel of the plugin.

• **Magic eye lamp (Output Right):**
Shows the output signal level of the Right channel of the plugin.

• **Size: Adjust the whole plugin-GUI size.**

Choose between 3 magnifications (1x - 1.5x - 2x) from the top left SIZE drop-down menu. Once the desired size has been selected, the plugin must be removed and re-load 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.

• **Presets:** Use the Preset button at the top of the plug-in GUI and select from different factory presets provided by Luca Pretolesi. Have fun!

3.2

HOW TO USE PRESETS

1. Open an instance of Diamond Dynamic Saturator in your DAW.
2. Click the PRESET(ICON) on the top left of the plugin GUI.
3. Select from the LIST the "Preset_name" under two Categories (Factory Presets / Massive) and click to load the preset.

FACTORY - PRESET LIST :

001 - Default Settings
002 - Bass Bus
003 - Drum Bus
004 - Hit Hats
005 - Kick+808
006 - Leads Synths
007 - Master Bus
008 - Percussion Bus
009 - Stereo Bus
010 - Synth Low
011 - Vocal Bus

MASSIVE - PRESET LIST :

001 - Bass Bus
002 - Drum Bus
003 - Fx Bus
004 - Hit Hats
005 - Kick
006 - Percussion Bus
007 - HF Expansion
008 - Stereo Bus
009 - Synths Bus
010 - Vocal Bus

4

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

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.

7 COPYRIGHT AND CREDITS

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8

EXTRA - WHATS NEW

We did it again...

Welcome to perfect analogue colour and saturation...

Welcome the Diamond Mix Saturator.

This new product joins our Diamond Dynamic Saturator to form a suite consisting of two separate plugins:

- 1- Diamond Dynamic Saturator
- 2- Diamond Mix Saturator

We thought we would offer our loyal customers a static version of the already popular Dynamic Saturator designed for mixing purposes. This simplified version will facilitate your workflow even more by allowing you to enjoy the same saturation as its bigger brother, in just a few simple moves.

The effect of saturation and the introduction of harmonic distortion into an audio track or mix is now a real treat, adding a truly special warmth and flavour that only magnetic tape, valves and transformers can.

With this new, huge sounding saturator plugin you can immerse yourself in the warm, mysterious world of analogue saturation, from delicate to extreme, adding analog vibes to instruments and vocals, making them sound full and helping them to cut through your mixes with just a few clicks.

You have never heard anything like this.

Trust us.

8.1 CONTROLS



- **Diamond symbol:** Bypasses (Lamp OFF) the plugin.
- **Byp:** Bypasses (Lamp ON) the saturation component.
- **+18:** Introduces the behaviour of an input trim set at +18 dB.
NOTE - Input Trim: An internal gain structure control linking the input and output gain stages with an inverse law increasing its harmonic content.
- **Output:** Sets the output level of the plugin. Range: -24 dB / +24 dB.
- **Saturation 1:** A continuous knob, range: 0% to 100%. This control controls the tube model Saturation 1, turn it up to increase its distortion. Be careful, it can give an instrument some analogue character, adding warmth, or it can literally 'punish' the signal with extreme saturation, becoming very aggressive; use it wisely!
- **Saturation 2:** A continuous knob, range: 0% to 100%. This control controls the tube model Saturation 2, turn it up to increase its distortion. From subtle and clean, high mastering-grade tubes to juicy or even broken tube sound.
NOTE: This control includes automatic gain compensation, which quickly adapts to current settings and ensures the output sounds as loud as the input.
- **M/S:** This Mid Side knob is able to gradually blend between 2 modes of operation: Mid and Side in an all-in-one expressive control of your stereo image.
NOTE:
Totally left: M (MID)-> processing is applied to the center of your soundstage.
Totally right: S (SIDE)-> processing is applied to the edges of your soundstage.

- **Listening section:** Allows you to listen to a specific channel/part of the signal flow.

- Delta: Listen to the difference between original signal and processed signal.
- Left-Right: Default listening
- Mid: Listen to only the centre of the soundstage (Mid component).
- Side: Listen to only the edges of the soundstage (Side component).

- **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 4x mode increases the sampling frequency of the compressor being processed by a fixed multiple of 4x.
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Have fun!

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