

**Acustica Journal**

July 2017

**EBONY**

**Dreamware reverb channel**



**Equalizer  
Reverb  
Preamp  
Compressor**



# What Is Ebony?

Ebony is a State-of-the-art modeling of legendary vintage units completely different than previous Acqua Effect plug-ins products. The realization of EBONY is the result of our continuous exploration for classic and coveted outboard gear and our desire to achieve perfection in our modeling.

## What's the main novelty?

Acustica will be proud to release the first plate REVERB Acqua plugin and we included it in our best channel-strip ever created! The rarity of emulated devices, the software development, the design work... all of this makes this plug-in truly special.

The Acustica team never stops!

With this latest product Acustica has decided to add new important features to demonstrate how this Acqua plugin is one of the most complex and complete ACQUA plugins ever released.

Our mission is to satisfy all customers and we believe that now Ebony can be the best choice without compromise to improve your sound.

Ebony is the name of the suite equipped by three different equalizers, four rare compressors, eight preamplifiers and a control section.

This suite represents a great offering on the market for any lover of a vintage sound and colors.

Anyone in search for faithful emulations simply must try this vintage channel strip (complete with its standalone modules).



Ebony suite is based on new native CoreX engine.

It's the revolutionary upgraded multi-threading technology by Acustica.

It is an optimization of Core9 in terms of high performance, it introduces new important features allows to optimize performance of Acqua plug-ins.

Features actually supported in Core X:

- Internal saturation of the plug-in no longer exceeds +3 dB.
- New algorithm for hard-clipping.
- "Multi-input system" implemented.
- "Blending algorithm" to reduce the number of instances, it allows significant saving in terms of CPU.

## CoreX technology



## PERFORMANCE CAUTION

In order to maximize performance and usability of your computer and minimize CPU usage we suggest you to follow some precautions.

First, keep your buffer size setting as high as possible.

There is generally no reason to use low buffer size setting for all sample rates.

Increasing buffer sizes (hence also latency) highly decreases required CPU power.

You should also consider using only necessary features.

We do not ensure the complete absence of bugs or the perfect operation of the product. Before purchasing, we suggest you to download the Trial version to verify the behavior of the plug-in with your system.

Trial products are fully-functional versions of the relative commercial plugin. The trial period lasts 30 days after activation.

CORE X upgrade solves spikes problems and jump volume issues.

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 publication of the product page but the period may vary at our discretion

This manual includes a description of the product but no guarantee as for specific characteristics or successful results.

The design of our products is under continuous development and improvement.

Technical specification are subject to change.

## DISCLAIMER

\*PRE-ORDER (%OFF)

- PRE-SALE
- SPECIAL PRICE
- PROMO

We are using these terms to define the introductory price of the product. It's a Public Beta Preview.

In other words, we provide to the customers a **COMMERCIAL VERSION/ TRIAL VERSION** that could be improved and bug fixed within this period.

If you want to be sure that the release is totally safe, you must wait for the pre-order term.





## ABOUT EBONY

Ebony is the name of the suite that consists of five different plug-ins:

EBONY (Channel-strip),  
EBONY COMP,  
EBONY EQ,  
EBONY REVERB,  
EBONY PREAMP.

### 1. EBONY includes:

EBONY  
EBONY ZL (zero latency)

### 2. EBONY COMP includes:

EBONY COMP  
EBONY COMP ZL (zero latency)

### 3. EBONY EQ includes:

EBONY EQ  
EBONY EQP ZL (zero latency)

### 4. EBONY PRE includes:

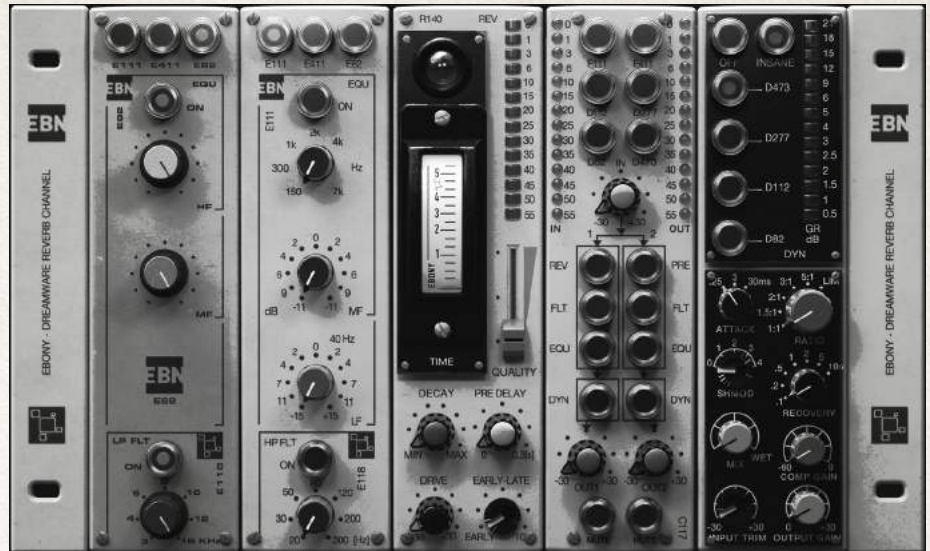
EBONY PRE  
EBONY PRE ZL (zero latency)

### 5. EBONY REVERB includes:

EBONY REVERB  
EBONY REVERB HL\* (High Latency)

\*High Latency, this reverb version doesn't use the ZL algorithm but rather a new implementation introduced for the reverb to optimize the CPU load (8192 samples for HL version VS. 2048 samples for the standard version).

# Ebony Channel Strip



# Ebony Standalone Plug-ins





# The equalizer

Ebony EQ is composed by 3 different Equalizers organized in two modules (HF/HMF module and LMF/ LF module).

Each module is bypassed when the relevant ON button isn't pressed (the section is bypassed).

Thus it is possible to compose different combinations choosing from the available EQ emulations. Below are descriptive tables for each module and EQ:



	E111	E□11	E□□
□□□□□E1	<b>HF</b> Frequency: 14 kHz (fixed). Gain: from -15dB to +15dB. Q: shelf filter.	<b>HF</b> Frequency: 14 kHz. Gain: from -15dB to +15dB. Q: shelf filter.	<b>HF</b> Frequency: 16 kHz. Gain: from -10dB to +4dB. Q: shelf filter.
	<b>MF</b> Frequencies: from 150Hz to 7 kHz. Gain: from -11dB to +11dB. Q: Peak filter.	<b>MF</b> Frequencies: from 150Hz to 7 kHz. Gain: from -11dB to +11dB. Q: Peak filter.	<b>MF</b> Frequencies: 2.5 kHz. Gain: from -10dB to +5 dB. Q: Peak filter.
□□□□□E□	<b>MF</b> Frequencies: from 150Hz to 7 kHz. Gain: from -11dB to +11dB. Q: Peak filter.	<b>MF</b> Frequencies: from 150Hz to 7 kHz. Gain: from -11dB to +11dB. Q: Peak filter.	<b>MF</b> Frequencies: 2.5 kHz. Gain: from -10dB to +5 dB. Q: Peak filter.
	<b>LF</b> Frequency: 40 Hz. Gain: from -15dB to +15dB. Q: Shelf filter.	<b>LF</b> Frequency: 40 Hz. Gain: from -15dB to +15dB. Q: Shelf filter.	<b>LF</b> Frequency: 50 Hz. Gain: from -8dB to +5dB. Q: Shelf filter.



# First module

## E111 equalizer

### ON:

This button enables the HF-HMF sections.

### HF BAND

HF GAIN: sets the gain of the shelf from -15dB to +15 dB ;  
The HF frequency is fixed at 14 KHz.

### HMF BAND

HMF GAIN: sets the gain of the shelf from -11 dB to +11 dB  
HMF BELL FREQUENCY: the stepped knob selects the peak frequency among the following 16 values from 150 Hz to 7Khz.

## E411 equalizer

### ON:

This button enables the HF-HMF sections.

### HF BAND

HF GAIN: sets the gain of the shelf from -15 dB to +15 dB;  
The HF frequency is fixed at 14 KHz

### HMF BAND

HMF GAIN: sets the gain of the shelf from -11 dB to +11 dB  
HMF BELL FREQUENCY: the stepped knob selects the peak frequency among the following 16 values from 150 Hz to 7Khz.

## E82 equalizer

### ON:

This button enables the HF-HMF sections.

### HF BAND

HF GAIN: sets the gain of the shelf from -10dB to +4 dB ;  
The HF frequency is fixed at 16 KHz.

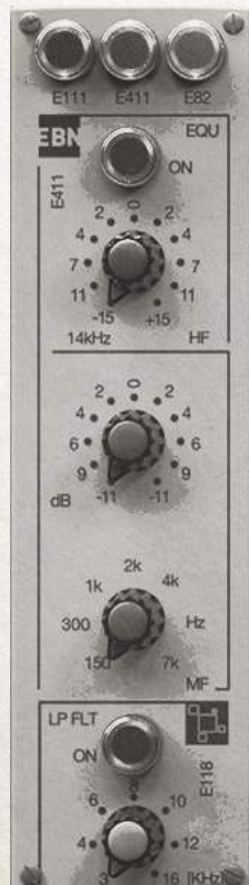
### HMF BAND

HMF GAIN: sets the gain of the shelf from -10 dB to +5dB.  
The HMF frequency is fixed at 2.5 KHz.

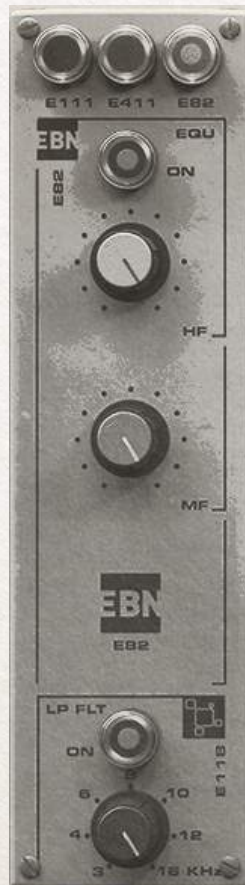
E111



E411



E82



LP filter

### ON:

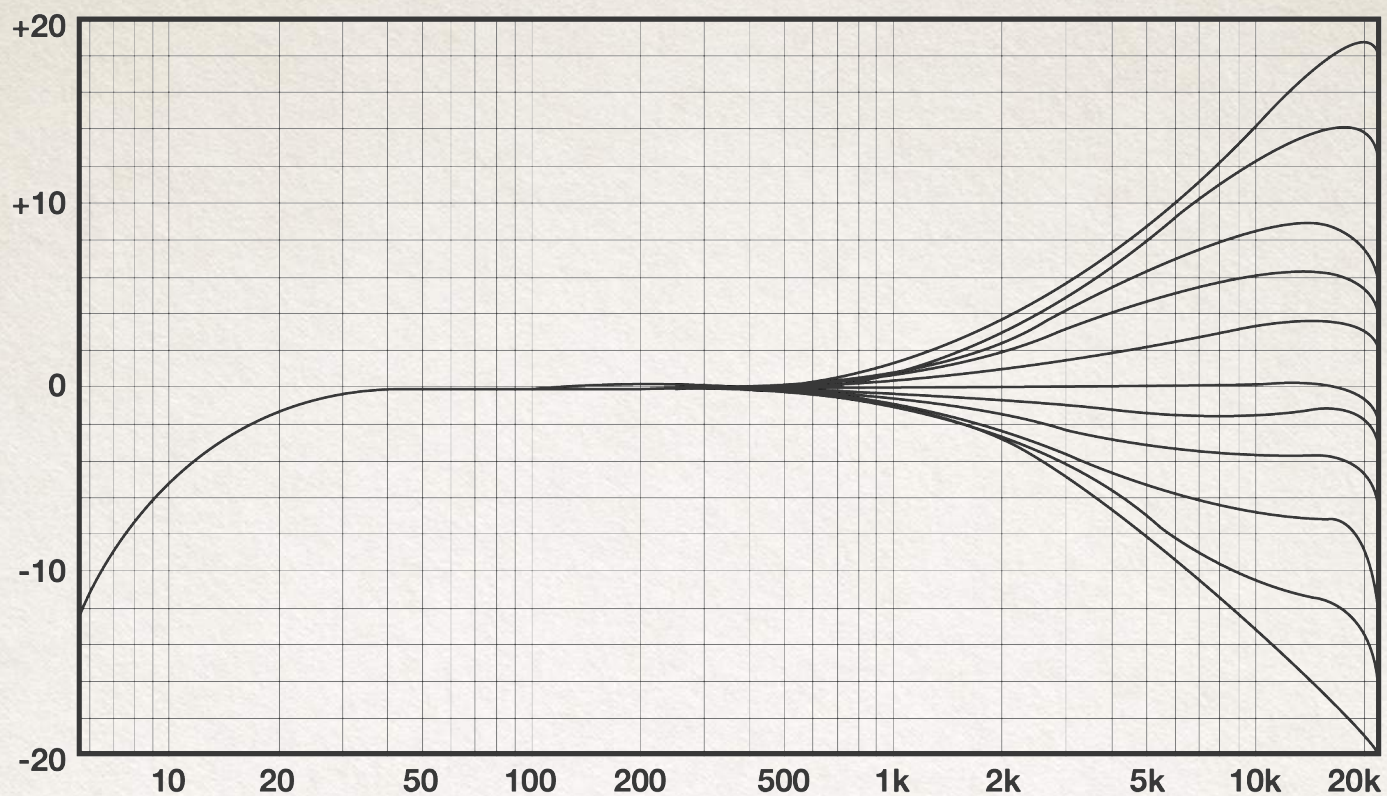
this button enables the LP filter.

**LP FREQUENCY:** Low Pass Filter among the following frequency values:  
3 KHz, 4 KHz, 6 KHz, 8 KHz, 10 KHz, 12 KHz, 16 KHz.

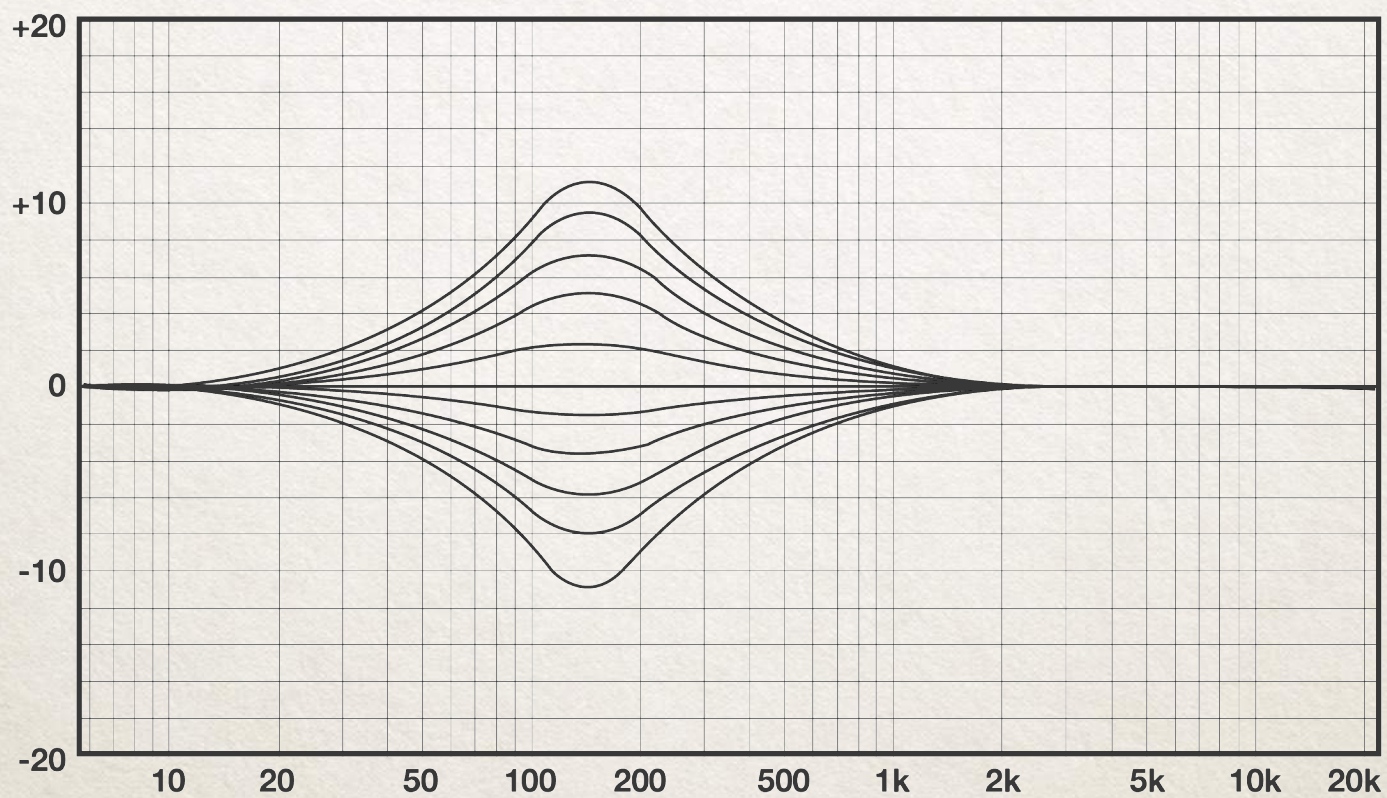
Pressing the ON button to enable the HP filter.



E111 - HF band

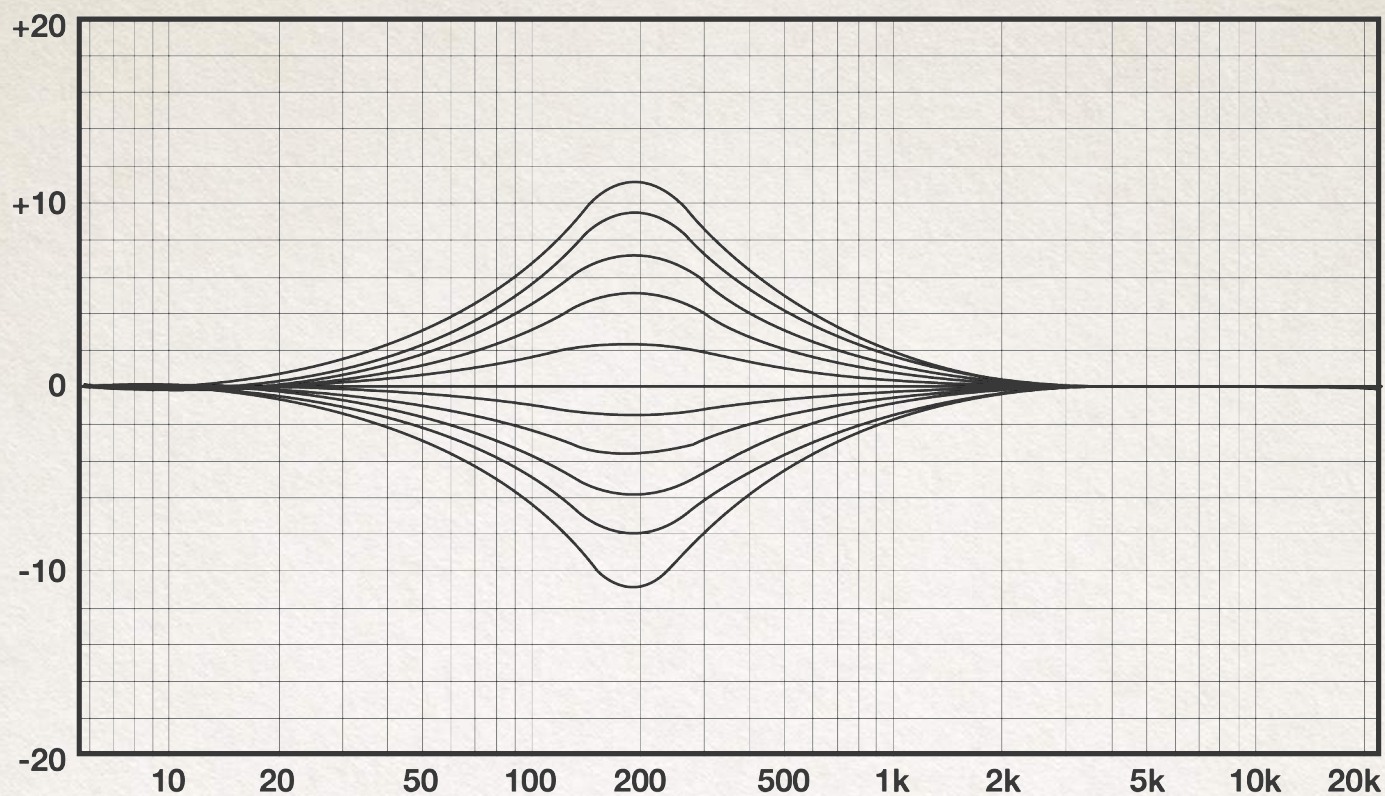


E111 - HMF band - 150 Hz

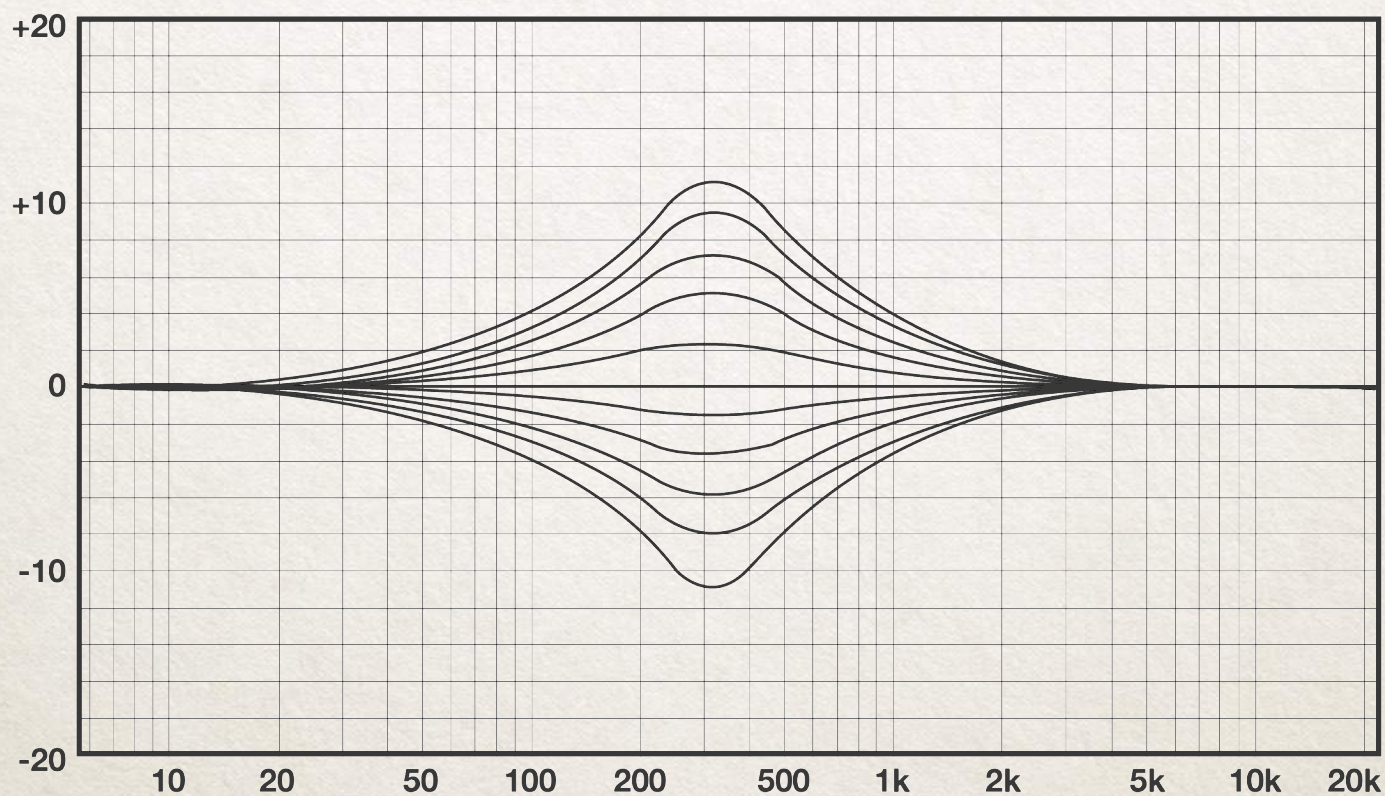




E111 - HMF band - 225 Hz

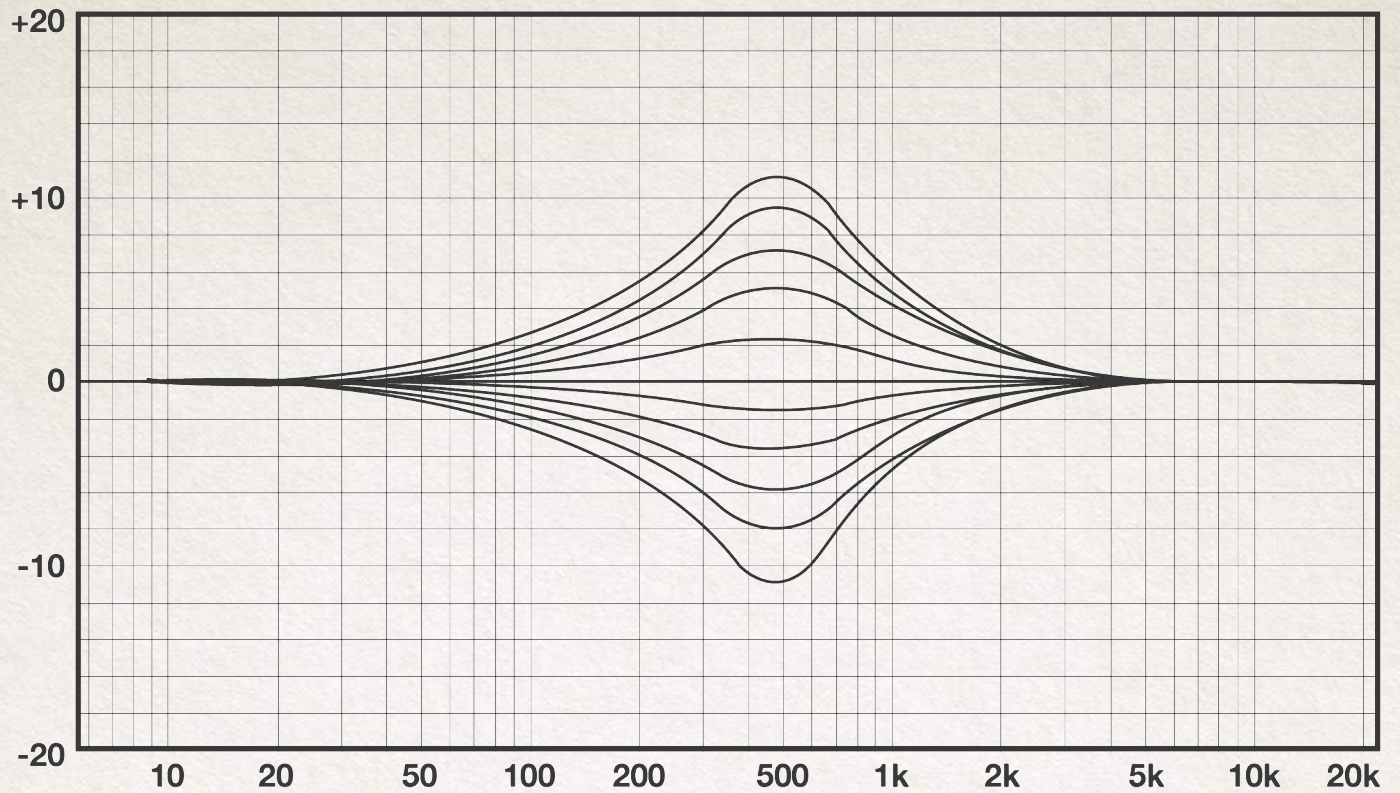


E111 - HMF band - 300 Hz

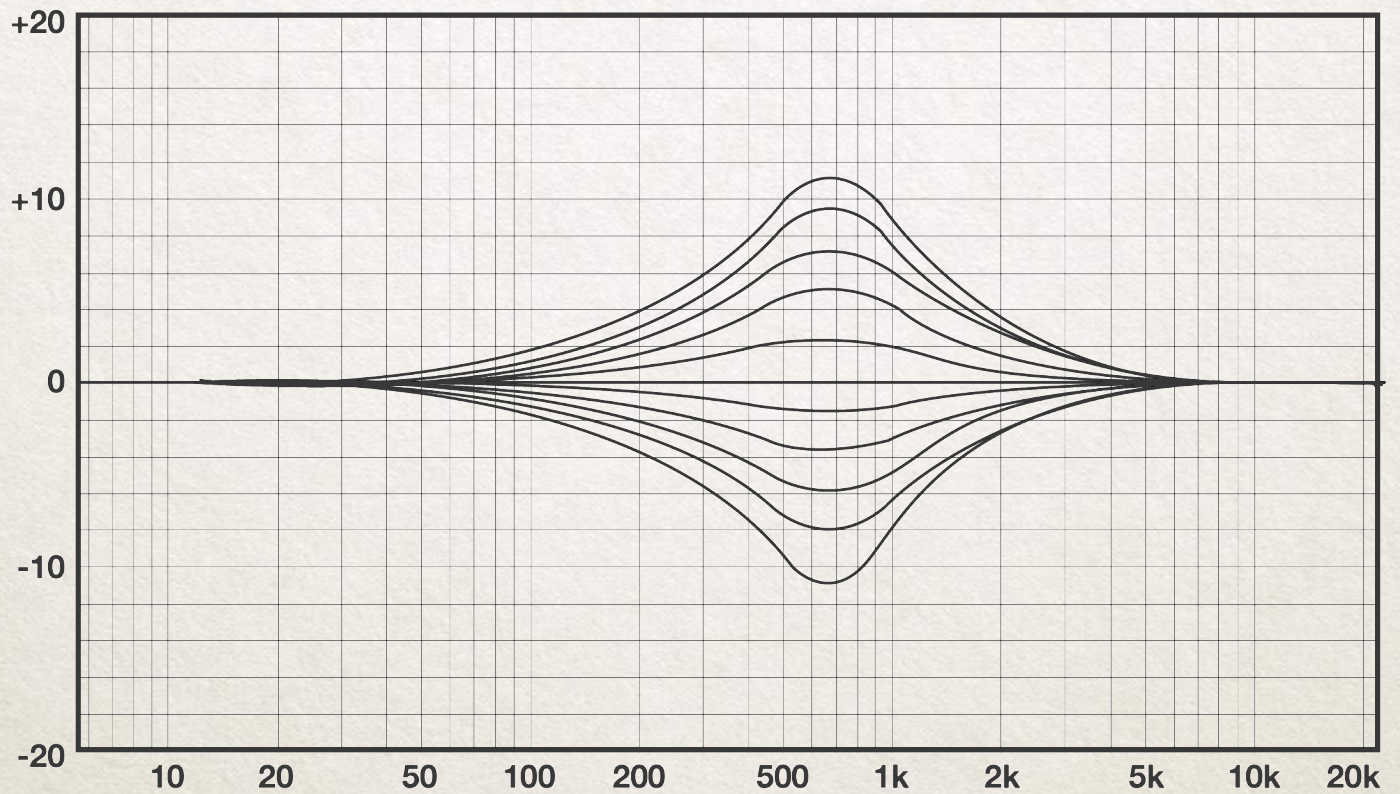




E111 - HMF band - 520 Hz

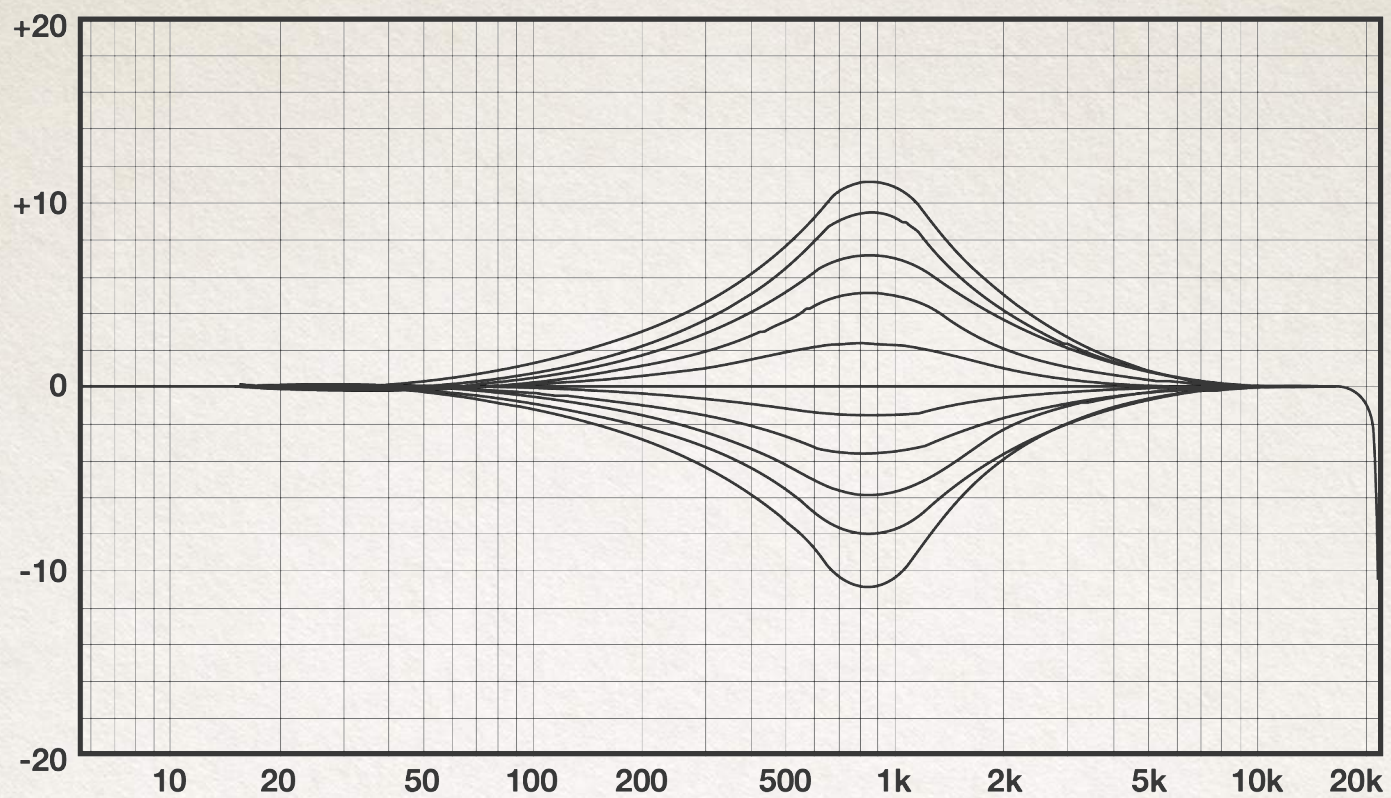


E111 - HMF band - 1000 Hz

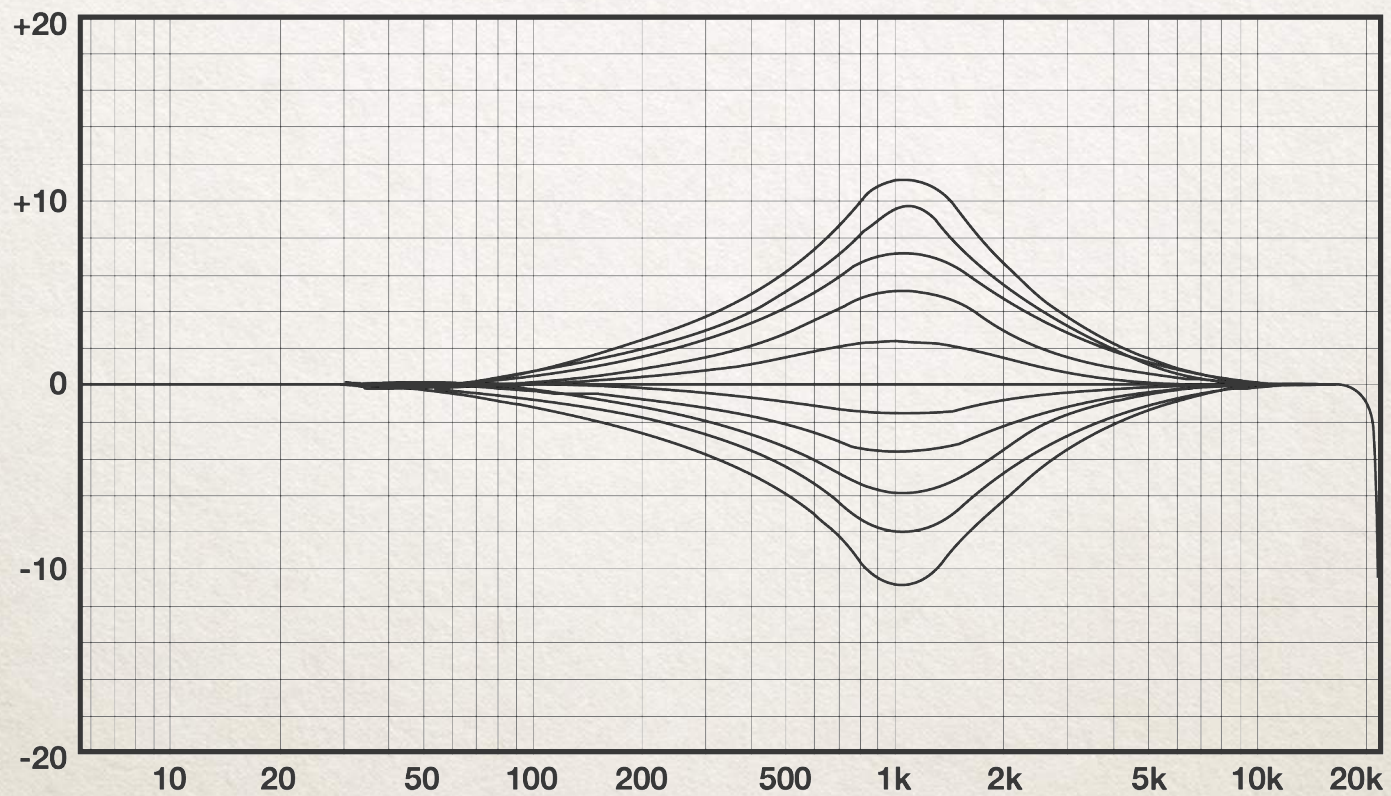




E111 - HMF band - 1050 Hz

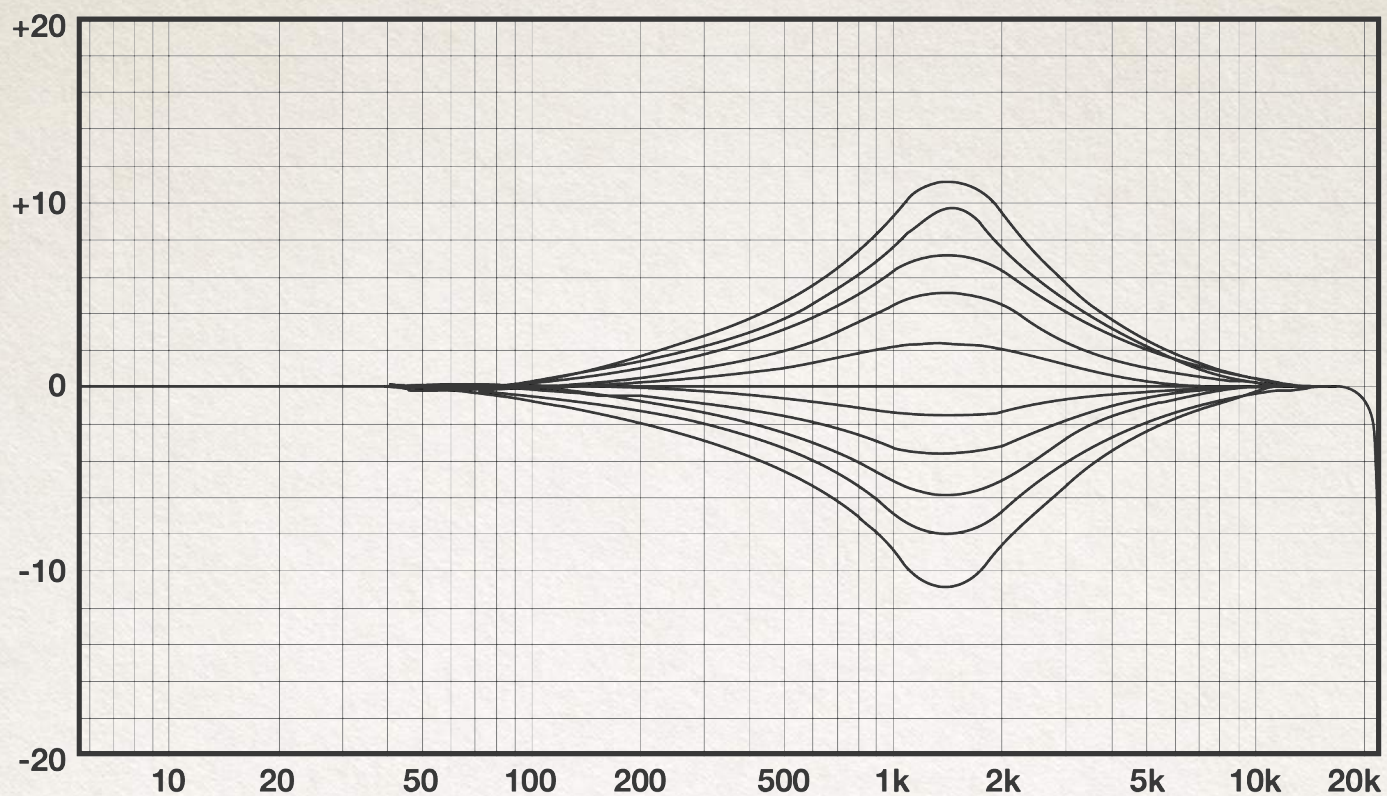


E111 - HMF band - 1280 Hz

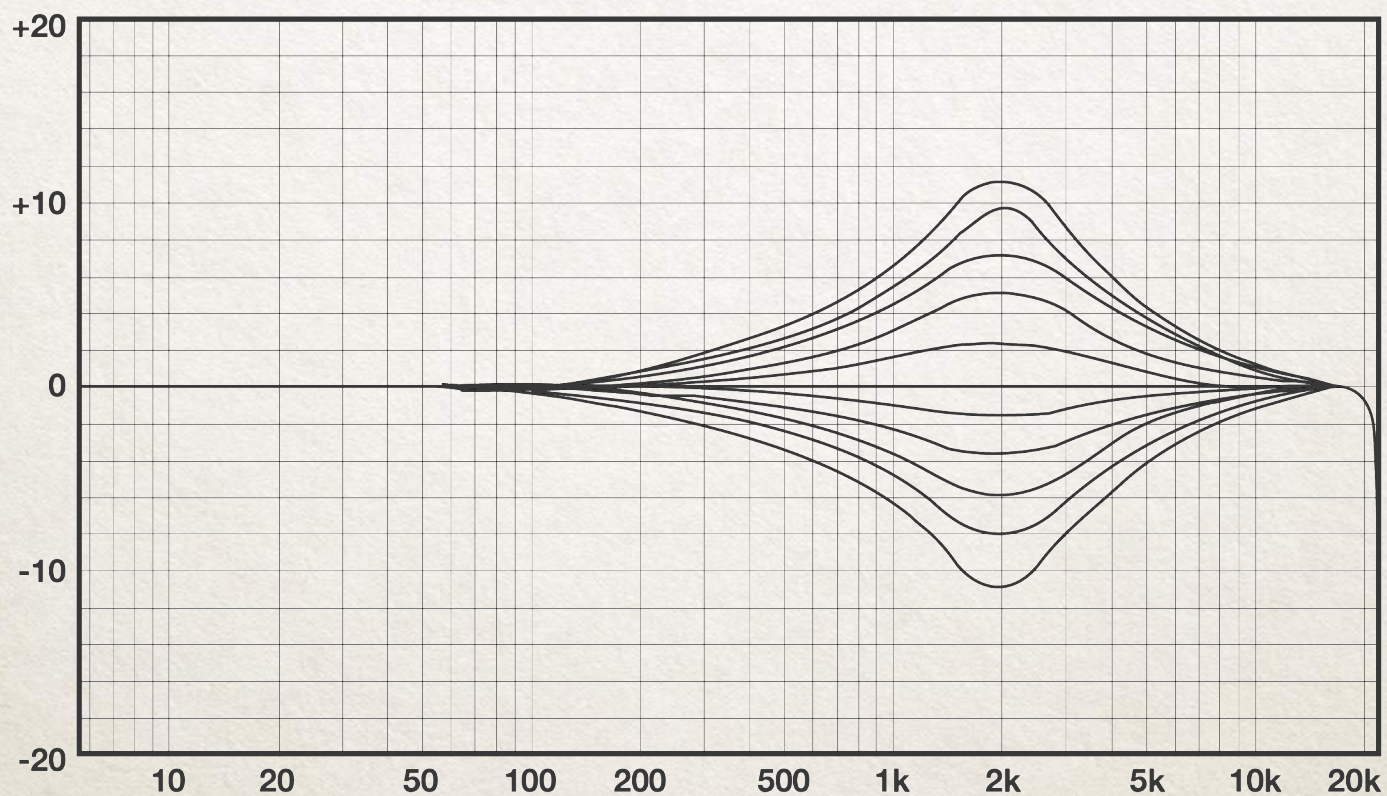




E111 - HMF band - 2000 Hz

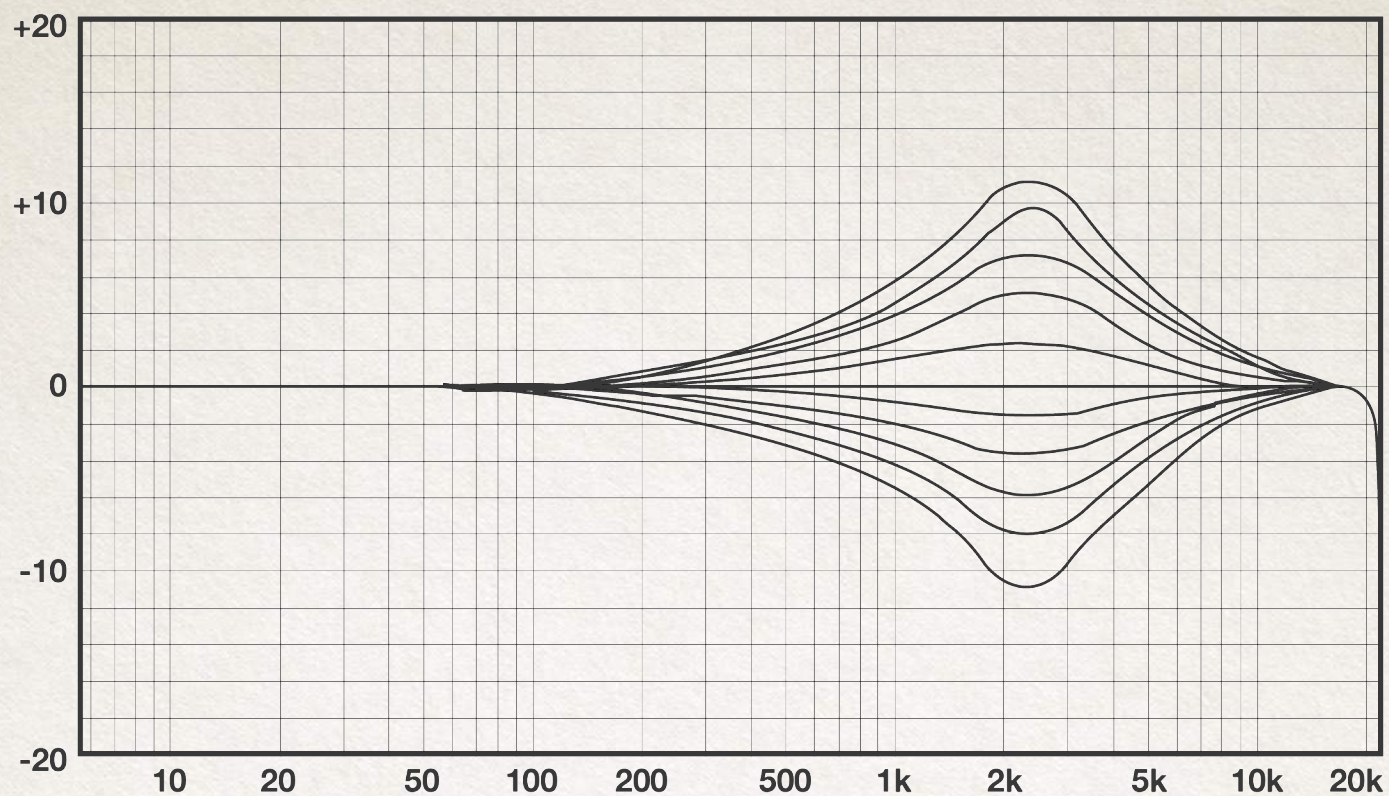


E111 - HMF band - 2500 Hz

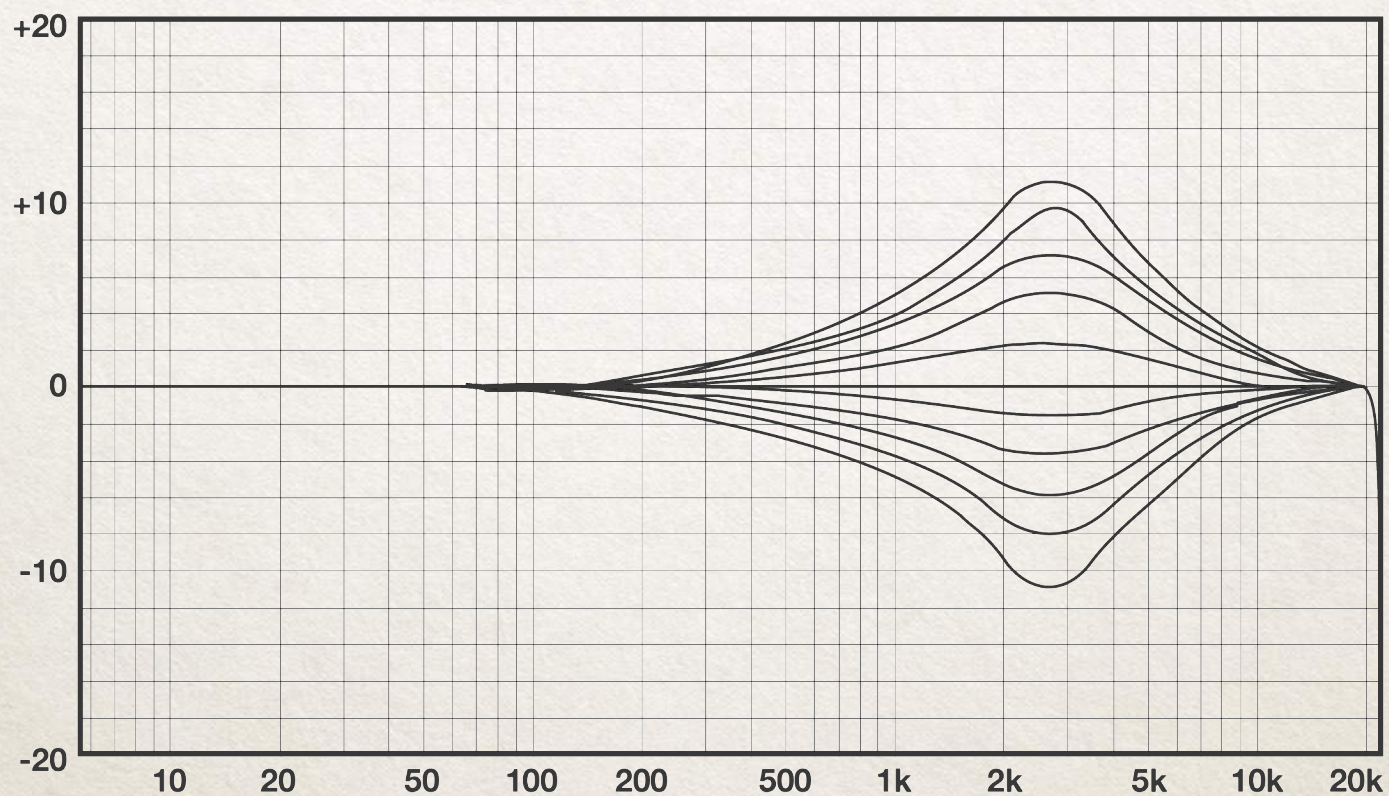




E111 - HMF band - 2800 Hz

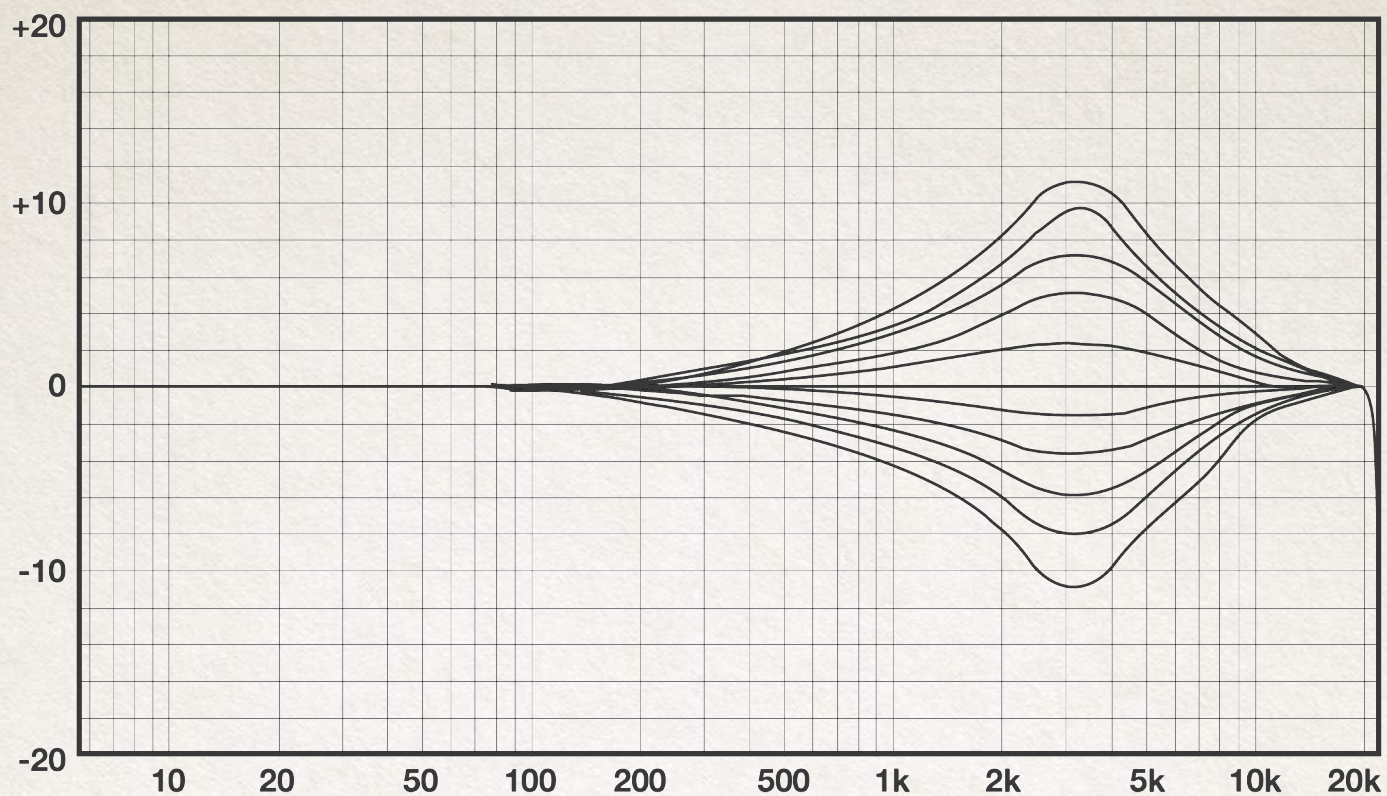


E111 - HMF band - 4000 Hz

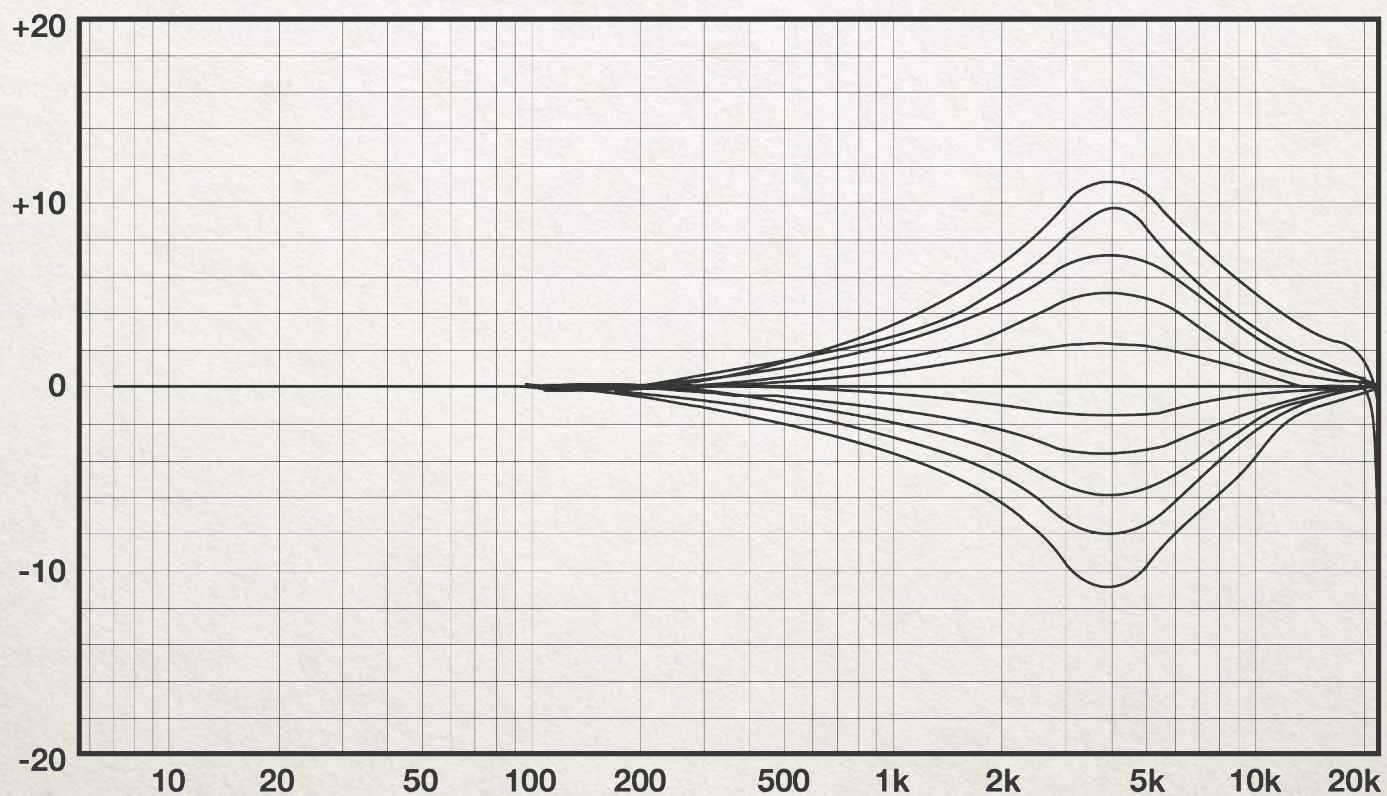




E111 - HMF band - 4350 Hz

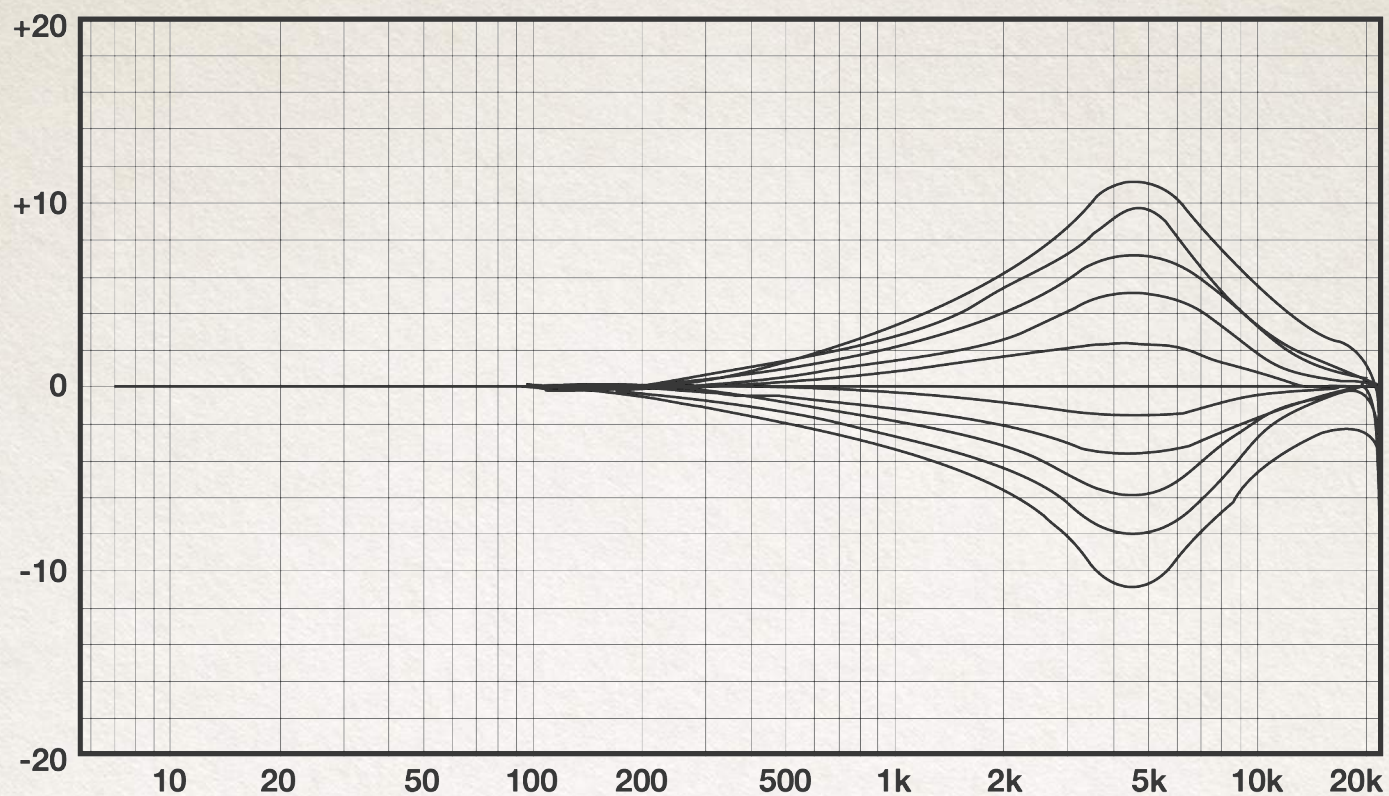


E111 - HMF band - 4700 Hz

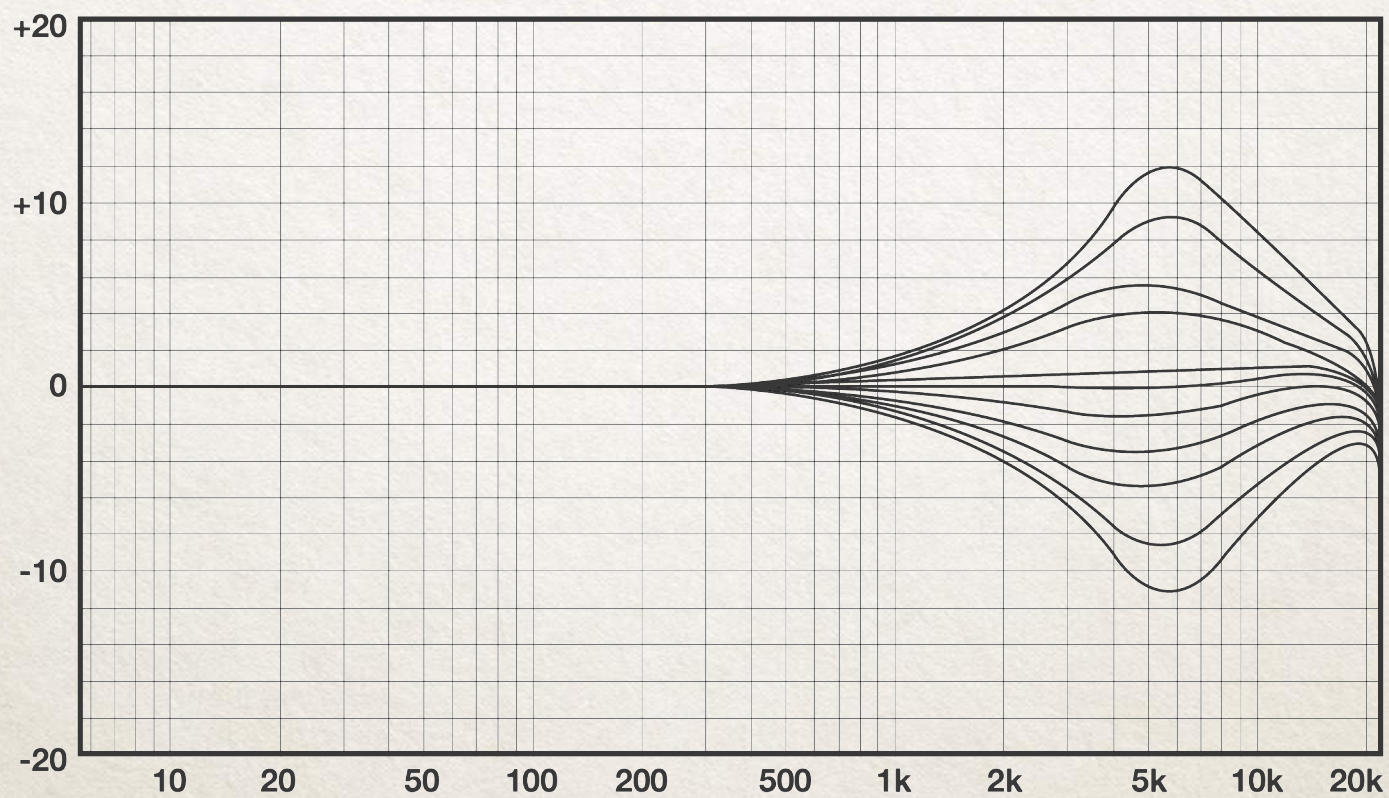




E111 - HMF band - 5300 Hz

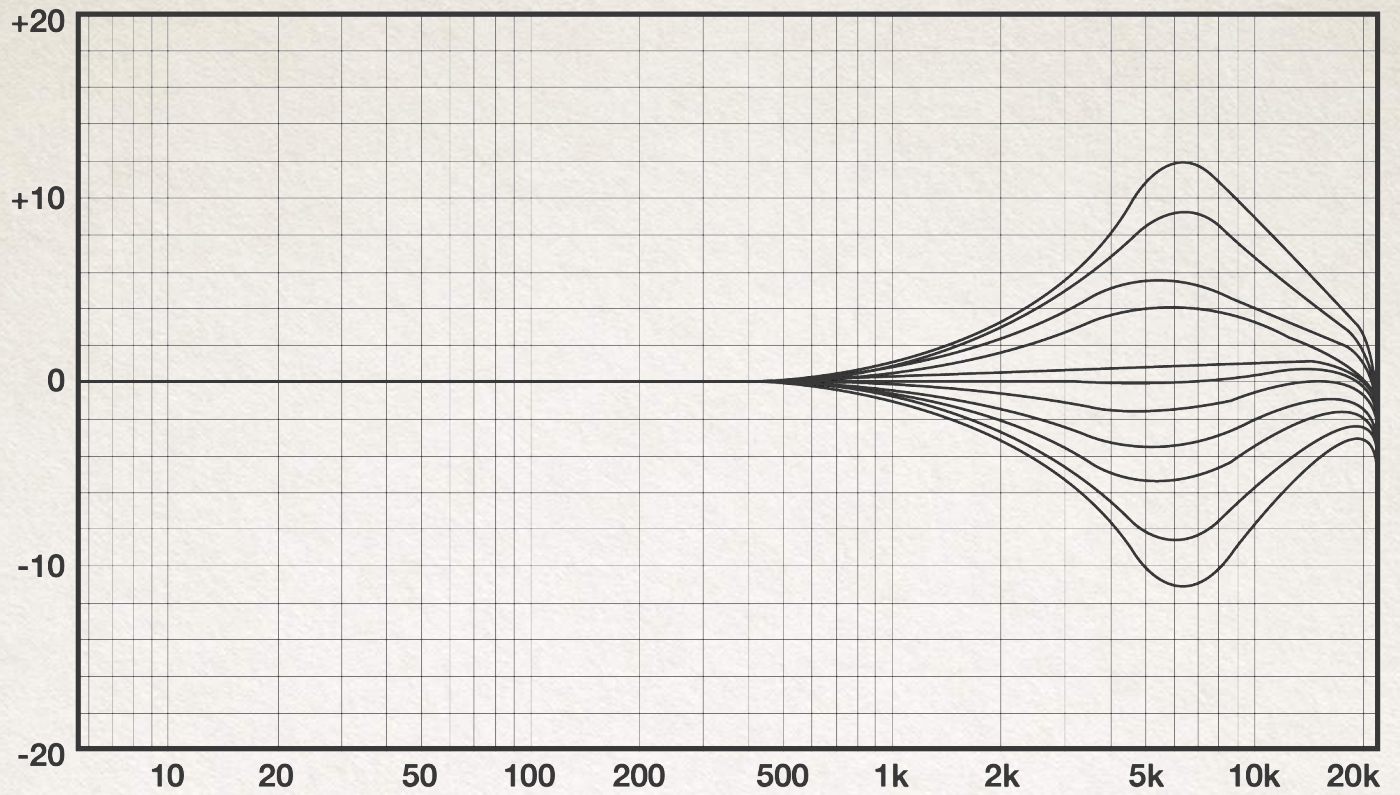


E111 - HMF band - 6200 Hz

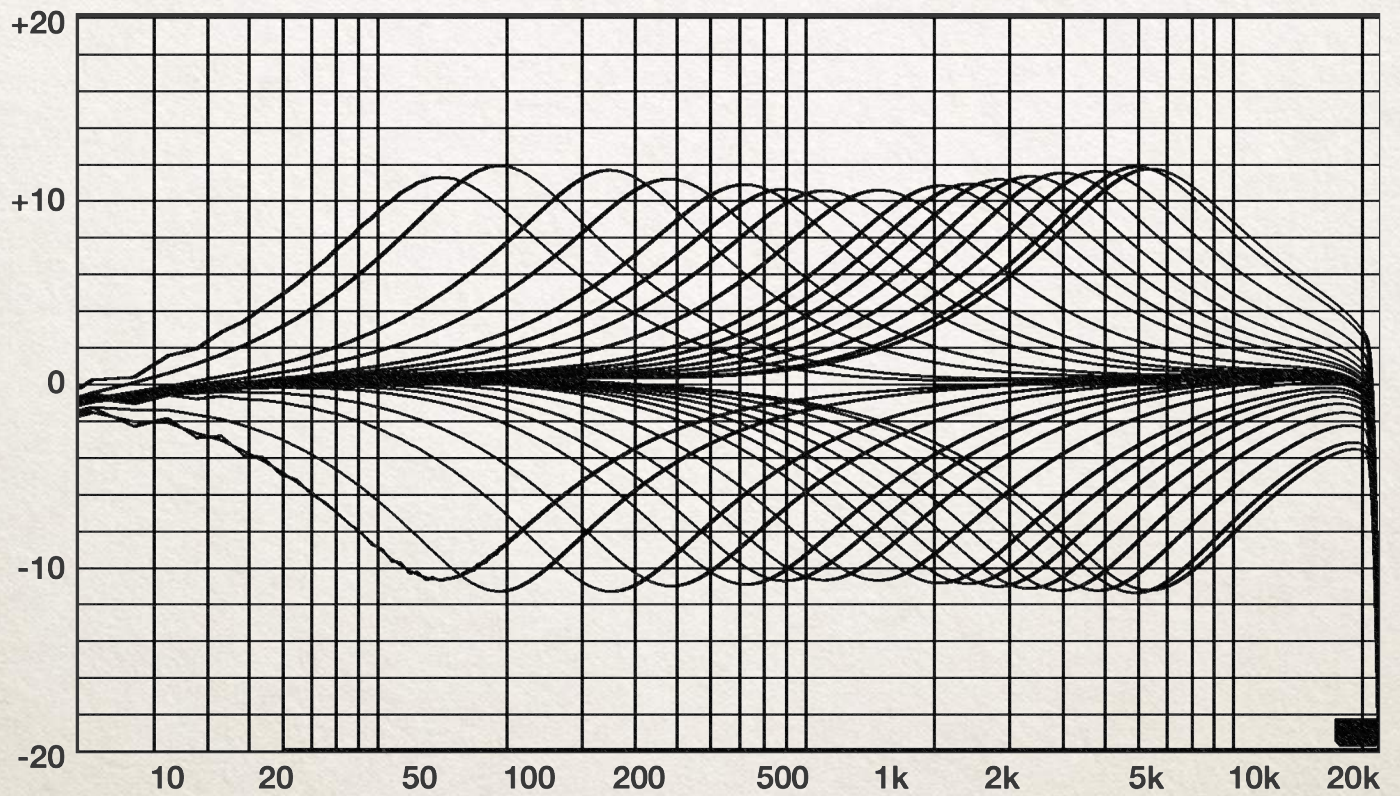




E111 - HMF band - 7000 Hz

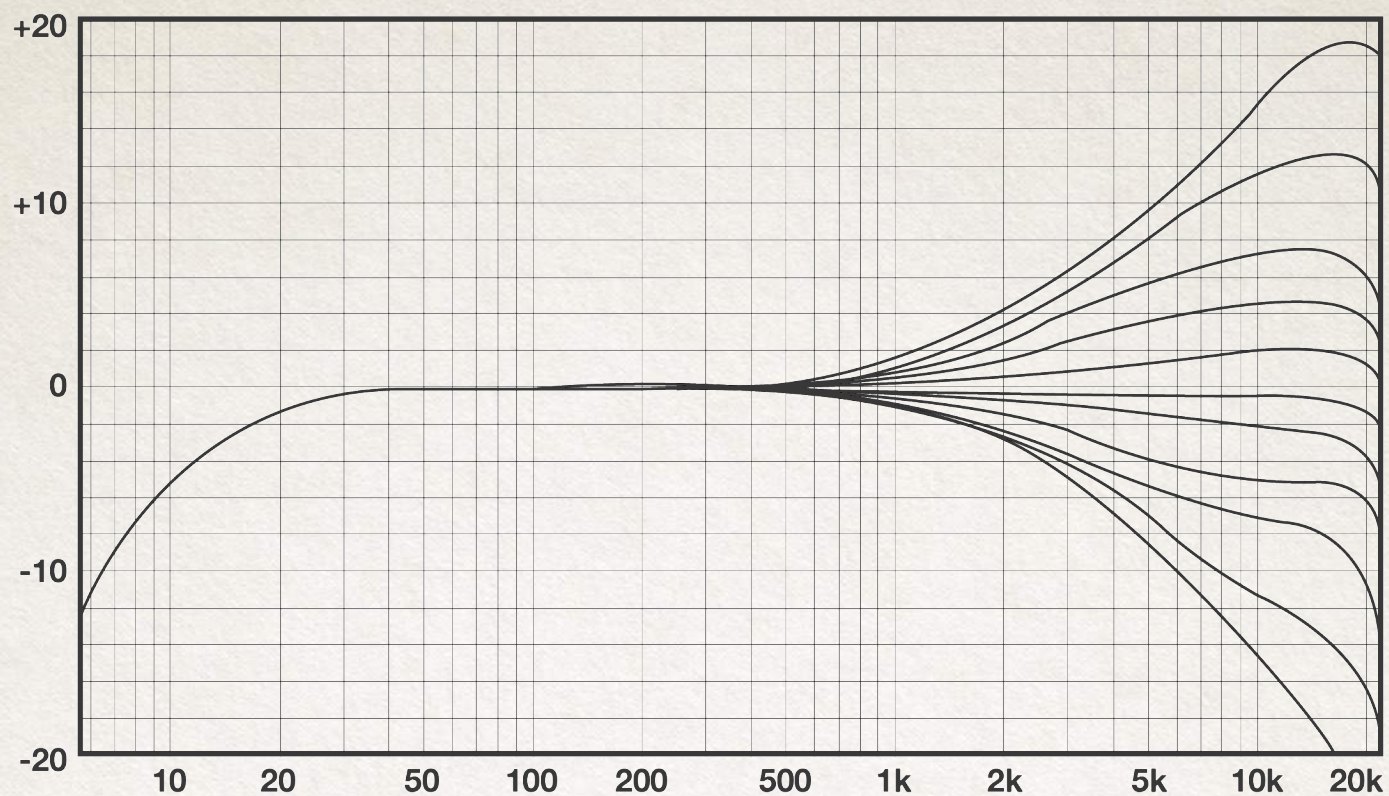


E111 - All frequencies

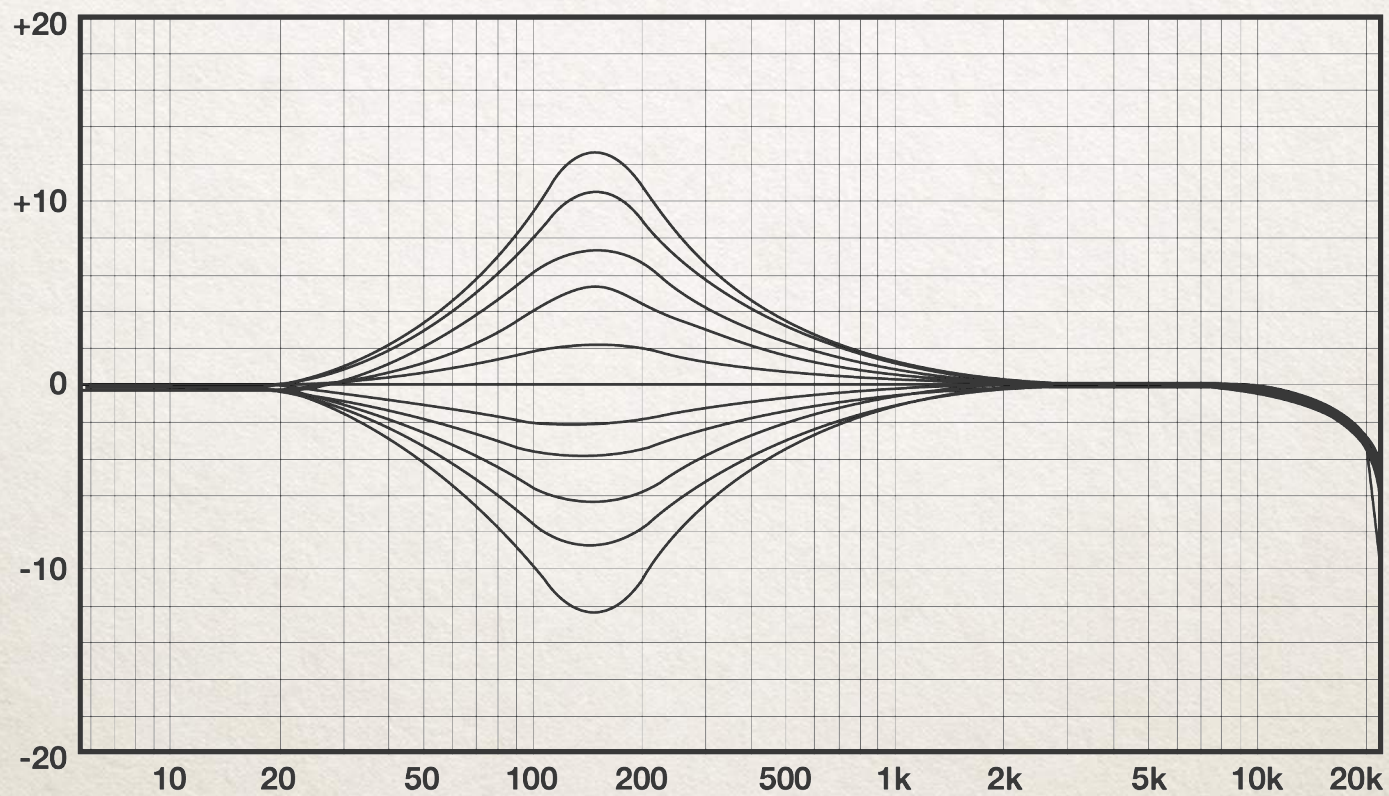




E411 - HF band

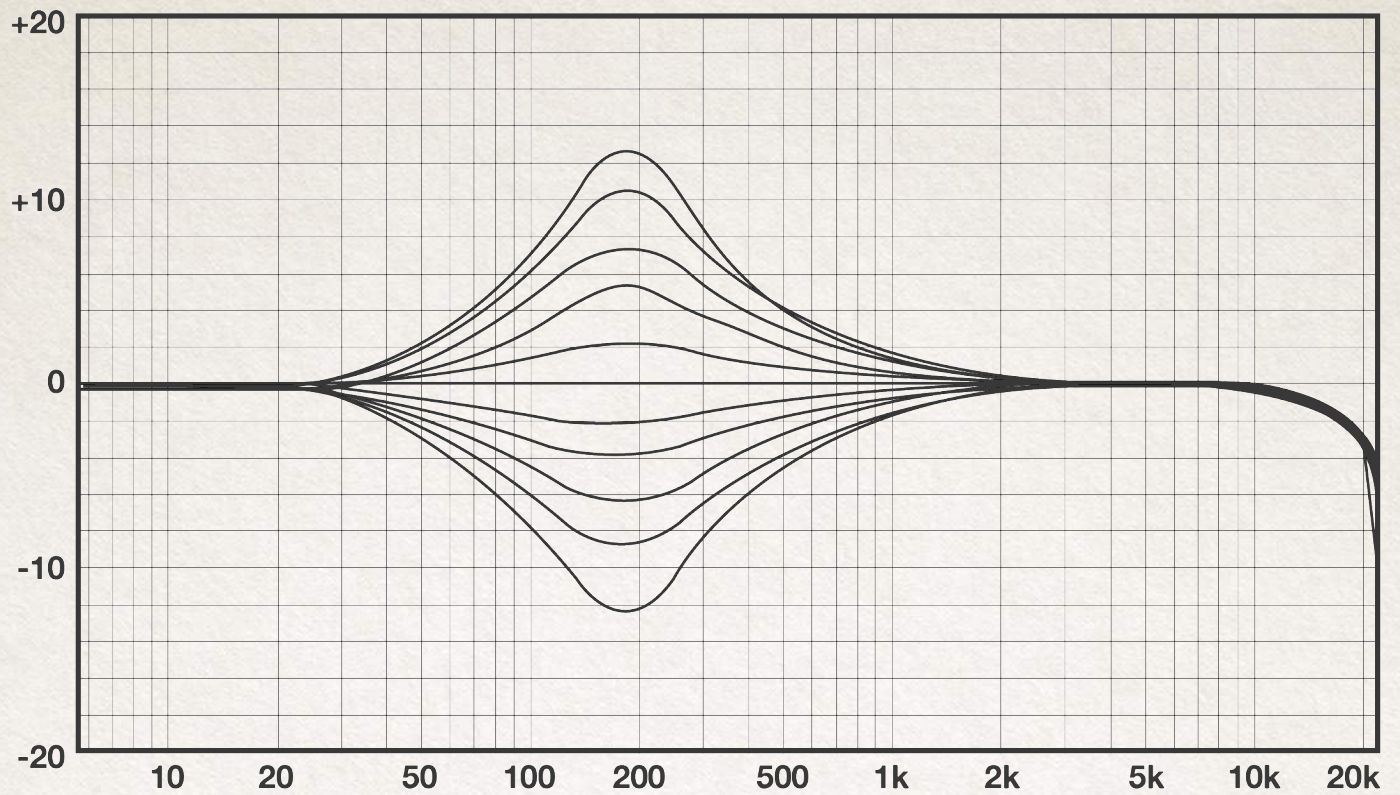


E411 - HMF band - 150 Hz

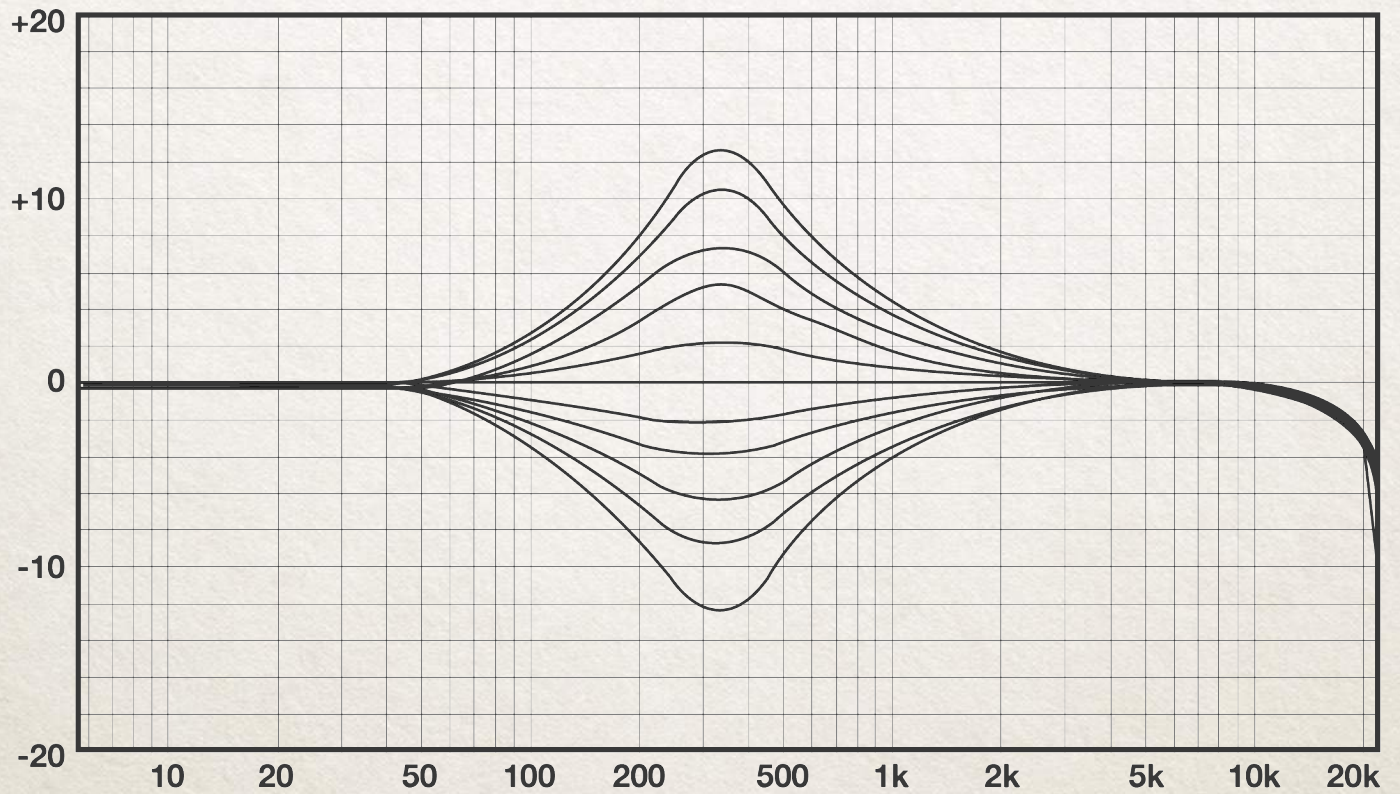




E411 - HMF band - 200 Hz

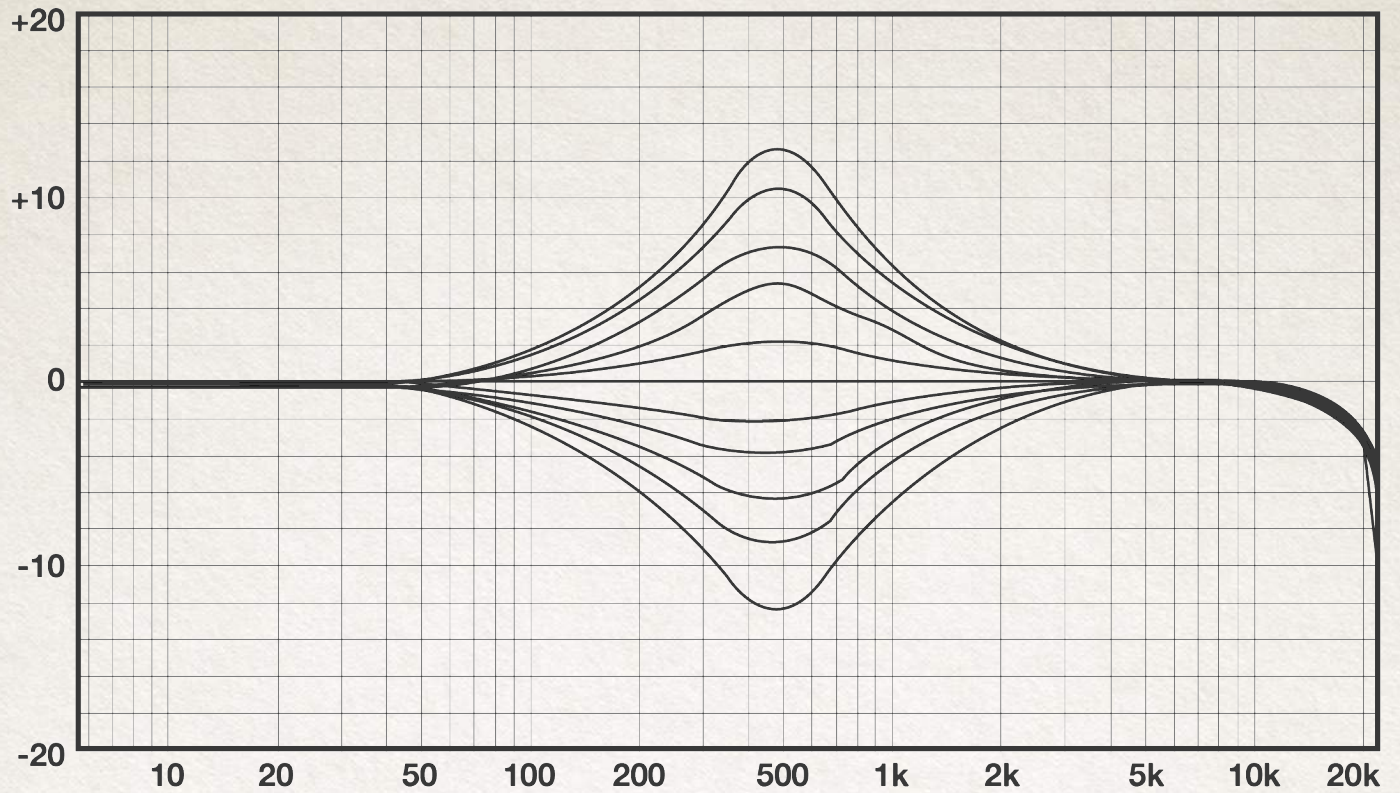


E411 - HMF band - 300 Hz

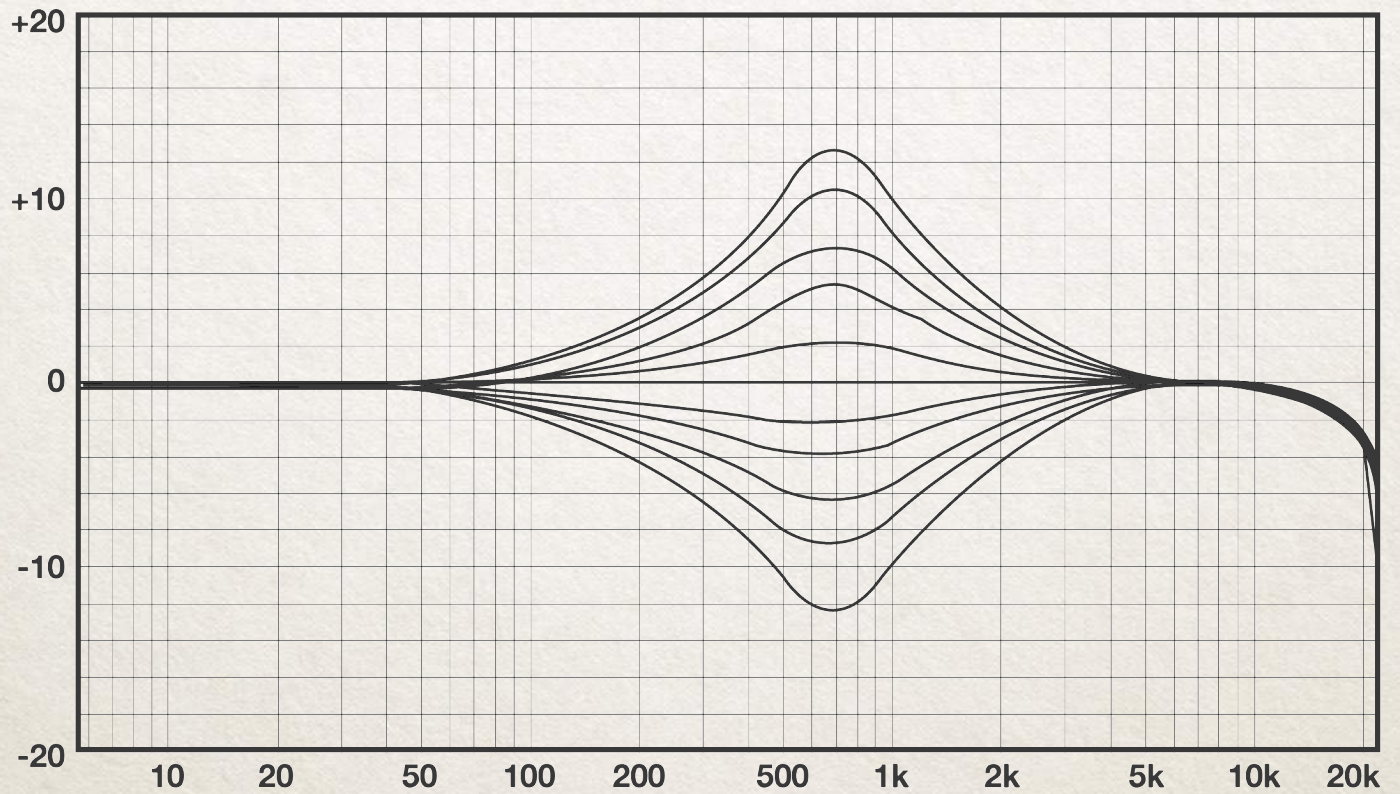




E411 - HMF band - 520 Hz

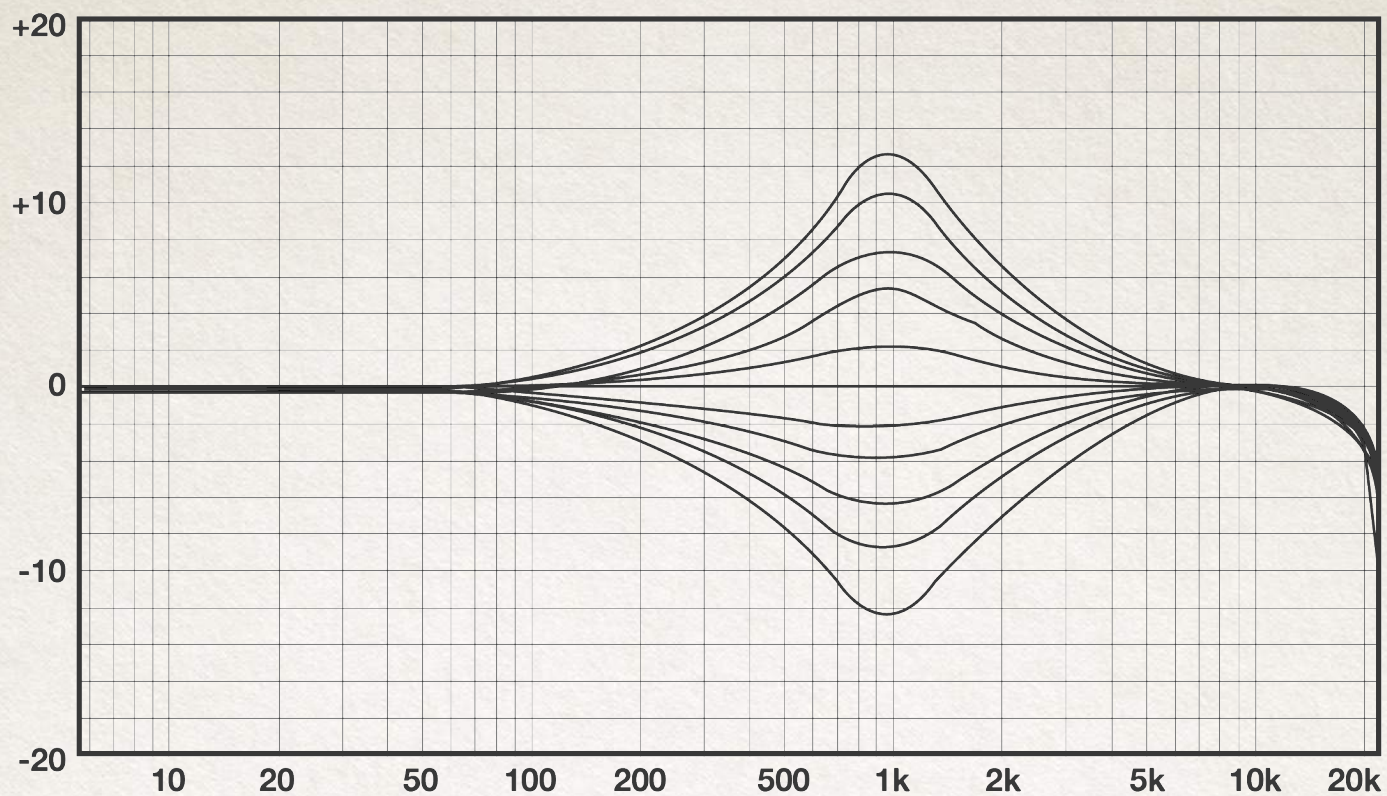


E411 - HMF band - 1000 Hz

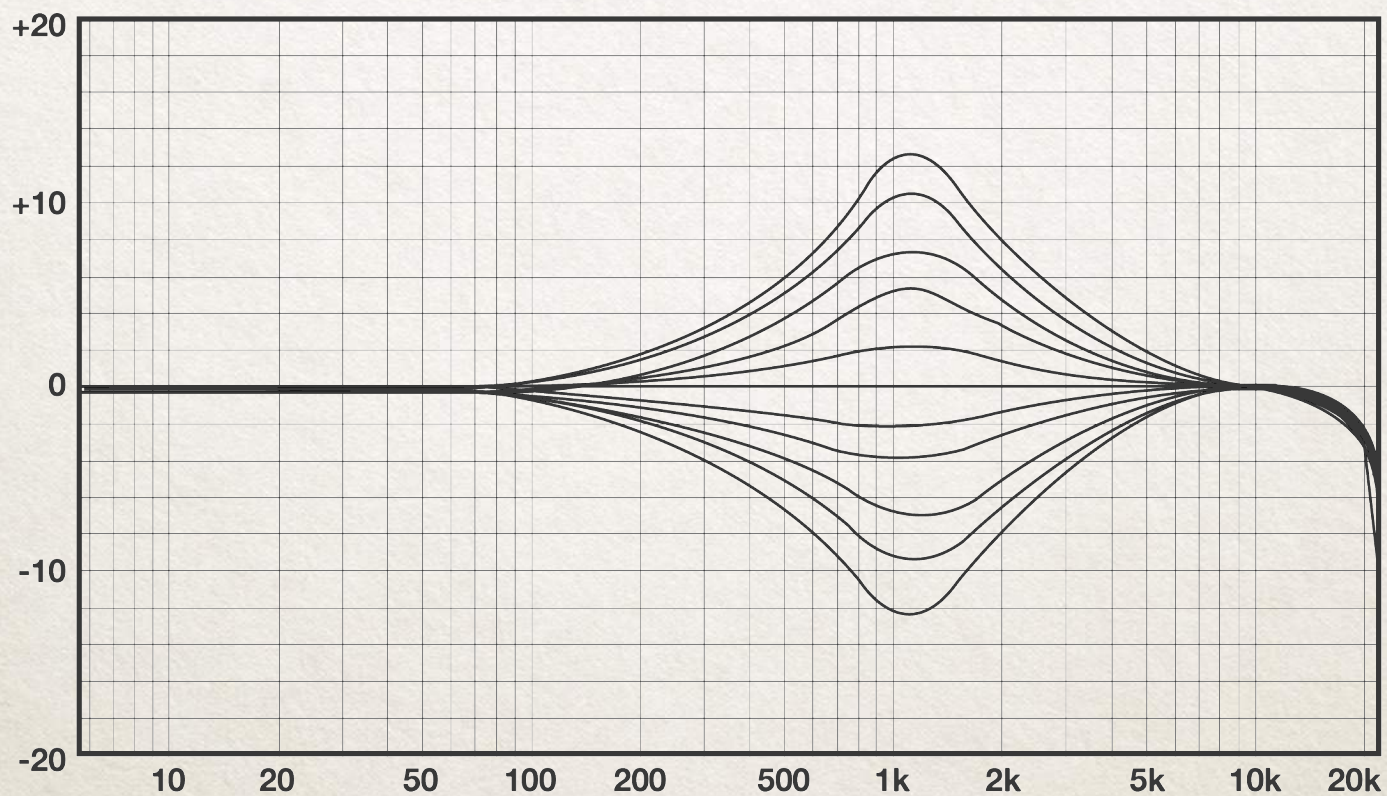




E411 - HMF band - 1050 Hz

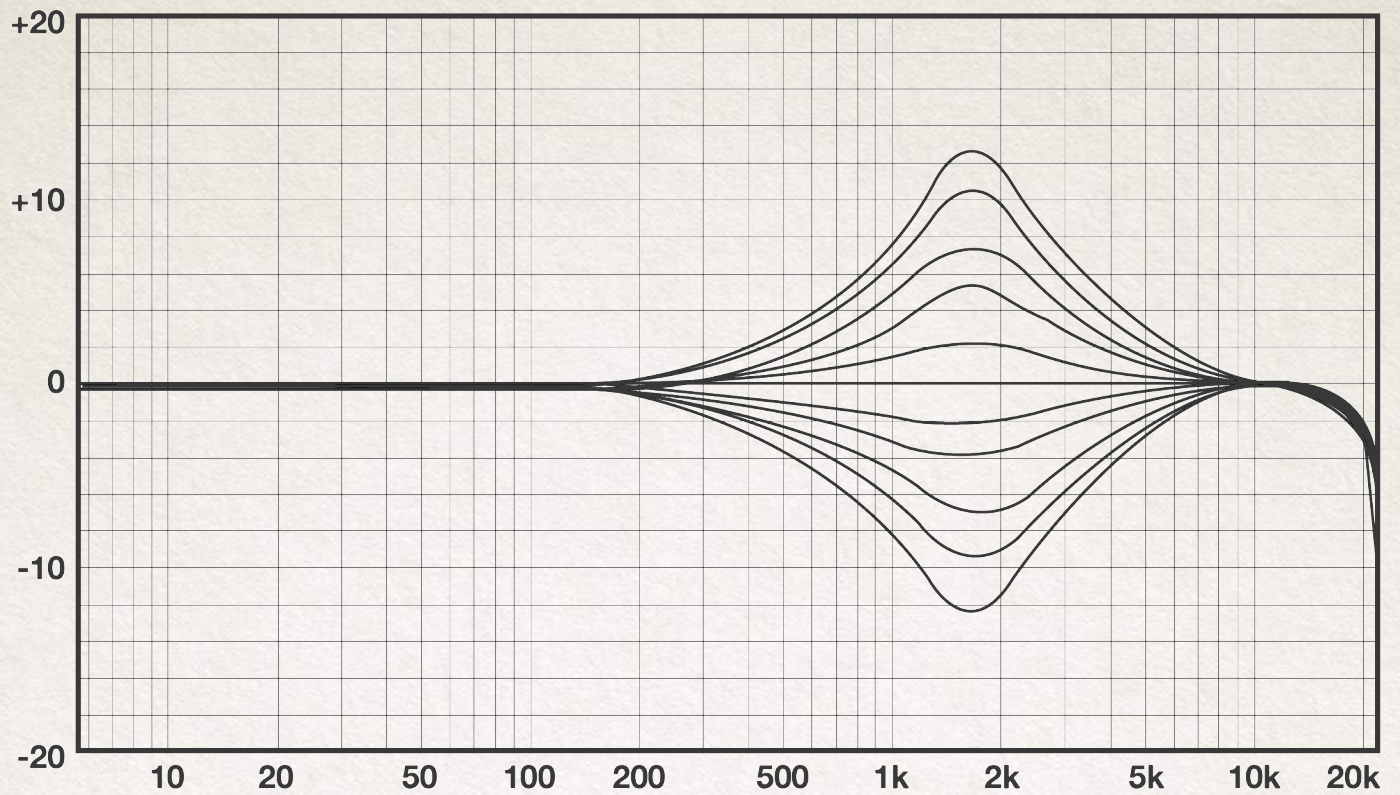


E411 - HMF band - 1250 Hz

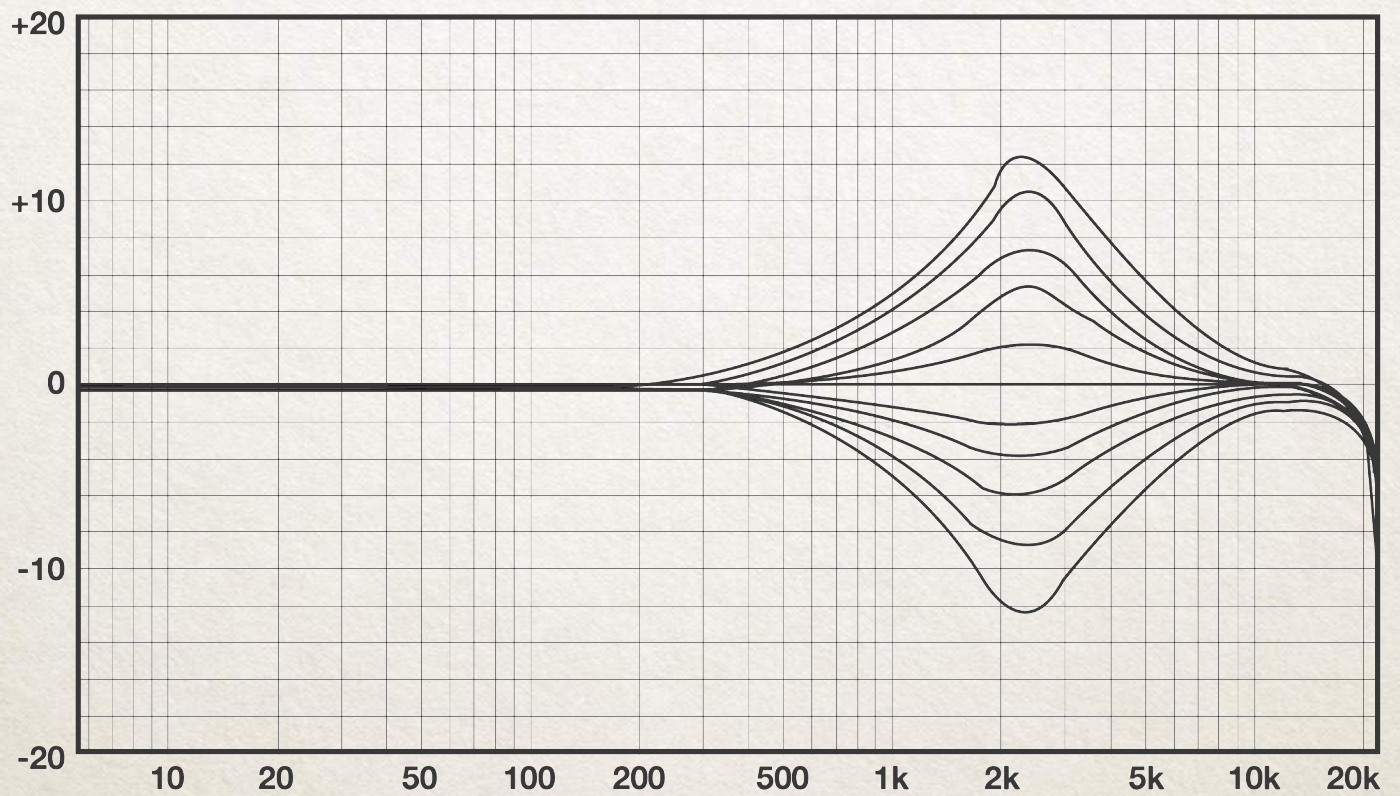




E411 - HMF band - 2000 Hz

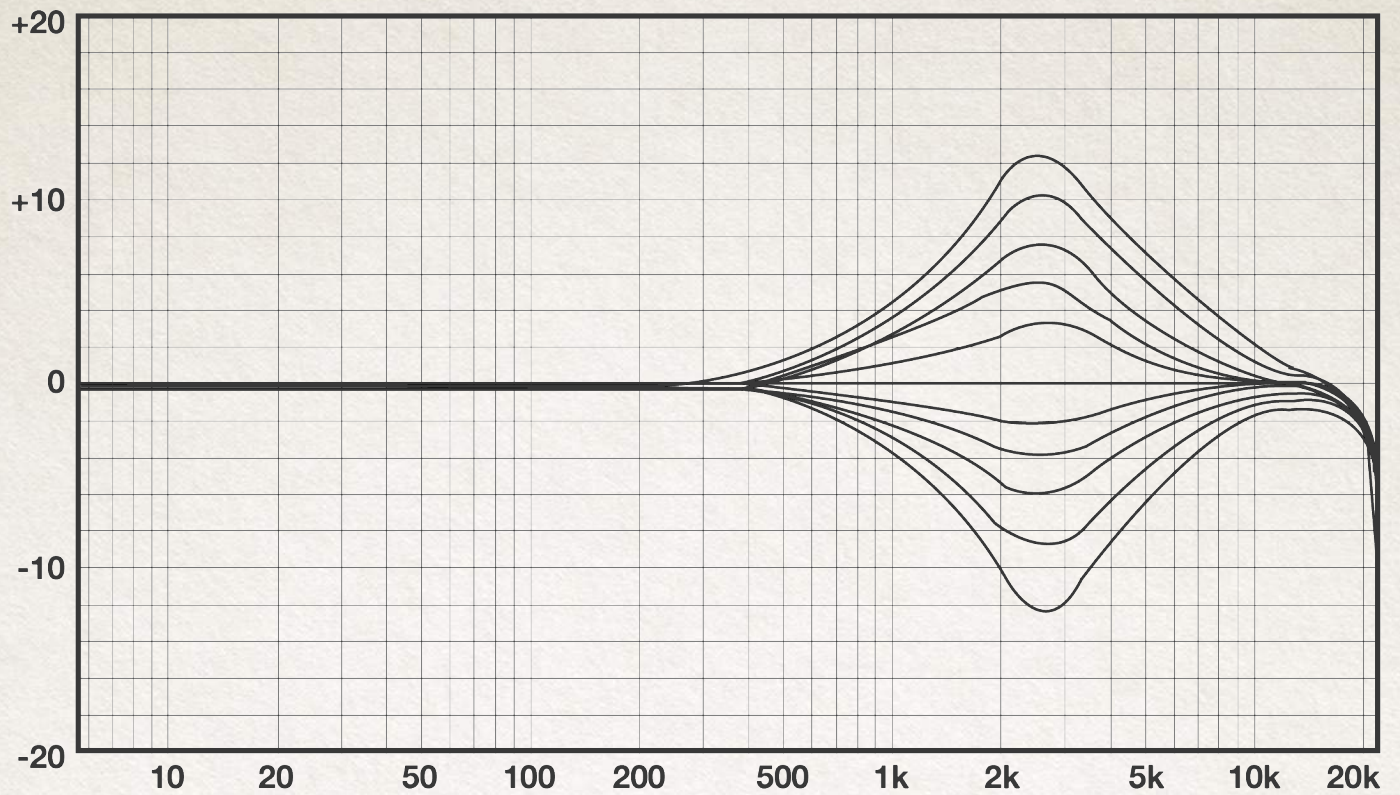


E411 - HMF band - 2300 Hz

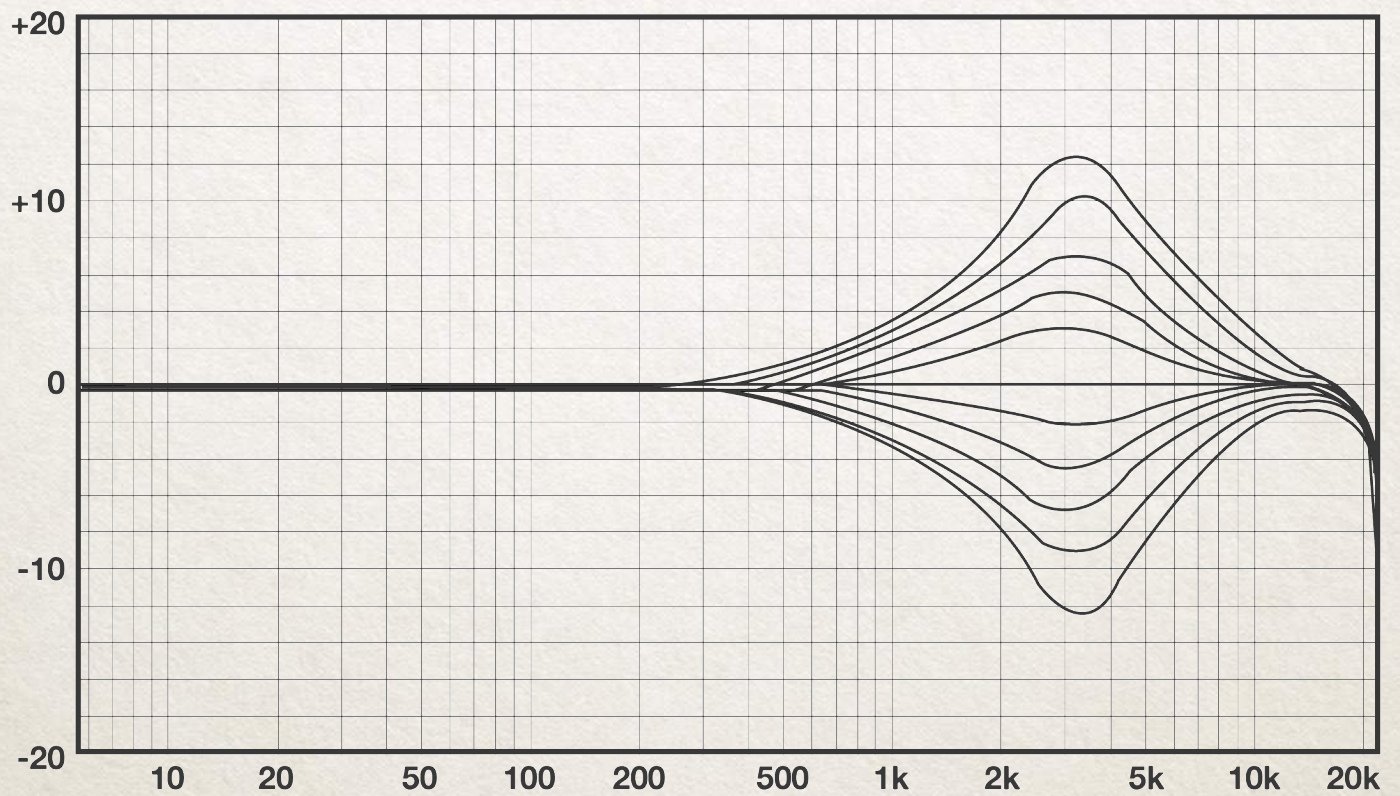




E411 - HMF band - 2600 Hz

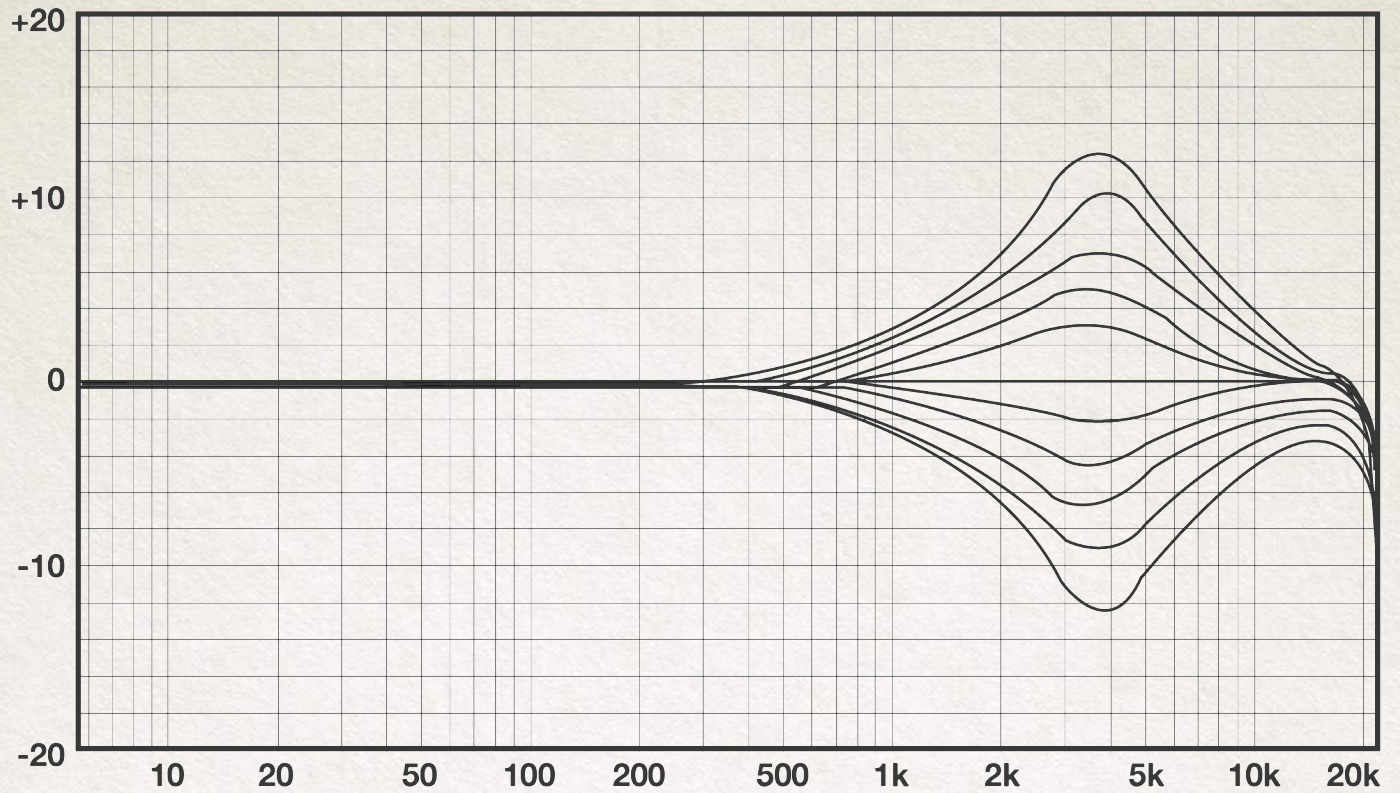


E411 - HMF band - 4000 Hz

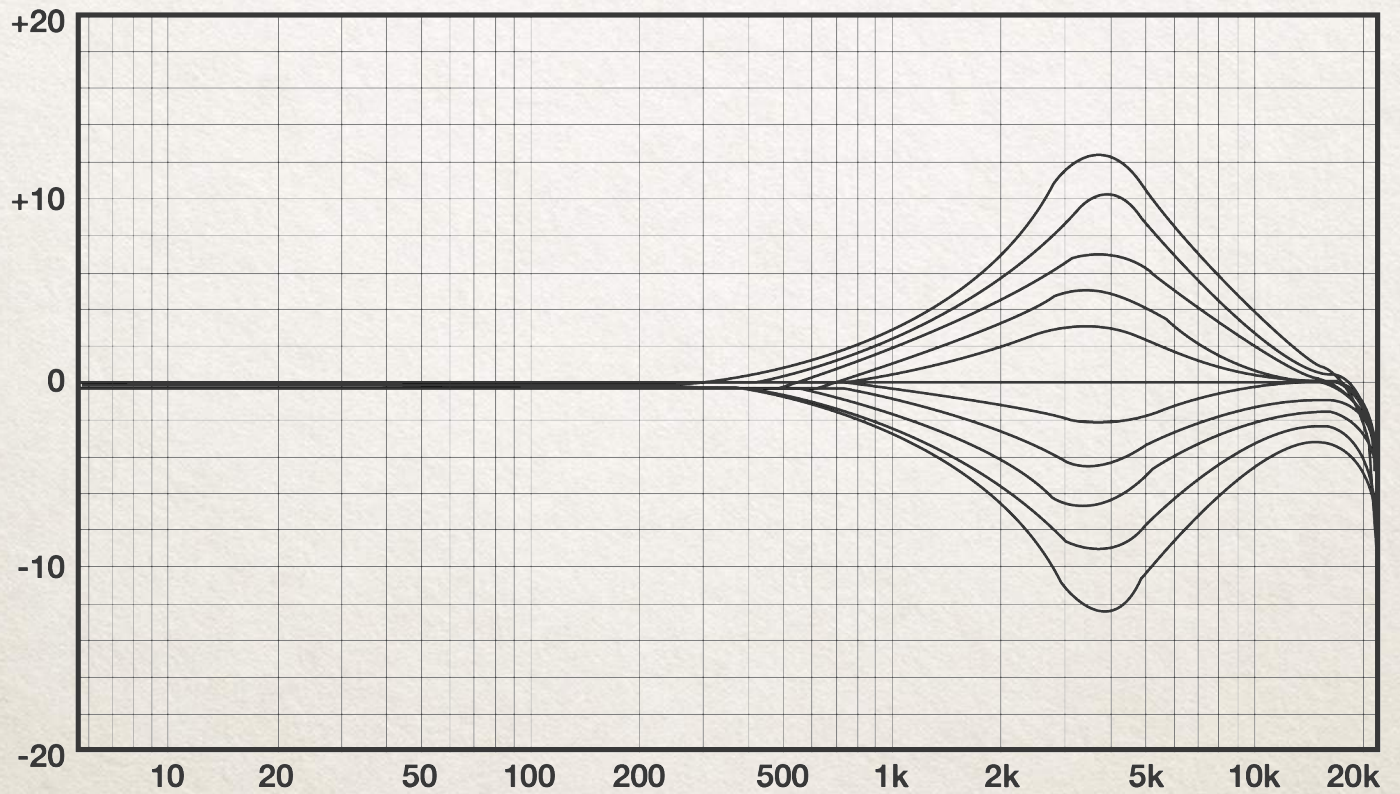




E411 - HMF band - 4350 Hz

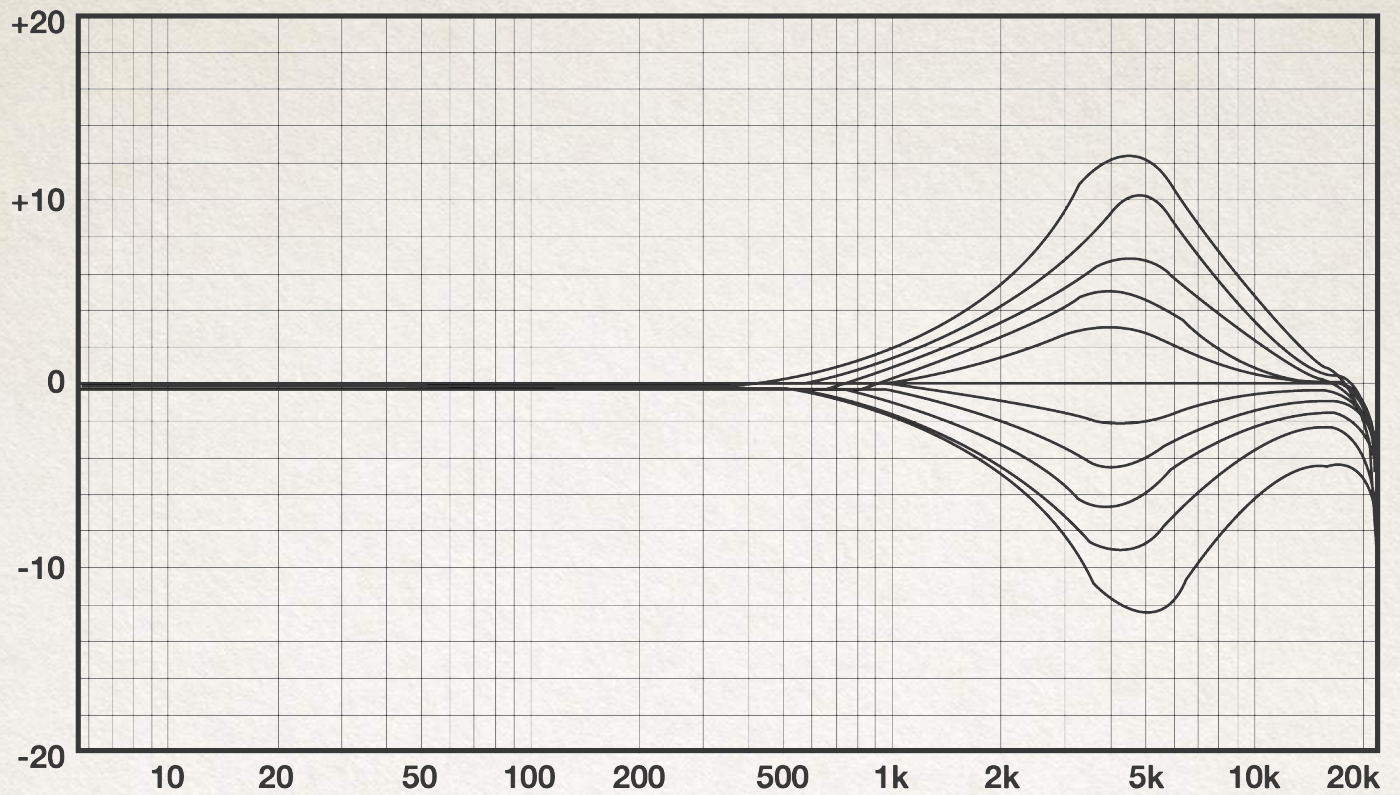


E411 - HMF band - 4500 Hz

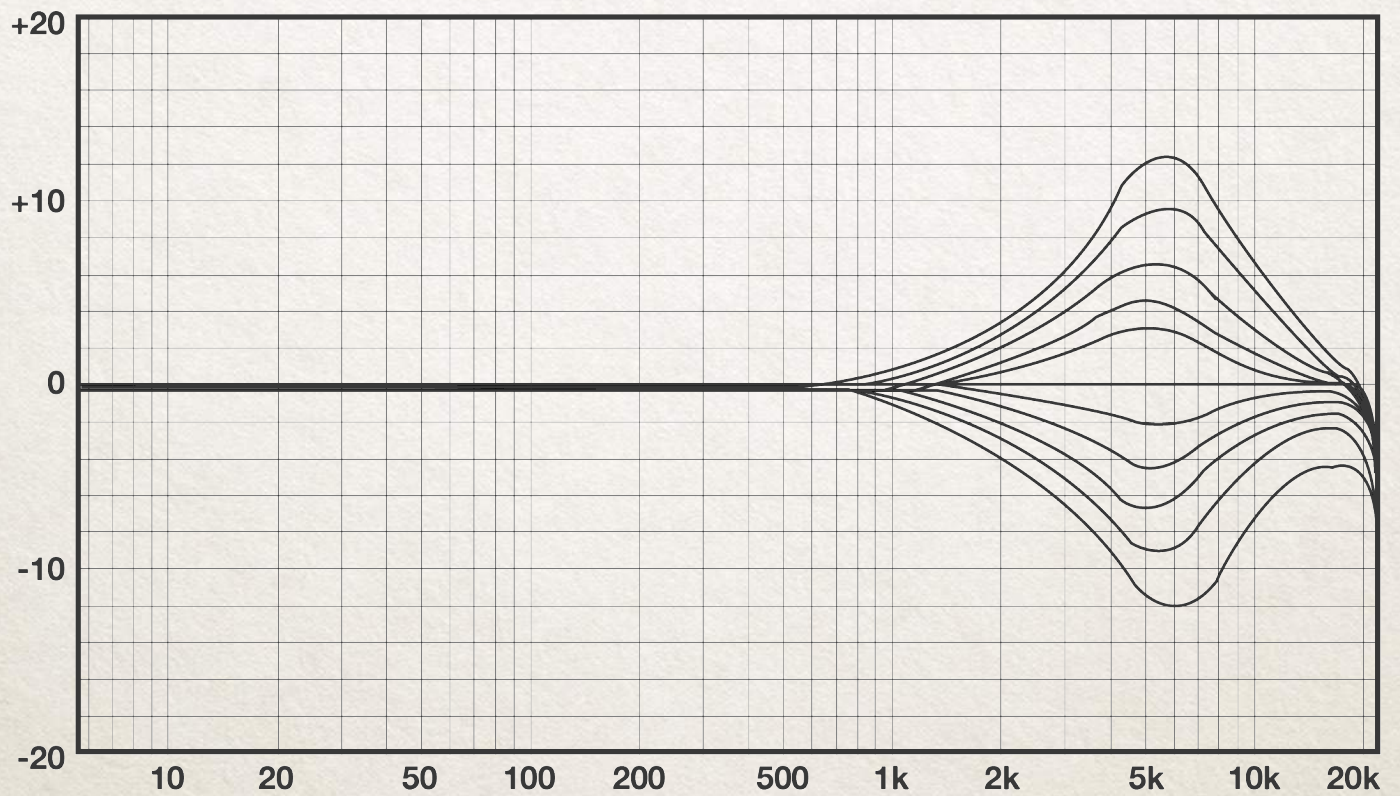




E411 - HMF band - 5300 Hz

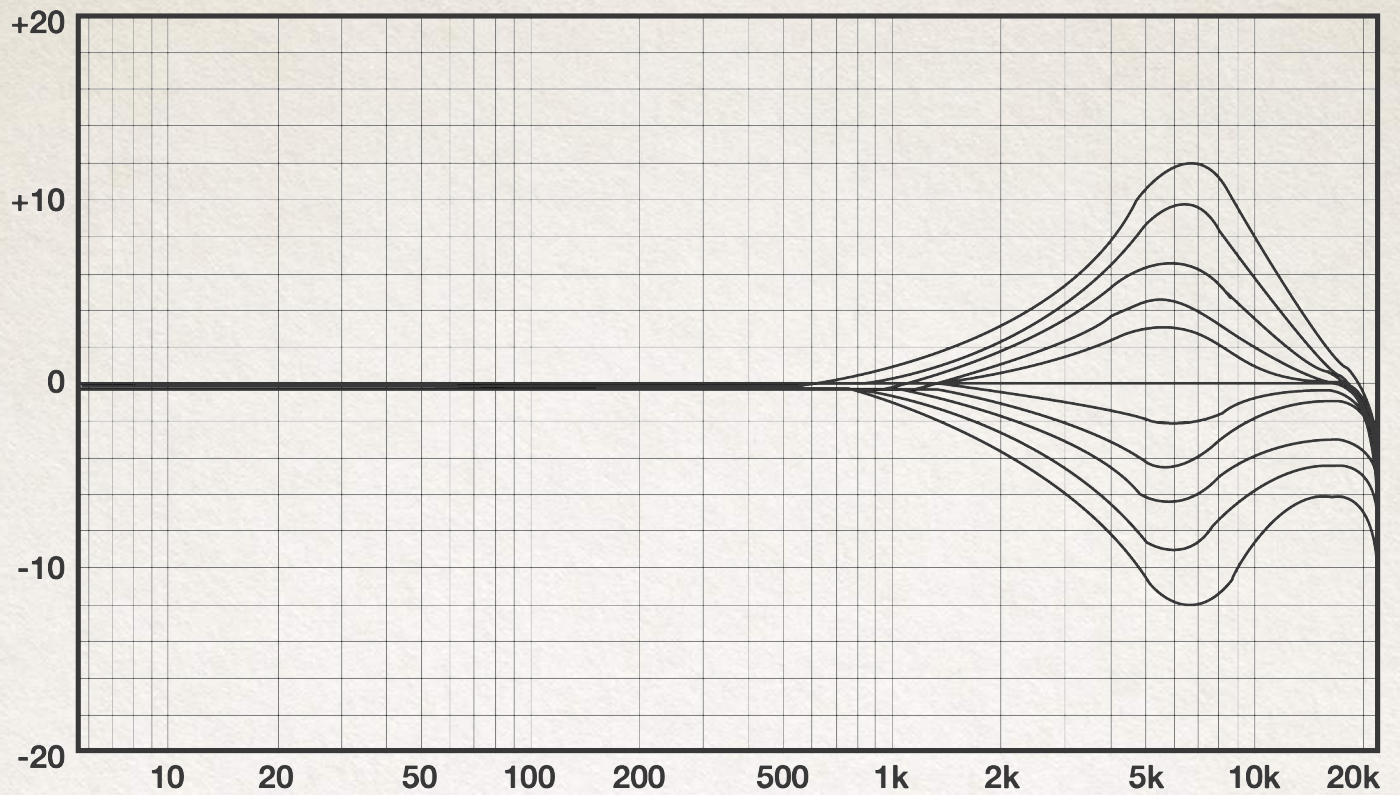


E411 - HMF band - 6500 Hz

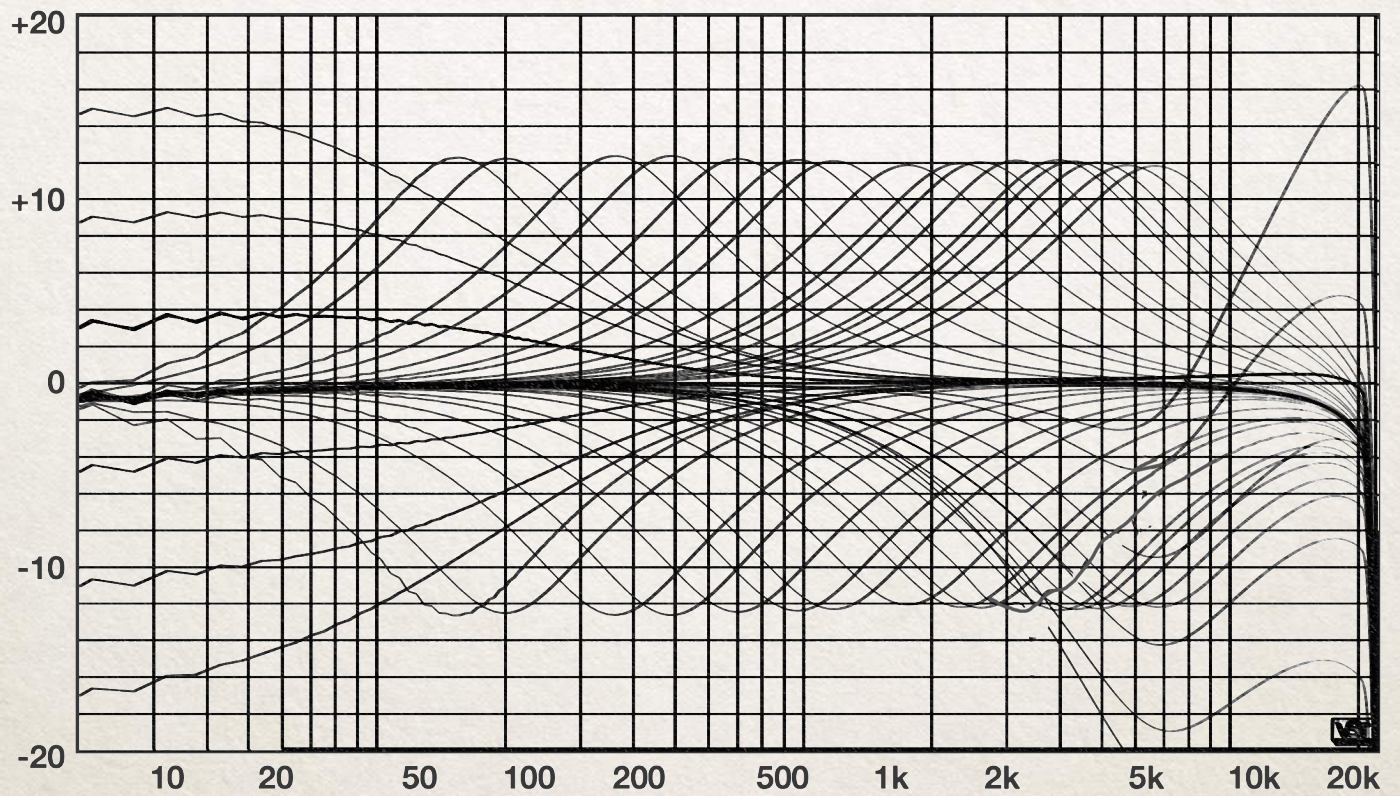




E411 - HMF band - 7000 Hz

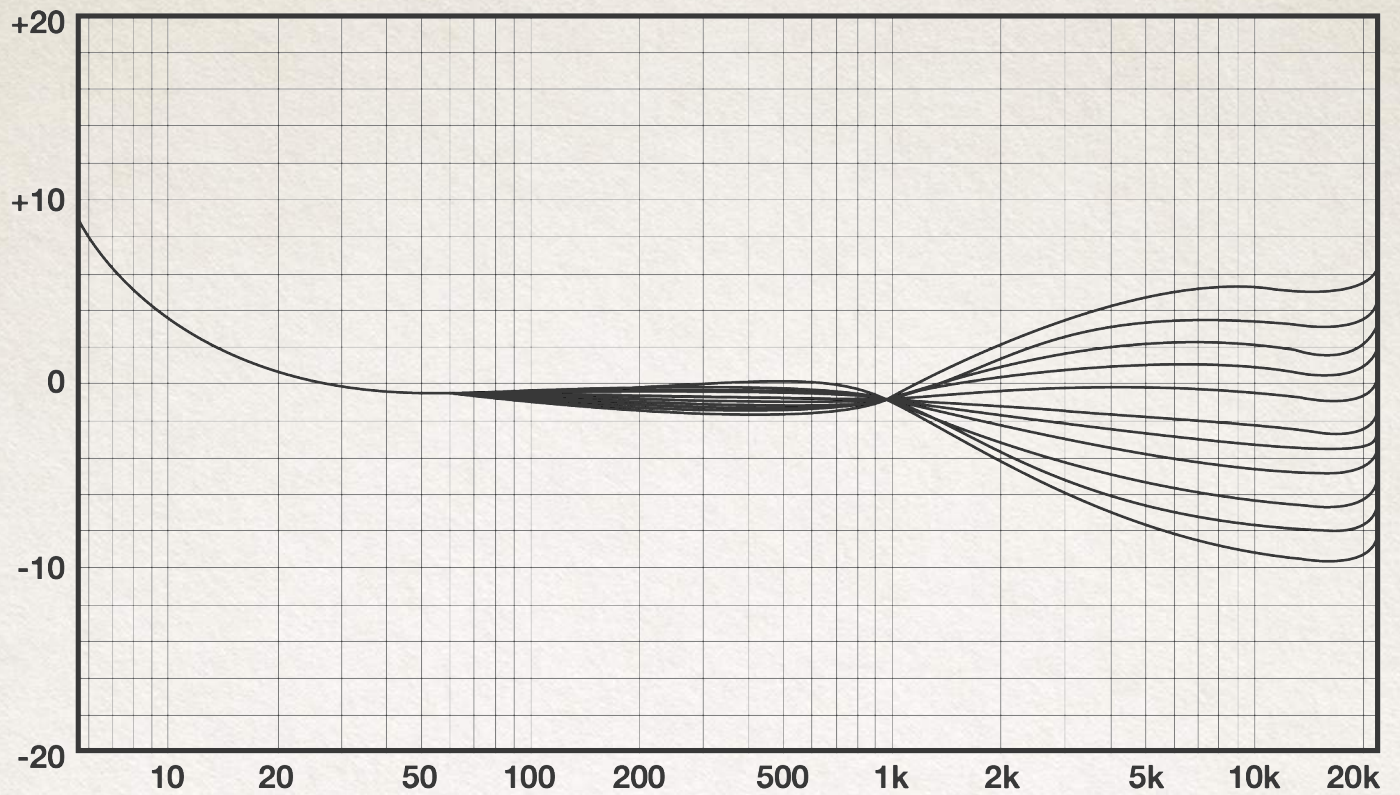


E411 - All frequencies

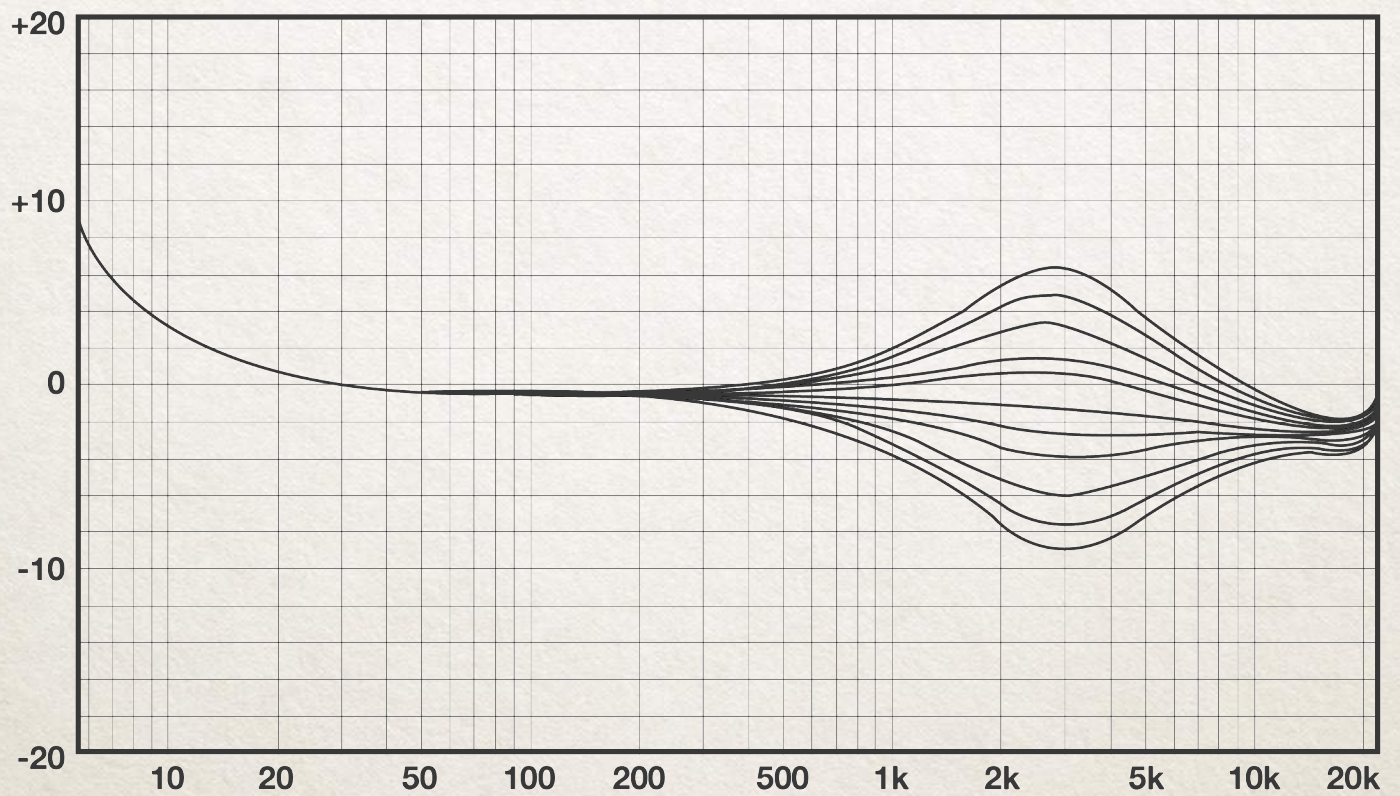




E82 - HF band

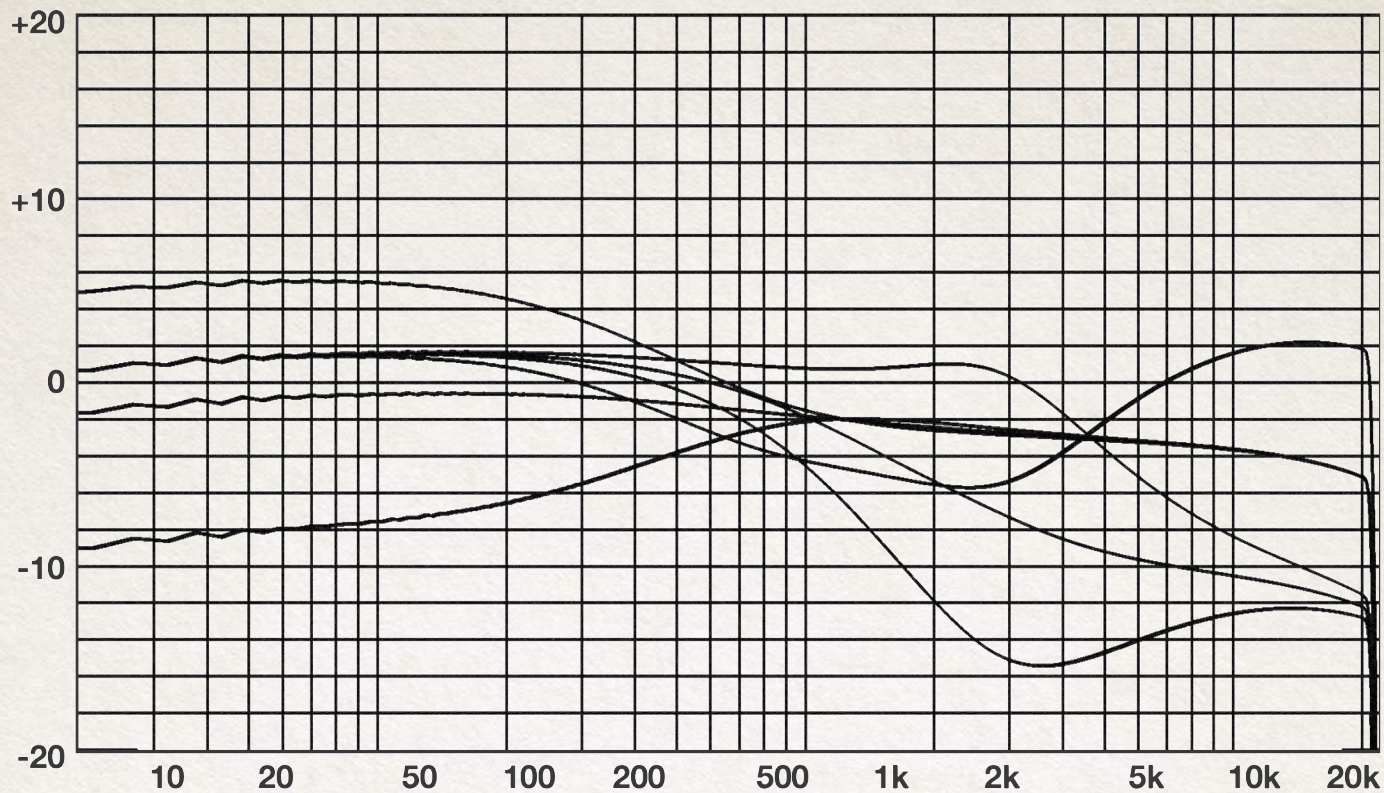


E82 - HMF band

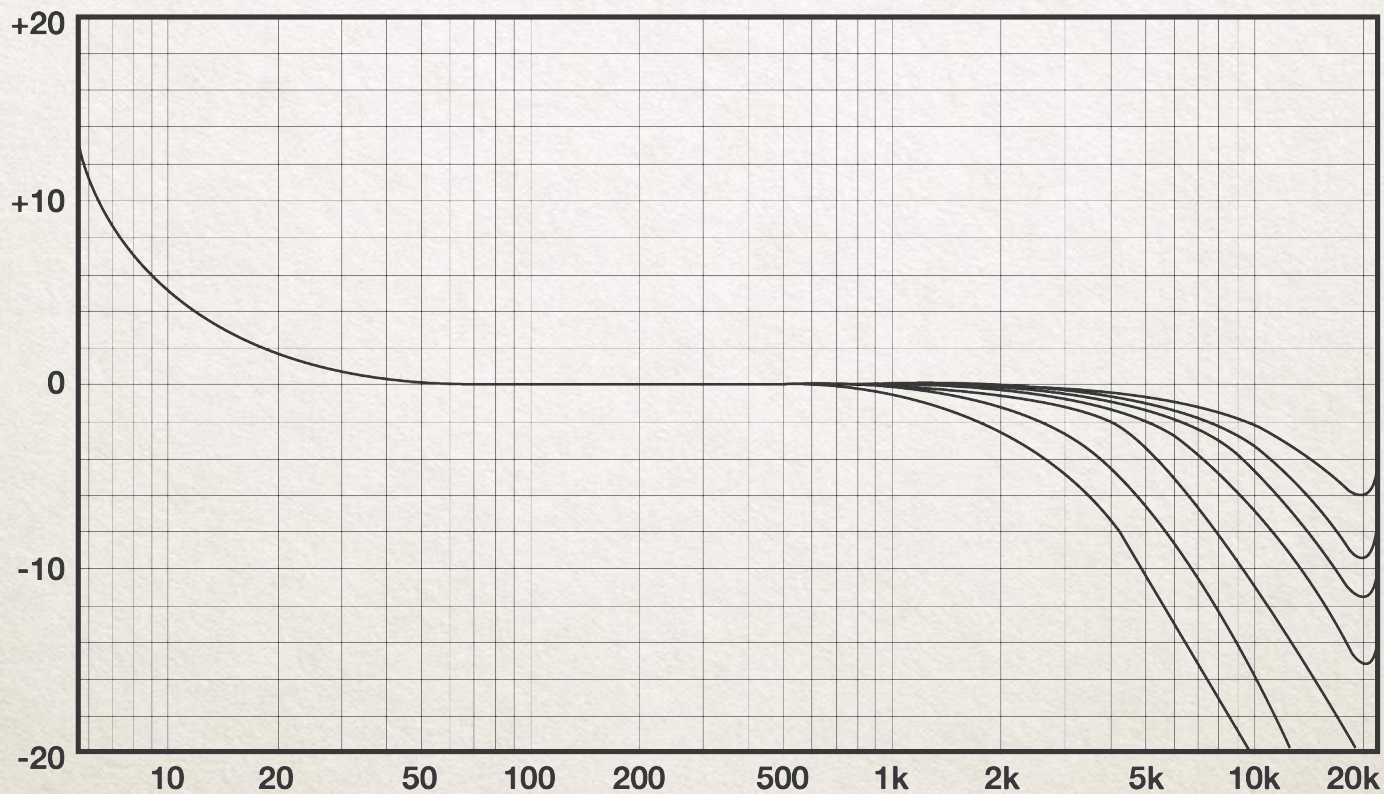




E82 - All frequencies



LP filter





# Second module

## E111 equalizer

**ON:**  
this button enables the LF-LMF sections.

### LMF BAND

LMF GAIN: sets the gain of the shelf from -11 dB to +11 dB  
LMF BELL FREQUENCY: the stepped knob selects the peak frequency among the following 16 values from 150 Hz to 7Khz.

### LF BAND

LF GAIN: sets the gain of the shelf from -15 dB to +15 dB  
LF frequency is fixed at 40 Hz.

## E411 equalizer

**ON:**  
this button enables the LF-LMF sections.

### LMF BAND

LMF GAIN: sets the gain of the shelf from -11 dB to +11 dB  
LMF BELL FREQUENCY: the stepped knob selects the peak frequency among the following 16 values from 150 Hz to 7Khz.

### LF BAND

LF GAIN: sets the gain of the shelf from -16 dB to +16 dB  
LF frequency is fixed at 40 Hz.

## E82 equalizer

**ON:**  
this button enables the LF-LMF sections.

### LMF BAND

HF GAIN: sets the gain of the shelf from -10 dB to +5 dB  
The LMF frequency is fixed at 2.5 KHz

### LF BAND

LF GAIN: sets the gain of the shelf from -8 dB to +5 dB  
LF frequency is fixed at 40 Hz.

E111



E411



E82



HP filter

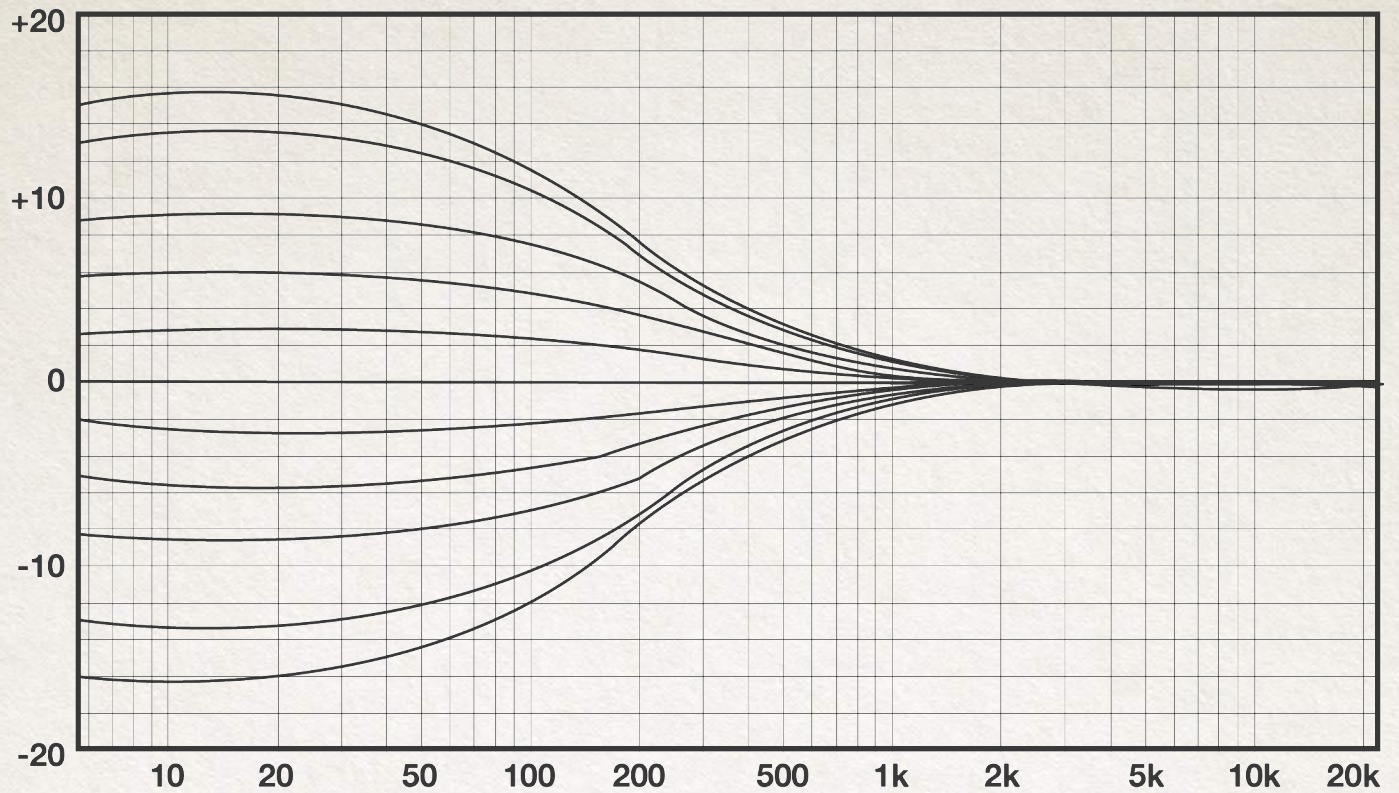
**ON:**  
this button enables the HP filter.

### HP FREQUENCY:

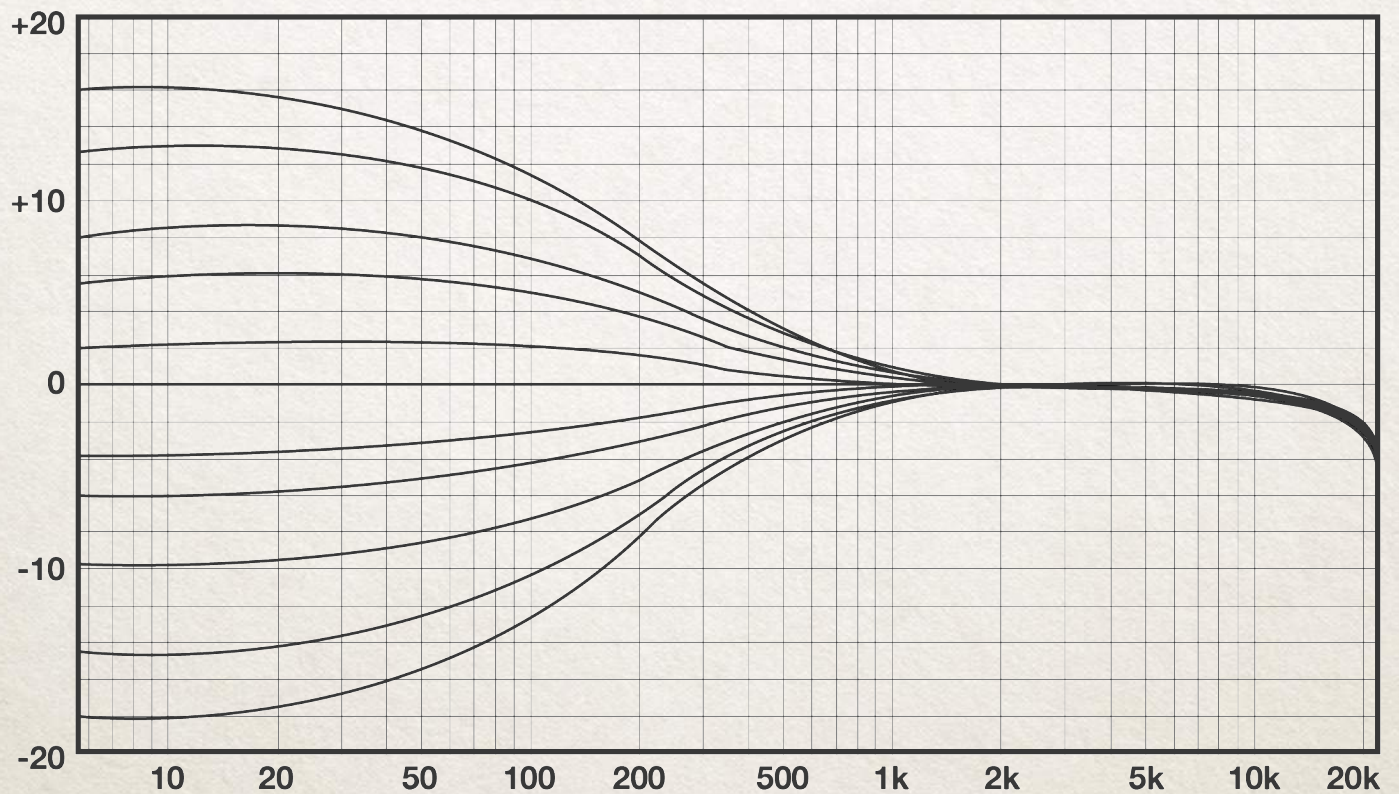
High Pass Filter among the following frequency values:  
20 Hz, 30 Hz, 50 Hz, 80 Hz, 120 Hz, 200 Hz, 300 Hz.  
Pressing the ON button to enable the HP filter.



E111 - LF band

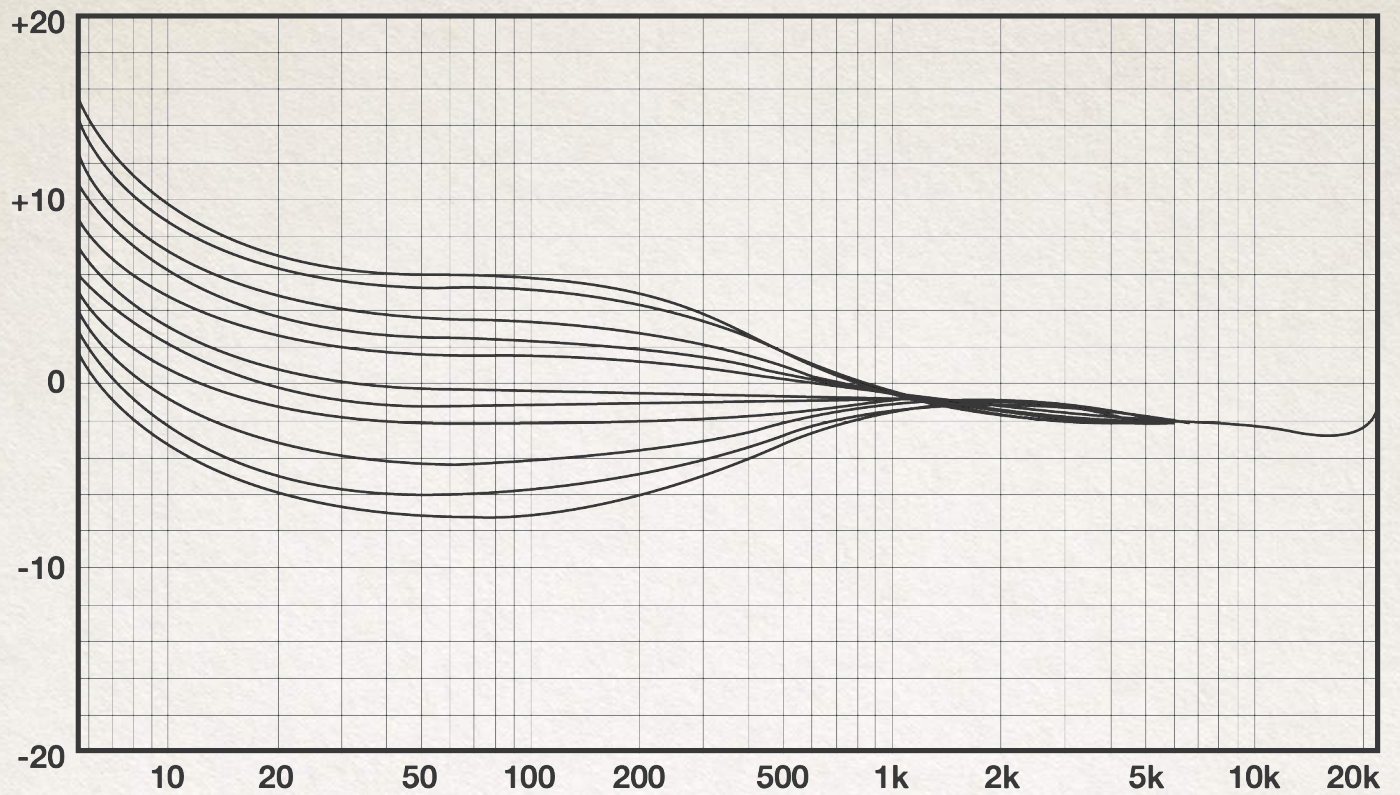


E411 - LF band

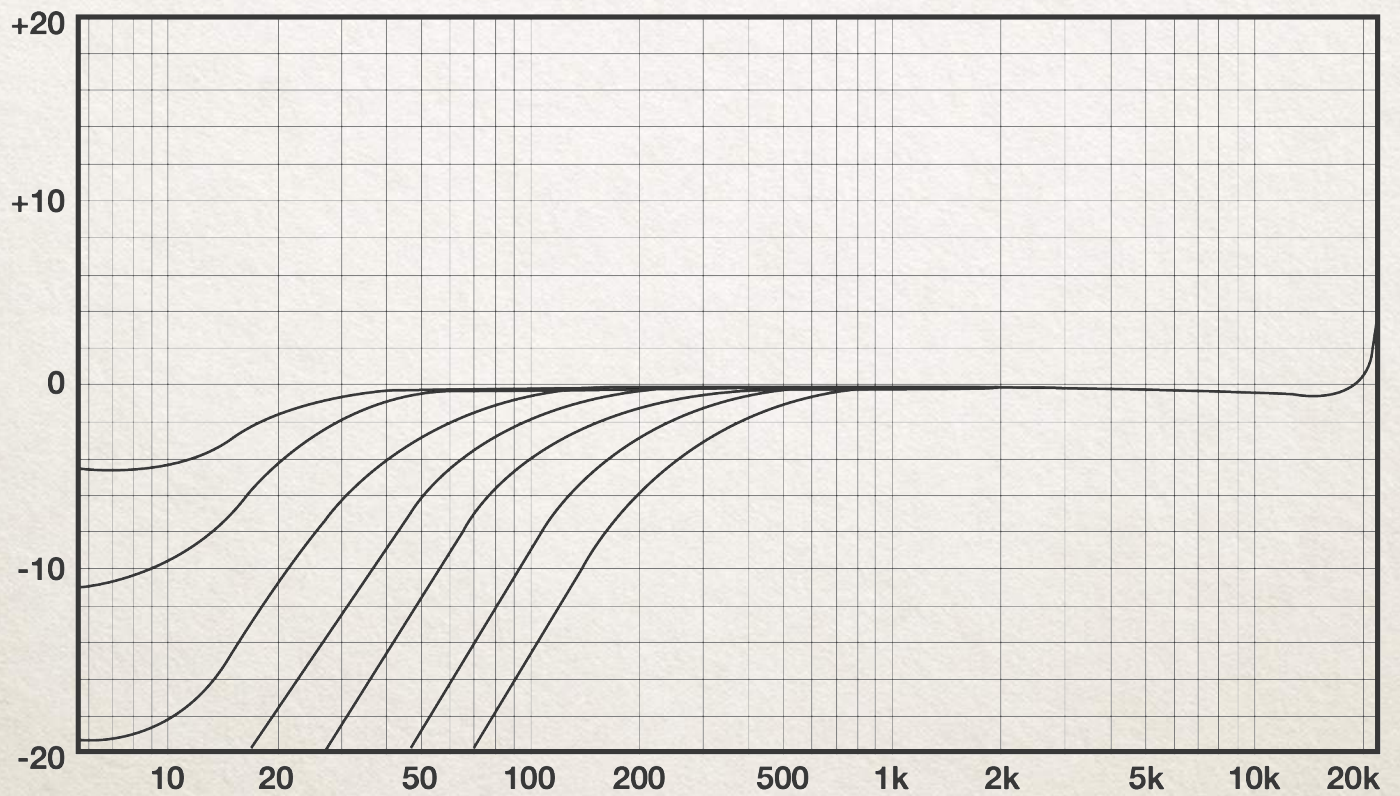




E82 - LF band



HP filter





# The reverb

Ebony includes the first Acqua plug-in plate reverb emulation. It recreates several features typical of the original device, the first plate reverberation unit designed in 1957 by Wilhelm Franz.

This iconic hardware is used all over pop music today and has provided a smaller solution to large echo rooms. In other words, it gives a huge room and a gorgeous sound but in a small space.

Starting from the original unit and using our technology we created our plug-in version adding new important features that we hope many people will appreciate.



## Controls

### PRE-DELAY

Pre-delay refers to the amount of time between the original dry sound, and the audible onset of early reflections and reverb tail. Carefully adjusting the pre-delay parameter makes a huge difference in the “clarity” of a mix. For example, a longer pre-delay will move the reverb tail out of the way of the vocals, making them much more present and understandable.

In other words Pre-delay is the time between the end of the initial sound and the beginning of the first reflections being audible. Imagine you’re back on that stage in a large music hall. Range values: 0 ms to 300 ms

### DECAY time

Decay is the time required for the reflections (reverberation) to die away.

In most modern music production, reverb decay times between one and three seconds are prevalent. A reverb setting with strong early reflections and a quick decay are a great way to create a stereo effect from a mono source.

### EARLY – LATE

This control allow to determine the amount of reflections of the reverb. It controls the crossfade between the Early and Late.

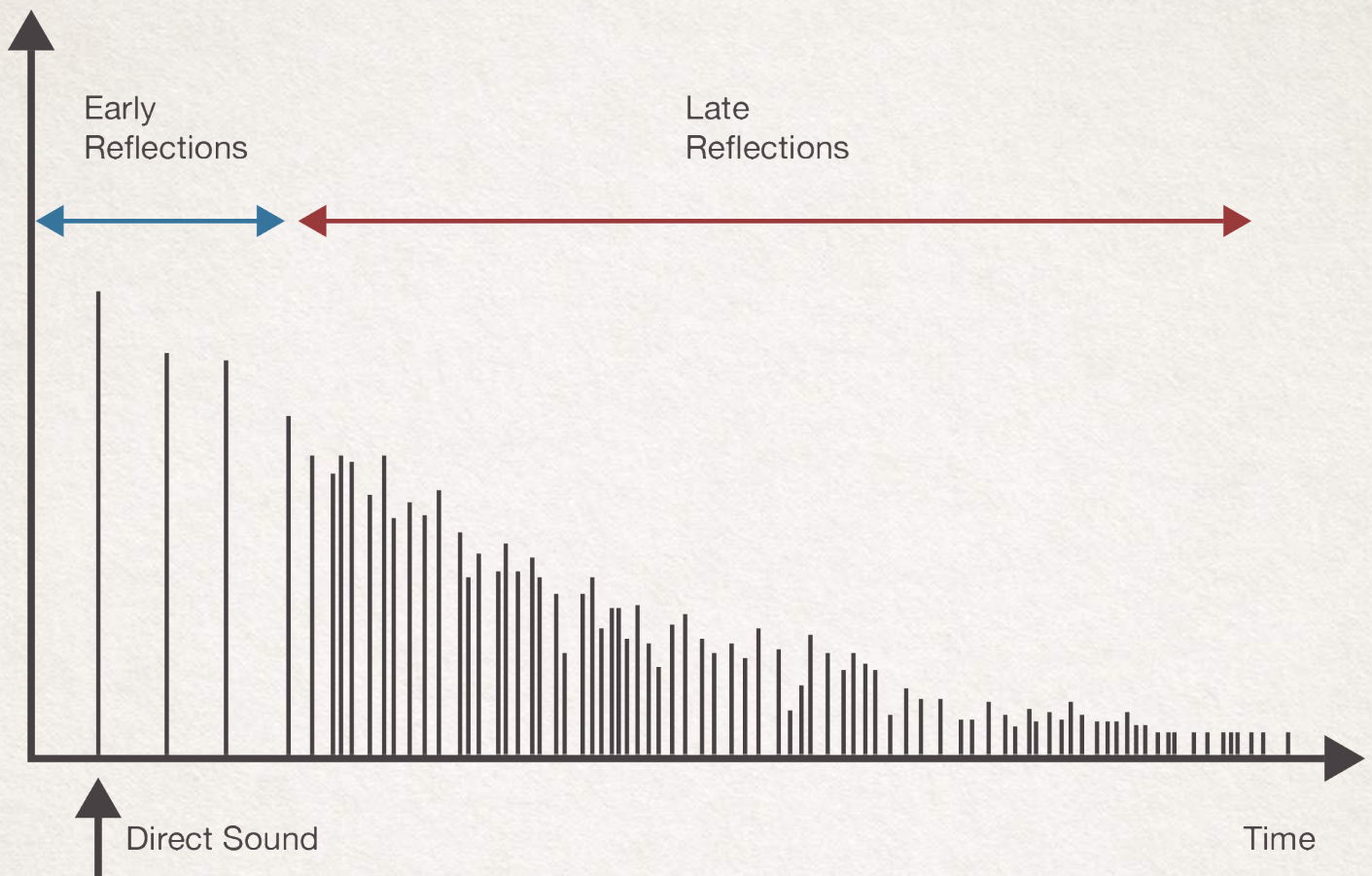


- **Early reflections** (up to 150 ms);

Modeled accurately thanks to Acustica technology; it represents the strong and distinct reflection and it provides spatial information

- **Late reflections** (high density);

It's characterized by low intensity and high density of reflections and it provides room information no longer depends on source position.

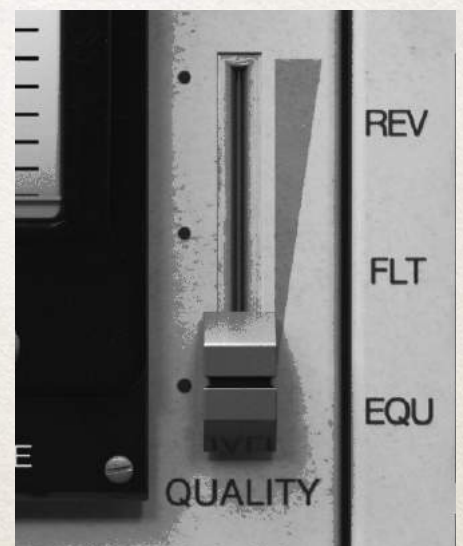


### DRIVE

This control increases the volume of the harmonic distortion of the signal.

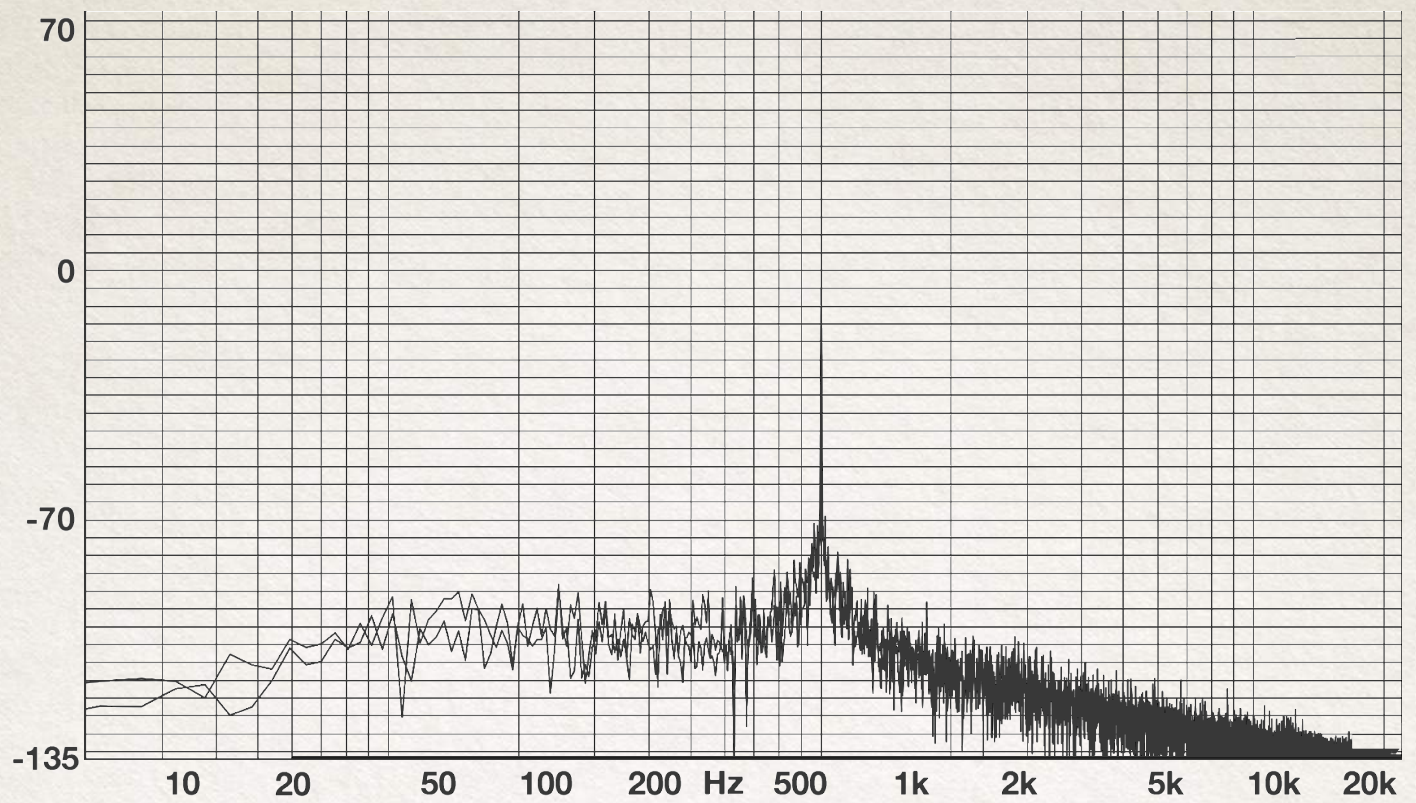
Range values: -30 dB to +30 dB

**QUALITY** slider sets the number of harmonics of the Reverb module from 1 (only fundamental) to 5 adding harmonic content (amount of power contained in the harmonics of a fundamental signal).

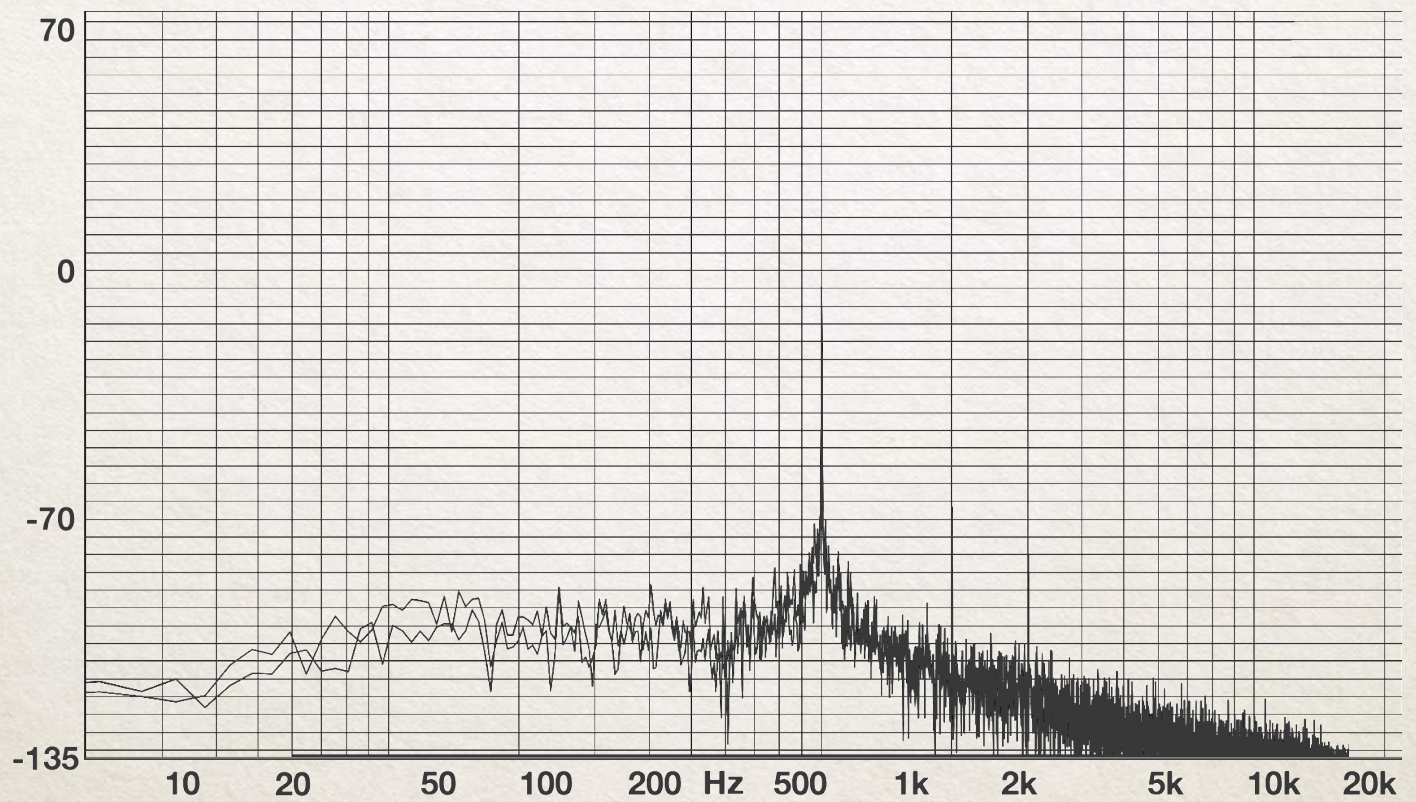




Quality 0

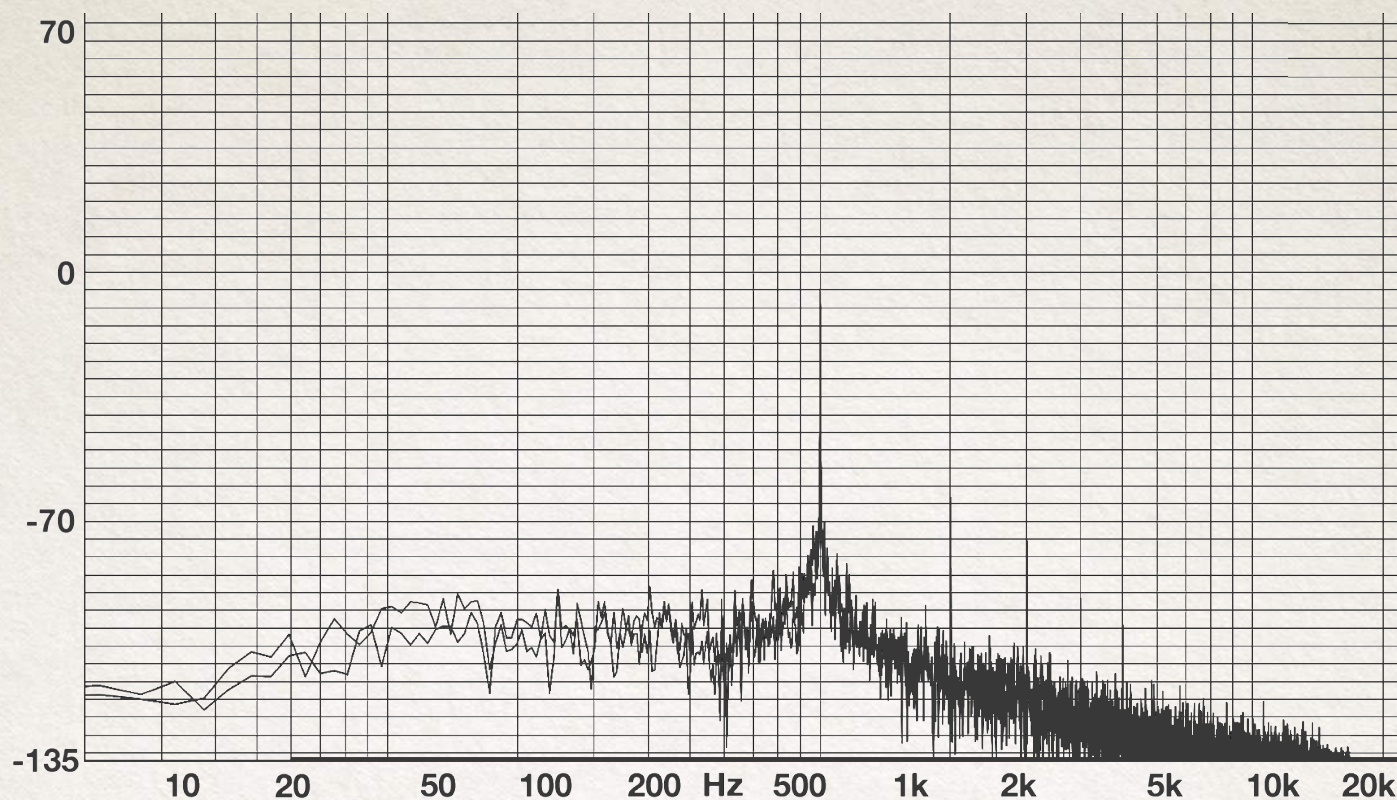


Quality 1





Quality 2



# Ebony REVERB





# The preamp



EBONY PRE is the standalone version of EBONY (channel-strip) preamps section.

Ebony preamplifiers are based on a collection of various hardware units; they precisely emulate the phase, frequency response and harmonic distortion of their corresponding circuits.

The standalone version (GOLD-PRE) includes OFF button( to bypass the unit) and two additional STEREO preamplifiers\*.

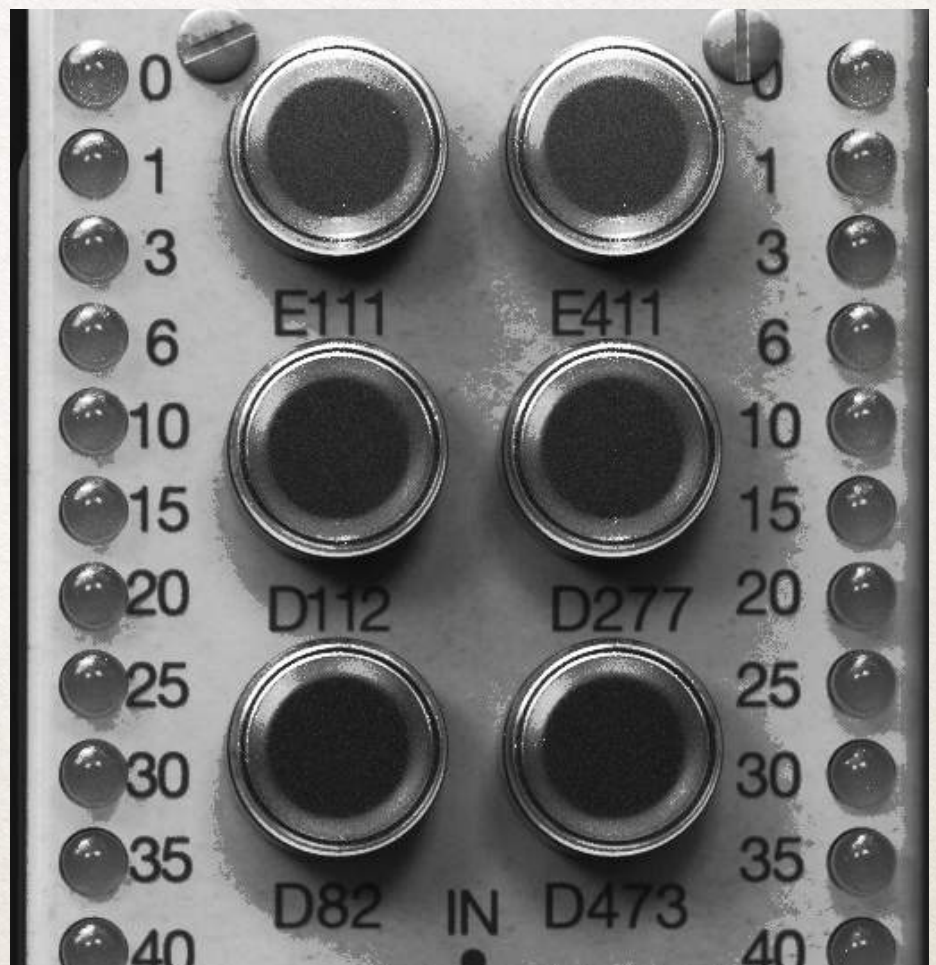
The Ebony channel-strip version offers many different preamps emulations faithfully sampled to warm up your sound.

This carefully chosen of preamps aims to provide you with an array of flexible options to build a virtual console emulation.

The best use of these colors can only be decided by the user on a case per case basis, and the engineer's final judgment should always depend on his/her own ears and imagination.

Ebony is equipped by 6 preamps each one derived from different device.

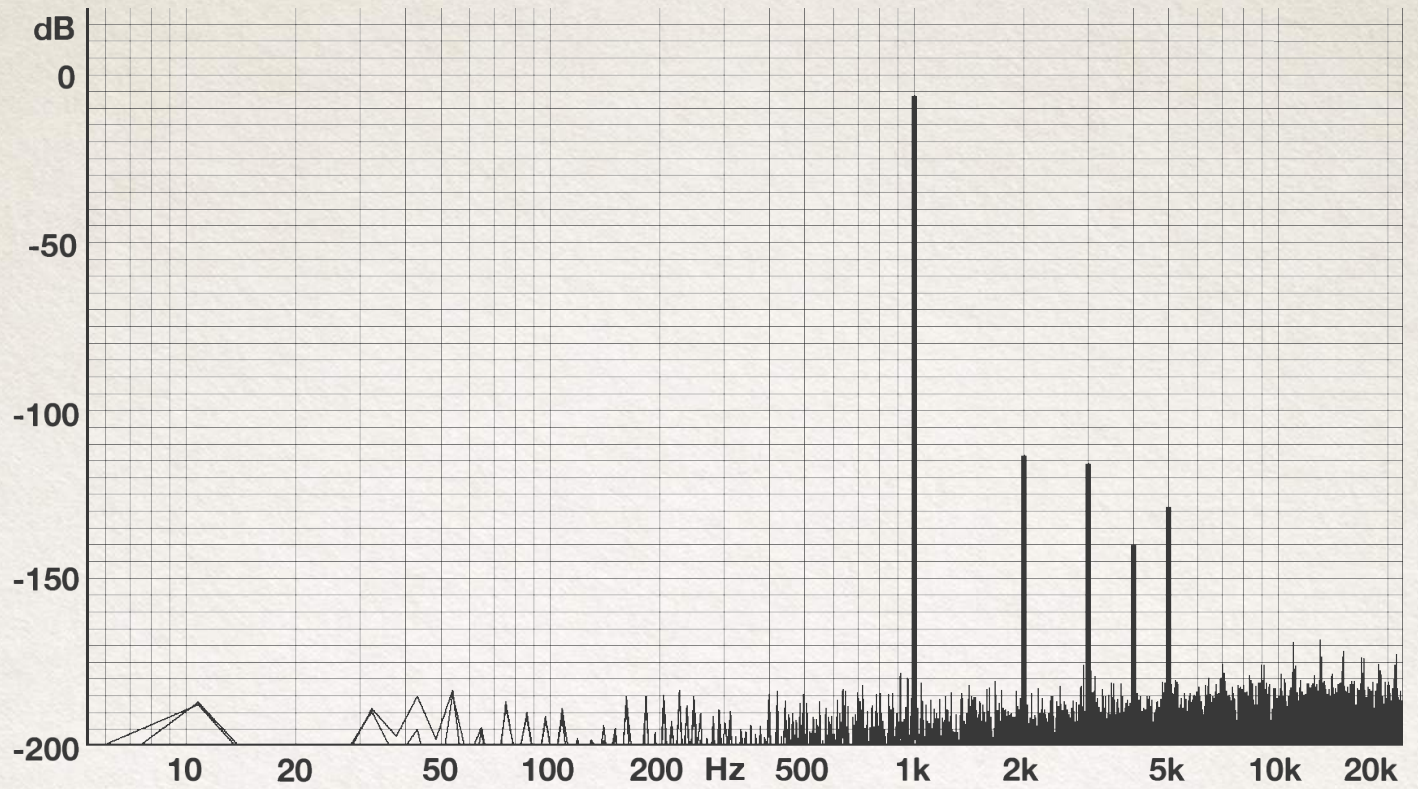
\* Ebony Pre (standalone version) in addition to previous there are 2 other preamps emulations and OFF button





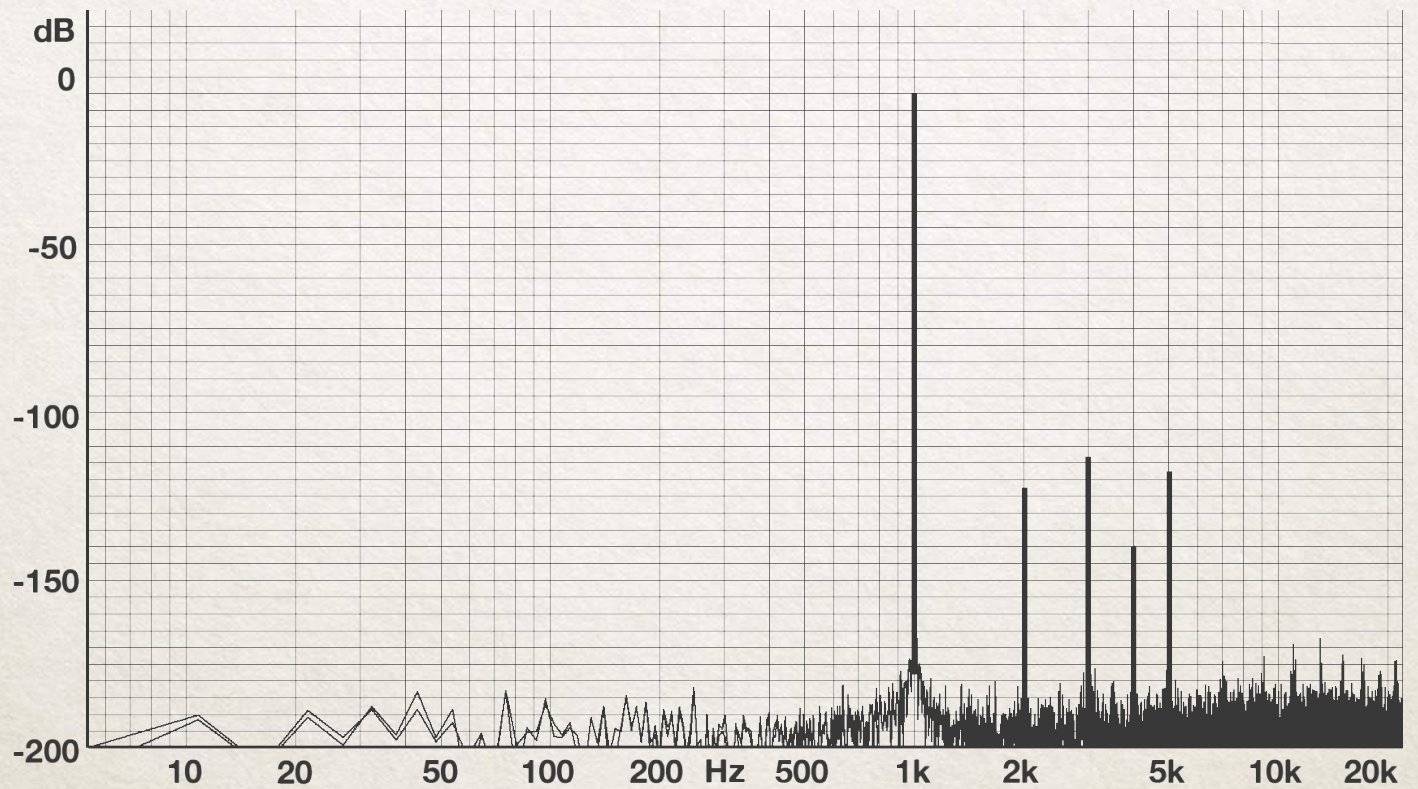
### E111

Pressing this button to activate the E111 PREAMP of the plug-in.



### E411

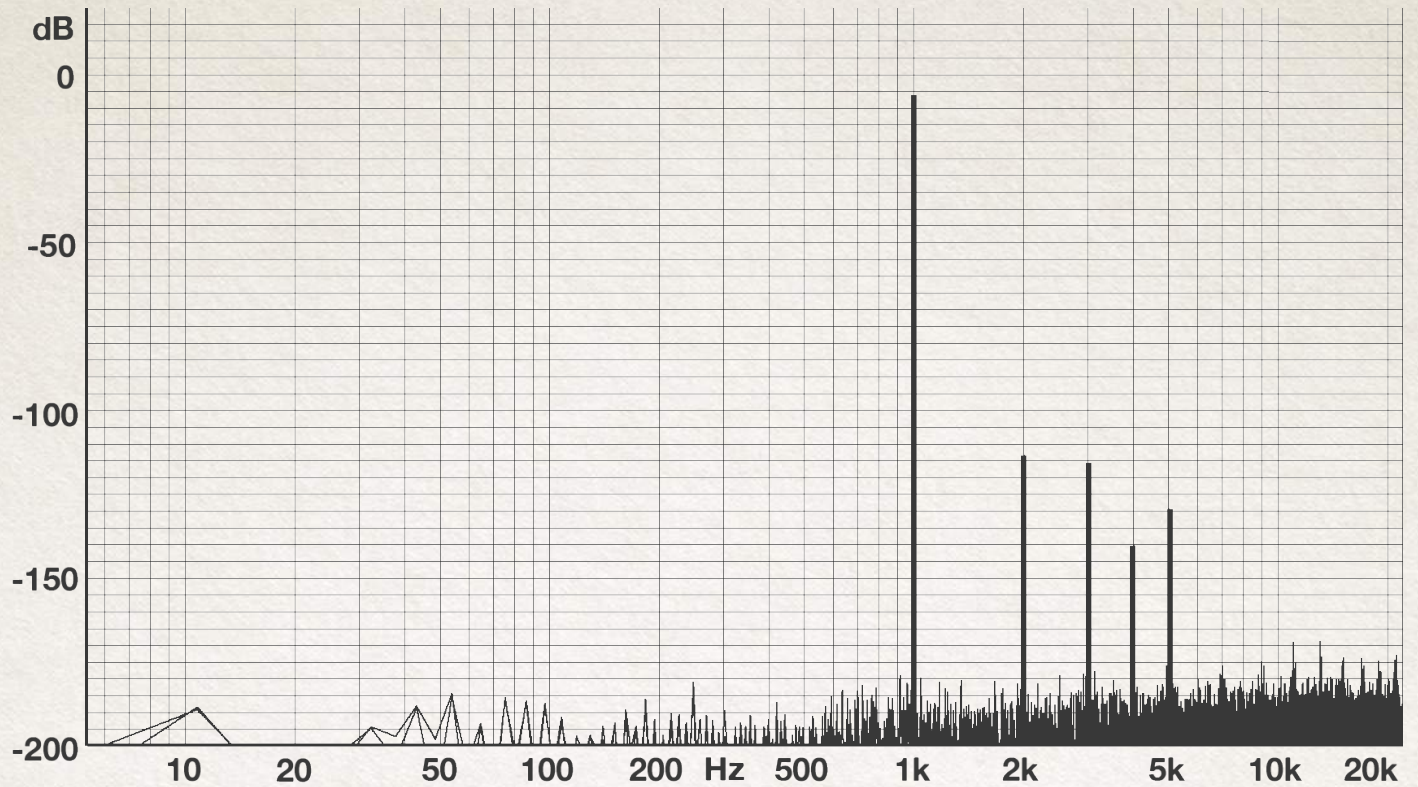
Pressing this button to activate the E411 PREAMP of the plug-in.





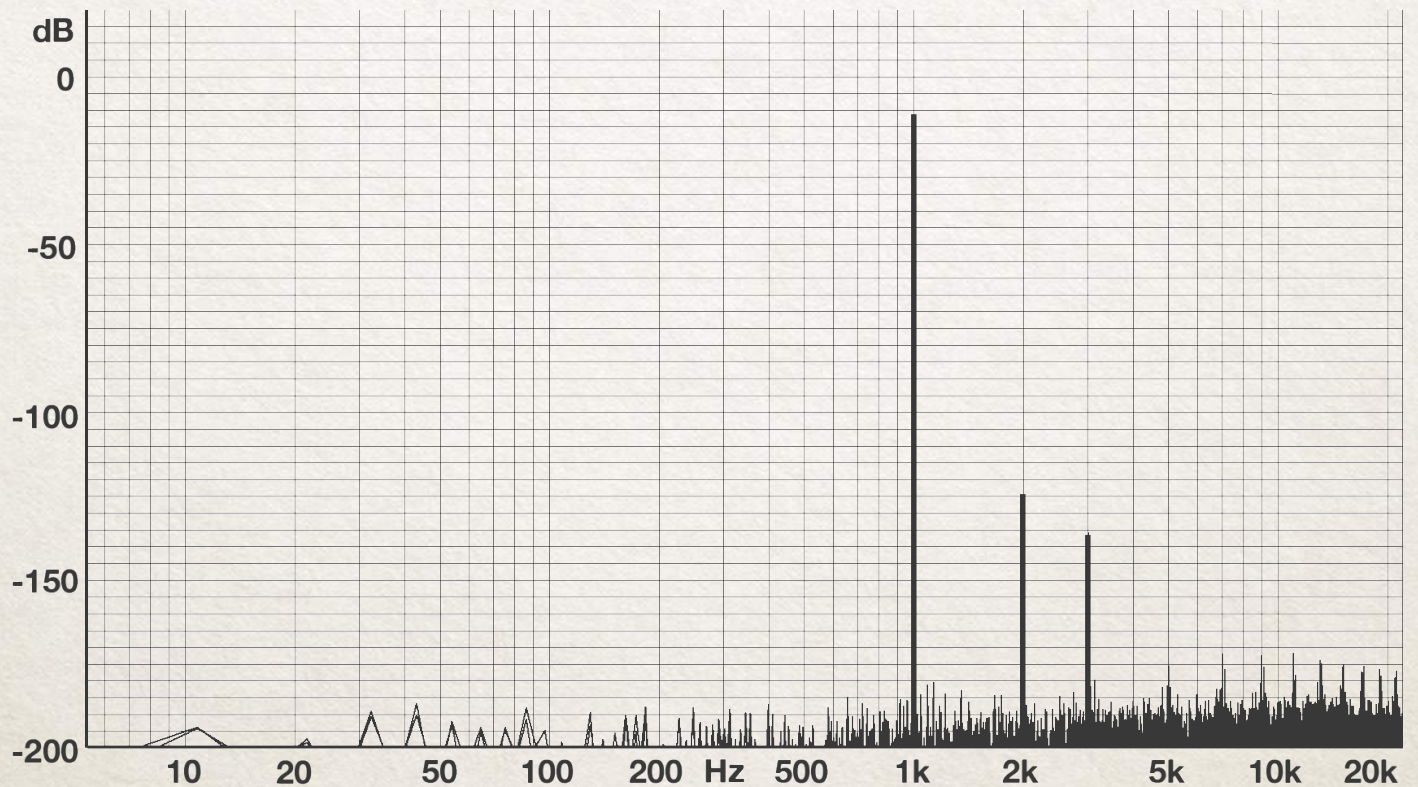
### D112

Pressing this button to activate the D112 PREAMP of the plug-in.



### D277

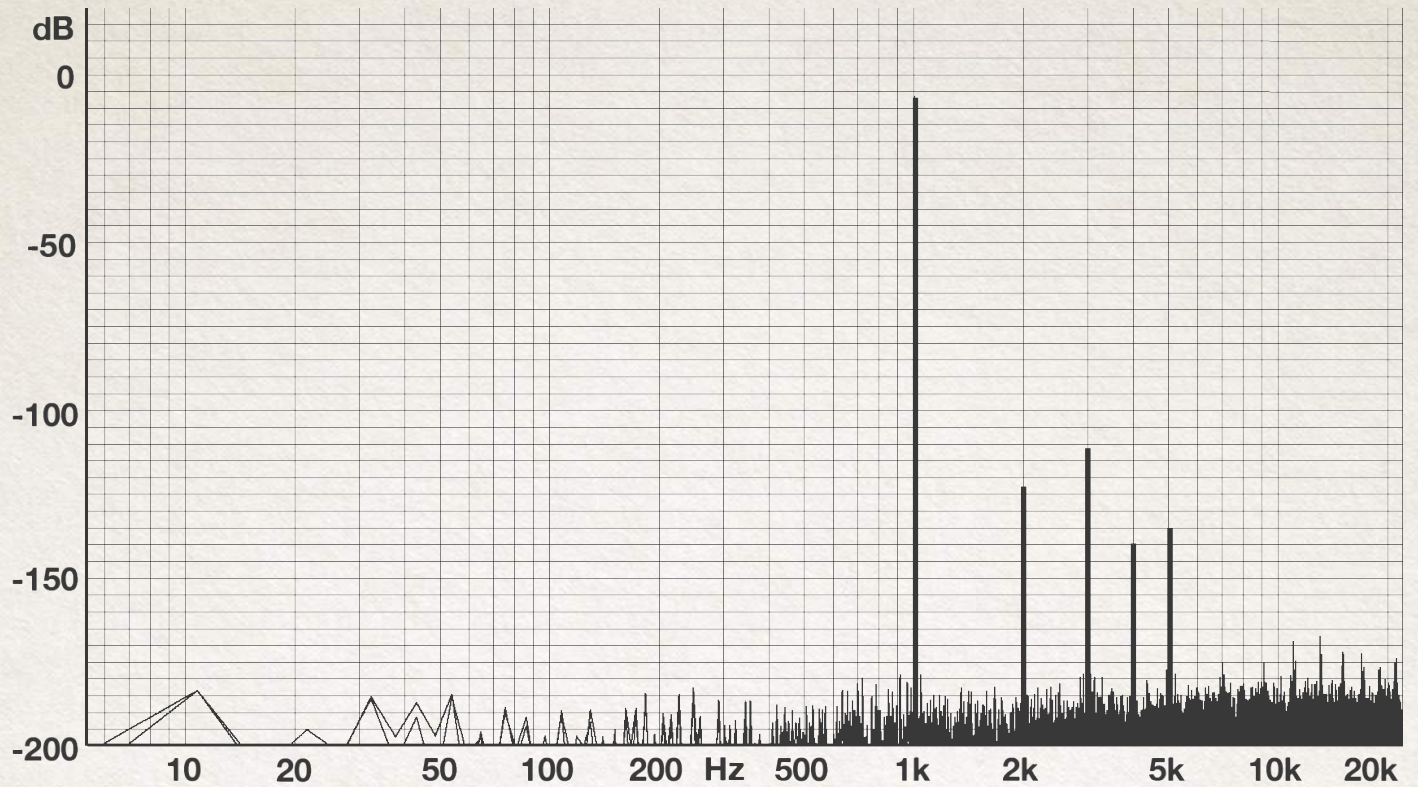
Pressing this button to activate the D277 PREAMP of the plug-in.





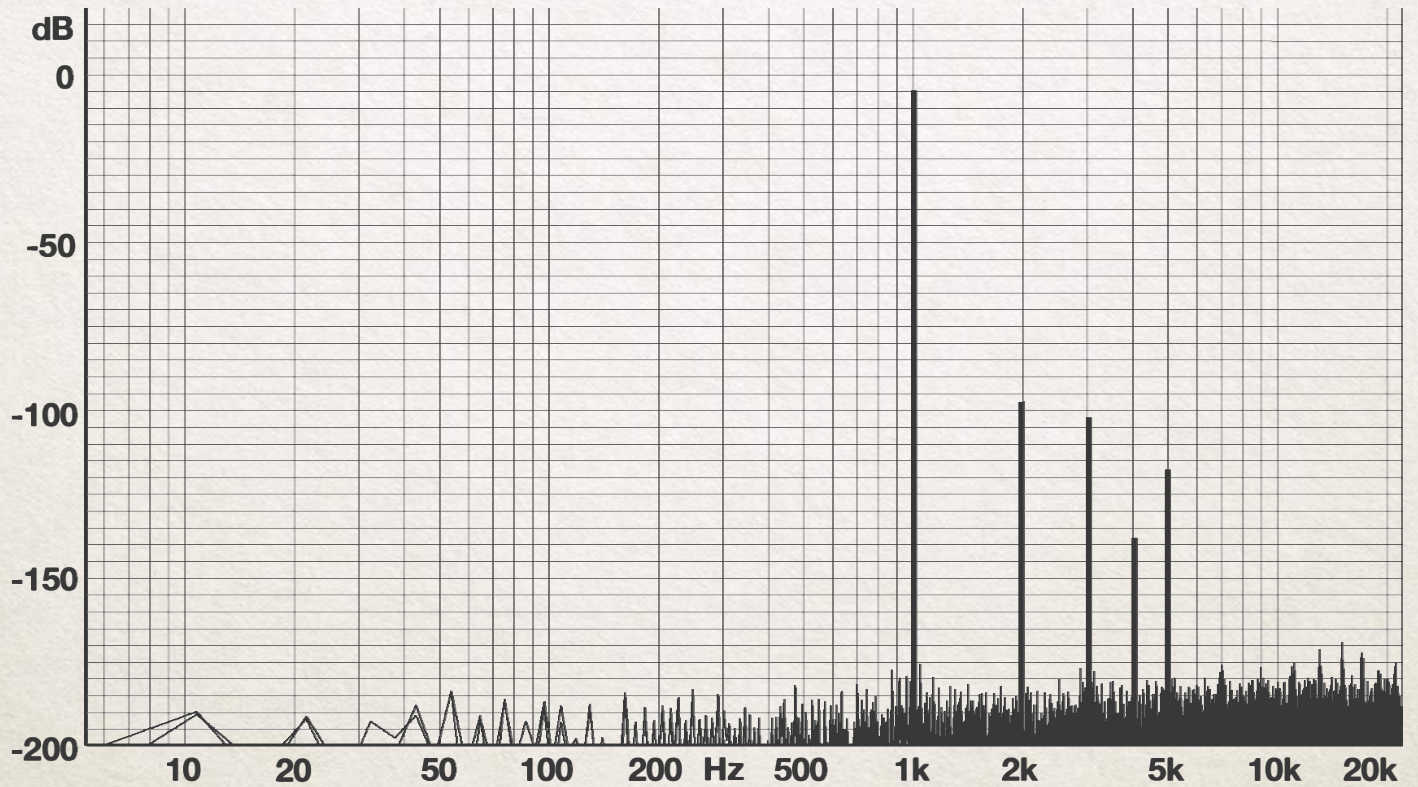
## D82

Pressing this button to activate the D82 PREAMP of the plug-in.



## D473

Pressing this button to activate the D473 PREAMP of the plug-in.





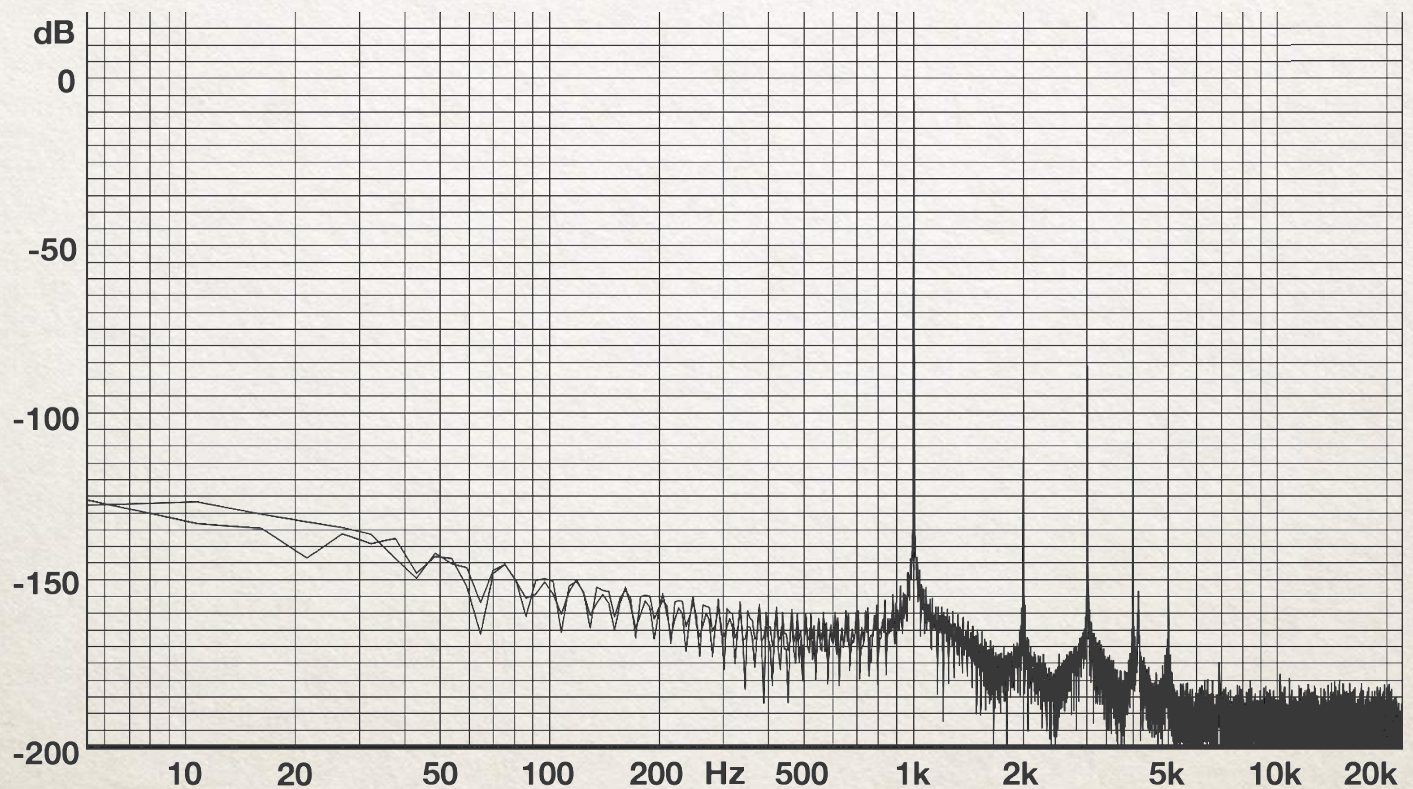


In the standalone version of the preamp we've added an "OFF" button that bypasses the preamp.

#### D82S

Pressing this button to activate the D82S PREAMP of the plug-in.

D82S is the STEREO version of D82 PREAMP

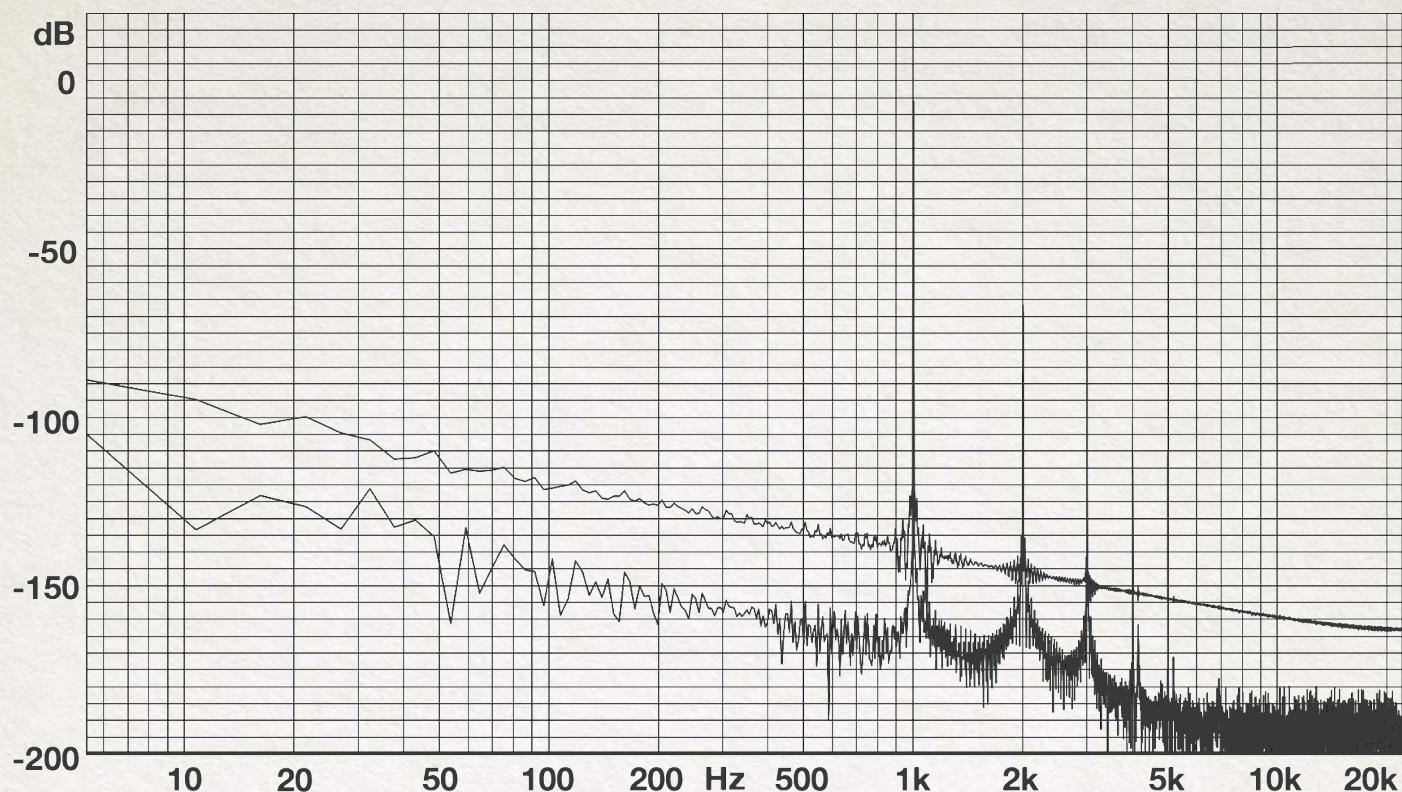




D473S

Pressing this button to activate the D473S PREAMP of the plug-in.

D473S is the STEREO version of D473 PREAMP



# Ebony EQ+Preamps





# The control section

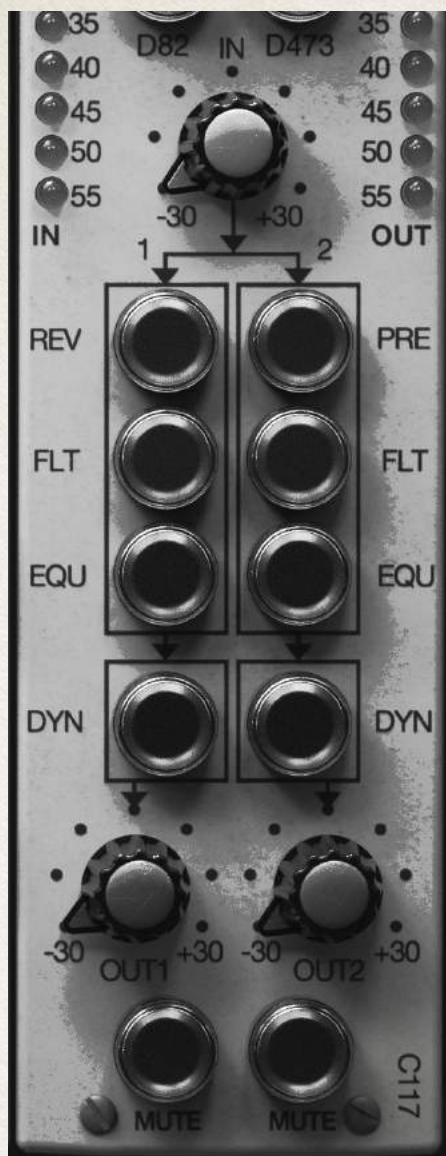


Figure 1

SWITCH PANEL section allow to manage:

- the switching of the plug-in components from 1° channel (FX signal channel) to 2° channel (directed signal channel) and vice versa in an easy and intuitive way.
- The MUTING of the plugin channel/s ("directed signal channel" and/or "FX signal channel").

Control section of Ebony (channel-strip) is a very unique feature included in this feature-rich plugin. It principally characterized by a "SWITCH PANEL" of the plugin modules and it can be considered the core of the system to determine which channel/s receive the input signal, which component is enabled, how much Input/output level sets for plugin, which component is ena

bled through the chain.

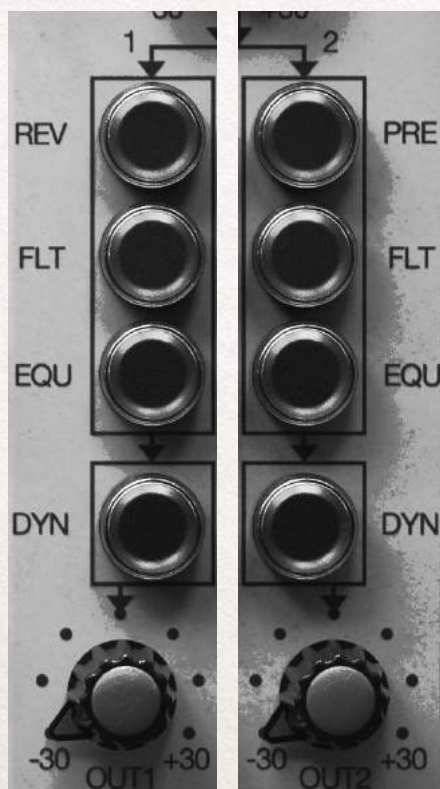
This news is very different compared to other Acqua plugins channel-strips where the only possibility is determine the routing of the components.

With Ebony there isn't a routing, modules are included in a fixed chain and the customers can move them on the first channel or second channel.

## CHANNEL 1



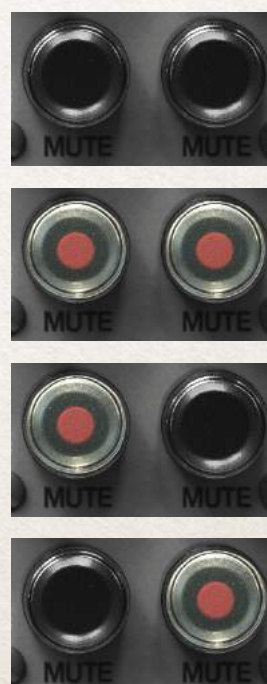
## CHANNEL 2



## CHANNEL 1

## CHANNEL 2

It is possible to mute and enable all channels or each channel independently.

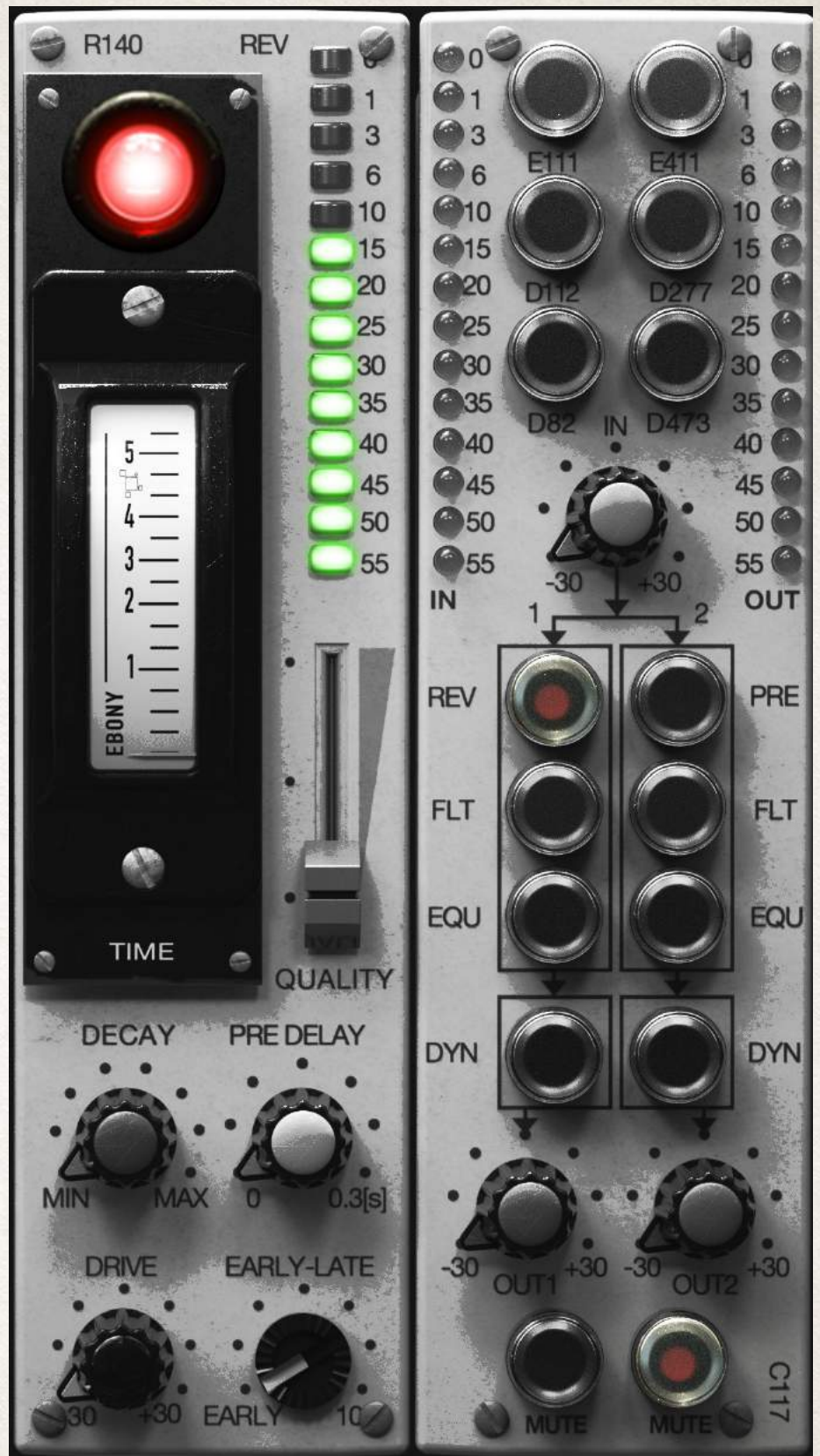
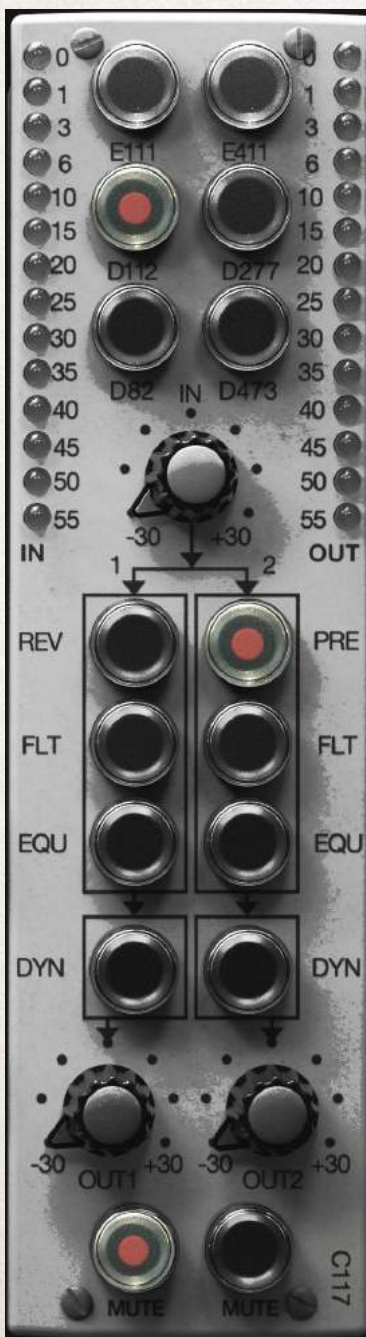




## IMPORTANT

To bypass single module (EQ- FLT-COMP) of Ebony STRIP you have to push the ON button of each module. The only two modules bypassable directly into the SWITCH PANEL of EBONY STRIP are: PREAMPS and REVERB.

PRE button enables (LAMP ON) the Preamp selected in Preamps section upper the SWITCH PANEL.



The same thing for REVERB module, so to bypass Reverb you have to disable (LAMP OFF) The REV button of the SWITCH PANEL.



## IN knob

It sets the input level from -30dB to +30dB and is used to control the signal level inside the input signal.

## OUT1

Gain control sets the FX signal level of the channel 1 of the plug-in. You have a -30dB/+30dB.

## OUT2

Gain control sets the Direct signal level of the channel 2 of the plug-in. You have a -30dB/+30dB.

## MUTE (1)

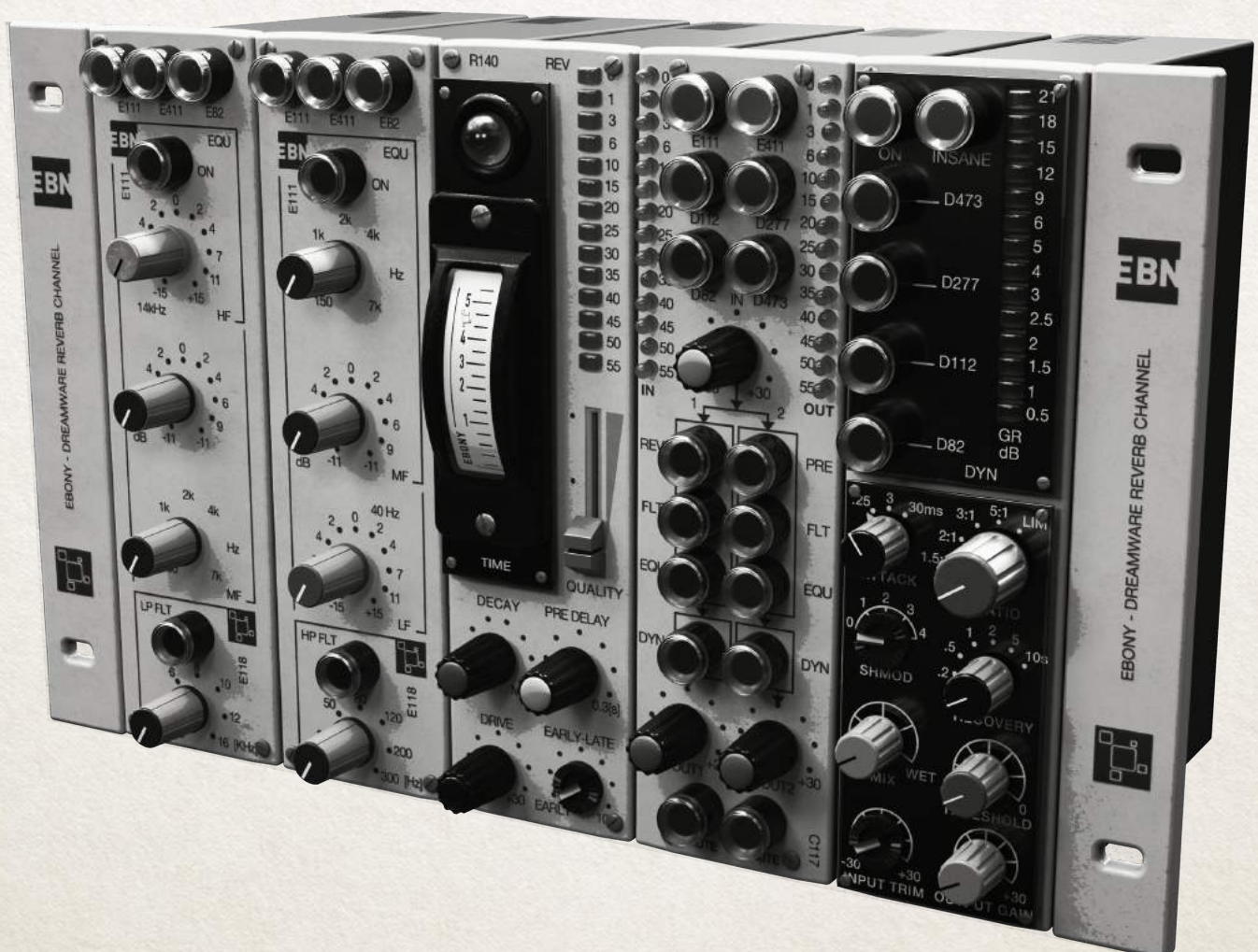
It mutes the channel 1 ("wet" signal) of the SWITCH PANEL

## MUTE(2)

It mutes the channel 2 ("dry" direct signal) of the SWITCH PANEL

## INPUT/OUTPUT METERS

INPUT-OUTPUT STEREO METERS measure the input (LEFT position meter) and output (RIGHT position meter) levels of the plug-in (EBONY Channel-strip).





# How to use

The control panel is used to easily manage “switching” of the various plugin components implemented in EBONY STRIP. The input signal is processed in one or two channels according to your needs.

## More in detail:

The basic idea of EBONY STRIP is to be able to exploit two parallel channels. The first channel is the routing of the reverb signal (“wet”) within the channel-strip module chain without affecting the direct (“dry”) signal. The direct signal is routed through channel 2. Using INPUT and OUTPUT you can control the signals of the different components.

In a sense, you have 3 combinations of signals:

1. The DEFAULT setting when opening the plugin the first time assumes that channel 2 is in MUTE, which means that the “dry” signal is excluded while the “wet” signal channel is enabled. By using the knob OUT1 it's possible to adjust the amount of effect needed. (Fig.1)

2. The 2nd combination involves enabling both channels, which means that the input signal is processed by both channels. In other words **the signal processed by the 1st channel is summed with the signal of the 2nd channel** so both the “dry” and “wet” signals are combined. (Fig.2)

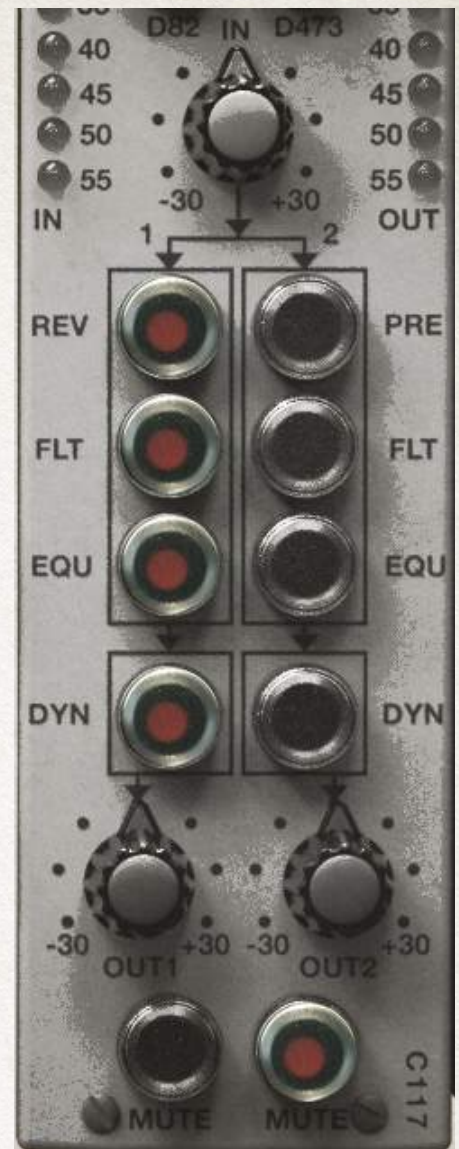
For example, with the PREAMP on the 2nd channel, the user can decide which channel to use and which module is enabled and balance the output signal by using OUT1 and OUT2.

3. Combination 3 provides the MUTE of both channels and acts as the **BYPASS** of the plugin. (Fig.3)

In this regard, please note that to enable the various modules, you must use the ON buttons in each section, with only two exceptions, REVERB and PREAMP can be bypassed directly by SWITCH PANEL by pressing the corresponding buttons.

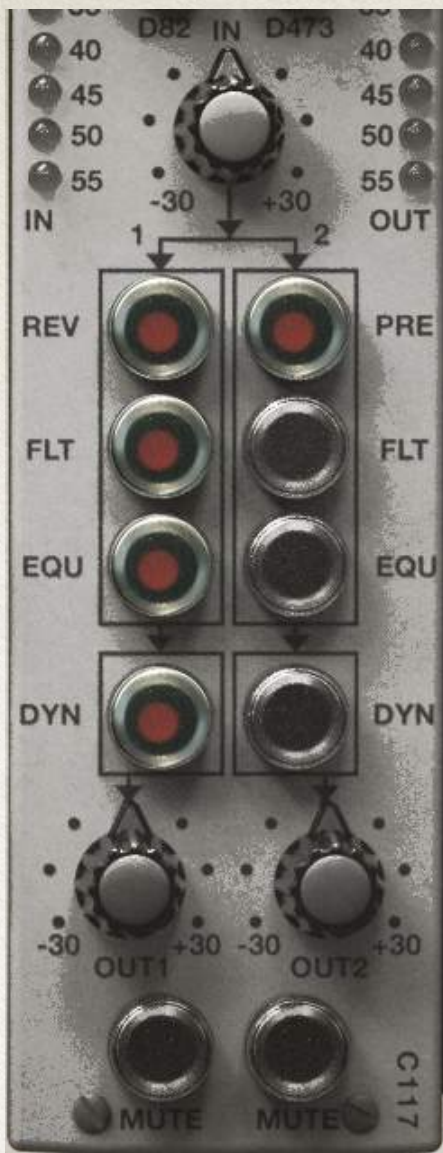
The block diagram simplifies the understanding of the section: Starting from an Input control, you can handle the input signal volume with a range from -30dB to +30dB.

This is not an INPUT TRIM but an input gain as the OUTPUT is not automatically balanced but is handled separately at the end of the processing chain. There are two OUTPUT knobs (to separately control the two channel); one for Channel 1 (OUT1) and one for Channel 2 (OUT2) both with a range from -30dB to +30dB.



1. Default setting





2. Second combination

As previously instated, INPUT signal enters into two parallel channels.

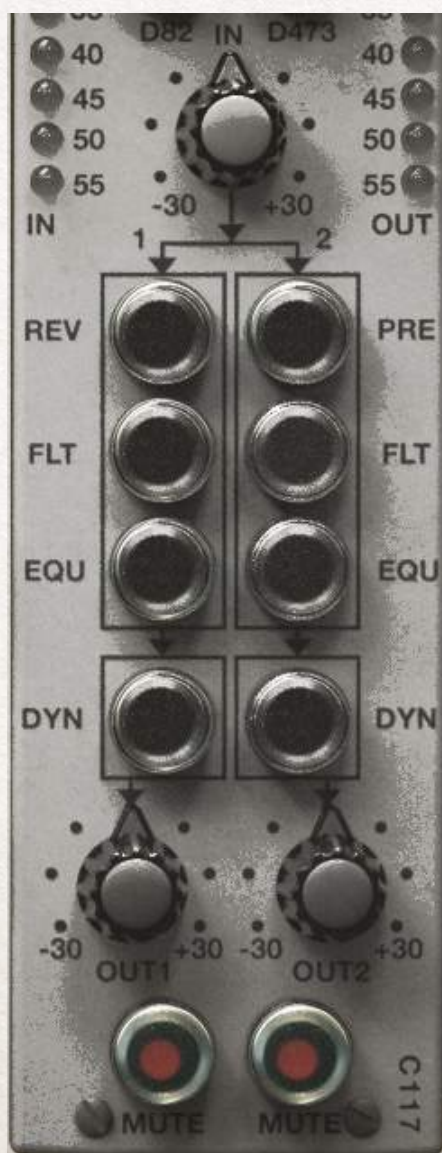
Each channel can be bypassed by pressing the MUTE button at each column and the output volume can be adjusted by the appropriate OUTPUT control.

- 1st CHANNEL is the channel where the reverb is followed by sequential filtering and compressor, the sequence of components is fixed because it is a switch panel and not a real routing panel. By pressing the REV button (lamp OFF) you can exclude the reverb;

Using the OUT1 knob with REV button active you can handle the amount of signal processed by reverb deciding whether to process or exclude the FLT, EQU, and DYN components that follow in the chain.

To do this FLT, EQU, DYN can be excluded from channel 1 by simply switching to 2, pressing the buttons at the other channel.

- 2nd is the “direct signal channel” that can include PREAMP (can be excluded by pressing the button off) sequenced by FLT, EQU, DYN. Using the knob OUT2 it is possible to handle the amount of direct processed signal. Even in this case we can decide which components will be excluded by switching off the unneeded ones on channel1. If the channel 1 is in MUTE, the switches will be automatically bypassed.



3. Third combination: BYPASS

The possible combinations of the plugin components using the switch panel are varied, the considerations to keep in mind are the use of the MUTE, enabling the output signal on both channels, resulting (regardless of the selected modules) with SUM of the signal of the 1ST Channel with the signal of the 2nd Channel. If we use the MUTE button on a channel the resulting OUTPUT signal will simply be that of the channel enabled. The best use of these combinations can only be decided by user on a case per case basis and the engineer's final judgment should always depend on his/her own ears and imagination.



# The compressor



Acustica is proud to give to all customers these dynamic processors emulations.

After long research and development we were able to accomplish a great rare units emulations, they can be set up for extreme compression maintaining transparency (fairly transparent sound) and low noise even at extreme setup. We hope that these compressors will become your first choice into your Mix!

Ebony is equipped with 4 different switchable compressors:

- D473
- D277
- D112
- D82

**D473:** it's a vintage dynamic processor developed in the 1970's, VCA design used a lot for classical mastering in Europe.

The sound of this emulation can be described as neutral and open. So it's very clean and it's characterized by very controlled sound and slightly velvety.

That's not to say that you can't hit them hard, especially in the limit setting. In our opinion it's a good choice for mastering use and/or for vocal leveling.

**D277:** a rare unit, fairly transparent sound of many '70s and early '80s records. It's characterized by a good line preamp inside.

**D112:** emulation of the compressor module included in a rare mixing console built in '70 by German company. The original design of the desk was simple (in a good way), making it easier to maintain / modify. In our opinion, the sound quality of this module is excellent, it's a milestone!

**D82:** compressor module emulation of a rare/vintage Dutch "heavy duty" mixing desk.

Acustica strongly believe that this product is really amazing! The company founded in 1975 is recognized as one of the companies who has been dedicated to developing, manufacturing and supplying professional audio products to the Radio Broadcast Industry.

Acustica strongly believes that this product is quite amazing and that despite its ease of use, it could be used to glue your sound with great results!



<b>D473</b> Pushing this button the D473 comp is enabled	<b>D277</b> Pushing this button the D277 comp is enabled	<b>D112</b> Pushing this button the D112 comp is enabled	<b>D82</b> Pushing this button the D82 comp is enabled
<b>ATTACK:</b> This knob set compressor's attack time that range from 0.25 ms (fast) to 30 ms (slow)	<b>ATTACK:</b> This knob set compressor's attack time that range from 0.25 ms (fast) to 30 ms (slow)	<b>ATTACK:</b> Fixed	<b>ATTACK:</b> Fixed
<b>RECOVERY/RELEASE</b> This knob set compressor's release time that range from 0.1 S (fast) to 10 S (slow)	<b>RECOVERY/RELEASE</b> This knob set compressor's release time that range from FAST to SLOW.	<b>RECOVERY/RELEASE</b> This knob set compressor's release time that range from FAST to SLOW.	<b>RECOVERY/RELEASE</b> This knob set compressor's release time that range from from FAST to SLOW. This emulation includes 7 release times from D473 unit and the last one from the D82 unit.
<b>RATIO:</b> This knob set the compression ratio, available values range from 1:1 to 5:1, LIM	<b>RATIO:</b> This knob set the compression ratio, available values range from 2:1 to 6:1.	<b>RATIO:</b> Fixed	<b>RATIO:</b> Fixed
<b>THRESHOLD:</b> This knob set the threshold of the compressor from -60dB to 0dB	<b>THRESHOLD:</b> This knob set the threshold of the compressor from -60dB to 0dB	<b>THRESHOLD:</b> This knob set the threshold of the compressor from -60dB to 0dB	<b>THRESHOLD:</b> This knob set the threshold of the compressor from -60dB to 0dB
<b>MAKE UP:</b> This knob sets the gain compensation and is designed to boost the compressed signal in order to match the level of uncompressed signal from 0 to +30.	<b>MAKE UP:</b> This knob sets the gain compensation and is designed to boost the compressed signal in order to match the level of uncompressed signal from 0 to +30.	<b>MAKE UP:</b> This knob sets the gain compensation and is designed to boost the compressed signal in order to match the level of uncompressed signal from 0 to +30.	<b>MAKE UP:</b> This knob sets the gain compensation and is designed to boost the compressed signal in order to match the level of uncompressed signal from 0 to +30.





# On detail

## D473 COMPRESSOR

### ON

Pushing this button the Compressor module is enabled.

### INPUT TRIM

It sets the input level from -30dB to +30dB and is used to control the signal level inside the Compressor, the output level is then automatically compensated by the same amount of gain.

At the first execution of the plug-in, input is set to ensure that you feed an appropriate level from the first stage of your signal path to the final one.

### GAIN REDUCTION METER (GR):

It measures the reduction level applied by 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 displayed.

### ATTACK:

This knob set compressor's attack time that range range from 0.1 S (fast) to 10 S (slow).

### RECOVERY:

This knob set compressor's release time that range range from 0.1 S (fast) to 10 S (slow).

### SHMODE:

This knob is a shape control for the compressor's attack behavior. It allows you to fine-tune the attack shape so you can really customize the attack behavior for any audio source.

### THRESHOLD:

This knob set the threshold of the compressor from This knob sets -60dB to 0dB.

### MAKEUP:

This knob sets the gain compensation and is designed to boost the compressed signal in order to match the level of uncompressed signal from 0 to +30.

### MIX:

This control included also in Ebony channel-strip version determines the mix proportion between the original (dry) and 'effected' (wet) signals. Here you'll find a very powerful and simple-to-use feature.

### INSANE/INS button:

It engages the INSANE\* mode of the compressor.

\*This mode has been implemented to increase the accuracy and speed of the compressor, but it's more expensive in terms of CPU usage.

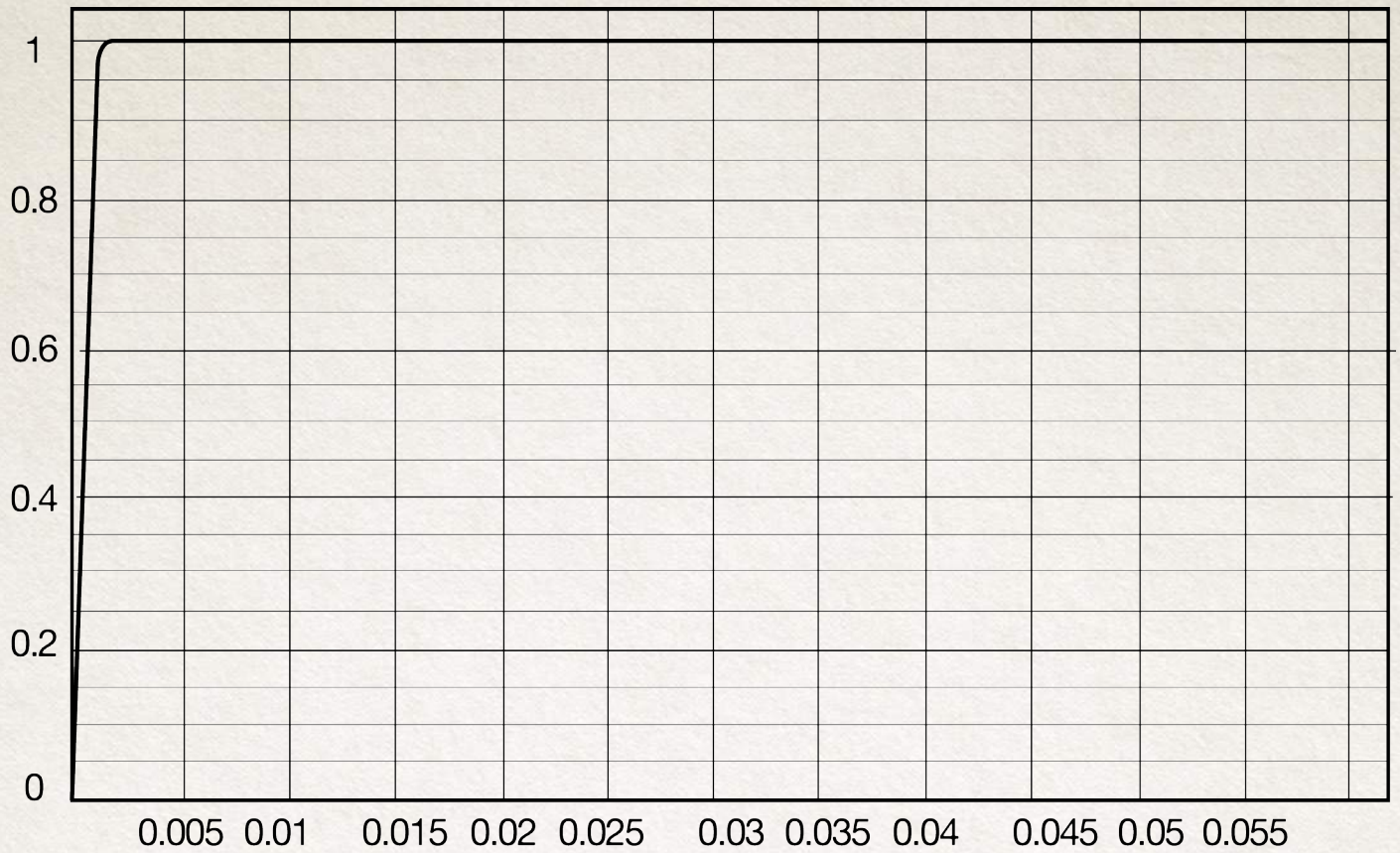
### RATIO:

This knob set the compression ratio, available values range from 1:1 to 5:1, LIM.

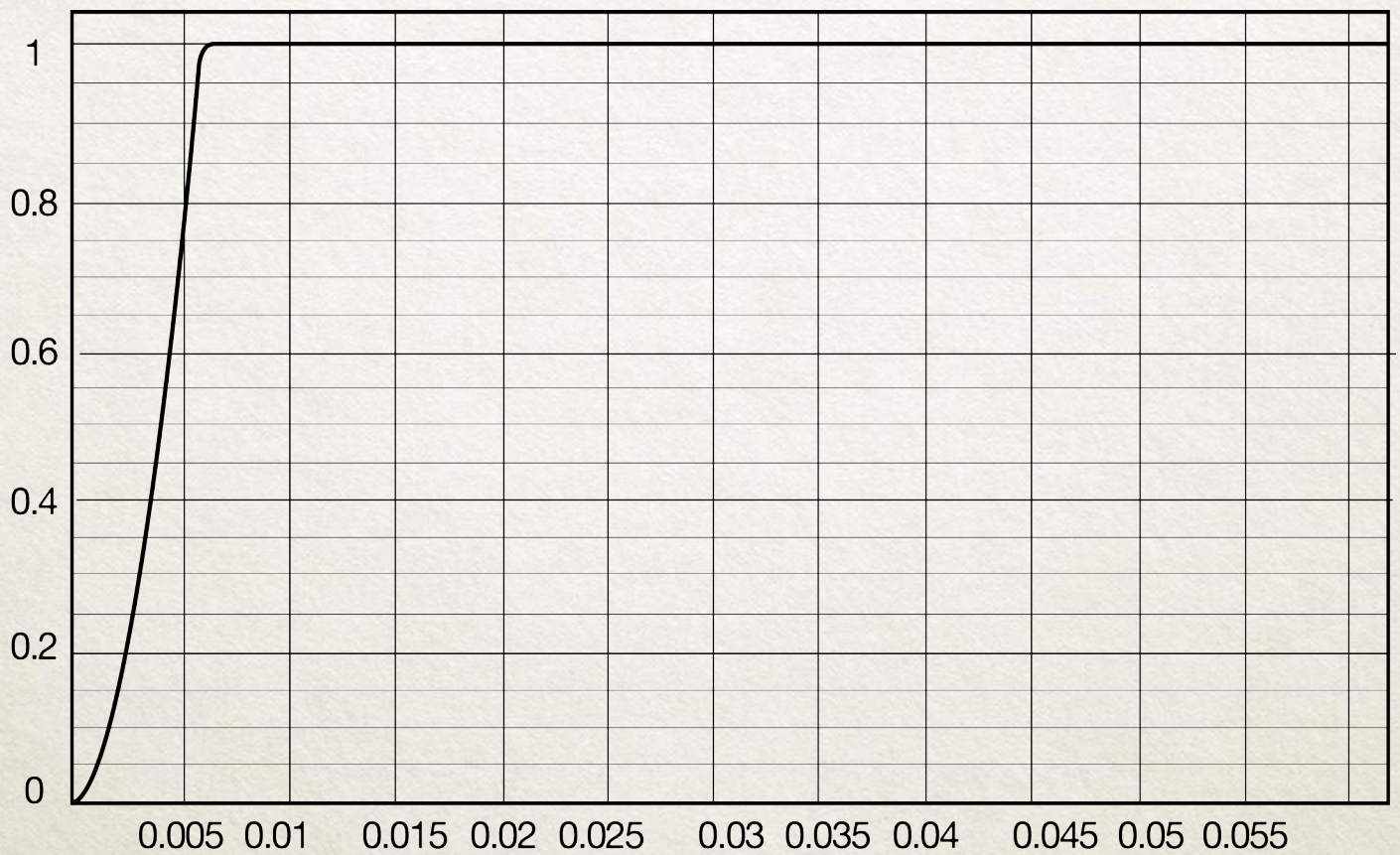




D473 attack time: 0.25 ms

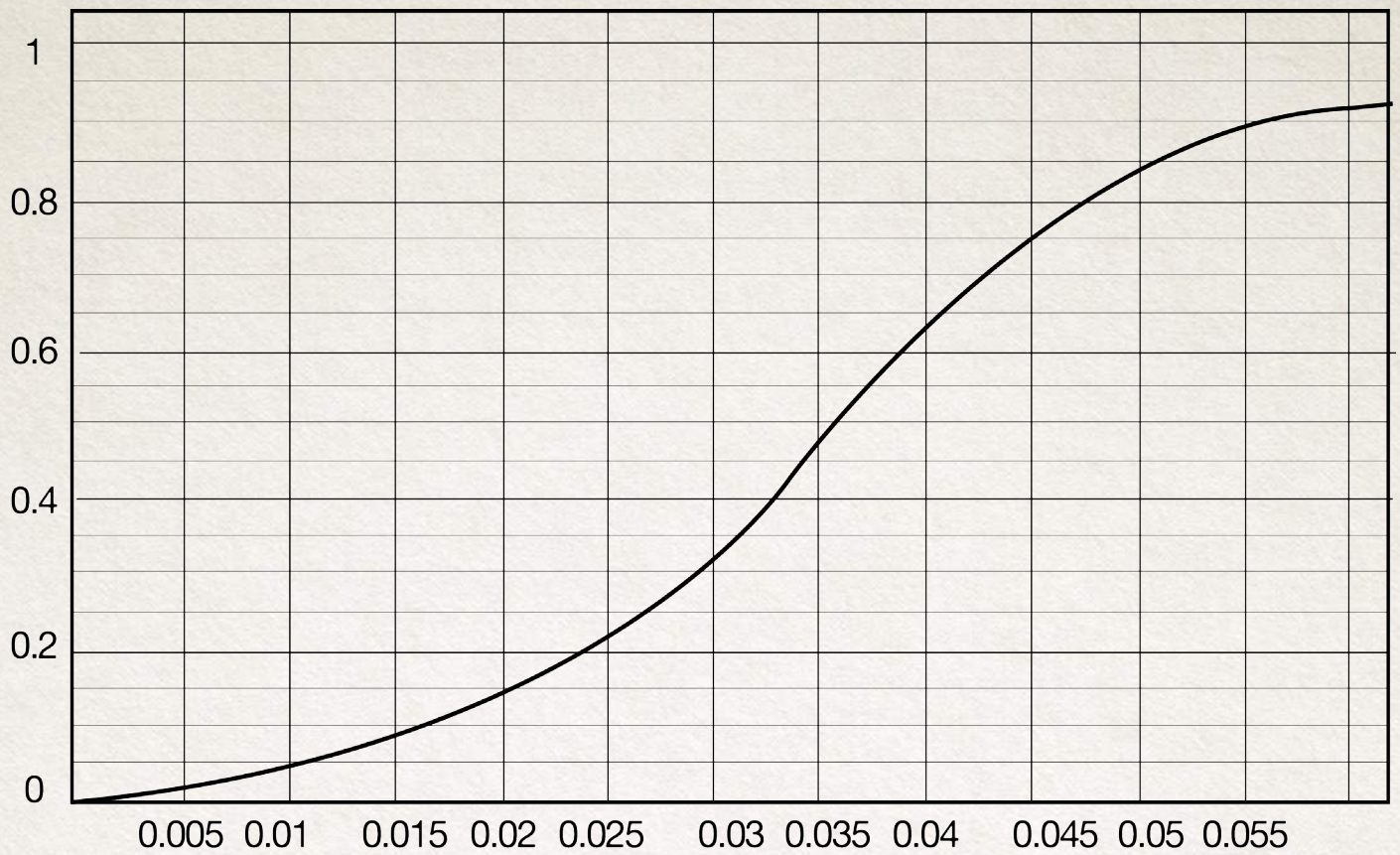


D473 attack time: 3 ms

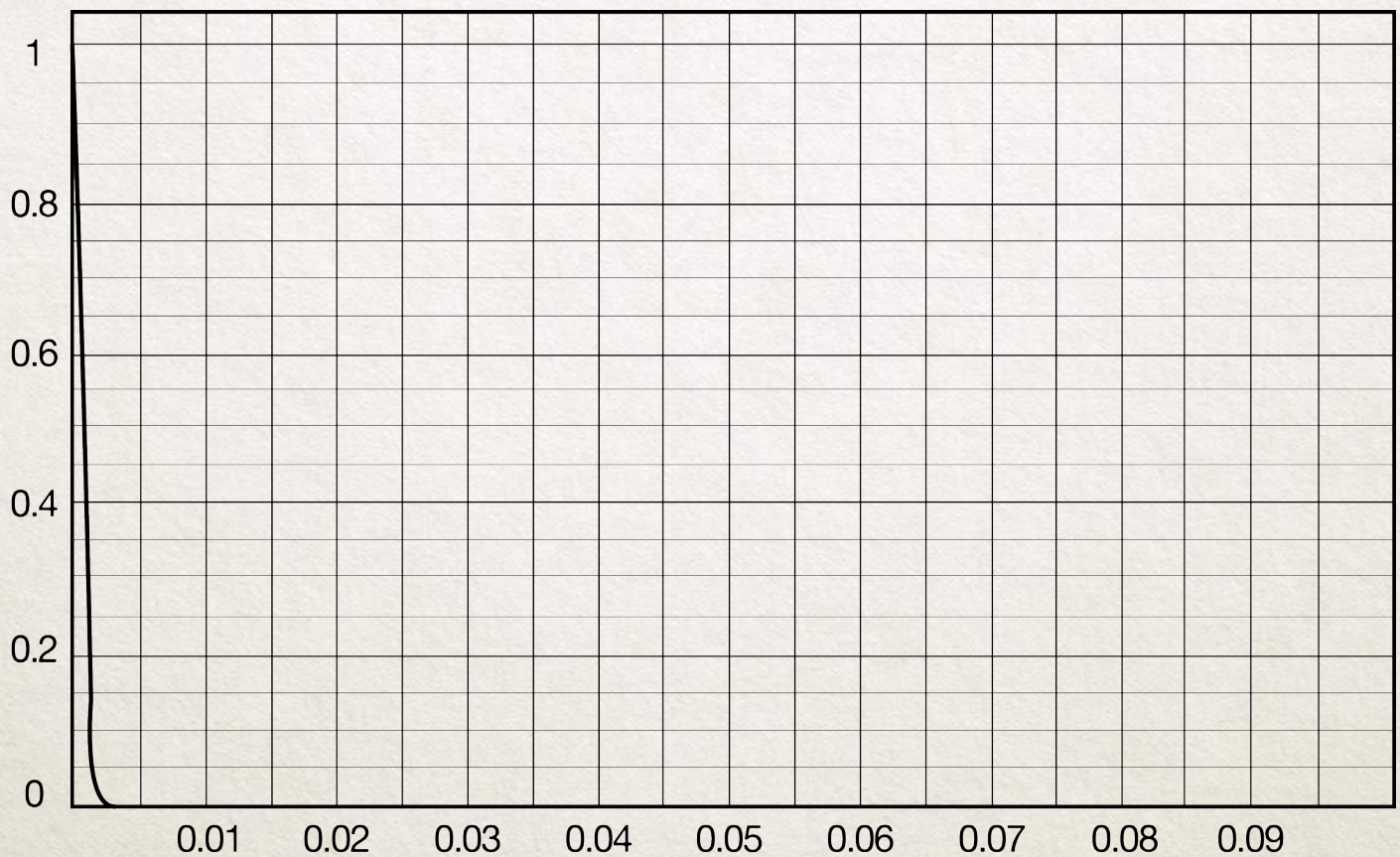




D473 attack time: 30 ms

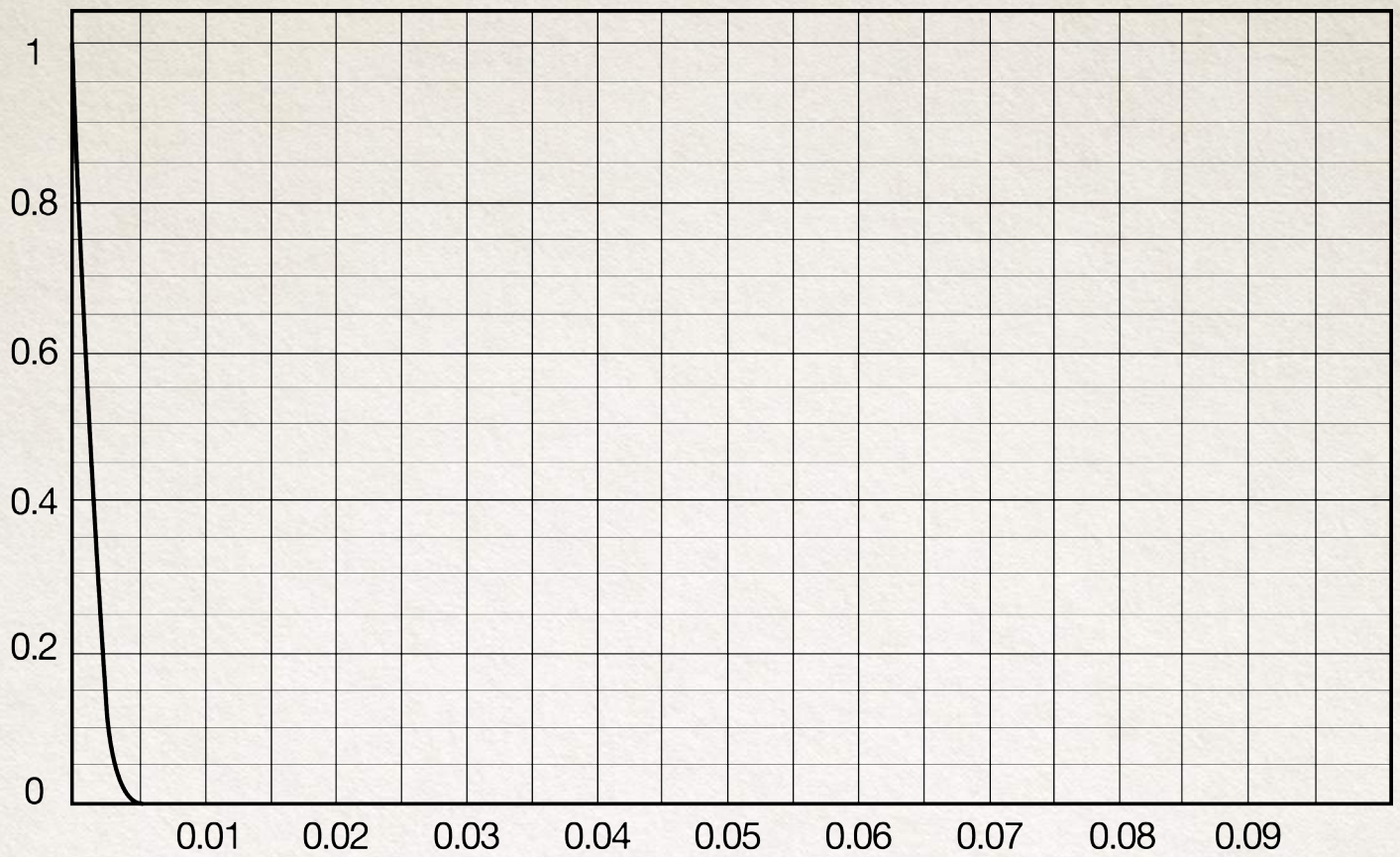


D473 recovery / release time: 0.1 s

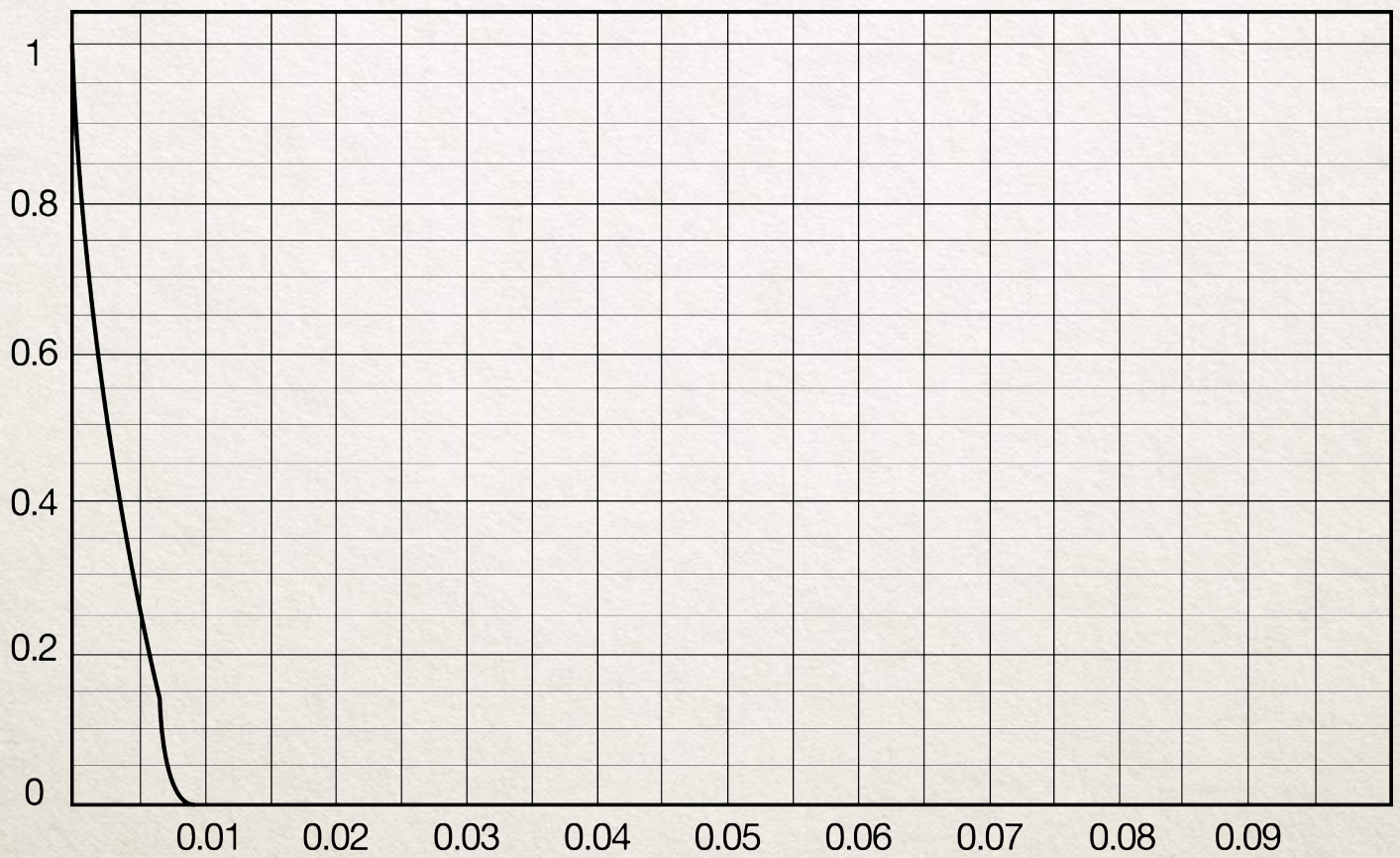




D473 recovery / release time: 0.2 s

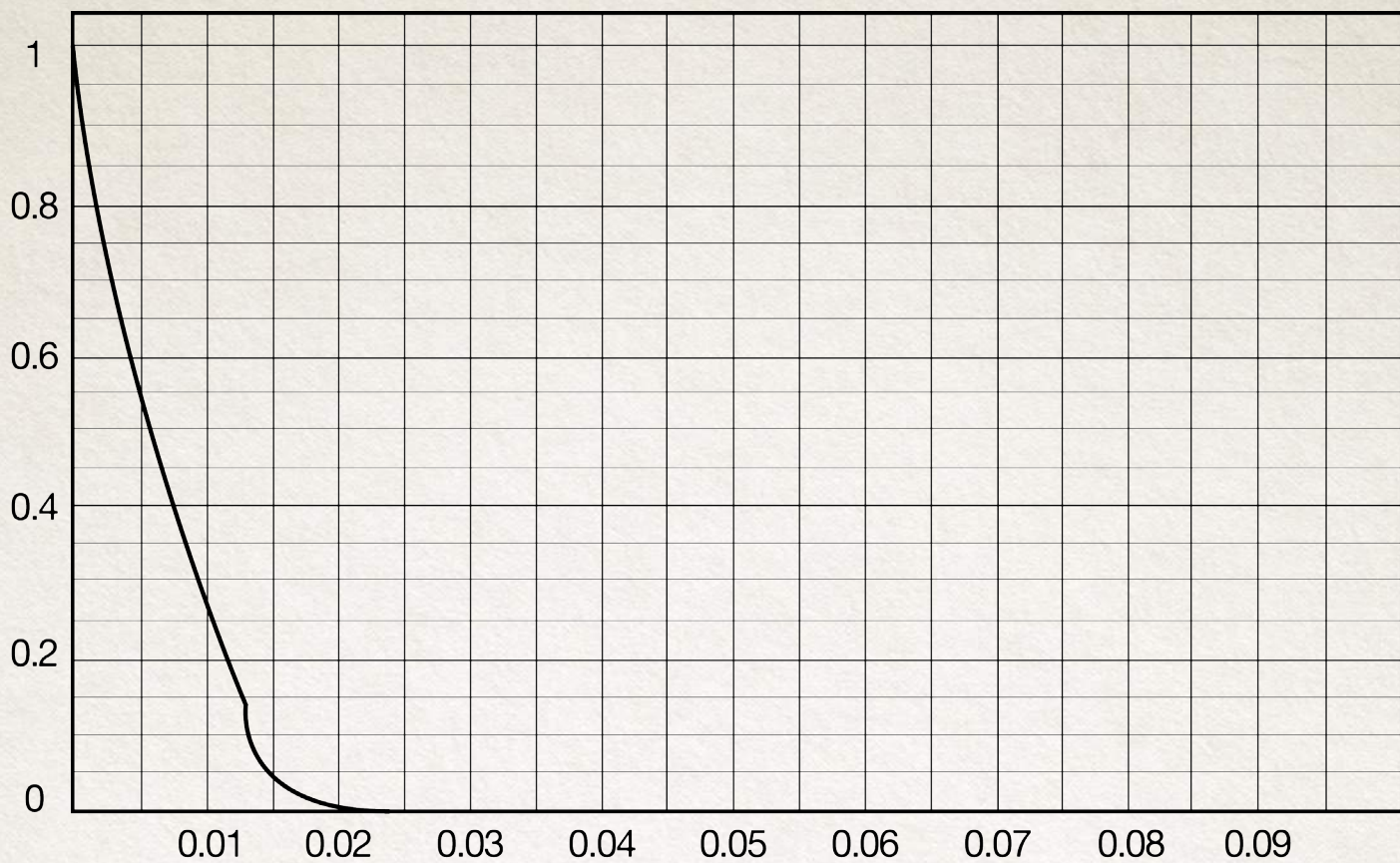


D473 recovery / release time: 0.5 s

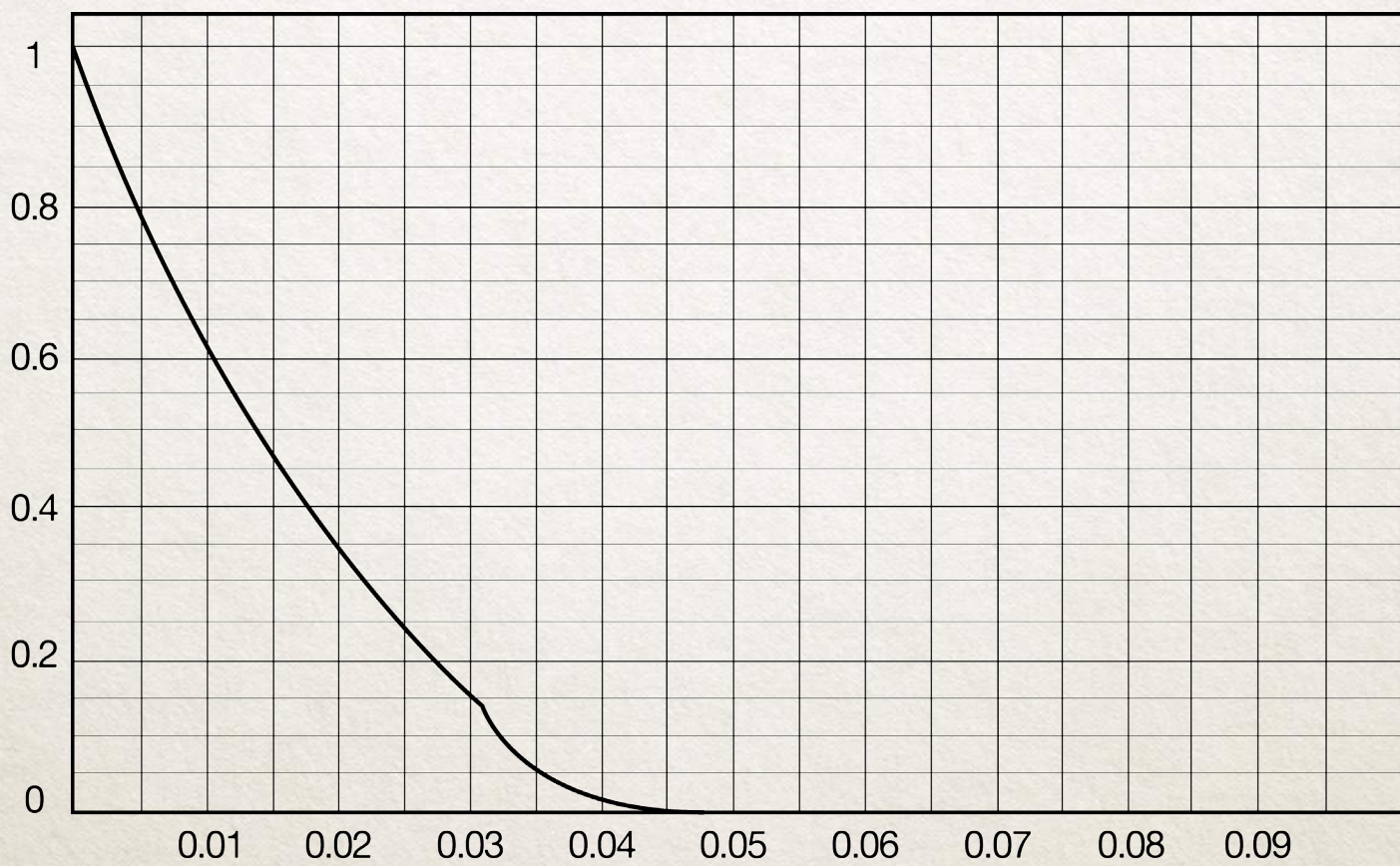




D473 recovery / release time: 1 s

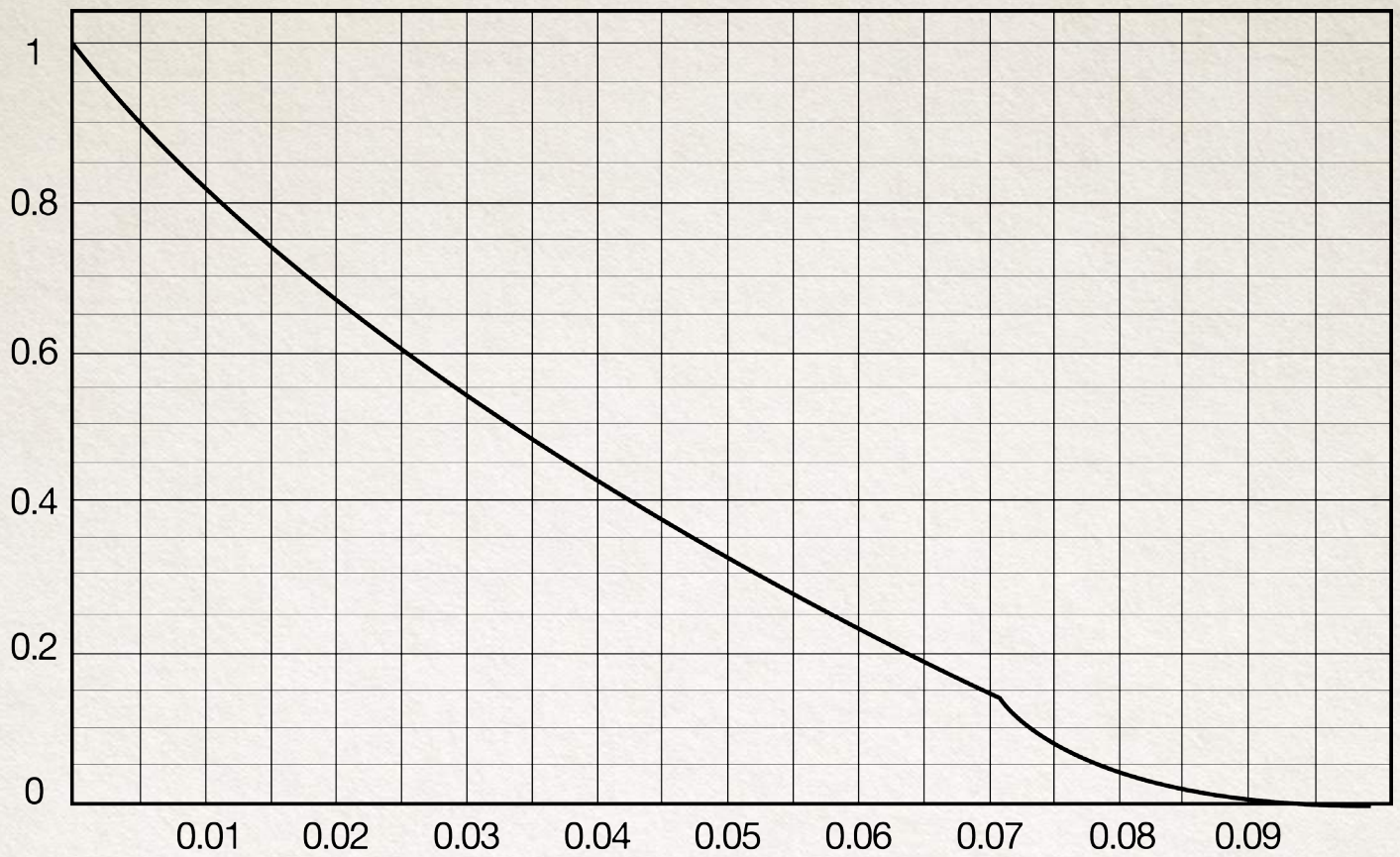


D473 recovery / release time: 2 s

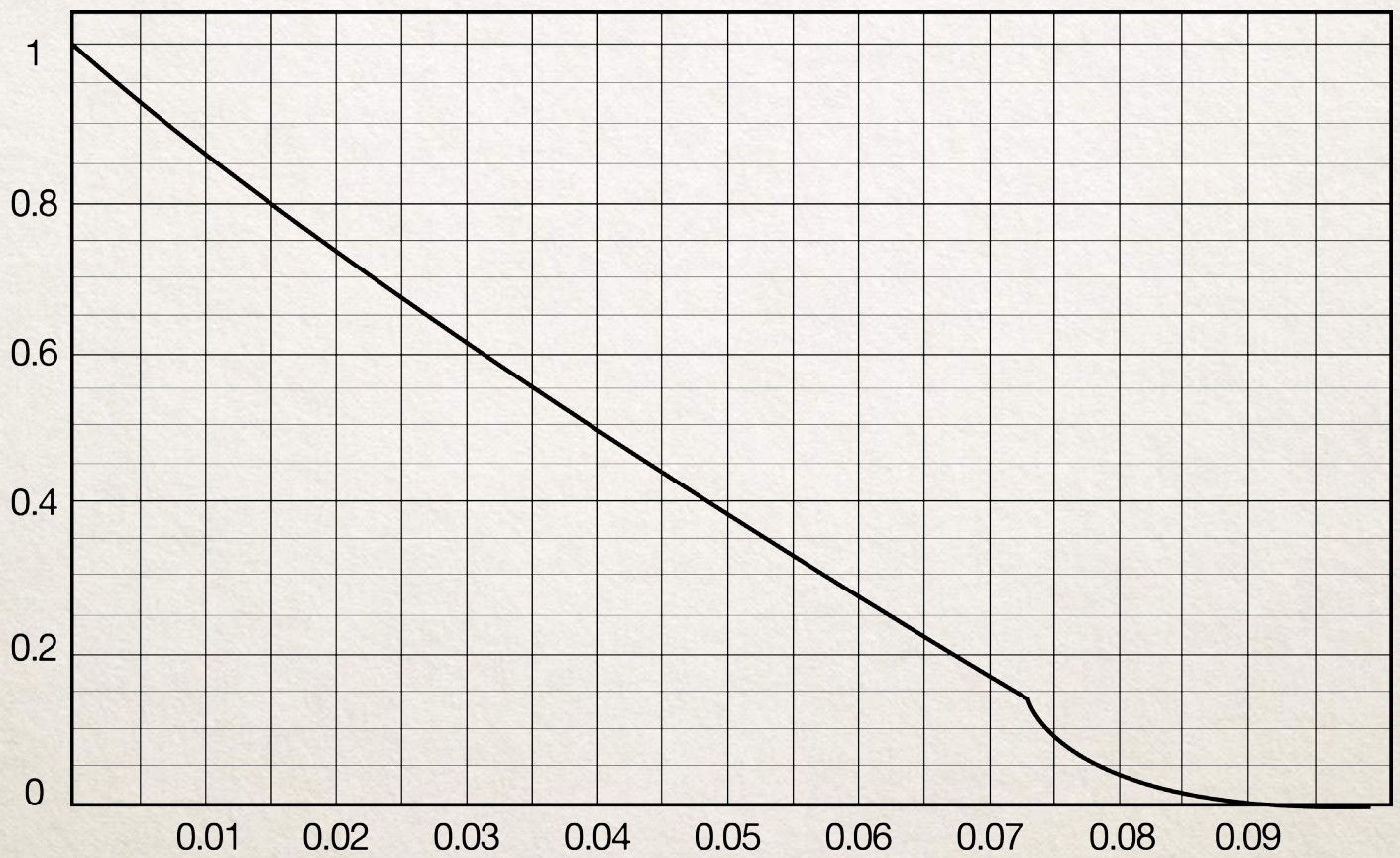




D473 recovery / release time: 5 s

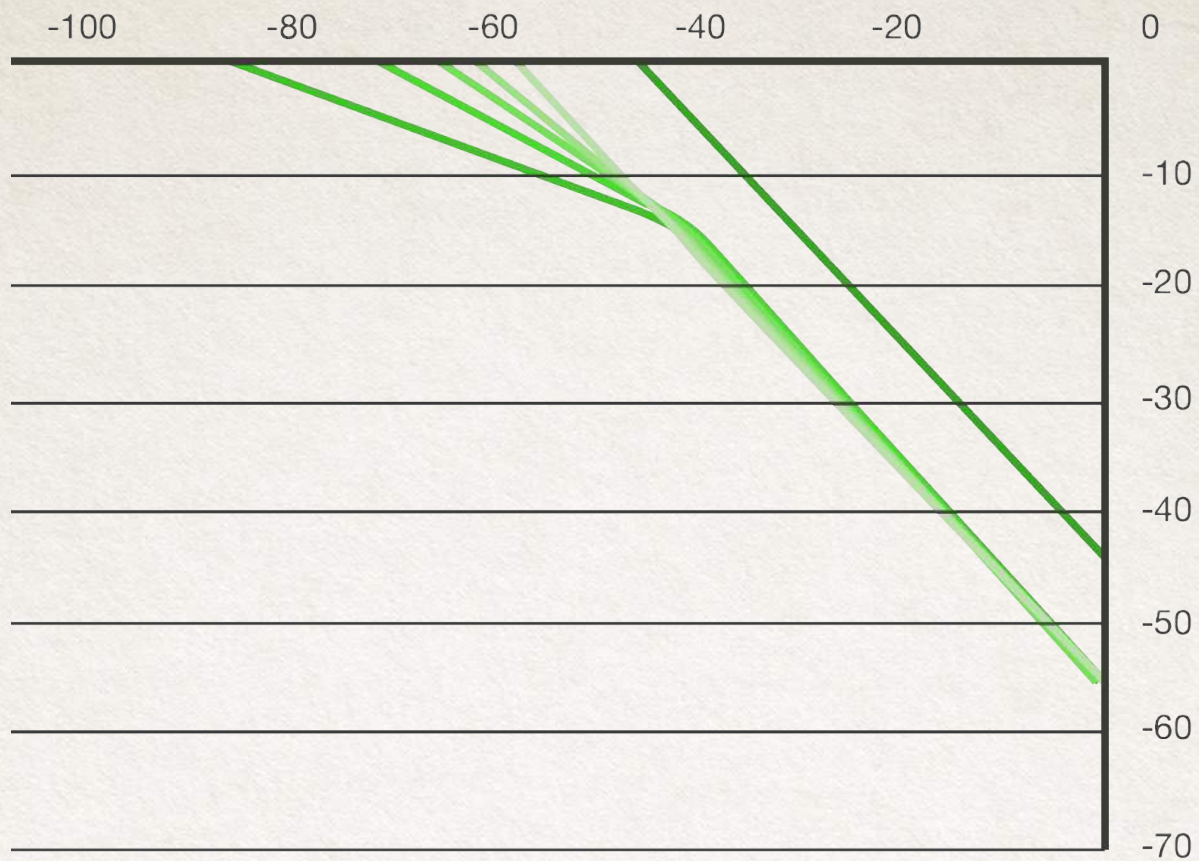


D473 recovery / release time: 10 s





## D473 ratios





## D277 COMPRESSOR

ON

Pushing this button the Compressor module is enabled.

### INPUT TRIM

It sets the input level from -30dB to +30dB and is used to control the signal level inside the Compressor, the output level is than automatically compensated by the same amount of gain.

At the first execution of the plug-in, input is set to ensure that you feed an appropriate level from the first stage of your signal path to the final one.

### GAIN REDUCTION METER (GR):

It measures the reduction level applied by 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 displayed.

### ATTACK:

This knob set compressor's attack time that range from 0.25 ms (fast) to 30 ms (slow).

### RECOVERY:

This knob set compressor's release time that range range from Fast to Slow;

### SHMODE:

This knob is a shape control for the compressor's attack behavior. It allows you to fine-tune the attack shape so you can really customize the attack behavior for any audio source.

### THRESHOLD:

This knob set the threshold of the compressor from This knob sets -60dB to 0dB.

### MAKEUP:

This knob sets the gain compensation and is designed to boost the compressed signal in order to match the level of uncompressed signal from 0 to +30.

### MIX:

This control included also in Ebony channel-strip version determines the mix proportion between the original (dry) and 'effected' (wet) signals. Here you'll find a very powerful and simple-to-use feature.

### INSANE/INS button:

It engages the INSANE\* mode of the compressor.

\*This mode has been implemented to increase the accuracy and speed of the compressor, but it's more expensive in terms of CPU usage.

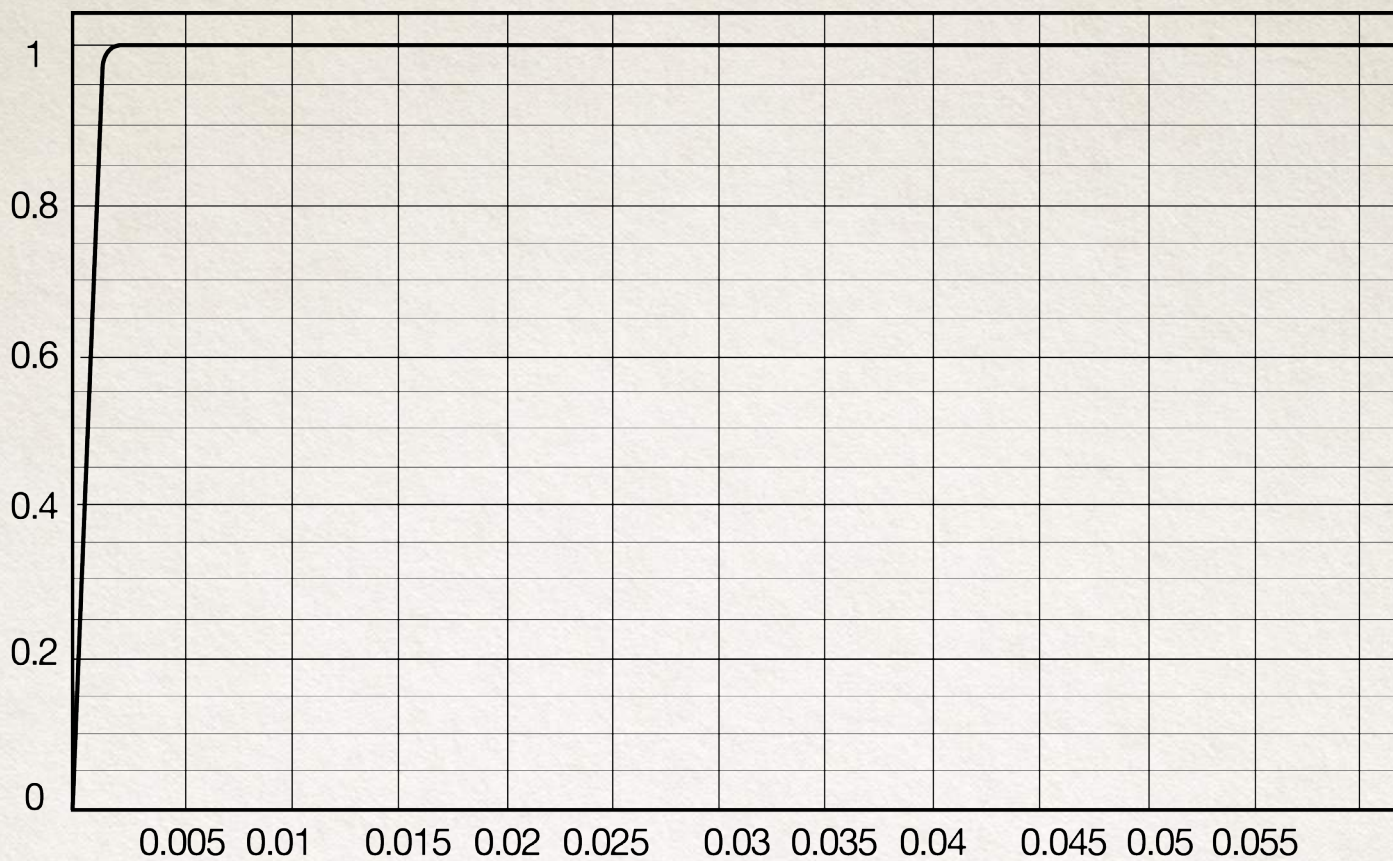
### RATIO

This knob set the compression ratio, available values range from 2:1 to 6:1.

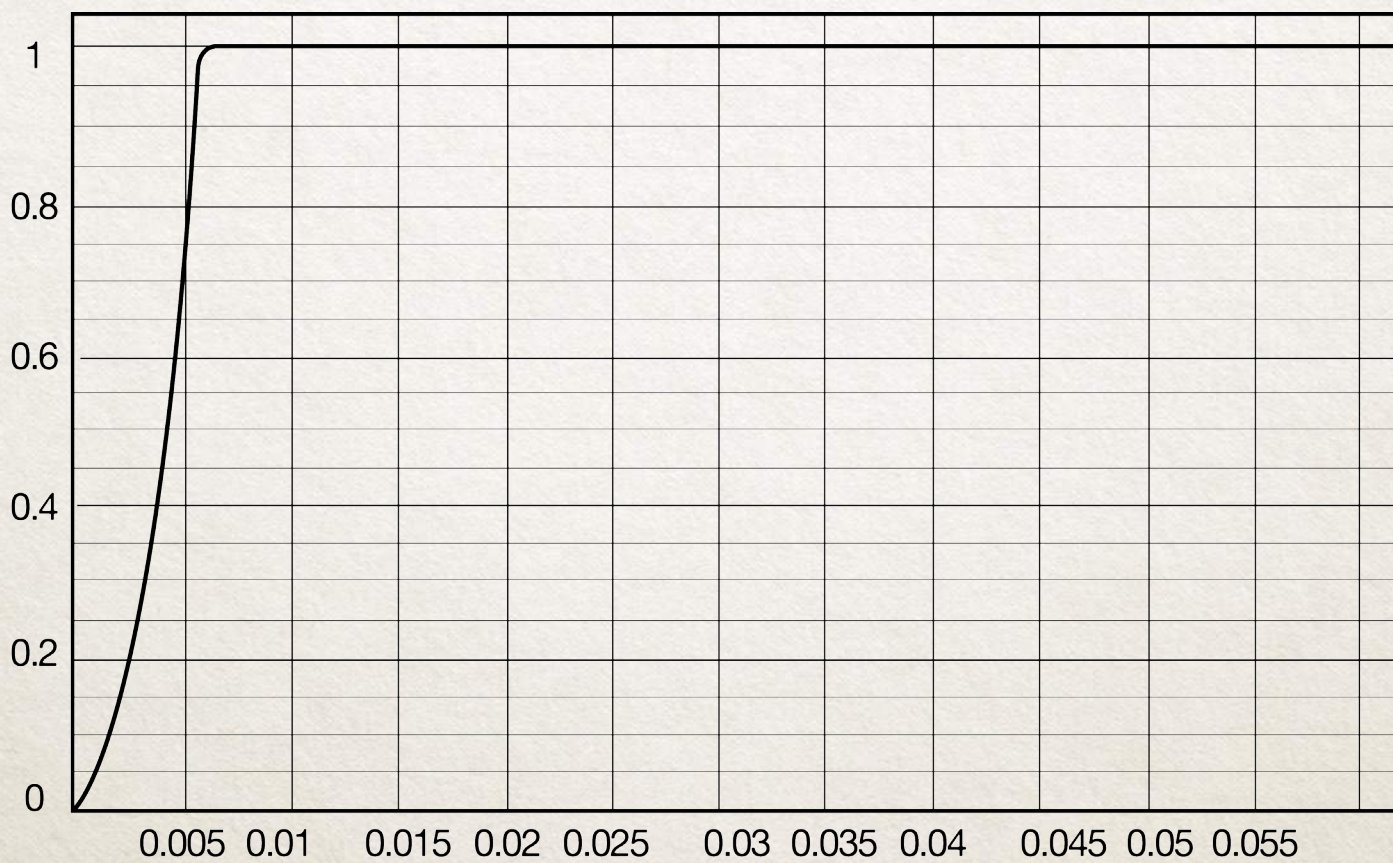




D277 attack time: 0.25 ms

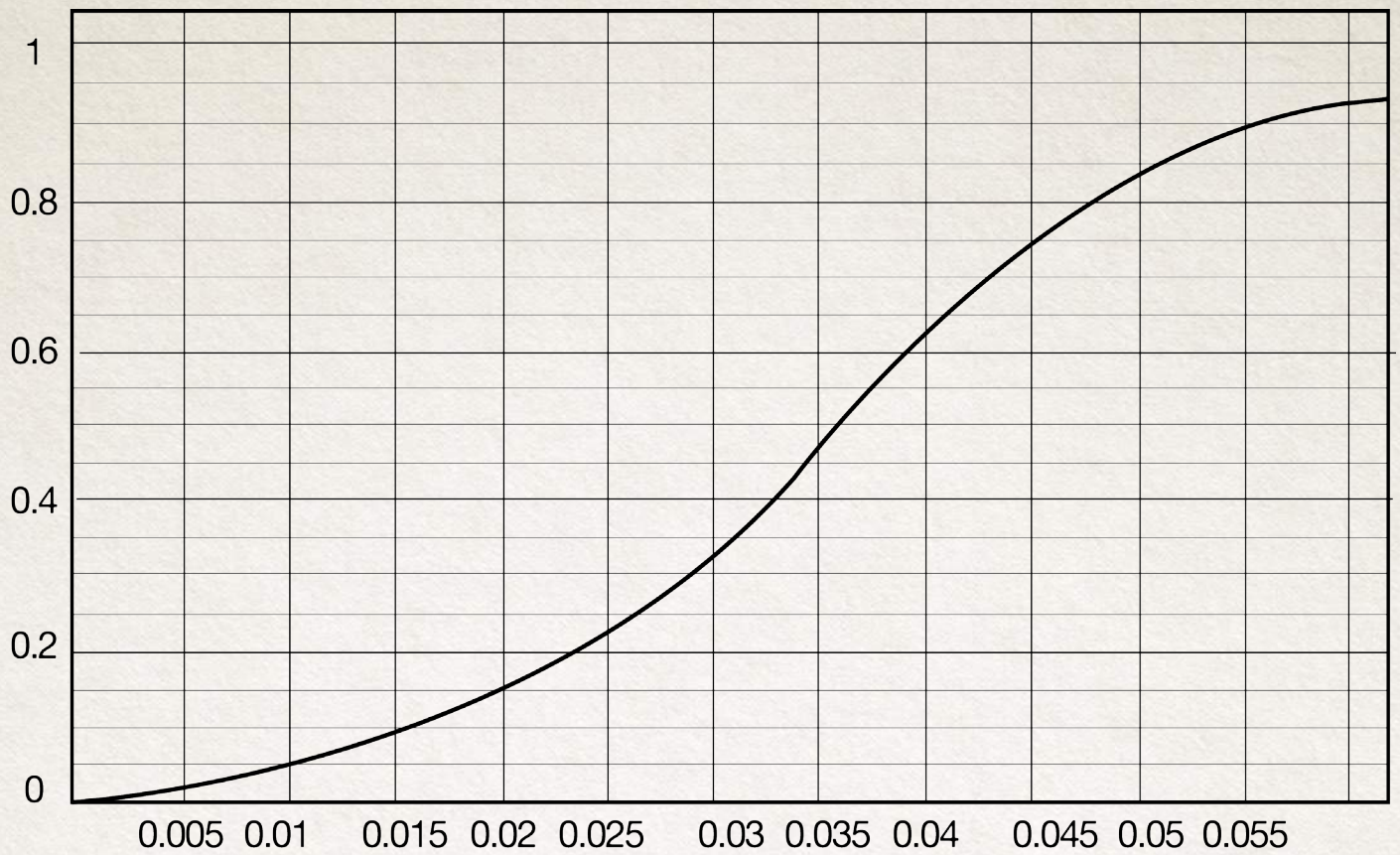


D277 attack time: 3 ms

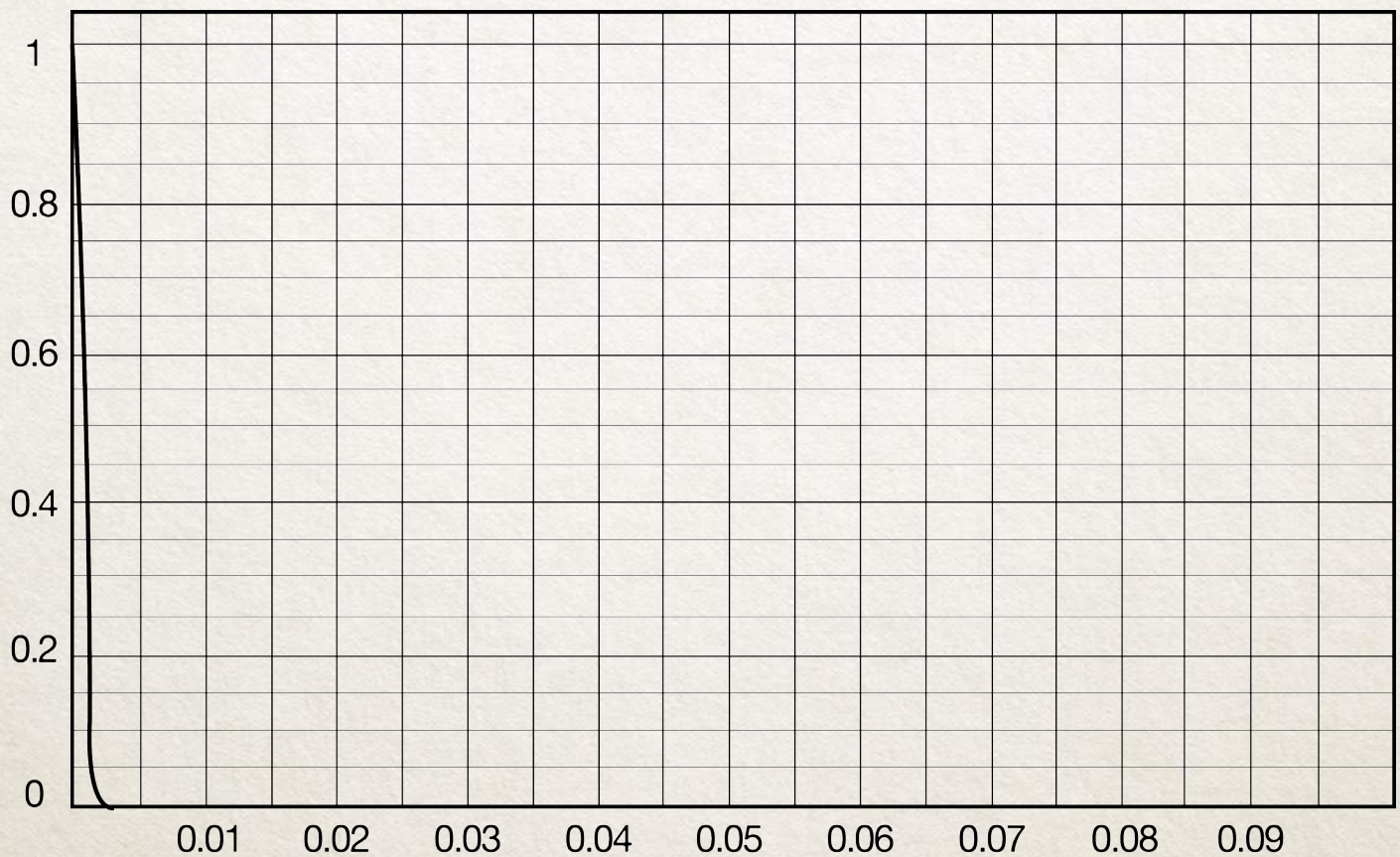




D277 attack time: 30 ms

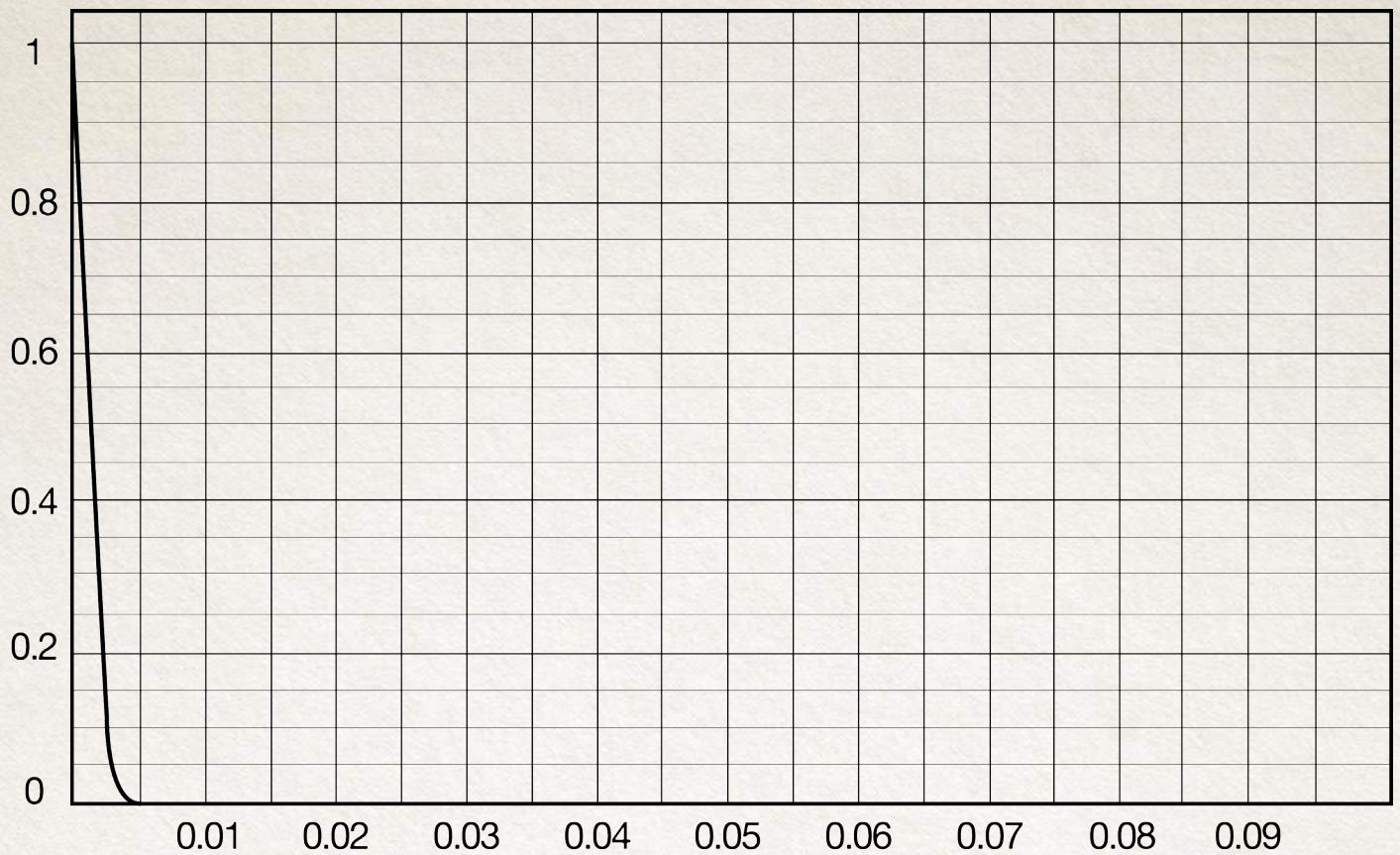


D277 recovery / release

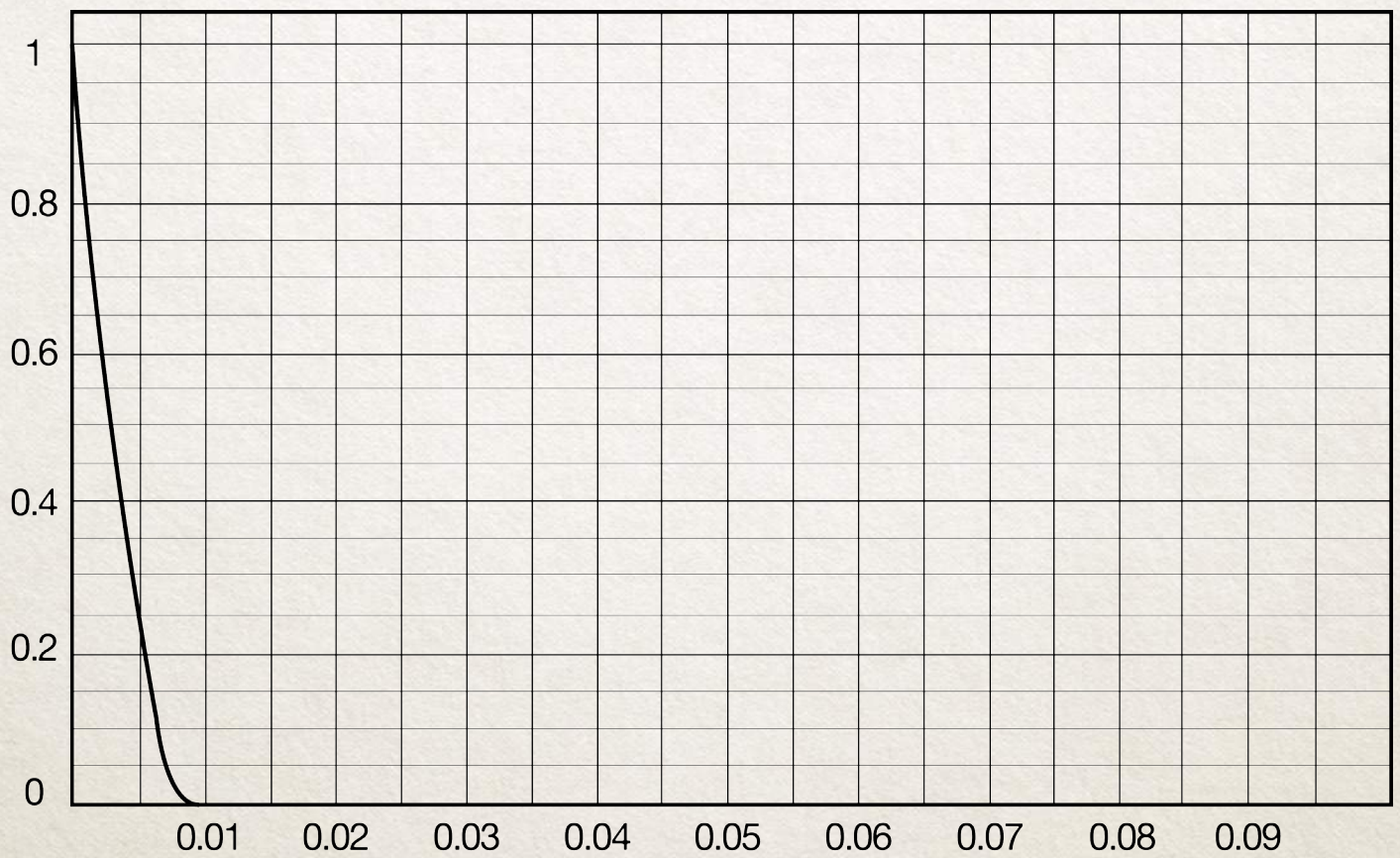




D277 recovery / release

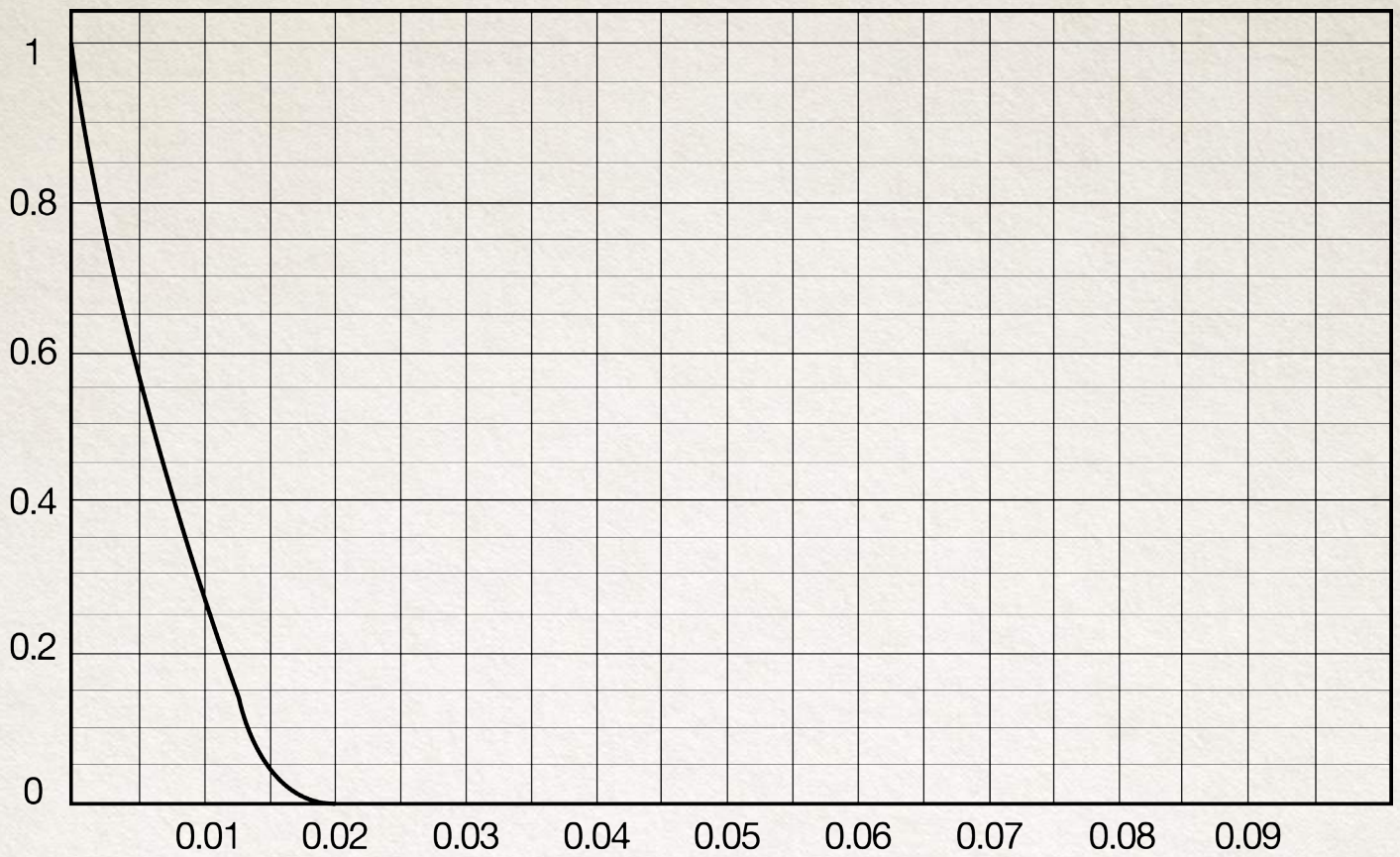


D277 recovery / release

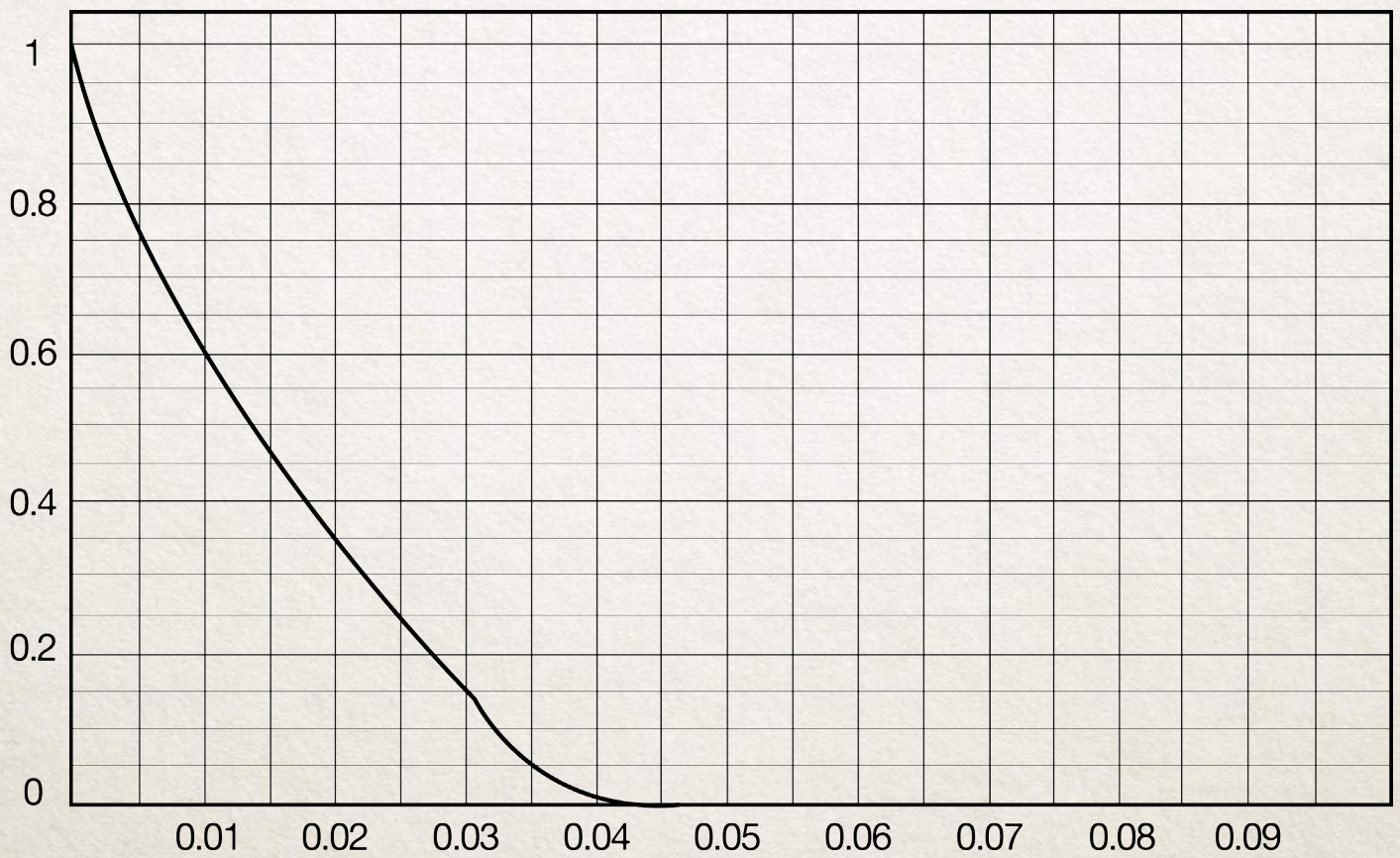




D277 recovery / release

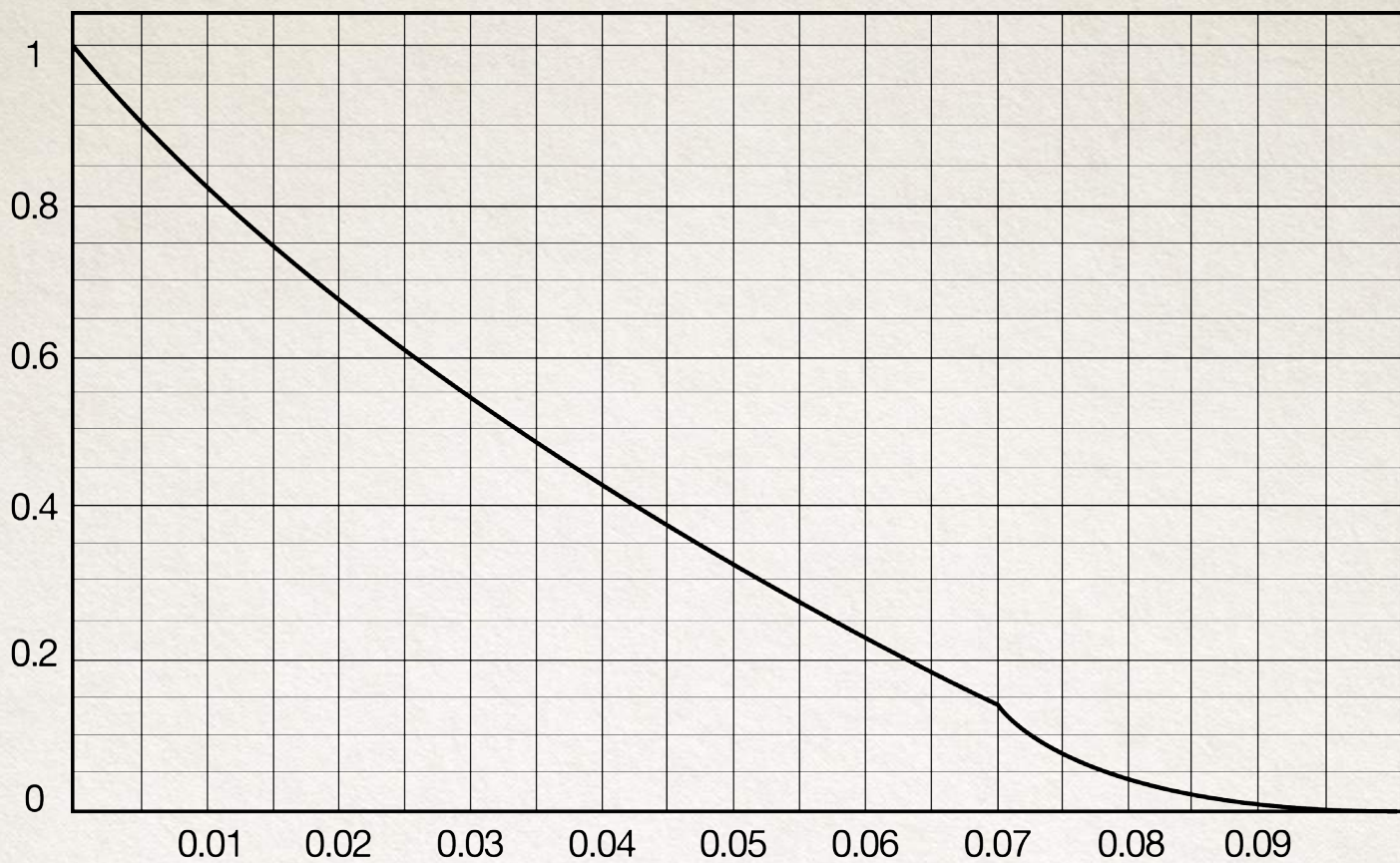


D277 recovery / release

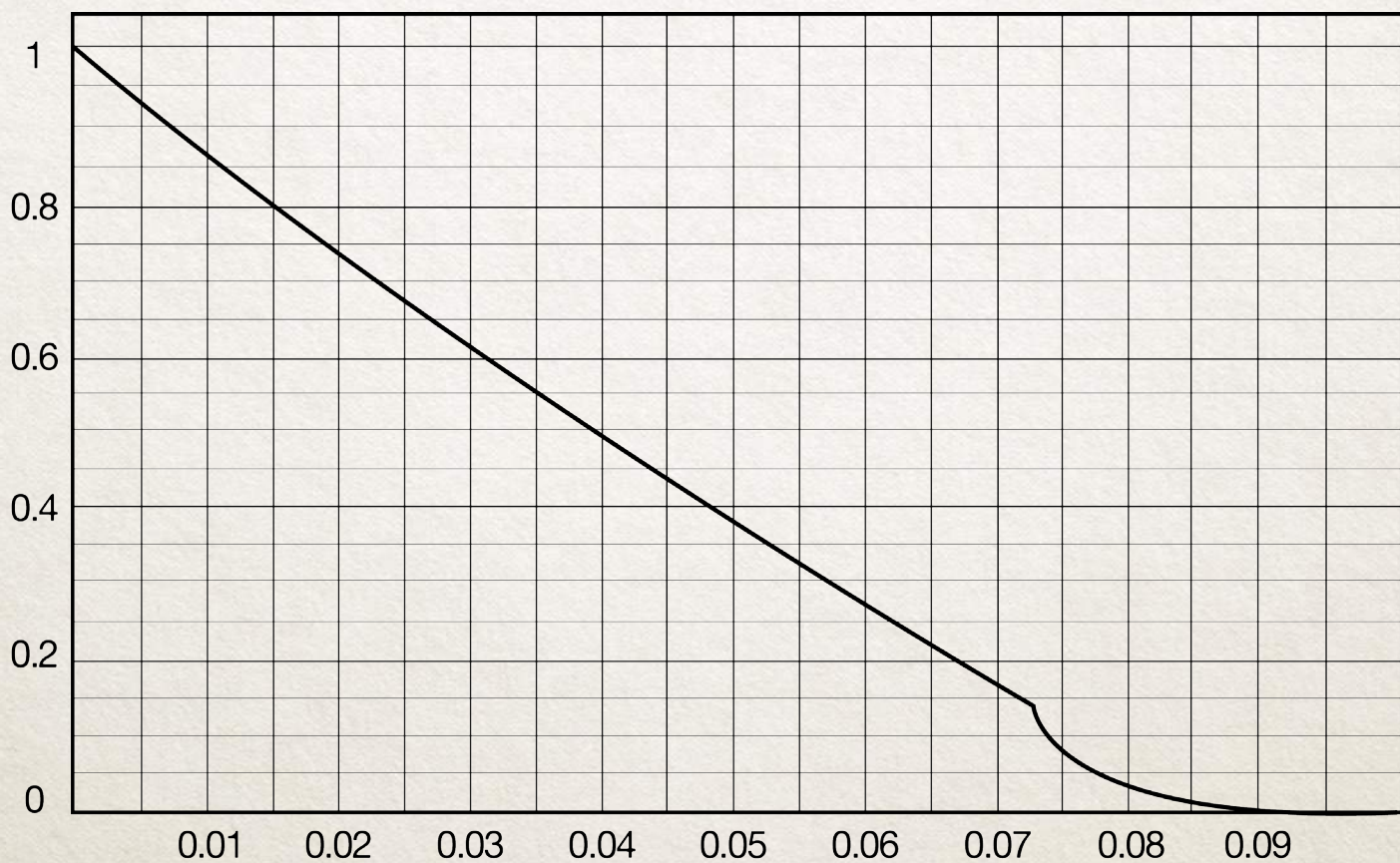




D277 recovery / release

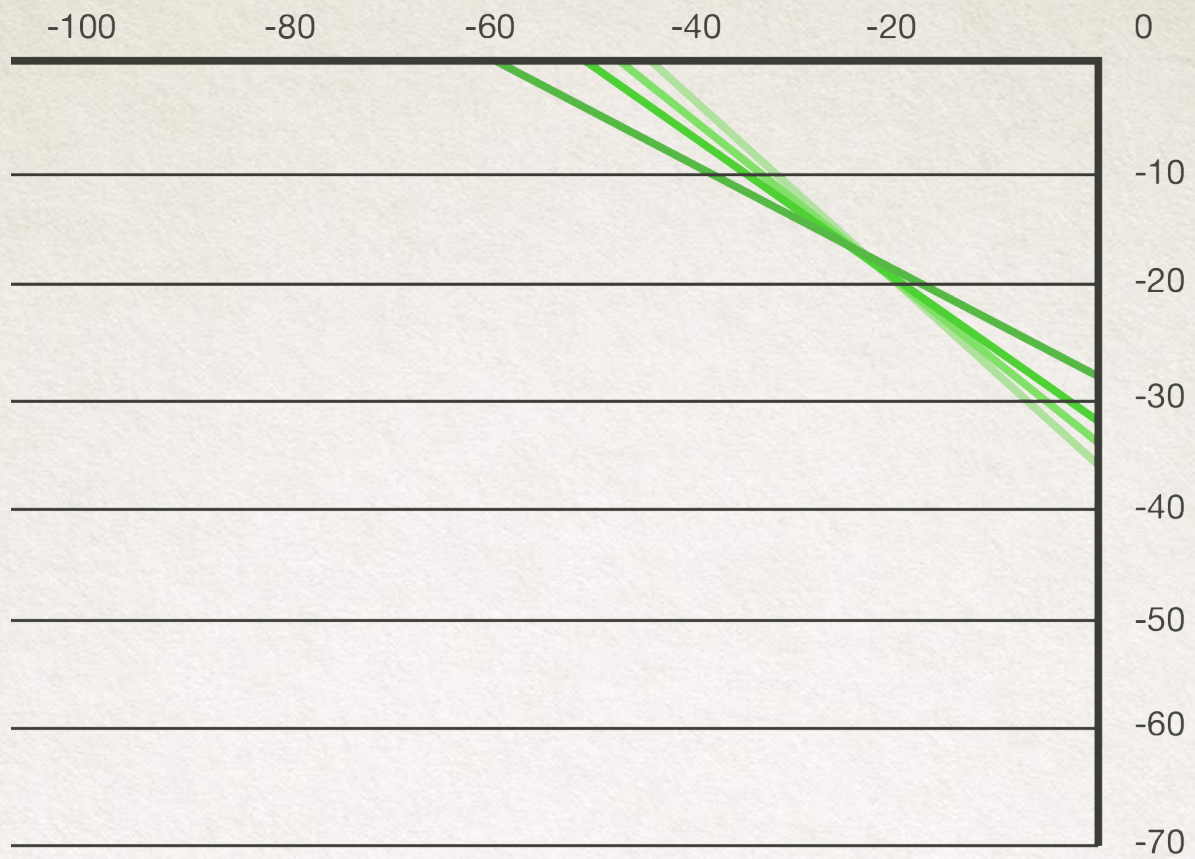


D277 recovery / release





## D277 ratio





## D112 COMPRESSOR

ON

Pushing this button the Compressor module is enabled.

### INPUT TRIM

It sets the input level from -30dB to +30dB and is used to control the signal level inside the Compressor, the output level is than automatically compensated by the same amount of gain.

At the first execution of the plug-in, input is set to ensure that you feed an appropriate level from the first stage of your signal path to the final one.

### GAIN REDUCTION METER (GR):

It measures the reduction level applied by 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 displayed.

### ATTACK:

Fixed.

### RECOVERY:

This knob set compressor's release time that range range from Fast to Slow.

### SHMODE:

This knob is a shape control for the compressor's attack behavior. It allows you to fine-tune the attack shape so you can really customize the attack behavior for any audio source.

### THRESHOLD:

This knob set the threshold of the compressor from -60dB to 0dB. This knob sets -60dB to 0dB.

### MAKEUP

This knob sets the gain compensation and is designed to boost the compressed signal in order to match the level of uncompressed signal from 0 to +30.

### MIX:

This control included also in Ebony channel-strip version determines the mix proportion between the original (dry) and 'effected' (wet) signals. Here you'll find a very powerful and simple-to-use feature.

### INSANE/INS button:

It engages the INSANE\* mode of the compressor.

\*This mode has been implemented to increase the accuracy and speed of the compressor, but it's more expensive in terms of CPU usage.

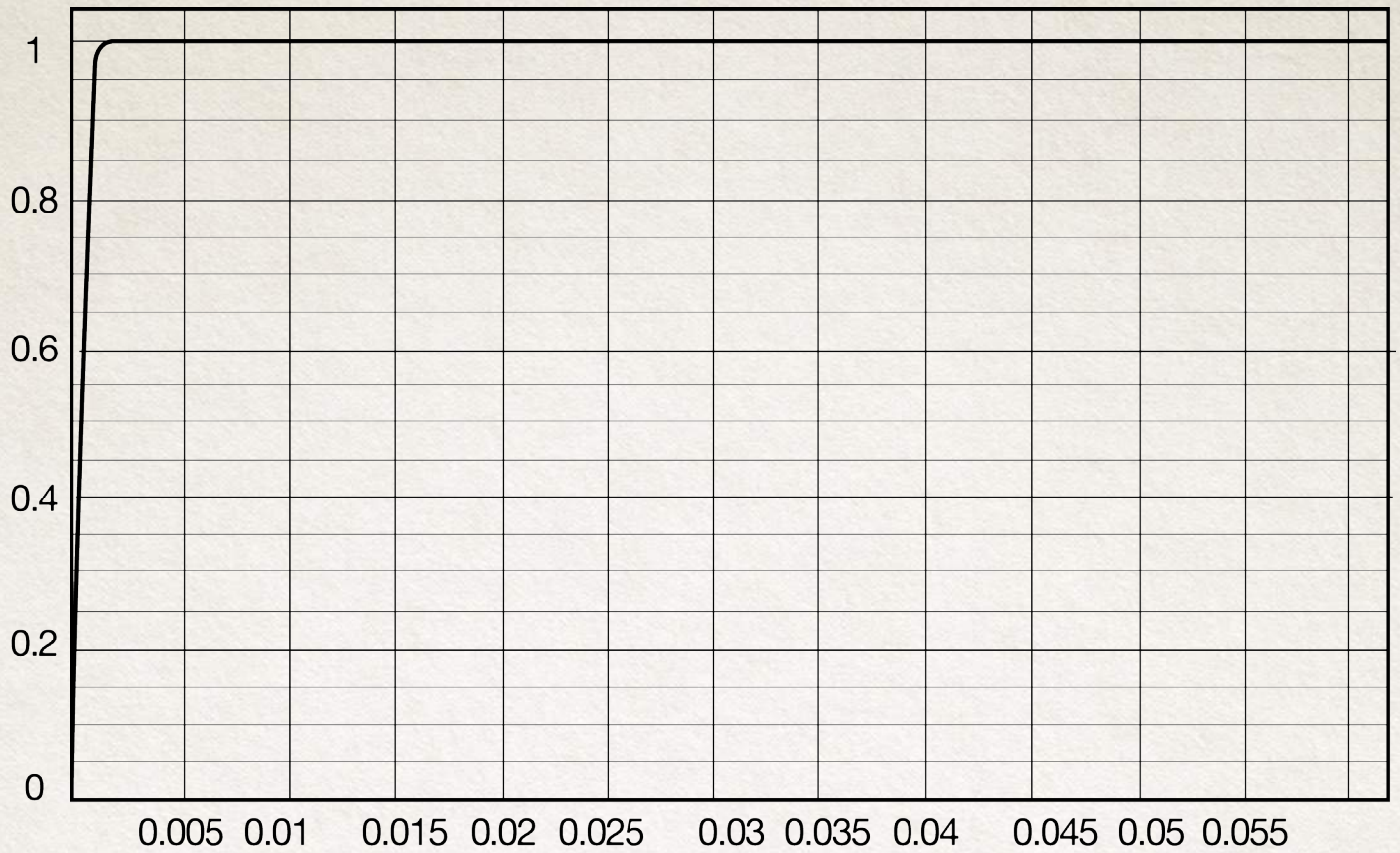
### RATIO

Fixed.

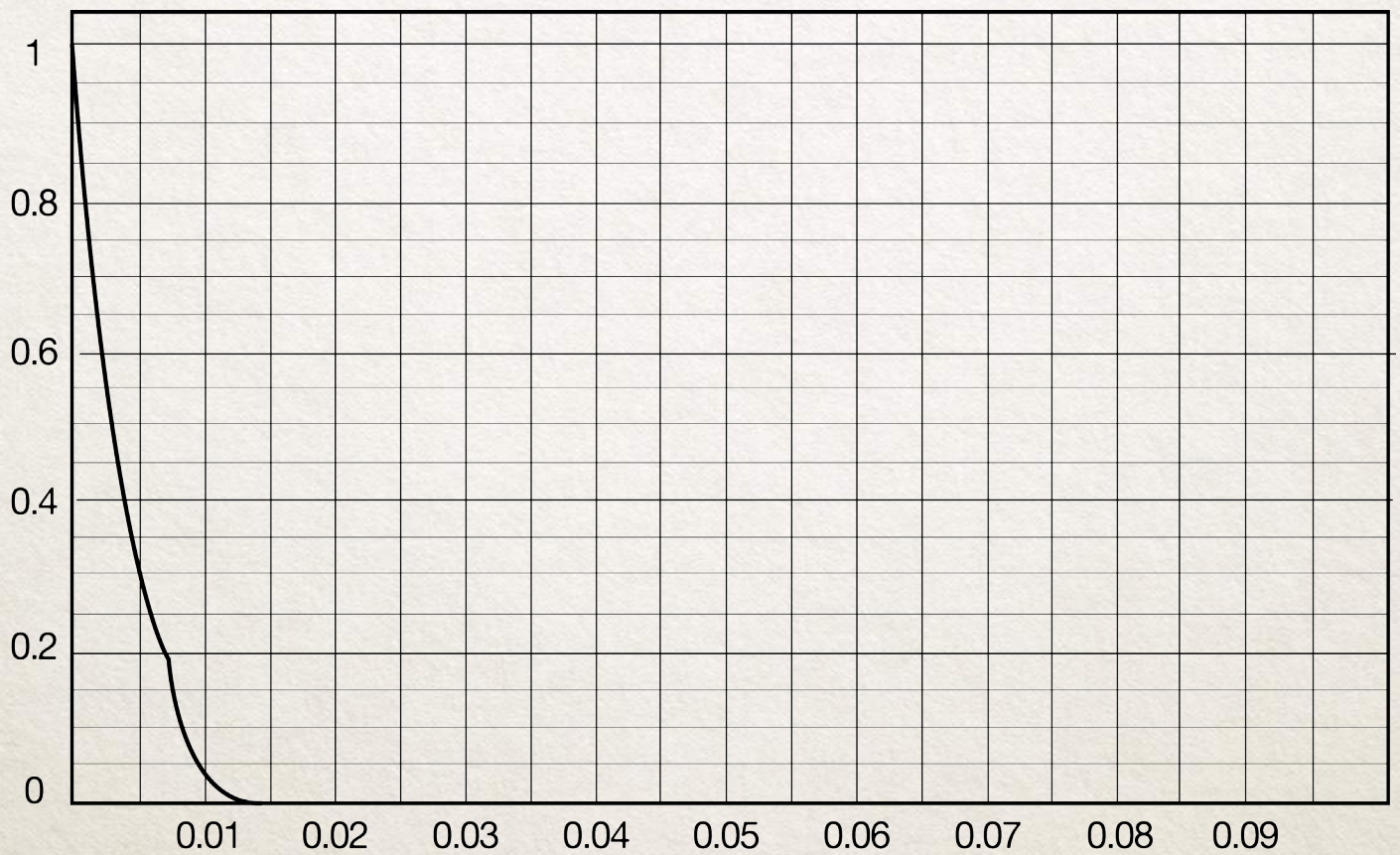




D112 attack

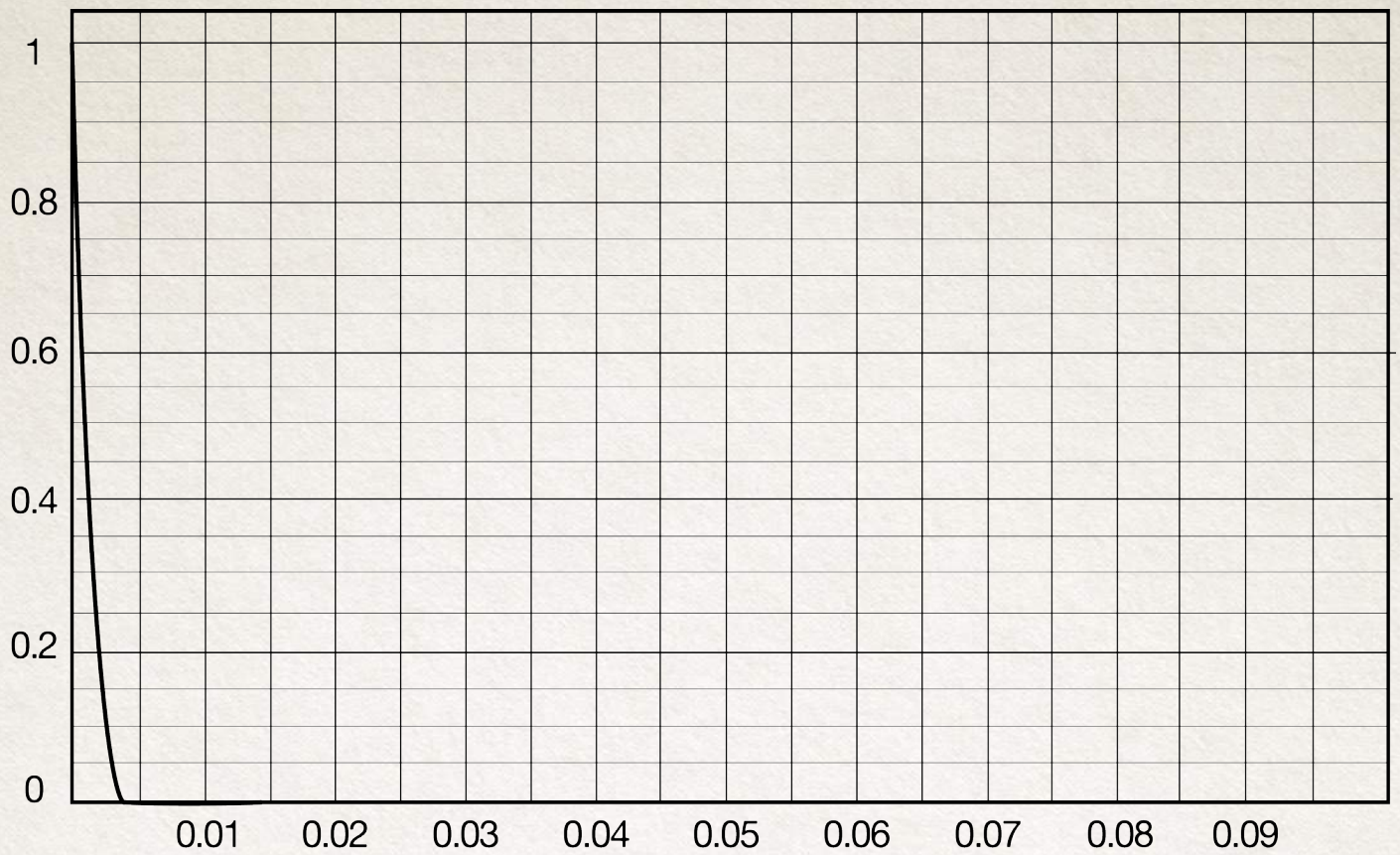


D112 release

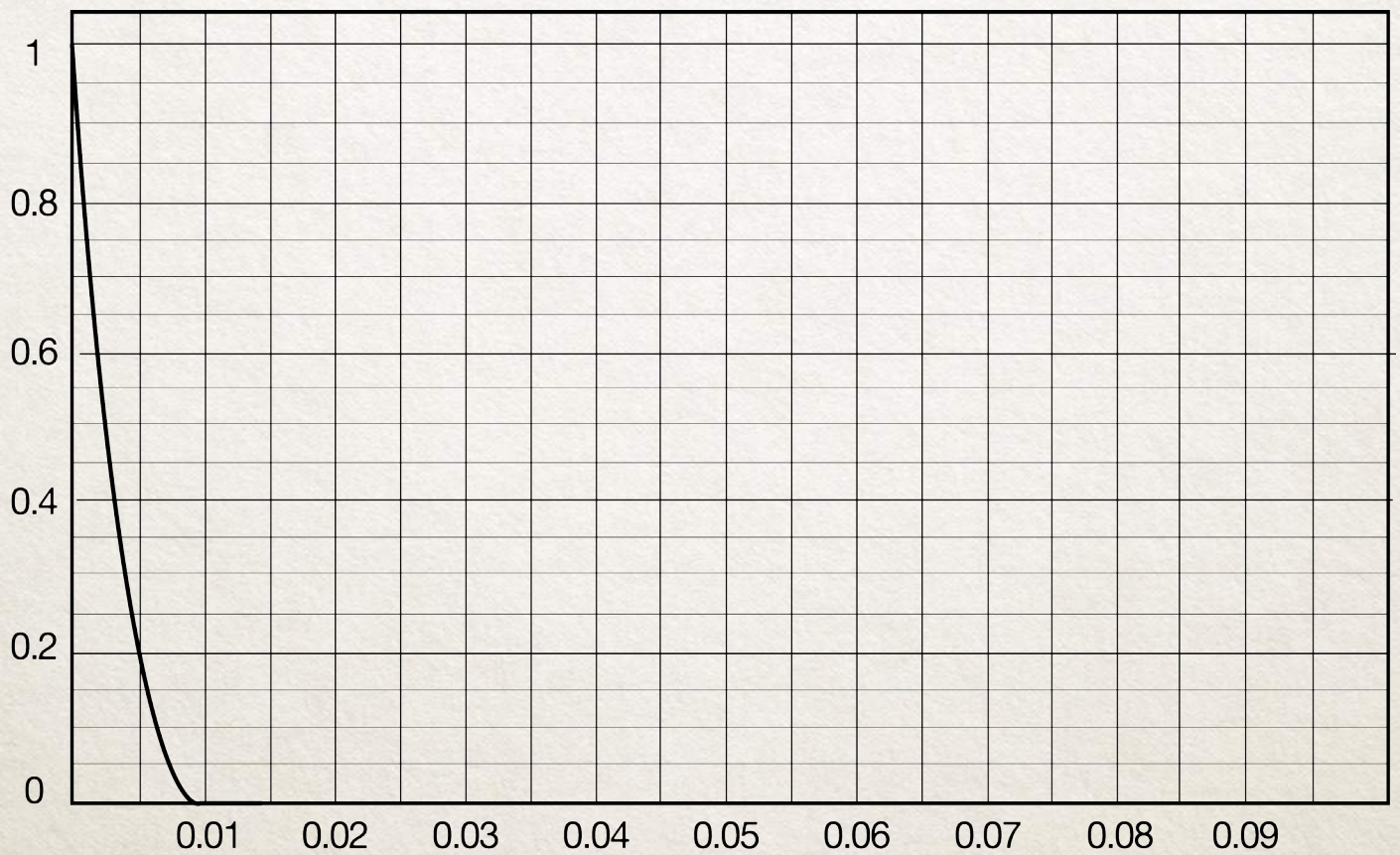




D112 release

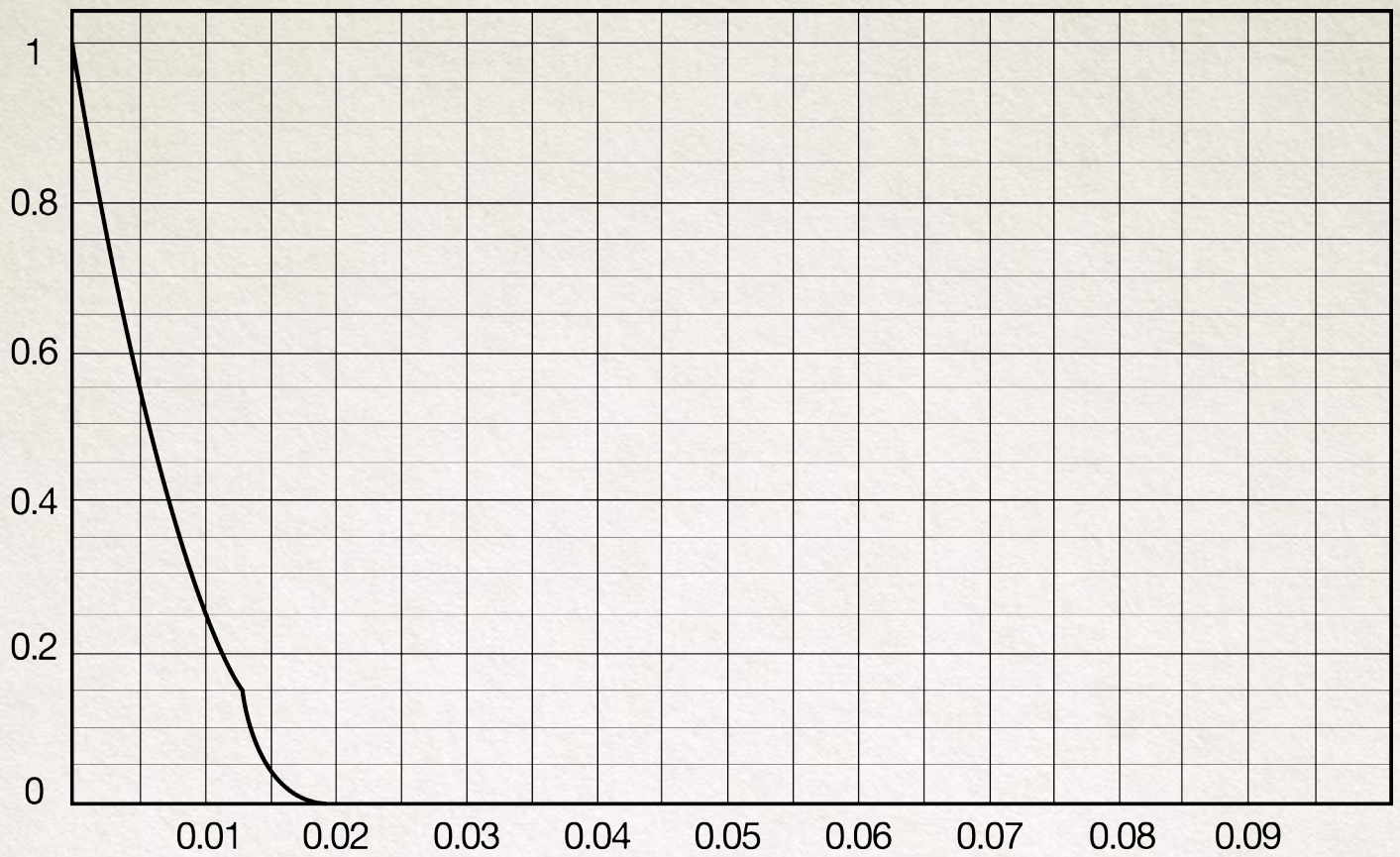


D112 release

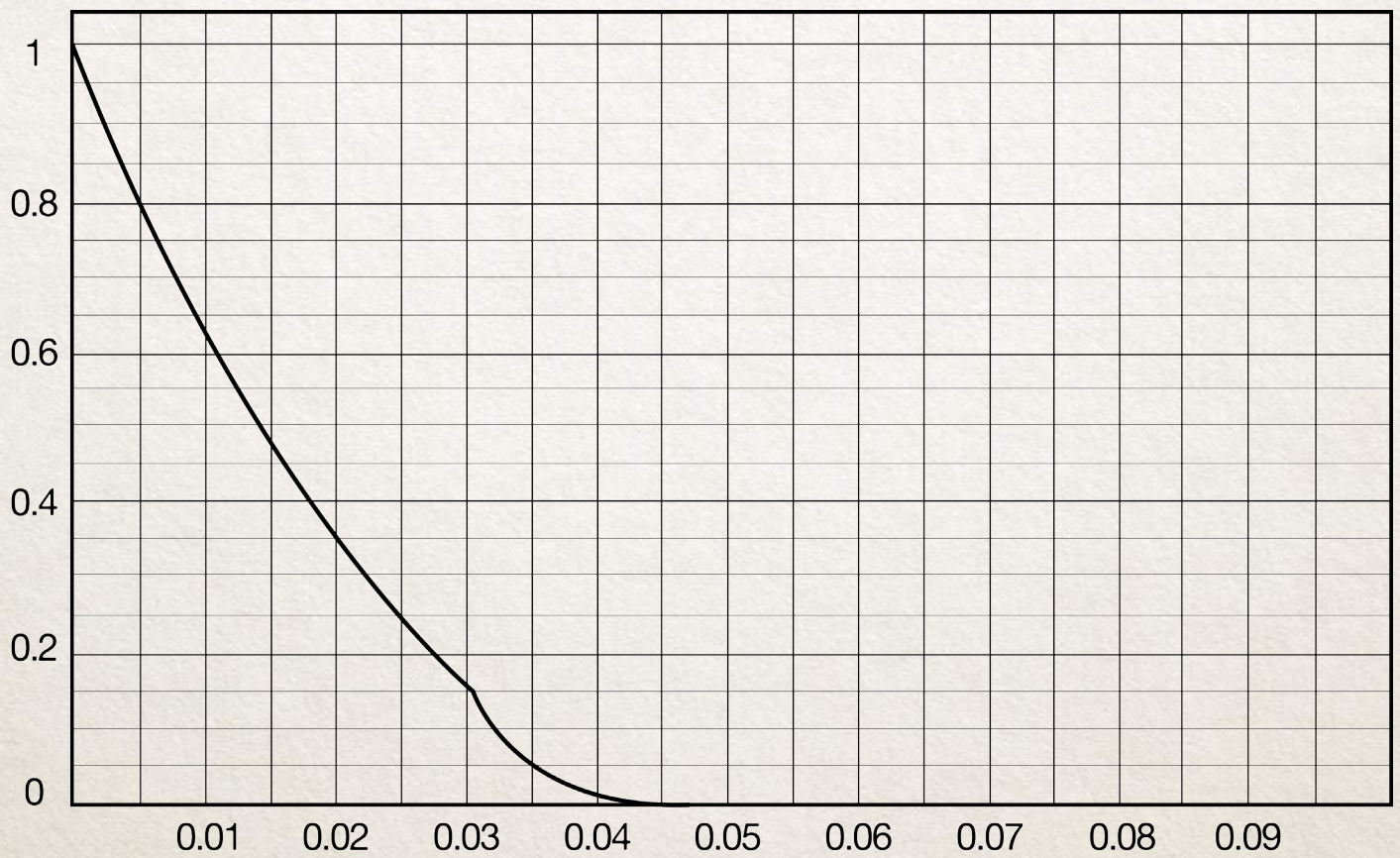




D112 release

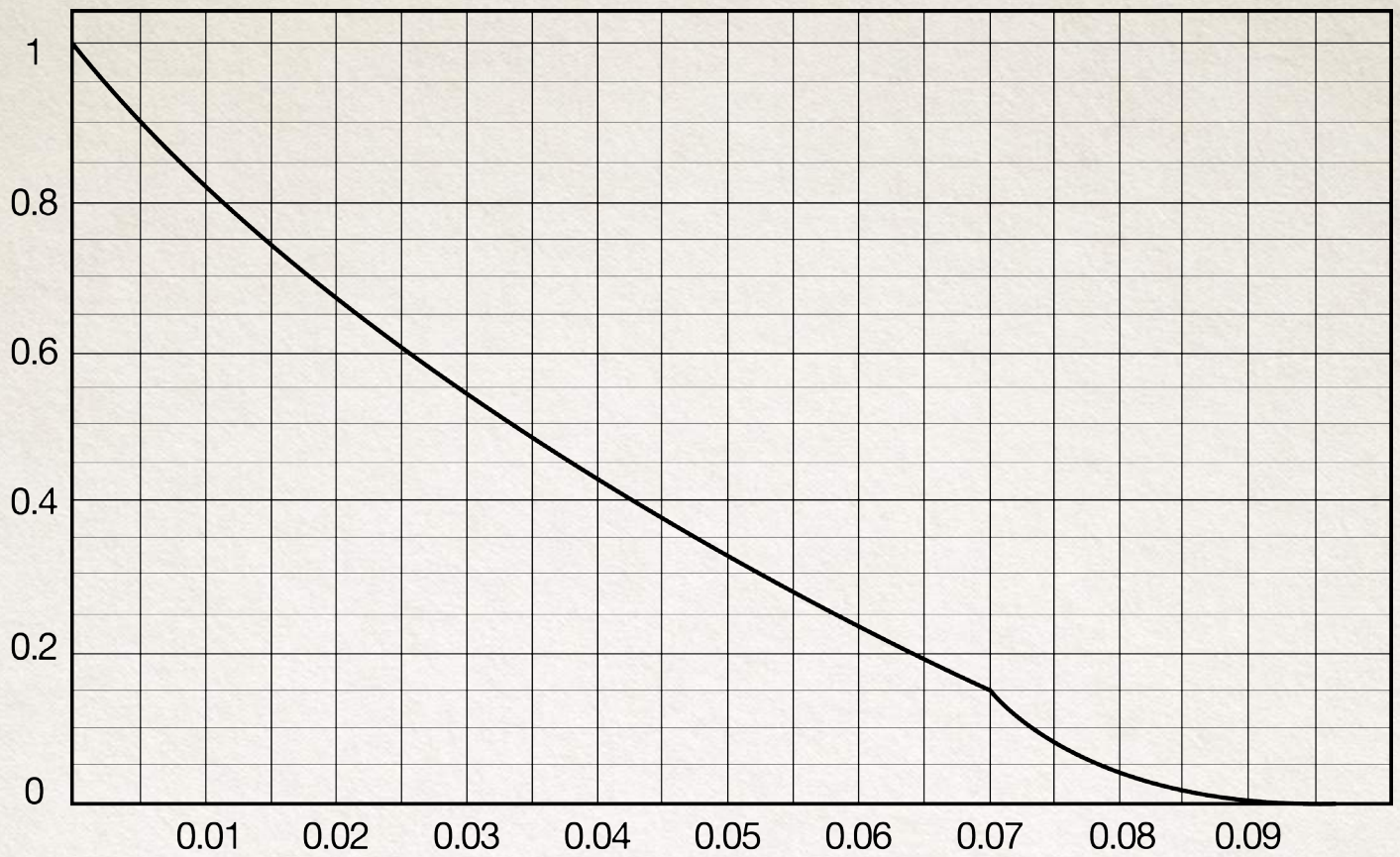


D112 release

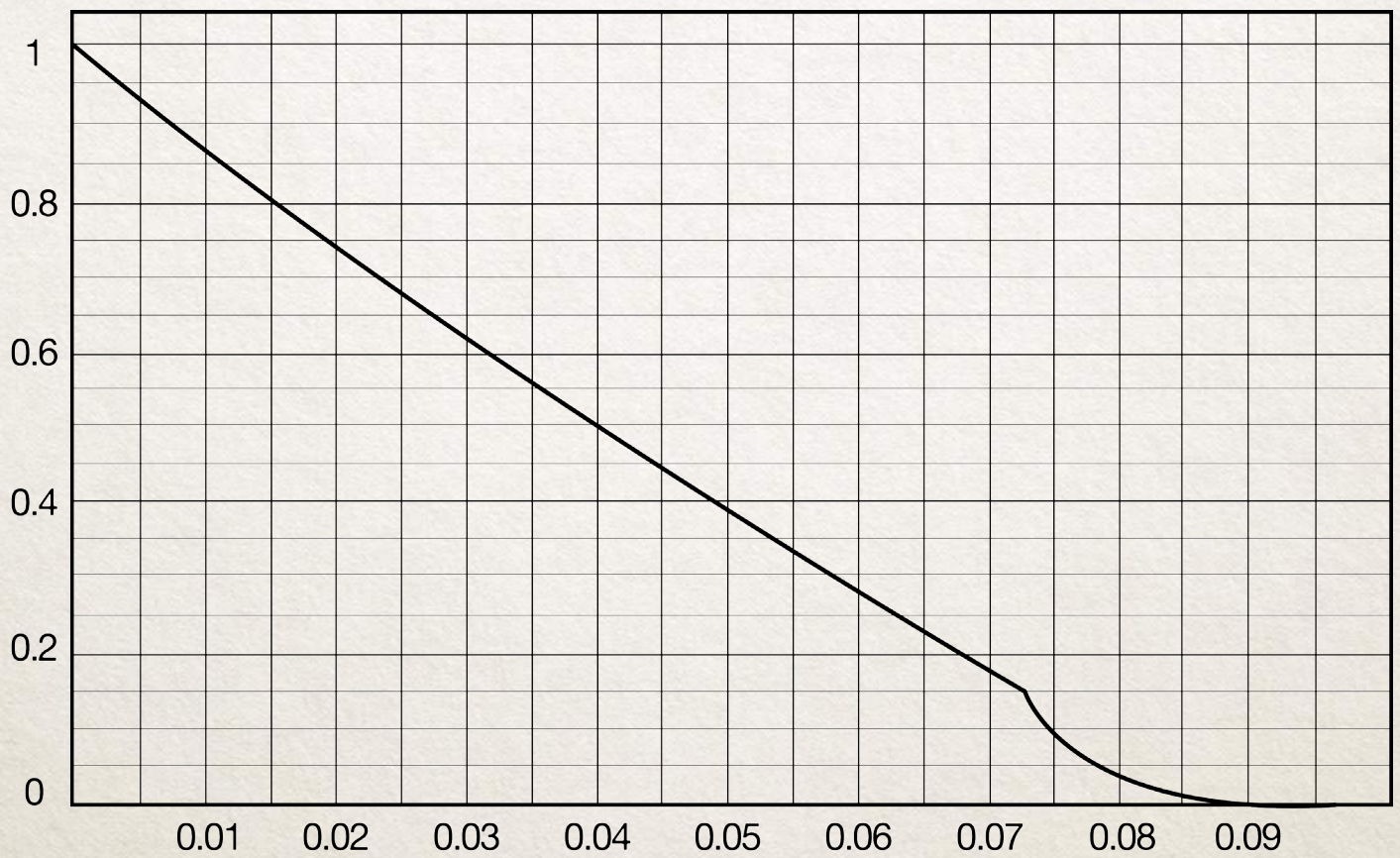




D112 release

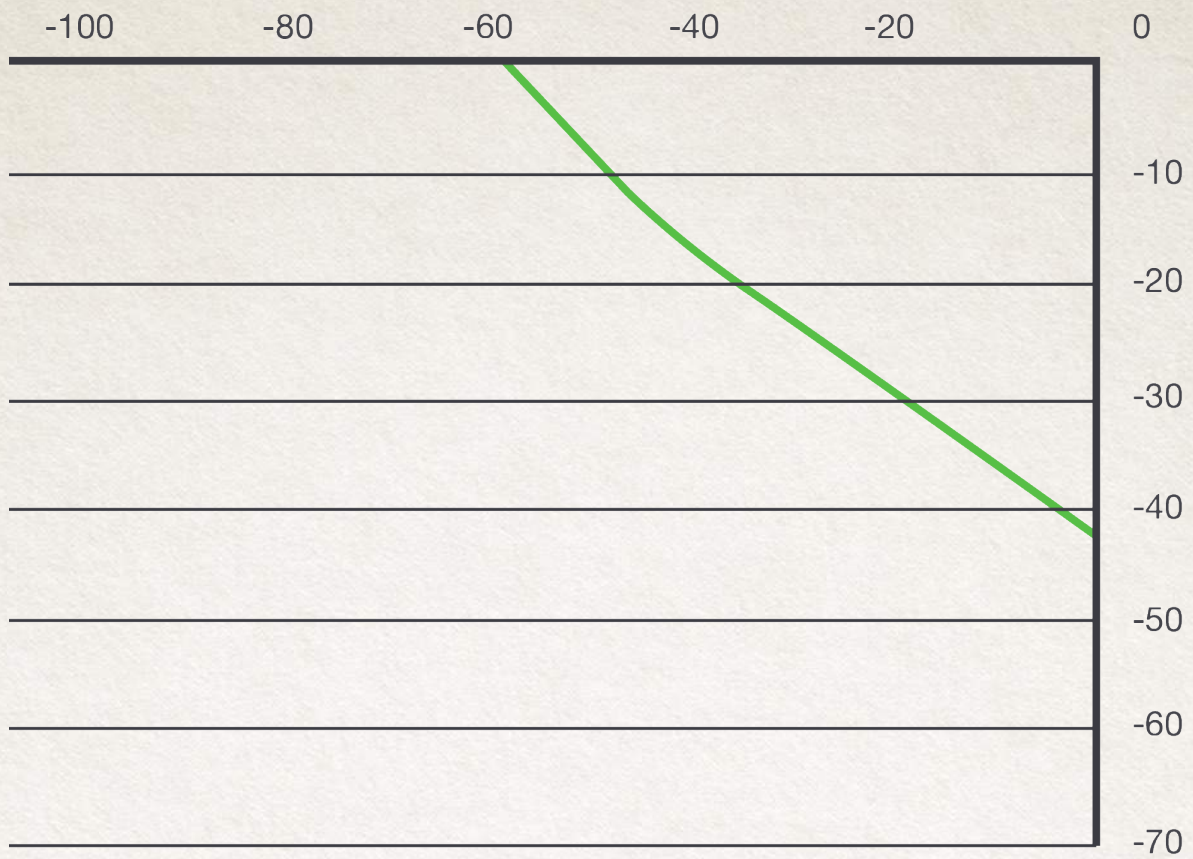


D112 release





## D112 ratio





## D82 COMPRESSOR

ON

Pushing this button the Compressor module is enabled.

### INPUT TRIM

It sets the input level from -30dB to +30dB and is used to control the signal level inside the Compressor, the output level is than automatically compensated by the same amount of gain.

At the first execution of the plug-in, input is set to ensure that you feed an appropriate level from the first stage of your signal path to the final one.

### GAIN REDUCTION METER (GR):

It measures the reduction level applied by 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 displayed.

### ATTACK:

Fixed.

### RECOVERY:

This knob set compressor's release time that range from from FAST to SLOW. This emulation includes 7 release times from D473 unit and the last one from the D82 unit.

### SHMODE:

This knob is a shape control for the compressor's attack behavior. It allows you to fine-tune the attack shape so you can really customize the attack behavior for any audio source.

### THRESHOLD:

This knob set the threshold of the compressor from -60dB to 0dB. This knob sets -60dB to 0dB.

### MAKEUP

This knob sets the gain compensation and is designed to boost the compressed signal in order to match the level of uncompressed signal from 0 to +30.

### MIX:

This control included also in Ebony channel-strip version determines the mix proportion between the original (dry) and 'effected' (wet) signals. Here you'll find a very powerful and simple-to-use feature.

### INSANE/INS button:

It engages the INSANE\* mode of the compressor.

\*This mode has been implemented to increase the accuracy and speed of the compressor, but it's more expensive in terms of CPU usage.

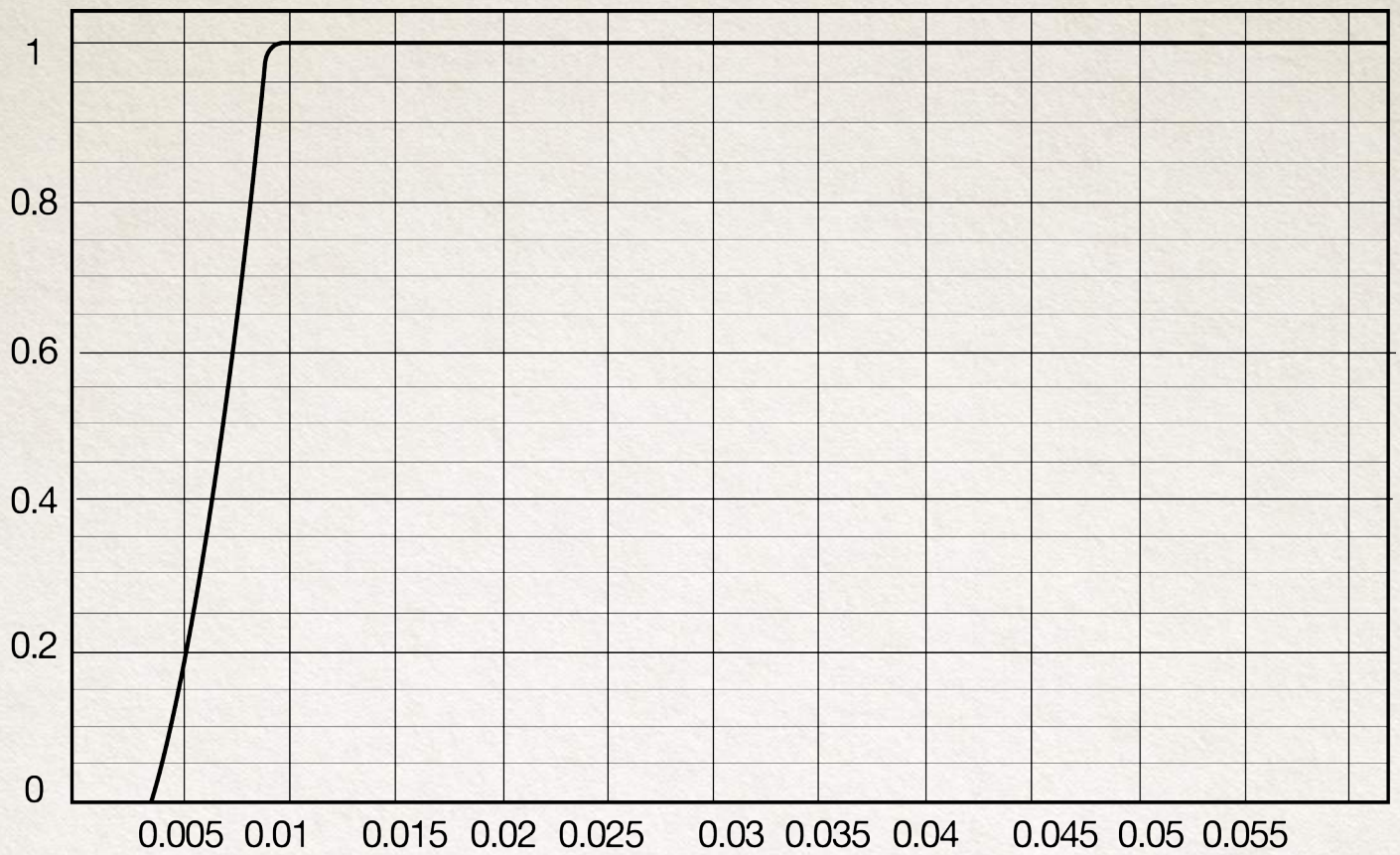
### RATIO

Fixed.

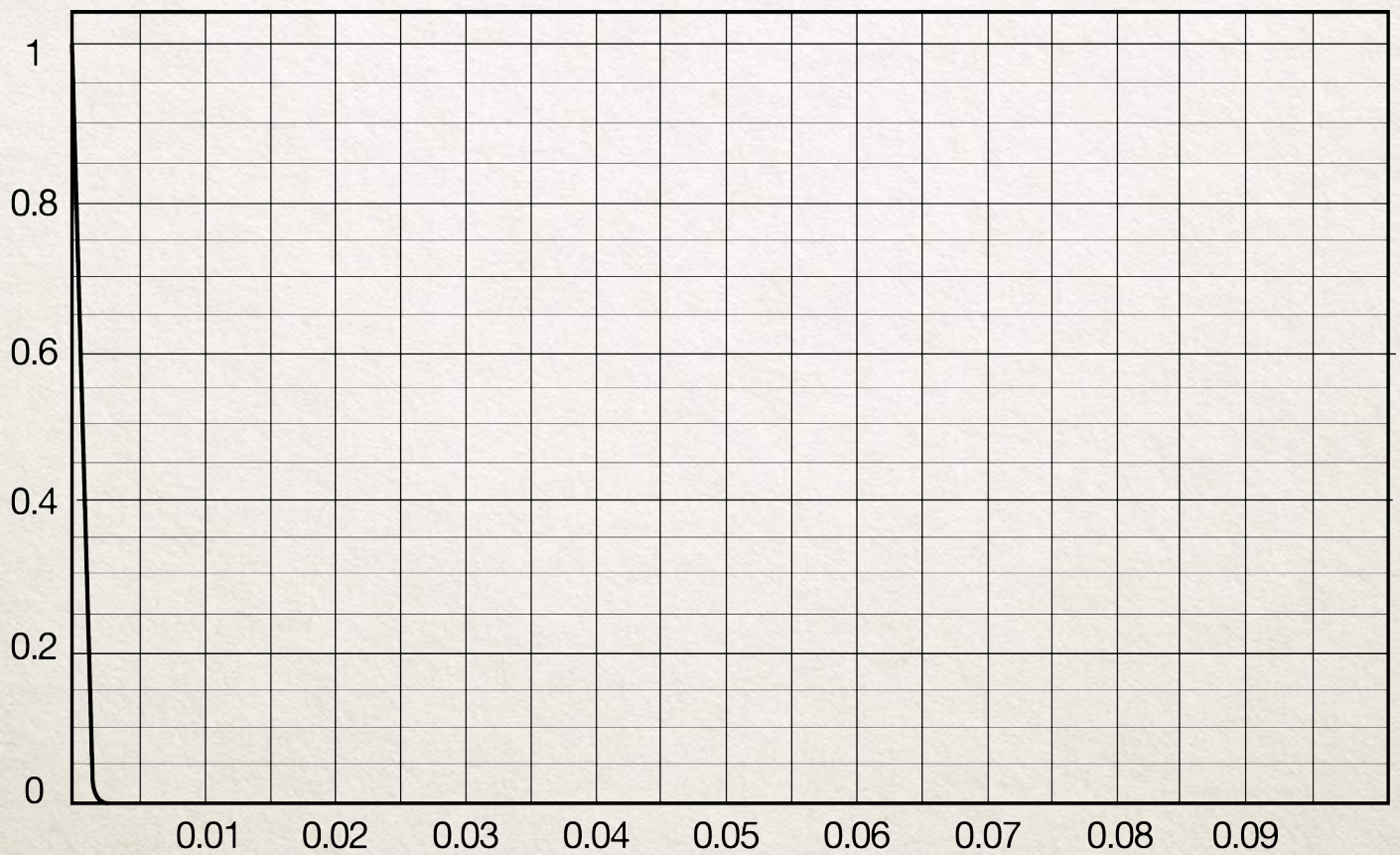




D82 attack

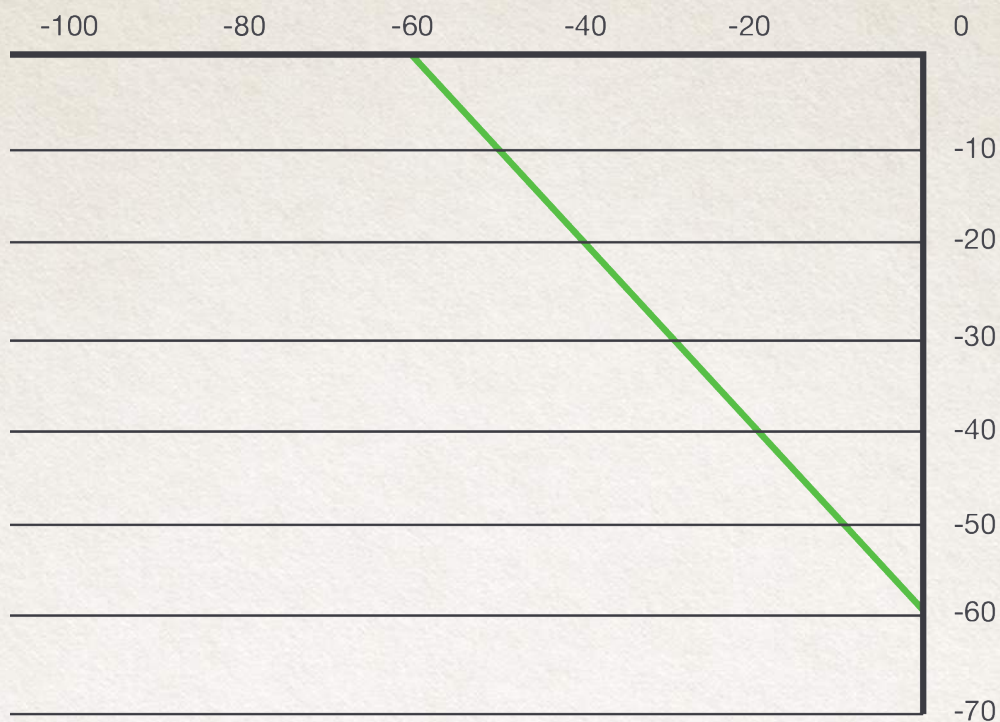


D82 recovery / release





## D82 ratio



Controls included only in Ebony Comp (standalone version):

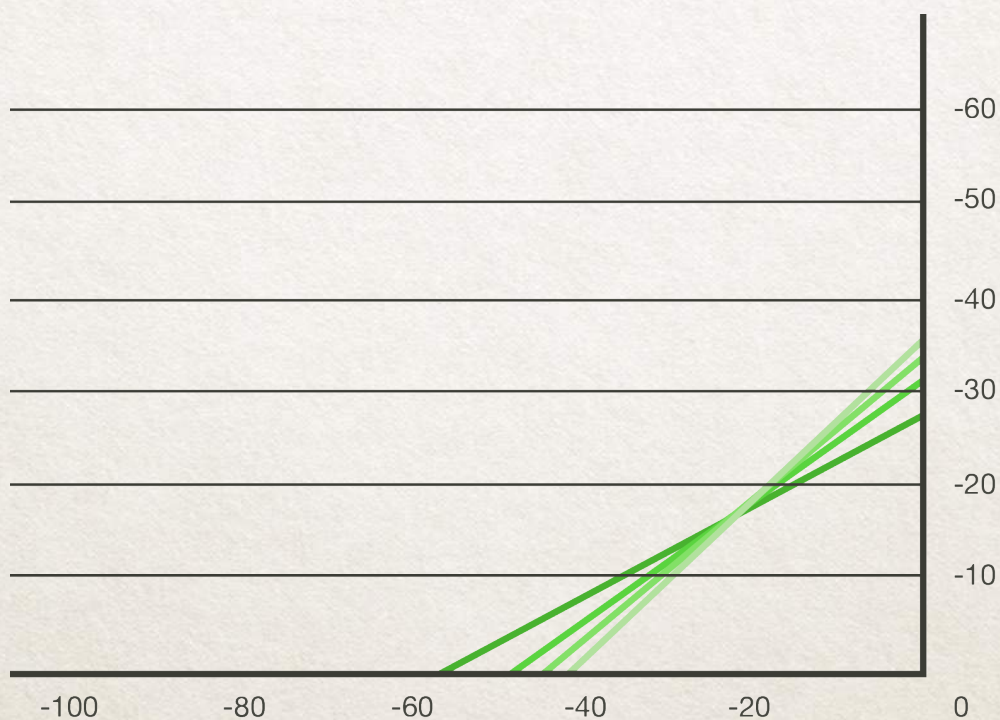
OFF:

Pushing this button the Compressor is bypassed.

E277 Expander:

this is an expander, the first introduced by Acustica, it increases the dynamic range of the audio signal. It's equipped only in Ebony standalone version.

## D77 expander ratio





SC button:

This button (in GOLD COMP standalone version) enables the external side-chain\*\* of the compressor.

#### **\*\*Side-chain details**

Ebony channel-strip version hasn't side-chain option, this control is present only in standalone version.

The "external sidechain" derives the control signal from another source (entering the plugin, but not necessarily straight to the compressor, as it can be filtered or EQ ed before entering the dynamic section). This control signal then goes through the sidechain channel and sets the amount of the gain reduction.

Explanation of the Sidechain behavior in different plugin formats:

VST: the plugin supports four input channels (Quadro Mode). The first two channels represent the audio channels (1-2), the last two channels are the sidechain channels (3-4).

AAX: the external sidechain routing controls a key input parameter to selectively modify the sidechain in PT.

Audio channels (1-2), Sidechain channels (3-4). Some hosts do not support the channels 3 - 4. To avoid any crash you can set the TAG LEGACYSTEREOCHANNEL in the plugin's XML master file (ie. GOLD.xml) so that problematic hosts can manage correctly the requested number of channels.

<LEGACYSTEREOCHANNEL>  
0 </LEGACYSTEREOCHANNEL> sets 2 channels;

<LEGACYSTEREOCHANNEL>  
1 </LEGACYSTEREOCHANNEL> sets 4 channels.

Users may contact our technical support for more details. The external sidechain is not yet supported in AUDIO UNIT (AU). It will be implemented in the future.





# Installation and authorization

## 1. System requirements and package contents

### 1.1.Sampling process

The sampling process has been performed by Acustica. The unit was sampled with mastering quality converters, using a method which takes considerably more time than the normal sampling standard.

This method improves the quality on the entire audio spectrum. Native sample frequency was 96 kHz. The 44.1 kHz, 48 kHz, 88.2 kHz frequencies were derived from the native one by a down-sampling and up-sampling process.

This method avoids any negative sample rate conversion (SRC) artifacts when loading projects at different sample rates and gives faster project loading times as well.

### 1.2. System Requirements

	Windows		OSX	
	Minimum	Recommended	Minimum	Recommended
Operating System	Windows 7	Windows 10	OSX 10.8	OSX 10.11
CPU	Dual Core	Latest multicore CPU (1)	Dual Core	Latest multicore CPU (1)
RAM	4 GB	16 GB to 128 GB	4 GB	16 GB to 128 GB
HDD/SDD	1000 MB	1000 MB	1000 MB	1000 MB
Screen Resolution	1024x768 (XGA)	1920x1080 (HDTV) (2)	1024x768 (XGA)	1920x1080 (HDTV) (2)
Audio Host	VST2 / AAX 32 bits	VST2 / AAX 64 bits	VST2 / AAX 32 bits	VST2 / AAX 64 bits



- (1) Intel i7 generation 6 or newer is recommended.
- (2) 3840x2160 UHD TV is also supported.

### 1.3. Sampling rate

- 44,1 kHz
- 48 kHz
- 88.2 kHz
- 96 kHz

## 2. Product Installation

### 2.1. Introduction

Acqua Effects plug-ins are released with an installer program for Windows and OSX. The installer contains plugin specific files and system files. Please run OS X (1) or Windows (2) installer depending on your OS and your audio host plug-in supported formats. During the installation, use a true administrator account or make your OS acknowledge that you have a user account with full administrator privilege.

If you don't understand what we are talking about, please contact your system administrator for more information.

. In VST-AU OSX installer, Skin and Vector files are shared between AU and VST format and are installed in Acustica (VST 32 bits) folder.

. In AAX OSX installer, Skin and Vector files are not shared with other formats and/or architectures due to a limitation of the AAX format. Co-installation of Pro Tools 10 (32 bits) and Pro Tools 11/12 (64 bits) it isn't possible.

. In VST Windows installers, Skin and Vector files are not shared between VST 32 bits and VST 64 bits.

. In AAX Windows installer, Skin and Vector files are not shared with other formats and/or architectures due to a limitation of the AAX format. Co-installation of Pro Tools 10 (32 bits) and Pro Tools 11/12 (64 bits) it isn't possible.

This method avoids any negative sample rate conversion (SRC) artifacts when loading projects at different sample rates and gives faster project loading times as well.

## 3. Product authorization

### 3.1 Online authorization: **AQUARIUS**

Aquarius Lite is a brand new application from Acustica Audio. Its purpose is to simplify authorization process for your purchased Acustica products (ACQUA plugins, N4 etc.). With future updates, this application will be covering product overview, download, installation,

authorization, updates and more.

Aquarius Lite runs on Windows as 32 bit (64 bit optional) and OSX 64 bit application. You will need a working internet connection in order to run the application.

Off-line mode is not available yet.

Current version of the application offers an overview and (re)

authorization of the purchased Acustica products installed on your computer(s).

Important note: Because this application needs access to system protected folders, you should always run it as administrator on Windows (mouse right-click on the icon / Run as administrator).



On OSX you'll be prompted to enter your OSX user password for every operation which involves system protected folders.

When started, application will scan your computer for installed products (see "Settings" chapter for additional explanation about scanning process).

Each product strip consists of:

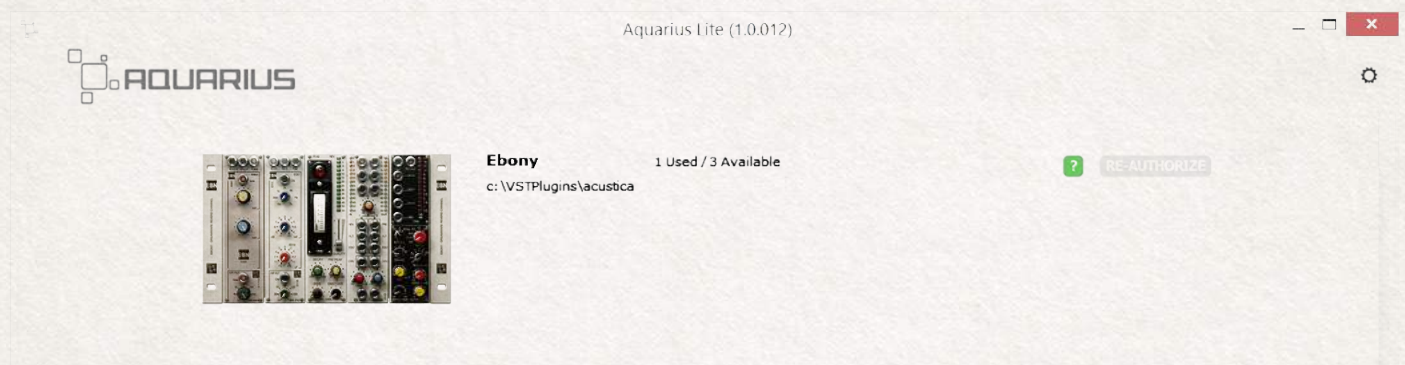
- image
- name and category
- information about used /available licenses
- colored info button
- action button

As image, name and category are pretty much self explanatory, let's talk more about license information and possible actions which can be taken, depending on the situation.

Under the product's name and category you can see the number of used licenses and the total number of purchased / available licenses. Of course, you can not use more licenses than you own, you would then need to buy additional licenses.

Depending on those two numbers and computers involved in the authorization process, info and action buttons can have different colors, labels and functions (they are context sensitive).

Let's first look at the small, colored info button, it is the main sign, which shows the status of product in question. By clicking on this button, you can see a hint about its status.



So what the different colors mean?

Everything is OK - your product is properly authorized and you don't need to do anything. Still, the action button on the right (labeled "RE-AUTHORIZE") is available. You should use the action button only if you experience unexpected problems with the product, despite it is properly authorized.

Your existing license slot will be used and used licenses count will NOT increase.

Note, if you've already used all your available licenses, the action button will not be available

at all, in such case, please contact technical support.

Authorize product - product hasn't yet been authorized on this computer and the action button on the right is labeled "AUTHORIZE". By clicking on the action button, you will authorize product in question on this particular computer. Note, that new license slot will be used, so used licenses count WILL increase.

There is one exception, though. If product is already marked as authorized on this computer, but license file can not be found (corrupted, deleted), clicking on the action button

will fix this situation using existing license slot (used licenses count will NOT increase).

Contact technical support - no further action is possible (action button is not available).

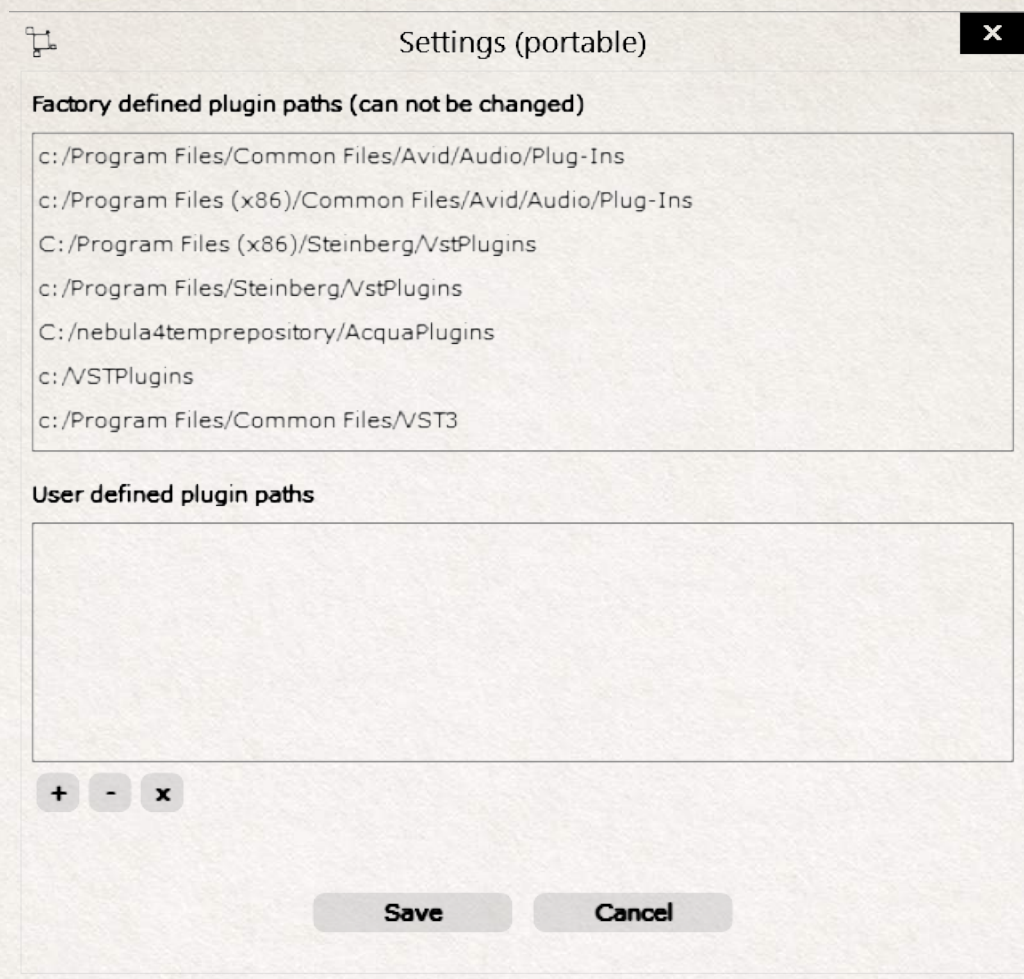
When clicking on the icon at the top right corner of the program, a pop-up menu will show.

Menu contains following options:

- Logout (will disconnect you from the server and the log in window will pop up again)
- Settings (settings window will pop up, see below)
- Exit (application will terminate)



You can click on the Aquarius image at the top left to force a re-scan of the products and refresh the product strips.



Settings window contains two main sections. The upper section shows factory defined plugin paths. All standard paths are covered, so if you've installed your plug-ins in standard places, they all will be found at the scan process. Factory list can not be changed.

In case you have some or all of your plugins installed in non-standard folders, you can use the bottom section. There you can add additional folders, which will then be included in product scanning stage as well.

Use "plus" button to add new, "minus" button to delete existing and "x" button to delete ALL existing user defined plugin paths. You must confirm changes with "OK" button, which will close the settings window and re-scan your installed products.



## 3.2 Offline authorization

### 3.2.1 Computer identification creation

Run your audio/video host and create a new session (avoid templates). Your Acqua Effect plugin should be scanned, detected, and added into the available list of plugins.

Load your Acqua Effect plug-in and you will see a message asking for authorization.

A computer Identification file (EBONY.SER) will be created into your Acustica/Acustica64 or Components folder depending on which format you are using in your audio/ video host application.

If your audio/video host refuses to create an Acqua Effect plug-in Computer Identification file, try it again running it as a true administrator with administrator privilege. If you don't understand what we are talking about, please contact your system administrator for more information.

### 3.2.2

Computer Identification file path in Windows

VST plug-in folder 32 bits: C:\VSTPlug-ins\Acustica\ (not fixed path)

VST plug-in folder 64 bits: C:\VSTPlug-ins\Acustica64\ (not fixed path)

AAX plug-in folder 32 bits: C:\Program Files (x86)\Common Files\Avid\Audio\Plug-Ins\ (fixed path)

AAX plug-in folder 64 bits: C:\Program Files\CommonFiles\Avid\Audio\Plug-Ins\ (fixed path)

File name: depends on the product or bundle. Extension: .SER.

If your audio/video host refuse to create Acqua Effect plug-in Computer Identification file, try it again running it as true administrator with administrator privilege. If you don't understand what we are talking about, please contact your system administrator for more information.

### 3.2.3

Computer Identification file path in OS X

- VST plug-in folder 32 bits: OSX HD/Library/Audio/Plug-ins/VST/Acustica (fixed path)

- VST plug-in folder 64 bits: OSX HD/Library/Audio/Plug-ins/VST/Acustica64 (fixed path)

- AU plug-in folder 32 and 64 bits: OSX HD/Library/Audio/Plug-ins/Components (fixed path)

- AAX plug-in folder 64 bits: OSX HD/Library/Application-Support/Avid/Audio/Plug-ins/ (fixed path)

- AAX plug-in folder 32 bits: OSX HD/Library/Application-Support/Avid/Audio/Plug-ins/ (fixed path)

## 3.2.4 Computer Identification on-line request

Go to Acustica Audio website, Customer Area, Dashboard, Authorize Products. Browse to your Computer Identification file (EBONY.SER) and click Upload.

Our Global Key Generator will create your authorization and within few minutes you will receive an email with your authorization attached. The Global Key Generator will also deposit a copy of your authorization into "My Licenses" section in your Dashboard as an on-line backup.



## 4. Authorization request

Browse to your computer ID file (EBONY.SER) created in Acustica/Acustica64 folder(s), Components folder, AAX Plug-ins folder, depending which format are you using, and upload it in Acustica Audio website, Customer Area, Dashboard, Authorize Products.

Our Global Key Generator will create your personal key in three minutes and you will receive an email with your personal key and also GKG (Global Key Generator) will add a copy of your license into My Licenses section in your Dashboard as an on-line backup.

**IMPORTANT:** Try with different browsers if you have any trouble with computer ID file upload.

**NOTE:** Do not try multiple uploads of your computer ID file (EBONY.SER) after each request, wait at least 3 minutes.

### Authorize Products

If you have purchased a new Acustica product or you did a new installation, you will need to authorize it.

Please upload your authorization file (.ser) so that we can process it and register it as your license. Once we have authorized your license, it will appear in the My Licenses section of this page

If you do not have any license showing, it means your authorization is currently pending with us, or that you have not authorized any Acustica products.

Note

- Free products doesn't need authorizations;
- The authorization process could take from 3 to 60 minutes, please be patient and don't make multiple-upload.
- You can do a limited numbers of requests;
- You will receive a copy of the license via e-mail;
- For further information, please contact: [licensing@acusticaudio.net](mailto:licensing@acusticaudio.net)

Choose a file to upload

Examinar...

Upload File...

Browse to your computer ID file (EBONY.SER) created in Acustica/Acustica64 folder(s), Components folder, AAX Plug-ins folder, depending which format are you using, and upload it in Acustica Audio website, Customer Area, Dashboard, Authorize Products.

Our Global Key Generator will create your personal key in three minutes and you will receive an email with your personal key and also GKG (Global

Key Generator) will add a copy of your license into My Licenses section in your Dashboard as an on-line backup.

**IMPORTANT:** Try with different browsers if you have any trouble with computer ID file upload.

**NOTE:** Do not try multiple uploads of your computer ID file (EBONY.SER) after each request, wait at least 3 minutes.

#### 4.1 License installation

After creating your license file, our Global Key Generator will send you a message to your registered email address with your license file compressed in zip format as an attachment. Decompress your license file and move it to the corresponding path, depending on the format you use. The product will be unlocked after you move the license file to the correct folder.



## 4.2 License file path in OS X

. VST plug-in folder 32 bits:  
OSX HD/Library/Audio/Plug-ins/VST/Acustica (fixed path)

. VST plug-in folder 64 bits:  
OSX HD/Library/Audio/Plug-ins/VST/Acustica64 (fixed path)

. AU plug-in folder 32 and 64 bits: OSX HD/Library/Audio/Plug-ins/Components (fixed path)

. AAX plug-in folder 64 bits: OSX HD/Library/Application-Support/Avid/Audio/Plug-ins/ (fixed path)

. AAX plug-in folder 32 bits: OSX HD/Library/Application-Support/Avid/Audio/Plug-ins/ (fixed path)

## 4.3 License file path in Windows

. VST plug-in folder 32 bits: C:\VSTPlug-ins\Acustica\ (not fixed path)

. VST plug-in folder 64 bits: C:\VSTPlug-ins\Acustica64\ (not fixed path)

. AAX plug-in folder 32 bits: C:\Program Files (x86)\CommonFiles\Avid\Audio\Plug-Ins\ (fixed path)

. AAX plug-in folder 64 bits: C:\Program Files\CommonFiles\Avid\Audio\Plug-Ins\ (fixed path).

File name: depends on the product or bundle.

Extension: .AUT.

Note: our Global Key Generator will also deposit a copy of both your Computer Identification and your license into “My Licenses” section in your Dashboard as an on-line back-up.

. AU plug-in folder 32 bits: OSX HD/Library/Audio/Plug-ins/Components (fixed path)

. AU plug-in folder 64 bits: OSX HD/Library/Audio/Plug-ins/Components (fixed path)

. AAX plug-in folder 32 bits: OSX HD/Library/Application-Support/Avid/Audio/Plug-ins (fixed path)

. AAX plug-in folder 64 bits: OSX HD/Library/Application-Support/Avid/Audio/Plug-ins (fixed path)

## 4.4.2 Windows paths:

. VST plug-in folder 32 bits: C:\VSTPlug-ins\Acustica\ (recommended path)

. VST plug-in folder 64 bits: C:\VSTPlug-ins\Acustica64\ (recommended path)

. AAX plug-in folder 32 bits: C:\Program Files (x86)\CommonFiles\Avid\Audio\Plug-Ins\ (fixed path)

. AAX plug-in folder 64 bits: C:\Program Files\CommonFiles\Avid\Audio\Plug-Ins\ (fixed path)

## 4.4.1 OS X paths:

. VST plug-in folder 32 bits: OSX HD/Library/Audio/Plug-ins/VST/Acustica (fixed path)

. VST plug-in folder 64 bits: OSX HD/Library/Audio/Plug-ins/VST/Acustica64 (fixed path)

Also recommended:

- Do not resume downloads.
- Disable any anti-virus and/or any anti-malware.
- Disable OSX Gatekeeper.
- Disable Windows Smart Screen.



# EBN



# Acustica

All names, company name, trademarks and registered trademarks are the property of their respective owners, which are in no way associated or affiliated with Acusticaudio S.r.l.

Product names are used solely for the purpose of identifying the specific products that were studied during Acustica'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.