

LACHAPELL AUDIO

Model 583s Vacuum Tube Preamplifier for Microphones  
and Instruments



Preliminary  
Operating  
Manual

**PRODUCT SUMMARY:** The Model 583s is a single-ended vacuum tube preamplifier designed for use in the “500 series” format. Its’ 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 with a transformer balanced output providing a typical output impedance of 50 ohms.

## Before You Get Started:

Stated below are a few areas that you must take the time to read before you install and use your 583s. 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 583s 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 583s from 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 583s’ standard tube is the ECC83. However, there are many different ECC83/12AX7 variants that are virtually identical and can be used in the 583s. 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.**

- 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 583s 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 3<sup>rd</sup> prong for ground missing or defeated be used with the power supply.
- Do not place the 583s in an area where there is a potential for fluids to fall, spill into or come in contact with the 583s. If you notice fluids or moisture present inside the 583s **DO NOT** turn power on! Contact LaChapell Audio for direction.
- **The 583s should only be used with power supply frames that have a >120ma rating per bay.**

## Controls:

**INPUT GAIN:** Adjusts gain within the input stage of the preamplifier and has a typical range of >30db via a fully variable 100kohm potentiometer.

**OUTPUT GAIN:** Throttles gain to the output stage of the preamplifier and has a typical range of 40db via a fully variable 100kohm potentiometer.

**48V:** Supplies 48v of DC current to pins 2 & 3 of the input jack for condenser microphones.

**-20dB:** Places a 20dB pad in front of the microphone input transformer. This feature is defeated when using the Hi-Z stage.

**POLARITY:** Reverses the polarity of pins 2 & 3 on the output jack.

**INPUT:** Allows the user to alternate between microphone input and Hi-Z input.

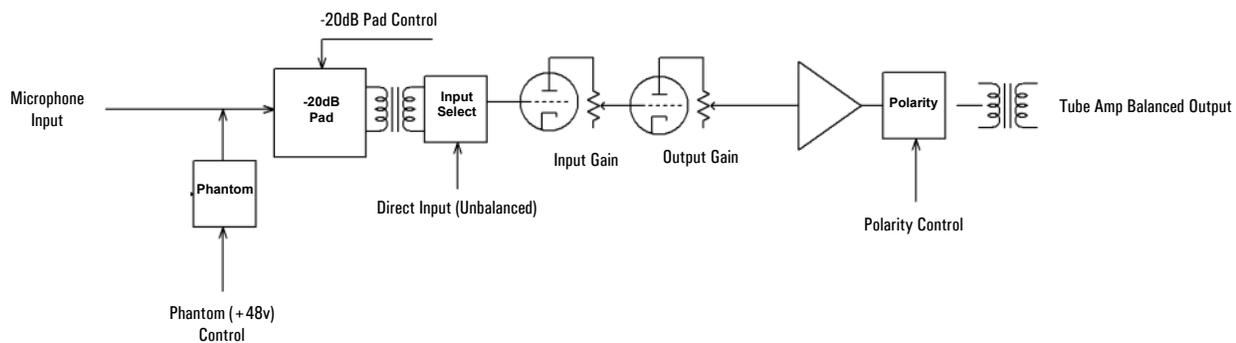
- All Toggle switches will illuminate red when their associated function is active.



# Specifications:

- Internal Gain, microphone: >70dB
- Internal Gain, Hi-Z: >50dB
- Maximum output: +26dBu (1% THD+N)
- Frequency Response: 12hz to >70khz (-3dB)
- THD+N: <.25% (@50db gain, 0dBu out) typical
- NOISE (EIN): Better than -120dB (rg=150ohm, 22hz to 20khz)
- Input Impedence: 1.5kohm microphone, 40kohm Hi-Z
- Tube Complement: (1) ECC83/12AX7
- Output Impedence: 50ohm

*Power Requirements: 220ma, +/- 14 volts (per API power supply)*



**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