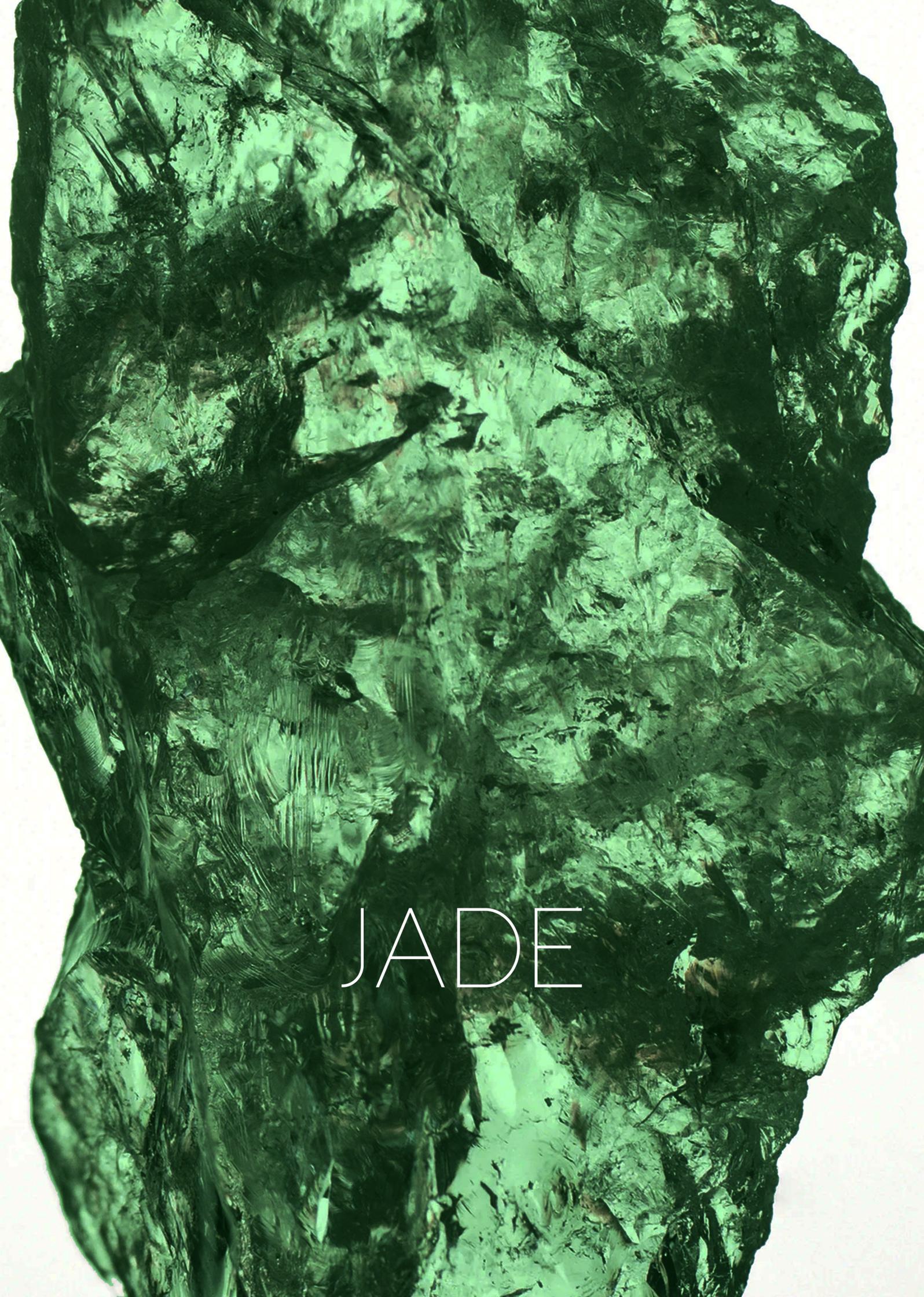




 JADE<sup>2</sup>



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JADE

# JADE

The name "jade" comes from the Spanish *pedra de ijada*, or "stone of the hips", given its traditional beneficial power on the loins and kidneys, and dates back to the time of the Spanish conquest of Central America, where this stone was much appreciated and finely worked. In ancient China it was a sacred stone used to make urns as it was believed to have the power to prevent corrosion and drive out evil spirits. Jade strengthens the liver, spleen and heart. It reactivates the circulation, purifies the blood and stimulates the immune system.

It has balancing properties for the entire body. It is beneficial for kidney activity and fights swelling in the legs and knees.

Jade has calming, and soothing properties for disturbed moods. It eliminates fear, consoles and invites benevolence. It helps the heart to find compassion to make the right decisions. It balances emotions and gives modesty and clarity of ideas. It opens the mind and pushes for renewal.



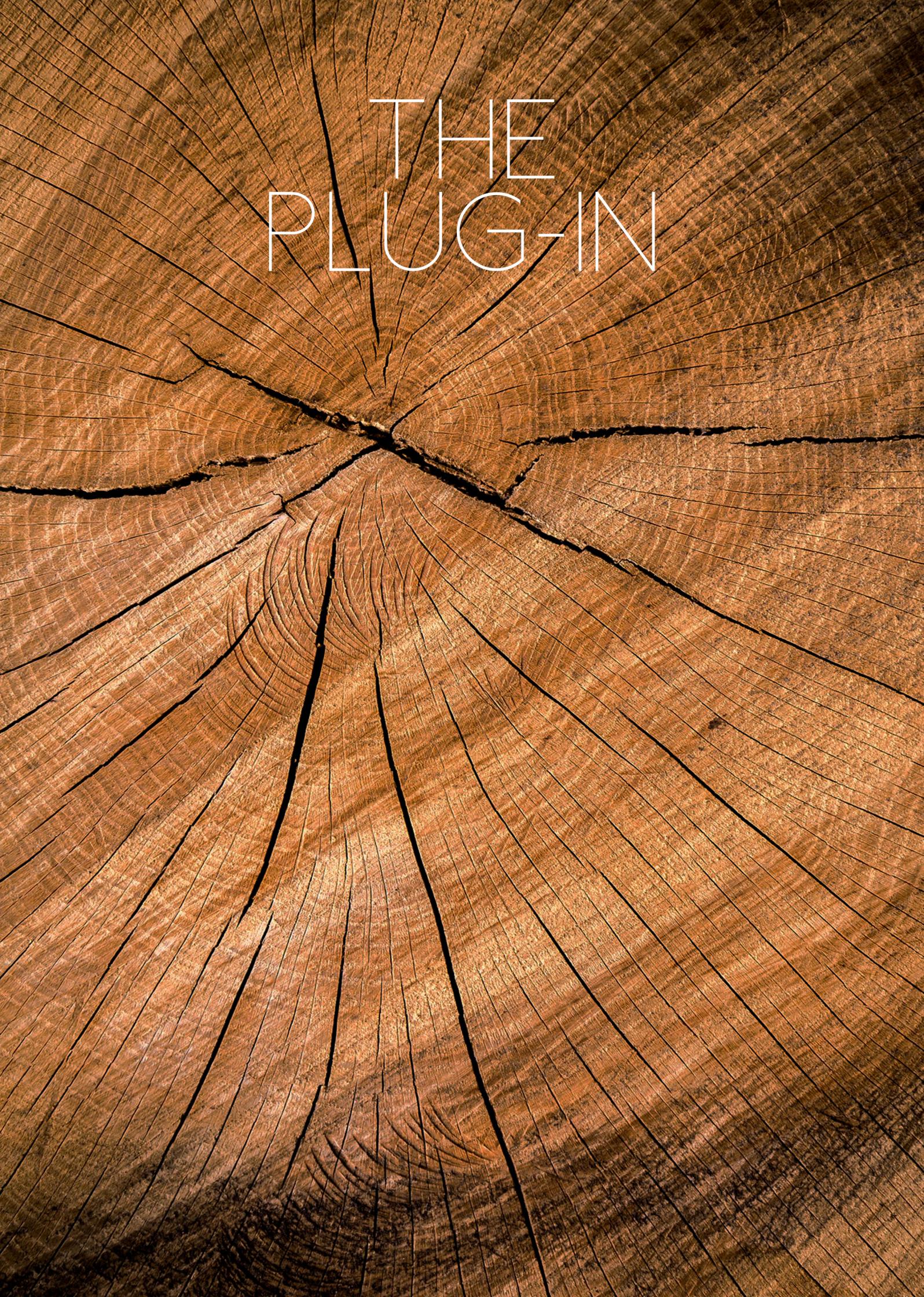
## 1. INTRODUCTION

Thank you for choosing Jade2! The latest entry into the Acustica plugin world. Please take the time to read this user manual carefully, to facilitate and ensure a proper understanding of this plugin.

### 1.1 OVERVIEW

Jade2 is one of the most versatile suites in the Acustica domain, capable of delivering a warm and smooth sound that retains a remarkable naturalness, while also providing absolute transparency and top-end presence. We truly believe it could become one of the most musical plugin suites ever made.





# THE PLUG-IN

# PINETREE

The pine tree, or Swiss stone pine (*Pinus cembra* L), is a tree widespread in the Alps and mountain areas of Central Europe where it can easily be found around 1800 and 2000 meters. In addition to being used to build beds, chests, and tall objects, pine wood is also used for its beneficial properties, as it is soaked in essential oils and balsamic resins.

The pine wood, or Swiss stone pine, contains an essential oil and balsamic resins that give it beneficial properties for health. Like many essential oils, the one extracted from pine wood has an antibacterial action and its use can be useful to purify domestic environments if spread in the rooms of the house. The antibacterial properties, together with the expectorant and relaxing one, make the essential oil of Swiss stone pine an excellent ally in the case of coughs, colds and respiratory disorders. To soothe flu symptoms it is enough to use just a few drops of the essential oil of pine wood to make suffumigias, or to dilute in a spoonful of vegetable oil that will then be used for chest and back massages. Massages with pine tree essential oil are also useful in case you find it difficult to sleep and relax, or to treat tension and muscle cramps. To improve sleep you can also pour a couple of drops of pine tree essential oil on the pillow: this essence seems to be able to slow down the heart rate, calming anxiety and agitation.



## 2. JADE2

### 2.1 ABOUT THE PLUG-IN

The Jade2 suite features 6 different hardware units merged into: 3 different eqs (A - B - C), two dynamics processors (Discrete Class-A Compressor (D)/ Peak Limiter (E) ) and last but not least a complete preamplifier section that now includes 20 preamp emulations divided into six banks/categories: LINE, MIC, FAT, TAPE, BUS, CUST with High-pass and Low-pass Filters. In the next chapters we will go into further details.

### 2.2 PACKAGE CONTENT

The Jade2 suite consists of:

- Jade2 Channel-strip (two switchable 4-Band Equalizers with High-pass and Low-pass Filters, a Class-A Compressor/Limiter, five Preamp emulations and a routing section).
- Jade2 EQ (two switchable 4-Band Equalizers with High-pass and Low-pass Filters and five Preamp emulations).
- Jade2 Preamp (a completely new preamp standalone plugin that includes all of the preamps for a total of 20 emulations divided into six banks/categories: LINE, MIC, FAT, TAPE, BUS, CUST with high-pass and low-pass filters different from those found in Jade2 Channel-strip and Jade2 EQ).

For each plugin included in our Jade2 suite, there is a "Standard" version or an alternative "ZL\*" version that operates at \*zero latency at the cost of extra processing resources and is thus suitable for use when tracking. For details refer to Chapter 2.7

For the first time, in the Jade2 suite, we included an alternative version of the channel strip called Jade2 'AL'. 'Adaptive Latency' technology can reduce plugin latency and resource consumption depending on the number of sections used.

EXAMPLE: If you only use the Jade2 channel-strip equalization module, bypassing the compressor section, you will experience a lower latency. Thanks to this NEW plugin approach, you will be able to optimize the use of your resources without sacrificing the distinctive quality of Acustica products.



Jade2 EQ plug-in



Jade2 channel-strip plug-in

### 2.3 ABOUT THE COMPANY

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

Since the birth of Nebula in the summer of 2005, there has been an active collaboration between forward thinking developers, beta testers, audio engineers and equipment samplers from around the world. The research and development has progressed through many stages and employs many innovative processes and technologies as 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 & analog).

Acustica... Audio Renaissance

### 2.4 DOWNLOAD AND AUTHORIZATION

Jade2, and all Acustica Audio products, can be downloaded, installed, and authorized using the Aquarius desktop application, our dedicated free app for macOS and Windows.

When you purchase a product on the Acustica store, the registration is automatic. For more information, please visit our website.

Please note: make sure Aquarius is always updated to the latest version. If you experience any issues during the authorization of your products, uninstall the plugin(s) and then re-install them using the latest version of Aquarius.

All technical specifications of Acustica Audio products provided are intended to be estimates or approximations. Due to numerous variables, no guarantees of compatibility or performance can be made. The end-user is solely responsible for, prior to purchase, ensuring that the end-user's devices are compatible and meet the system requirements for Acustica Audio products.

	PC Windows		Apple macOS	
	MINIMUM	RECOMMENDED	MINIMUM	RECOMMENDED
<b>OPERATING SYSTEM</b>	Windows 10 1909 64 bits <sup>(1) (9)</sup>	Windows 21H1 10 64 bits <sup>(1) (9)</sup>	macOS 10.14 <sup>(1) (9)</sup>	macOS 10.15 <sup>(1) (9)</sup>
<b>CPU</b>	Intel i5 4 <sup>th</sup> generation <sup>(2) (8)</sup>	Intel i9 10 <sup>th</sup> generation <sup>(2) (8)</sup>	Intel i5 4 <sup>th</sup> generation <sup>(2) (8)</sup>	Intel i9 10 <sup>th</sup> generation <sup>(2) (8)</sup>
<b>RAM</b>	4 GB of RAM <sup>(3)</sup>	64 GB of RAM <sup>(3)</sup>	4 GB of RAM <sup>(3)</sup>	64 GB of RAM <sup>(3)</sup>
<b>SSD</b>	It depends on the product <sup>(4)</sup>	It depends on the product <sup>(4)</sup>	It depends on the product <sup>(4)</sup>	It depends on the product <sup>(4)</sup>
<b>SCREEN RESOLUTION</b>	FHD (1920x1080)	UHD (3840x2160)	FHD (1920x1080)	UHD (3840x2160)
<b>PLUG-IN FORMAT</b>	VST & AAX	VST & AAX	VST, AAX & AU	VST, AAX & AU
<b>PLUG-IN ARCHITECTURE</b>	64-bits		64-bits	
<b>TRIAL / DEMO</b>	30 Days <sup>(5)</sup>		30 Days <sup>(5)</sup>	
<b>SUPPORTED DAW / NLE</b>	Cubase 64-bits & Pro Tools 64-bits <sup>(6)</sup>		Cubase 64-bits & Pro Tools 64-bits & Logic Pro X 64-bits <sup>(6)</sup>	
<b>AQUARIUS APPLICATION</b>	YES & Mandatory		YES & Mandatory	
<b>INTERNET CONNECTION</b>	YES & Mandatory <sup>(7)</sup>		YES & Mandatory <sup>(7)</sup>	

- (1) Case sensitive file systems are not supported.
- (2) Intel i7/i9 X and Xeon processors need CORE 16 or superior. The CPU speed is more important than the number of CPU cores.
- (3) In order to run more plug-ins instances it is always necessary to increase the amount of RAM.
- (4) Each format needs three times more space than what the product is in order to download and decompress the installation files.
- (5) Trial settings cannot be transferred from the trial to the commercial version.
- (6) For others DAWs or NLEs, try trial before buy
- (7) TCP/UDP ports 8080 and 443 should be open. Reliable and fast internet connection is recommended
- (8) For Apple Silicon (ARM) computers, check compatibility before purchasing. AMD processors are not officially supported.
- (9) For other operating systems, check compatibility before purchasing using the trial version.

**IMPORTANT:** Genuine Apple device with a valid serial number or valid volume ID on Windows operating systems is mandatory.  
**IMPORTANT:** It is highly recommended to make a complete backup before making changes to your computer systems.  
**IMPORTANT:** Acustica Audio cannot be held responsible for any loss or damage arising directly or indirectly from any error or omission in this manual.

## 2.5 SYSTEM REQUIREMENTS

Acustica Audio has been working in high-quality analog hardware device software modeling for over fourteen years now. The audio rendering engine, Acqua, embodies state of the art, sample-based technology, and has set a new quality standard in the professional audio plug-in market.

Acustica Audio, in a bold move, even for a cutting-edge company like us, have created something great and we are now bringing it to you in the form of this groundbreaking and incredible sounding Acqua plug-in. Of the current software plug-ins available on the market, none come close to the sound of the Jade2 suite. This plug-ins bundle is based on our new CORE 17 technology.

Modern computers are powerful enough to run many plugins at once. However, our technology requires more resources than algorithm-based software. Please, consider optimizing your system to work with high CPU loads and low audio latency.

## 2.6 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.

NOTE: Please keep in mind that for each plug-in in the Desert suite we recommend that you calibrate your input levels to: -18dBFS = 0dBu. We suggest that you do not overload the input. This way you will avoid any unwanted distortion or unpredictable behavior due to excessive input levels.



OPERATION

# HEAT THERAPY

Thermal therapy refers to the use of heat as a therapeutic tool for the treatment of diseases, such as cancer. Heat has been used as a therapeutic tool since ancient times. Heat treatment is also used to increase the effectiveness of other cancer therapies. A person's tolerance limits the temperatures that can be used in treatments, with heated blood, of the whole body or regions.

When higher temperatures above about 50°C are applied, the treatment is called thermotherapy.

Thermotherapy facilitates rapid tissue destruction.

At these temperatures, there is no difference in heat sensitivity between healthy tissue and neoplastic tissue. For this reason, thermotherapy must be applied, carefully, in the right position because, when the tissue is heated, it necrotizes.



### 3. OPERATION

With Jade2 you will have at your disposal a Filter section (Highpass - Lowpass), three equalizers (A - B - C), two dynamic processors, (D=compressor - E=limiter) and five Preamps (A - B - C1 - C2 - D) all assembled as a Channel-strip.

NOTE: The Jade2 suite includes the Jade2 Eq which consists of all the modules mentioned above except the Jade2 dynamic processors module, also in the Jade2 Eq you can use the 'SPREAD' control not available in the Channel-Strip version.

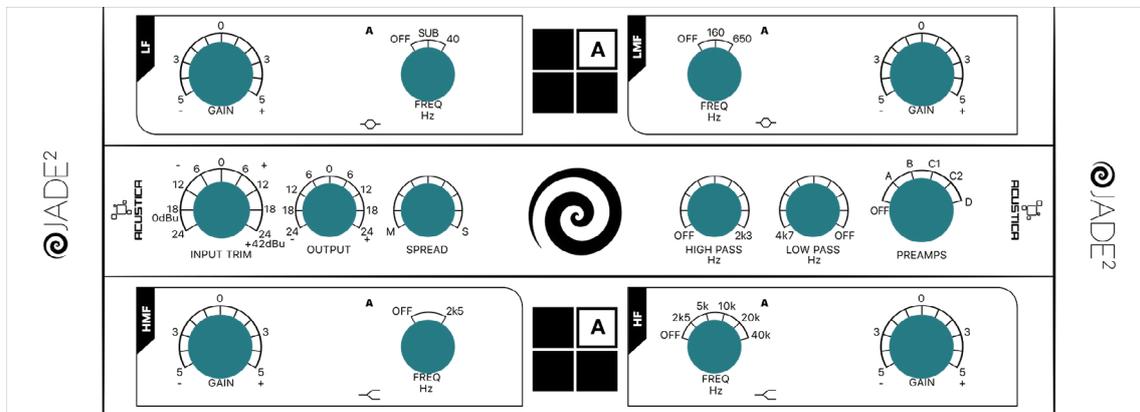
Below we will immerse ourselves into the explanation of the controls included in this new powerful plugin suite. We will get into the details of each individual plugin section of the Jade2 Channel-strip to facilitate the understanding of each of the controls included in this new Acqua Effect Plugin bundle.

NOTE: Controls that are not part of the modules included in the Jade2 Channel-strip will be specified and explained at the bottom of each Sub-chapter of Chapter 3.



Jade2 channel-strip EQ section

#### 3.1 EQUALIZER SECTION



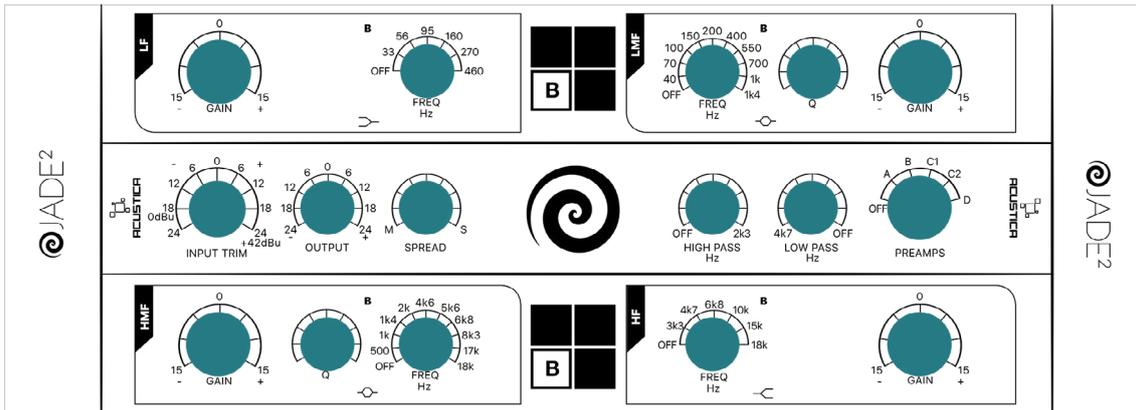
Jade2 EQ - A mode

- **Model A** is derived from an American unit famous for being able to maintain the integrity of your mix's original sound and likewise be able to act on the so-called "Air" frequencies enhancing them considerably. It turns out to be one of the most used machines on the market today, able to guarantee absolute transparency and top end presence.

The potentialities of this equalizer are many and we think it can be an excellent choice for both mixing and mastering purposes.

In other words, it is one of the most versatile equalizers ever emulated by Acustica, meticulously sampled taking into account the intrinsic peculiarities of the original machine, first and foremost the interaction of the bands.

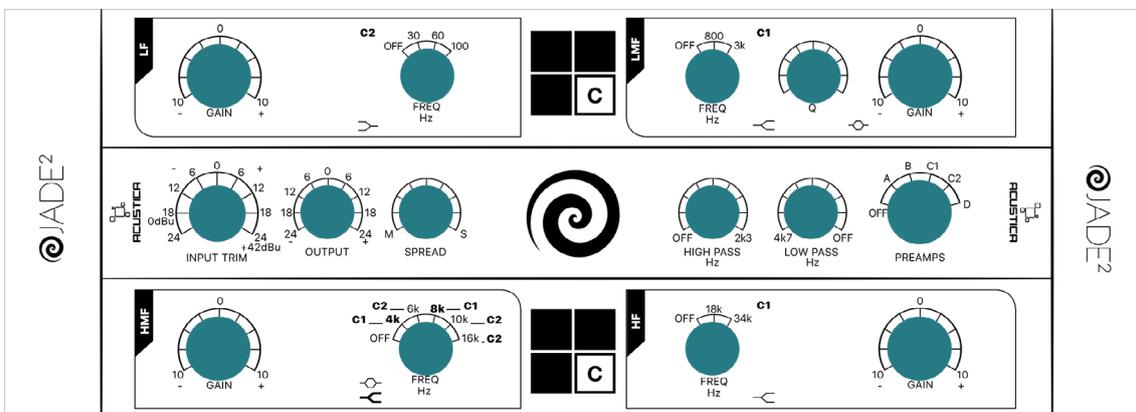
PLUS: The original unit is characterized by a HIGH band gain excursion of a maximum +10 dB gain for each frequency, our emulation includes the corresponding negative part for each frequency (-10 dB gain).



Jade2 EQ - B mode

- **Model B** is based on a powerful unit part of an iconic British series of gear introduced in 1994. Famous for their natural, unobtrusive sound they have earned an 'iconic' status in the pro audio world and are coveted by producers and engineers for their exceptional clarity and versatility. This 'flaming' collection of units remains among the most successful and recognizable hardware series of this British company, still present in professional recording studios the world over..

Our emulation embodies the essence and the sound of the EQ of this renowned U.K. series and represents one of the best emulations, capable of tonally sculpting your tracks from top to bottom with an unrivaled transparency and top end presence. Finally you can take advantage of this famous series, distinguished by its subjectively warm and smooth sound, conveniently from within your Digital Audio Workstation. Now, you can use this beauty, easily and flexibly, in your own mixes.



Jade2 EQ - C mode

- **Model C** is a 'hybrid' Equalizer that merges 2 different Equalizers (labelled C1 - C2) on the market into a single emulation. In a logical way Acustica has combined several frequencies in 4 bands to create a perfect 'breathy' EQ that will bring your tracks to life. The result is a state-of-the-art EQ capable of adding musical presence to different sources: vocals, acoustic guitars, drums, especially on the overheads. It's the perfect secret weapon for the master bus and also for mixing duties.

Just one recommendation, use it sparingly because it is addictive! PLUS: The original units from which the C emulation are derived are characterized by either positive or negative GAIN excursion (but not both) depending on the band, its frequency and the selected model. To remedy this absence we have introduced and improved our emulated version by creating the corresponding negative or positive missing part for each frequency.

### 3.1.1 CONTROLS

#### A-B-C BUTTONS

Each A-B-C (mutually exclusive) button enables pairs of two bands on the Jade2 Channel-strip and standalone version (LF and LMF - HF and HFM).

In the Jade2 EQ the Buttons A/B/C at the TOP of the plugin GUI enable both the LOW FREQUENCY BAND and simultaneously the LOW MID FREQUENCY BAND.

The buttons A/B/C in the LOWER part of the plugin GUI enable both the HIGH FREQUENCY BAND and simultaneously the HIGH MID FREQUENCY BAND.

The EQ models don't show the same controls (Frequency - Gain - Q) but they change according to the selected models.

#### POWER BUTTON

This button deactivates (bypass) the relevant EQ bands (LF & LMF - HF & HMF).

#### CUT FILTERS

The Jade2 suite includes two different FIXED cut filters: They are derived from the same unit that we sampled for EQ model B. They can be activated or deactivated or disabled independently of each other.

- Low Pass Filter Frequency range (Hz): 20k5 to 4k7, Off (the first knob step bypasses the LP filter).

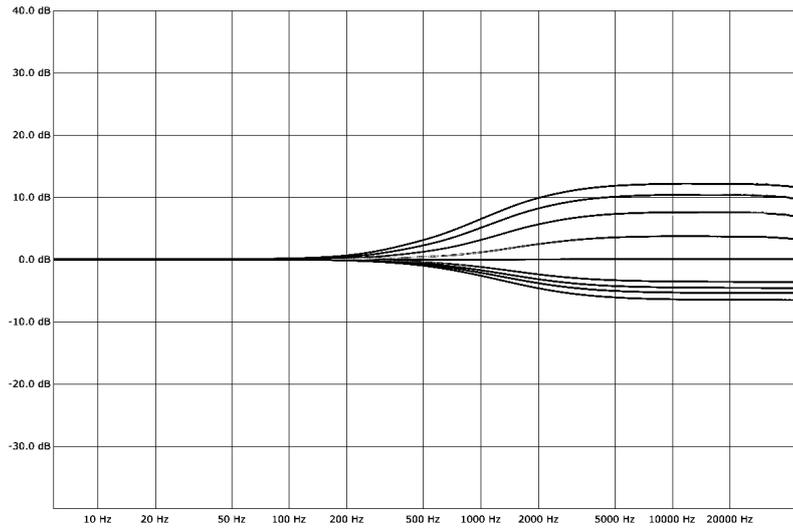
- High Pass Filter Frequency range (Hz): 80 to 2k4, Off (the first knob step bypasses the HP filter).

#### SPREAD

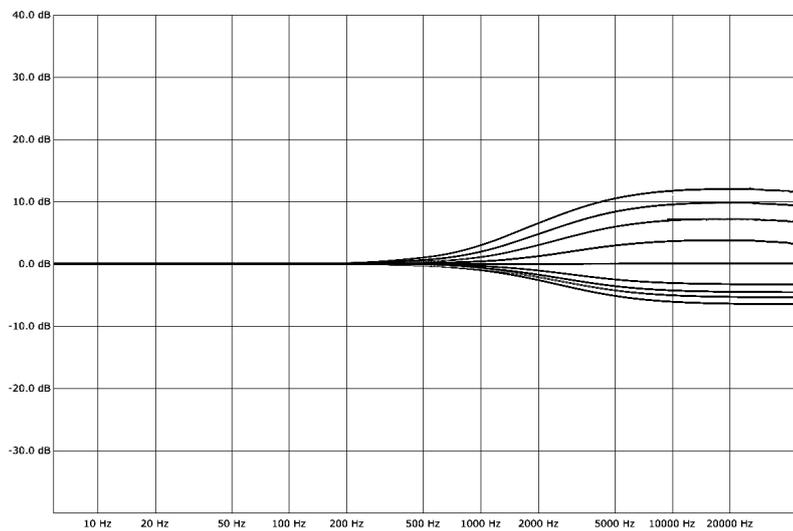
This knob is only included in the Jade2 Eq (standalone version) and it determines the balance between the full MID (M) and full SIDE (S) signal of the plugin.

MODEL A	MODEL B	MODEL C
<p><b>FREQUENCY CONTROL</b></p> <p>Available values are:  <b>Low Band (LF):</b> 10 (SUB), 40, 100 Hz.  <b>Low-Mid Band (LMF):</b> 160, 650 Hz.  <b>High-Mid Band (HMF):</b> 2.5 kHz.  <b>High Band (HF):</b> 2.5, 5, 10, 20, 40 kHz.</p>	<p><b>FREQUENCY CONTROL</b></p> <p>Available values are:  <b>Low Band (LF):</b> 33, 56, 95, 160, 270, 460 Hz.  <b>Low-Mid Band (LMF):</b> 40, 70, 100, 150, 200, 400, 550, 700, 1k, 1k4 Hz.  <b>High-Mid Band (HMF):</b> 500, 1k, 1k4, 2k, 4k6, 5k6, 6k8, 8k3, 17k, 18k Hz.  <b>High Band (HF):</b> 3.3, 4.7, 6.8, 10, 15 kHz.</p>	<p><b>FREQUENCY CONTROL</b></p> <p>Available values are:  <b>Low Band (LF):</b> 30, 60, 100, Hz. 3k Hz.  <b>High-Mid Band (HMF):</b> 4k, 6k, 8k, 10k 16k Hz.  <b>High Band (HF):</b> 18k, 34k Hz.</p>
<p><b>GAIN CONTROL</b></p> <p>Gain control boosts or attenuates the chosen frequency band.            It ranges from approx -5 dB to +5 dB.</p>	<p><b>GAIN CONTROL</b></p> <p>Gain control boosts or attenuates the chosen frequency band.            It ranges from approx -15 dB to +15 dB.</p>	<p><b>GAIN CONTROL</b></p> <p>Gain control boosts or attenuates the chosen frequency band.            It ranges from approx -10 dB to +10 dB.</p>
<p><b>Q CONTROL</b></p> <p>This control is <b>NOT</b> present in this EQ model. The bandwidth is fixed and depends on the selected band.            There are four bands, the first two of which have BELL responses (Peaking) and a fixed centre freq of: 10 Hz ( SUB), 40 Hz, 160Hz, 650 Hz with WIDE overlapping bandwidths of three octaves (Q fixed at 0.4). The last two bands are a HMF SHELF and a HF SHELF.</p>	<p><b>Q CONTROL</b></p> <p>The Q button modifies the bandwidth of the Low-Mid (LMF) and High-Mid (HMF) frequency bands (Peaking).            It toggles between WIDE and NARROW.            Low (LF) and High (HF) band offer a Shelving response.</p>	<p><b>Q CONTROL</b></p> <p><b>Low Band (LF):</b> offers a shelving response, it doesn't offer a Q control.  <b>Low-Mid Band (LMF):</b> doesn't offer a Q (WIDE/NARROW) control but rather a SHELF/ PEAK control that toggles between Shelf (off) to Bell (on) and vice versa.  <b>High Mid Band (HMF):</b> doesn't offer a Q control. The frequencies labeled on the plugin GUI as C1 are shelving filters, frequencies labeled as C2 are peaking filters.  <b>High Band (HF):</b> offers a shelving response, it doesn't offer a Q control.</p>

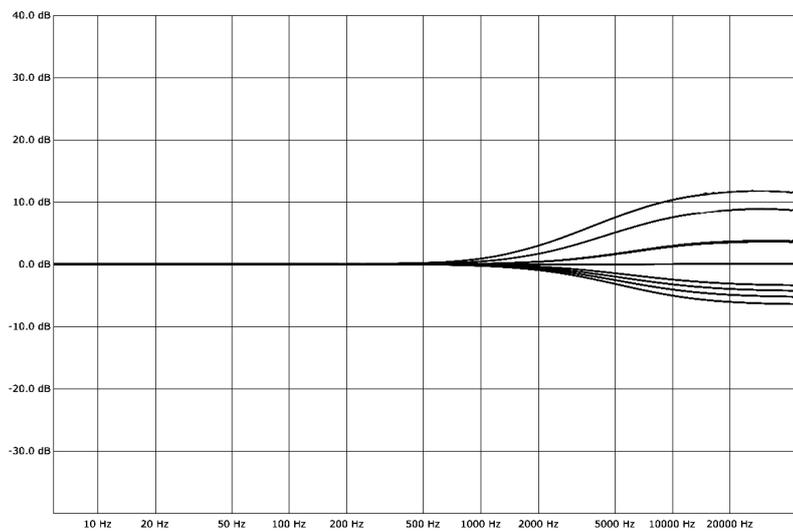
# A MODE EQUALIZER GRAPHS



A mode - HF band - 2500 Hz

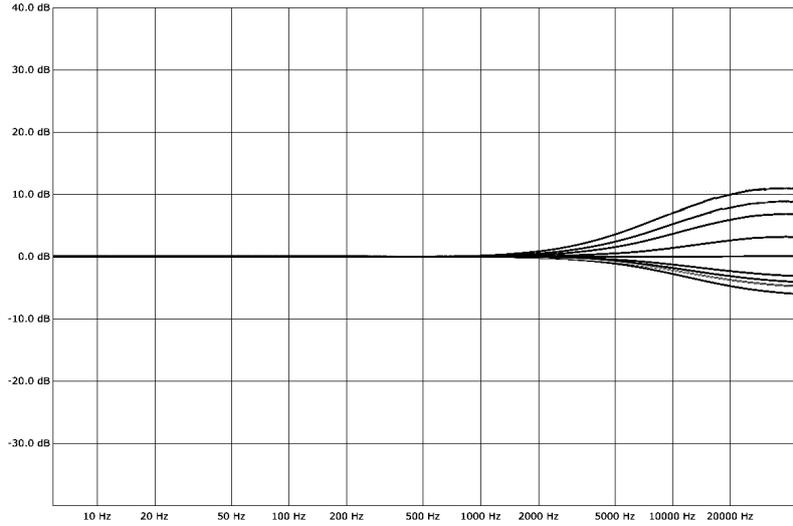


A mode - HF band - 5000 Hz

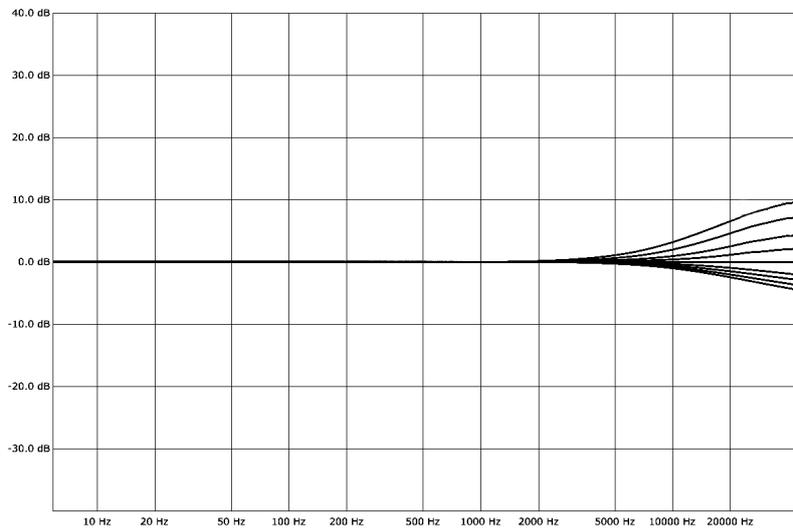


A mode - HF band - 10000 Hz

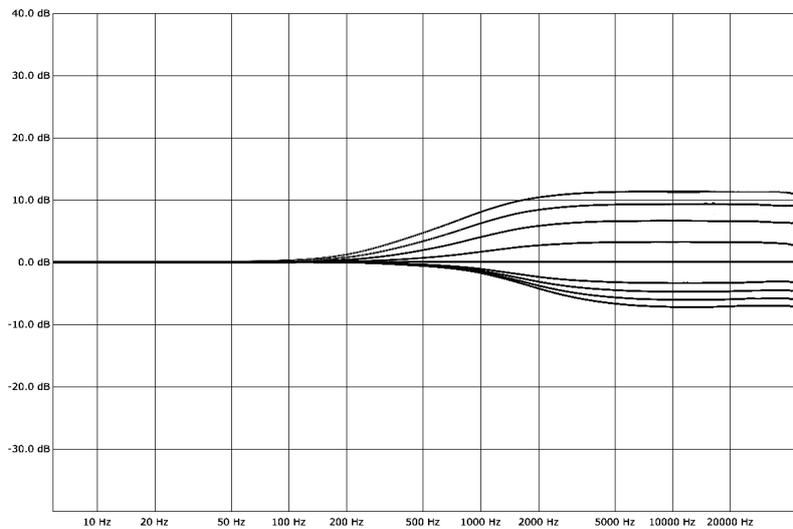
# A MODE EQUALIZER GRAPHS



A mode - HF band - 20000 Hz

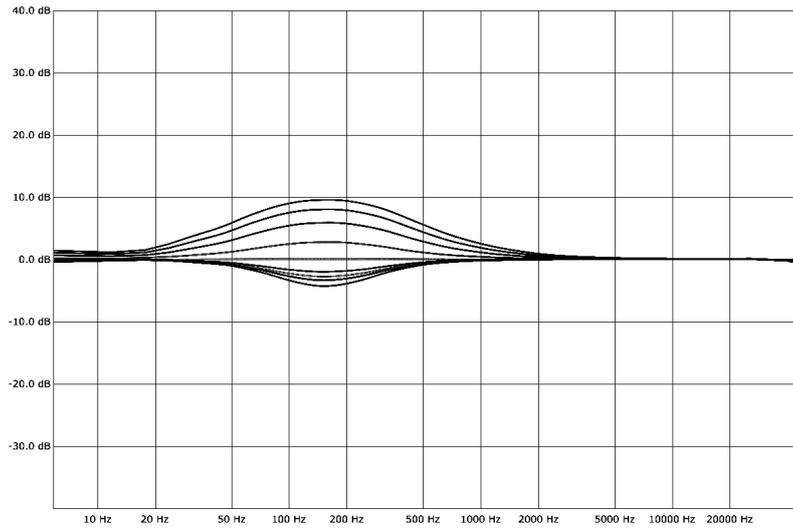


A mode - HF band - 40000 Hz

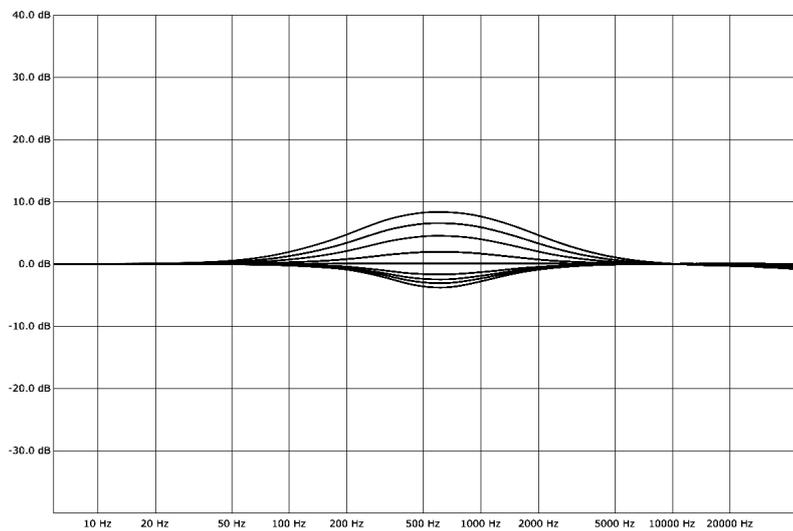


A mode - HMF band - 2500 Hz

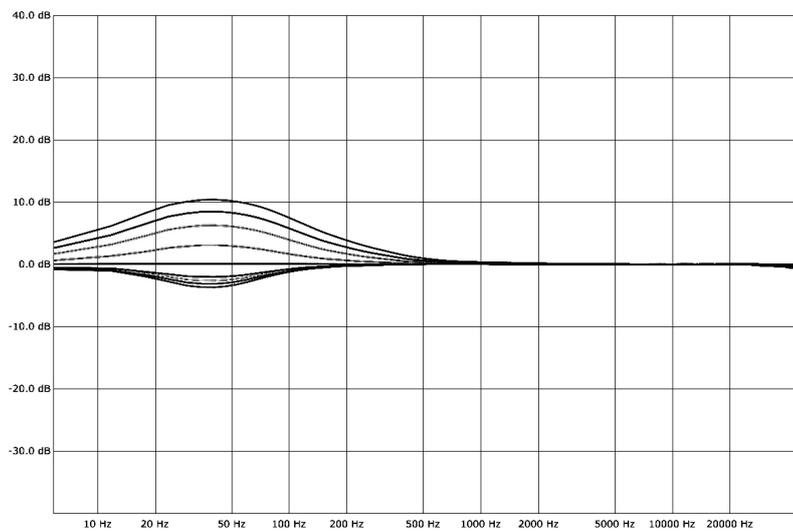
# A MODE EQUALIZER GRAPHS



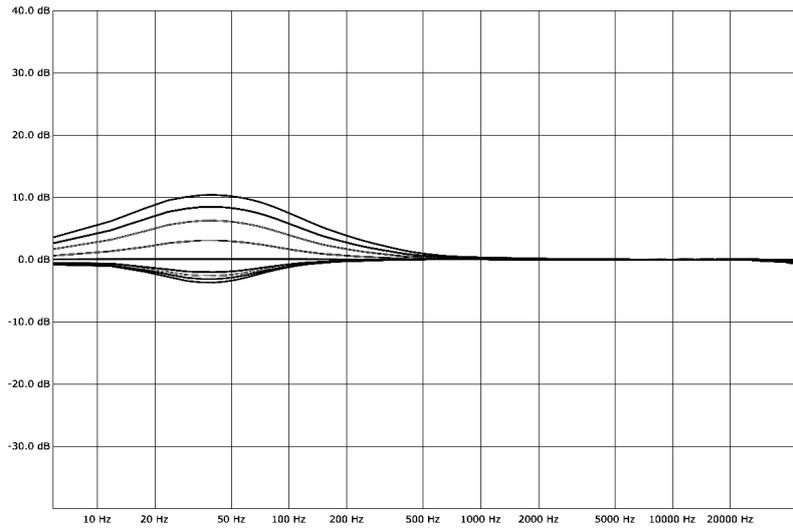
A mode - LMF band - 160 Hz



A mode - LMF band - 650 Hz



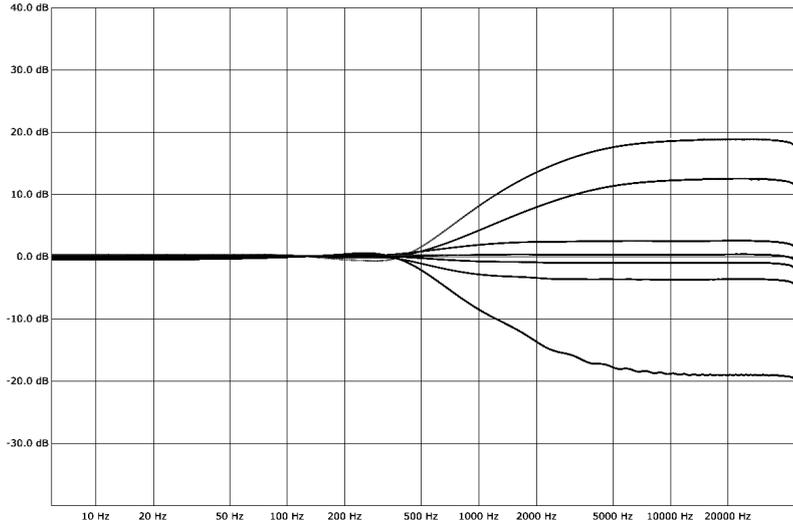
A mode - LF band - 40 Hz



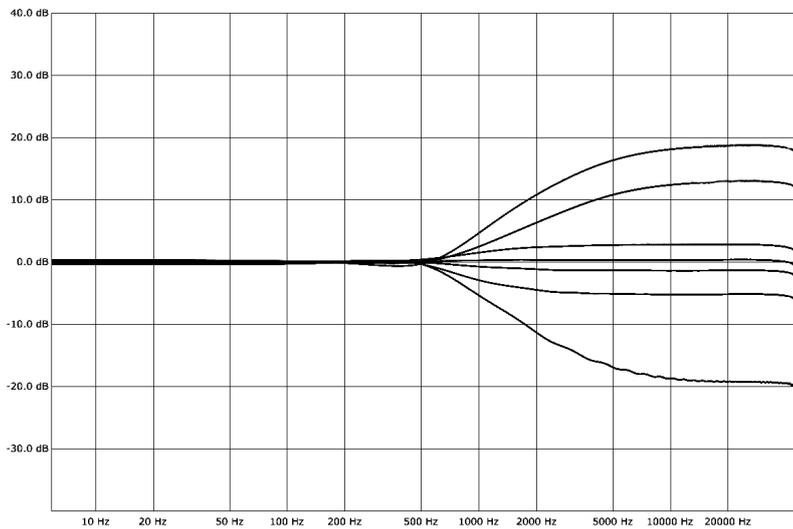
A mode - LF band - SUB (10 Hz)



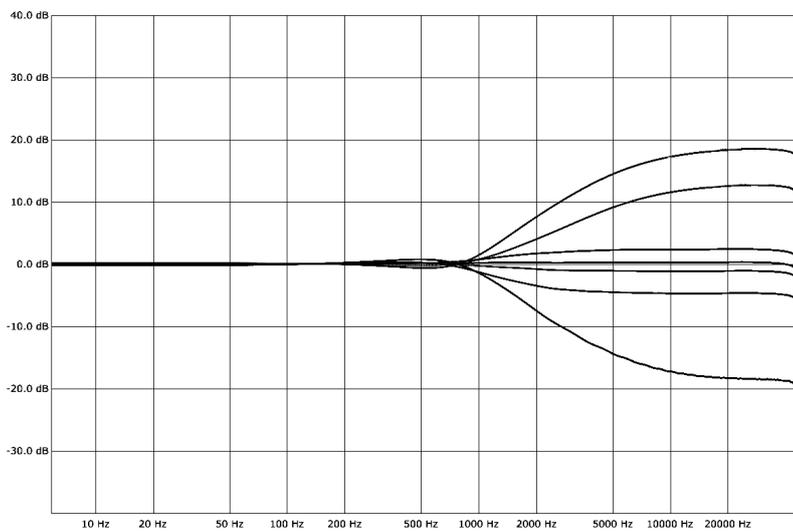
# B MODE EQUALIZER GRAPHS



B mode - HF band - 3300 Hz

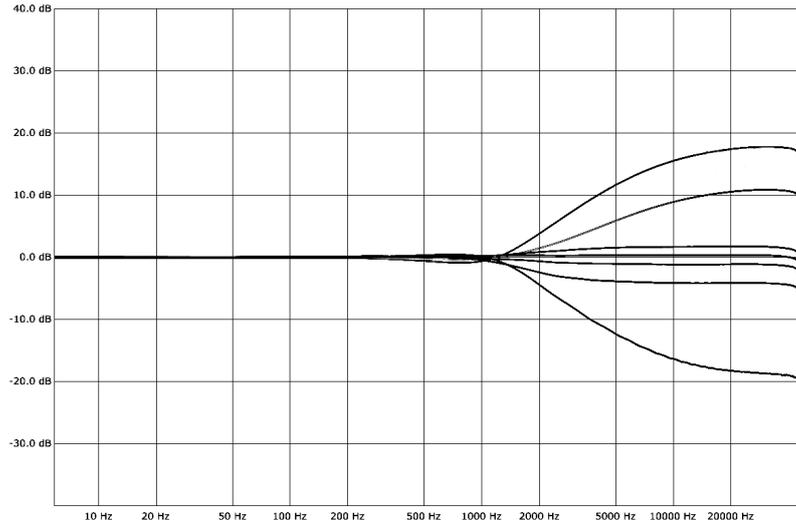


B mode - HF band - 4700 Hz

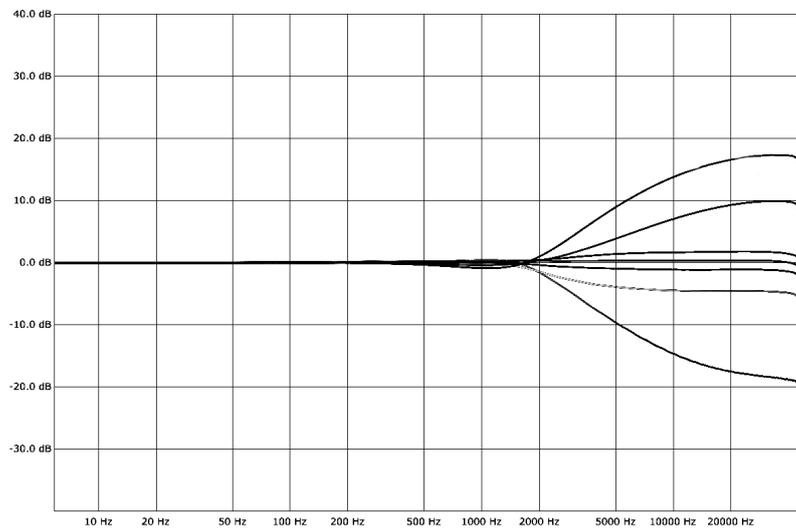


B mode - HF band - 6800 Hz

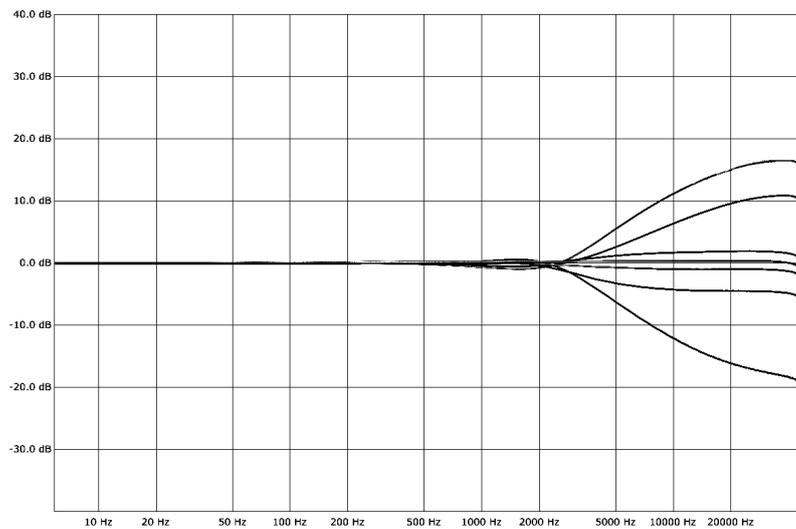
# B MODE EQUALIZER GRAPHS



B mode - HF band - 10000 Hz

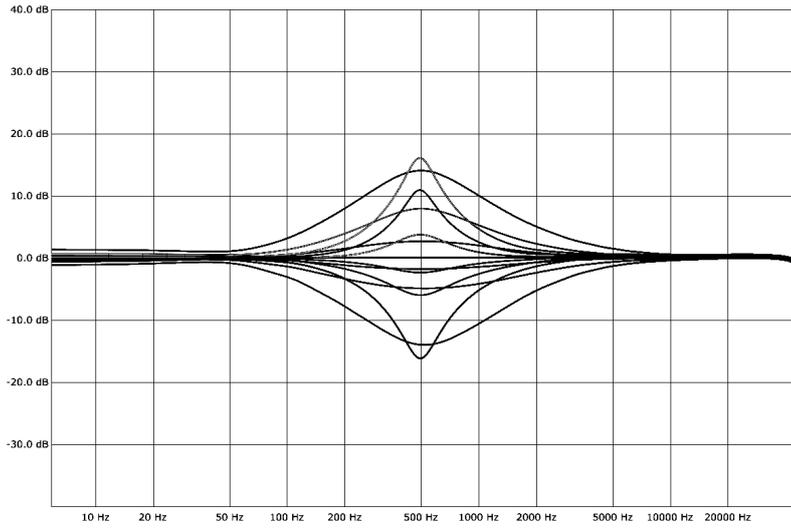


B mode - HF band - 15000 Hz

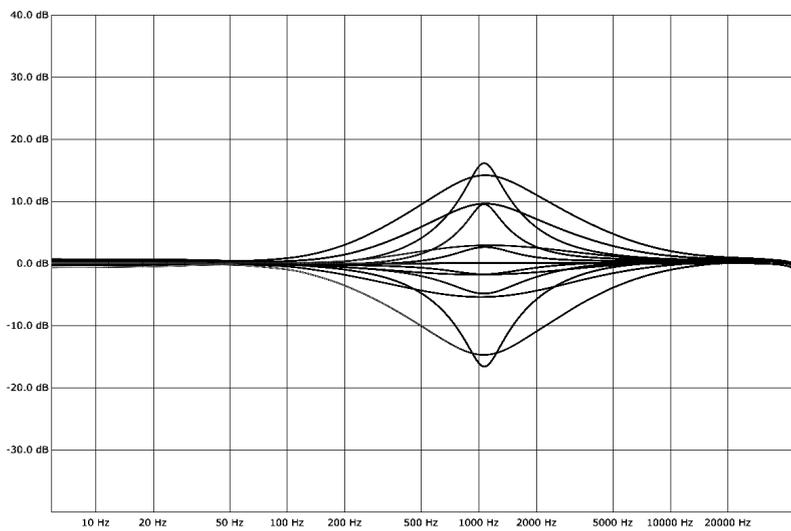


B mode - HF band - 18000 Hz

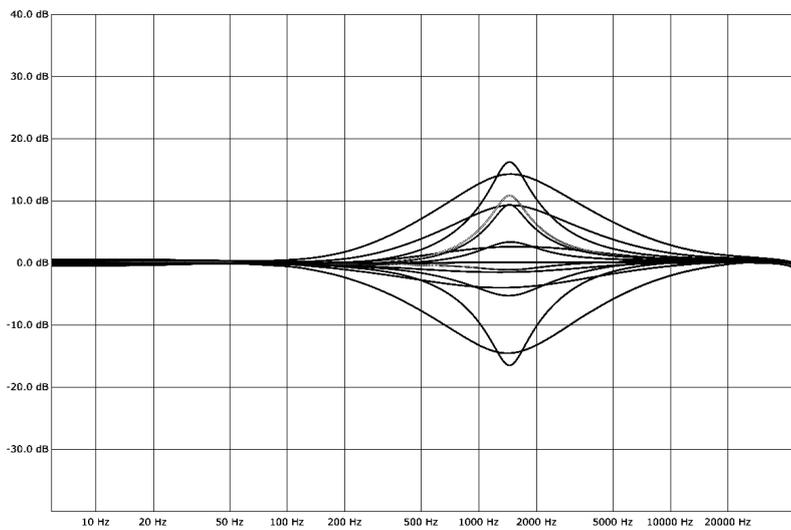
# B MODE EQUALIZER GRAPHS



B mode - HMF band - 500 Hz

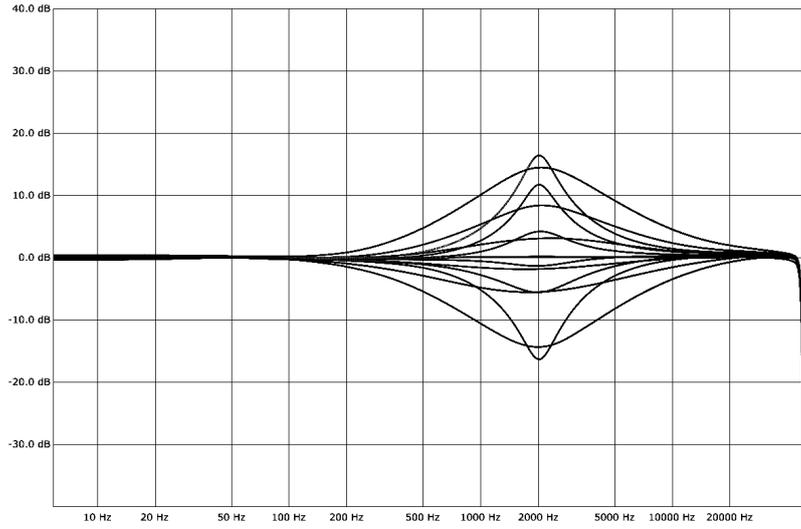


B mode - HMF band - 1000 Hz

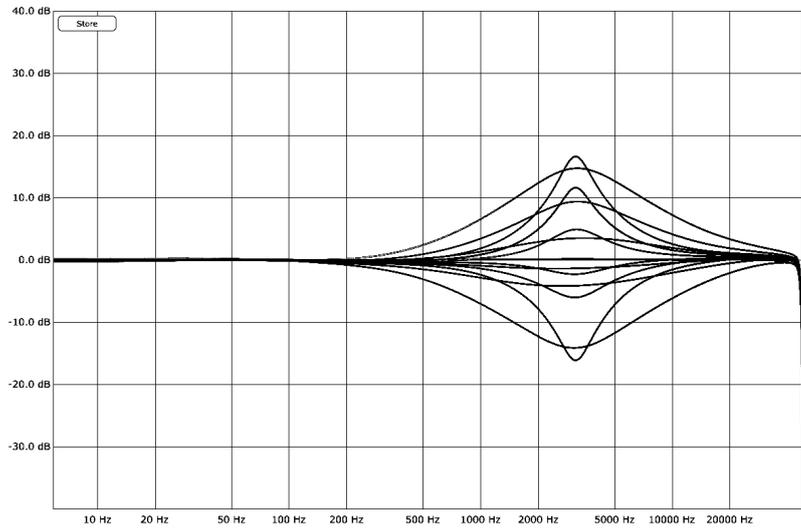


B mode - HMF band - 1400 Hz

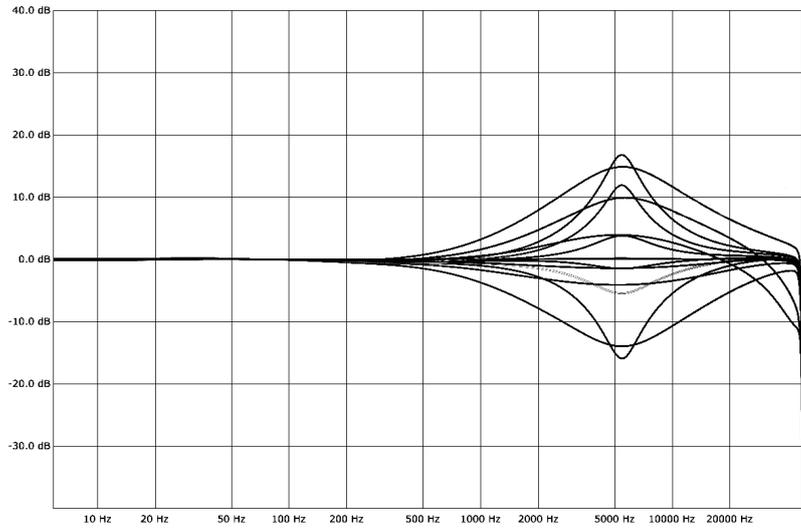
# B MODE EQUALIZER GRAPHS



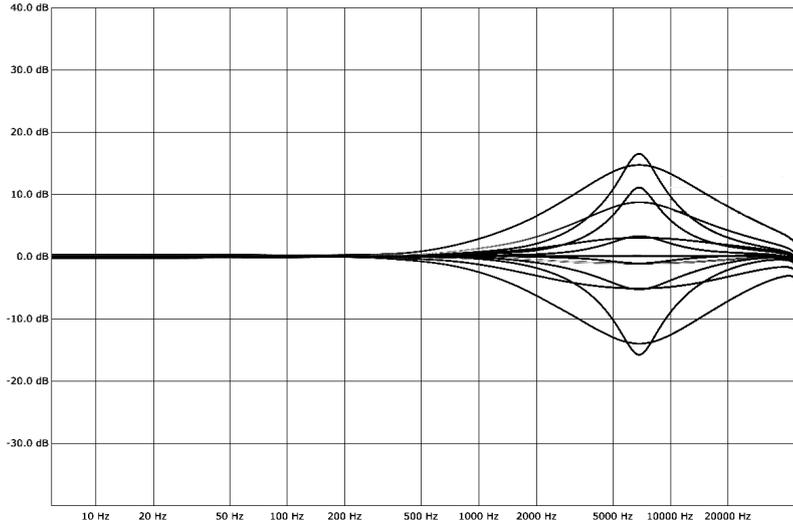
B mode - HMF band - 2000 Hz



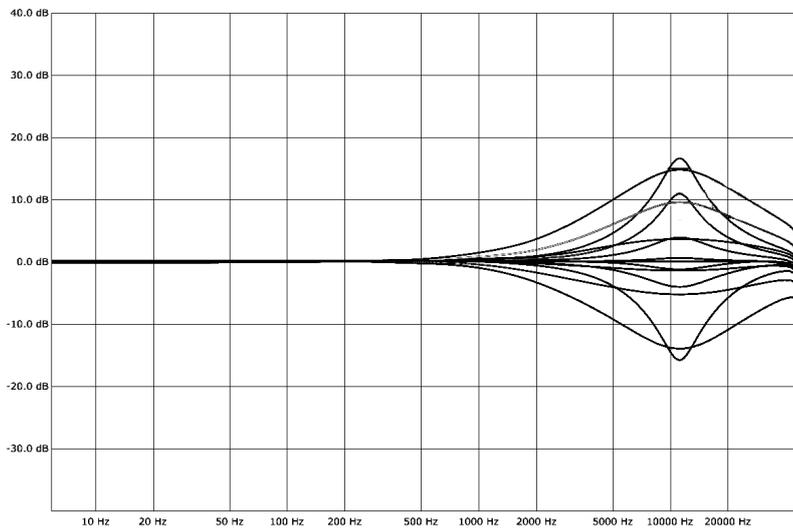
B mode - HMF band - 4600 Hz



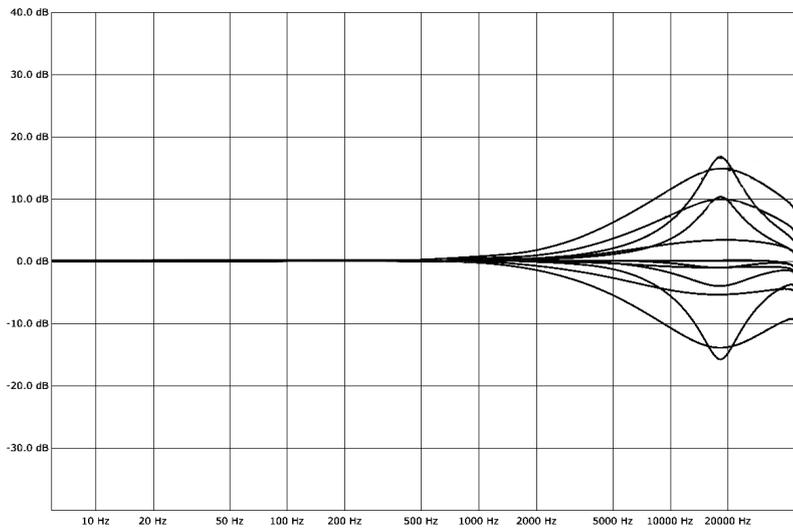
B mode - HMF band - 5600 Hz



B mode - HMF band - 6800 Hz



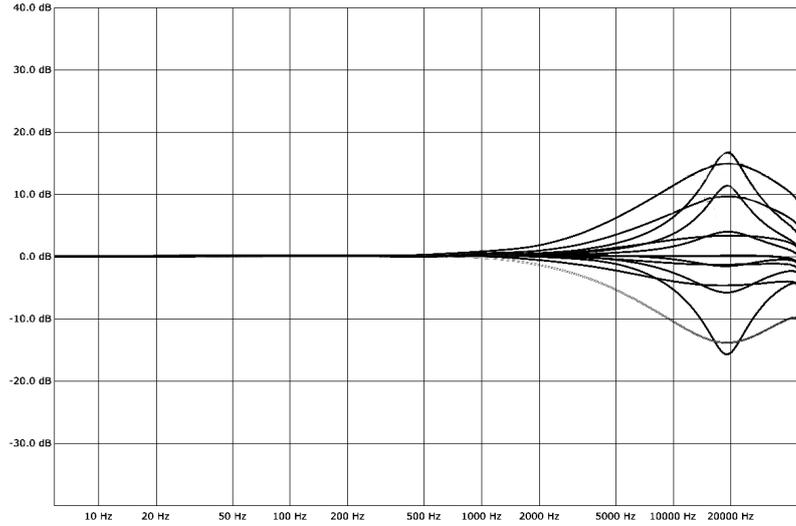
B mode - HMF band - 8300 Hz



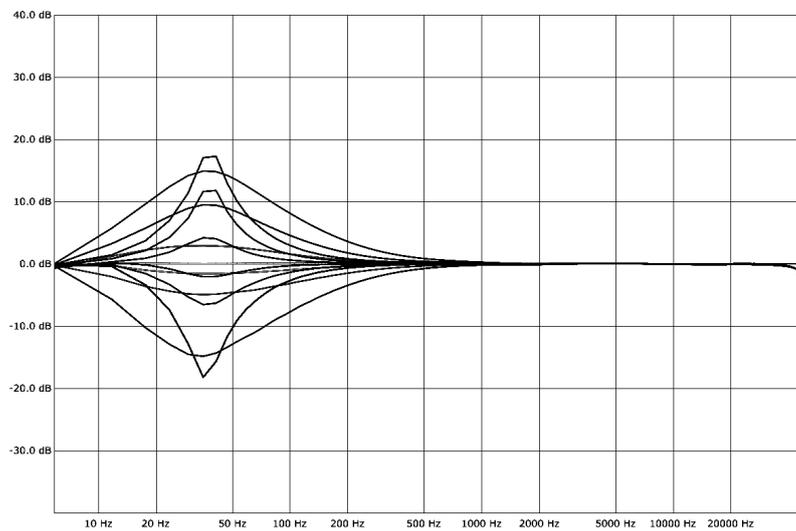
B mode - HMF band - 17000 Hz

**B MODE EQUALIZER GRAPHS**

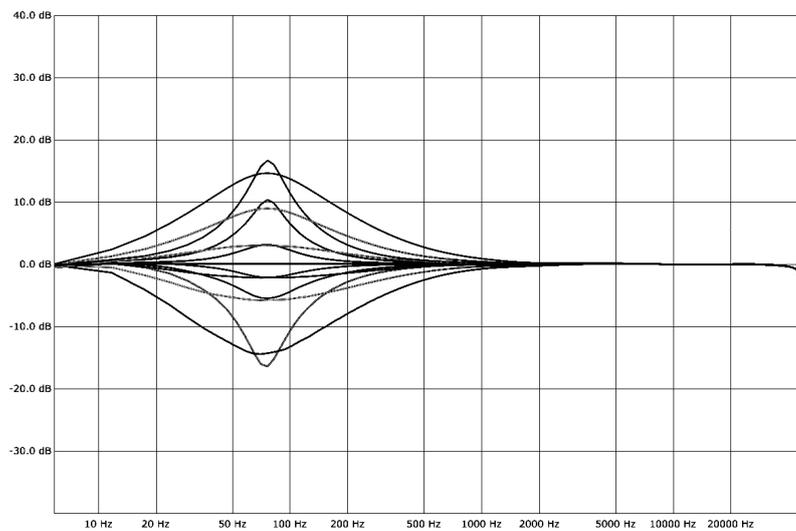
# B MODE EQUALIZER GRAPHS



B mode - HMF band - 18000 Hz

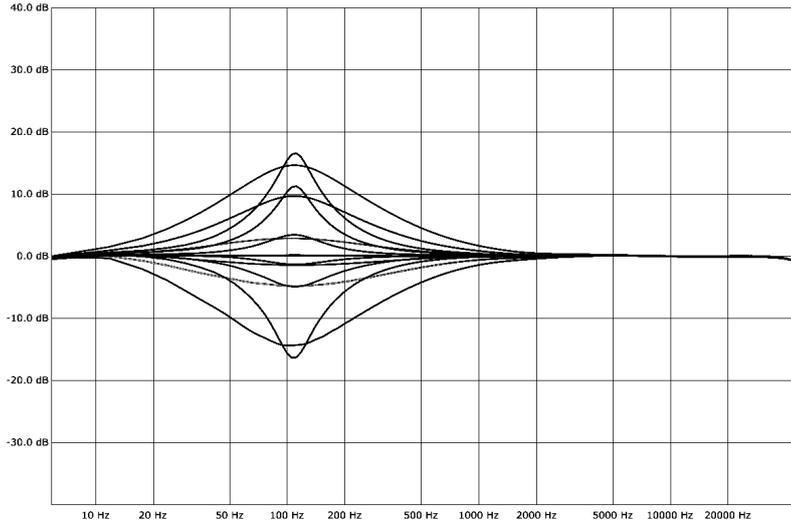


B mode - LMF band - 40 Hz

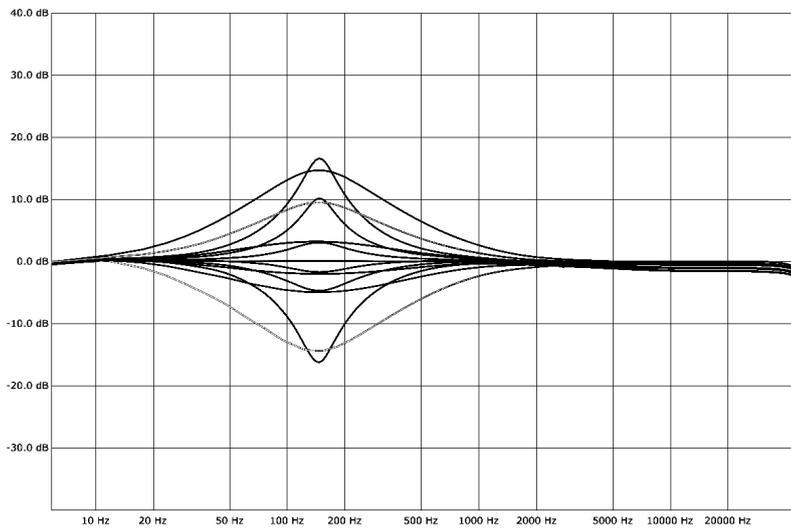


B mode - LMF band - 70 Hz

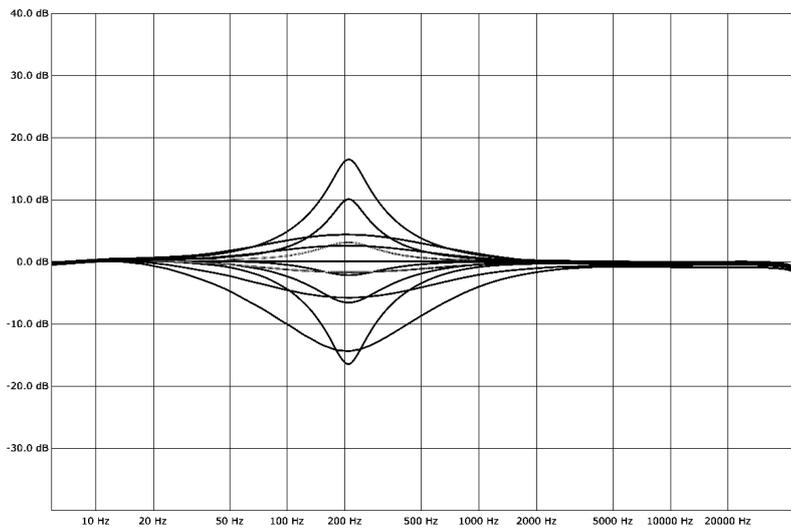
# B MODE EQUALIZER GRAPHS



B mode - LMF band - 100 Hz

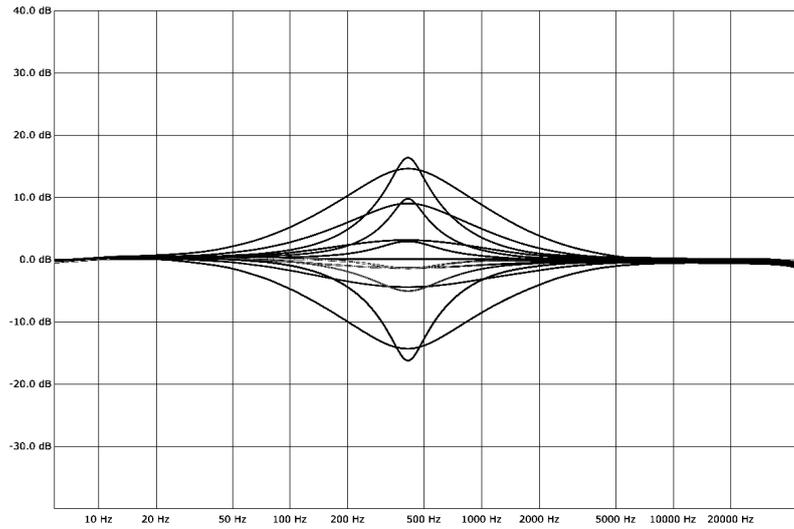


B mode - LMF band - 150 Hz

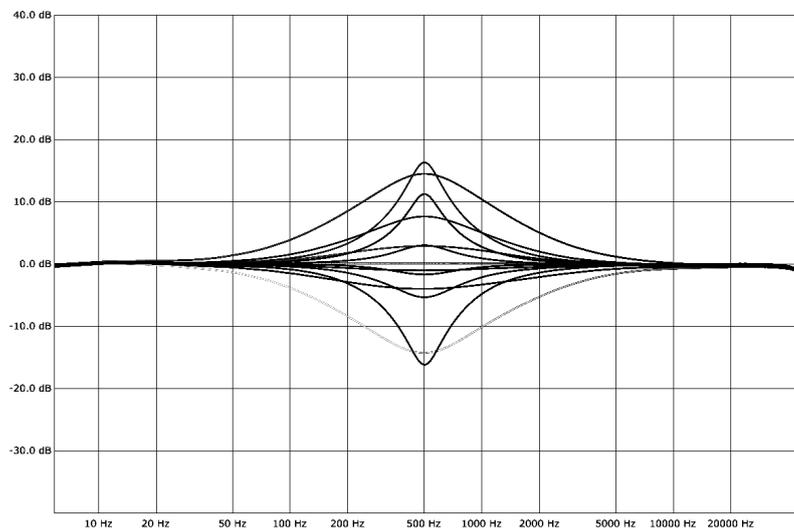


B mode - LMF band - 200 Hz

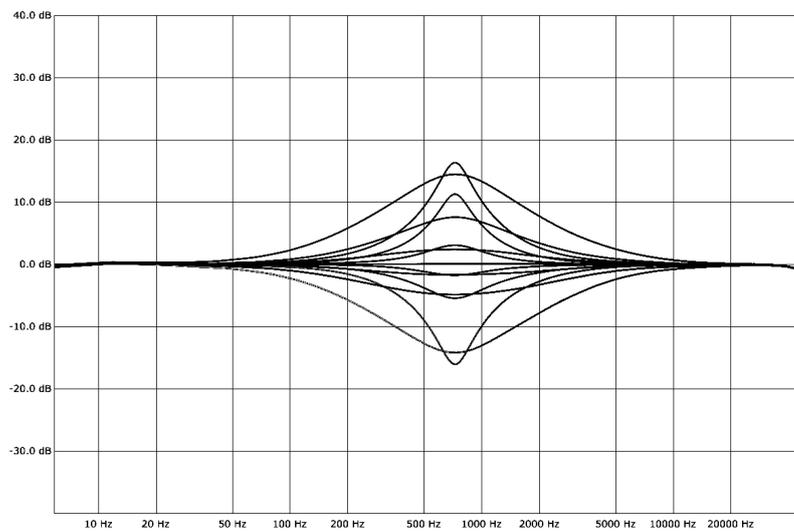
# BMODE EQUALIZER GRAPHS



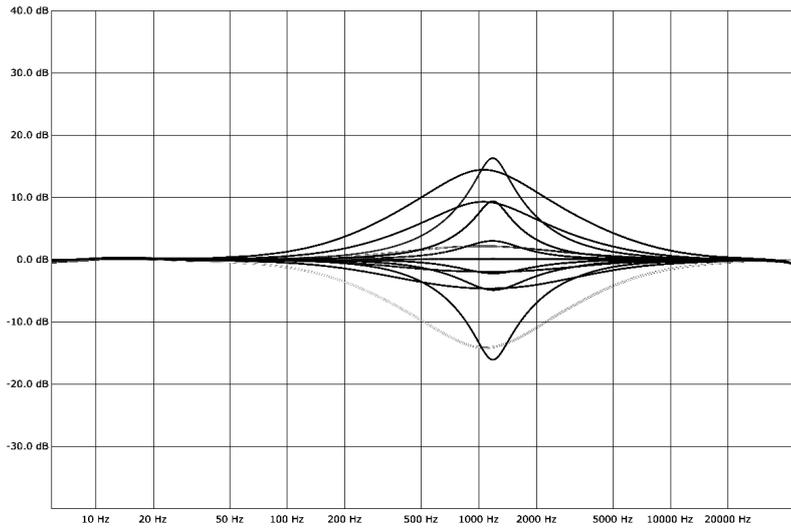
B mode - LMF band - 400 Hz



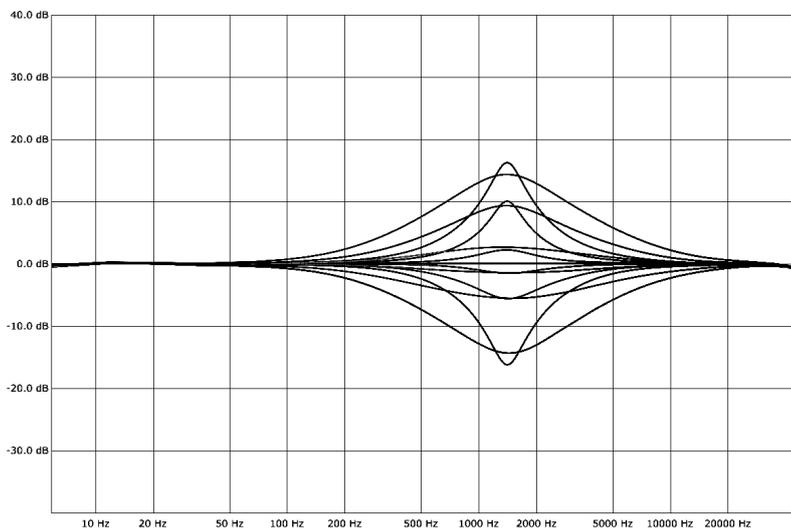
B mode - LMF band - 550 Hz



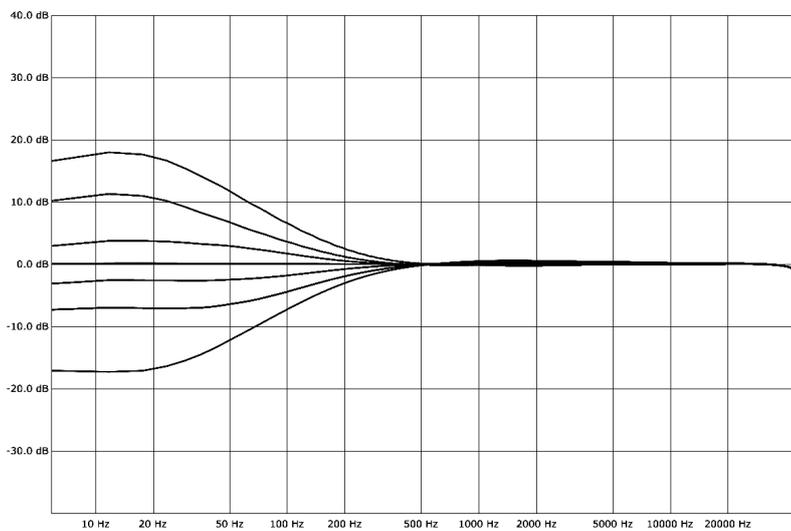
B mode - LMF band - 700 Hz



B mode - LMF band - 1000 Hz



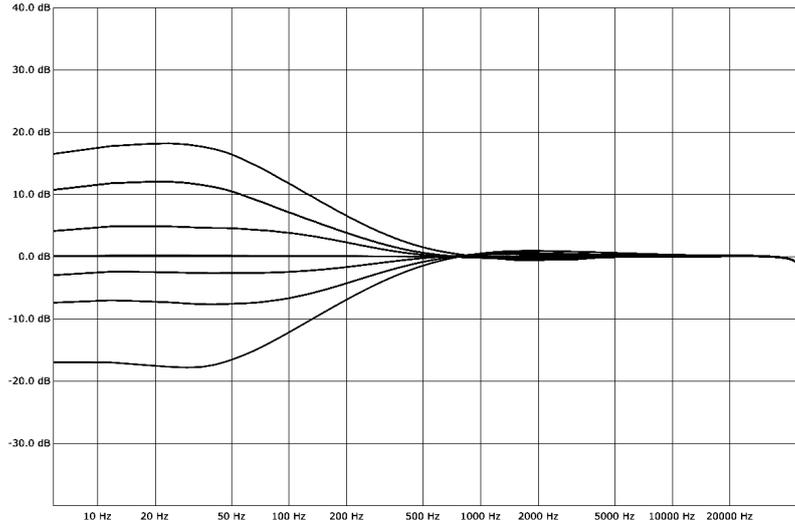
B mode - LMF band - 1400 Hz



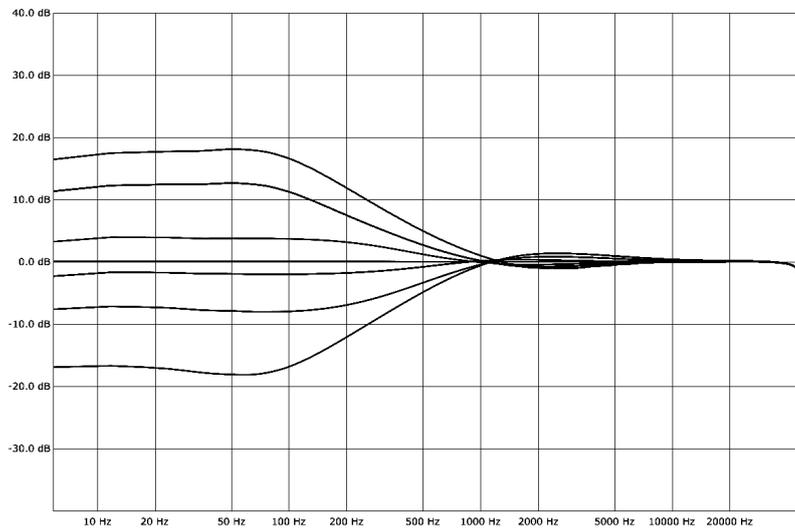
B mode - LF band - 33 Hz

**B MODE EQUALIZER GRAPHS**

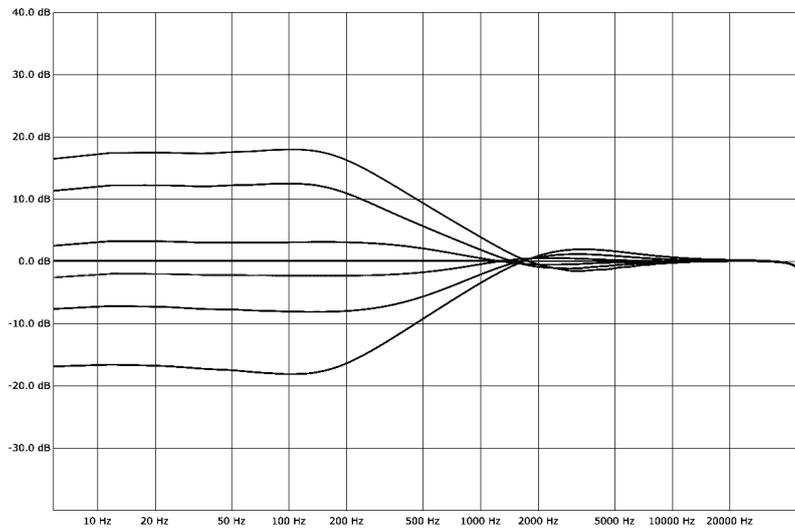
# B MODE EQUALIZER GRAPHS



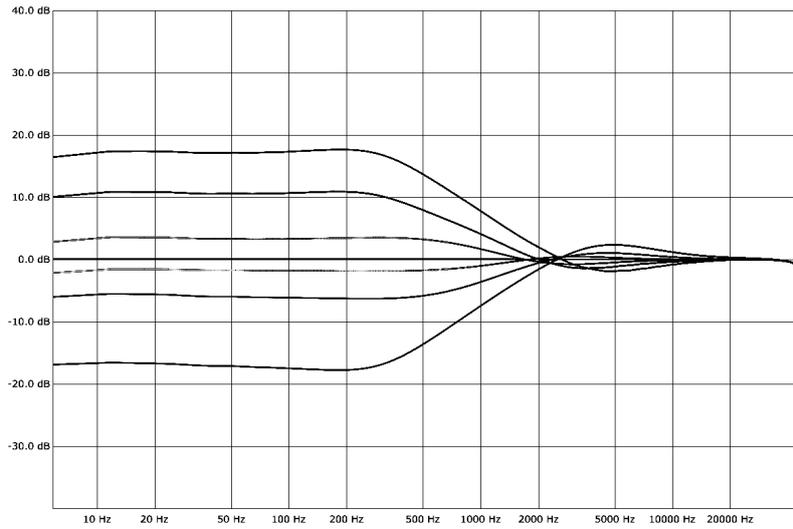
B mode - LF band - 56 Hz



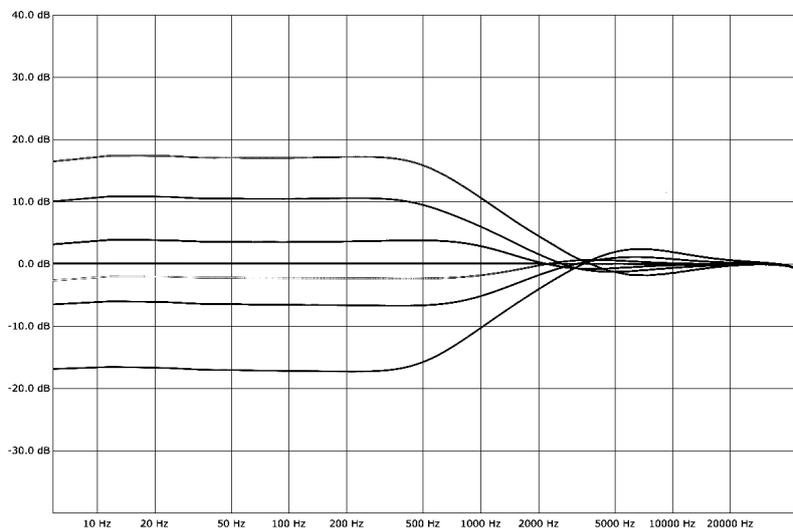
B mode - LF band - 95 Hz



B mode - LF band - 160 Hz



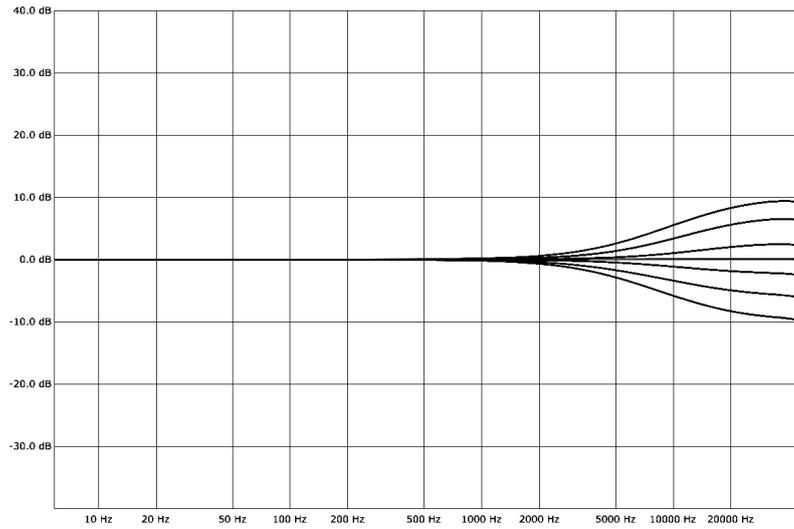
B mode - LF band - 270 Hz



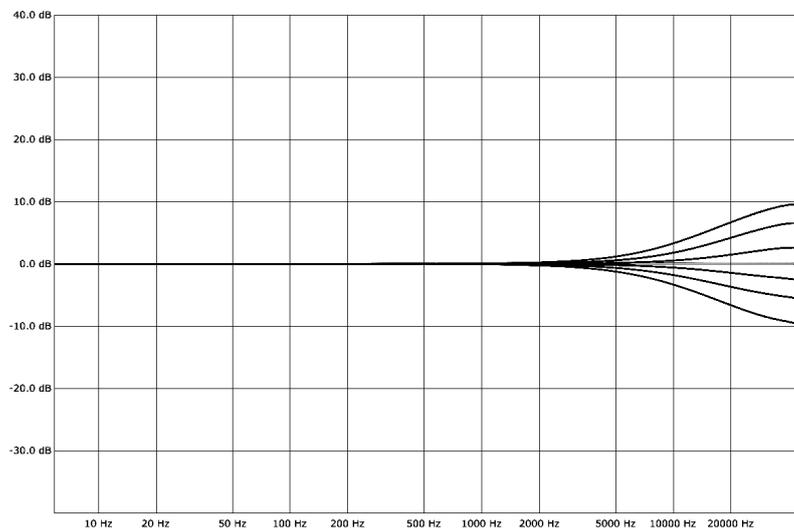
B mode - LF band - 460 Hz



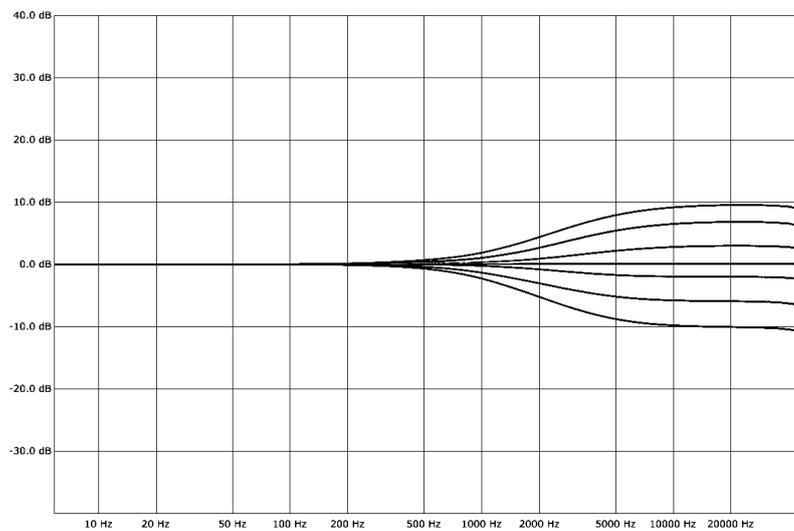
# C MODE EQUALIZER GRAPHS



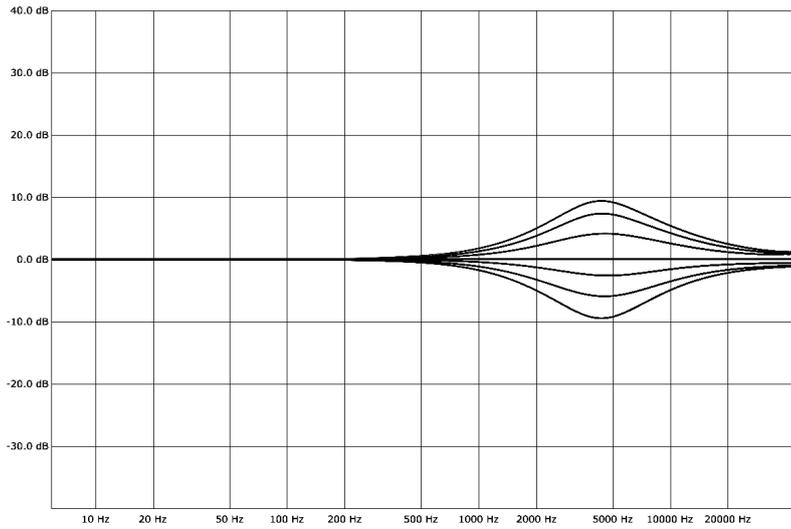
C mode - HF band - 18000 Hz



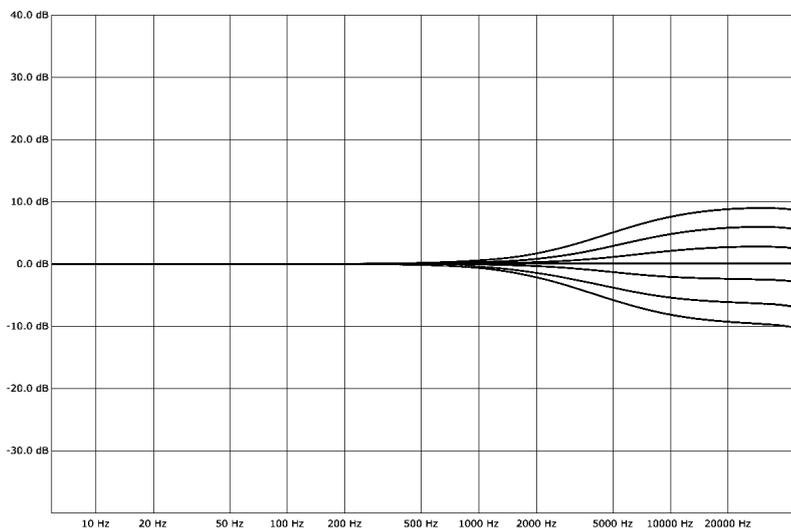
C mode - HF band - 34000 Hz



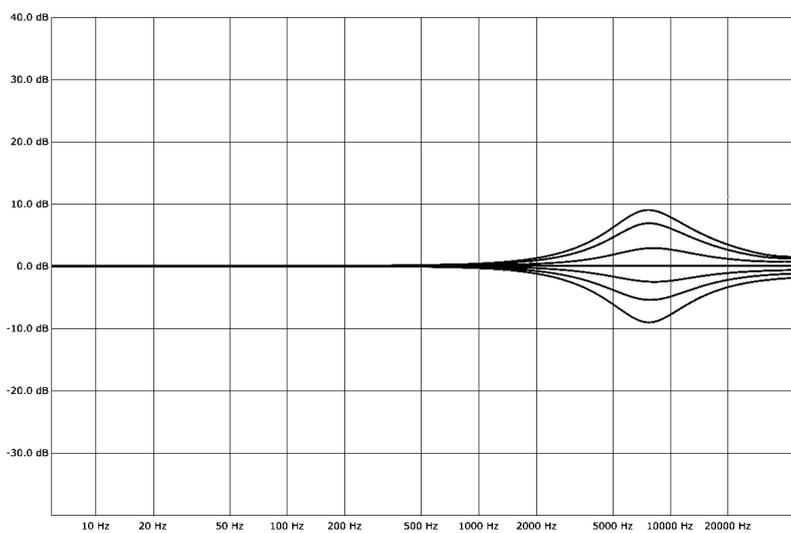
C mode - HMF band - 4000 Hz



C mode - HMF band - 6000 Hz

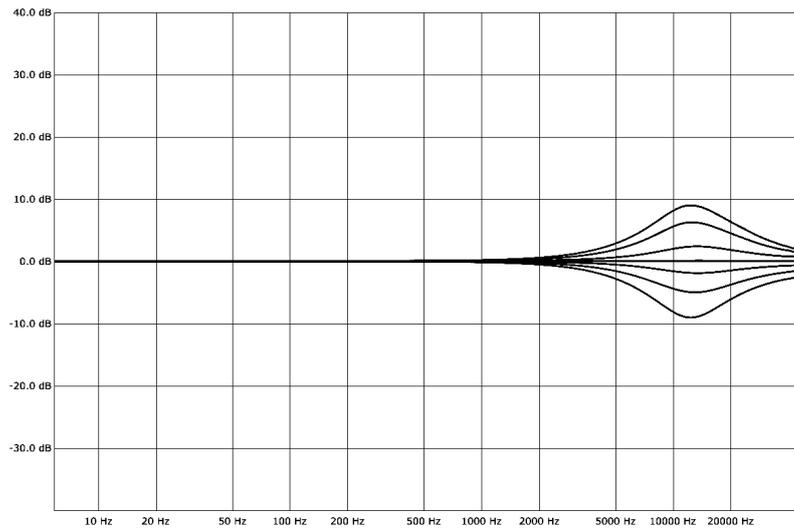


C mode - HMF band - 8000 Hz

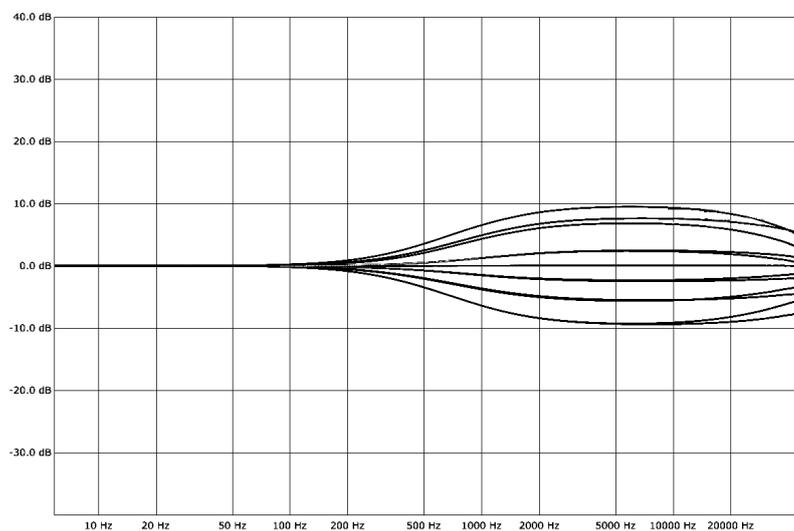


C mode - HMF band - 10000 Hz

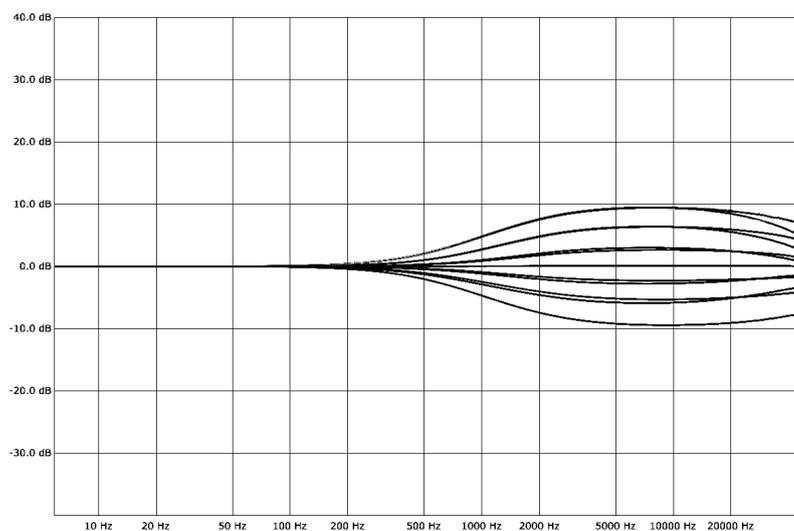
# C MODE EQUALIZER GRAPHS



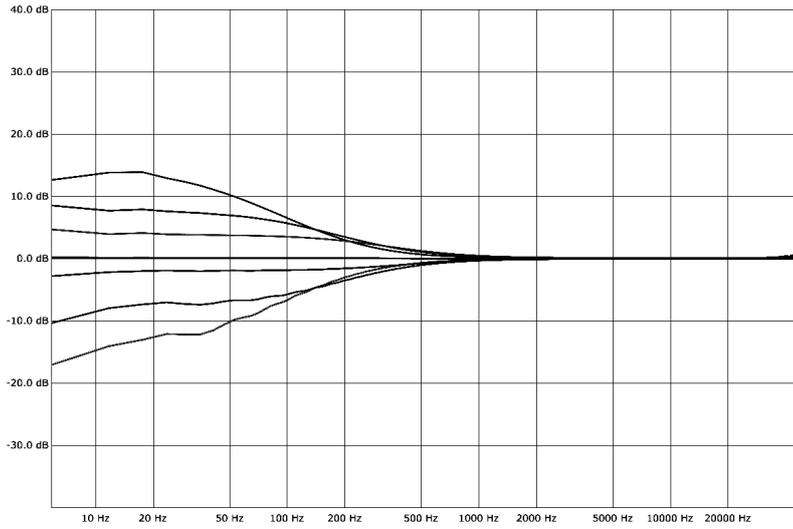
C mode - HMF band - 16000 Hz



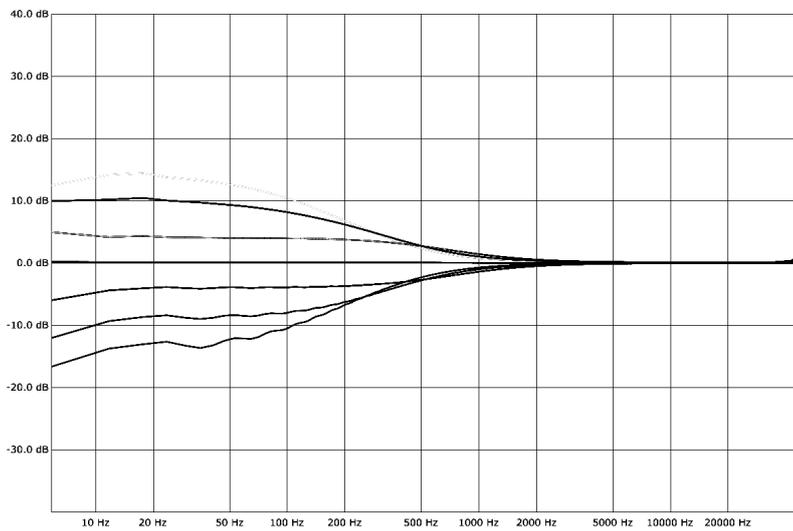
C mode - HMF band - 800 Hz



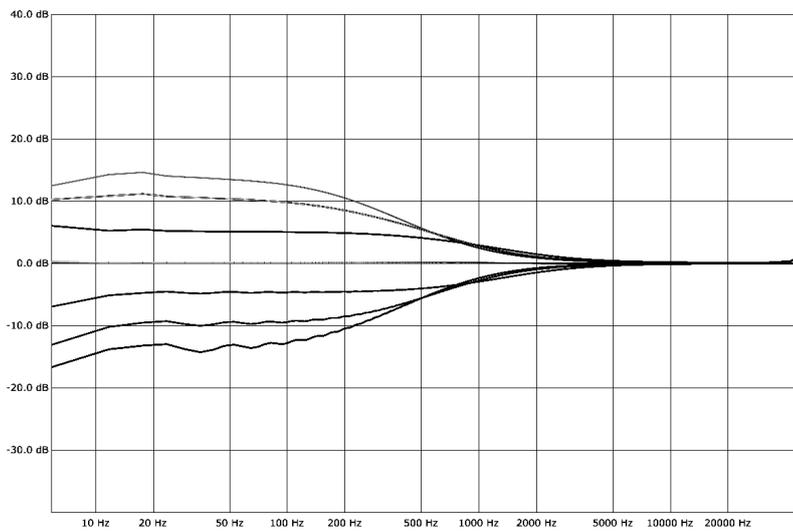
C mode - HMF band - 3000 Hz



C mode - LF band - 30 Hz



C mode - LF band - 60 Hz



C mode - LF band - 100 Hz

**C MODE EQUALIZER GRAPHS**

### 3.2 COMPRESSOR SECTION

Jade2 is equipped with two dynamics processors: a Discrete Class-A Compressor (D) and a Peak Limiter (E).

The main idea behind the original unit is to provide a transparent, musical control of the gain, without neglecting the ability to create distinctive new sounds as well as vintage ones, too.

NOTE: These emulations can be activated and used individually (C / D) or simultaneously (C + D). If both emulations are used at the same time, their behaviour is in SERIES, so the limiter module will follow that of the compressor.

Also, the behaviour and the sound of these dynamics processors may vary further by taking into account that this plugin has routing control (in the channel strip version) that sets different block configurations. For more details refer to the next chapter.

**NEW:** Jade2's compressors now implement the improvements that have been made with Acustica's latest compressors. The overflow problem that can occur when you raise the level of the input signal too much through the "Input Trim" control has been resolved and it is now possible to use the input trim even with signals close to 0dB. The compression curve has also been extended to allow compression of very low signals.

### 3.2.1 COMPRESSOR CONTROLS

#### D/E BUTTONS

These buttons allow you to activate (LED ON) and disable (LED OFF) the compressor (D) and /or the limiter (E).

#### INPUT TRIM

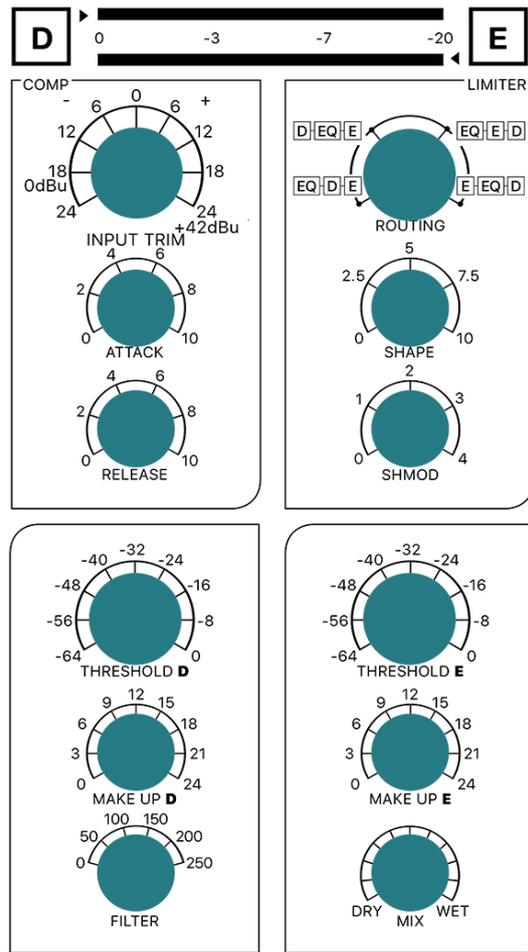
This function allows for a “one knob” internal gain staging control by automatically linking input and output gain stages following an inverse law. The control sets the input level from -24dB to +24dB of this module, and adjusts the internal operational level of the plug-in.

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 the Jade2 COMP/LIM’s input, the output level is automatically compensated so that there’s no perceived level change.

NOTE: This control has an effect on both the compressor (D) and the limiter (E).

#### ATTACK

This knob sets the processor’s attack time. The attack control determines the time it takes the comp to respond to the input signal and have gain reduction take place. Zero (0) on the control is FAST; Ten (10) is SLOW.



Jade2 channel-strip COMP section

LABELS	0	2	4	6	8	10
TIMES	0.35 mS	9.6 mS	35 mS	350 mS	500 mS	550 mS

Jade2 Compressor attack times

#### RELEASE

This knob sets the processor’s release time, namely it sets the time for the compressor’s gain to return to the point of no gain reduction. Zero (0) on the control is FAST; Ten (10) is SLOW .

LABELS	0	2	4	6	8	10
TIMES	80 mS	250 mS	450 mS	1.9 S	3.5 S	4.5 S

Jade2 Compressor release times

## SHMOD

This alters the shape of the attack envelope, allowing you to fine tune the attack behaviour in order to adapt it to any audio source. Position 2 gives the original attack time of the modeled compressor. Position 1 gives the fastest setting. Going from 1 down to 0, a further look-ahead function is enabled. The global range of the look-ahead zone goes from 0 to 4 milliseconds. Values above 2 will slow down the attack time.

## FILTER

This control sets the cut frequency of a very gentle 1-pole high-pass filter inserted in the side-chain path. Generally, the higher the frequency, the smaller the amount of gain reduction, since less of the low frequencies will be affecting the COMPRESSOR (D) and/or /LIMITER (E) action. The leftmost position (labelled 0) of this knob bypasses the filter.

## MIX

This controls the 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%.

## THRESHOLD D

It sets the threshold of the COMPRESSOR (D), ranging from -64 dB to +0 dB.

## THRESHOLD E

It sets the threshold of the LIMITER (E), ranging from -64 dB to +0 dB.

## MAKE UP D

It sets the output gain compensation of the compressor, in order to match the level of the compressed signal with the original. Make-up gain range: from 0 dB to +24 dB.

## MAKE UP E

It sets the output gain compensation of the limiter, in order to match the level of the compressed signal with the original. Make-up gain range: from 0 dB to +24 dB.

**SHAPE:** this control acts exclusively on the Compressor and it changes the gain curve, the relationship between amount of gain reduction taking

place and the signal level. Zero (0) on the control determines a GENTLE slope; Ten (10) determines a curve more AGGRESSIVE and an higher slope.

## Gain reduction meter (D):

The Gain Reduction of the meter measures the gain reduction level applied by the COMPRESSOR (D). 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 displayed.

## Gain reduction meter (E):

The Gain Reduction meter measures the gain reduction level applied by the LIMITER (E). 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 displayed.

## DYNAMIC ROUTING

This knob allows you to adjust Jade2's dynamic routing (in the Channel-strip version) to its four positions. Each position/step sets a different block configuration (module) displayed on the DYNAMIC ROUTING knob labels. This way the routing is simple and intuitive. We believe it's a simple and innovative idea to create one control that simplifies the plugin's routing operation by switching between programs. Each block configuration is explained as follows.

### 1° step:

Input > EQ > Compressor > Limiter > Output



### 2° step:

Input > Compressor > EQ > Limiter > Output



### 3° step:

Input > EQ > Limiter > Compressor > Output



### 4° step:

Input > Limiter > EQ > Compressor



NOTE: The EQ block includes the preamp + Equalizer + filters modules.

### 3.3 PREAMP SECTION

Jade's pre-amp section is based on a collection of various hardware units; it emulates the frequency/phase response and harmonic distortion of their corresponding circuits.

**NEW:** Jade2's standalone preamp section now includes a faithful emulation of a truly unique Class-A design mic-pre amplifier/mixer for recording engineers who want a very flexible audio path and sound quality without compromises.

Plus, it still includes the same five preamp models (A – B – C1 – C2 – D) from the Jade2 Channel-strip and EQ under the "cust" bank/category.

With the Jade2 suite we are able to provide a higher quality in terms of sound, guaranteed by our new CORE 17 technology which is able to extend the creative potential and flexibility of our emulations. For more details please refer to the Chapter 5.1

#### 3.3.1 JADE2 (CHANNELSTRIP & EQ PREAMP CONTROLS)

##### PREAMP SELECTOR

This control allows you to select from 5 different preamps.

As expected, each preamp is mutually exclusive; as a consequence, only one pre-amp emulation at a time can be activated. The first step bypasses the Preamps section. The harmonic distortion levels of the preamps included in this plugin depend on the Input Trim control.

NOTE: when the pre-amp stage is bypassed, the 'Input Trim' mode has no effect on the plug-in.

##### INPUT TRIM

This function allows for a "one knob" internal gain staging control by automatically linking input and output gain stages following an inverse law. The control sets the input level from -24dB to +24dB, and adjusts the internal operational level of the plug-in. 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 Jade's input, the output level is automatically compensated so that there's no perceived level change.

##### OUTPUT

This knob is an output gain control ranging from -24dB to +24dB.

### JADE EYE

This meter shows the input source level of the plugin by changing intensity depending on the input signal level.

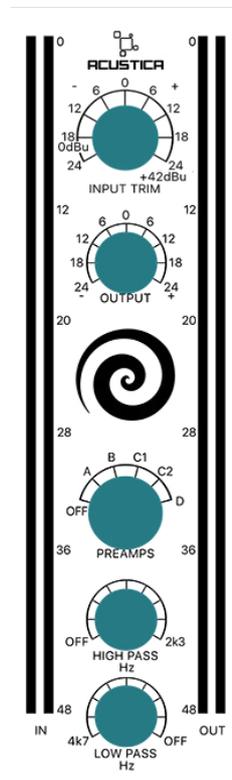
##### INPUT PEAK METERS

These measure the input signal level of the plugin. Digital PPM or Peak Program Meters can help you get a sense of the dynamic range of your mix by displaying the maximum decibel amplitude level of the audio signal's waveform. Peak metering is designed to respond quickly so that the meter display reacts in exact proportion to the voltage of the audio signal. Peak meters are also very useful for alerting users to when potential clipping distortion occurs caused by the signal spiking over 0 dBFS.

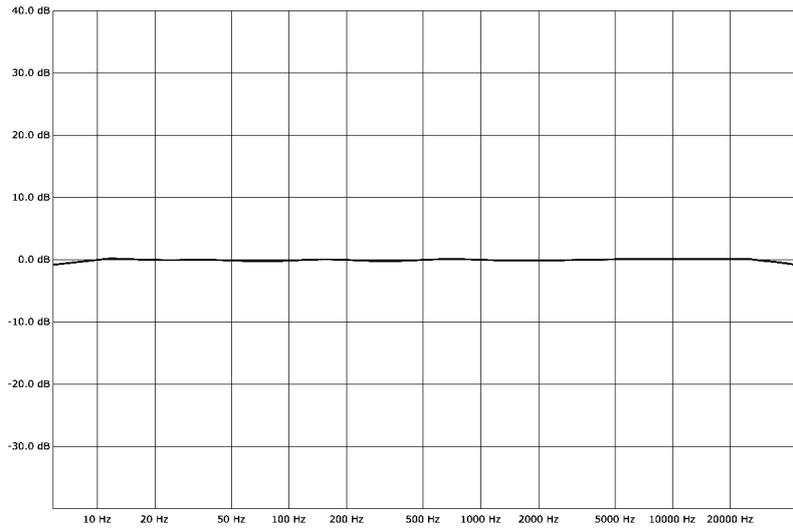
NOTE: These L-R Input meters are not included in the Jade2 Eq – The standalone plugin is only equipped with the Jade2 eye that shows the input signal level of the plugin by changing intensity depending on the input signal level.

##### OUTPUT PEAK METERS:

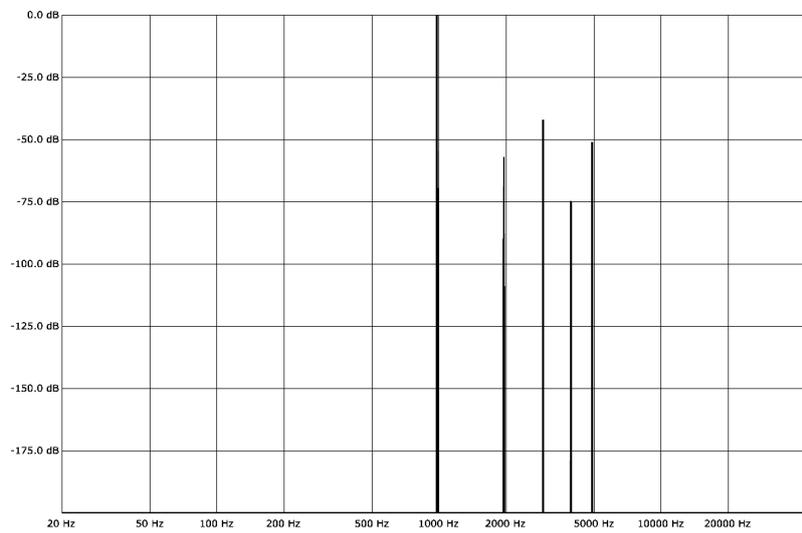
These measure the OUTPUT signal level of the plugin. NOTE: Output meters are not included in the Jade2 Eq – standalone plugin.



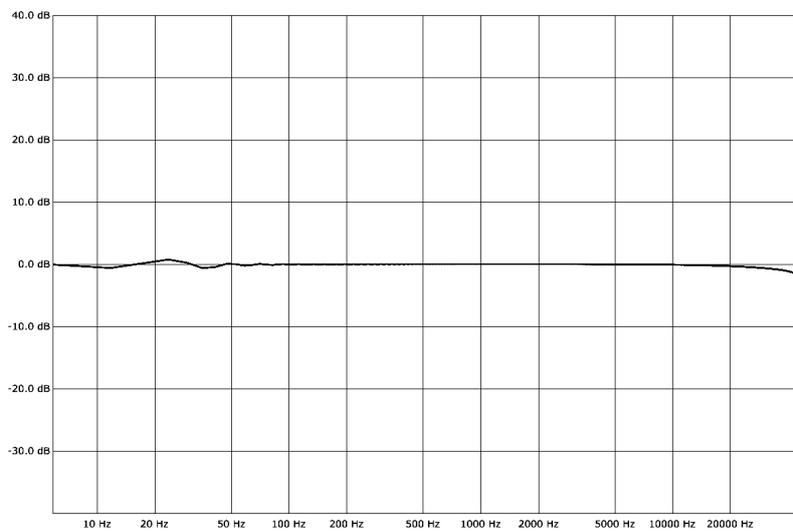
Jade2 channel-strip PRE section



Preamp A - Frequency Response

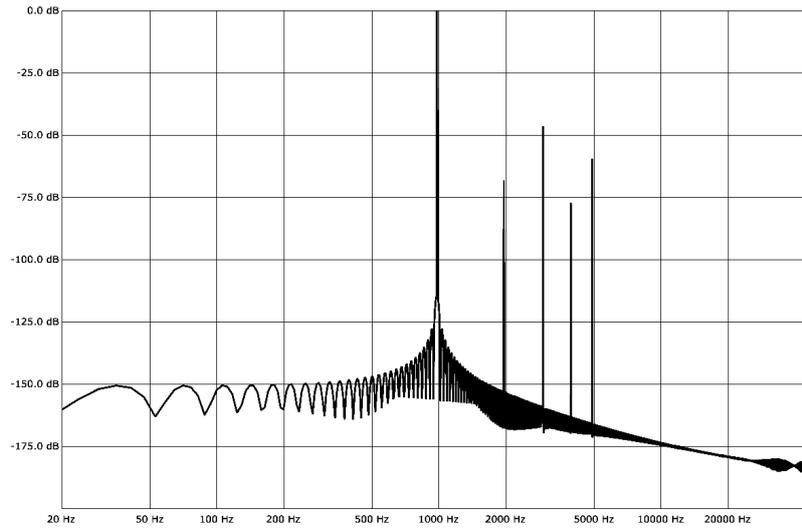


Preamp A - Harmonics

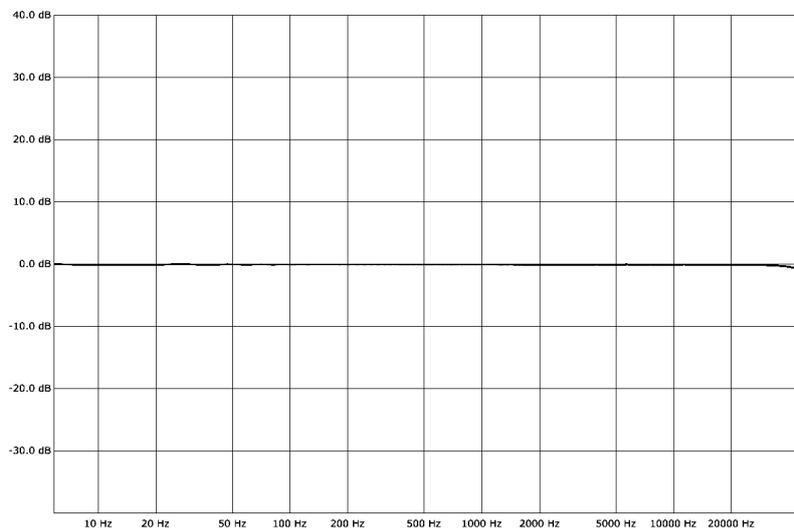


Preamp B - Frequency Response

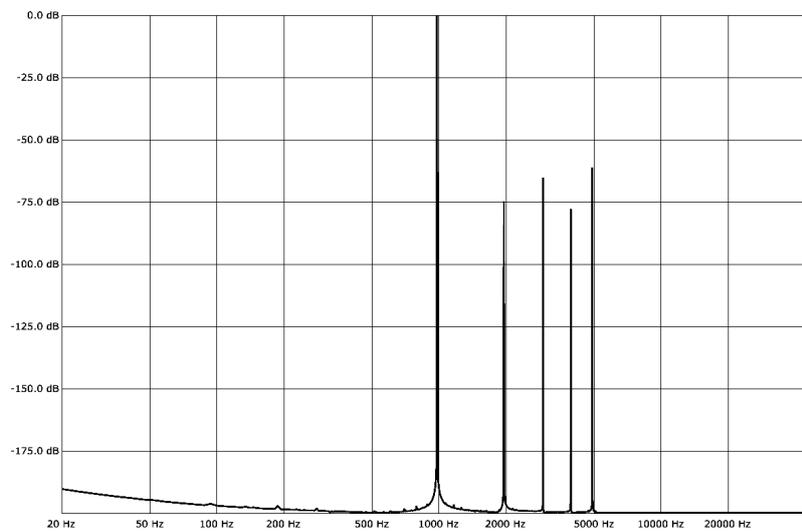
# PREAMP GRAPHS



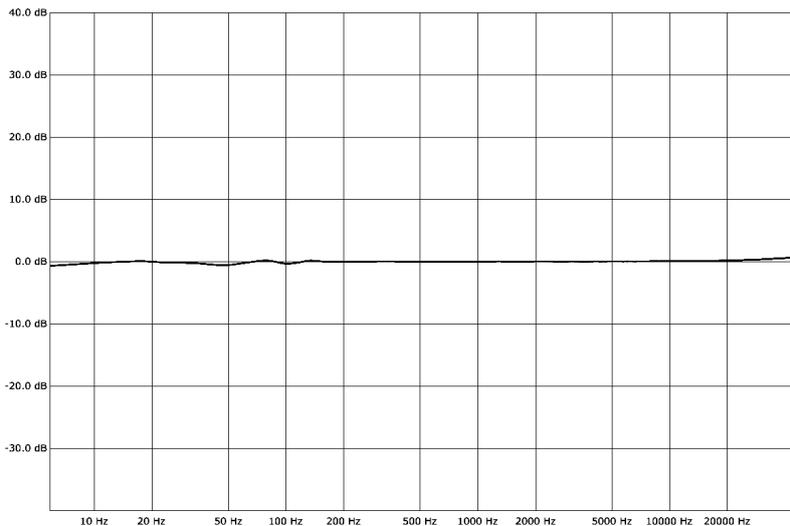
Preamp B - Harmonics



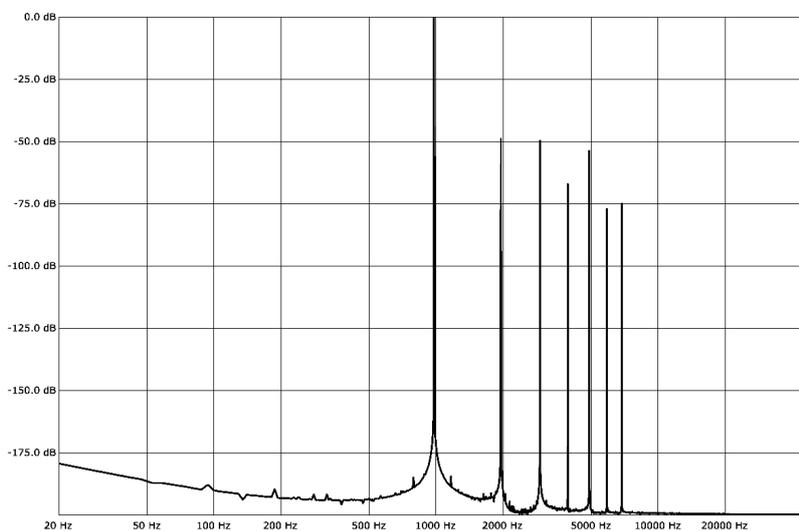
Preamp C1 - Frequency Response



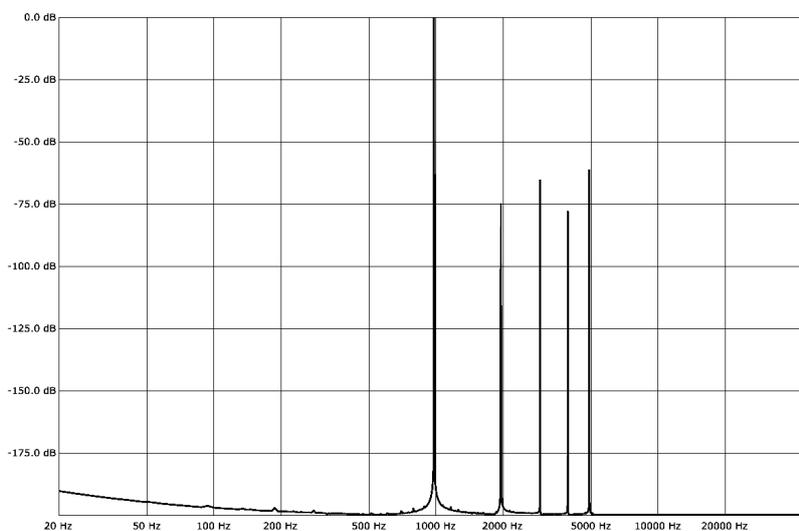
Preamp C1 - Harmonics



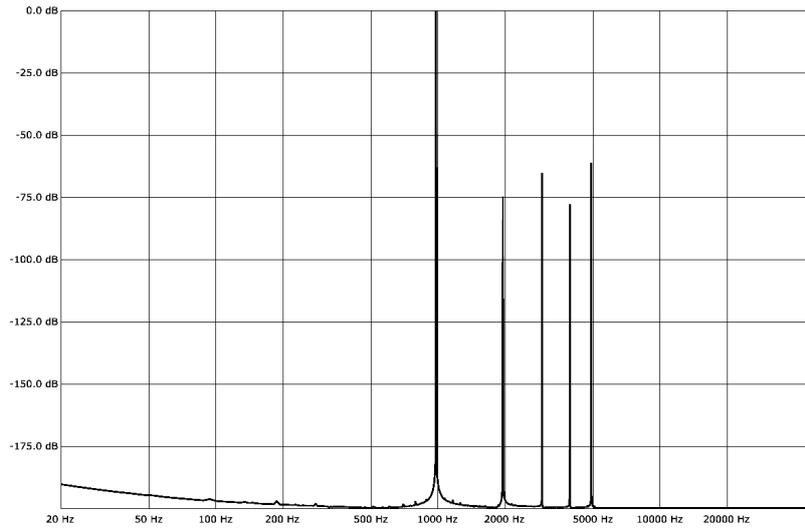
Preamp C2 - Frequency Response



Preamp C2 - Harmonics



Preamp D - Frequency Response



Preamp D - Harmonics



As anticipated in the previous chapters, in version 2 of Jade, Acustica has introduced a new standalone preamplifiers plugin. It's an emulation of a Class-A design mic-pre amplifier/mixer with a truly unique design, repurposed with some interesting additions and taking into account the line that has long distinguished Acustica products. Below is an in-depth explanation of the controls that characterize it.

Jade2 Pre includes several preamps divided into 6 banks. Thus, you can use and abuse its distinct palette of tones as a 'mojo booster' for your mix.

**LINE:** 8 line preamps (Ch.1 through 8)

**MIC:** 8 mic preamps (Ch.1 through 8)

**FAT:** 4 preamps emulating vacuum tube distortion which provides a gentle tube overload and a different Valve type sound creating mainly 2nd Harmonics ( with some 3rd ) into the signal.

**TAPE:** 2 Tape emulation preamps, both generate odd-predominant harmonics and apply a change in response curve from about 2kHz and up. The first preamp attenuates about 2.5db at 20kHz, and in the second preamp the attenuation at about 20k exceeds 6db.

**BUS:** 1 stereo bus emulation.

**CUST:** 5 different 'colored' preamp emulations from Jade2 Channelstrip/EQ units.

### 3.3.2 JADE2 PRE CONTROLS

**Input Peak Meters (L-R):** Displays the input level of the plugin. Range IN: -36dB to +0dB.

**Output Peak Meters (L-R):** Displays the output level of the plugin. Range IN: -36dB to +0dB.

**Highpass filter:** Press the HP button to activate (Led On) the Highpass filter at 80 Hz;

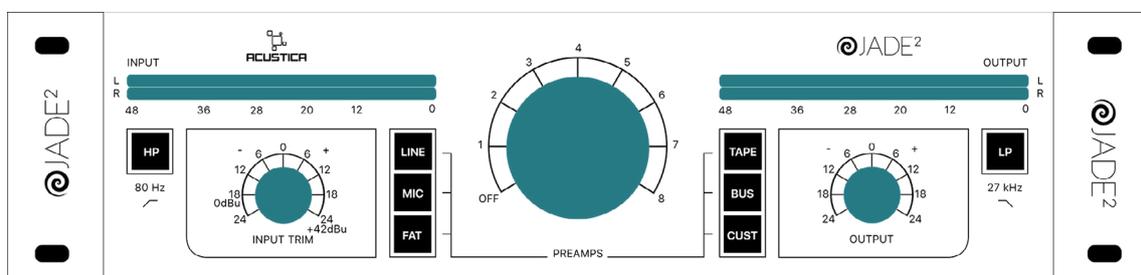
**Input Trim:** A one-knob internal gain structure control linking the input and output gain stages with an inverse law. The control sets the input level from -24dB to +24dB of the plugin, and it is used to adjust the plugin's internal level. Note: when the preamp stage is bypassed, the 'Input Trim' mode has no effect. It is possible to increase the harmonic saturation with this Input trim knob.

**Preamp Bank selector:** Use these buttons to select the preamp BANK: LINE-MIC-FAT-TAPE-BUS-CUST. Use the Preamp Selector (6) to choose the desired preamp emulation. The OFF button bypasses this section.

**Preamp selector:** Use this stepped knob to select the desired preamp (for each BANK: LINE-MIC-FAT-TAPE-BUS-CUST); First knob step bypasses the preamp section.

**Output:** This knob is an output gain control ranging from -24dB to +24dB.

**Lowpass filter:** Press the LP button to activate (Led On) the Highpass filter at 27 kHz;



Jade2 Pre



The background is a vibrant teal color, filled with numerous water droplets and bubbles of various sizes. The droplets are scattered across the frame, some in sharp focus and others blurred, creating a sense of depth and movement. The bubbles are concentrated in the center-right area, appearing as a cluster of small, shimmering spheres. The overall effect is a fresh, clean, and dynamic aesthetic.

AI PRESETS

# THERMAL CURE

Water is a fundamental element in the human organism: we are made of 65% water. The oldest cure with water is thermal balneotherapy: thanks to the beneficial action of minerals and trace elements, it has a draining and anti-inflammatory action, improving physical and mental health.

The waters rich in sulphur, calcium, fluoride and magnesium are the most suitable for health and body care.

In determining the therapeutic action of a thermal bath there are two components, the temperature of the water and the chemical composition of the water itself.

With regard to the changes that heat causes on the human organism in general, on the organs of locomotion and on painful manifestations in particular, the chemical composition of the salt-bromine-iodine mineral water of the thermal baths of Abano and Montegrotto has a stimulating and resolving effect on the inflammatory processes even of the deep organs.



## 4. AI PRESETS

### 4.1 PRESET MANAGEMENT

#### **The Jade2 Eq (standalone version) includes AI (Artificial Intelligence) Presets.**

By clicking the "PRESET" drop down menu on the left hand side of the Jade2 Eq you can select a preset from the displayed list. You can choose between several presets. You may find a detailed list of presets in the following Chapter "AI PRESET LIST & CREDITS".

A normal preset would simply load the same settings each time you use it. Our AI Presets are based on a huge amount of data sampled from real-life mixing sessions by renowned engineers. Any AI Preset will assess the audio being fed into the plugin and then, based on the data stored in its memory, it will automatically modify the EQ settings, emulating what the referenced engineer would have done in the same situation.

Here's the procedure to obtain the best results:

- loop a short section of audio that you deem is most significant for the AI evaluation. The analyzed time frame is quite short (only a couple of seconds) so different points in the audio will obviously produce different results;
- click the preset you would like to use;
- sit back and watch as the eq settings change.

This brand new technology works very well on individual tracks and groups, whereas results on the master bus may vary.

## 4.2 AI PRESETS LIST AND CREDITS

### 01. AI MAX PAPARELLA

Preset Technique  
(used in the AI capture phase)

- EQ for Master Bus purposes

Max Paparella - born in 1975, is a Hammond organist with a great passion for vintage musical instruments. For over 20 years in the music industry he has collaborated over the years both in Europe and in the USA, working on the creation of numerous albums as a composer, musician, remixer and ghost producer.

In 2010 he founded the Groove Sound Design studio, starting a solid partnership with the guitarist and producer Valerio Fuiano (member of Mind Music Labs in Sweden), working for singers, artists and record labels on productions as a mixing & mastering engineer.

In 2011 he became a member of AES (Audio Engineering Society). In 2014, as part of his professional training, he took two courses for mastering engineering at the SAE Institute in the UK, passing both with full marks (100/100). He has been working as a mastering engineer and musician with many record labels such as BMG Production Music (UK), Good Looking Records (UK), Cabana Recordings (USA), SelektA Re-cordings (USA), IRMA Records (IT).

**Groove Sound Design**  
[www.groovesounddesign.com](http://www.groovesounddesign.com)

### 02. AI EMI CIONCOLONI

Preset Sampling Technique  
(used in the AI capture phase)

- EQ for individual tracks  
(on voices, guitars and drums)  
- EQ for Mix Bus purposes  
- EQ for Master Bus purposes

Emi Cioncoloni - born in 1979, started his career as a multi-instrumentalist with a passion for recording, which was solidified in the early 2000s with the creation of his first studio (studioe recording lab), and then in 2013 with EL FISH, the recording studio he currently runs.

Over the last 20 years Emi has worked on a great diversity of projects which has allowed him to gain much experience and refine his skills in producing albums in a variety of genres including jazz, metal, blues, indie rock, electronic music, funk, world music, and alternative rock.

Another significant service that EL FISH has provided for many years is 'multimedia' such as jingles, soundtracks, voiceovers, e-books, and school coursebook materials in various languages.

Emi is currently specializing in music composition and sound design for video games, TV, and cinema, with a view to further broadening his areas of expertise.

He his also a beta-tester for a number of Italian plug-in software houses and has been working also as a plug-in GUI designer.

**El Fish Recording Studio**  
[www.elfish.it](http://www.elfish.it)

### **03. REUVEN AMIEL**

General Purpose EQ suitable for individual audio sources, group busses and mixbus.

Grammy Winning Mixer Reuven Amiel is an eclectic and versatile Mixing Engineer/Producer/Sound Designer.

He applies his modern, edgy and vibey sound to Indie Music, Modern Rock, Electro-Pop as well as Latin Pop moving thru World Music and everything in between.

Reuven is also a sound designer and programmer for many prestigious audio software and electronic music software/loops companies.

He has worked with a kaleidoscope of Artists and genres as his life is eclectic, having lived in many hem-ispheres of the world. From his beginnings, studying under the wings of Yoav Gera (Ofra Haza, Yehudit Ravitz) and moving all the way to Canada to receive knowledge from Top Producer Bob Ezrin (Pink Floyd, Peter Gabriel, Kiss etc.) to working with Israeli/Scottish underground Rock Band Mushroom Symphony, Cult Indie artists as Rouckfour to his upcoming project with European Rock Band, Pony Asteroid. He has also worked with acts like, PVRIS, Cadaver Exquisito, Canadian Electronic Band NOIA, Prime Ministers among many others.

He also has worked with Top Latin Grammy Winning/Nominees such as Ricardo Arjona, Shaila Durcal, Gian Marco, Susana Baca, Cristian Castro among others. He received a Latin Grammy for his mixing of Artist Felipe Pelaez and several other awards in different territories.

AmielMix

**[www.amielmix.com](http://www.amielmix.com)**

### **04. EARLE HOLDER**

General Purpose EQ suitable for individual audio sources, group busses and mixbus.

Earle Holder is a voting member of The Grammy Recording Academy for Engineering and currently the Chief Mastering Engineer for the world famous Public Enemy and Chuck D's new record label SlamJamz along with many other industry heavy hitters such as Beyonce, Ma\$e, Tameko Starr (MCA Records Europe), Interscope Records, Universal Records, One Million Strong, Vol. 2: Love, Peace and War, Kenny Banks, DeBarge, OCF Records, Tuere, Houseguest, Ayana, 4ize (Disturbing the Peace, part of the Ludacris crew, JD Lawrence, Candice (Australia) and many more. He has a musical background that spans his entire life. He studied music with the late Jimmy Cannady of Cannady Studios (former member of the Inkspots for those of you who remember). He has more than twenty-five years of experience and is the recipient of several prestigious music awards, including the Atlanta Music Industry Award presented by the GA Music Center. He is a regular guest speaker at music studios throughout North America and is quoted in numerous industry magazines.

**[www.hdqtrz.com](http://www.hdqtrz.com)**

## 06. EMRE RAMAZANOGLU

Preset Sampling Technique  
(used in the AI capture phase)

- General Purpose EQ suitable for individual audio sources, group busses and Master bus

Emre is an incredibly versatile songwriter, producer, mixer, and programmer who loves everything from filmic landscapes, 80s pop, beats and jazz. In two words he'd describe his sound as "Dysfunctional Pop"

On one end he's a founder member of Jazz band 'Ill Considered' and on the other he co-wrote and co-produced "Making the Most of the Night" by Carly Rae Jepsen. (with Sam Dixon and Sia).

Somewhere in the middle would be his work on the latest #1 Noel Gallagher album "Who Built the Moon" He was brought in by David Holmes to engineer but ended up drumming, programming and mixing the whole lot. He was an integral part of the sonic.

He's mixed R I T U A L feat Tove Styrke, John Newman, Aqualung, Rita Ora, Jack Savoretti, Kylie (Music's Too Sad Without You, from her #1 album) and has just produced/mixed four Lily Allen tracks from her latest album including the single "Lost My Mind". He's co-produced and mixed Richard Ashcroft's new album 'Natural Rebel'. He co-produced "Warrior" from Paloma Faith's number 1 album and mixed Jimothy and Tom Grennan recently. He's engineered for U2 and played drums for Michael Jackson

He's been writing with Sampha, Foxes, Theon Cross, Actress, Emily Burns, Pasteur, Morgxn (including single "Holy Water" which he also produced and mixed), LUME, JONES, Sophia Alexa, Chelcee Grimes, Nilufer, Grace Barker, Lauren Aquilina, Barny Lister amongst others.

Emre worked with David Holmes on the movie Logan Lucky. He's currently working on the new Killing Eve sound track (having worked on the first and second series) and the new Steven Soderbergh movie "The Laundromat"

[www.emremusic.com](http://www.emremusic.com)

## 05. AI OLEG YORSHOFF

Preset Sampling Technique  
(used in the AI capture phase)

- General Purpose EQ suitable for individual audio sources, group busses and mixbus.

Oleg "Yorshoff" Yershov - mixing and mastering engineer, pro audio journalist and respected audio mentor and educator from Ukraine. Former classical piano player, then heavy metal touring vocalist Oleg now focuses on studio work for different artists producing different genres and styles of music - from synth-pop and Indie to EDM, atmospheric black metal and countless Hip-Hop artists all over East Europe.

In 2013 Oleg launched YorshoffMix, a YouTube-channel with the aim of helping Russian speaking audio engineers to grow and become better educated in music production, mixing and mastering. In addition, Oleg writes for Future Music Russia magazine.

**Yorshoff Mix | Mixing & Mastering Services**  
[www.yorshoffmix.com](http://www.yorshoffmix.com)

## **07. MATTHIAS FLEISHMANN**

General Purpose EQ suitable for individual audio sources, group busses and mixbus.

Matt Fleischmann, born in 1968 in Germany, started playing piano and guitar at the age of 6. A relative introduced him to sound technology at the early age of 14 by taking him to his studio on a regular basis. At the age of 19 Matt left for Ireland and the UK where he worked as a musician and live-sound technician for more than 10 years while studying studio sound engineering in the UK. This gave him the chance to work with some notable folk and rock artists from Ireland and the UK, both live and in his first own studio.

After moving back to Germany in the late 90s he worked as a musician and freelance sound engineer. At the time he was primarily involved in live recordings. He reopened his own recording studio which is now located near Stuttgart and Ulm, Germany. Matt's widespread musical interests include the recording, mixing and mastering of hand made folk, blues, jazz, rock and also classical music in the same way as world music and experimental electronic music. His studio services also include audio restoration.

Today Matt is mainly running his own studio while still maintaining the live side of things on the side. He never lost his passion for live mixing and recording, he plays in a couple of bands himself and enjoys supporting new talent. He's also distributor and product specialist for Fuchs Audio Technology guitar amplifiers as well as some high-end recording microphones and outboard gear. On top of that he's beta-tester for some DAW and plugin makers, and gives classes in audio engineering and workshops in guitar technology and guitar recording.

**[www.pro-suite-audio.de](http://www.pro-suite-audio.de)**

The background of the image is a close-up, top-down view of parched, cracked soil. The cracks are irregular and form a network of polygonal shapes across the entire surface. The soil is a dark, rich brown color, and the lighting creates strong shadows in the crevices, highlighting the texture and depth of the cracks. Some dry, thin blades of grass are scattered across the surface.

TECHNOLOGY

# CLAY

Clay is one of the oldest remedies available to man because it effectively and naturally cures many ailments. And yet the virtues of this magic powder are passed on above all as one of the secrets of beauty. Depending on the minerals it contains (iron, silica, calcium, magnesium) clay can be of various colours and have different properties. Able to absorb unpleasant odours, trap germs and bacteria, soothe pain, restore energy or simply purify and soften the skin, clay is capable of restarting a limping organism, fighting ageing, stress and fatigue, as well as soothing dermatitis, rheumatic diseases and other illnesses. In fact, clay performs important functions for the human organism. It is the chemical composition of clay that ensures that this mineral substance has unique therapeutic properties.



## 5. TECHNOLOGY

Our technology provides seamless real-time emulations of: pre-amplifiers, equalizers, compressors, reverbs, multi-effects, stomp-boxes, cabinets, microphones and tape 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 Acustica Audio. 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 recalling, loading, saving, and advanced editing when desired. The quality of reproduction of sampled sources is 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 is continuously developing 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 100,000 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).

More info about our technology can be found at the following link:

<http://www.acustica-audio.com/pages/engine>



## 5.2 TECHNICAL SUPPORT

Technical support is exclusively provided via our dedicated 'Freshdesk' platform. Please visit our website to learn more.

## 5.3 TROUBLESHOOTING AND BUG REPORT

We are constantly improving our products and adding new features. On-going issues, bugs, and rare crashes can still be possible. If you are experiencing problems with your product, please head over to our website and visit the dedicated knowledge base section. Many answers have already been answered, and ready-to-use solutions can be found there.

## 5.4 COPYRIGHTS AND CREDITS

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**ACUSTICA 2021**

