

LACHAPELL AUDIO

583 Series Vacuum Tube Preamplifier Modules for
Microphones and Instruments (Model's 583E & S).



Preliminary
Operating
Manual

PRODUCT SUMMARY: The LaChapell Audio 583 series modules feature single-ended vacuum tube preamplifiers designed for use in the “500 series” format. The microphone input configuration is based on the 992EG and consists of an input transformer with a turns ratio of 1:10 and one ECC83/12AX7 vacuum tube. The instrument input stage is transformer-less with the signal essentially going straight to the grid of the tube. The output stage utilizes premium Burr-Brown and THAT Corporation line drivers along with an 80% nickel alloy core transformer to generate a balanced line-level output signal. The model 583E features an ultra-clean transformer-less three-band EQ section with fully sweeping frequency controls and cut/boost settings of +/- 8dB... the EQ can run as an integrated EQ (serving the preamplifier) or separate as its own autonomous module apart from the preamplifier.

Before You Get Started:

Stated below are a few areas that you must take the time to read before you install and use your 583. You as the owner/user are responsible for completely understanding how to operate this device safely and properly.

- **UNPACKING:** Inspect thoroughly. Although we take extreme care at final assembly and packing, things can happen during transit. It is very important that you contact LaChapell Audio if there is anything broken or damaged upon receipt of package. Shipping is always insured and we will do our absolute best to satisfy any legitimate claim as long as it is made within 7 days of receipt. Included in every package should be: (1) preliminary operating manual, (1) packet of mounting screws, (1) registration card. It is a good idea for you to retain the packaging (box & foam case) in case there is a need to return the unit for service or repair at a later date.
- **SERVICE/REPAIR:** With the exception of tube replacement (see below) the user should NOT attempt to service this unit in any way, due to the risk of electrical shock and the presents of lethal voltages inside the 583 while powered. Only LaChapell Audio personnel are to perform maintenance and service activities. The user should also take note that excessive ‘swapping’ of tubes will introduce undue wear on the tube socket. It is therefore recommended that tube replacement be performed only when necessary and by technically competent individuals.

Tube replacement: Turn power supply off and remove 583 from the chassis, wait five minutes to allow the vacuum tube to cool before attempting to remove it. Using your fingers, apply a slight circular/rotating motion as you pull it away from the socket. **It is important to replace the tube with the same type.** When a replacement tube is installed double check that you’ve inserted the correct tubes into the 583’s tube socket BEFORE powering up.

NOTE: The 583’s standard tube is the JJ ECC803. However, there are many different ECC83/12AX7 variants that are virtually identical and can be used in either 583 module. These include: ECC803, E83CC, CV4004, 6057, M8137, C492, 7025 and the 5751 (you will notice a slight drop in gain when using the 5751).

WARNING: Warrantee may be void if tubes other than those listed above have been used at any time.

Controls:

INPUT: Drives more or less current into the tube stage.

OUTPUT: Drives more or less current into the cleaner output stage.

48V: Supplies 48 volts of DC current for condenser micro-

PAD: Reduces microphone input signal by 20dB.

POLARITY: Reverses the polarity of the output signal

INPUT: Activates Hi-Z or Microphone input jacks.



HIGH: Frequency sweep range: 2.5Khz to 20Khz.

MID: Frequency sweep range: 325hz to 5Khz.

LOW: Frequency sweep range: 30hz to 400hz..

Each frequency band has a cut/boost potential of + or - 8dB.

PRE + EQ: In this mode, the EQ section is internally routed to serve the preamp's output signal; effected signal is sent out the left bay output jack.

Independent EQ: In this mode, the EQ section is available as a completely independent module. The corresponding rear right side connections are now active allowing you to use the EQ on any external souse while the preamp remains available on the left bay.

- All Toggle switches will illuminate red when their associated function is active.

Specifications:

AMPLIFIER:

- Internal Gain, microphone: 0 to >70dB
- Internal Gain, Hi-Z: 0 to >50dB
- Maximum output: +26dBu (1% THD+N)
- Frequency Response: 12hz to >70khz (-3dB)
- THD+N: <.25% (@50db, 0dBu out)
- NOISE (EIN): -120dB (rg. 150ohm, HP22)
- Input Impedance (mic): 1.5kohm
- Input Impedance (Hi-Z): 40kohm
- Tube Complement: (1) ECC83/12AX7
- Output Impedence: 50ohm

EQ:

- Noise Floor: -93dB
- THD+N: 0.014% (@ +4dB)
- Frequency Response: Flat from 10hz to 50Khz
- Cut/Boost Range: 8dB (+ or -)
- Maximum Input Level: >24dB
- Input Impedance: 48kohm
- Input/Output Type: Transformer-less
- Output Impedence: 50ohm

Power Requirements: 583S: 210ma • 583E: 248ma (+/- 14 volts)

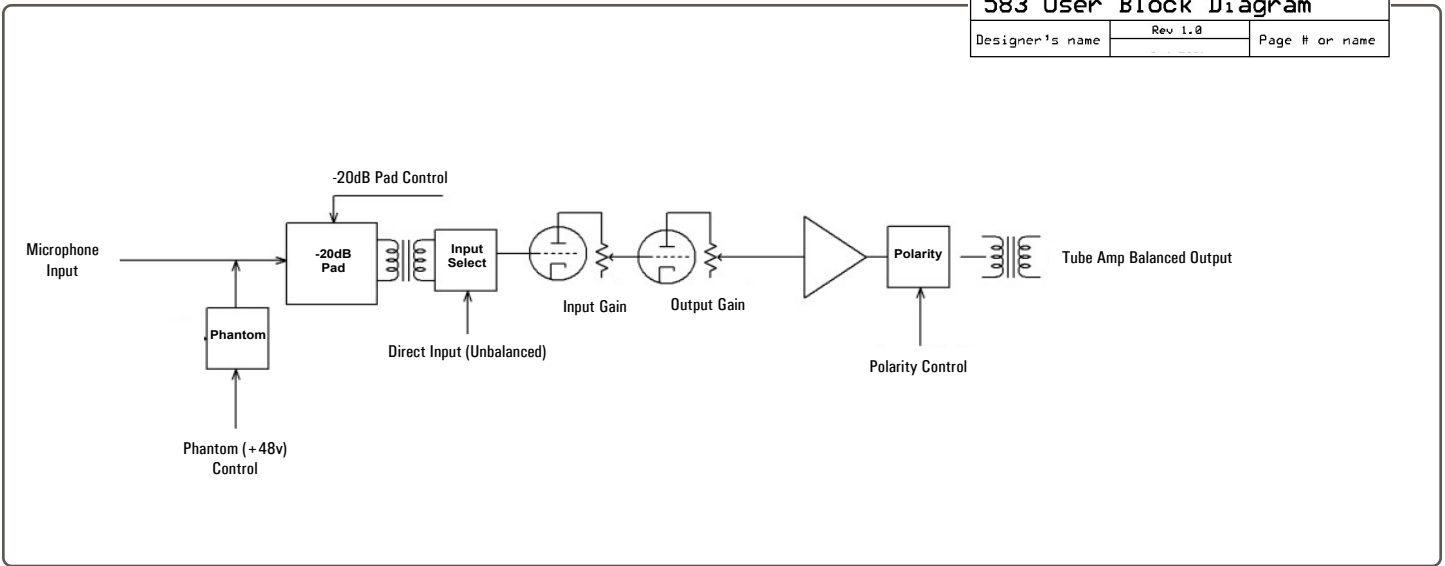
SAFETY PRECAUTIONS:

- Always provide adequate ventilation by allowing the top vents of your 500 series power supply chassis to remain unobscured. Due to the vacuum tube and the internal secondary power supply, the 583 will get warm, blocking or defeating any existing vent is not recommended.
- Never position the power supply directly above other heat generating sources such as a power amplifier.
- Always provide a source to ground (earth.) Never under any conditions should a power cord that has the 3rd prong for ground missing or defeated be used with the power supply.
- Do not place the 583 in an area where there is a potential for fluids to fall, spill into or come in contact with the 583. If you notice fluids or moisture present inside the 583 **DO NOT** turn power on! Contact LaChapell Audio for direction.
- **The 583 (S or E) should only be used with power supply frames that have a >120ma rating per bay.**

Block Diagrams:

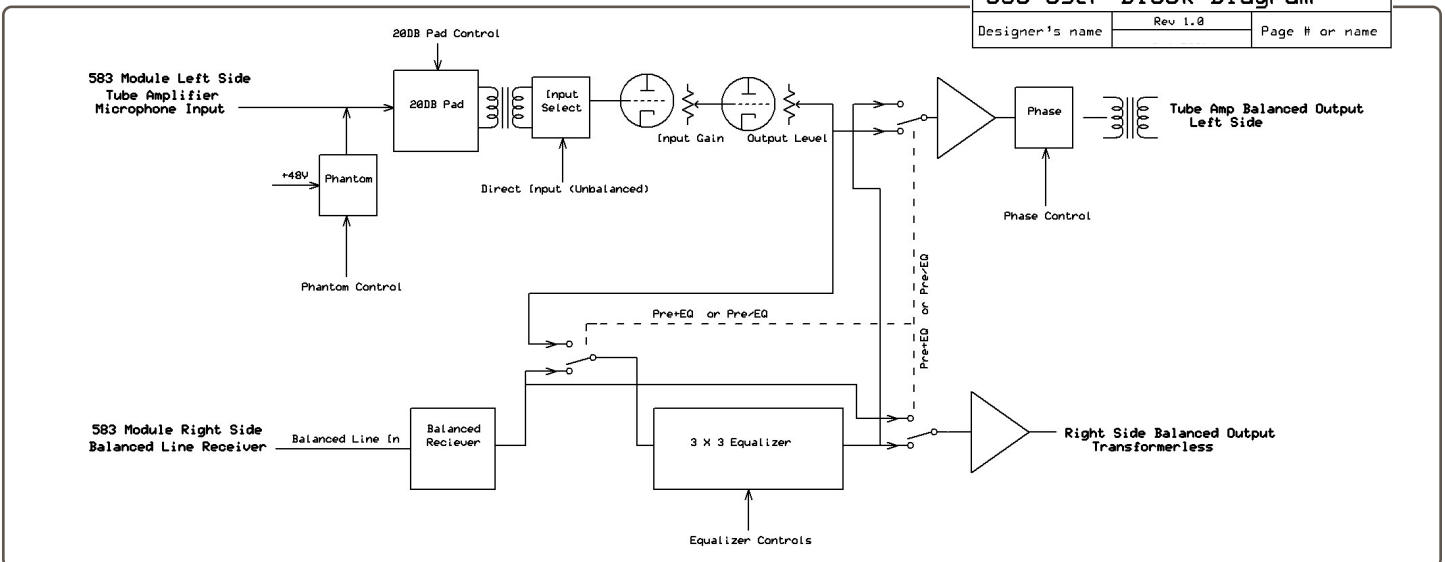
MODEL 583S Diagram

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583 User Block Diagram		
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MODEL 583E Diagram

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583 User Block Diagram		
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Warranty: LaChapell Audio warrants that for a period of one year after the date of delivery, the Products delivered hereunder shall perform in accordance with the written product specifications current as of the date of shipment and under normal use shall be free from defects arising from selection of material or process of manufacture. LaChapell Audio agrees to repair or replace at its principal business office in California or other authorized repair center, without charge, all defective parts in the Products which are returned for inspection to said center within the warranty period; provided such inspection discloses that the defects are as specified above, and provided further that the Products has not been altered or repaired other than with authorization from LaChapell Audio and by its approved procedures, not been subjected to misuse, improper maintenance, negligence or accident or otherwise had its serial number or any part thereof altered, defaced or removed. All shipping and insurance costs for the Products repaired or replaced under warranty are the responsibility of the party shipping the Products. All defective items replaced hereunder shall become the property of LaChapell Audio.

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