

SYMPH EQ

STEREO ASYMPTOTIC EQUALIZER
RACKMOUNT



USER MANUAL



January/2023 Rev. 1.0.

INTRODUCTION

Thank you for choosing the **SYMPH EQ**. Heritage Audio is dedicated to bringing you ‘the sound of yesterday for tomorrow’. We specialize in capturing that unique, enticing sound that everybody has fallen in love with. For years engineers, producers and musicians have been yearning for that classic vibe. Usually the only option is to search for old, used original equipment that is almost always in a questionable state of operation. This brings with it a whole lot of other issues, making the experience less than desirable. Not to mention the very high prices asked for this equipment, which makes them virtually unobtainable for the great majority. Now it’s possible to obtain that same sound with a brand new piece that will give you all the problem-free, heavy-duty use you’ll need for years of music making history.

Peter Rodriguez
CEO
Heritage Audio - Madrid, Spain



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DESCRIPTION

The Baxandall EQ has been around for over 70 years now. With the SYMPH Stereo Asymptotic Equalizer, Heritage Audio has decided to release a version ready to take your mixes to a new level. As usual, with the team at Heritage Audio, simply precisely recreating its curves and responses wouldn't be enough... It would also need an improvement...or two.

Heritage Audio has successfully replaced the Baxandall topology with a functional equivalent, a much more musical one. The SYMPH EQ, takes its name from the shape obtained by its shelf curves; where the boost or cut amplitude grows up until the asymptotic value is reached, keeping the ultra highs and sub lows always controlled. Its sound can be described as tight, sweet, natural & pure, and its use of parallel equalizing to obtain the desired response curves ensures it has exceptionally low phase deviation and undesired artifacts.

Although the interface is deceptively clear and simple, the results can be stunning. Tiny adjustments can produce huge changes in clarity, focus, depth and overall impact. Using a combination of the different features available you can also drastically change the way your music sounds and feels.

A clever circuit layout allows for a maximum boost/cut of 10.5 dB in 0.5 dB steps. The main rotary switch sets 1dB steps whilst the 0.5 button adds half a dB to the main reading so you'll be able to achieve exactly what you're after. The convenient CUT button turns the boost amount into cut to determine problematic frequencies and quickly eliminate them. A generous six strategically selected frequency choices per band are available: 8, 10, 12, 15, 20 and 24 kHz on the high shelf and 470, 360, 220, 110, 60 and 20 Hz on the low shelf.

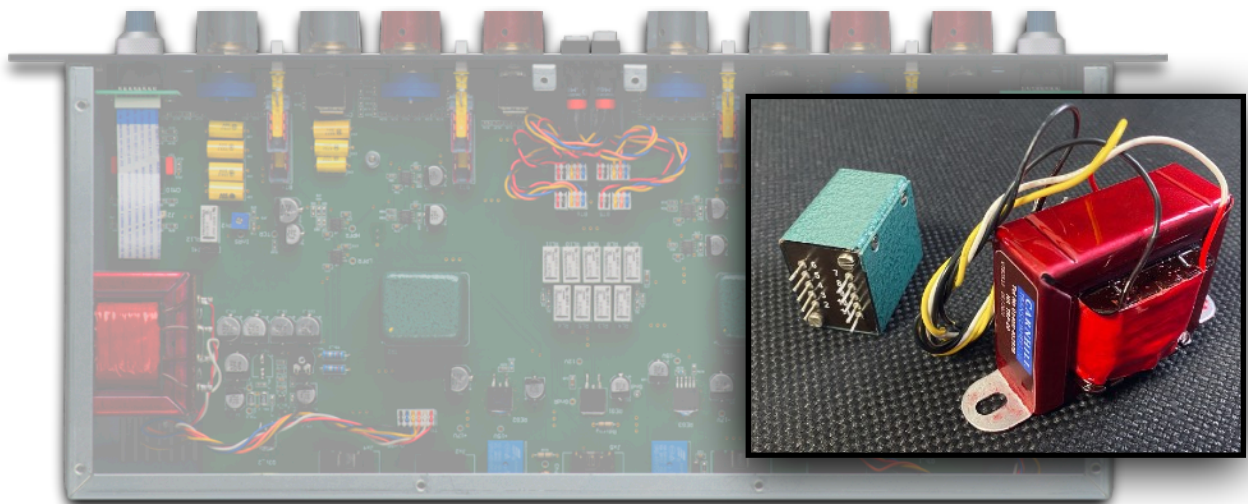
In order to keep the sub-low and ultra-high frequency content well under control, additional high-quality high-pass and low-pass filters have been added on dual concentric rotary switches, at 12 dB/octave (2 Pole). There are 5 frequency choices plus OFF available on each filter. Frequencies available are: 10, 12, 18, 22 and 30 kHz on the low-pass and 160, 82, 47, 20 and 15 Hz on the high-pass filter. What's more, the response of the Side high-pass filter has been made elliptical, just as it is in the vintage disk cutters for a precise frequency response.



These filters can be critical on your main stereo bus, especially when you're doing some healthy increases to the high and/ or low shelf as sub low frequencies are not heard but will eat up your headroom and while ultra-high frequencies do not eat up your headroom that much, they will make your converters work unnecessarily, especially at the higher resolution sampling frequencies. Get rid of the information that you do not need in the analog domain... your converters will love it.

Most importantly, here is where the SYMPH EQ really shines, it has built in Mid Side (M/S) capabilities. Nothing comes close to M/S equalizing a mix as it allows the user to process the center and the sides independently. The benefits of such processing are hard to believe. You can brighten your mix without making your vocals sound harsh, or even tighten the stereo-image's bass content without making your bass or kick sound weak! These are just a few examples of the SYMPH EQ M/S power available to you...but there are tons more! Now, although mainly used in Mixing and Mastering situations obviously, the SYMPH EQ's M/S mode can also be a fantastic tool for individual tracks providing lots of control and creativity. When in M/S mode, left set of controls will process the Mid channel, while right side will process the Side channel. Once you've tried Mid/Side processing you'll wonder how you've gone so long without it.

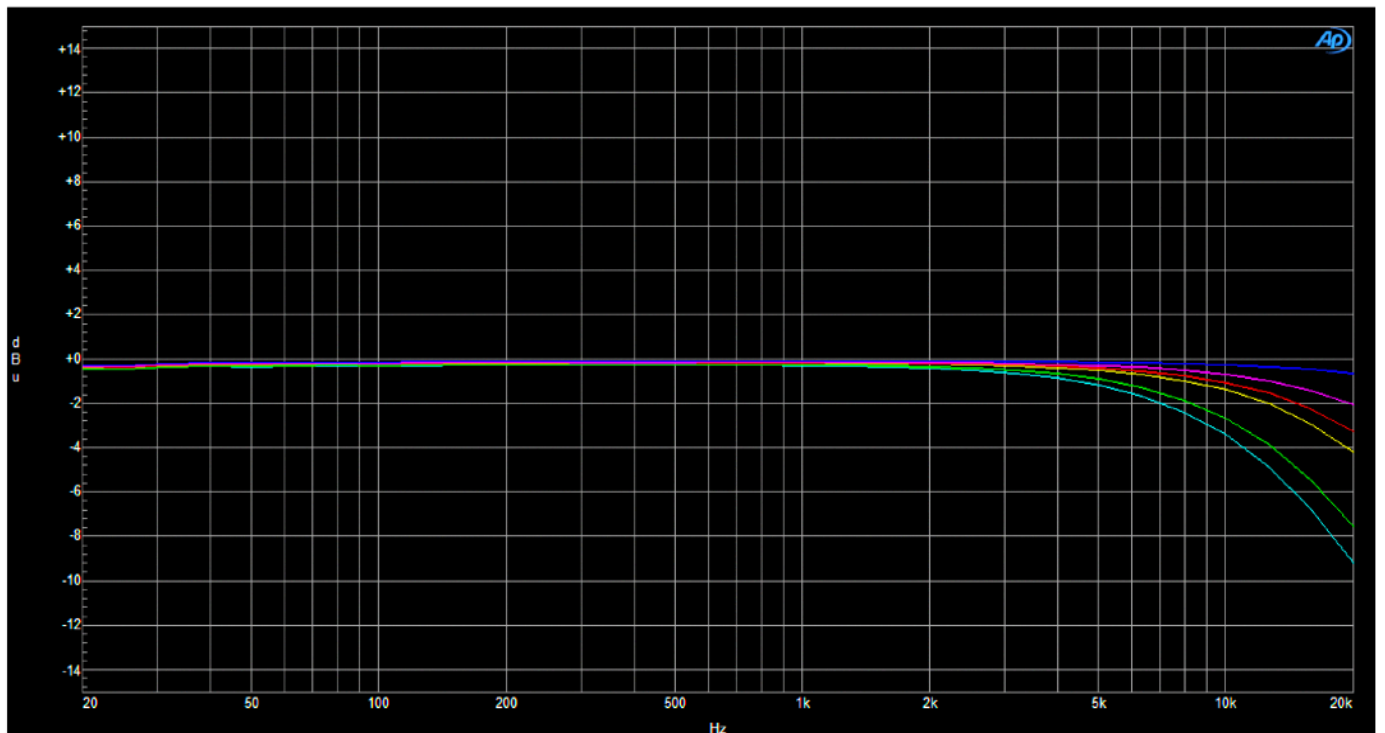
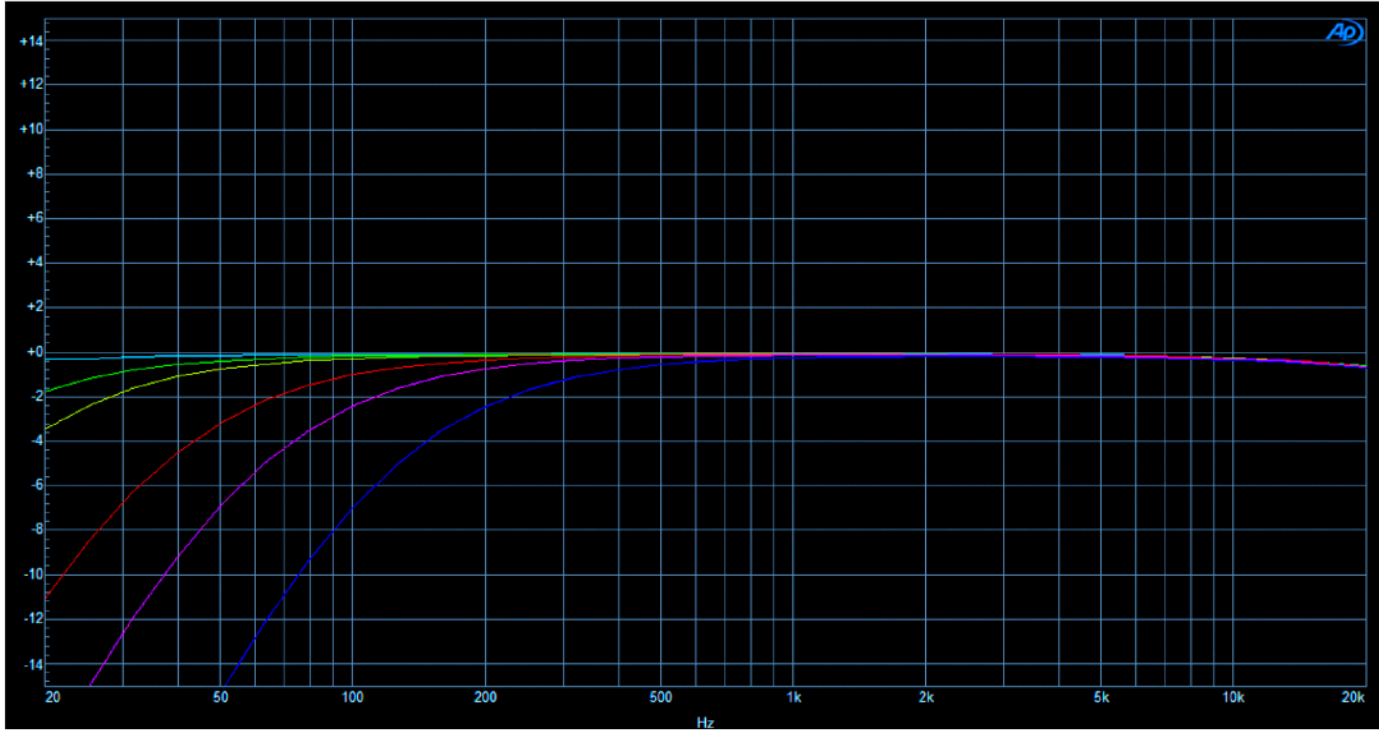
Keeping in tradition with the majority of the gear produced at Heritage Audio, the stereo inputs and outputs are transformer coupled and fully balanced to assure a thick, solid, noise-free signal. Once again, exclusive Carnhill transformers from their St. Ives and Oxford factories have been used to provide the utmost quality. Combined with a 73-style Class-A output stage you'll even notice an improvement to the signals with the equalizers bypassed. Simply passing audio through the unit with no processing will instantly give you a more professional tone thanks to those special transformers and that exquisite output stage. The SYMPH EQ has been designed with stepped controls for easy recall and exact settings between stereo channels.



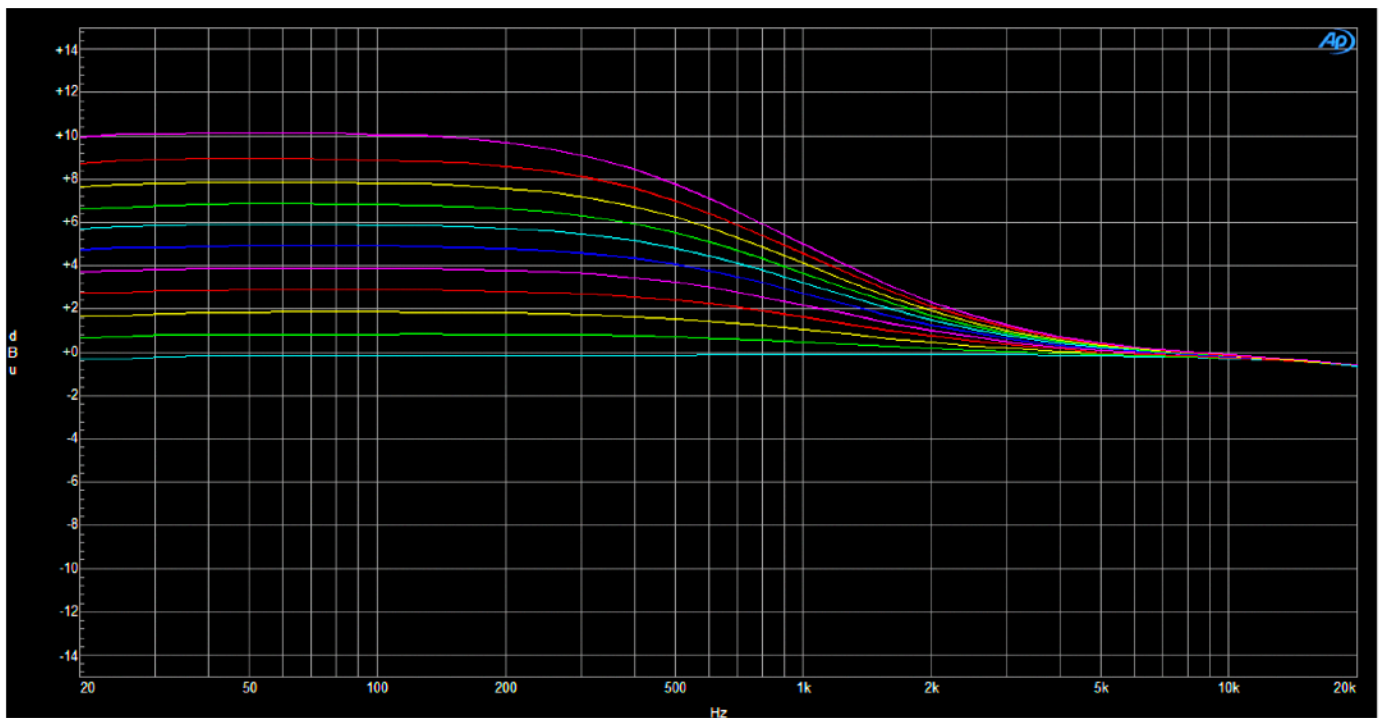
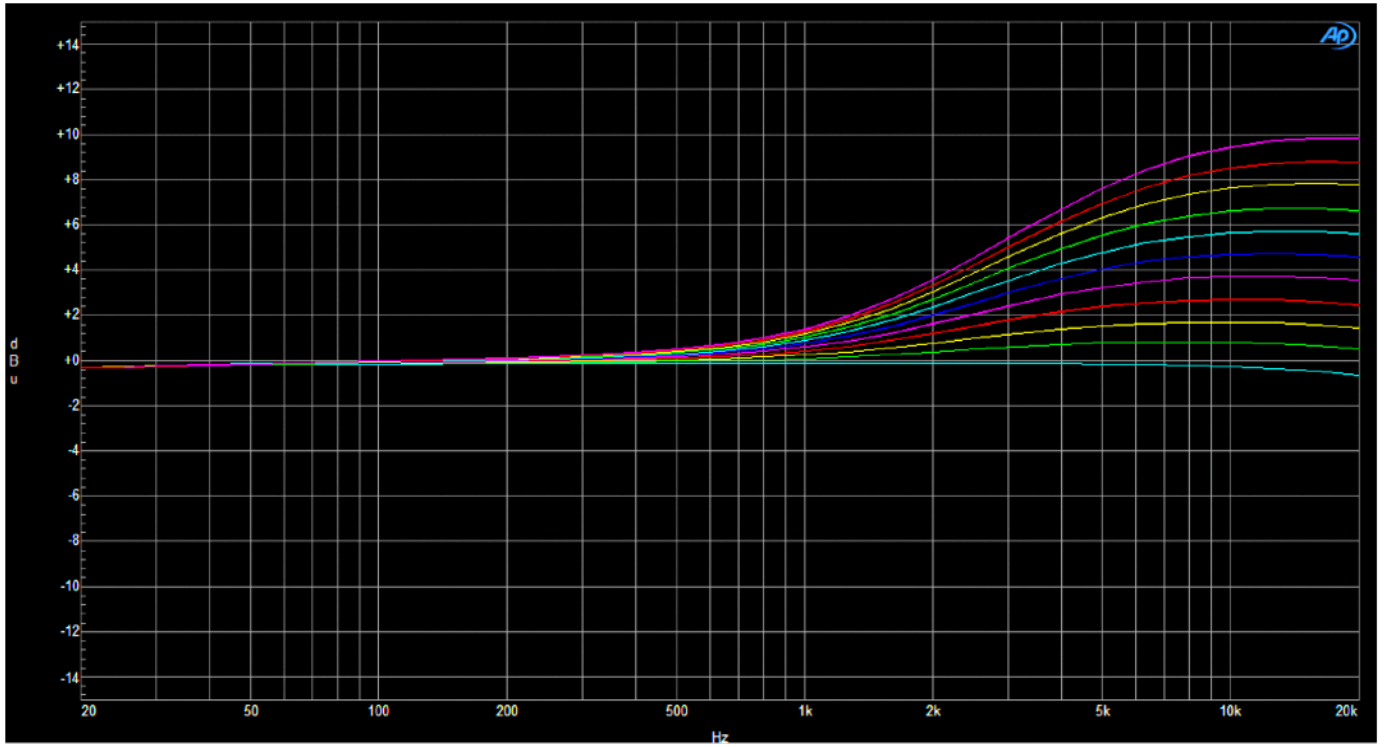
Heritage Audio is also very proud to announce that it is fully manufactured in the EU.

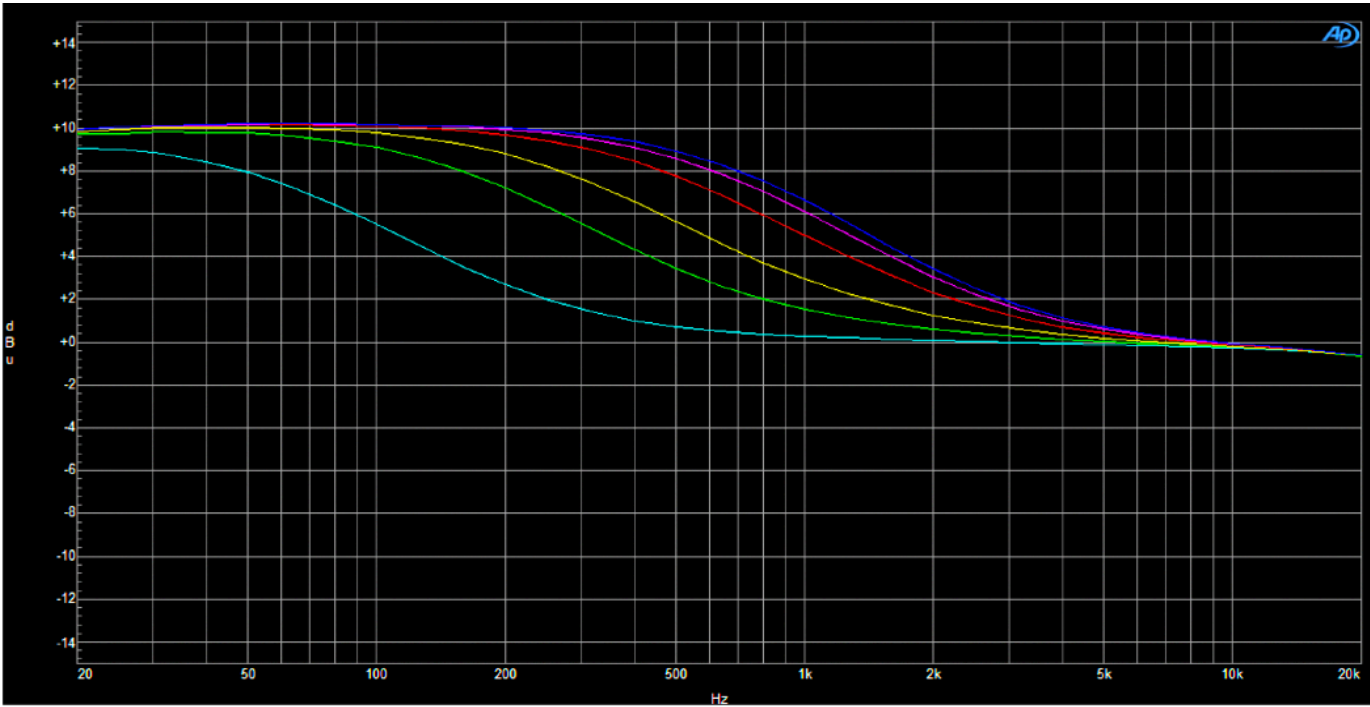
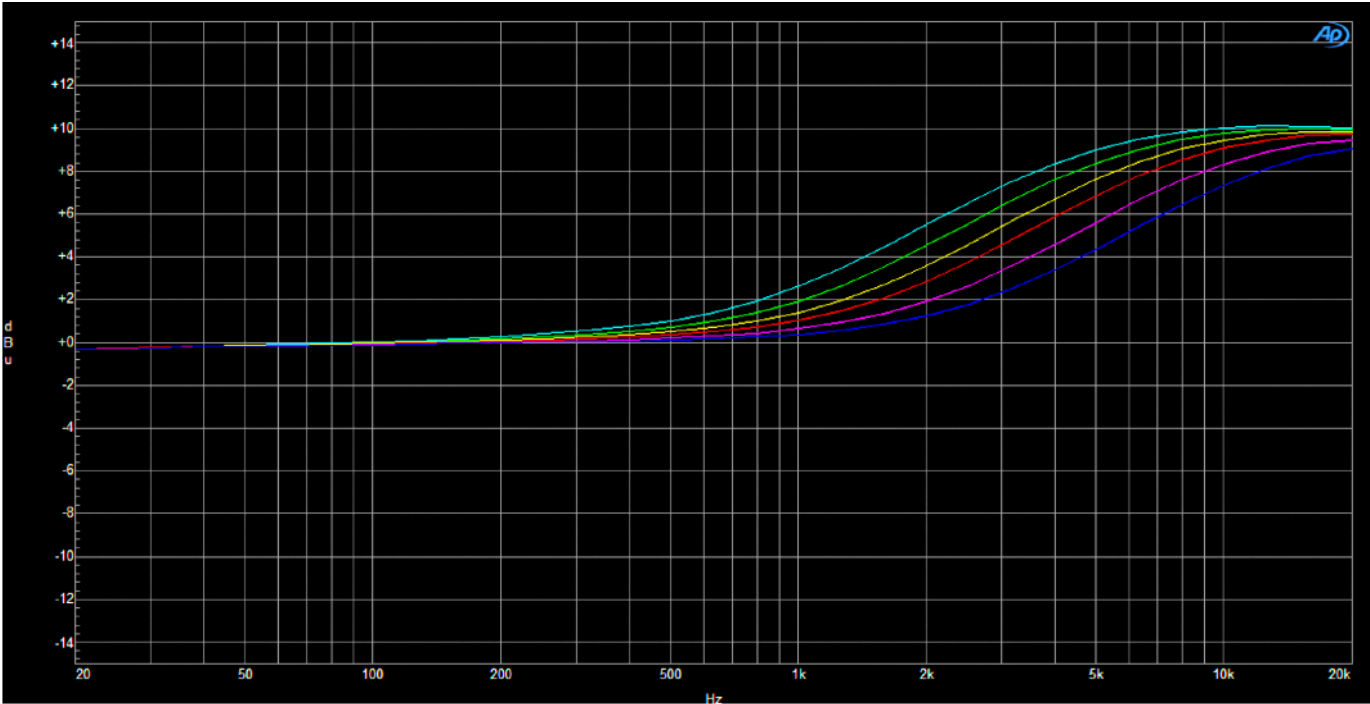


HIGH PASS FILTER & LOW PASS FILTER RESPONSE CURVES



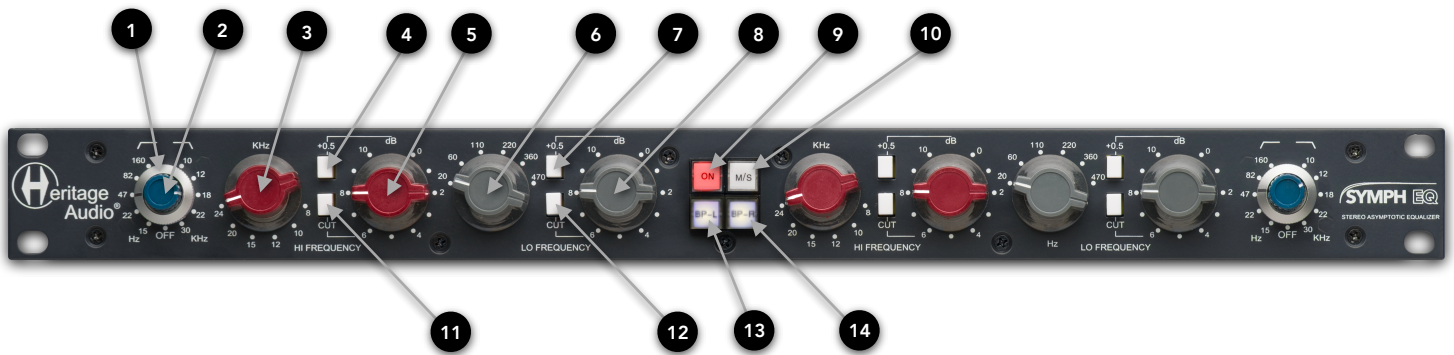
HIGH SHELF & LOW SHELF CURVE EXAMPLES





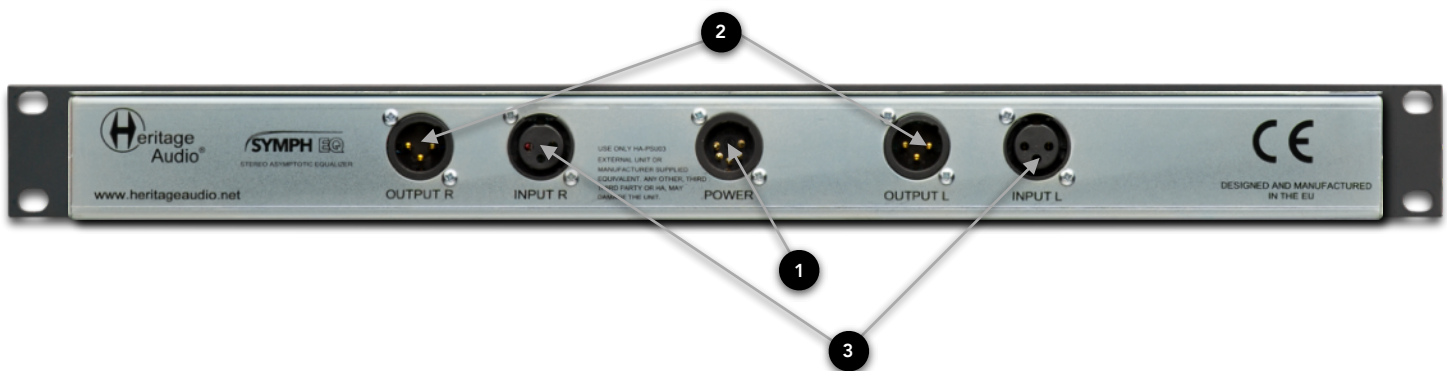
GETTING STARTED

FRONT





1	2	3	4	5
HI PASS FILTER SWITCH -12 dB/octave @ 15, 22, 47, 82, 160 Hz & OFF	LOW PASS FILTER SWITCH -12 dB/octave @ 10, 12, 18, 22, 30 kHz & OFF	HI FREQUENCY SELECTOR SWITCH 8, 10, 12, 15, 20, 24 kHz	+ 0.5 dB SWITCH Adds 0.5 dB to whatever the selected amount is	HI FREQUENCY BOOST/CUT AMOUNT SWITCH 0-10 dB in 1 dB increments
6	7	8	9	10
LOW FREQUENCY SELECTOR SWITCH 20, 60, 110, 220, 360, 470 Hz	+ 0.5 dB SWITCH Adds 0.5 dB to whatever the selected amount is	LOW FREQUENCY BOOST/CUT AMOUNT SWITCH 0-10 dB in 1 dB increments	POWER ON SWITCH Turns unit on	M/S MODE SWITCH Activates Mid Side mode
11	12	13	14	
CUT MODE SWITCH Reverses from Boost mode to Cut mode	CUT MODE SWITCH Reverses from Boost mode to Cut mode	BYPASS L SWITCH Bypasses the Left Channel	BYPASS R SWITCH Bypasses the Right Channel	

REAR

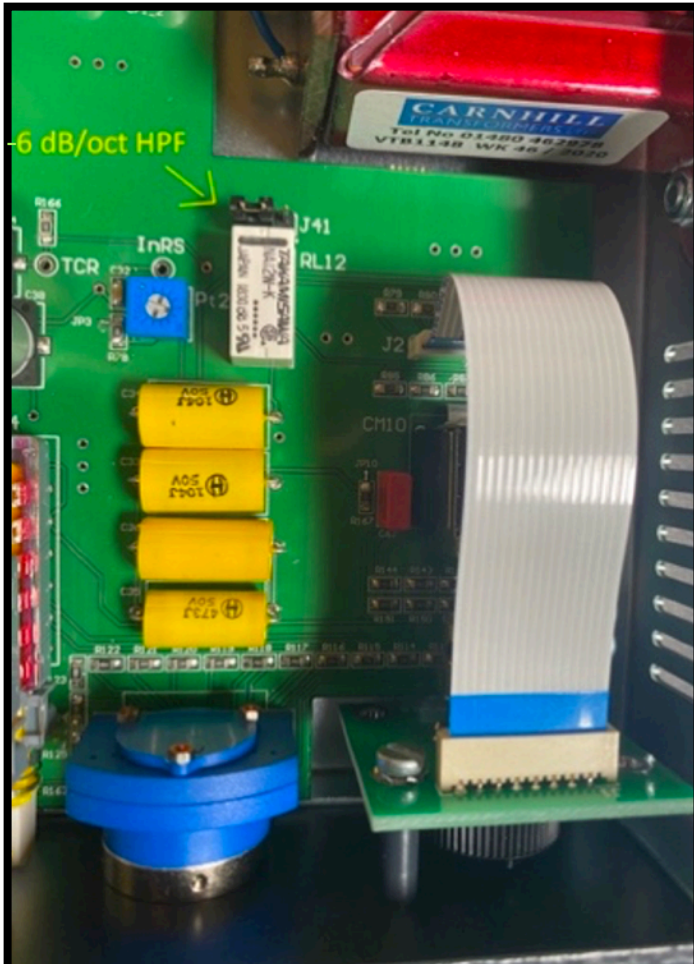


1	2	3
POWER INPUT To Be Connected to the external Power Supply (HA-PSU03)	LINE OUTPUTS Male XLR Connectors	LINE INPUTS Female XLR Connectors

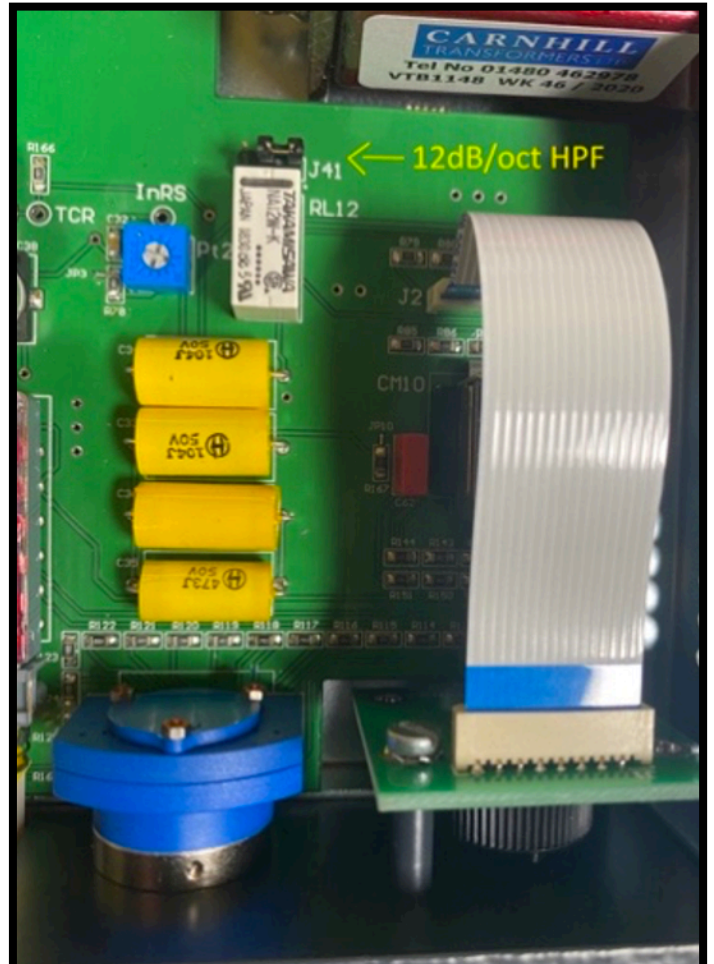
All XLRs are:	MALE XLR	FEMALE XLR
Pin 1: GND Pin 2: Hot Pin 3: Cold		
	GND Hot (+) Cold (-)	GND Hot (+) Cold (-)

HIGH-PASS FILTER CONFIGURATION

In order to comply with the old disk cutter's practice, the high-pass filter has the ability to automatically turn into elliptical response when in M/S mode. This way, the Mid HPF stays at 12 dB/oct while the Side HPF switches to 6 dB/octave. This provides the most natural way of "monoing" the bass content as was intended in the vinyl mastering. However, if you prefer to keep the response of the Side HPF at the steeper 12 dB/octave, this can be configured with a jumper inside the unit as seen in the pictures below. All units leave the factory with the pre-configured "Elliptical" option.

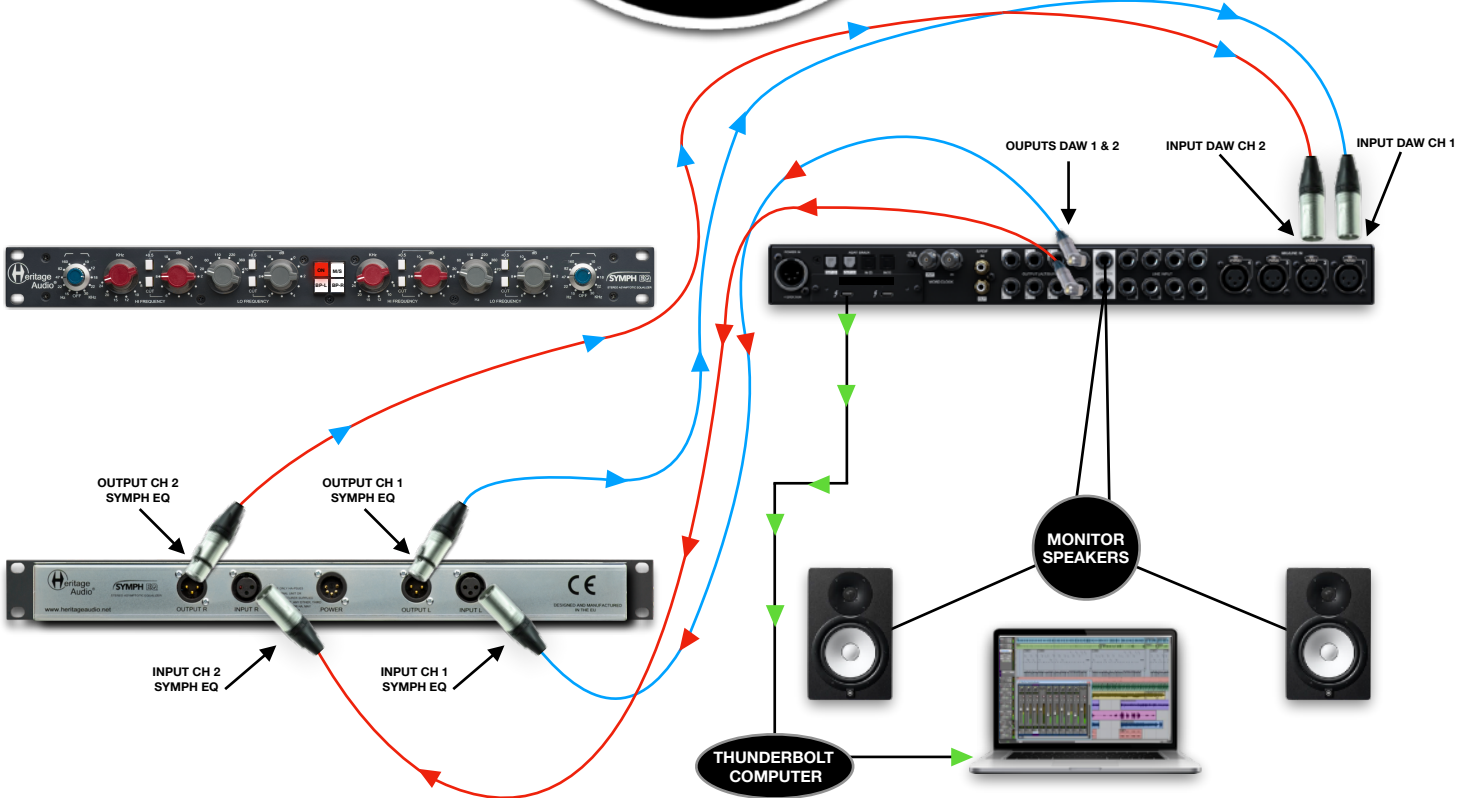


As is straight from Heritage Audio, -6 dB/oct HPF...

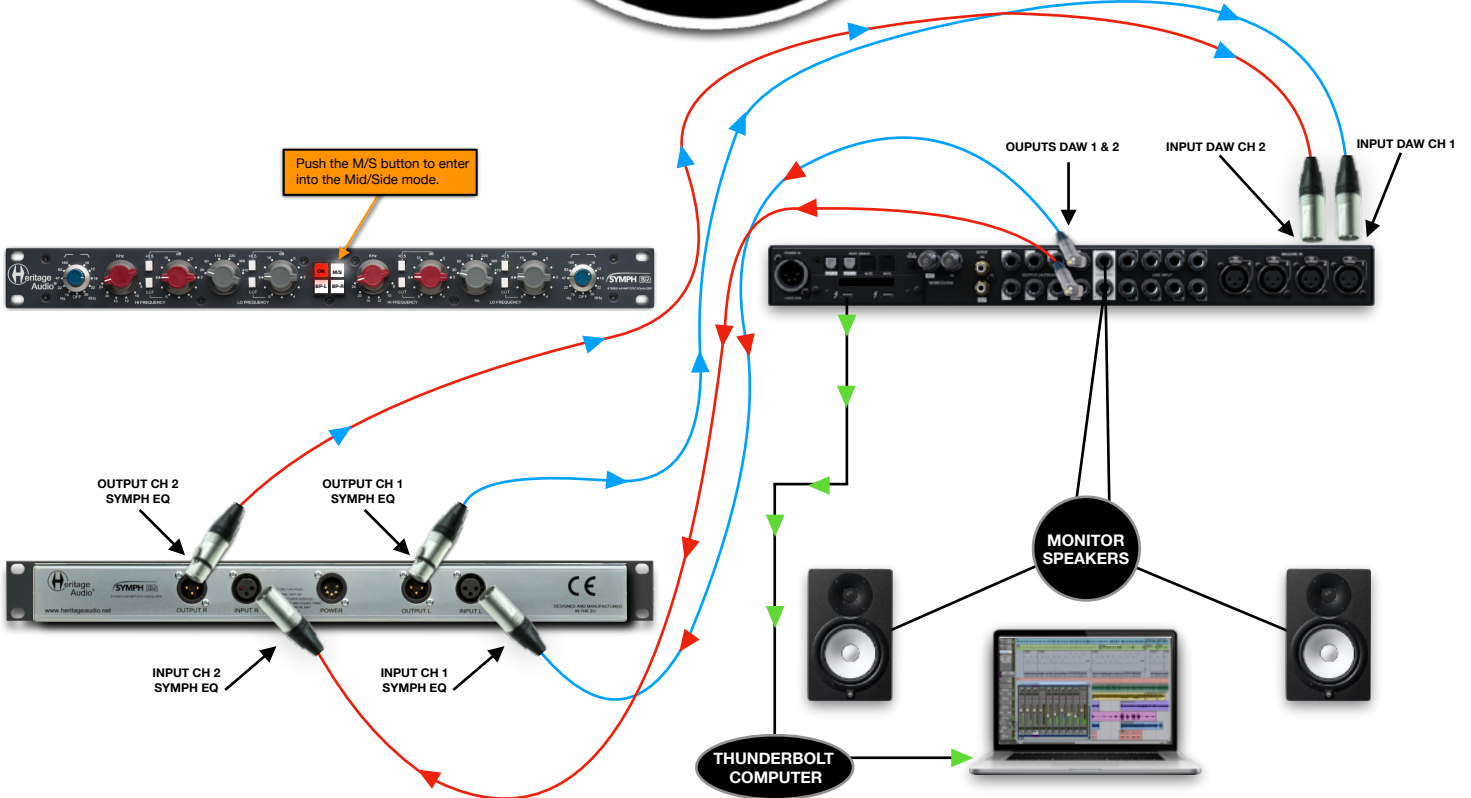


Modified by moving jumper for -12 dB/oct HPF.

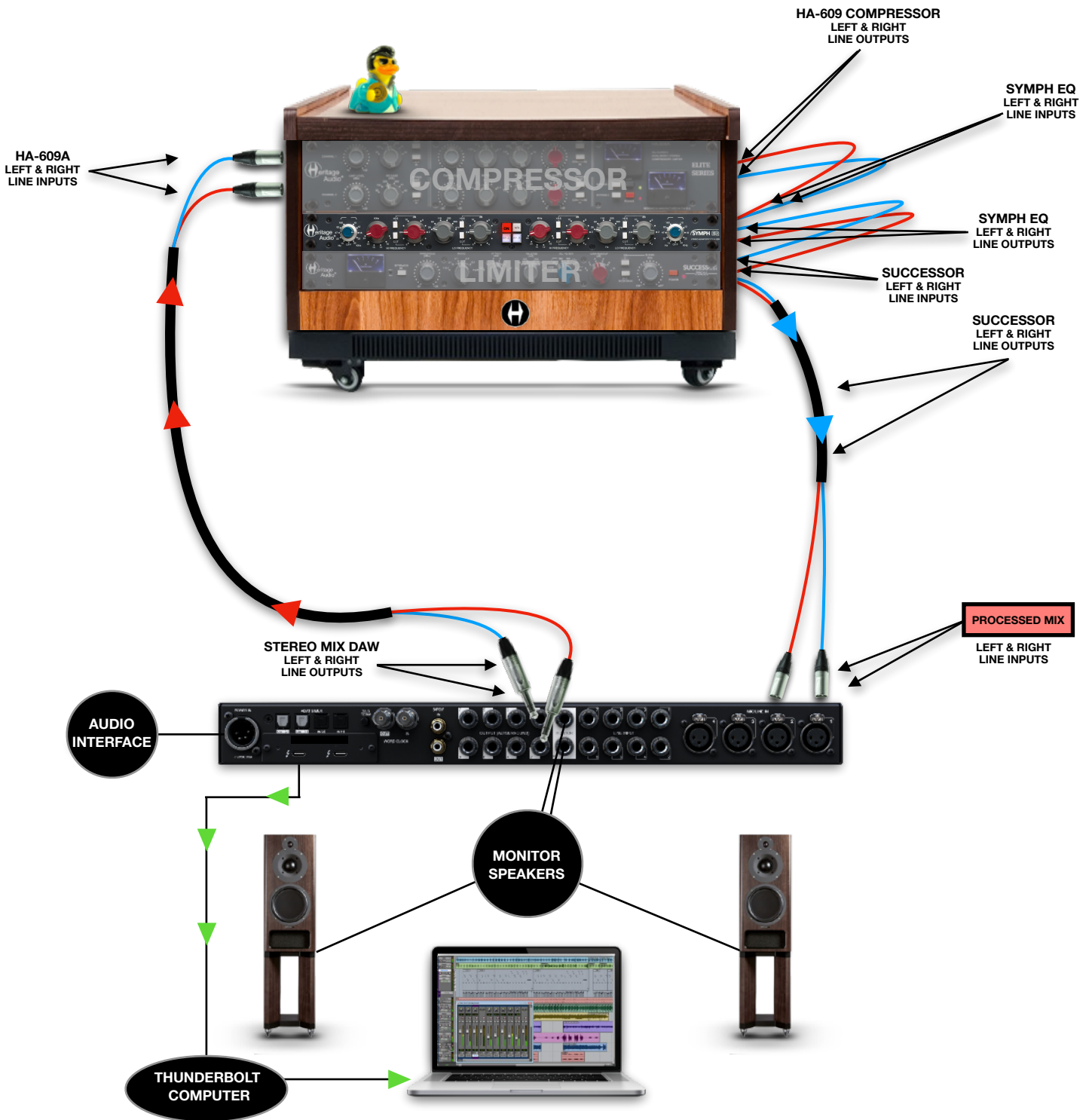
TRACK INSERT
STEREO



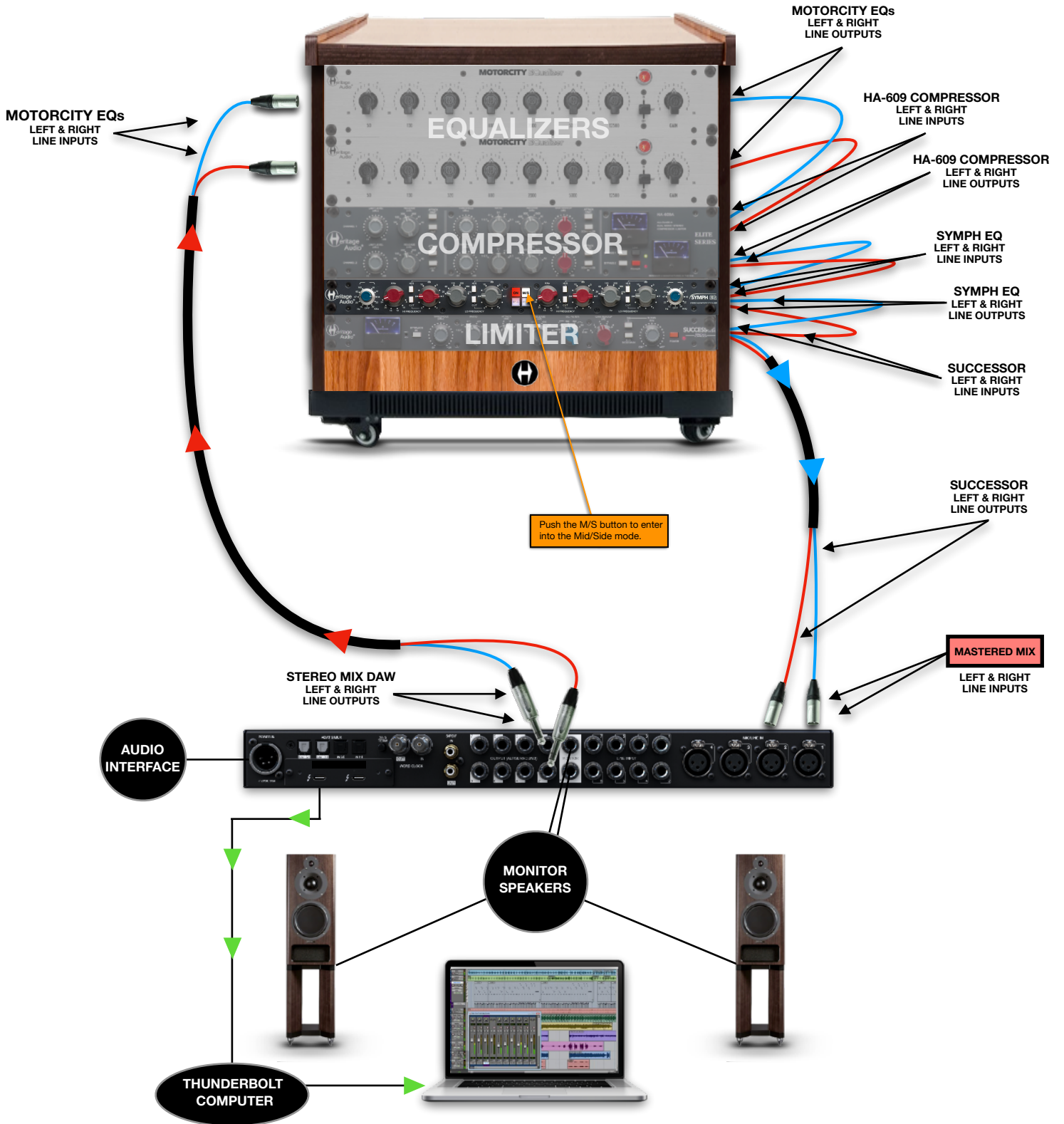
TRACK INSERT
MID/SIDE



**MIX BUSS
STEREO**



MASTERING MID/SIDE

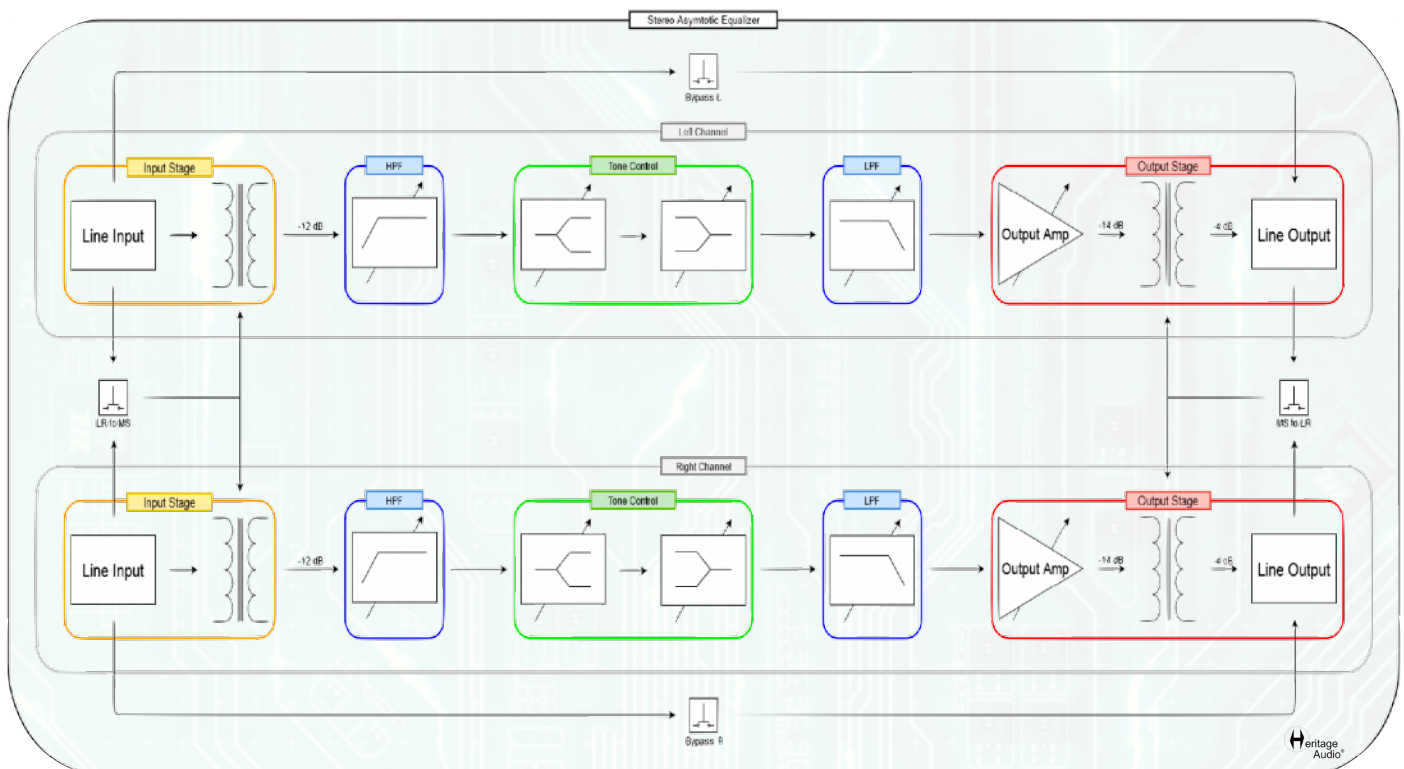


SPECIFICATIONS



- **Maximum input level:** Over + 22 dBu.
- **Maximum output level:** Over + 26.5 dBu into 600 Ω .
- **Self-noise:** Less than -89 dBu @ EQ Flat.
- **THD+N (50 Hz - 20 kHz):** Less than 0.07% at +20 dBu.
- **Frequency response:** ± 0.5 dB, 15 Hz - 30 kHz.
- **Input impedance:** 10 K Ω , transformer balanced and floating.
- **Output impedance:** Less than 75 Ω , transformer balanced and floating, Class A driven.
- **Dimensions SYMPH EQ (W x H x L):** 482 mm x 44 mm (1 Rack unit) x 184 mm.
- **Weight:** 3.705 Kg.

SIGNAL FLOW



TROUBLE SHOOTING



PROBLEMS	SOLUTIONS
There doesn't seem to be any change in the audio happening.	Make sure the BYPASS buttons have not been left on.
How is the Mid/Side mode activated?	Simply by pushing the M/S button in the middle section of the SYMPH EQ.
I only want to apply 0.5 dB of increase. How is that possible?	Just leave the GAIN pot for that frequency at 0 dB and push the +0.5 dB button.
After applying a healthy amount of Low boost I have too much Sub now.	This is where those nice High Pass Filters are really helpful.
Now that I've increased a few dBs at 24 kHz, the sound has the right clarity but is a bit too strident.	Once again, use a filter. In this case a Low Pass Filter at 30 kHz should help out. But do try others as sometimes you'd be pleasantly surprised at the results.
I'm trying to adjust only the MID channel but it doesn't seem to be responding at all.	Remember, in M/S (Mid/Side) mode you must not only have the button pushed but also remember that the LEFT channel corresponds to the MID and the RIGHT channel corresponds to the SIDE signal.
It seems like I can only BOOST signals when what I want to do is CUT them.	To change the action from boosting to cutting it is necessary to push the CUT button for that channel and frequency band.
Exactly how extreme are the Low and High Pass Filters?	The Low and High Pass Filters are 12 dB/Octave (2-Pole).

* For any further doubts or questions please get in contact with us at: support@heritageaudio.com

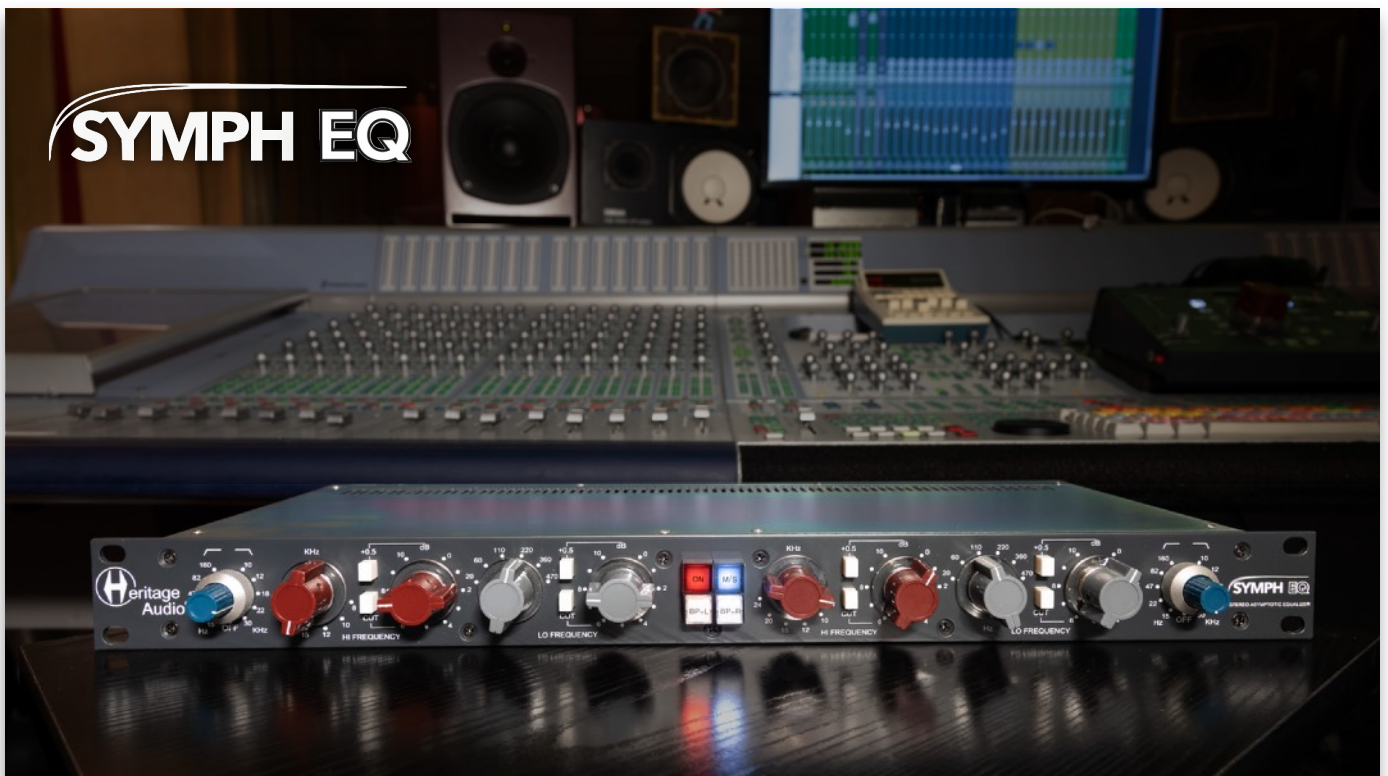
WARRANTY STATEMENT

LIMITED 2 YEAR WARRANTY

Heritage Audio **SYMPH EQ** is warranted by Heritage Audio SL to be free from defects in materials and workmanship for the period of 2 years to the original purchaser. In the event of such defects, the product will be repaired without charge or, at our option, replaced with a new one if delivered to Heritage Audio prepaid, together with a copy of the sales slip or other proof of purchase date. The warranty excludes problems due to normal wear, abuse, shipping damage or failure to use the product in accordance with the specifications.

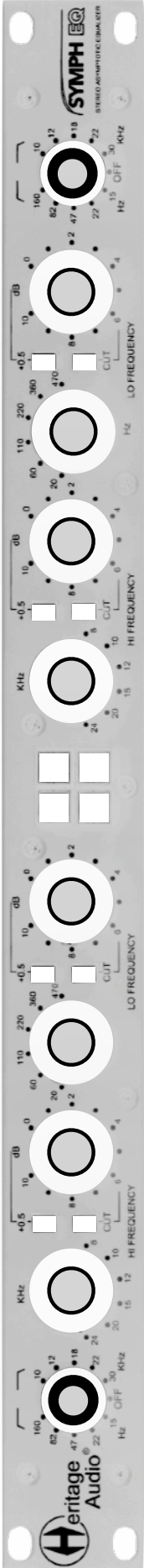
Heritage Audio shall not be liable for damages based upon inconvenience, loss of use of the product, loss of time, interrupted operation or commercial loss or any other damages, whether incidental, consequential or otherwise.

This warranty is not transferable.



REGISTRATION

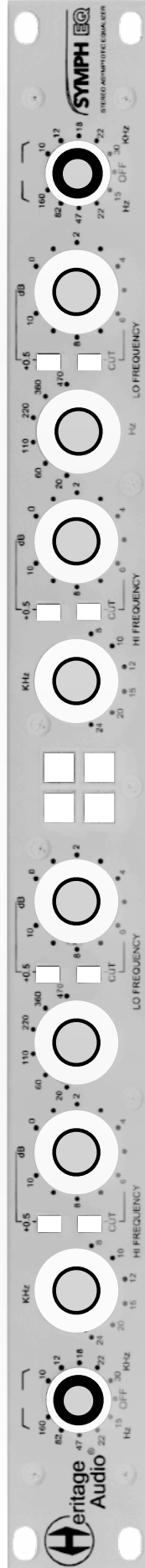
Please visit our website: <https://heritageaudio.com/registration/>



Session / Title: _____ Track: _____ Connected Equipment: _____

Switch ON
 Switch OFF

Date: _____ Instrument: _____ Notes: _____



Session / Title: _____ Track: _____ Connected Equipment: _____

Switch ON
 Switch OFF

Date: _____ Instrument: _____ Notes: _____



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