



# PEQ-2

## PROGRAM EQUALIZER

January/2023 Rev. 1.0.



LANG SPECIALIZED AUDIO EQUIPMENT

# INTRODUCTION

---

Thank you for choosing the LANG PEQ-2 Program Equalizer. Lang Electronics inc, 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  
Lang-Electronics inc. - Madrid, Spain



© 2023 Lang Electronics inc. is the sole owner of the copyright of all information and drawings contained in this manual which are not to be copied or reproduced by any means or disclosed in part or whole to any third party without written permission.

Lang Electronics inc., reserves the right to alter specifications without notice. The information in this manual has been carefully checked and is believed to be accurate at the time of publication. However, no responsibility is taken by us for inaccuracies, errors or omissions nor any liability assumed for any loss or damage resulting either directly or indirectly from use of the information contained within it.

## TABLE OF CONTENTS

---

INTRODUCTION	2
CONTENTS	2
DESCRIPTION	3
COMPLETE FREQUENCY DESCRIPTIONS	4
FREQUENCY RESPONSE AND EQ CURVES	5
GETTING STARTED	8
APPLICATIONS	9
SPECIFICATIONS	12
SIGNAL FLOW	12
TROUBLE SHOOTING	13
WARRANTY STATEMENT	14
REGISTRATION	14
RECALL SHEETS	15



## DESCRIPTION

---

Heritage Audio has recently acquired Lang Electronics Inc., a professional audio company from the 1960s dedicated to producing high quality equipment and replacement parts at very accesible prices. The most desired product was the PEQ-2 Program Equalizer. Unfortunately, not very many were made and those that have survived until today are carefully guarded by their lucky owners. Many have said that they actually prefer this model to the ubiquitous Pultec program equalizers. Both are very high quality passive equalizers with custom inductors and tone capacitors and both are from Western Electric patents, but the fact that the PEQ-2 offers a sharper, tighter response makes it ideal for mix bus use where flabby, undefined sound can ruin your results. A few important differences are: The PEQ-2 has nearly twice as many frequency options to choose from...26 compared to the Pultec's 14. The low end is infinitely more controllable as the LANG gives you the ability to Boost and Cut at different frequencies, unlike the Pultec. There is also a very useful 20 kHz option in the High Frequency Peak Boost section that can really be helpful. So those that are lucky enough to still have them will not let them go. In fact, many have stated that they have become their 'secret weapon' and totally rely on them to produce their trademark sound. So it is only fitting that the first product from the new LANG Electronics Inc. line would be the PEQ-2.

While having a very simple, clear and easy layout, the PEQ-2 can be deceiving as it is actually capable of some very extreme processing all while maintaining the musicality of your signal. With independent controls for Boost and Droop (Cut) of both the High and Low bands you can quickly transform your material in interesting, creative ways that you have almost certainly never considered before and are not even possible with the Pultec design. Convenient stepped controls provide easy recall and settings matching when working with two units for stereo use. Once you've found out how to mould your mixes with these you'll wonder how you ever managed before.

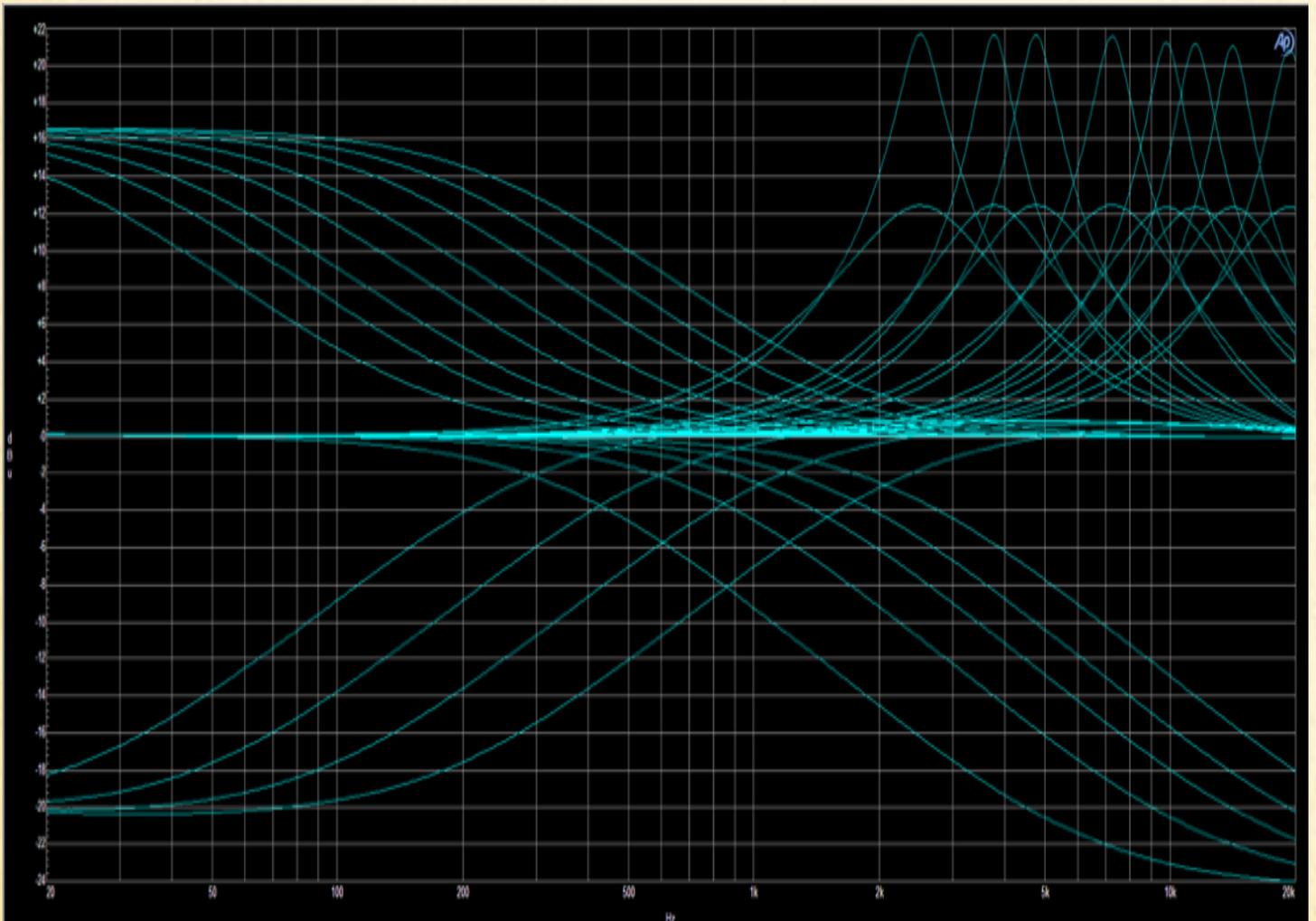
The ability to boost and cut at the same or similar frequencies produces exciting new equalized response curves. Experimentation is key, but you will quickly realize just how powerful this feature can be. Within no time the PEQ-2 will most likely become one of your most used studio tools. The sheer power it offers with the ease and speed of achieving results is impressive...

Not only does the PEQ-2 offer Low Shelf boost and cut control and High Shelf cut, but it also has a High Peak Boost with a completely variable Q (Bandwidth) setting that spans from Sharp to Broad to cover any needs. What's more, the range of Boost actually varies depending on what you're selected Bandwidth setting is to offer a very smooth and natural response at all times... Very clever indeed.

- The Low Shelf Boost offers 8 frequencies to choose from: 20, 30, 40, 60, 80, 120, 160 & 240 Hz with up to 16 dB of boost.
- The Low Shelf Droop offers 4 frequencies to choose from: 25, 50, 100 & 200 Hz with up to 18 dB of cut.
- The High Peak Boost offers 8 frequencies to choose from: 2.5, 3.75, 5, 7.5, 10, 12, 15 & 20 kHz with a boost that varies the maximum between 21 and 12.5 dB depending on the Bandwidth setting.
- The High Shelf Droop offers 6 frequencies to choose from: 2.5, 5, 7.5, 10, 15 & 20 kHz with up to 16 dB of cut.

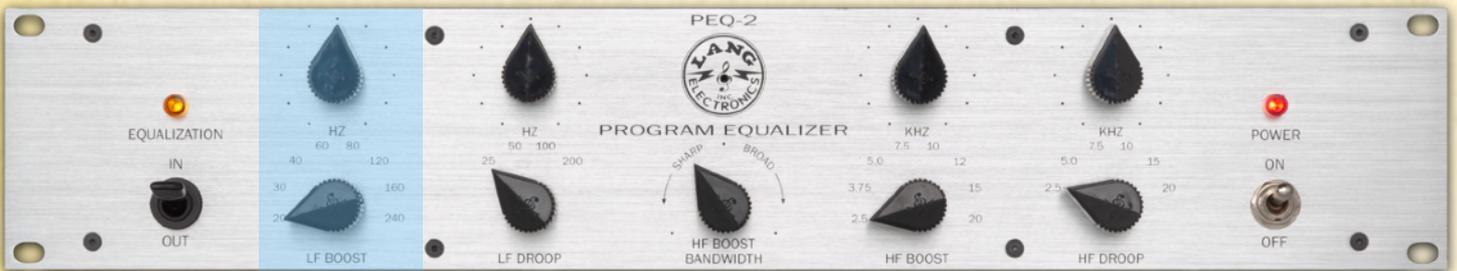
A high quality Silicon Transistor Amplifier is used in the signal path to restore the signal back to unity gain. An adjustable Trimmer screw is located on the front panel within the LOGO, and comes after the EQ. A bypass has also been included to make quick comparisons possible between processed and unprocessed signals. And like all the Heritage Audio products, the LANG PEQ-2 comes equipped with custom audio transformers at the Input and Output to make sure you always have a powerful, solid, noise-free signal to work with.

# COMPLETE FREQUENCY DESCRIPTIONS

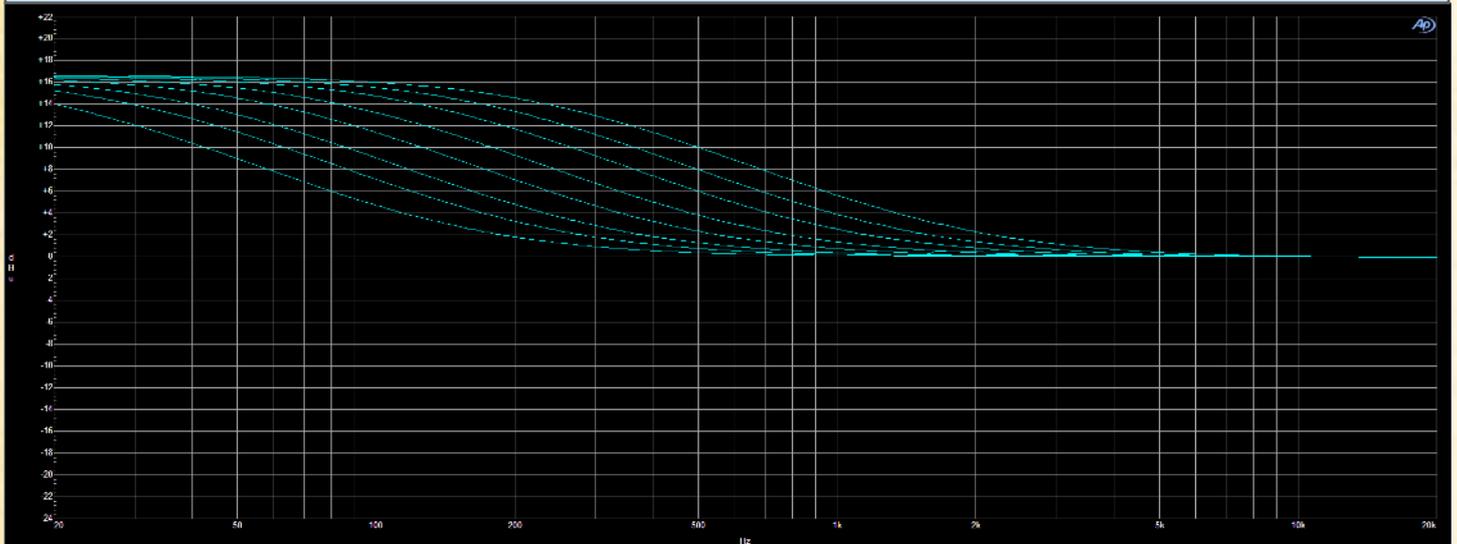


# FREQUENCY RESPONSE AND EQ CURVES

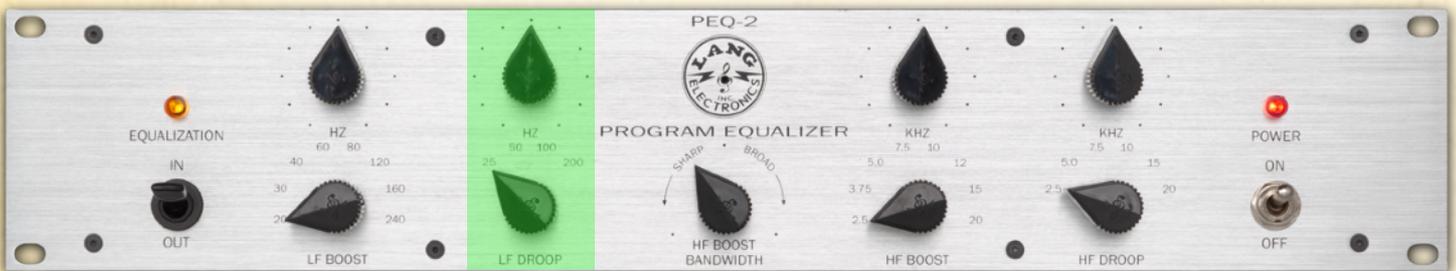
## LF BOOST



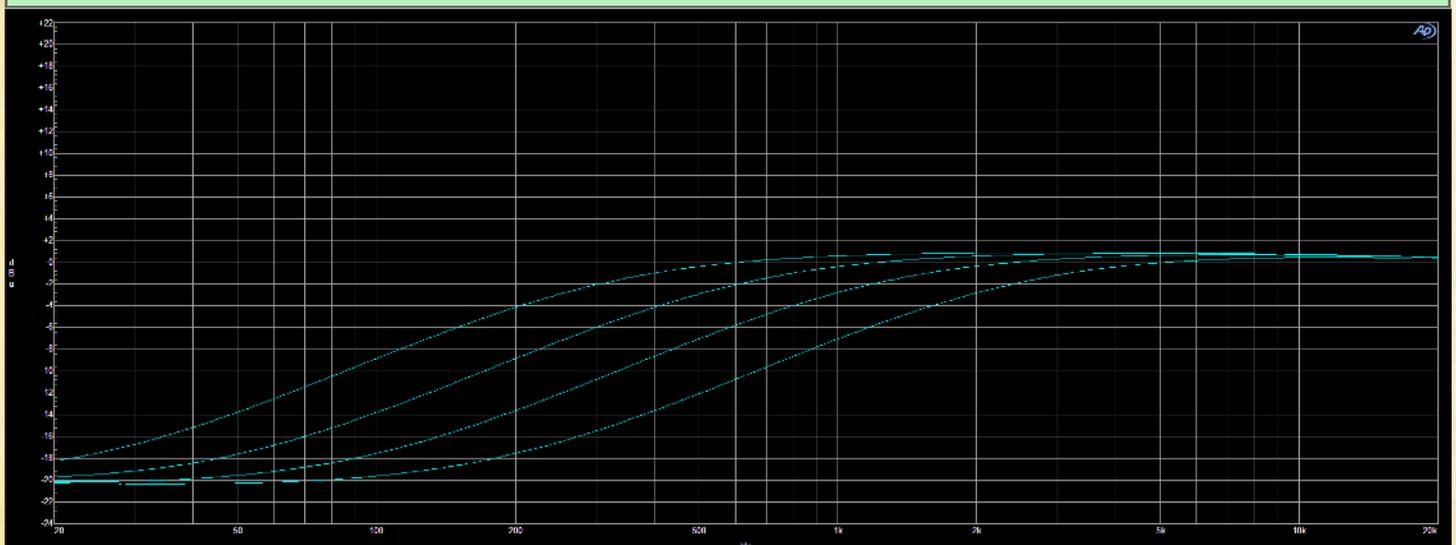
**LF BOOST: 20 Hz; 30 Hz; 40 Hz; 60 Hz; 80 Hz; 120 Hz; 160 Hz; 240 Hz, Gain knob fully CW.**



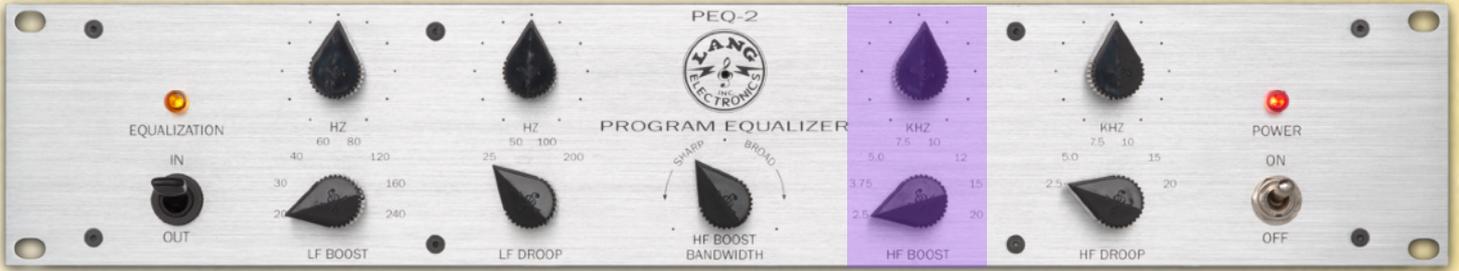
## LF DROOP



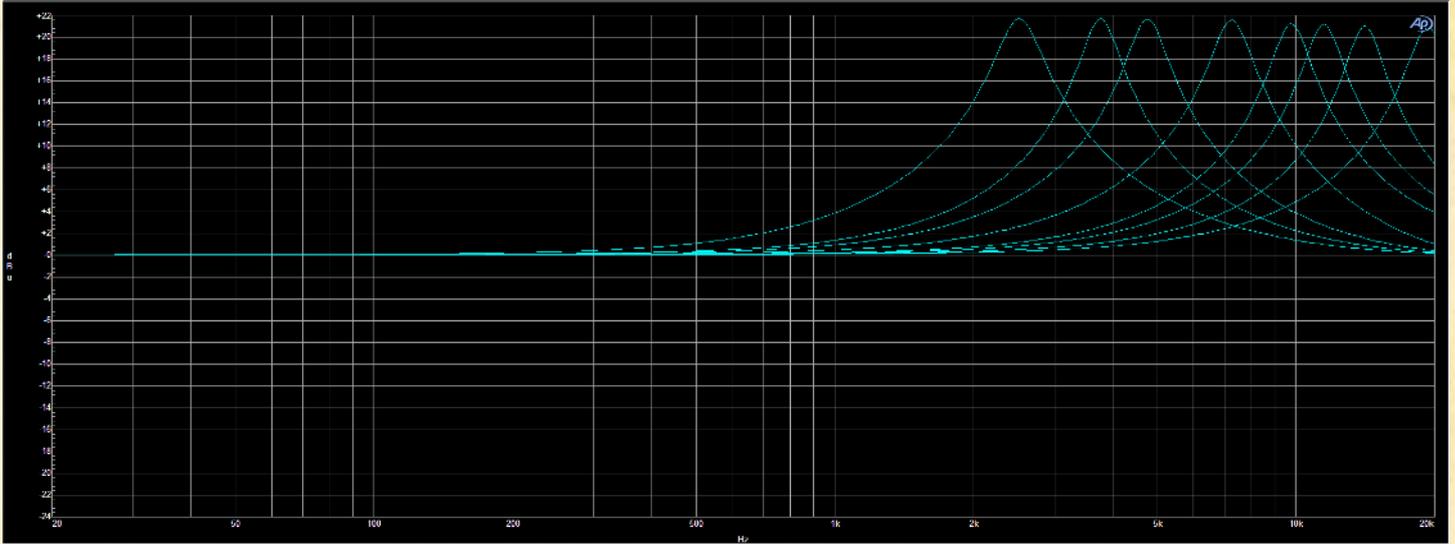
**LF DROOP: 25 Hz; 50 Hz; 100 Hz; 200 Hz, Gain knob fully CW.**



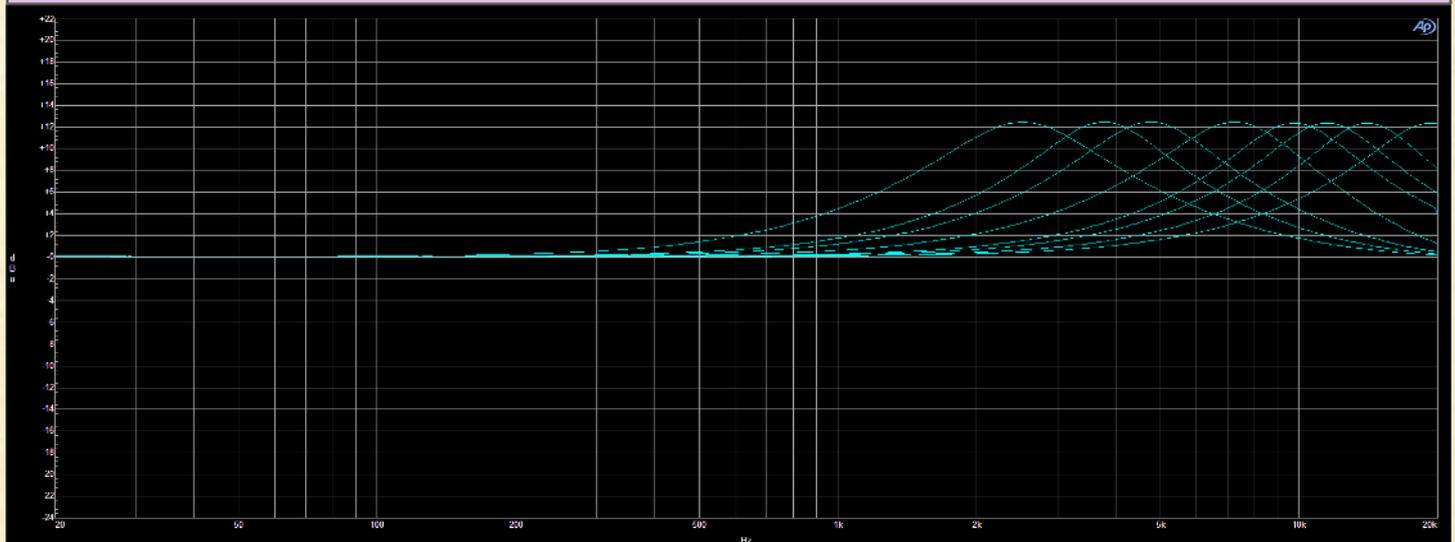
## HF BOOST



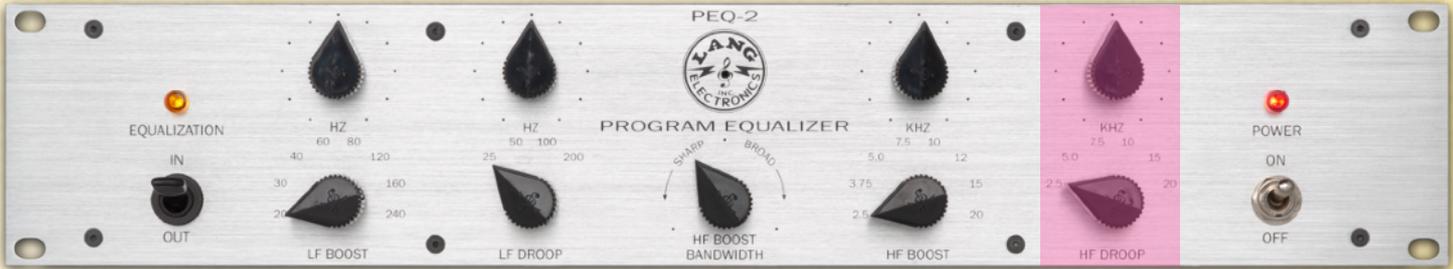
**HF BOOST: 2.5 kHz; 3.75 kHz; 5.0 kHz; 7.5 kHz; 10 kHz; 12 kHz; 15 kHz; 20 kHz, Gain knob fully CW, Bandwidth fully CCW**



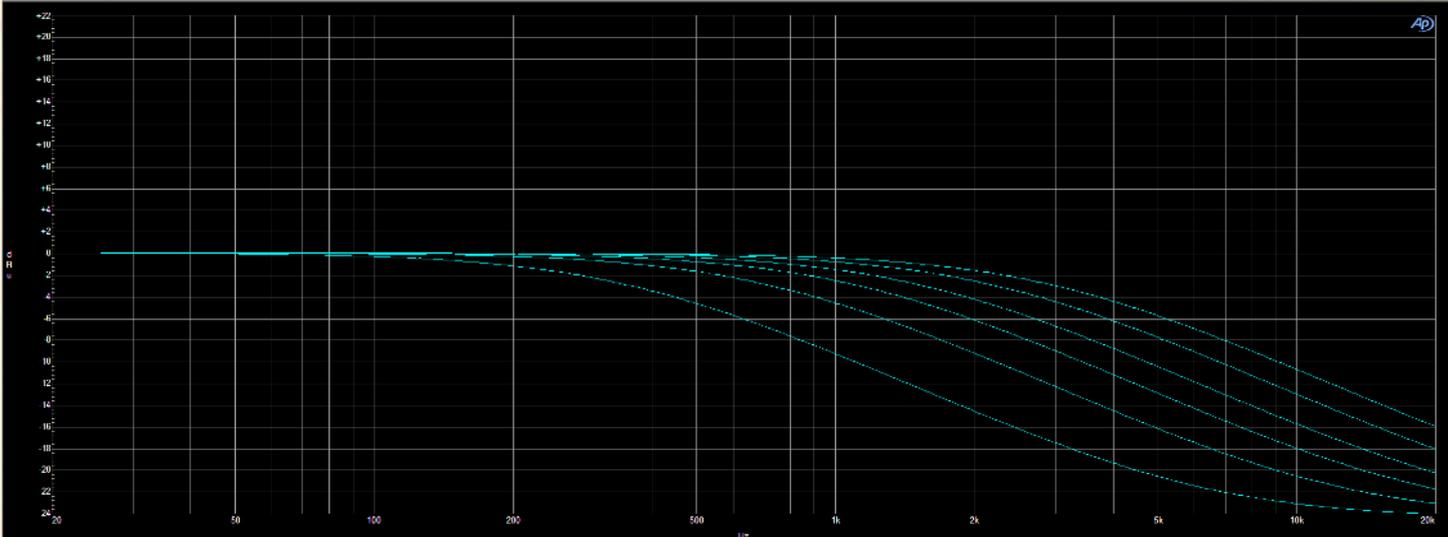
**HF BOOST: 2.5 kHz; 3.75 kHz; 5.0 kHz; 7.5 kHz; 10 kHz; 12 kHz; 15 kHz; 20 kHz, Gain knob fully CW, Bandwidth fully CW (Broad).**



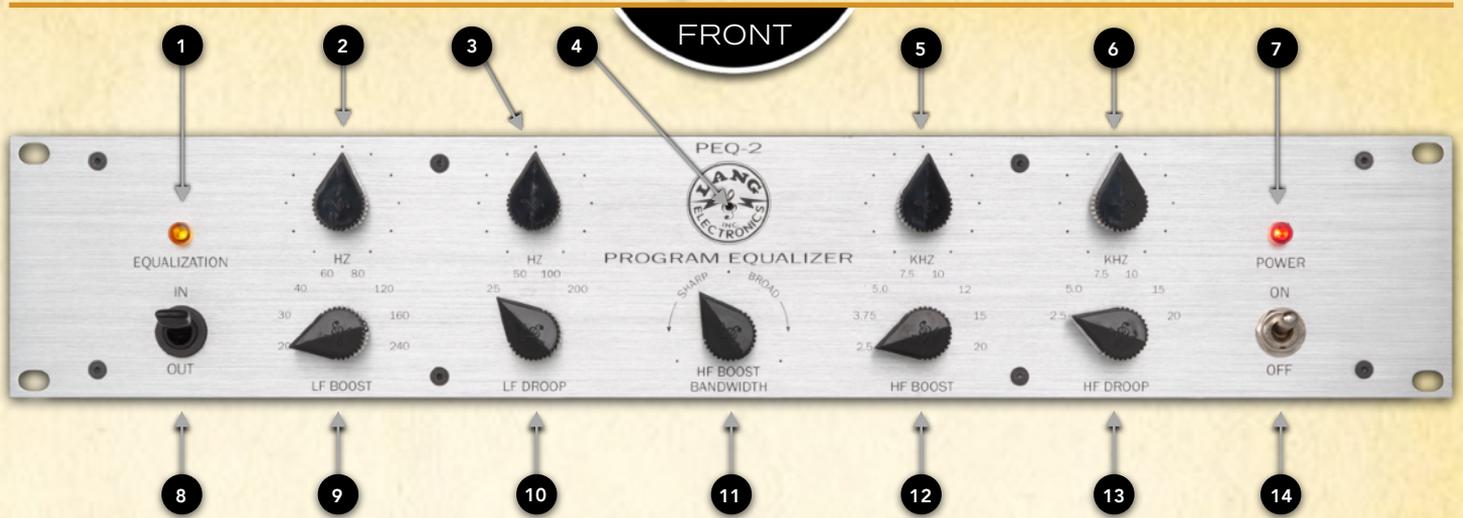
# HF DROOP



**HF DROOP: 2.5 kHz; 5.0 kHz; 7.5 kHz; 10 kHz; 15 kHz; 20 kHz, Gain knob fully CW.**



# GETTING STARTED



<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>ORANGE ACTIVITY LIGHT</b> Indicates EQ is in "ON"	<b>GAIN KNOB LF BOOST</b> 0 to 16 dB	<b>GAIN KNOB LF DROOP</b> 0 to 18 dB	<b>GAIN ADJUSTMET TRIMMER</b> -12 dB to +1.6 dB range	<b>GAIN KNOB HF BOOST</b> 21 to 12.5 dB depending on the BANDWIDTH setting
<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>GAIN KNOB HF DROOP</b> 0 to 16 dB	<b>RED LIGHT</b> Indicates equipment in "ON"	<b>EQUALIZATION SWITCH</b> Switches EQ IN and OUT	<b>LF BOOST</b> 20 Hz; 30 Hz; 40 Hz; 60 Hz; 80 Hz; 120 Hz; 160 Hz; 240 Hz.	<b>LF DROOP</b> 25 Hz; 50 Hz; 100 Hz; 200 Hz.
<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	
<b>HF BOOST BANDWIDTH</b> Varies the EQ curve between SHARP and BROAD for the HF BOOST	<b>HF BOOST</b> 2.5 kHz; 3.75 kHz; 5.0 kHz; 7.5 kHz; 10 kHz; 12 kHz; 15 kHz; 20 kHz.	<b>HF DROOP</b> 2.5 kHz; 5.0 kHz; 7.5 kHz; 10 kHz; 15 kHz; 20 kHz.	<b>POWER SWITCH</b> Turns the unit ON or OFF	

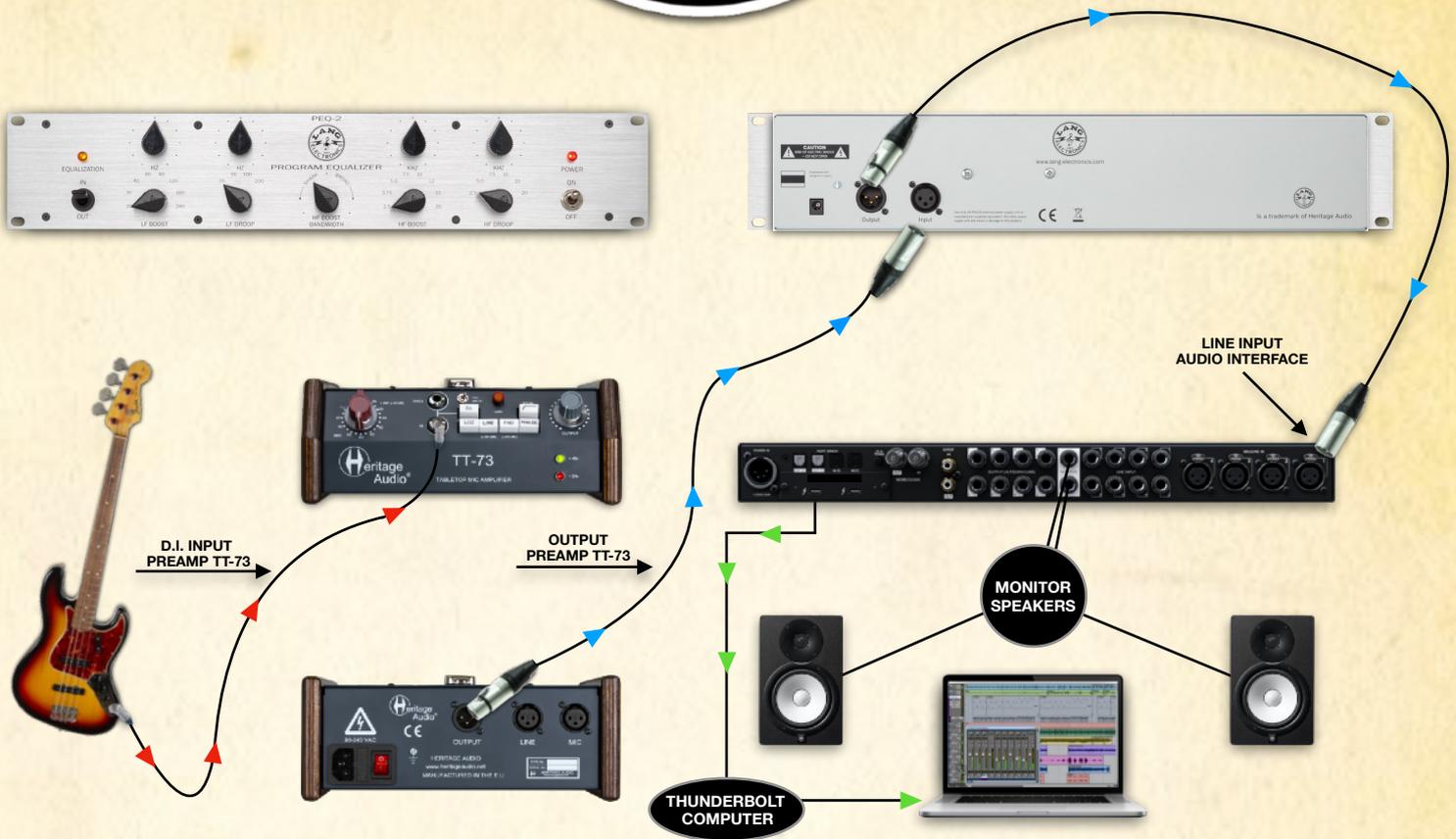
## REAR



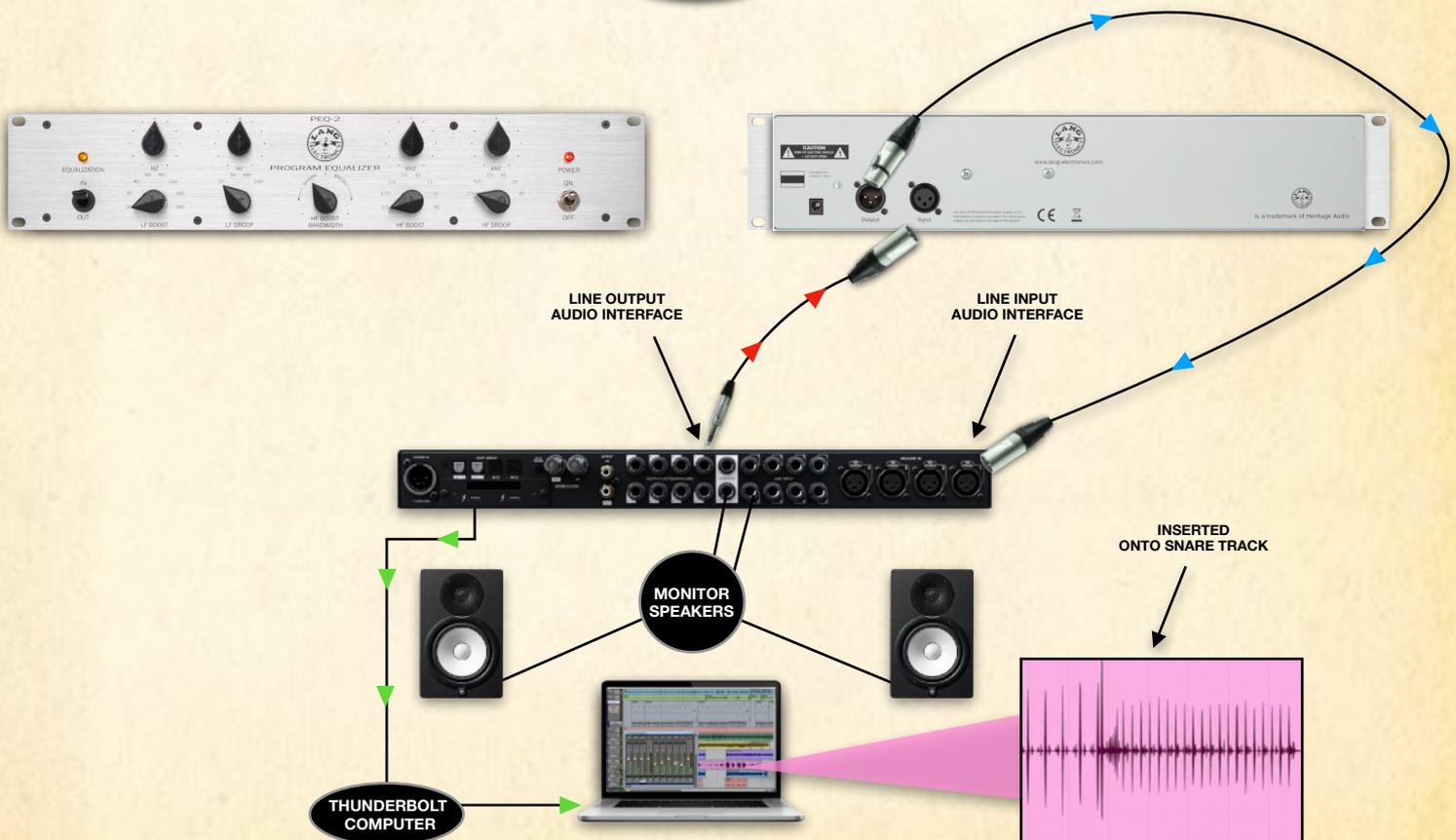
<b>1</b>	<b>2</b>	<b>3</b>
<b>POWER INPUT</b> To Be Connected to the HA PSU04 Power Supply	<b>LINE OUTPUT</b> Male Gold Plated XLR Connector	<b>LINE INPUT</b> Female Gold Plated XLR Connector

All XLRs are:	MALE XLR	FEMALE XLR
Pin 1: GND		
Pin 2: Hot		
Pin 3: Cold		

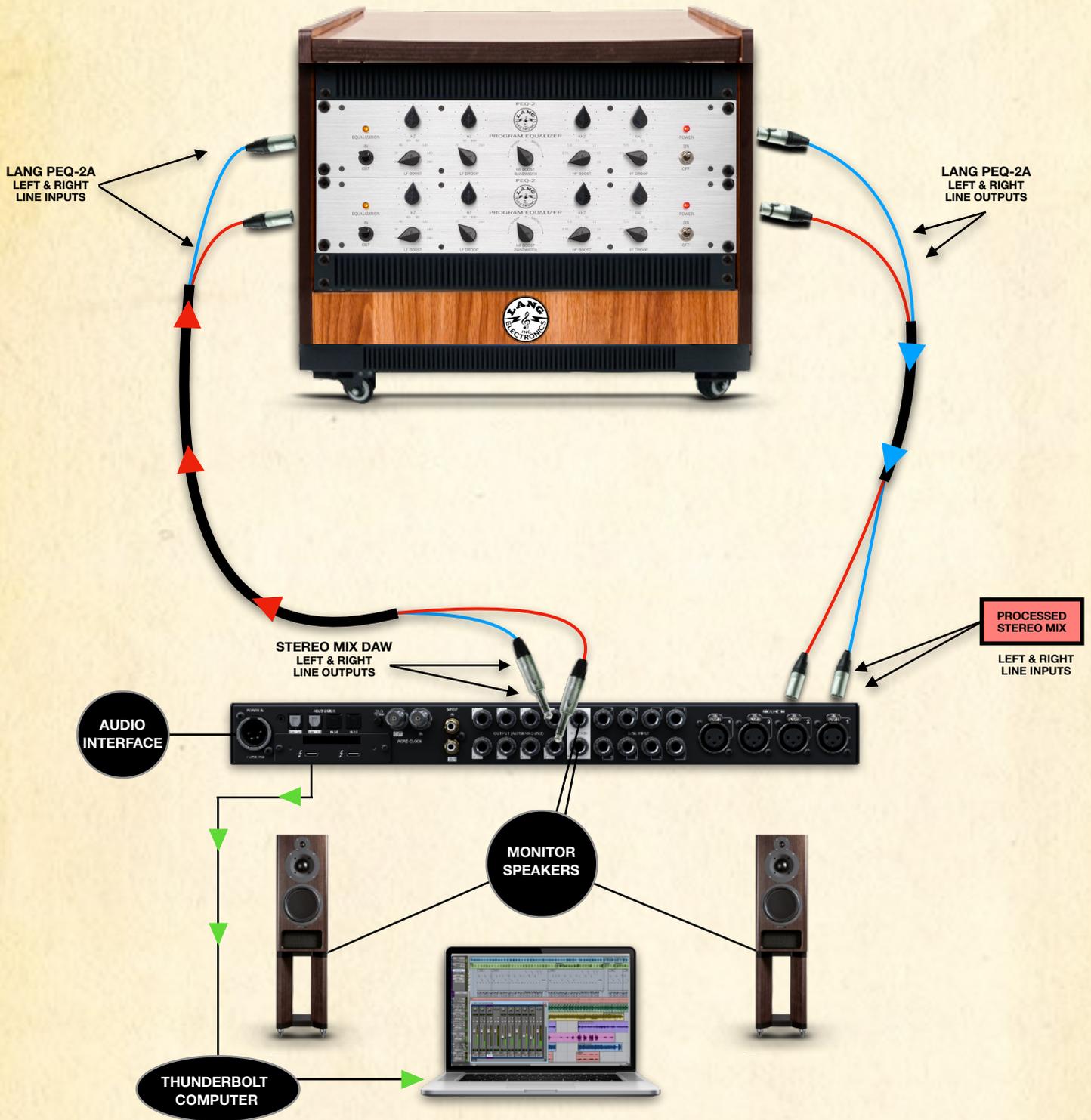
BASS RECORDING



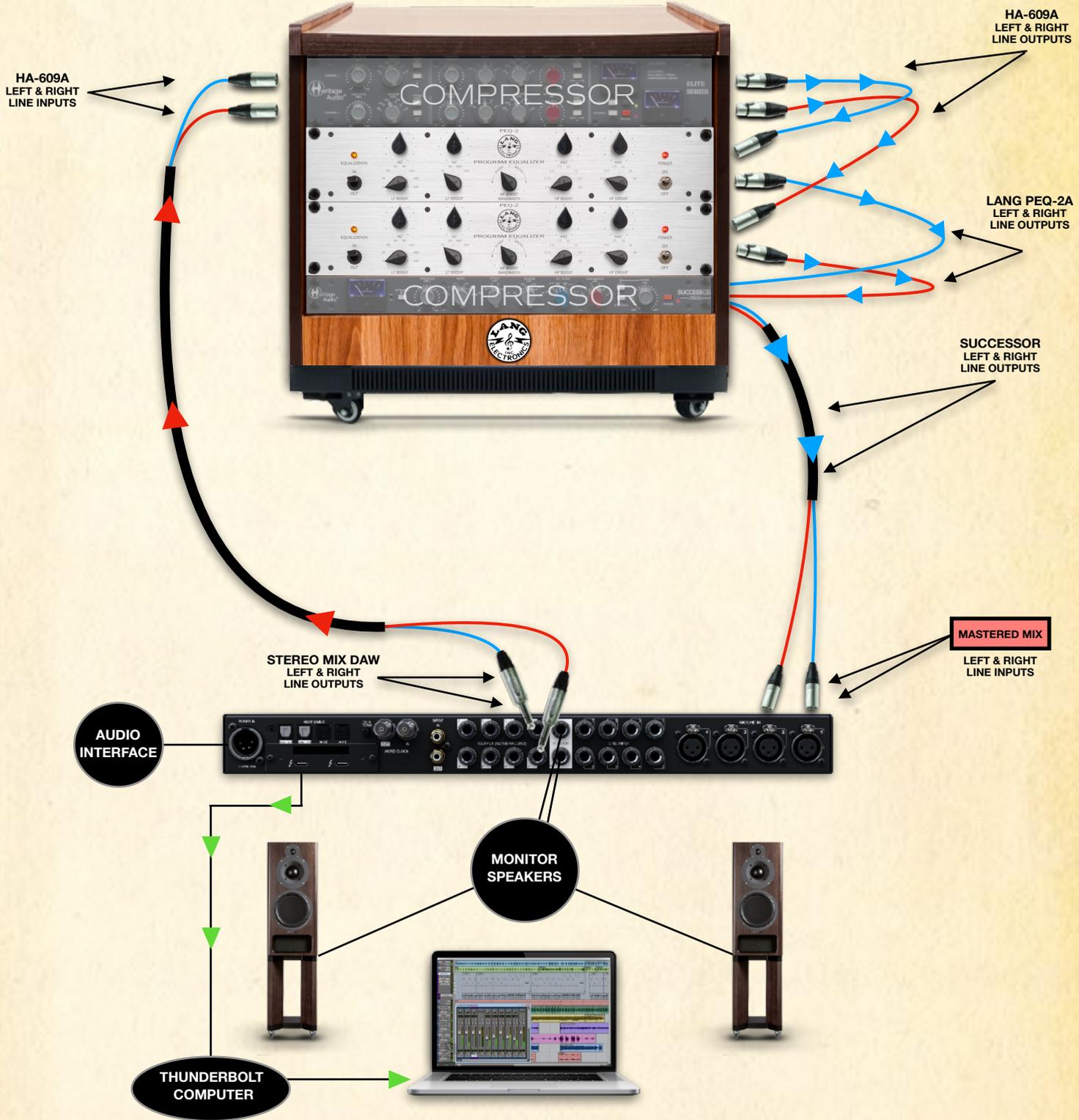
TRACK INSERT



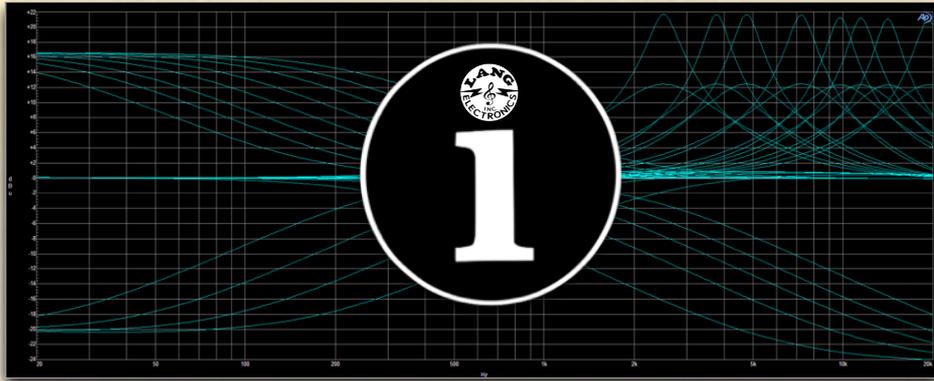
# MIX BUSS INSERT



# MASTERING



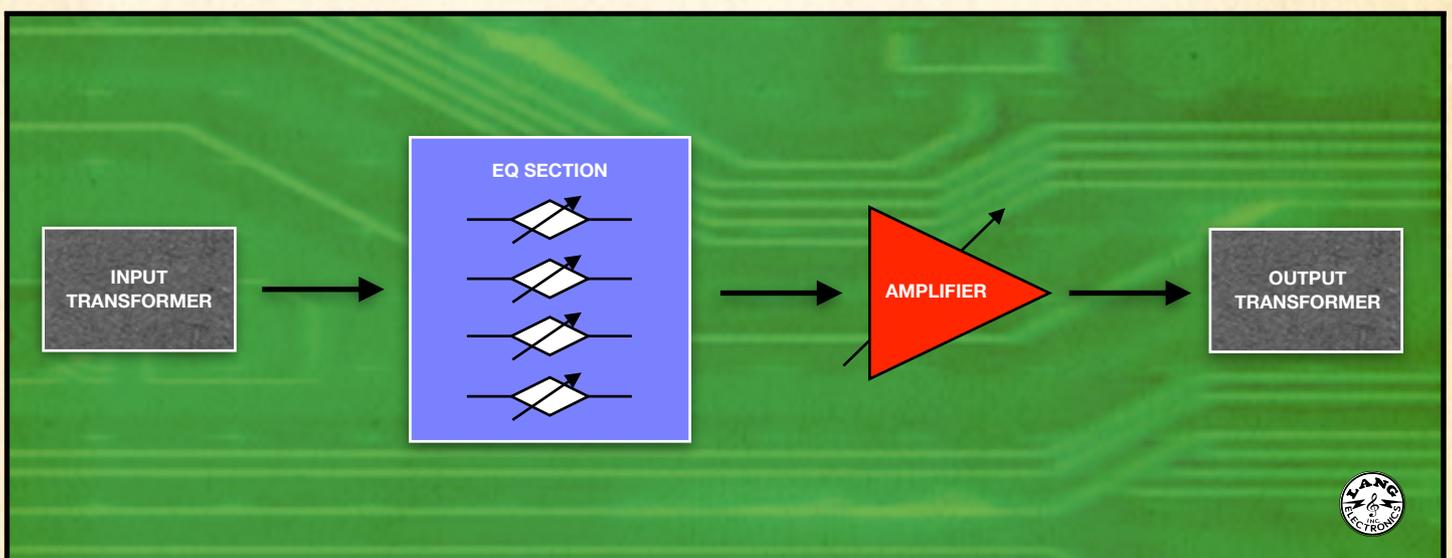
## SPECIFICATIONS



- **Line input impedance:** 2400  $\Omega$  bridging, transformer balanced and floating.
- **Output impedance:** Transformer balanced and floating, to drive a load of 600  $\Omega$ .
- **Maximum output:** Greater than +26.5 dBu into 600  $\Omega$  (internally terminated).
- **THD+N Ratio:** 0.02 % @ 1 kHz 24 dBu, all control CCW\*.
- **Frequency response:** 20 Hz to 20 kHz ( $\pm 0.3$  dB).
- **Noise floor:**  $\leq$  -86 dBu.
- **Power:** 48 V DC @ 60 mA.
- **Dimensions (W x H x L):** 482 mm x 88 mm (2 Rack units) x 153 mm.
- **Weight:** 3.088 Kg.

\*CCW stand for fully counter clockwise – Turn all controls to the left.

## SIGNAL FLOW





PROBLEMS	SOLUTIONS
Applying Cut and Boost to the frequencies doesn't have any affect on the signal.	Make sure the LANG PEQ-2 isn't in OUT mode.
The frequency range covered by the HF Boost is too small.	Use the Bandwidth knob to adjust the bell curve of the Peak.
The frequency range covered by the HF Boost is too wide.	Once again, use the Bandwidth knob to control exactly how wide or narrow that adjustment needs to be.
When I activate the equalizer there is just too much of a drop in the signal's volume.	Becareful, you are most likely applying to much attenuation to your processed signal.
The LANG PEQ-2 just makes every track sound too good.	Remember you are lucky enough to be working with a piece of history. Enjoy it!
The sound is altogether to strident and screechy.	Apply a bit of HF Droop at 10, 15 or 20 kHz to soften it up.
There are too many sub sonic frequencies going on.	Use some LF Droop to cut at 20 or 50 Hz to clear things up a bit.

\* For any further doubts or questions please get in contact with us at: [support@lang-electronics.com](mailto:support@lang-electronics.com)

## WARRANTY STATEMENT

---

### LIMITED 2 YEAR WARRANTY

LANG PEQ-2 Program Equalizer is warranted by Lang Electronics Inc. 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 Lang Electronics Inc. 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.

Lang Electronics Inc. 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.

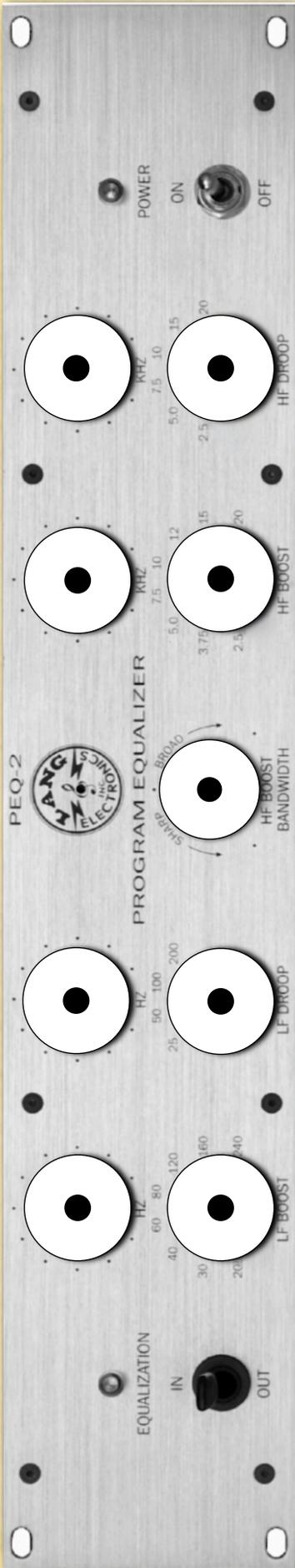
Lang Electronics and the  logo are registered Trademarks owned and/or licensed by Lang Electronics Inc.



## REGISTRATION

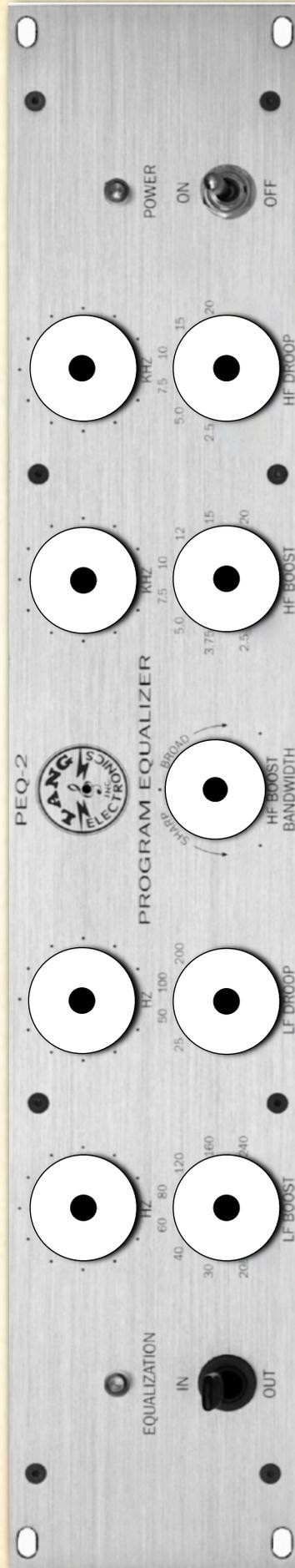
---

Please visit our website: <https://lang-electronics.com/registration/>



Session / Title: \_\_\_\_\_ Track: \_\_\_\_\_ Connected Equipment: \_\_\_\_\_

Date: \_\_\_\_\_ Instrument: \_\_\_\_\_ Frequency: \_\_\_\_\_ Notes: \_\_\_\_\_



Session / Title: \_\_\_\_\_ Track: \_\_\_\_\_ Connected Equipment: \_\_\_\_\_

Date: \_\_\_\_\_ Instrument: \_\_\_\_\_ Frequency: \_\_\_\_\_ Notes: \_\_\_\_\_



[www.lang-electronics.com](http://www.lang-electronics.com)

**LANG ELECTRONICS Inc.** C/ Alfonso Gómez, 38, 3C. 28037 Madrid – Spain. Tel: +34 917 266 189

[info@lang-electronics.com](mailto:info@lang-electronics.com)

© 2023 LANG ELECTRONICS Inc.

