

WATER³

VOLUME II PURGATORY

ACUSTICA

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OVERVIEW



Welcome

Thank you for choosing Water, a plug-in by Acustica Audio which is second in a series of three plug-ins, each embodying a volume of Dante's Divine Comedy, according to Acustica's vision.

While conceiving this manual, we are continuing with the theme that we started with Cream; it serves as a 'common thread' in order to better communicate our vision behind this product. So, once again welcome to a Cantica... the second Dante's volume reinterpreted by Acustica. Here is our 'Water Purgatory'!

Prepare yourself for the journey of sonic purification and ascension, through the place of passage and transit for your soul, up to the Ultimate wonders of Paradise.

How to use this manual

Please read this user manual carefully: we did our best to make it pleasant and informative reading. This manual is divided into nine different sections.

As with the traditional Purgatory, we have followed the Thomistic classification of The Vices. Here we are not referring to single faults, instead, we are subdividing the canticle into seven cornici. In each of them, one of the seven deadly sins (peccati capitali) is expiated: pride, envy, wrath, sloth, greed, gluttony and lust.

At the beginning you will find the Ante-purgatory, and finally the Earthly Paradise at the end of our journey. This sums up to a total of nine sections, each one describing various features of the Water Acqua Effects plug-in.

Legal detail

All other product names and trademarks are the property of their respective owners, which are in no way associated or affiliated with Acusticaaudio S.R.L.

Product names are used solely for the purpose of identifying the specific products that were studied during Acustica-audio's sound model development and for describing certain types of tones produced with Acustica-audio's digital modeling technology. Use of these names does not imply any cooperation or endorsement.



Ante-Purgatory. OVERVIEW

General concept of Water, the idea behind the product, history of the original hardware that inspired our software and additional information on this sensational plugin.

First Terrace: Pride. OPERATION

This Cornice discusses the various plug-in functions, describing all the features for each module of WATER (and all the included standalone modules). Furthermore, you will find interesting info about the genesis of the sampled devices and the reason why Acustica included them in this powerful product.

Second Terrace: Envy. CONTROLS

A detailed look at the various signal processing capabilities, few quick notes, a description of the signal route inside WATER, graphs and presets.

Third Terrace: Wrath. TECHNOLOGY

A brief look into Acustica's technology.

Fourth Terrace: Sloth. HOW TO REGISTER, INSTALL AND AUTHORIZE

Guess what... Registration, Installation and authorization guide.

Fifth Terrace: Avarice. COPYRIGHTS AND CREDITS

Usage of images, videos texts and other material.

Sixth Terrace: Gluttony. TECHNICAL SUPPORT

How to get support from Acustica, troubleshooting and bug report.

Seventh Terrace: Lust. APPENDIX

Curiosities, additional graphs, tech details and some Water-related trivia.

The Earthly Paradise

Final conclusions... or rather not.

PERFORMANCE CAUTION

In order to maximize the performance and usability of Water on your computer, we suggest following some precautionary rules that will help you save precious CPU cycles.

- First of all, set your buffer size setting as high as possible. For instance, there is generally no specific reason for using a low buffer size setting during mixing or mastering sessions. Increasing buffer sizes (also latency) highly decreases required CPU power.
- You should also consider only using the necessary features.

We do not ensure the complete absence of bugs or perfect operation of the product.

Before purchasing, we suggest you download the Trial version to verify the behavior of the plug-in in your system. Trial products are fully-functional versions of the relative commercial versions. The trial period expires 30 days after activation.

We do not take any responsibility for misuse of the product, or collateral problems derived from it.

Normally the pre-order period ends within 30 days from the first publication of the product page, but this period may vary at Acustica's discretion.

This manual includes a description of the product, but gives no guarantee for specific characteristics or successful results. The design of our products is under continuous development and improvement. Technical specifications are subject to change.



To run o'er better waters hoists its sail
The little vessel of my genius now,
That leaves behind itself a sea so cruel;

And of that second kingdom will I sing
Wherein the human spirit doth purge itself,
And to ascend to heaven becometh worthy.

But let dead Poesy here rise again,
O holy Muses, since that I am yours,
And here Calliope somewhat ascend,

My song accompanying with that sound,
Of which the miserable magpies felt
The blow so great, that they despaired of pardon.

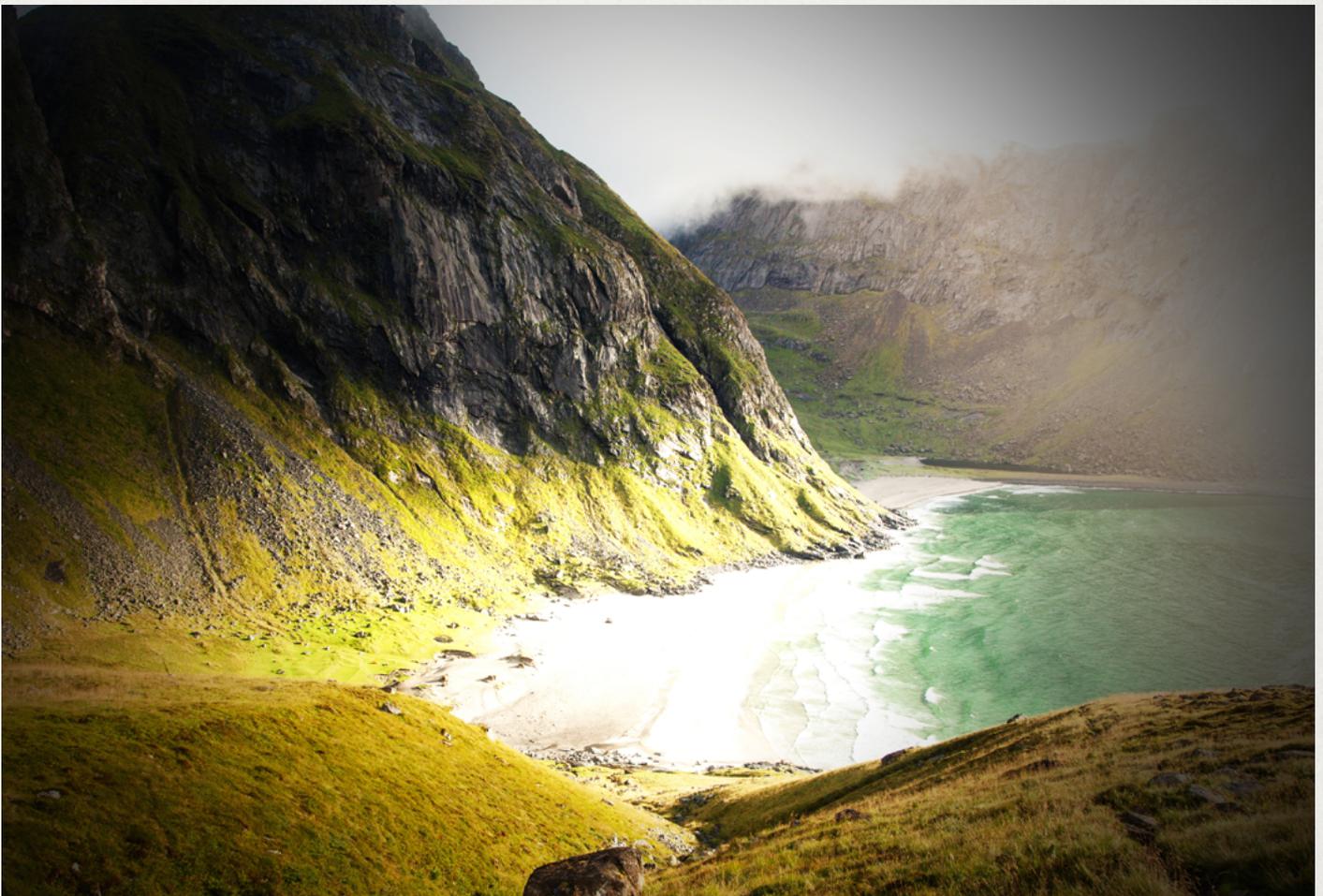
Sweet colour of the oriental sapphire,
That was upgathered in the cloudless aspect
Of the pure air, as far as the first circle,

Unto mine eyes did recommence delight
Soon as I issued forth from the dead air,
Which had with sadness filled mine eyes and breast.

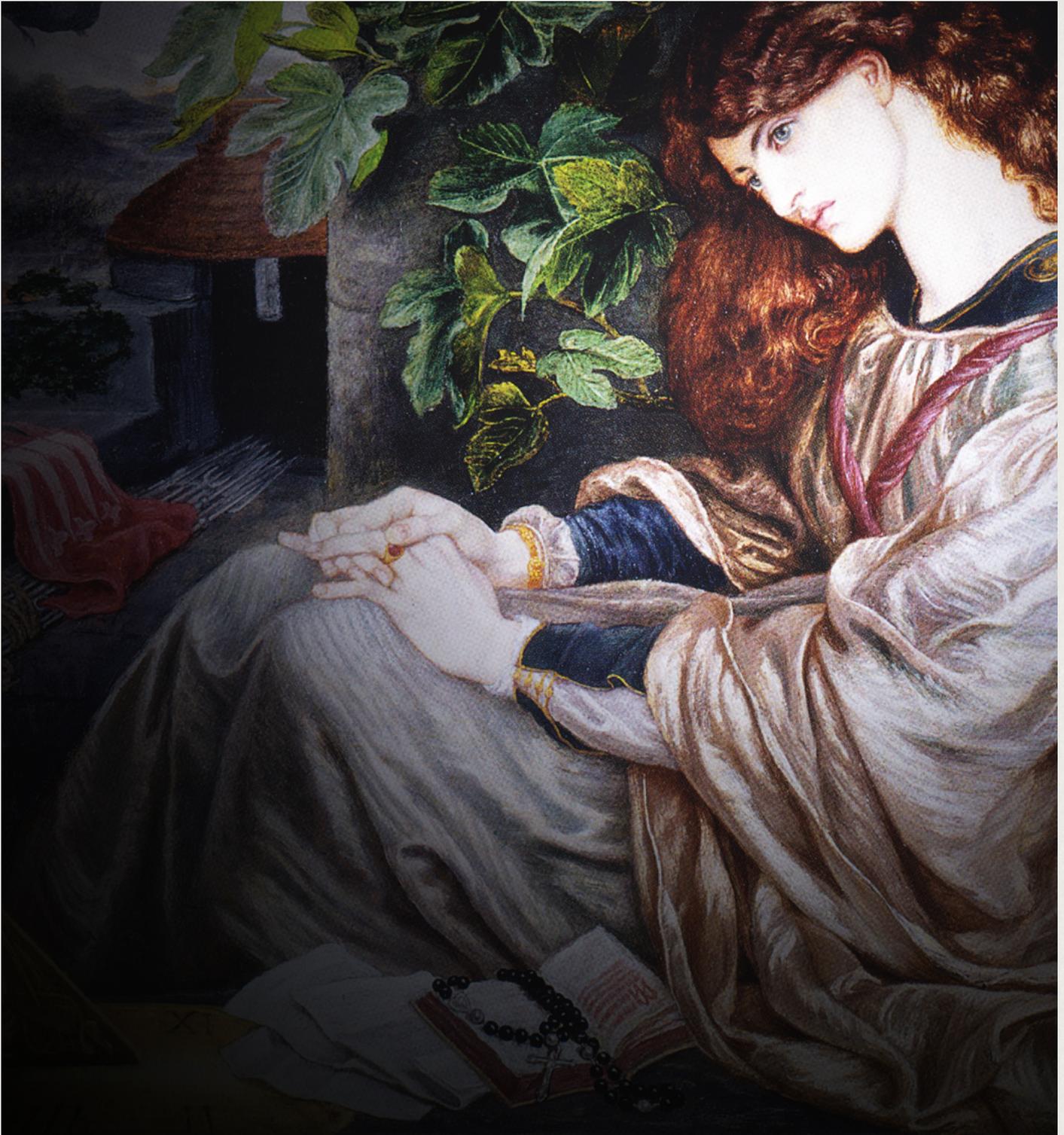
The beauteous planet, that to love incites,
Was making all the orient to laugh,
Veiling the Fishes that were in her escort.

To the right hand I turned, and fixed my mind
Upon the other pole, and saw four stars
Ne'er seen before save by the primal people.

(Purgatory - Canto I - Divine Comedy - Dante Alighieri)



ANTE - PURGATORY



Welcome to Purgatory, the second volume of Dante's Divine Comedy, according to Acustica's vision.

Water represents our idea of Dante's Purgatory: a sensational plug-in which once again raises the quality of our products to unprecedented heights.

Water is the latest Acqua Effects plug-in by Acustica. It includes several modules derived from a rare collection of Austrian hardware built during the 60's early 70's.

1.1 Package Contents

WATER3 is the name of the suite that consists of three different plug-ins:

1. WATER3 (Channel-strip)
2. WATER3 EQ (Equalizer standalone module)
3. WATER3 COMP (Compressor standalone module)

Each plug-in included in the Water3 suite comes in a “Standard” version or an alternative “ZL*” version which operates at *zero latency and is thus suitable for use when tracking, at the cost of extra processing resources. So more specifically we can consider Water bundle like a big suite composed by:

1. WATER3:
WATER3
WATER3 ZL (zero latency)



2. WATER3 EQ:
WATER3 EQ
WATER3 EQ ZL (zero latency)



3. WATER3 COMP:
WATER3 COMP
WATER3 COMP ZL (zero latency)



1.2 The main concept behind Water

With Water we're continuing an exciting journey aimed at discovering rare vintage audio processors. This plug-in represents the perfect prosecution of what we started with Cream, a bundle that has led us to discover the mojo of vintage British units. Now we're changing geographical location, tiptoeing into a new territory: Water embodies the renowned design and construction quality of one of the most famous German conglomerates. During the '50s said company opened an Austrian branch that specialized in creating an entire line of audio equipment that was mostly intended for the Austrian broadcast market, as well for export to former Austrian territory (such as Hungary and other Eastern European countries).

Thanks to the precious contribution of Luca Pilla, editor of AudioFader magazine and member of the board of directors of AES Italy, Acustica has succeeded in sampling two of the extremely rare vintage devices of this brand that are part of its private collection.

Water is characterized by a number of important features which make this plug-in a true incarnation of a vintage sound in a new package. Just as was the case with Cream, we believe that Water can equally be considered another valued plug-in that represents the perfect fusion between Vintage and Modern - Analogue and Digital... In our opinion, this is precisely the new frontier in the audio software domain. In other words, we believe that we have created a bridge capable of narrowing the gap that separates software from hardware, once again demonstrating all the inherent potential of Acustica's technology.

1.2.1 Genesis of Water

Water...

“The nourishment of all things resides in the wet and the water is the matrix, mother and generation principle.”

““Water is the principle, or the element, of things. All things are water”

(Thales of Miletus, Greek philosopher, c. 624 – c. 546 BC)

Thales is commonly considered, from Aristotle on, the first philosopher in the history of Western thought; Dante mentions this within the Divine Comedy, in the fourth Canto of his Inferno, placing him in Limbo as a virtuous, unbaptized soul.

We at Acustica, with all due respect, have the audacity to quote him though. Although Thales actually belongs to Dante's previous canticle, we believe that his words can rightly be placed at the beginning of our Water journey. While we're ascending to Purgatory, his thoughts can guide us on our way, step by step...

The genesis of this sensational plug-in suite took place only after an intense phase of design, development and prototyping. Our ultimate goal was to be faithful to the original machine and at the same time, extend its capabilities by introducing a series of features and controls which by now have become an Acustica trademark, thus creating a software alternative with the highest sound quality.

Today we hope we have succeeded again in realizing an indispensable suite that should not be missing in the equipment list of any recording studio worth its name and fame.

With Water we want to expand our collection of emulated plug-ins by introducing some real rarities... In this case we have two vintage devices designed by the Austrian branch of a German company that between the '60s and the '70s built machines that had a unique sound of its kind.

It's generally accepted that many of the best audio designs were developed between the '60s and the '70s, and in our opinion this rare hardware suite is no exception, since it embodies the good design concept that made it one of the highest-quality audio tools available in its day.

These units are extremely sought after to this day... this is why we decided to invest our time in this new and intriguing project. We wanted to create a realistic and faithful suite of plugins as close as possible to the original units, but we have not confined ourselves to recreating the original sound behavior: for this plug-in bundle we also designed a series of graphic interfaces meant to offer the same user experience of the original Austrian devices. But first, before going into the details, allow us to clarify a concept that does not often emerge in operating manuals, something that can be summarized in a very simple and concise sentence: Not everything we may call 'VINTAGE' is really good!

Unfortunately the lucky buyer of such equipment may quite often have to come to terms with noticeable background noise, AC hum, or an unreliable operation of the mechanical parts, to say the least. But nobody should be surprised, after 30/40 years of daily use, capacitors have dried-out, transistors and resistors might have drifted and the electrical contacts of the switches (as well as the soldering joints) might be heavily oxidized.

The sampling process of vintage audio processors in non-optimal conditions (i.e. badly aged or out-of-spec components) often leads to unsatisfactory results. Maintaining such devices is a delicate procedure that must be carried out by skilled and knowledgeable operators. That is why, before the realization of a product like *Water* we always only turn to specialized and professional figures.

For this project, we were lucky we could rely on the expertise of Luca Pilla, chief editor of *AUDIOFADER* magazine, a highly respected figure in Italy. Luca allowed us to draw on his private collection: we were able to test and sample many vintage devices, some of which impressed us with their truly unique sound. Furthermore, all the hardware proved to be in excellent maintenance condition and expertly restored. *Water* represents the sound of two vintage German/Austrian processors characterized by several important features. Just to give one example: in the early '60s this company was one of the first in the world to adopt the (back then) brand-new solid-state Germanium technology in their units.

Today these devices are highly sought after; their market value increases on a daily basis and their artistic and historical relevance is beyond question. The sound of this hardware is characterful with no artifacts, no hum, clean, but warm and very rich with detail!

The development of the germanium transistor opened the door to endless applications of solid state electronics. Suffice it to say that from about 1950 until 1970 the germanium semiconductor market grew steadily. Actually, silicon was already known to have better conducting properties, but it was only during the 1970s that it gradually replaced germanium: it took quite some after the difficult post-war period for technology to reach the requested level of know-how to produce the extremely pure silicon crystals needed by the semiconductor industry.

Subjectively the sound of Germanium offers a smoother, more-ear pleasing distortion. Whether that's technically due to greater capacitances, lower 'cut-off' voltage, lower bandwidth (Germanium can't handle those higher frequencies that can sometimes lead to harshness) as well as lower gain, it can sometimes lead to more satisfying sounds.

Given the rarity of these units, the cost over time has become prohibitive, and today the fabrication of germanium components is no longer convenient. As a consequence, these parts are available only as NOS (New Old Stock) supplies, with constantly declining quantities and rising prices.

We've been blessed to find these machines and sample them; we hope we have been able to harness their essence, their beauty and their unmistakable sound.

So, here is the new, exciting, *Water Effects* plug-in that embodies the spirit of revolution and the desire to experiment typical of the time.

Specifically, this amazing plug-in includes the emulations of the following machines:

1) Austrian 436511 Passive Germanium EQ modules (1961) with expanded EQ section created by SoundDrops (SteDal). Fully discrete, inductor-based, complete with input and output transformers.

2) Austrian 601430S Limiter/Compressor (1968)

Built with fully discrete technology, it includes three audio transformers in the audio path and two in the sidechain. This device delivers an overwhelming sound. The characteristic of the compressor is reminiscent of old legendary tube devices. Built in the '60s - unfortunately very, very rare to find. A dream compressor!

In the following chapters we'll give a detailed description of each module in *Water*, complete with operating instructions and some historical notes referring to the modeled analogue unit.

1.3 About us

Acustica Audio is a leading company specialized in analog hardware virtualization.

Since the birth of *Nebula* in the summer of 2005, an active collaboration has started between forward thinking developers, beta testers, audio engineers and equipment samplers from around the world.

The research and development have progressed through many stages and employ innovative processes and technologies as of yet unheard of in other products or devices.

The company's goal is to provide the most authentic reproduction of sampled vintage gear and other high-end hardware devices, using the revolutionary technology Vectorial Volterra Kernels Technology (V.V.K.T.) without the negative artifacts created by the current convolution technology.

After many years of fruitful labor, this creative forward thinking group has evolved into a team of experts in knowing what it takes to serve the "best of both worlds" (digital & analogue).

Acustica... Audio Renaissance

1.4 References

Acustica Audio is a trademark of Acusticaudio s.r.l.

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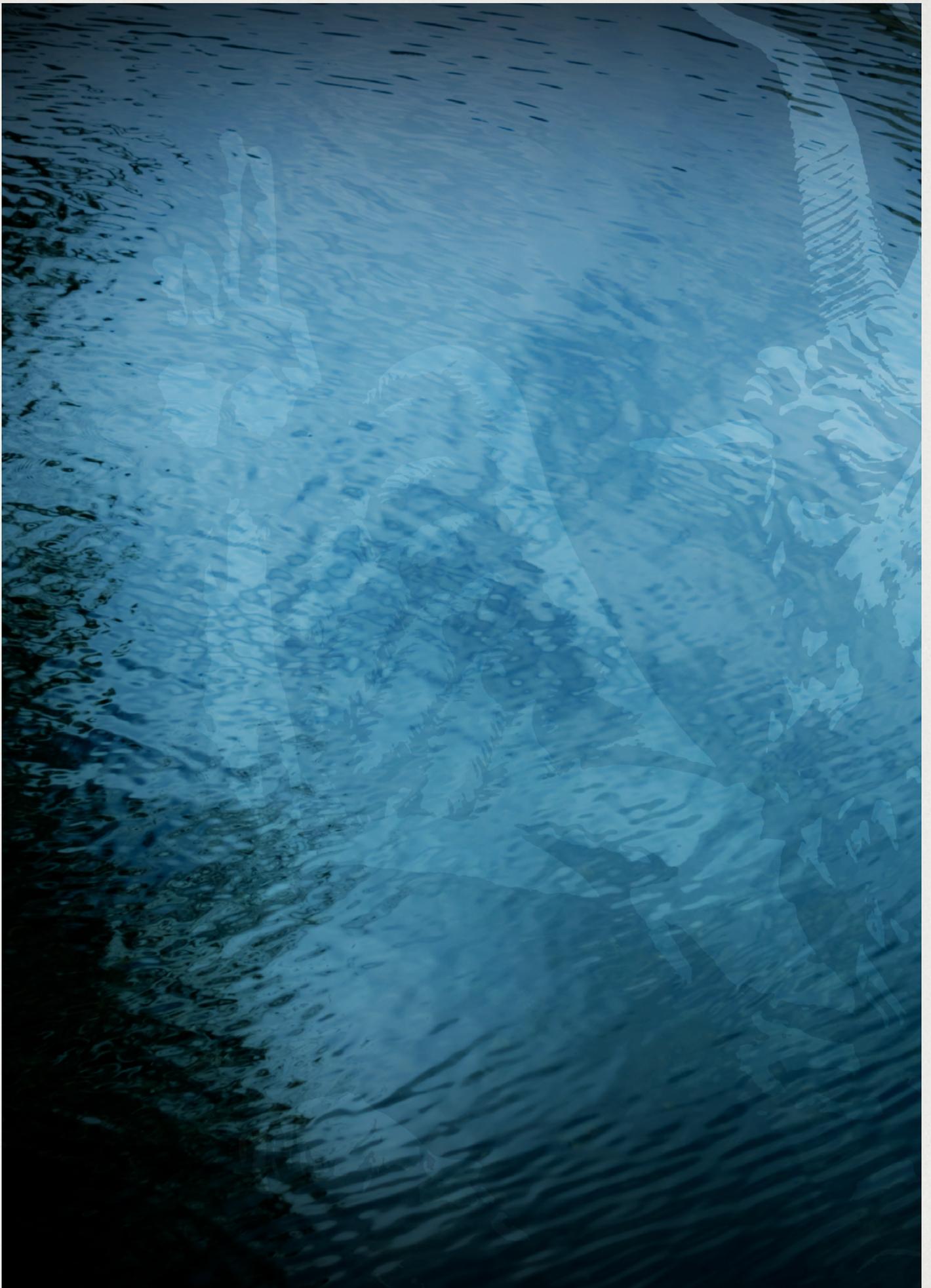
www.acustica-audio.com

1.5 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>







FIRST TERRACE PRIDE

After his conversations with the proud, Dante notes further sculptures on the pavement below, this time illustrating pride itself. The sculptures show Satan (Lucifer), the building of the Tower of Babel, King Saul, Niobe, Arachne, King Rehoboam, and others.

FIRST TERRACE OPERATION

2.1 Water3 Pre-Amps

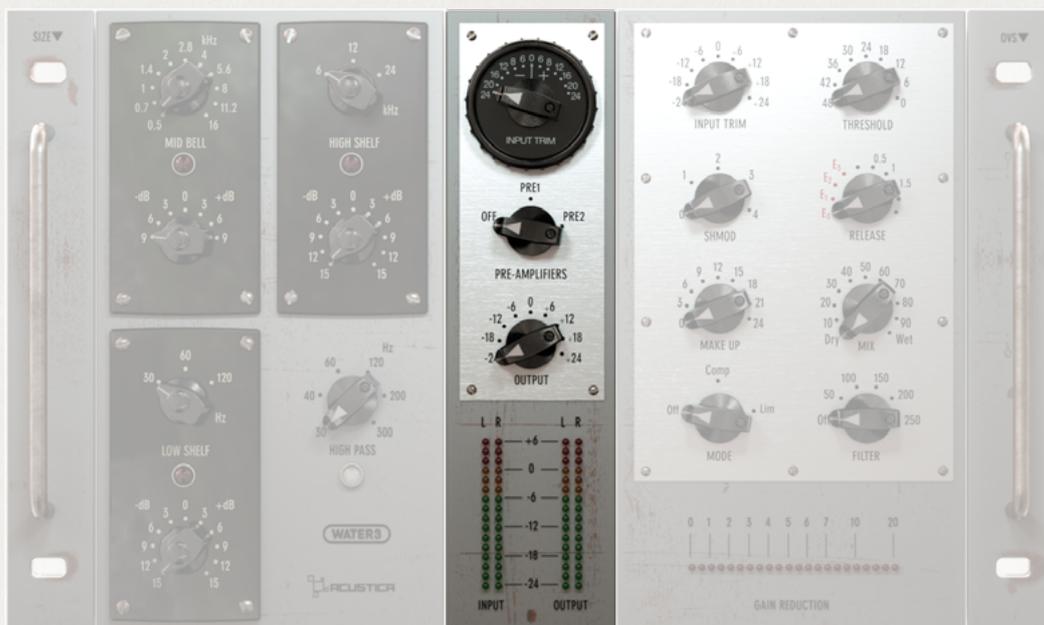
Each plug-in in the Water bundle features different Pre-Amplifiers, capable of adding warmth to your sound.

PRE1: this preamp (MONO) is characterized by a clean and bright sound; it comes from the WSW EQUALIZER circuit, but it has been sampled excluding input and output transformers. PRE1 is available in WATER channel strip.

PRE2: this preamp (STEREO) faithfully reproduces the behavior of the entire preamp circuit of the WSW 436511 Passive Germanium EQ. It is an extremely faithful emulation of the original unit, both input and output transformers included. We have managed to preserve and capture the essence of the germanium transistor sound characterized by an unmistakably warm tone color. PRE2 is available both in WATER channel strip and in the preamp (PRE) stage of the WATEREQ.

PRE3 (COMP): this preamp is only available in the WATER COMP. It emulates the preamp stage of the WSW 601430S germanium limiter/comp.

Water3 Channel Strip Preamp Section



2.2 Water3 EQ module

The Water3 EQ is created from an original passive stereo Germanium topology EQ unit dating back to 1961 and a set of 'Homebrew' additional hardware circuits, hand-built using original components and sampled by Sound-Drops (SteDal) to make this device more flexible and suitable for the demands of modern productions. SteDal's meticulous designs, following the original circuit schematics, helped us to include not just 9dB of boost for the MID band, as it is in the original, but also a 9dB of cut. In a similar way we also added extra frequency choices for the LF and HF bands and the high-pass filter. Further to this, within the standalone unit we added mid-side and dual-mono operation modes. As always with such modules, we provide the option to switch on and off the pass-through tone distortions of the original HW, allowing the user to avoid or embrace the frequency, phase and harmonic distortions of the gear.

EQ section included in Water channel-strip (and relevant stand-alone plug-in):

EQ bands:

BASS: 3 frequencies (30, 60, 120 Hz); ± 15 dB

MID: 11 frequencies (0.5, 0.7, 1, 1.4, 2, 2.8, 4, 5.6, 8, 11.2 KHz); ± 9 dB

HIGH: 3 frequencies (6, 12, 24 KHz); ± 15 dB

Filter section:

HP FILTER: High Pass Filter with 6 frequency values:
(30 Hz, 40 Hz, 60 Hz, 120 Hz, 200 Hz, 300 Hz).

You'll find further information about this section in the next chapter (Controls), where each control in each EQ module will be analyzed and described in detail.



Water3 Channel Strip EQ Section



Water3 Standalone EQ



A little bit of history...

The Germanium Legacy

The sampled hardware is based on the preponderant presence of germanium transistors; since the whole project converges towards these distinctive elements, we will dedicate a few, but significant lines to their properties. A few chapters earlier, in the Genesis of Water section we could not exempt ourselves from mentioning the historical importance that Germanium had in the '60s, as far as the production of audio equipment, to the point that even today some manufacturers exploit the legacy of these vintage machines and give new luster to germanium circuitry by creating brand new devices based on this technology.

Since its invention by Lee de Forest in 1906, active electronics relied exclusively upon the thermionic 'valve'. Nevertheless, in the '50s the science of semiconductor materials had progressed to the point where it was possible to make bipolar junction transistors — and compact solid-state electronics gave its first cry.

“The first devices employed Germanium as the semiconductor, and these were widely used for more than 10 years. However, silicon was found to be better in virtually all aspects. It was also ultimately much cheaper, and so silicon transistors gradually replaced germanium through the 1960s, until silicon was ubiquitous in virtually all applications by the mid-1970s”.

For everything there is a season. That's how our beloved germanium slowly disappeared from the audio hardware industry. Yet, today a handful of audio companies have decided to give this obsolete technology a second life, so new pre-amplifier designs are currently on the audio market.

Actually, germanium devices are nowadays largely relegated to optical applications, so you'll find them in devices such as night-vision equipment or the most common fibre-optic interfaces.

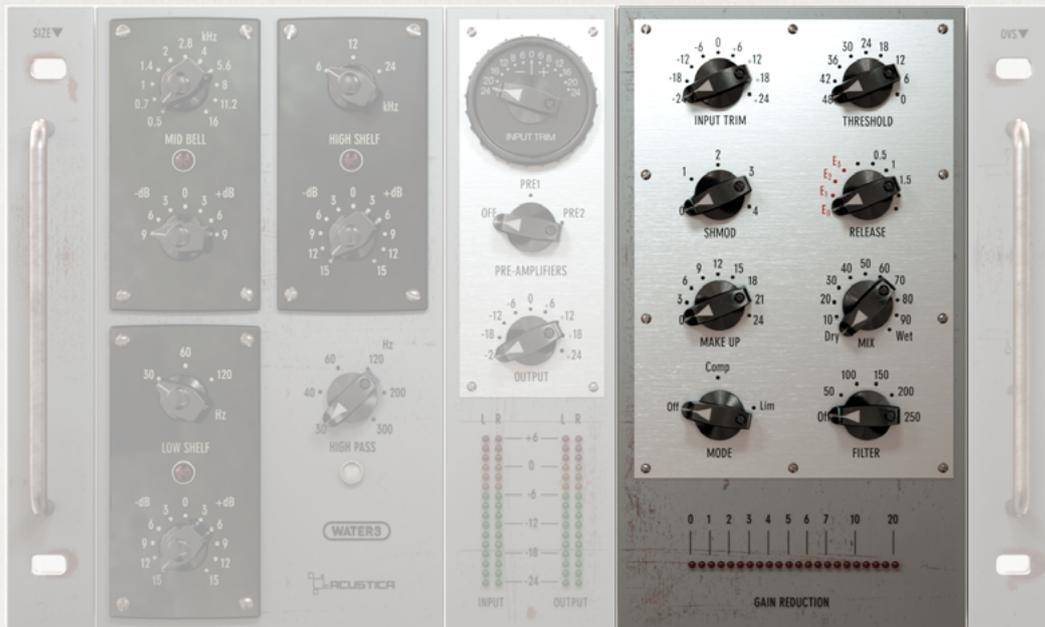


2.3 Water3 Compressors module

“These compressors really grab a single and hold on to it. They have a euphoric quality and can really beef up a sound without sounding ‘tubby’ or lacking definition. I like to use them for lead vocal, bass, parallel compression and even as buss compressors for a whole mix.”

— David Weiss

Water3 Channel Strip Compressor Section



Water3 Standalone Compressor



The Water3 Limiter/Compressor is based on a 1968, discretely built, diode bridge device that delivers an overwhelming sound. With three of some of the very best transformers in the audio path, it gives a smooth, larger than life coloration that is reminiscent of classic legendary tube devices. Made in the '60s the hardware is unfortunately very rare to find these days.

Our take on this design is to make this great device even more flexible and powerful: we have included the extras of an attack shape modulation control, high-range HPF in the side-chain, some additional faster release curves derived from the Ebony mod. D473 VCA compressor, the ability to switch on and off the pass-through tone of the original HW unit, and a dry/wet control for parallel compression. We also managed to add a high-quality hardware modeled clipper at the output for this dream compressor!





SECOND TERRACE

ENVY

The souls of the envious wear penitential grey cloaks, and their eyes are sewn shut with iron wire, resembling the way a falconer sews shut the eyes of a falcon in order to train it.

SECOND TERRACE CONTROLS

Water is a new high performance plug-in suite released by Acustica.

As with similar releases, we offer to our customers a versatile and complete bundle consisting of a powerful complete channel-strip plus 2 separate plug-ins for each of its EQ and compressor sections.

Each stand-alone plug-in contains the same features included in the strip, and in some cases also offers some useful extras. For example, in the Water stand-alone compressor (WATER3COMP) you can enable an external sidechain which is unavailable in the channel-strip unit.

In order to facilitate the understanding of the following section, we will explain the controls separately for each stand-alone plug-in.



3.1 Equalizers:

ON: these red buttons enable each relevant EQ band.

CL (CONTROL-LINK): this button links the controls of left and right channels.

M/S (MID-SIDE): this button enables the MID-SIDE configuration of the plug-in; when bypassed, the plugin is in normal LEFT-RIGHT configuration.

PRE: this button enables a preamp stage that closely emulates the phase, frequency response and harmonic distortion of the original Germanium device; it adds a great warm tone color.

HP: High-Pass filter with selectable cut-off frequencies at 30, 40, 60, 120, 200, 300 Hz.
The first position (Off) disables the HP filter.



LOW SHELF FREQUENCY BAND

- The LF Hz stepped knob sets the operating frequency of the low shelf. Values (Hz): 30, 60, 120.
- The LF Gain knob sets the boost or cut level of the low shelf. Range: +/-15dB.



MID FREQUENCY BAND

- The MF KHz stepped knob sets the operating frequency of the presence filter. Values (KHz): 0.5, 0.7, 1, 1.4, 2, 2.8, 4, 5.6, 8, 11.2, 16.
- The MF Gain knob sets the boost or cut level of the presence filter. Range: +/-9dB*.



HIGH FREQUENCY BAND

- The HF KHz stepped knob sets the operating frequency of the high shelf. Values (KHz): 6, 12, 24.
- The HF Gain knob sets the boost or cut level of the high shelf. Range: +/-15dB.

*Note:

In the original unit only the boost function was available in the Presence filter, going from 0 to +9dB.

Thanks to the contribution of SoundDrops (SteDal) we are able to give you a complete boost/cut range for this eq section, ranging all the way to -9 to +9dB.



3.2 Compressors:

OFF/COMP/LIM KNOB (MODE/COMP knob): this stepped control bypasses the processor in its leftmost position (Off), then enables the compressor (step 2, Comp) or the limiter (step 3, Lim).

PREAMP: this button enables a preamp stage that closely emulates the phase, frequency response and harmonic distortion of the original device. It gives an essential contribution to the authenticity of the global tone color of this unique processor.

INPUT TRIM: this function allows for a 'one knob' internal gain staging control by automatically linking input and output gain stages with an inverse law. The control sets the input level from -24dB to +24dB, and it is used to adjust the internal operational levels of the plugin. Note that this is different from a standard input gain control due to the linked output gain stage, which always ensures that whatever gain change is introduced at Water's input, the output level is automatically compensated, so that there's no perceived level change.

When a positive value is selected the signal entering Water is brought up by the set amount in dB and the device will operate at higher internal level. This will result in higher harmonic distortion levels and stronger compression. Contrary to this, negative values result in lower internal operational level.

SHMOD:

The original unit has a fixed, non-adjustable attack time. SHMOD allows you to alter the shape of the attack envelope, allowing you to overcome this limitation by fine-tuning the attack behavior in order to adapt it to any audio source.

Due to the hardware's specific attack shape, which has a slight 'delay' unlike other dynamic processors sampled by Acustica Audio, a short lookahead time is required for the Water compressor to obtain its original attack shape and for the SHMOD control to function properly. This is why in Water the SHMOD feature behaves slightly differently compared to that of previous Acqua compressor plugins.

Position 2 still equals the attack time and shape of the hardware, but it features a tiny 'fixed' lookahead, which cannot be bypassed or altered. Below 2 to 0 the attack time becomes faster and no additional lookahead has been added. Above 2 to 4 the attack time becomes slower and again no additional lookahead was added.

RELEASE: sets the compressor's release time ranging from 0.1 s (fast) to 2.5 s (slow).

E1/E2/E3 RELEASE TIMES have been directly derived from our EBONY COMP (mod. D473)*; *this is a vintage dynamic processor developed in the 1970s, a VCA design used in a lot of classical mastering sessions, especially in Europe.

The sound of this emulation can be described as neutral and open. So it is very clean and characterized by a very controlled and slightly velvety sound. That's not to say that you can't hit it hard, especially in limiter mode. In our opinion it's a good choice for mastering use and/or for vocal leveling.

E1 = 0.05 s; E2 = 0.15 s; E3 = 0.20 s

Fourth step= 0.25

sEight step= 2 s

Ninth step: 2.5



THRESHOLD: this control sets the threshold of the compressor. It ranges from -48dB to 0dB.

MAKE-UP: This is the classic compressor make-up gain control (It ranges from 0dB to 24dB). It allows for the compressed signal to be boosted so that it is level matched to the uncompressed signal. This allows for an easier comparison between the two signals and a better judgment on the compressor's action.

PEAK: push the red button to engage the 'clipper' section of the plugin. It helps raise the overall volume retaining the (perceived) shape of the emulated analogue saturation whenever the input signal reaches the limit (0 dB). There is no oversampling stage, so some aliasing might be present at extreme settings.

GAIN REDUCTION VU METER: measures the reduction level applied by the compressor. The meter indicates '0' in the absence of an input signal or any gain reduction. If the signal exceeds the compression threshold or limit level, the amount of gain reduction is shown.

Range GR: from 0dB to 30dB.

SIDECHAIN (EXTERNAL INPUT): this button engages the external side-chain of the compressor. This allows for control of the compression behavior of the unit by an external control source. The control signal goes through the sidechain channel and sets the amount of the gain reduction.



MIX: controls the mix proportion between the original (dry) and ‘effected’ (wet) signals. In other words, it determines the balance between the compressed and uncompressed signal.

Range: 0% to 100%

FILTER: this knob allows to use a IIR type high-pass filter within the sidechain circuit of the compressor. It is a useful to control the way the compressor reacts to bass heavy sources, limiting its sensitivity to the low frequency range of the signal.

Available range: Off (bypass)/from 50 to 250 Hz.



We have elevated the Water suite to new heights with the release of its 3rd version, incorporating new features that enhance its accuracy and integrating it with our cutting-edge Hyper technology.

New features:

- Improved audio quality thanks to the oversampling.
- New “Hyper” engine.
- New controls (Attack, Hold Attack, Hold Release, Power, Morph, Ext Sidechain). in the compressor.
- Numerical value parameters.
- Various optimizations and graphical improvements.
- Resizable interface.

Details

Attack: Sets the compressor’s attack time, ranging from 1.2 mS (fast) to 280 mS (slow).

Hold Attack - Hold Release: These controls allow you to overcome any limitation and arrive at instantaneous compression.

In an envelope detector, the attack (attack) is the time required for the output of the circuit to reach the maximum value of the input signal after a sudden increase in its amplitude. On the other hand, the hold function forces the time required for the output of the circuit to maintain its value after a sudden increase in the amplitude of the input signal. The visible result is a tendency to preserve transients, avoiding compressing them if they are shorter than the HOLD time. In the Water3 comp, the time is also proportional to the current attack value. The HOLD function related to attack differs from that of release because it is dependent on the threshold value of the compressor (whereas in the case of release, it is independent): when the hold function is active, once the amplitude of the input signal exceeds the threshold, the output of the circuit will remain at its value for a predetermined period, regardless of further changes in the amplitude of the input signal. So as a general rule, transients that exceed the value set by the threshold and are shorter than the HOLD time are perfectly preserved.

Since the HOLD section creates a considerable effect, its presence (or non-presence) can drastically change the way transients are processed, and a slight change in release can create a completely different feel on transients. We decided to introduce in Water 3 Comp a hold control for release as well, increasing versatility and allowing you to have all the punch you want! Range: from 0 / 100.

Power: The power function allows you to change the general characteristics of the detector.

Power ranges from 1 to 5, where the value 1 corresponds to the typical PEAK-type detector.

The times written for attack and release are calculated in the PEAK mode and are derived from sampled curves from the best existing hardware compressors.

Morph: This implements an intuitive morphing control (MORPH) that allows each of the dynamic elements to be seamlessly transformed from a compressor to a limiter to a saturator while simultaneously handling the stereo-link intuitively.

This control allows for a continuous action of further deformation of the detector’s attack and release curves. In the first half of the run, they deform the attack curves arriving at an attack time of zero length; in the second half, they bend the release curves coming at a release time of zero length. Interestingly, the deformation of the attack and release curves maintains the previous proportions.

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

Oversampling: 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 2x mode increases the sampling frequency of the compressor being processed by a fixed multiple of 2x.
- 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.
- The 32x mode increases the sampling frequency of the compressor being processed by a fixed multiple of 32x.



EXTRAS

In the Water channel-strip you will also find the following controls:

Meters (IN-OUT): they display the input and output levels entering and exiting Water.

Range IN/OUT: -24dBFS to +6dBFS.

(These meters are only available in the Water Channel-strip version)

MODE knob: this stepped control enables/disables and selects the compressor and limiter included in Water CHANNELSTRIP. (OFF step: bypasses the unit; COMP step: enables the compressor; LIM step: enables the Limiter).

PRE-AMPLIFIERS: this control allows to select different preamplifier emulations. Using this stepped knob you can switch from OFF (preamp disabled) to PRE1, and to PRE2.





THIRD TERRACE WRATH

The souls of the wrathful walk around in acrid smoke, which symbolises the blinding effect of anger.

THIRD TERRACE TECHNOLOGY

Our technology provides seamless support of real-time pre-amplifier, equalizer, compressor, reverb, multi-effect, stomp-boxes, cabinets, microphones and tapes emulations on Intel based machines, both for Windows and OSX. The Acustica Acqua Engine is a combination of multiple advanced technical processes that are unique to the Acustica team. Effects devices can be successfully sampled without further editing or adjustment, and then immediately processed and reproduced via the same engine, where the sampled data is stored and available for recall, loading, saving, and advanced editing when desired. The quality of reproduction of sampled sources are nearly indistinguishable from the originals. The following techniques are merged into a single model.

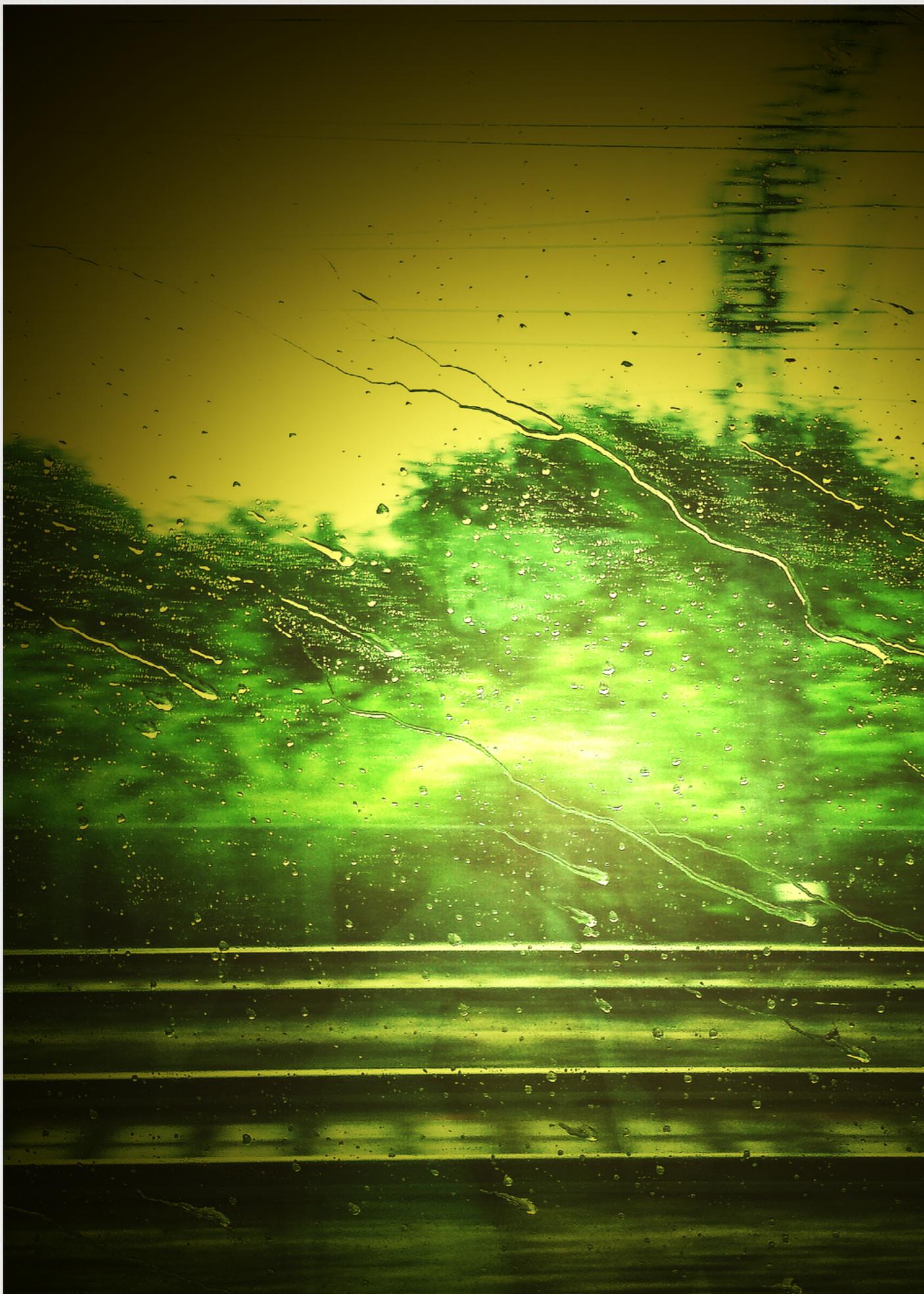
Nonlinear convolution: The Volterra theorem is applied as a complete re-thinking, replacement, and generalized substitution of the convolution algorithm that is commonly used in audio applications. Accurate sampling, processing, and reproduction of up to 9 harmonics is possible with our proprietary technology.

Nonlinear convolution, dynamic Volterra series, and time-varying models are just some of the state-of-the-art features that the Core Acqua Engine offers. The Core Acqua Engine comes complete with all of its internal tools, and also includes the N.A.T. sampling system, a stand-alone application shipped with most of Acustica Audio's products using different configurations. Support is provided directly from the R&D Team that continuously develops the engine. Workshops and project-specific learning sessions can be organized for your team. The Core Acqua Engine is available with a diverse stand-alone library, ready for inclusion in 3rd party products.

Vectorial Volterra Kernels Technology (V.V.K.T.): Volterra kernels are stored in tree data structures (managing up to 100000 elements in real-time using a CPU Pentium IV 3 GHz). The Acqua Engine is capable of implementing a list of modules commonly used in audio synthesizers (LFO, envelope followers, dynamic modules, FUNS). Multiple combinations of these processes may be applied to control sources and destinations.

Time Varying Models (T.M.V.): A collection of kernels collect data using an advanced sampling technique, creating a multi-dimensional snapshot of a nonlinear/time-varying system. Multiple recordings are interpolated in order to mimic the time evolution and response to external variables such as user parameters and input/output assessments (e.g. time-varying cyclic effect processors, stomp-boxes, digital multi-effect units).







FOURTH TERRACE SLOTH

On the fourth terrace we find souls whose sin was that of deficient love – that is, sloth or acedia. Since they had failed in life to act in pursuit of love, here they are engaged in ceaseless activity.

FOURTH TERRACE

HOW TO DOWNLOAD, INSTALL AND AUTHORIZE

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 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.

5.2 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.

5.3 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





FIFTH TERRACE AVARICE

On the fifth terrace, excessive concern for earthly goods – whether in the form of greed, ambition or extravagance – is punished and purified.

FIFTH TERRACE CUSTOMER CARE

6.1 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.







SIXTH TERRACE GLUTTONY

It is between 10 and 11 AM, and the three poets begin to circle the sixth terrace where the gluttonous are purged, and more generally, those who over-emphasised food, drink, and bodily comforts.

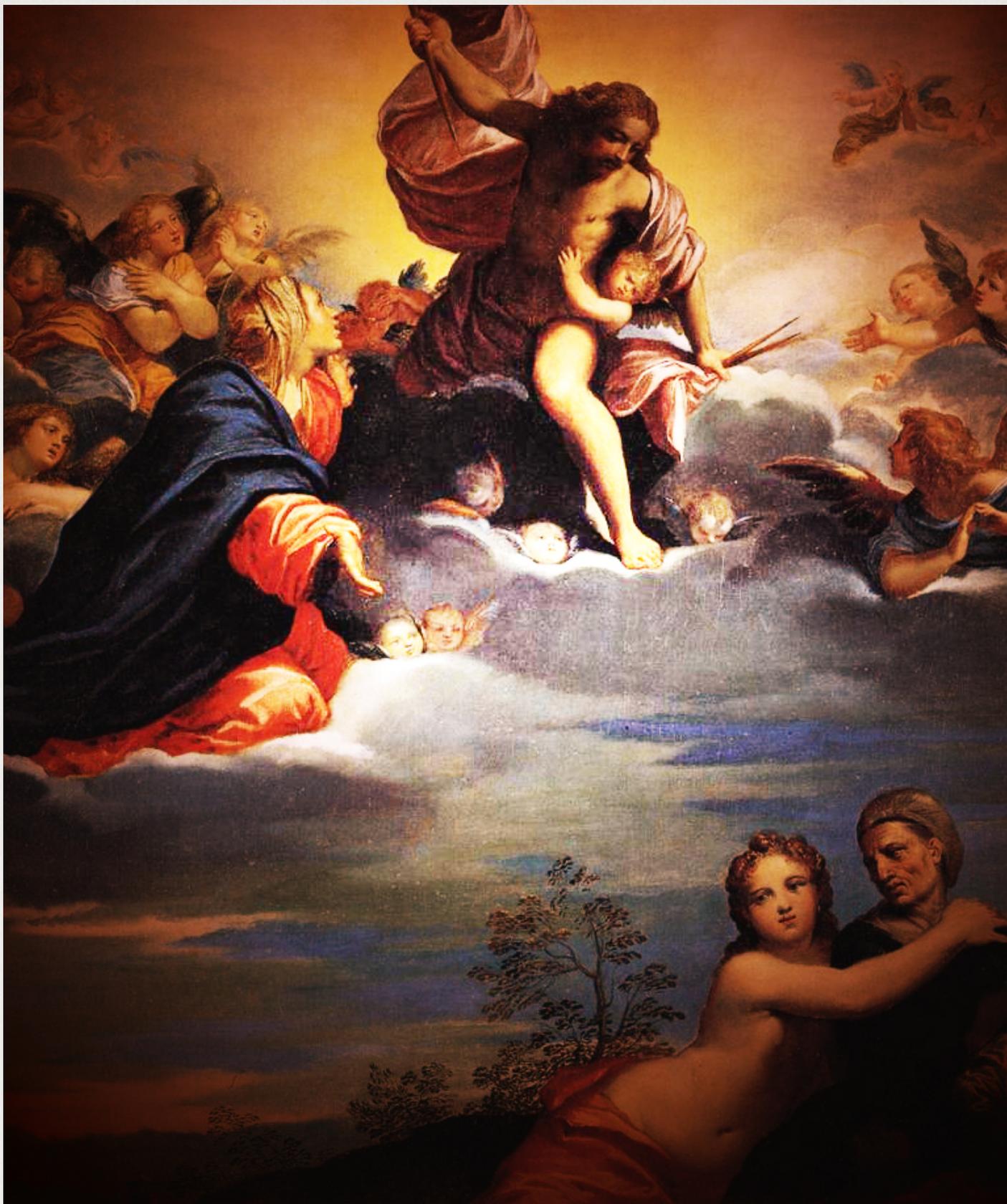
SIXTH TERRACE COPYRIGHTS AND CREDITS

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SEVENTH TERRACE LUST

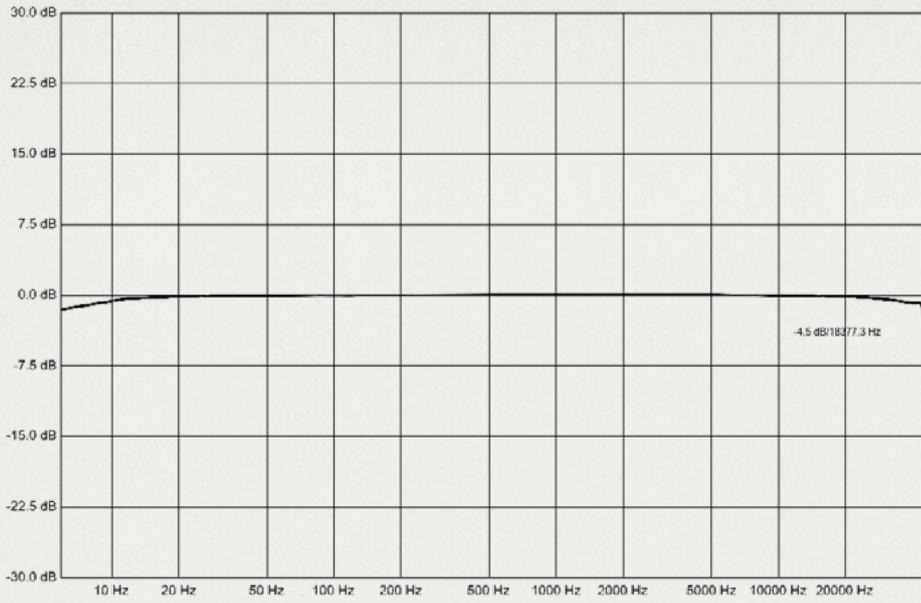
The terrace of the lustful has an immense wall of flame through which everyone must pass. Souls repenting of misdirected sexual desire call forth in praises of chastity and marital fidelity.

SEVENTH TERRACE APPENDIX

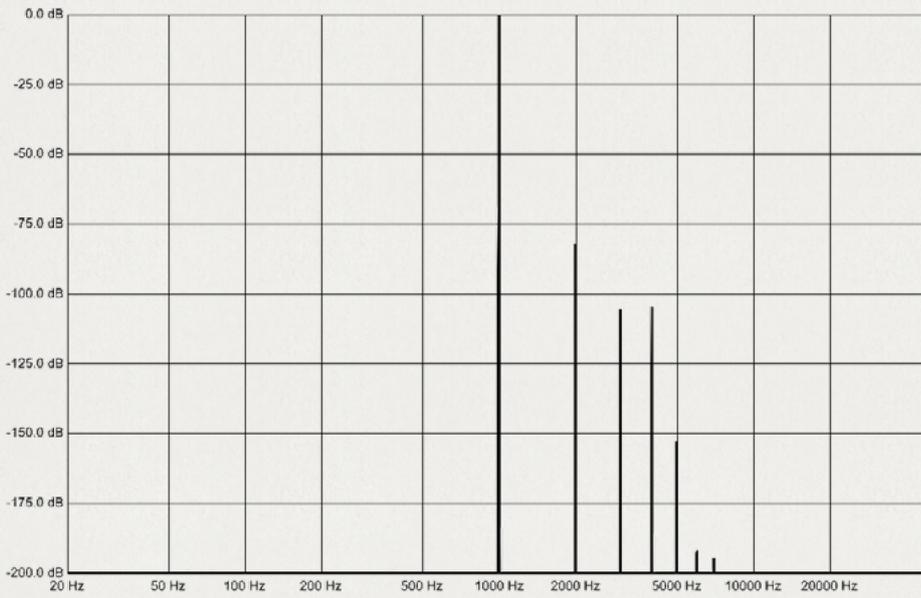


Preamps

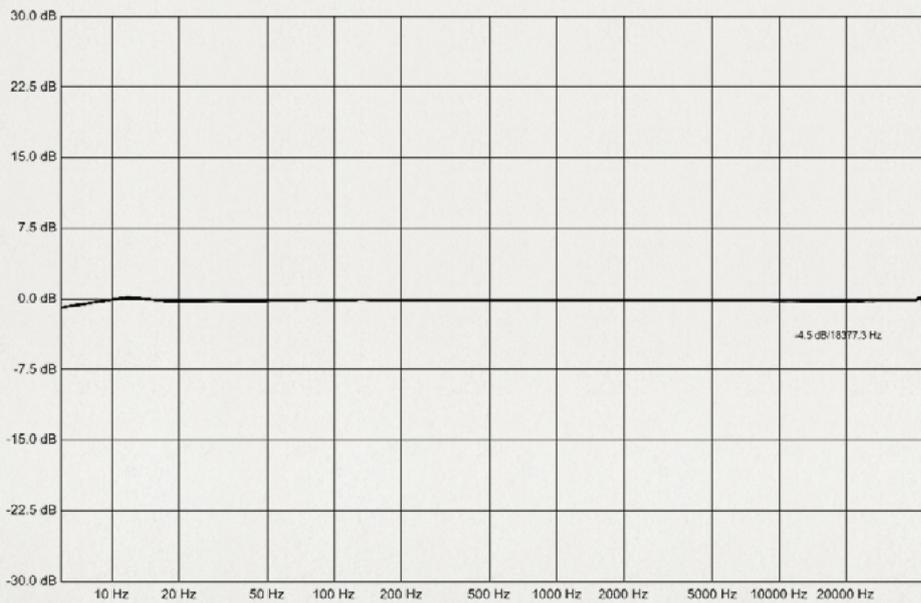
PRE1 - Frequency



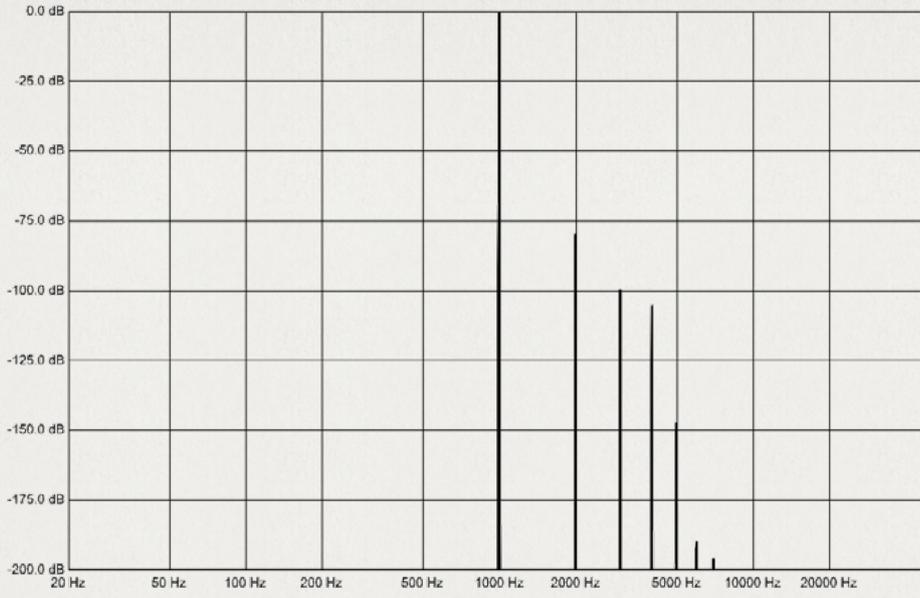
PRE1 - Harmonics



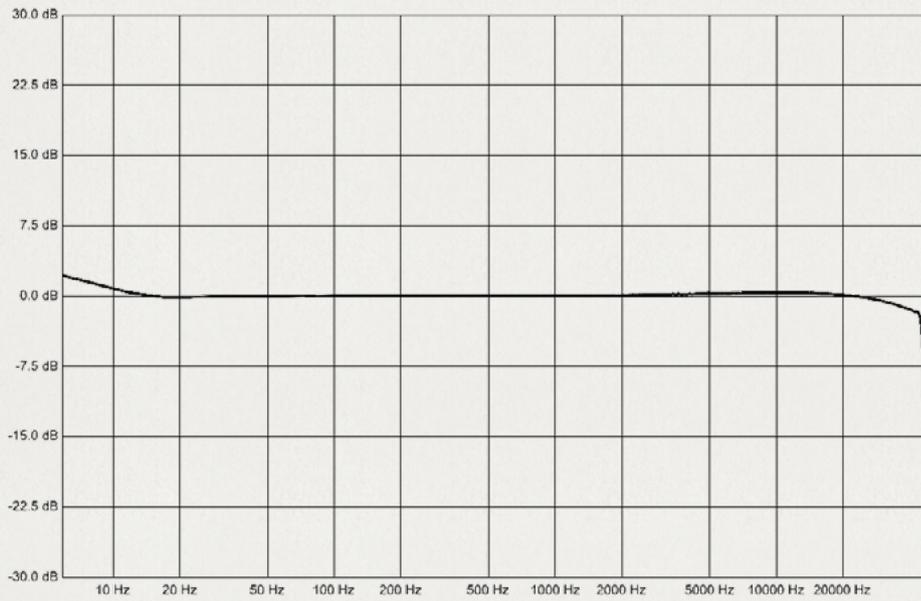
PRE2 - Frequency



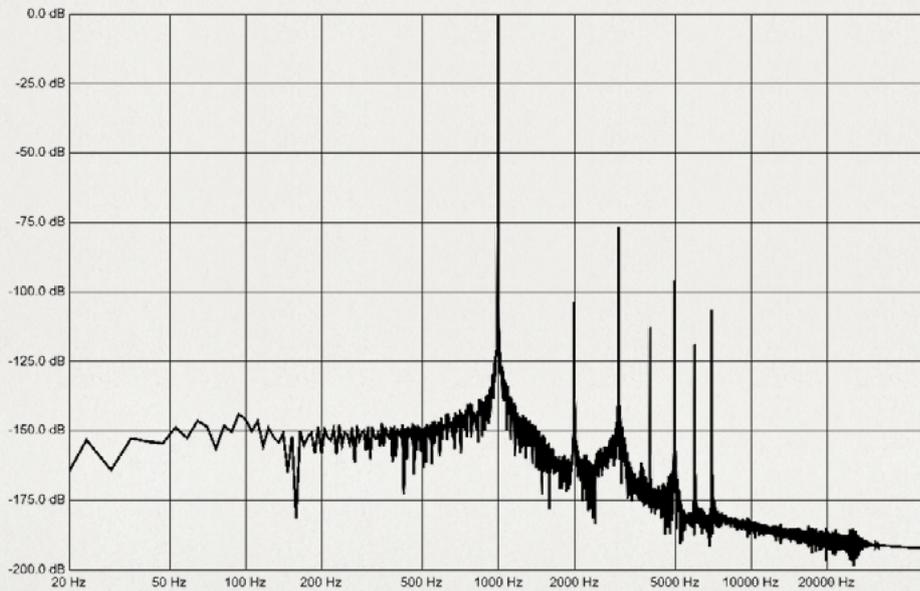
PRE2 - Harmonics



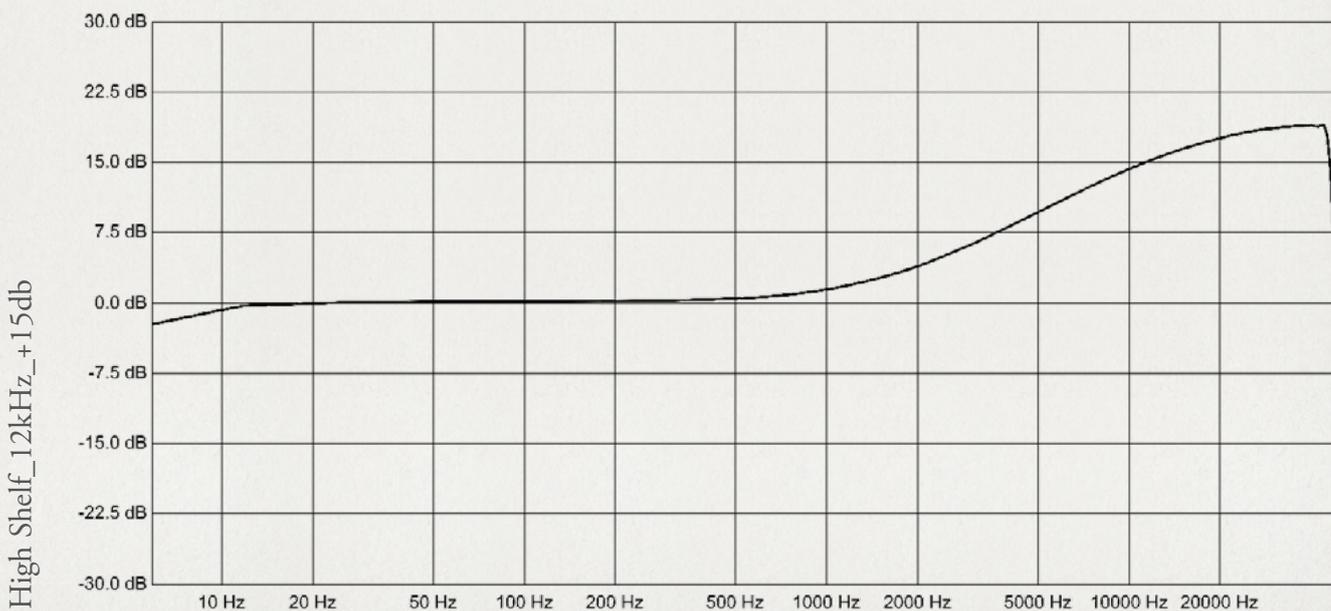
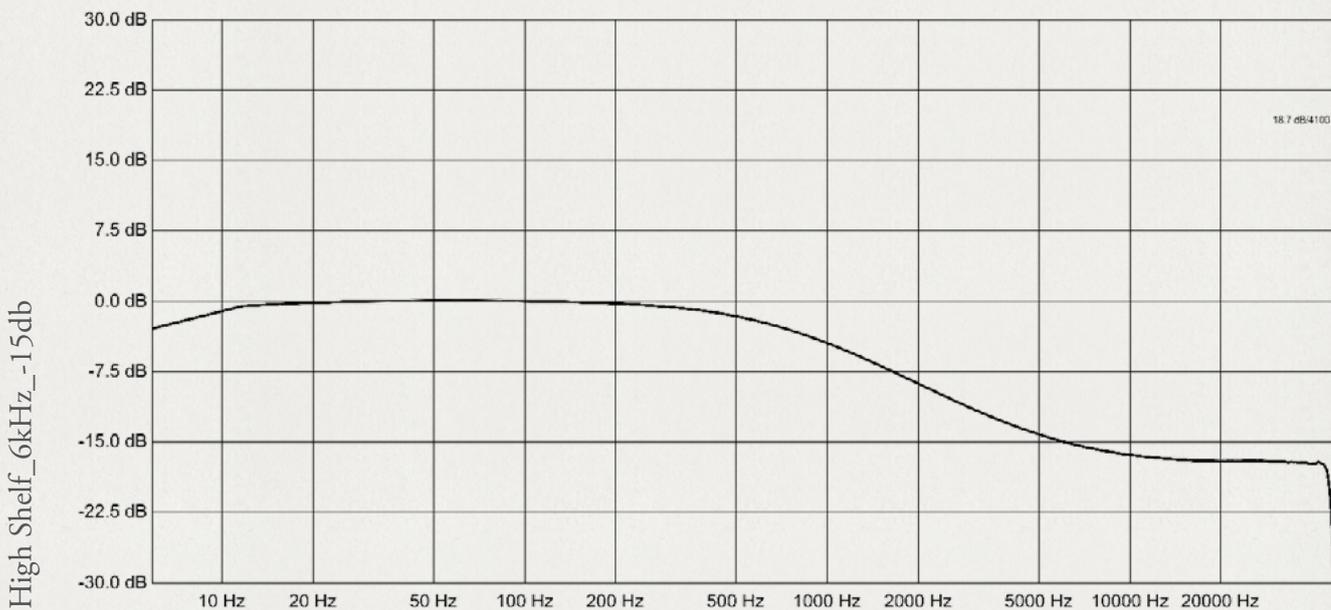
PRE COMP - Frequency



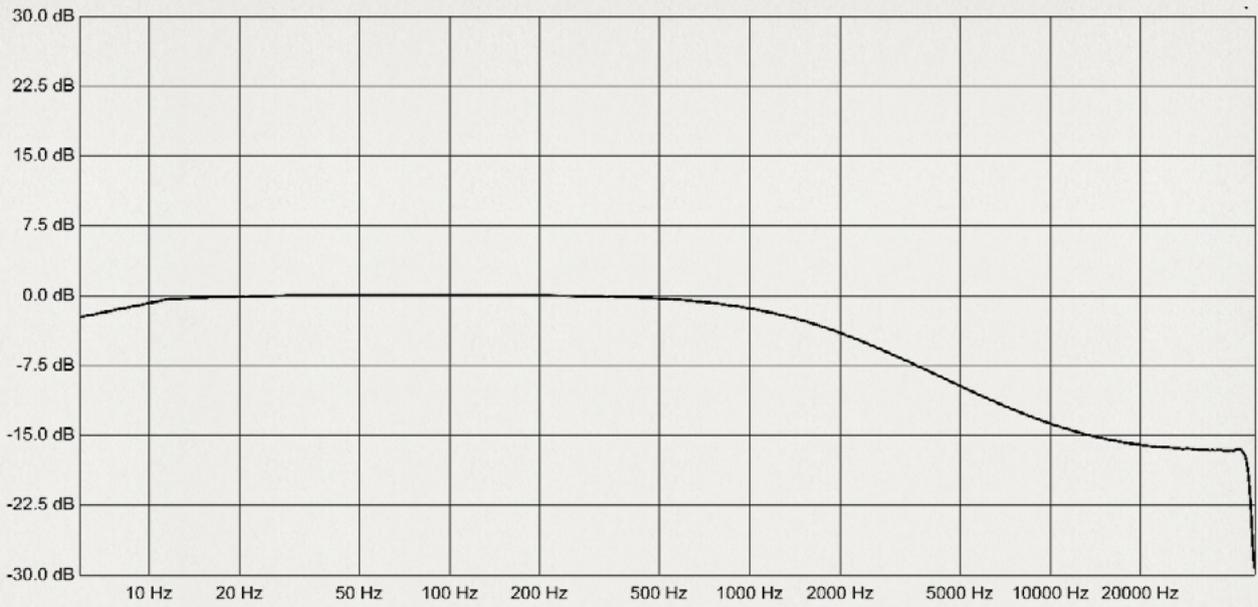
PRE COMP - Harmonics



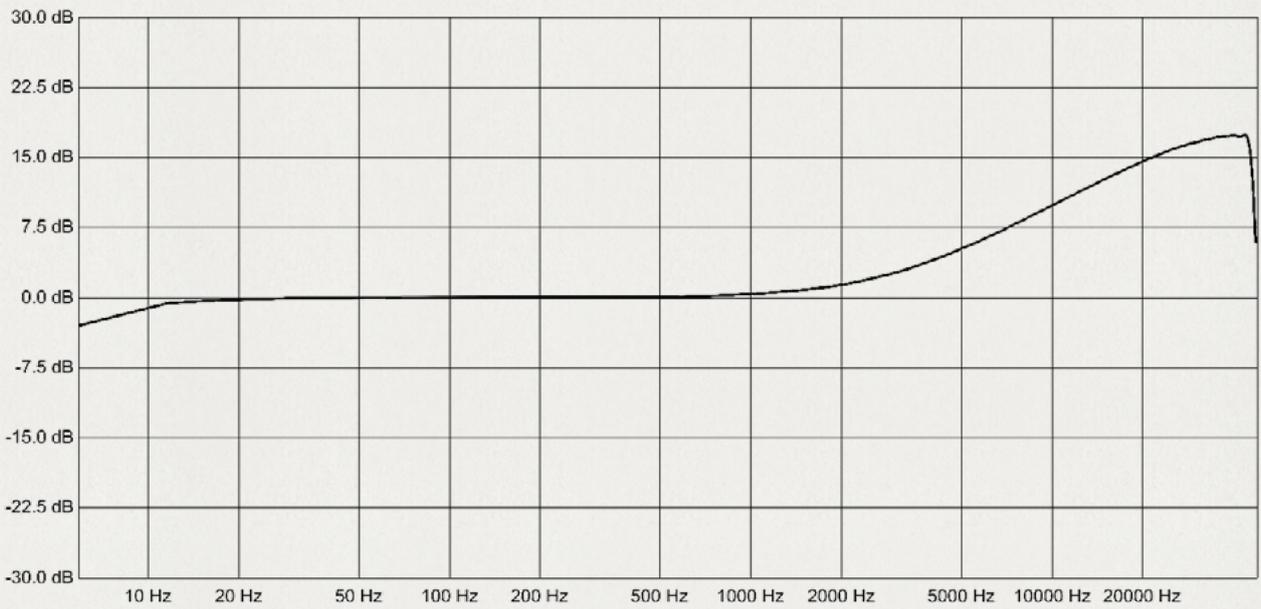
Equalizer



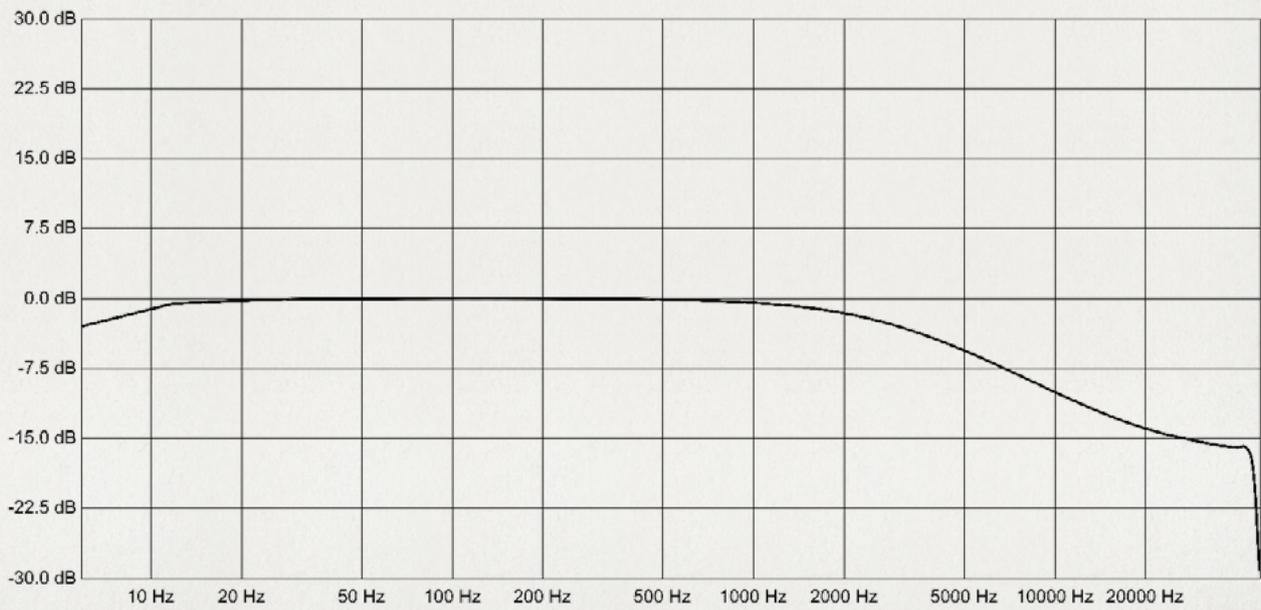
High SHelf_12kHz_-15db



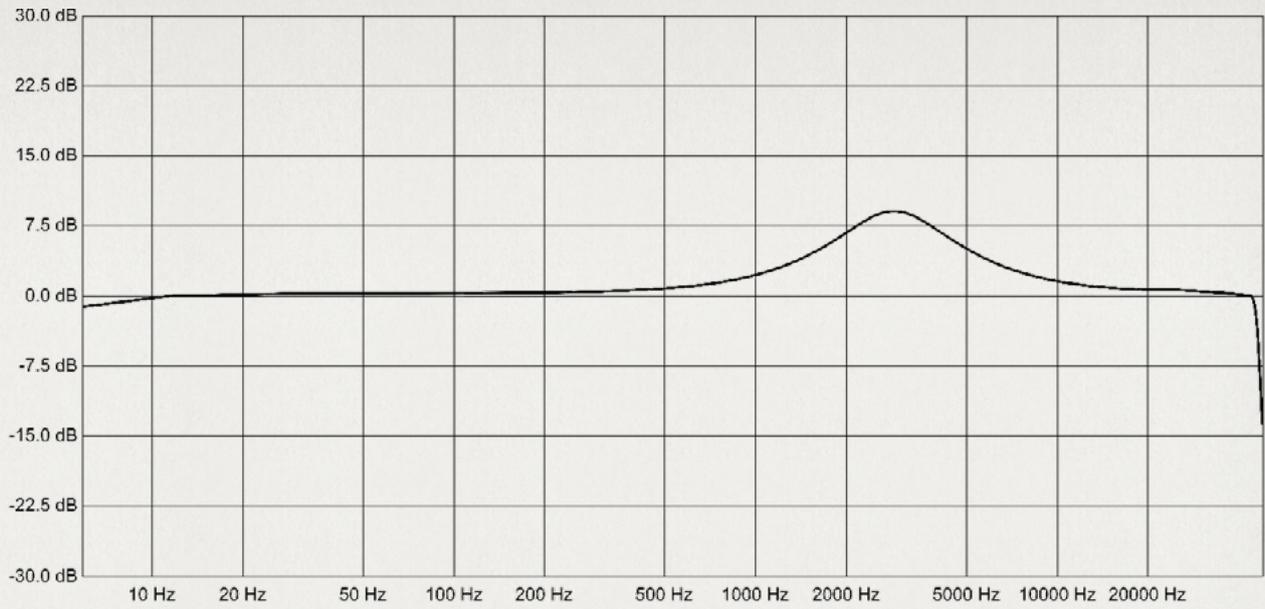
High Shelf_24kHz_+15db



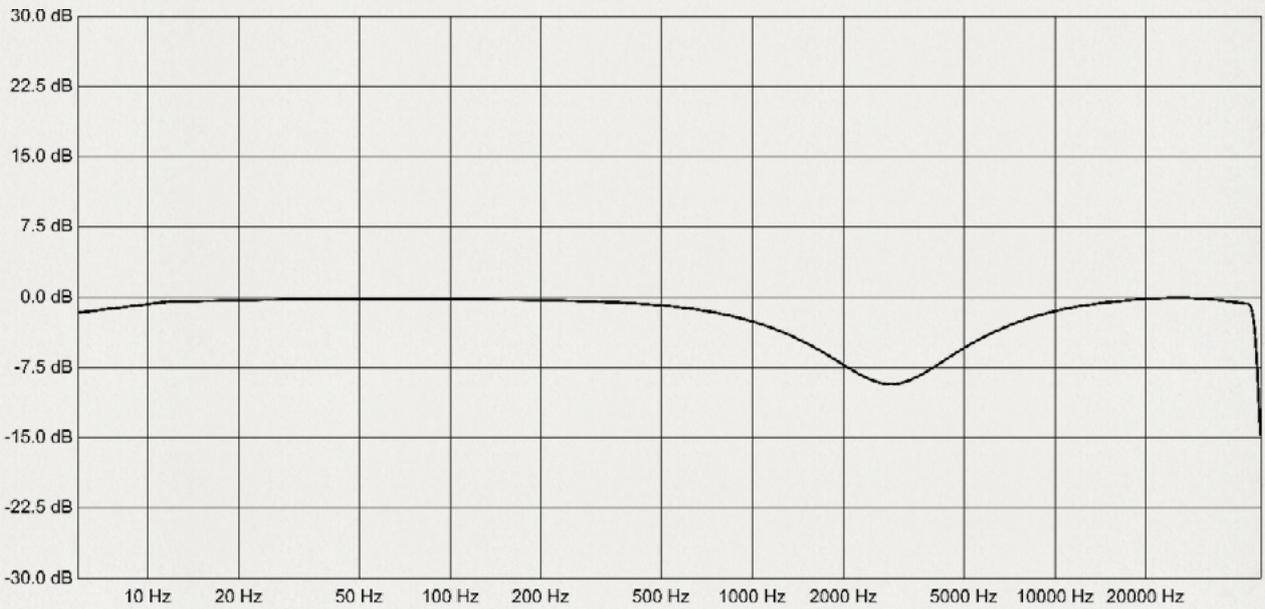
High SHelf_24kHz_-15db



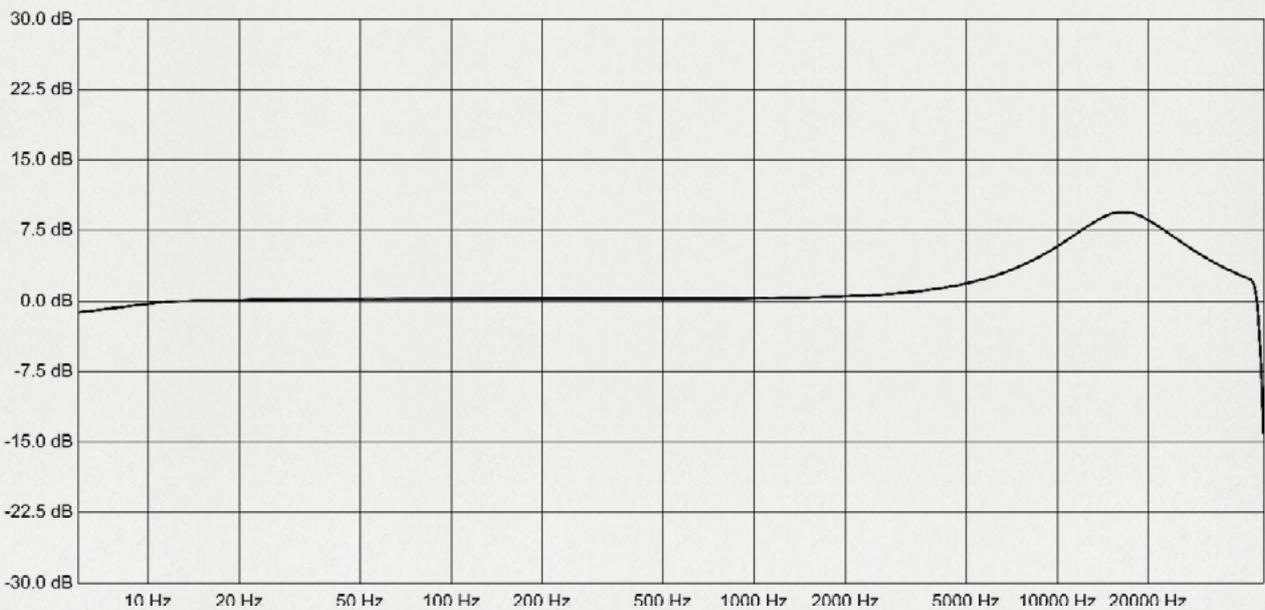
Mid Bell_2k8Hz_+9dB



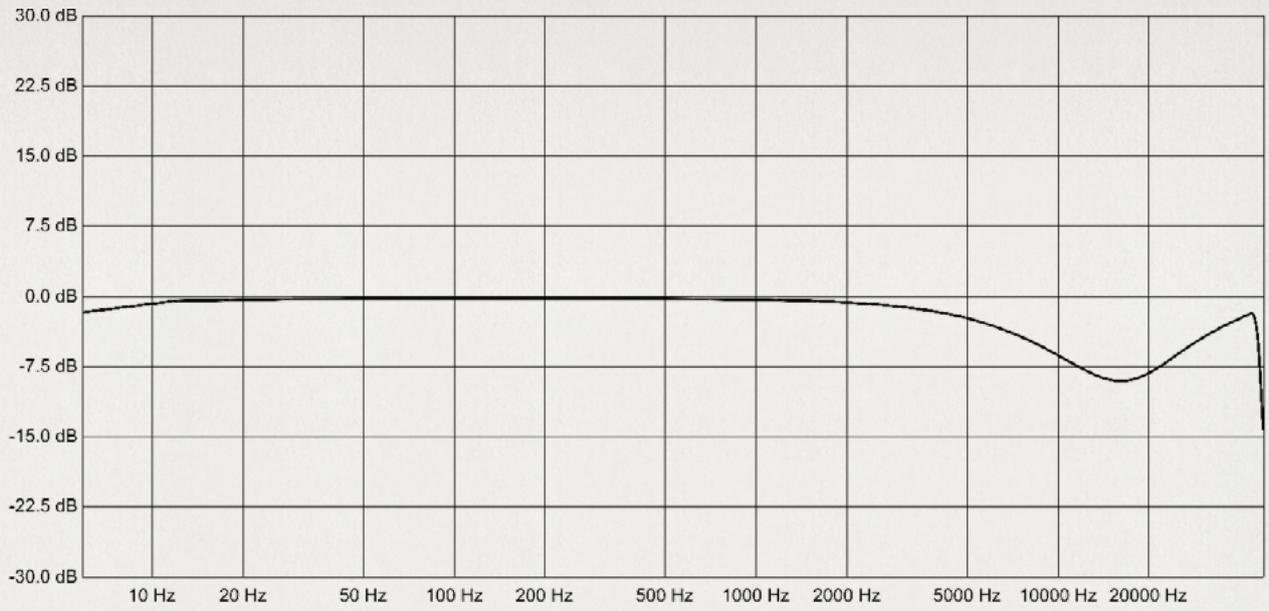
Mid Bell_2k8Hz_-9dB



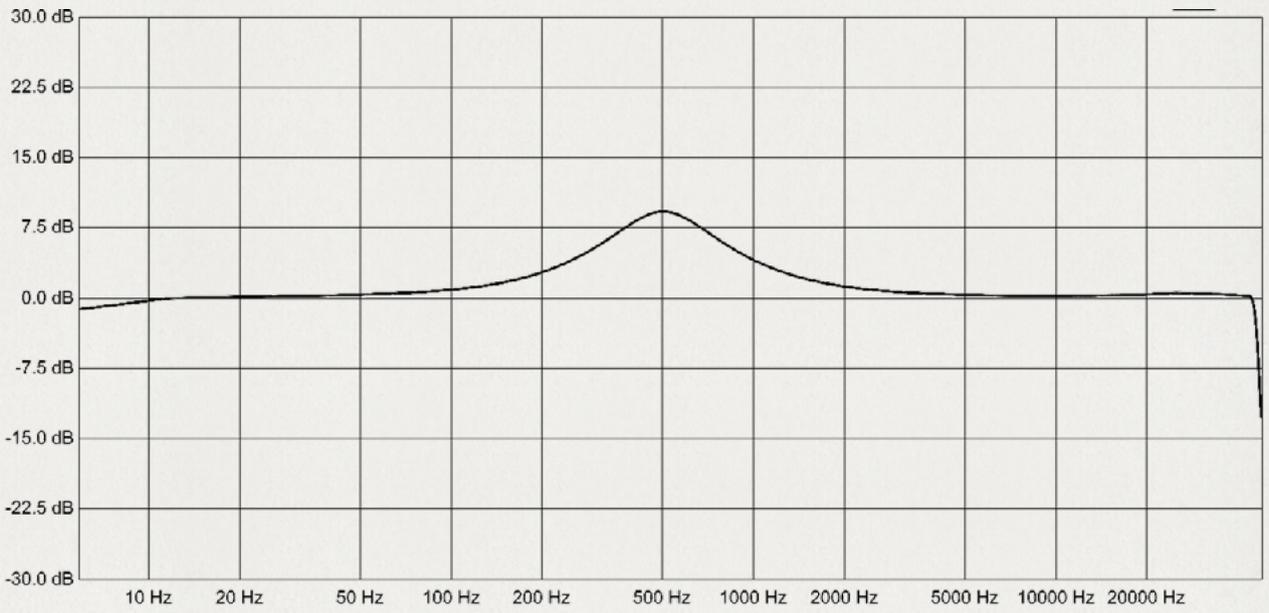
Mid Bell_16kHz_+9dB



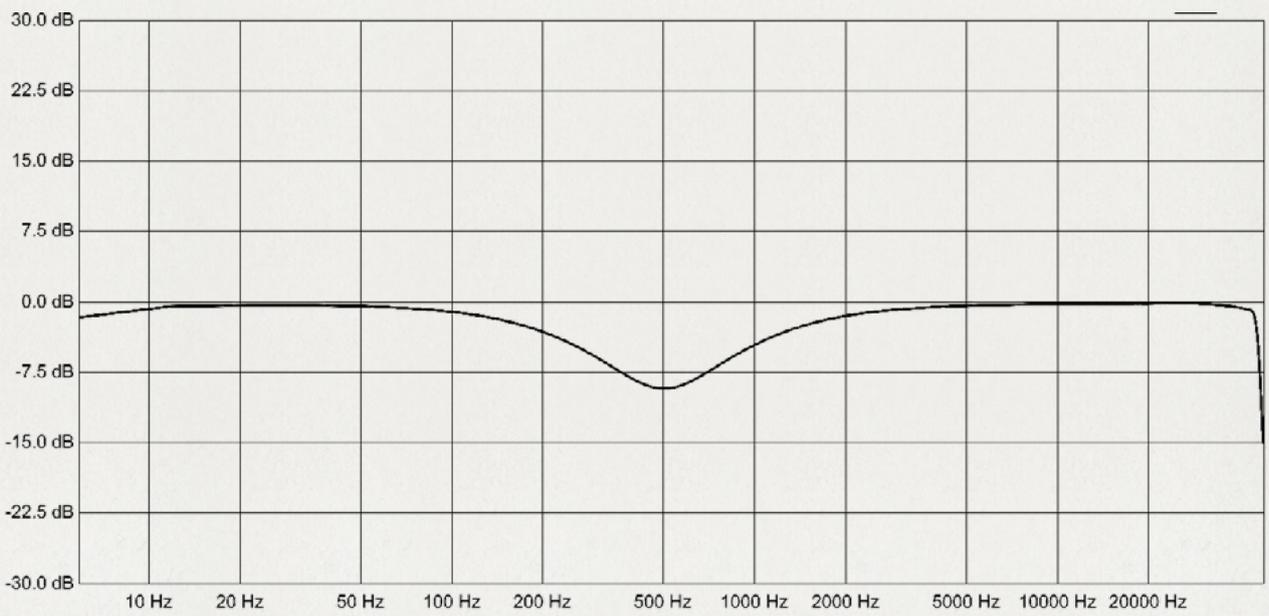
Mid Bell_16kHz_-9dB



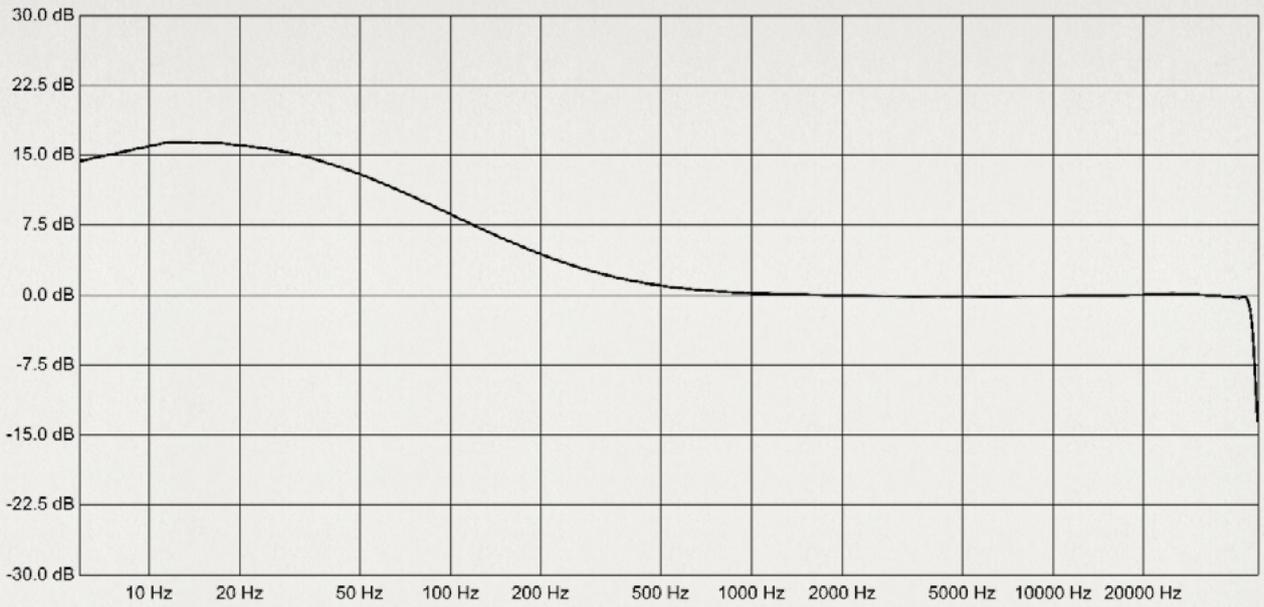
Mid Bell_500Hz_+9dB



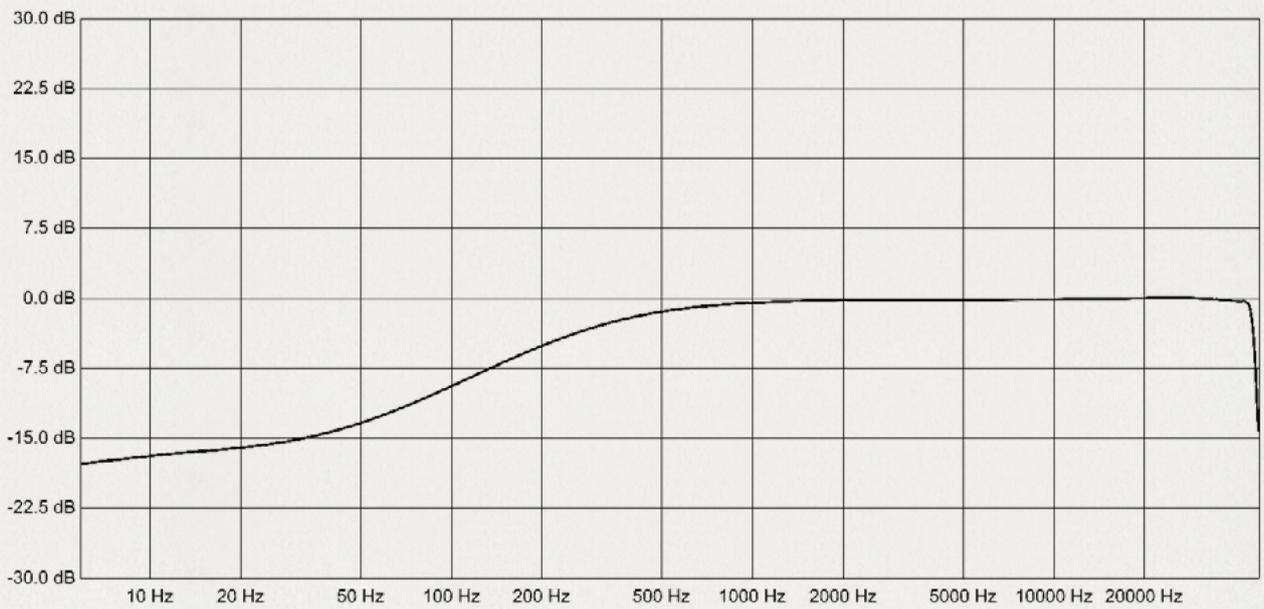
Mid Bell_500Hz_-9dB



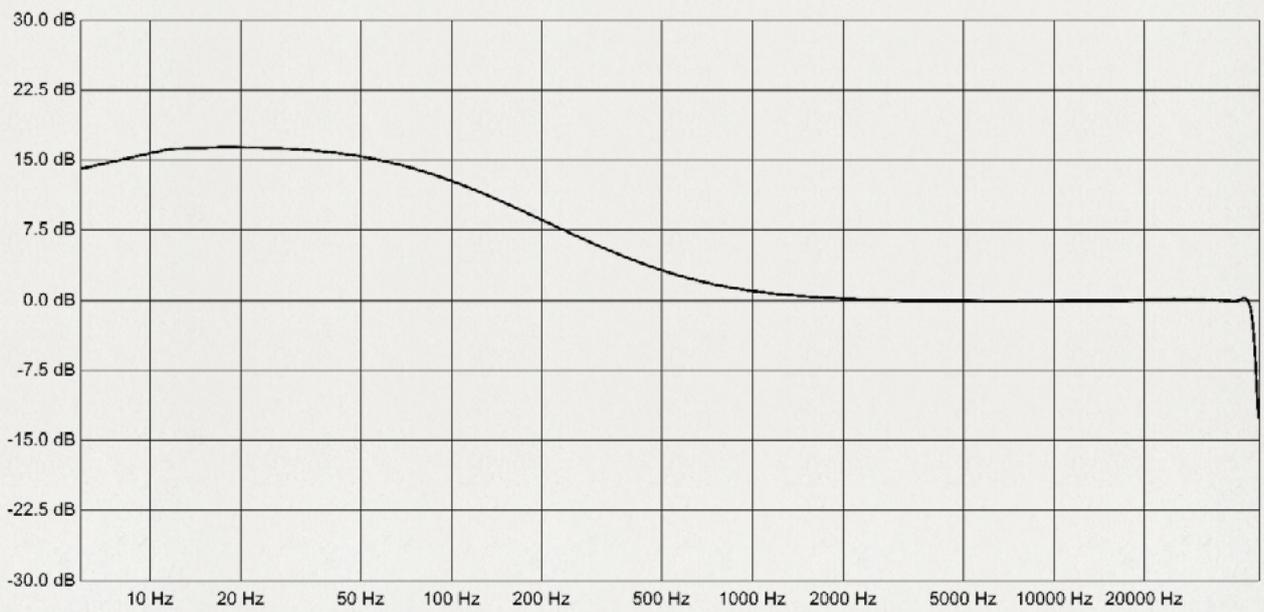
Low Shelf_30Hz_15dB



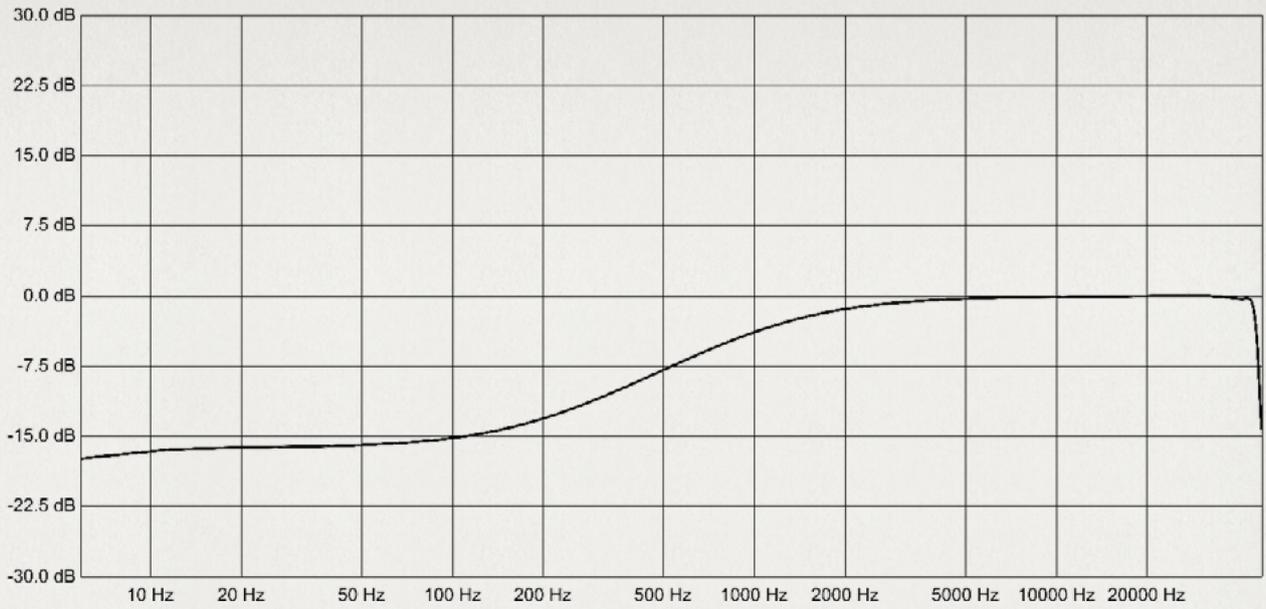
Low Shelf_30Hz_-15dB



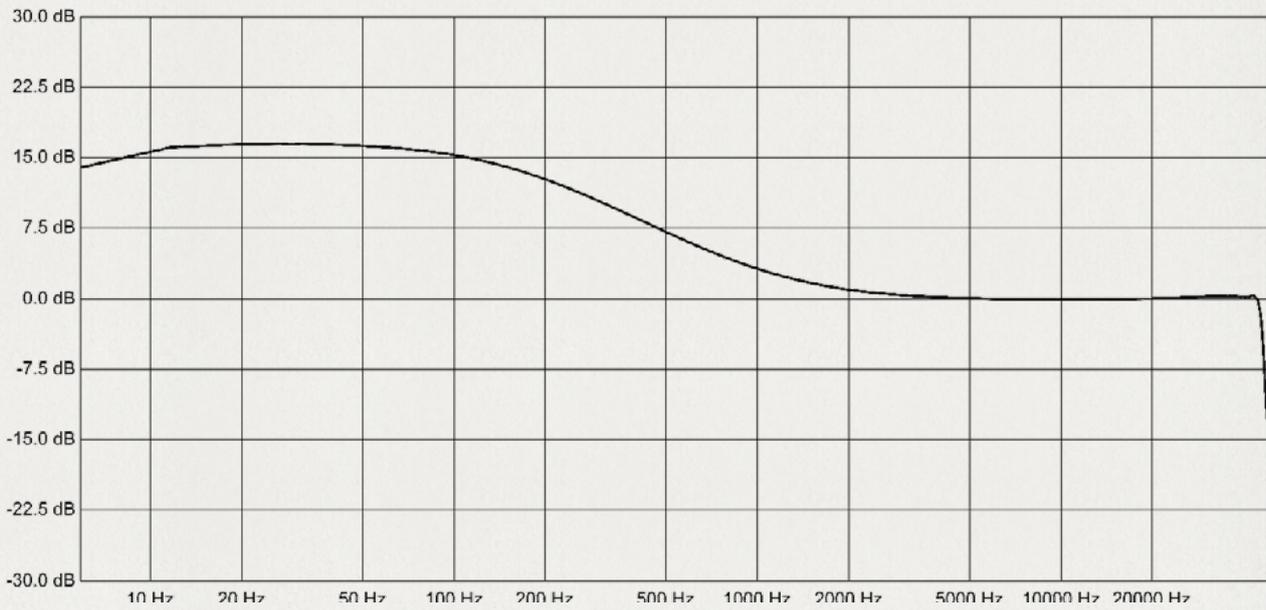
Low Shelf_60Hz_+15dB



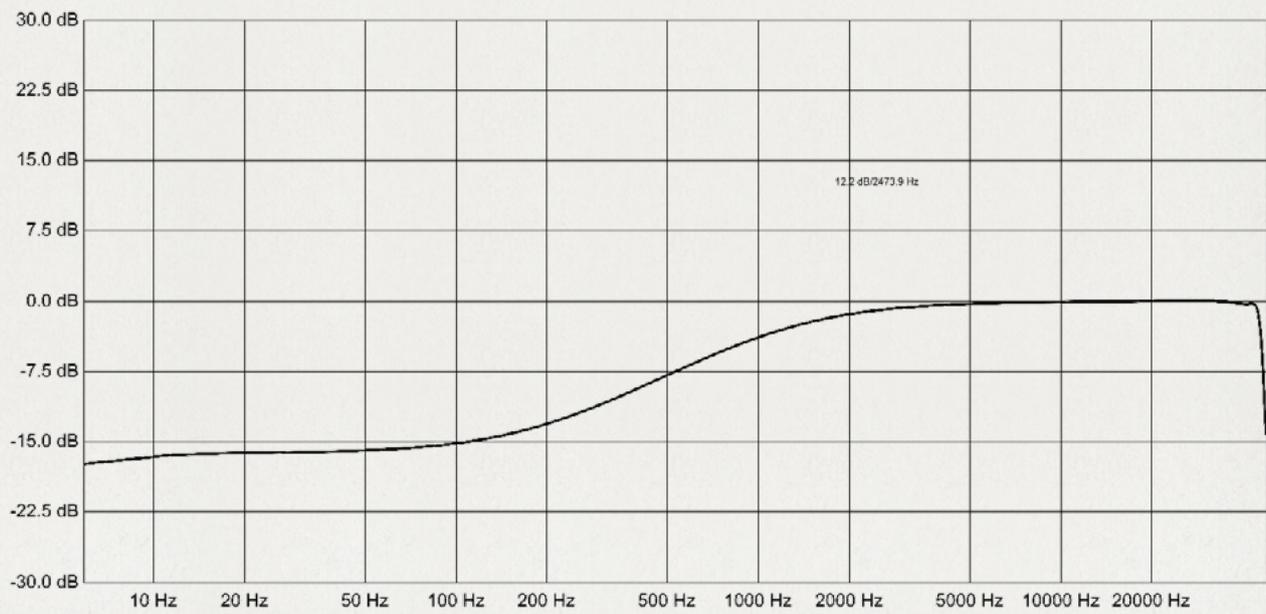
Low Shelf_60Hz_-15dB



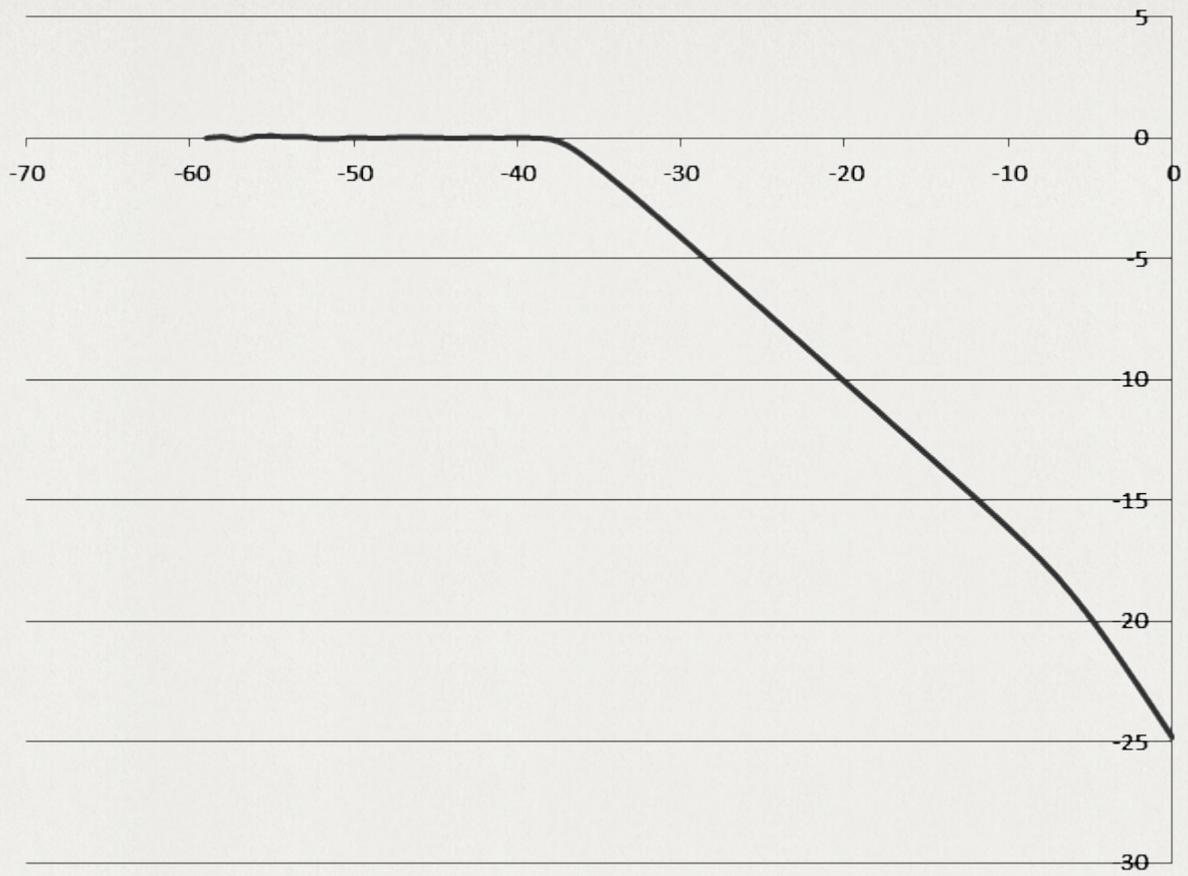
Low Shelf_120Hz_+15dB



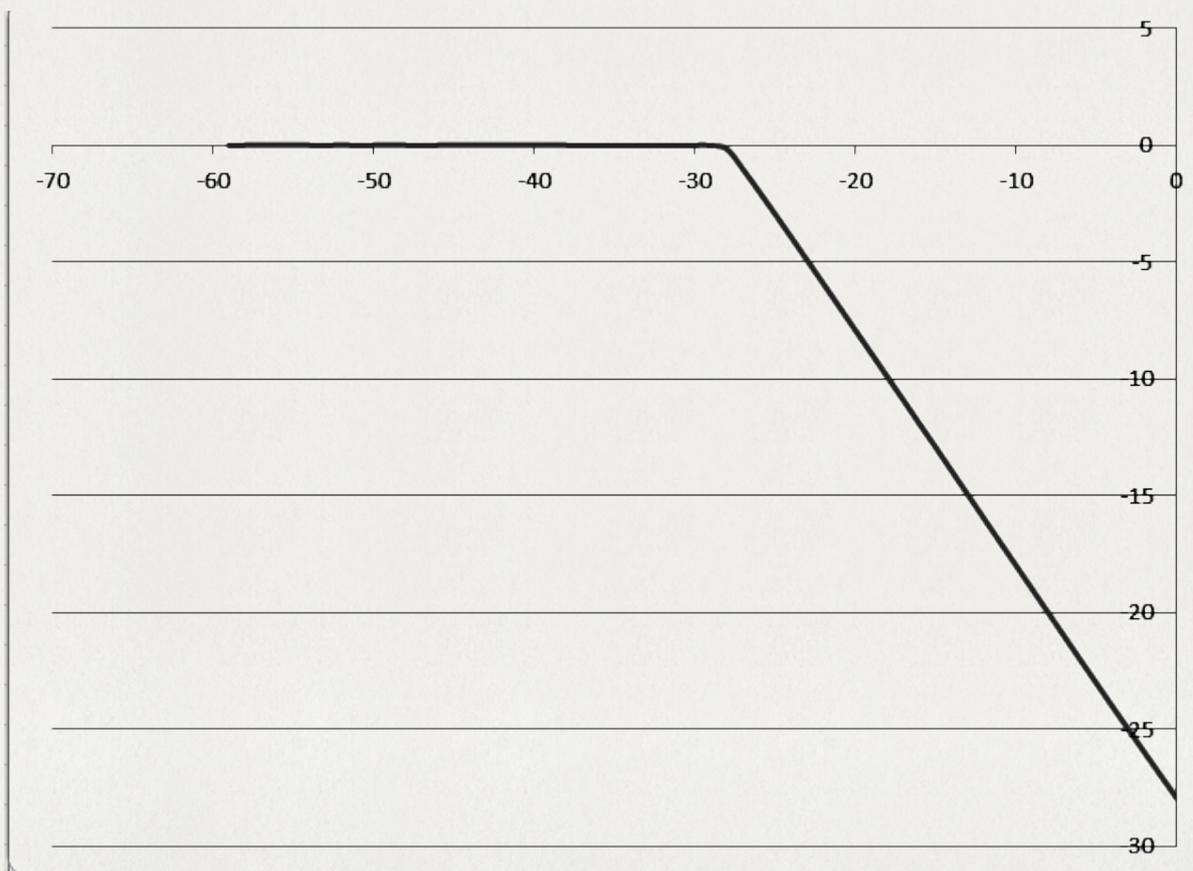
Low Shelf_120Hz_-15dB



Compressor

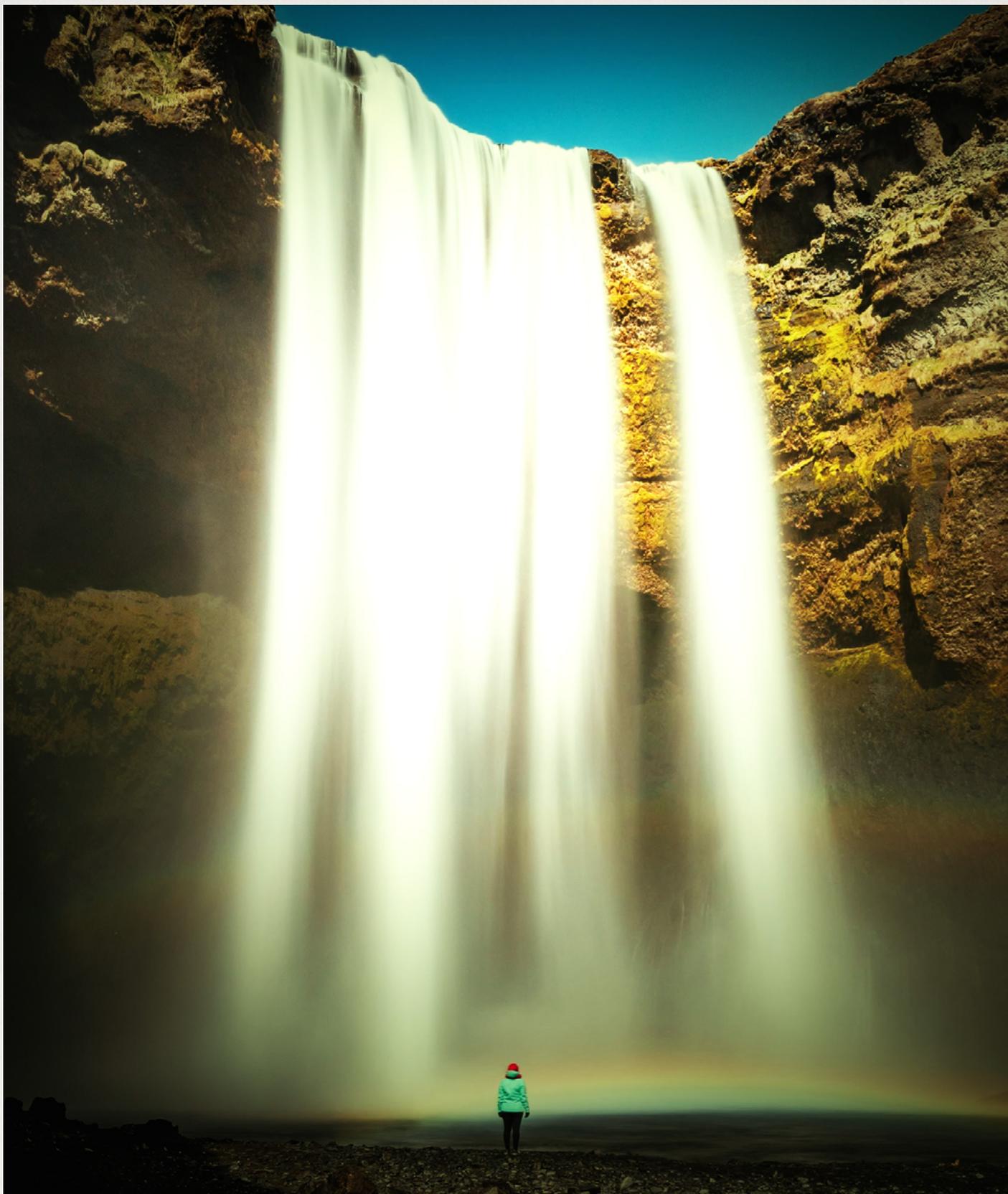


Limiter









THE EARTHLY PARADISE

At the summit of Mount Purgatory is the Earthly Paradise or Garden of Eden.[79] Allegorically, it represents the state of innocence that existed before Adam and Eve fell from grace.

“Deus venerunt gentes,” alternating
Now three, now four, melodious psalmody
The maidens in the midst of tears began;

And Beatrice, compassionate and sighing,
Listened to them with such a countenance,
That scarce more changed was Mary at the cross.

But when the other virgins place had given
For her to speak, uprisen to her feet
With colour as of fire, she made response:

“Modicum, et non videbitis me;
Et iterum,’ my sisters predilect,
‘Modicum, et vos videbitis me.’”

Then all the seven in front of her she placed;
And after her, by beckoning only, moved
Me and the lady and the sage who stayed.

So she moved onward; and I do not think
That her tenth step was placed upon the ground,
When with her eyes upon mine eyes she smote,

And with a tranquil aspect, “Come more quickly,”
To me she said, “that, if I speak with thee,
To listen to me thou mayst be well placed.”

As soon as I was with her as I should be,
She said to me: “Why, brother, dost thou not
Venture to question now, in coming with me?”

As unto those who are too reverential,
Speaking in presence of superiors,
Who drag no living utterance to their teeth,

It me befell, that without perfect sound
Began I: “My necessity, Madonna,
You know, and that which thereunto is good.”

And she to me: “Of fear and bashfulness
Henceforward I will have thee strip thyself,
So that thou speak no more as one who dreams.

Know that the vessel which the serpent broke
Was, and is not; but let him who is guilty
Think that God’s vengeance does not fear a sop.

Without an heir shall not for ever be
The Eagle that left his plumes upon the car,
Whence it became a monster, then a prey;

For verily I see, and hence narrate it,
The stars already near to bring the time,
From every hindrance safe, and every bar,

Within which a Five-hundred, Ten, and Five,
One sent from God, shall slay the thievish woman
And that same giant who is sinning with her.

And peradventure my dark utterance,
Like Themis and the Sphinx, may less persuade thee,
Since, in their mode, it clouds the intellect;

But soon the facts shall be the Naiades
Who shall this difficult enigma solve,
Without destruction of the flocks and harvests.

Note thou; and even as by me are uttered
These words, so teach them unto those who live
That life which is a running unto death;

And bear in mind, whene'er thou writest them,
Not to conceal what thou hast seen the plant,
That twice already has been pillaged here.

Whoever pillages or shatters it,
With blasphemy of deed offendeth God,
Who made it holy for his use alone.

For biting that, in pain and in desire
Five thousand years and more the first-born soul
Craved Him, who punished in himself the bite.

Thy genius slumbers, if it deem it not
For special reason so pre-eminent
In height, and so inverted in its summit.

And if thy vain imaginings had not been
Water of Elsa round about thy mind,
And Pyramus to the mulberry, their pleasure,

Thou by so many circumstances only
The justice of the interdict of God
Morally in the tree wouldst recognize.

But since I see thee in thine intellect
Converted into stone and stained with sin,
So that the light of my discourse doth daze thee,

I will too, if not written, at least painted,
Thou bear it back within thee, for the reason
That cinct with palm the pilgrim's staff is borne."

And I: "As by a signet is the wax
Which does not change the figure stamped upon it,
My brain is now imprinted by yourself.

But wherefore so beyond my power of sight
Soars your desirable discourse, that aye
The more I strive, so much the more I lose it?"

"That thou mayst recognize," she said, "the school
Which thou hast followed, and mayst see how far
Its doctrine follows after my discourse,

And mayst behold your path from the divine
Distant as far as separated is
From earth the heaven that highest hastens on."

Whence her I answered: "I do not remember
That ever I estranged myself from you,
Nor have I conscience of it that reproves me."

"And if thou art not able to remember,"
Smiling she answered, "recollect thee now
That thou this very day hast drunk of Lethe;

And if from smoke a fire may be inferred,
Such an oblivion clearly demonstrates
Some error in thy will elsewhere intent.

Truly from this time forward shall my words
Be naked, so far as it is befitting
To lay them open unto thy rude gaze."

And more coruscant and with slower steps
The sun was holding the meridian circle,
Which, with the point of view, shifts here and there

When halted (as he cometh to a halt,
Who goes before a squadron as its escort,
If something new he find upon his way)

The ladies seven at a dark shadow's edge,
Such as, beneath green leaves and branches black,
The Alp upon its frigid border wears.

In front of them the Tigris and Euphrates
Methought I saw forth issue from one fountain,
And slowly part, like friends, from one another.

"O light, O glory of the human race!
What stream is this which here unfolds itself
From out one source, and from itself withdraws?"

For such a prayer, 'twas said unto me, "Pray
Matilda that she tell thee;" and here answered,
As one does who doth free himself from blame,

The beautiful lady: "This and other things
Were told to him by me; and sure I am
The water of Lethe has not hid them from him."

And Beatrice: "Perhaps a greater care,
Which oftentimes our memory takes away,
Has made the vision of his mind obscure.

But Eunoe behold, that yonder rises;
Lead him to it, and, as thou art accustomed,
Revive again the half-dead virtue in him."

Like gentle soul, that maketh no excuse,
But makes its own will of another's will
As soon as by a sign it is disclosed,

Even so, when she had taken hold of me,
The beautiful lady moved, and unto Statius
Said, in her womanly manner, "Come with him."

If, Reader, I possessed a longer space
For writing it, I yet would sing in part
Of the sweet draught that ne'er would satiate me;

But inasmuch as full are all the leaves
Made ready for this second canticle,
The curb of art no farther lets me go.

From the most holy water I returned
Regenerate, in the manner of new trees
That are renewed with a new foliage,

Pure and disposed to mount unto the stars.

Purgatory is in essence the kingdom closest to the human experience of the common man that Dante aims to impersonate: compared to the atrocious sufferings of Hell and the elevation of the style and the subject matter of Paradise, this is the world in which the Poet, also a pilgrim himself in the process of purification, may feel closer to the experience lived by those he meets on the way... with that same degree of deep humanity displayed by Dante throughout his journey, we invite everyone to behold the purifying essence of WATER as something cleansing and ultimately transforming. It is no coincidence that water is a symbol of purity. It is the primordial element symbolizing candor and clarity...

Be prepared then for what awaits you next: the Glory of Paradise.

