1. INTRODUCTION

In the Pro Audio sector, the quest for tools that combine intuitive workflow, immediate execution, and high-quality, authentic analog sound in the box is unending. Acustica has met this challenge with Wine, a plugin that not only functions as powerful tools but also enhances the creative experience. This allows users to produce competitively loud and professional-sounding masters without compromising the quality of their tracks.

Wine is the latest addition to our Acqua plugins, available in VST, VST3, AAX, and AU formats featuring carefully selected analog emulations in a comprehensive all-in-one tool. It's engineered from the ground up to effortlessly integrate what is known within the audio community as the "classic analog tone" into your DAW (Digital Audio Workstation). Serving as a mastering finalizer and stereo enhancer, Wine injects a robust dose of analog warmth directly into your DAW's master bus while introducing innovative features that set new standards in analog mastering.

This master bus beast definitely needs to be tamed, and it can also simplify the final, crucial phase of the production process: mastering. When you think the master is complete, using Wine can bring a new level of refinement, ensuring that your track achieves its full potential.

1.1 WHAT MAKES WINE TRULY EXCITING?

"To drink wine is to drink genius".
Charles Baudelaire

Creating Wine has been like making a wine to be proud of. Not unlike the process of producing a grand cuvée, we select the finest components with the same care and love a vintner would choose the best grapes. These elements are meticulously blended with precision and methodology. Just as a winemaker introduces innovative techniques to enhance the vintage, we infuse new tech features into our product. This approach ensures that this release, much like a superbly aged wine, enriches and amplifies the sensory experience it delivers.

Carefully memorize the terms Analog Plus and Euphonic starting today, they proudly enter Acustica's vocabulary not merely as buzzwords, but as terms that encapsulate a new leap forward in Acustica's technology, revisiting its roots and embracing the concept of preamplification with an emphasis on dynamic range and improved stereo panorama perception.

This implies an approach closer to hardware, definitively bypassing the artifacts introduced by the traditional dynamic approach to preamplifier reproduction, as initially experimented by Acustica.
This allows for the capture of some of the dynamic behaviors characteristic of preamplifiers, offering a superior analog listening experience compared to the past without any artifacts.

We are thrilled to share these innovations with our dedicated users, and we hope that Analog Plus and Euphonic will enhance your sonic experiences.

1.2 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 Wine, 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.

1.3 KEY FEATURES

• Two different plugins to choose from (Wine and Fire The Blend).
• Hyper 3 technology.
• New Aria engine supporting dynamic/real-time metering displays.
• New Anti-Aliasing algorithm significantly reducing plugin aliasing issues.
• New 'Analog Plus' algorithm for dynamic preamp enhancement.
• New Stereo Field Enhancement algorithm.
• New True peak mode to prevent inter-sample peaks.
• High-quality dithering algorithm with 8 different modes.
• Five dithering bit depth modes.
• High-quality oversampling, up to 8x.
• Listening modes (Δ, LR, M, S).
• Resizable and responsive GUI.
• Presets available.

1.4 WHAT YOU GET

Wine is an Acqua plugin suite comprising two different standalone tool:

• Wine (Full Version): The complete version with all features.
• Fire The Blend (Lite Version): A stream-lined and highly intuitive version from the Fire series.

2. THE PLUGIN EXPLAINED

Let's start by introducing the signal chain of the Wine main plugin, which will serve as our reference for explaining each individual module that makes up the plugin, aiming to provide as detailed and comprehensive an explanation as possible for a complete immersion into its functionalities.

At the end of this explanation, in a new sub-chapter, we will also focus on Fire The Blend, the lite version of Wine, which further simplifies the functionalities of this high-performance product.

A significant difference between Wine and its competitors is that every module of Wine is the result of an authentic sampling process. Therefore, we can speak of 'True analog emulation' for each component/module of the plugin. This approach ensures that each function within Wine closely mirrors the behavior and sound quality of traditional analog hardware, offering a genuine analog experience in a digital format.

Wine comprises four distinct modules:

1. EQ, Filters and Preamp

• A 4-band EQ featuring High Frequency (HF) and Low Frequency (LF) in 'Purple-Style', and Low-Mid Frequency (LMF) and High-Mid Frequency (HMF) in 'Sand-style'.
• It also includes a tilt EQ corresponding to the Tone control.
• Additionally, this section features High-Pass (HP) and Low-Pass (LP) filters, along with 2 notch filters for removing resonances.
• Following the EQ, there is a preamp incorporating an 'Alive' mode for dynamic response.

2. Mono maker

• The signal is divided by a crossover filter; frequencies below 100Hz are rendered mono, enhancing clarity and punch in the low end thanks to a Mono maker control.

3. Stereo Enhancement

• The frequencies above 100Hz are processed with the Euphonic control to widen the stereo image through the use of a new algorithm.

4. Dynamics Processing

• This stage includes a series of dynamic processors: a compressor, limiter, and clipper, each equipped with gain staging control that activates when the module is engaged.

5. True Peaking, Dithering and Output Control

• The signal is refined with true peak and dithering options to ensure clean and precise final output. Following this, the final output level, it can be decreased by -5dB using the specialized out -5 button, providing flexibility in integrating with other equipment or final media standards.

Focus on each section and their respective controls explanation below.

2.1 Module 1
EQ, Filters and Preamp

Module 1 of Wine serves as the tonal center, harmonic enrichment, and coloration hub of the plugin. It is designed to gently or even dramatically shape your source without adding undesirable artifacts. This module allows users to enhance the audio dramatically, adding depth and warmth without compromising the original quality.

Controls:

- **The LF (LOW FREQUENCY)** control enables you to refine the low end, making it either softer or tighter by boosting or cutting specific frequencies within the bass spectrum. The curves selected for the low band are in "Purple-style", a nod to Acustica's plugins, which are known for their generous and musical nature. These are pre-set to enhance the intelligibility of the source material effortlessly. The values ranging from -30 to +30 correspond to a dB range of -3dB to +3dB, ensuring that even at maximum settings, the EQ adjustments are moderate and controlled.
NOTE: The settings from -1 to +1 on th GUI correspond to a decibel range of approx. -3dB to +3dB, ensuring that even at maximum adjustments, the EQ changes remain moderate.

- The **LMF (LOW MID FREQUENCY)** control allows you to shape the presence of your music in the vocal and instrument range. By boosting the Mids, your tracks will sound more prominent and "in-your-face," whereas cutting the Mids can give your music a smoother and more mellow tone.

This EQ band takes its cue from a "Sand-style" LMF band.
NOTE: The settings from -1 to +1 on th GUI correspond to a decibel range of approx. -3dB to +3dB, ensuring that even at maximum adjustments, the EQ changes remain moderate.

- Increasing the **HMF (HIGH MID FREQUENCY)** can subtly enhance the perceived loudness of your music, allowing it to stand out without actually increasing the volume. This EQ band takes its cue from a "Sand-style" HMF band.
NOTE: The settings from -1 to +1 on the GUI correspond to a decibel range of approx -3dB to +3dB, ensuring that even at maximum adjustments, the EQ changes remain moderate.

- The **HF (HIGH FREQUENCY)** control manages the uppermost frequencies, allowing you to enhance appealing high tones while simultaneously diminishing harsher sounds. *NOTE: The settings from -1 to +1 on th GUI correspond to a decibel range of approx -3dB to +3dB, ensuring that even at maximum adjustments, the EQ changes remain moderate.*

The EQ section is equipped with high-pass and low-pass filters.

- The **HIGH PASS FILTER** ranges from 45 Hz to 10000 Hz, and the **LOW PASS FILTER** ranges from 100 Hz to 22000 Hz.

Our Resonance Filters are specifically designed to address problematic frequencies that are often overly pronounced in many professional mixes. These filters excel at isolating trouble spots and effectively notching them out. They have been meticulously sampled for this project from one of the most highly regarded hardware units known for the quality of its notch filters.

- The **LOW RESONANCE FILTER** is ideal for cleaning up the lower spectrum of your mix, helping to distinguish the bass drum from other softer low-end sounds more clearly. Range: 180 Hz - 17 kHz.

- On the other hand, the **HIGH RESONANCE FILTER** is effective at removing harsh and overly pronounced frequencies in your instruments, smoothing out the unpleasant aspects of your master. Range: 1.8 kHz - 25 kHz.

- The **TONE** Control is a useful Tilt EQ, capable of significantly transforming and overall tonality of your track with minimal adjustments. It's perfect for fine-tuning your track to better fit into a master, especially useful for making slight adjustments to a well-balanced mix that just needs a bit more highs or less lows.

- The **EQ DISPLAY** provides a visual representation of the EQ curves for all filtering elements in Module 1. It graphically presents the frequency response for all EQ bands, including the high-pass and low-pass filters, resonance filters, and tone control. This allows for clear and precise adjustments across the spectrum.

- The **PRE** button enables the preamp stage of the plugin.

- The **HARMONIX** control is a Global boost (Trim) of the harmonic content and linear material of the Preamp, thus it only functions when the preamp stage is enabled. The control sets the input level from -24dB to +24dB, and it is used to adjust the internal level of the plug-in but the output level is automatically compensated so that there

is no perceived change in volume.

- The **ALIVE** mode alters the traditional behavior of Acustica's preamplifiers, transforming them into an emulation that even more closely resembles the 'imperfect' behavior of a genuine analog machine. By continuously changing and dynamically modifying its behavior, it replicates the organic unpredictability of analog equipment. This variability is distinct between the left and right channels and evolves over time, resulting in a uniquely dynamic output, all without introducing artifacts.
NOTE: The Alive control works on the MID channel in a mid-side configuration!

2.2 Module 2
Crossover, Mono Maker

Module 2 of Wine introduces a fundamental aspect of audio processing, specifically focusing on low-frequency management and the low-end range treatment facilitated by a dedicated control.

Controls:

- The **MONO MAKER**, an elliptical filter, ensures low frequencies remain mono (from 10Hz to 100Hz).
Best used alongside the Euphonic control so both can offer comprehensive control over the mono-stereo field. It includes a Linear phase option.

2.3 Module 3
Stereo Enhancement

With this Module 3, Acustica introduces for the first time a concept of Stereo Enhancement that is NOT a simple M/S width control. It's an algorithm designed to expand the stereo image through a randomized technique specifically crafted to emphasize and further widen the perception of stereo, the most musical way we've encountered for broadening both width and depth.
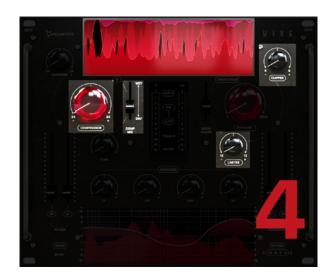

Controls:

- The **EUPHONIC** control contributes to enhancing the stereo image of the audio not in a common way, even reaching extreme levels compared to what would be the predictive behavior of an analog machine.
It should be used judiciously; proper dosage is crucial. The more the control is turned clockwise, the more the stereo field is emphasized. It is advised to use it with extreme caution and move beyond the 12 o'clock position only if an extremely creative and dominant intervention is needed.
NOTE: The euphonic control works on the SIDE channel in a mid-side configuration!

- The **PHASE REVERSE** button allows you to invert the phase of the right/Side channel input signal.

2.4 Module 4 Dynamics Processing

Module 4 consists of dynamic processors such as a compressor, limiter, and clipper, each featuring gain staging control. Upon activation, these processors refine the signal, ensuring clean and precise final output through true peak, ceiling limit, and dithering options.

Controls:

- The **COMPRESSOR** control features a single knob that manages the internal gain

structure by linking the input and output gain stages of the Compressor component inversely. This knob adjusts the input level from -24dB to +24dB, allowing you to tailor the internal level to the Compressor. To specifically increase only the input volume to the compressor (with no output gain compensation), use the 'numerical label' control located in the center of the GUI.

- The **DRY-WET** control allows blending the original (dry) signal with the compressed/processed (wet) signal.

After the compression stage, the signal passes through a professional limiter, which is set to a predefined boost to create a loud yet compressed sound.

Adjust the **LIMITER** control to modulate the limiter's intensity, keeping in mind that its effect is not always essential. While this setting may be ideal for genres such as Metal, Rock, or EDM, it might not be necessary for Classical or Acoustic music, where the management of transients is extremely important and requires a more refined and delicate approach.

- The **CLIPPER** control determines the amount of input volume to the Clipper, thereby dictating its effect.

- The combined action of the various elements that make up Module 4 is displayed by the **ADVANCED METERING SYSTEM** with Real-Time Waveform Display.

2.5 Module 5
True peaking – Dithering - Output stage

This last module of the plugin chain includes True Peak, Dither and the Final Output stage.

Controls:

- The **TPEAK** menu in the Wine plugin allows you to select the appropriate Ceiling/True Peak algorithm. Options include True Peak, True Peak 2, True peak HD.
This menu introduces for the first time two new true peaking algorithms, True Peak 2 and HD (the first consumes less CPU compared to the second), marking their first appearance in Wine and further enhancing the quality and standard of our plugins.

- The **DITHERING** control minimizes quantization noise during the finalization process, it's capable of optimizing dither and noise shaping for any combination of bit depth and sample rate in a truly efficient manner.

Additionally, there are 5-bit depth modes available for dithering.
Each dithering mode serves specific needs, with options ranging from conservative to aggressive, offering engineers the flexibility to tailor the audio production process to their requirements.

Dithers models:

• Truncate
• TPDF
• TPDF 2
• Psychoacoustic
• Psychoacoustic 2
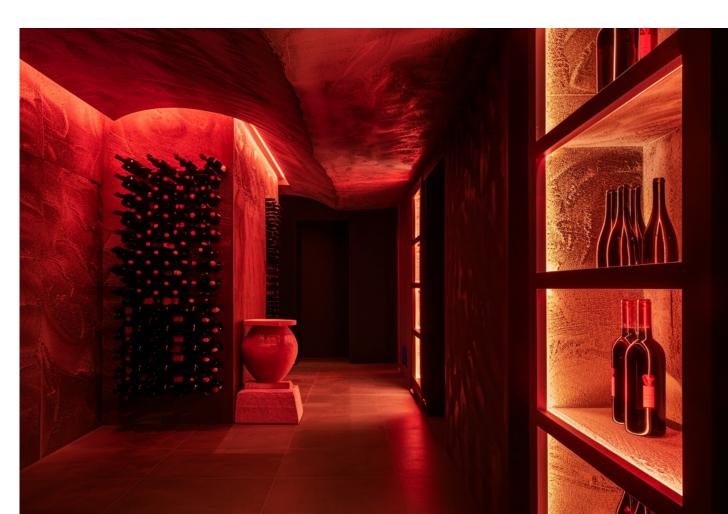• Entropic
• Smoother
• Smoother 2

TPDF 2 is a TPDF derived from the differentiation of an RPDF. The key distinction between TPDF and TPDF 2 is that TPDF 2 features a 6dB/octave slope towards high frequencies. When it comes to the other dithering modes:

• Psychoacoustic is a highly conservative option.

• Psychoacoustic 2 is somewhat similar but less conservative.

• Entropic employs rather aggressive noise shaping curves.

• Smoother resembles a more restrained version of a renowned dithering product on the market, introducing slightly more noise in the ~8-15kHz range.

• Smoother 2 adopts a steeper design with a similar concept, closely resembling a well-known dithering algorithm celebrated for enhancing resolution while maintaining a smooth, natural sound and avoiding extreme high-frequency peaks.

We opted for a cautious approach across all models when it came to high-frequency levels, ensuring that none of them come across as overly aggressive.

- Utilize the **OUT -5** button to reduce the output level by -5dB, offering flexibility in integration with other equipment or adhering to final media standards.

- **INPUT - OUTPUT METERS** (L-R) display the input - output levels of the plug-in. Range OUT (Peak): -40dB to +0dB.

Extra controls:

- LISTENING MODES:
• LR: Default listening.
• M: Listen to only the centre of the sound-stage (Mid component).
• S: Listen to only the edges of the sound-stage (Side component).
• Δ: Listen to the difference between original signal and 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 oversampling mode increases the sampling frequency of the compressor being processed by a fixed multiple of 2x 4x 8x.

- BYPASS: Bypasses the whole plugin.

- ACTIVATION BUTTONS: Each module of the plugin has an activation / deactivation button button that, when pressed, enables or disables the specific module or section.

- SIZE: Adjust the whole plugin-GUI size. Choose between 7 magnifications (0.8x - 1x – 1.25x – 1.5x – 1.75x – 2x – 2.25x) 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.

NOTE: Wine suite introduces a new resizing feature that allows you to adjust the size of the plugin's graphical interface to your exact needs. You can easily change the size of the plugin GUI by dragging the bottom right corner. This bypasses the need for a size dropdown menu, enabling you to display the plugin as large or small as you desire, effortlessly.

-PRESETS:
By clicking on the 'Preset' drop down menu on the left hand side you can select a preset from the displayed list.

3. FIRE THE BLEND

Fire The Blend, available in VST, VST3, AAX, and AU formats, is specifically designed to enhance preamp dynamic behavior and improve stereo panorama perception with few controls, delivering a genuine analog listening experience without traditional artifacts. This plugin features two key innovations: Analog Plus and Euphonic, each crafted to elevate audio production to new heights.

Controls:

- **LISTENING MODES**:
• LR: Default listening.
• M: Listen to only the centre of the sound-stage (Mid component).
• S: Listen to only the edges of the sound-stage (Side component).
• Δ: Listen to the difference between original signal and processed signal.

- **BYPASS**: Bypasses the whole plugin.

- **SIZE**: Adjust the whole plugin-GUI size. Choose between 7 magnifications (0.8x - 1x – 1.25x – 1.5x – 1.75x – 2x – 2.25x) from the top left SIZE dropdown menu.
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NOTE: The euphonic control works on the SIDE channel in a mid-side configuration!

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. We recommend that you use a ZL instance when tracking. Basically, both plugin 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 helpful for tracking or direct monitoring.

5. 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

5.1. HOW TO DOWNLOAD A PRODUCT IN AQUARIUS DESKTOP APP

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.

5.2. HOW TO INSTALL A PRODUCT IN AQUARIUS DESKTOP APP

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.

5.3. HOW TO AUTHORIZE A PRODUCT IN AQUARIUS DESKTOP APP

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.

6. 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/AASYSTEMRE-QUIREMENTS

7. 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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SIZE▼

BYP

)))(LR M S Δ)))

OVS▼
1X

50

40   60

30   70

20   80

10   90

0%   100%