

TUBESESSOR

OPTICAL TUBE
COMPRESSOR



USER MANUAL

INTRODUCTION

Thank you for choosing the **TUBESESSOR**. 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

Optical Tube Compressors have been the choice of seasoned engineers and producers for recording critical signals such as voice where it is essential to retain all the individual character and emotion while offering a natural, transparent control... Now, Heritage Audio has released its take on this venerable classic, the TUBESESSOR.



A unique design manufactured in the EU with top-of-the-line components, custom transformers at the input as well as output and NOS tubes operating at an extremely high internal voltage to ensure a clarity, depth and headroom previously unheard of. Analog excellence is achieved by combining an all tube-based amplification stage with an outstanding UTC A10 input transformer replica by AMI as well as a custom all-silicon steel output transformer. With an elevated internal operating voltage you can be sure the TUBESESSOR will heat up any signal while also maintaining its character and vibe. No starved plate circuits here! Never has dynamics control been so easily obtainable while at the same time so invisible. Even with generous amounts of gain reduction being applied anything processed with the TUBESESSOR still maintains its clarity and depth.

Not only is the TUBESESSOR the perfect choice for warming up and slightly enhancing a signal subtly all while maintaining total dynamic control, but it also has a few tricks up its sleeve...

The TUBE SATURATION section allows you to add in a taste of attitude with 4 settings varying from CLASSIC, no saturation at all, to HOT, an angry tone ready for a fight. This greatly increases the tonal options you can achieve with the TUBESESSOR therefore making it much more flexible than any other optical tube compressor out there. This takes full advantage of a creamy sounding NOS Raytheon double triode tube to add in just a pinch of aggression or fully transform the signal into something ready for war. It, importantly, works in tandem with the custom output transformer to produce the right harmonic content. And thanks to Heritage Audio's use of an audiophile-grade Psvane dual output triode in a totem pole configuration, a solid output stage is guaranteed all while allowing much higher headroom than other tube compressors, whether vintage or modern.

Heritage Audio has also opted to include its legendary sidechain filter section to expand control even more with five internal sidechain settings to choose from. Two of the settings make sure the compressor is not being unfairly overpowered by lower frequencies and the other three are frequency specific options for extra creativity.

Continuously adjustable ATTACK & RELEASE controls in addition to a FIXED mode and a combination of the two will provide all the necessary settings possible, allowing you to mold your signal exactly as you'd like.

Thanks to the TUBESESSOR'S three unit high front panel you'll find plenty of room to adjust the large Herchild-style knobs making it a breeze to achieve the desired sound. No cramped spaces here, just plenty of room to easily and quickly adjust the settings to taste. The only bad thing about this is that you'll dread returning to a confined 1 space unit much less a tiny 500 series module. In this case, size does matter...



A huge, attractive custom VU meter for monitoring either Input, Output or Gain Reduction guarantee you'll always be informed with a clear reading of exactly what is happening.

Everything you could possibly require to achieve a top-notch professional recording. TUBESESSOR, the optical tube compressor for when you need the sweetest, warmest most natural dynamic control possible, but also want the ability to spice it up on occasion.

As is the case with other tube offerings from Heritage Audio, the company has sourced NOS tubes for a lifetime, making sure your investment is safe and sound.



Choose the correct voltage depending on the country where used. 110 V or 240 V. This is EXTREMELY important as a mistake here could be disastrous.

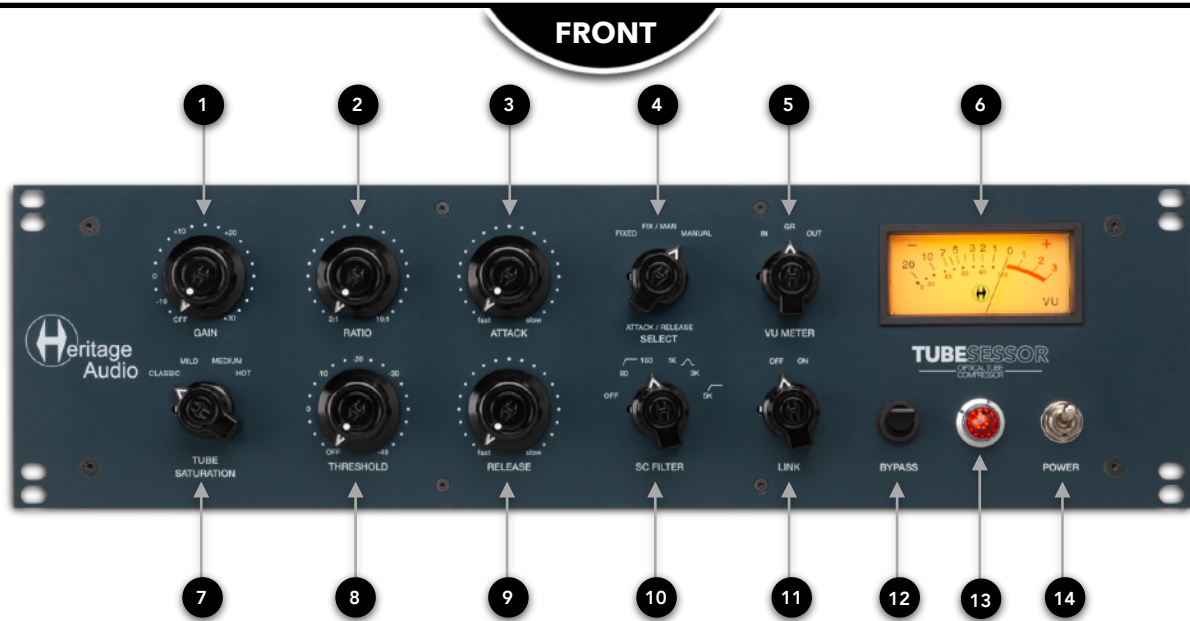


Do not open. No user serviceable parts inside. Risk

Tube replacement is conveniently possible from the outside. Opening the unit is not necessary and should not be done under any circumstance. Very high voltage inside (450 V).



GETTING STARTED



1-GAIN: Up to 30 dB of MakeUp Gain.

2-RATIO: Continuously variable from 2:1 to 10:1.

3-ATTACK: Continuously variable from 0.5 to 300 mS.

4-ATTACK/RELEASE SELECT: Three settings to choose the operation mode: FIXED, MANUAL & FIX/MAN.

- **FIXED:** *Attack time: 1 mS / Release time: 50 mS.*
- **FIX/MAN:** *This setting combines the release times of fixed and manual mode. The attack time is as in the fixed mode (1 mS).*
- **MANUAL:** *Attack time: from 0.5 mS - 300 mS / Release time: from 0.05 sec to 10 sec.*

5-VU METER (SELECTOR): Knob to choose the readout of the VU meter, either GAIN REDUCTION, INPUT & OUTPUT.

6-VU METER: Indicates GAIN REDUCTION, INPUT & OUTPUT (0=+8 dBu).

7-TUBE SATURATION: Selects the degree of added saturation from 4 settings varying from none to heavy saturation. This is determined by selecting a setting and adjusting the GAIN control to achieve the desired results.

8-THRESHOLD: This is really a sensitivity control to determine when the compression starts to take place, continuously variable from 'OFF' to -40 dB. The 'OFF' position completely eliminates the compression from the circuitry (No signal will be detected by the sidechain, therefore effectively bypassing the compressor circuit completely).

9- RELEASE: Continuously variable from 0.05 to 10 seconds.

10- SC FILTER: This is a filter applied only to the control signal to decide if and where the TUBESESSOR will be less or more sensitive to certain frequencies. There are 5 choices available: 80, 160, 1K, 3K and 5K. The first two settings are great to avoid the compressor being unnecessarily overpowered by lower frequencies, very useful to avoid undesired pumping. The 1K and 3K settings can be very helpful when it comes to taming unruly elements of a mix such as loud vocals, fuzzy guitars or overly aggressive snares.

11-LINK: 'OFF' simply leaves the control to the unit's internal detection, while 'ON' is used for syncing two units for stereo use and bases the control off of whichever unit requires more gain reduction at any given moment.

12-BYPASS: A Hard Bypass that completely avoids the circuitry.

13- RED JEWEL INDICATOR LIGHT: Simply indicates that the equipment is 'On'.

14-POWER SWITCH: Turns the unit on or off.

REAR



1-TUBES: (2) User changeable valves with easy access.



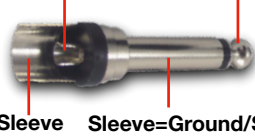
2-LINE INPUT: Female Gold Plated XLR Connector.

3-LINE OUTPUT: Male Gold Plated XLR Connector.

4-VOLTAGE SELECTOR: Here you can select the correct voltage input according to the country you are in.

5-POWER INPUT: IEC standard power input connector.

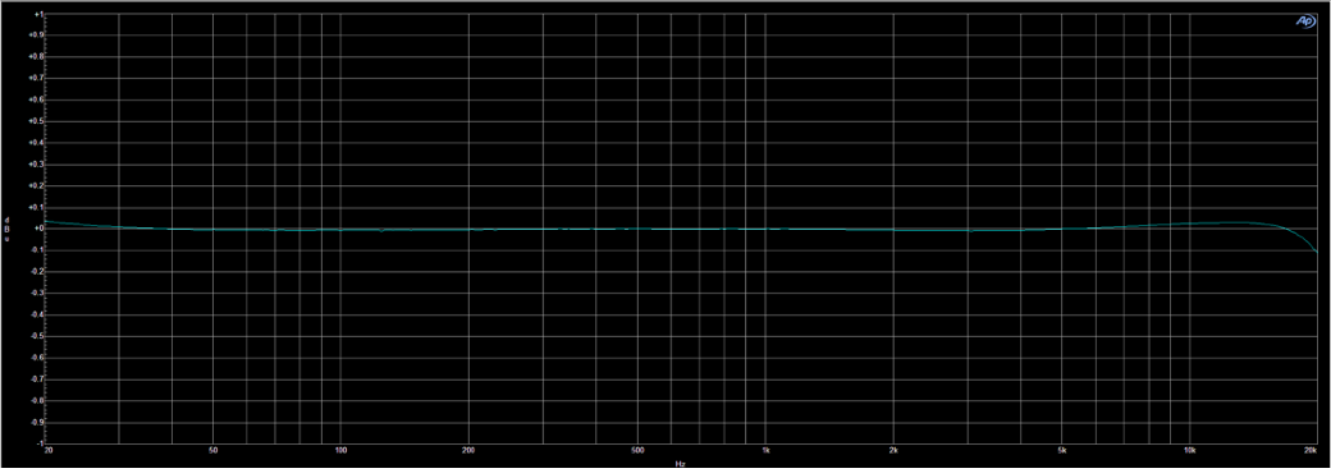
6-LINK: A Tip/Sleeve female connector used to link two TUBESESSORS together for stereo use.

All XLRs are:	MALE XLR	FEMALE XLR	LINK Jack:	
Pin 1: GND Pin 2: Hot Pin 3: Cold			Tip: Signal Sleeve: Ground	
	GND Hot (+) Cold (-)	GND Hot (+) Cold (-)		

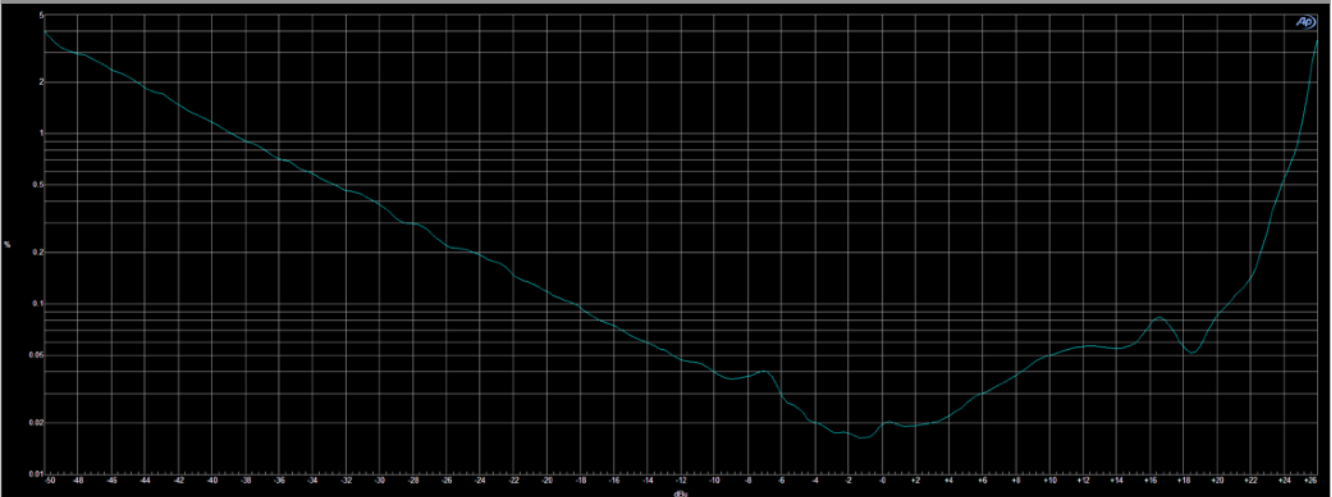


MEASUREMENTS

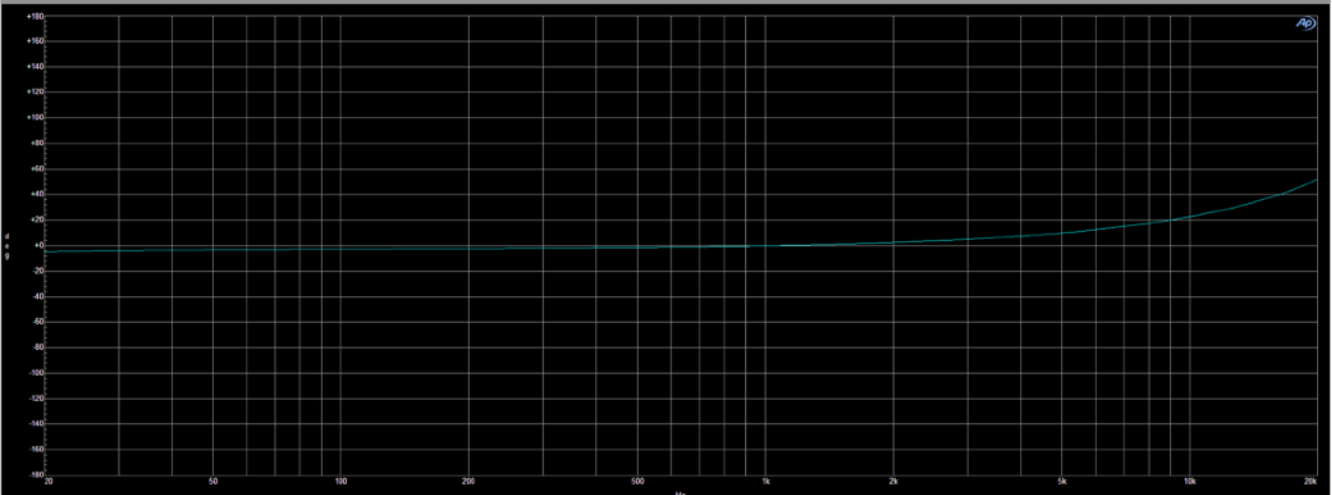
Frequency response 20 Hz: + 0.038 dBu, 20 kHz: - 0.112 dBu Δ dB = 0.15 dB from 20 Hz – 20 kHz



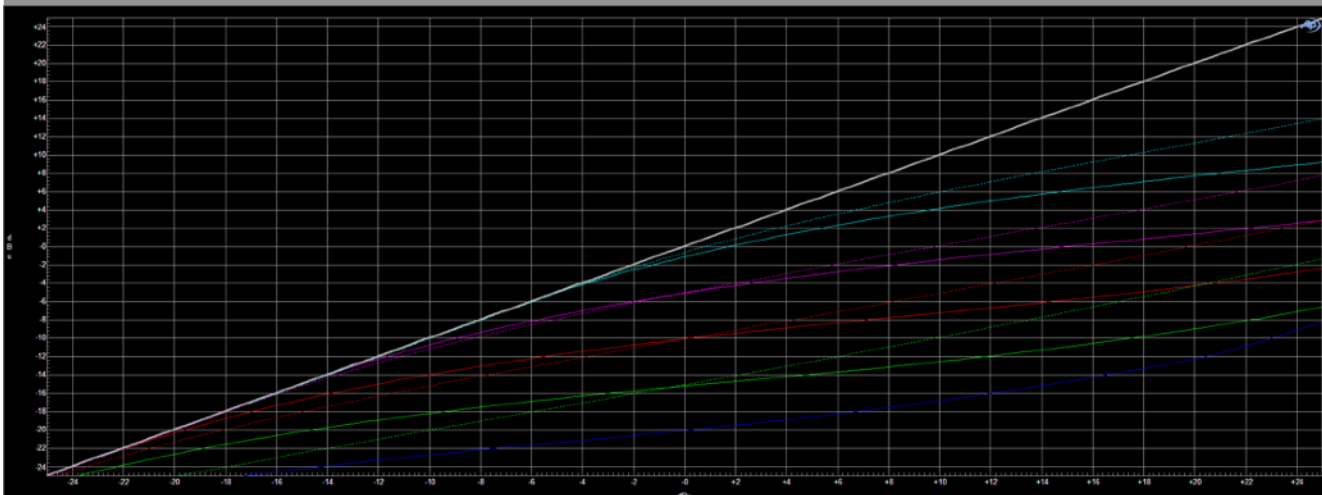
THD @ 1 kHz, 0 dBu input with 0 dBu output, 0.02%



Phase, normalized @ 1 kHz, 0 dBu

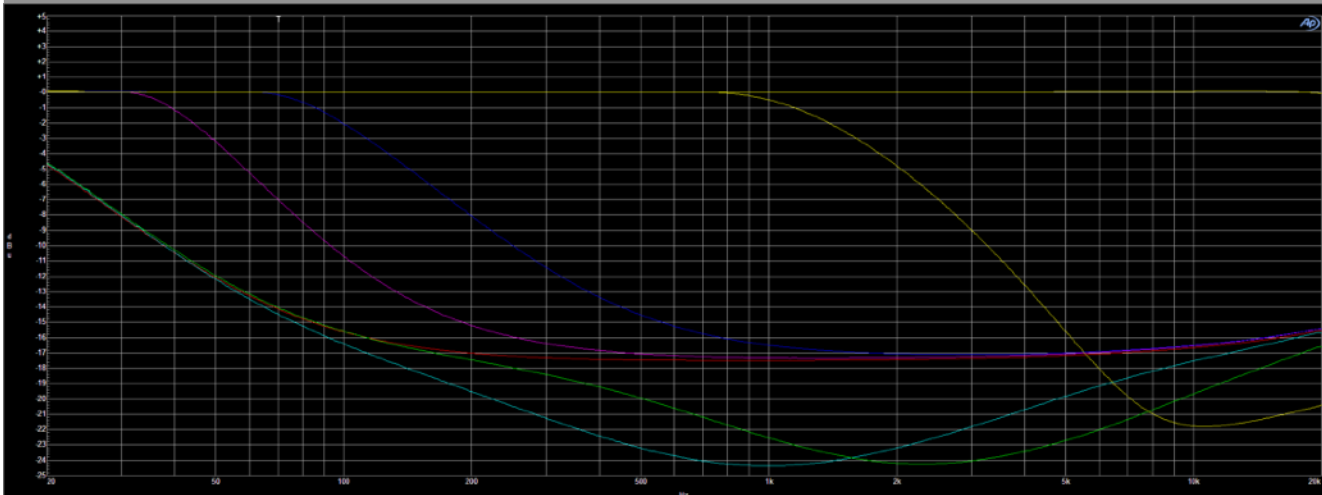


Compression Curves. Solid Line Ratio 10:1, Dashed Line Ratio 2:1, -1 dBu, -5 dBu, -10 dBu, -15 dBu, -20 dBu Threshold position

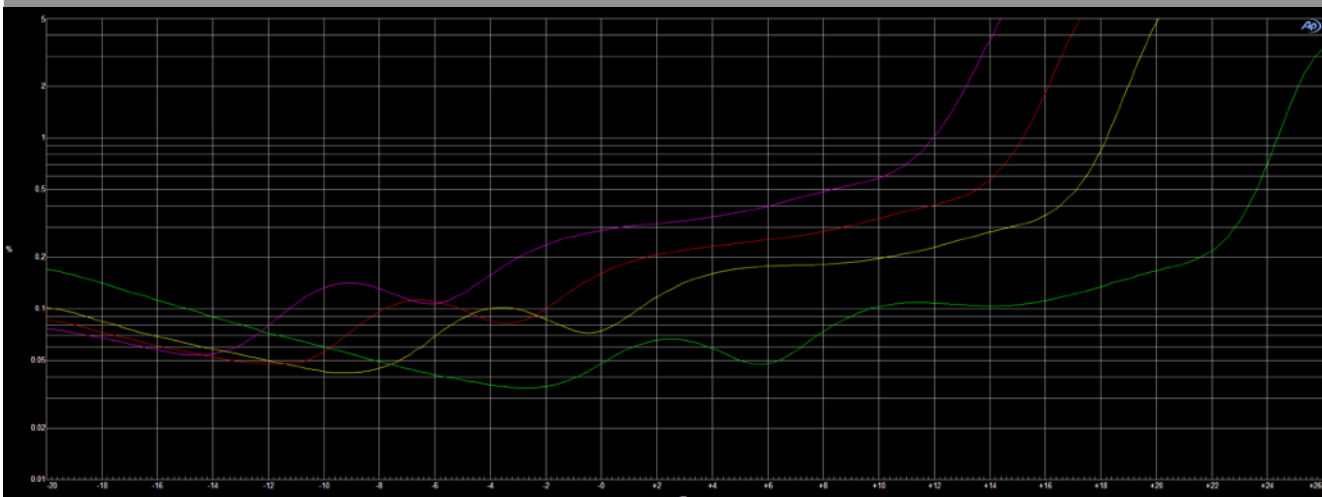


Frequency response for -20 dB Threshold with Sidechain filter engaged.

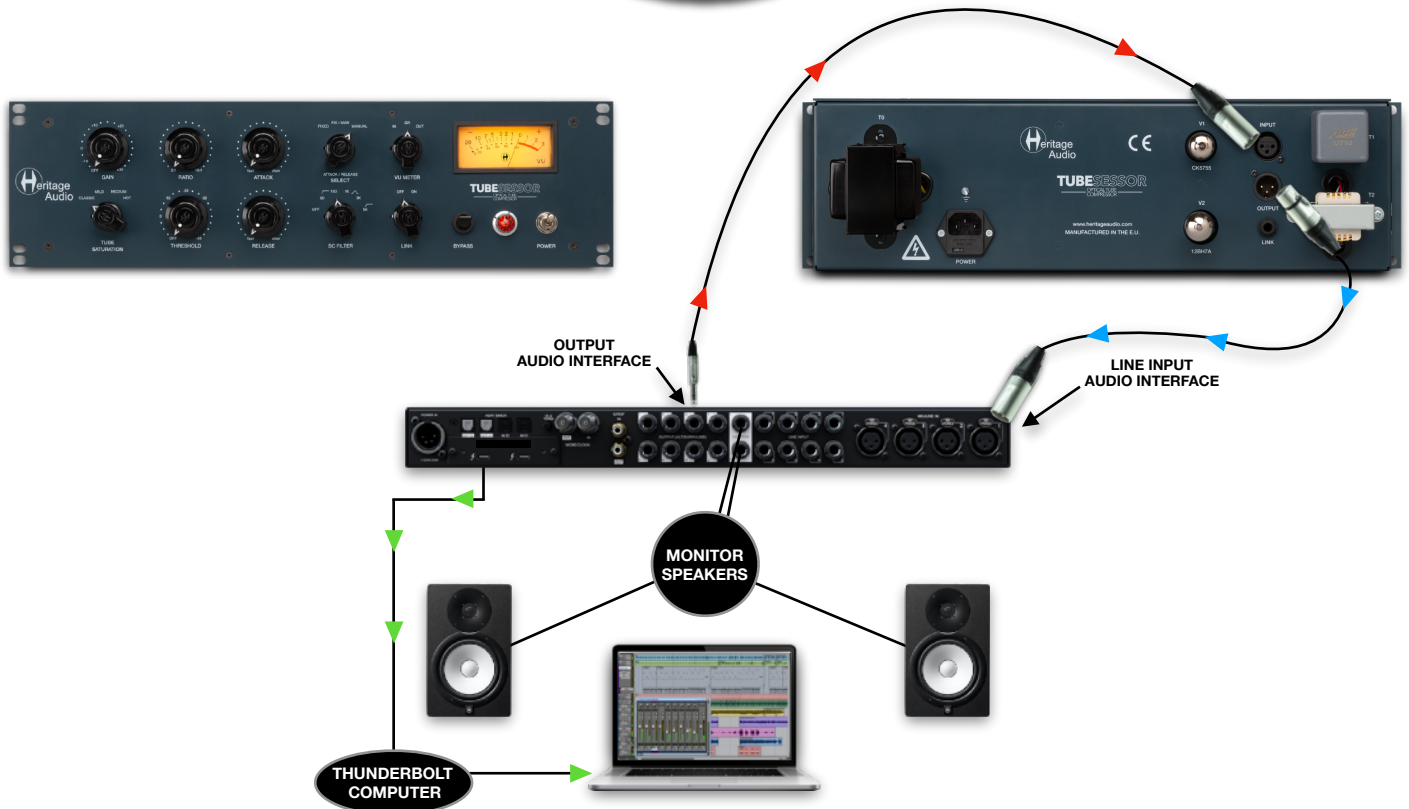
Red: 50 Hz, Purple: 80 Hz, Blue: 160 Hz, Cyan: 1 kHz, Green: 3 kHz, Yellow 5 kHz



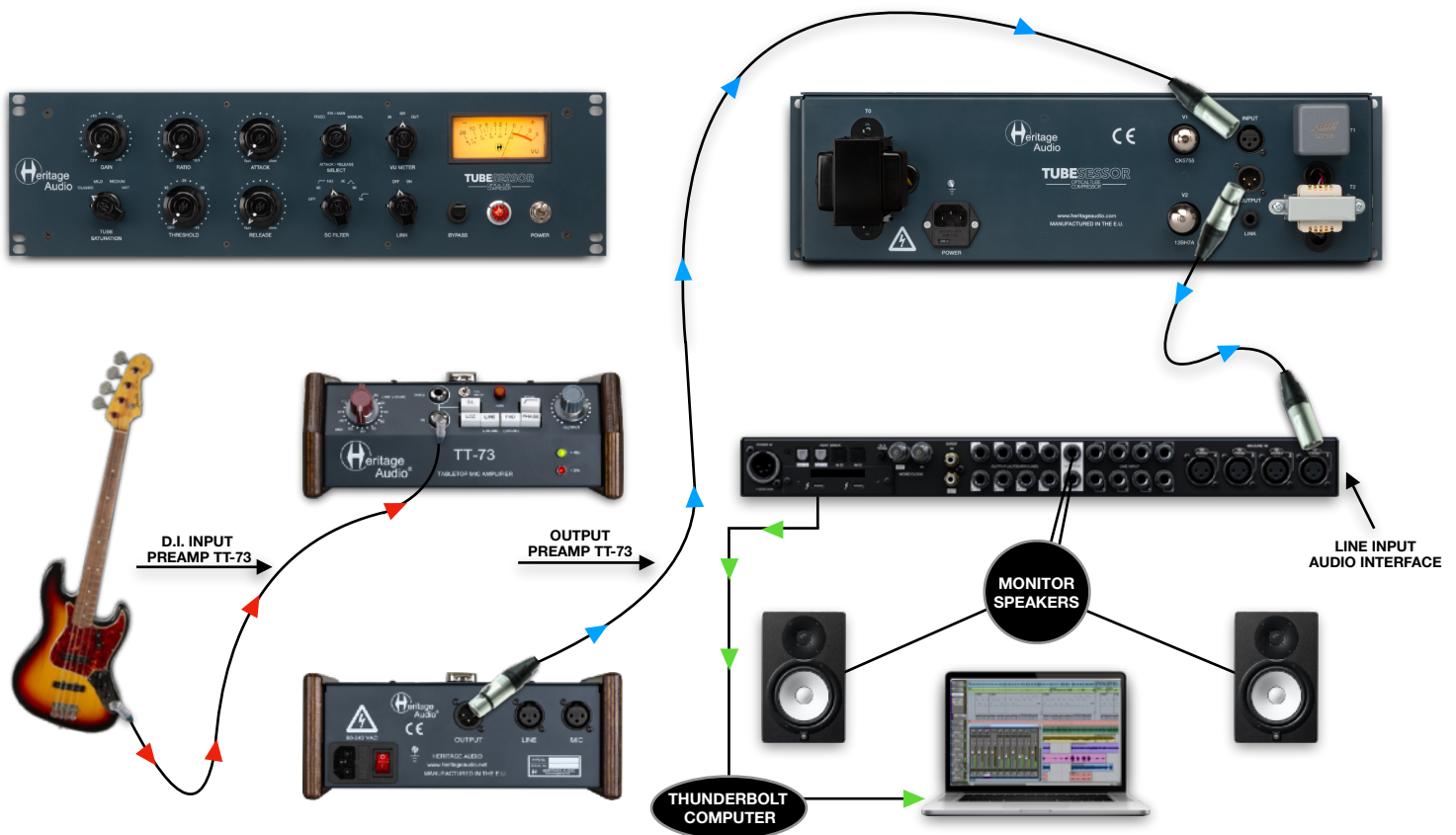
THD+N for the four Tube Saturation positions. Green: "CLASSIC", Yellow: "MILD", Red: "MEDIUM", Purple: "HOT".



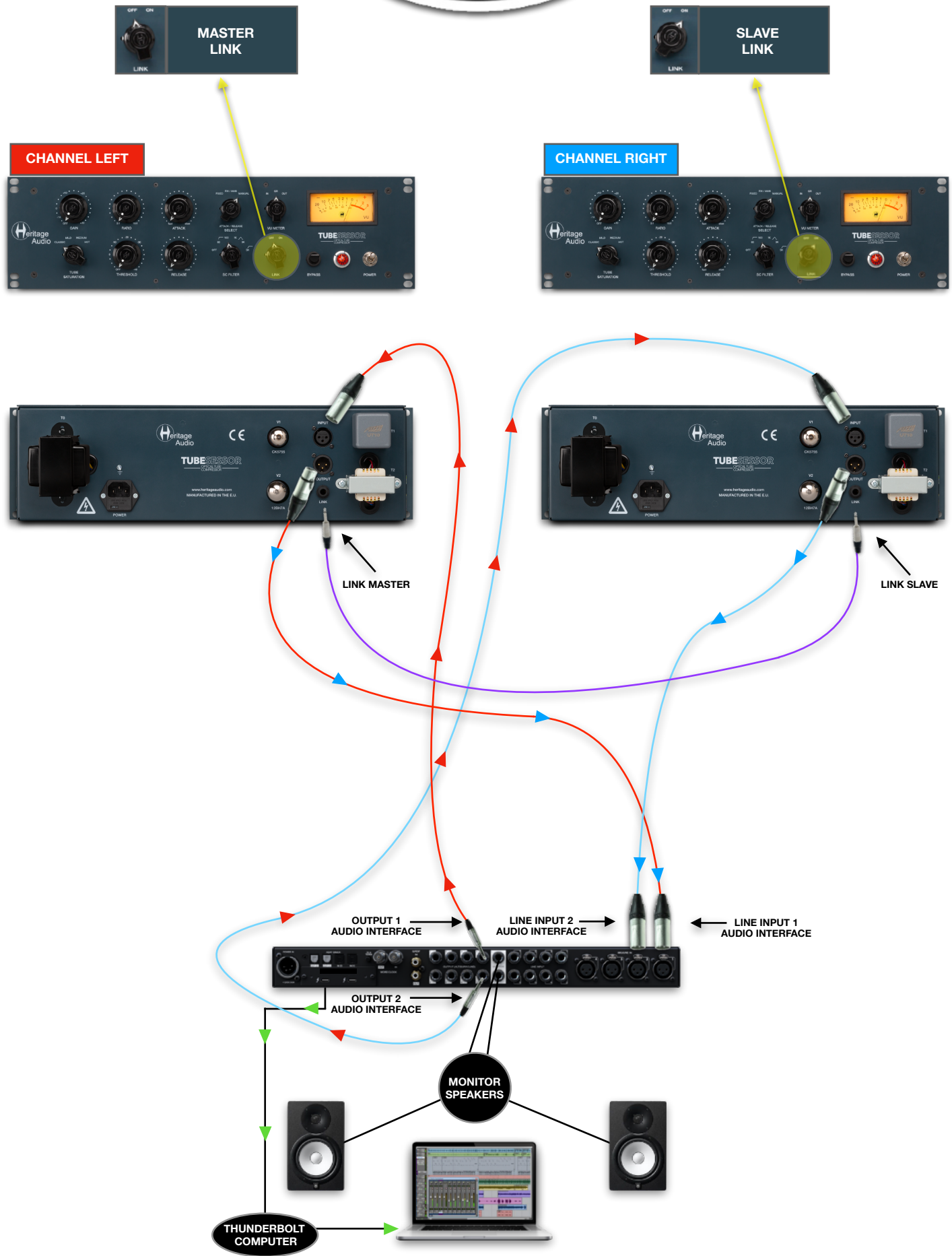
VOICE TRACK INSERT



BASS RECORDING



STEREO COMPRESSION (LINKED)

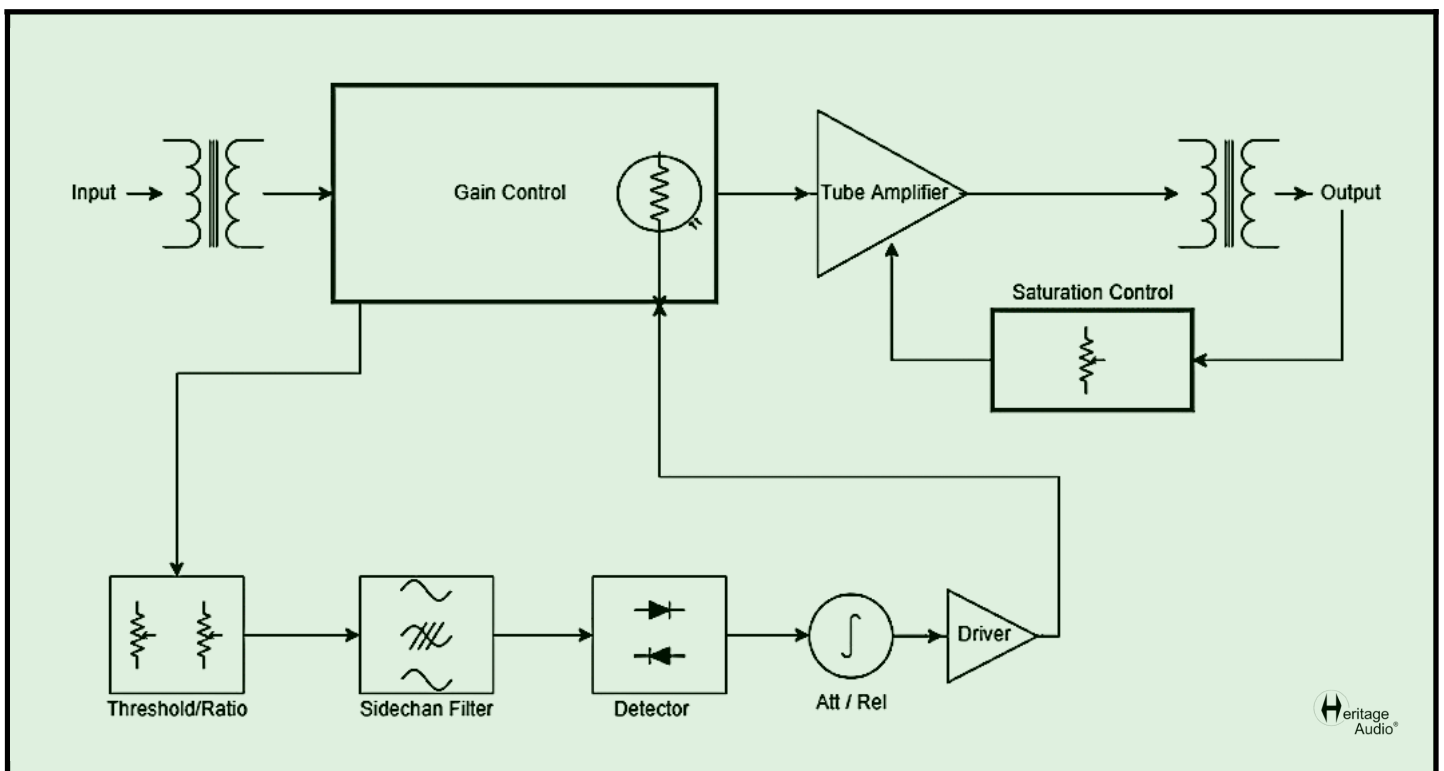


SPECIFICATIONS



- **Gain:** 30 dB
- **Input Impedance:** 600 Ω
- **Output Impedance:** 20 Ω
- **Frequency Response:** 20 Hz to 20 kHz \pm 0.15 dB
- **Signal To Noise Ratio:** >94 dB
- **Noise Floor:** -75 dBu \pm 1 dBu
- **THD+N @ 1kHz, -6 dBu input with full gain and 24 dBu output:** \leq 1 %
- **Dimensions:** (W x H x L): 482 mm x 134 mm (3 Rack units) x 153 mm
- **Weight:** 3.643 Kg

SIGNAL FLOW



TROUBLE SHOOTING



PROBLEMS	SOLUTIONS
There is almost no sound coming from the TUBESESSOR.	The TUBESESSOR can be an extremely transparent compressor so even with a healthy amount happening it can be hard to detect. Select GR for the Meter readout to double check.
There still doesn't seem to be any compression taking place, not even registering on the Meter.	Check to see if the THRESHOLD is all the way down. If so, increase to obtain desired amount of Gain Reduction.
I'm getting way too much compression for what I need.	Try lowering the THRESHOLD control.
I'm still getting way too much compression for what I need.	Try adjusting the SC FILTER to make the TUBESESSOR less sensitive to the lower frequencies.
The TUBESESSOR does not seem to be reacting as it should.	Have you allowed the recommend 10 minutes for the unit to warm up?
The signal has decreased significantly after compressing.	Use the GAIN control to bring the level back up again.
The compression I am getting is altogether too aggressive for what I am looking for.	Try a different setting on the RATIO control.
The compression I am getting is still altogether too aggressive for what I am looking for.	Try different settings on the ATTACK/RELEASE controls to ease back a little.
My ATTACK and RELEASE controls don't seem to be working.	Check to make sure you have not left the operation mode in FIXED .
My TUBESESSOR is brand new but the VU meter isn't working.	The VU meter will not light up nor register gain reduction until the unit is out of BYPASS . The Input and Output will, however, be indicated.
I'm having trouble syncing two TUBESESSORs for stereo operation.	Make sure you have a TS jack cable connected between the two units and select ON position in the LINK section for the Slave unit.

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

WARRANTY STATEMENT

LIMITED 2 YEAR WARRANTY

Heritage Audio **TUBESESSOR** 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.

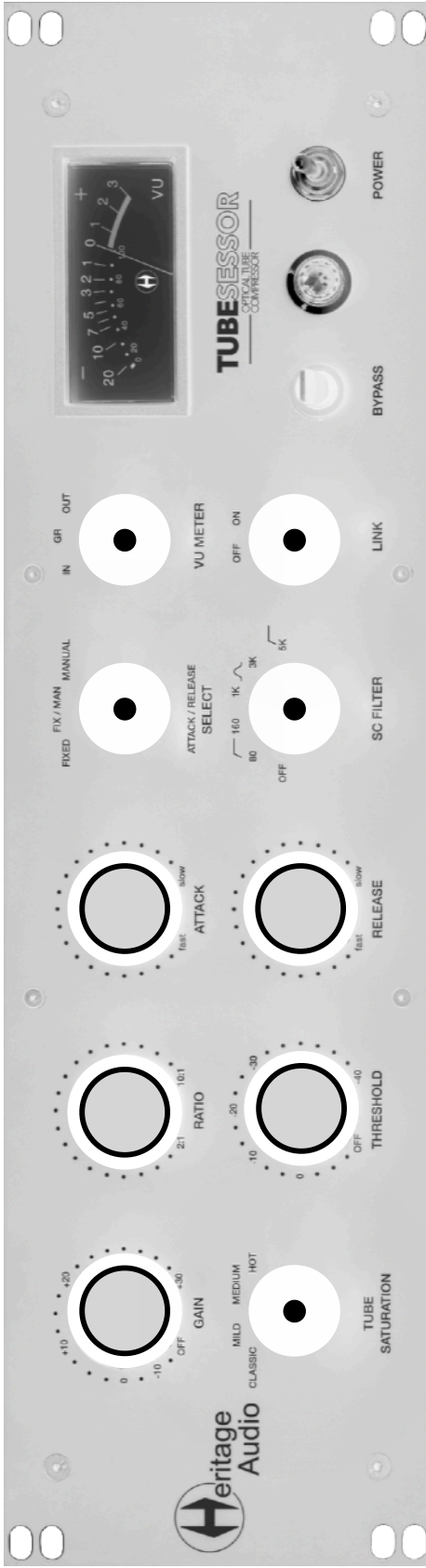
This warranty is not transferable.

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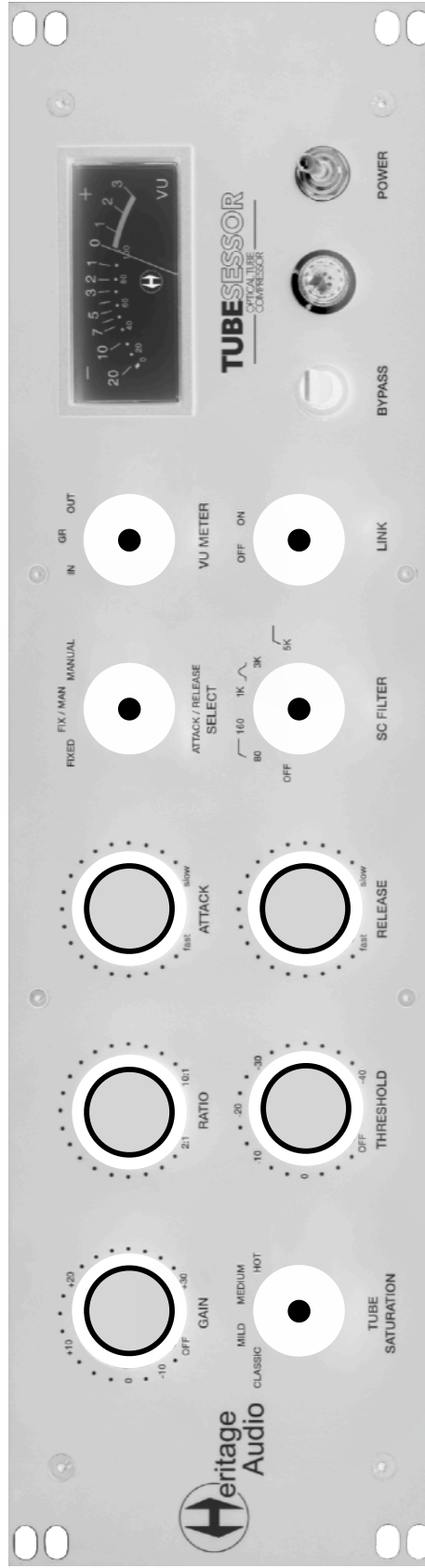
REGISTRATION

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



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

Date: _____ Instrument: _____ Notes: _____



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

Date: _____ Instrument: _____ Notes: _____



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