

**LACHAPPELL**AUDIO

# **LACHAPPELL AUDIO 992EG** USER GUIDE

Vacuum Tube Preamplifier for Microphones and Instruments

Version 1.2  
June 2017

# SAFETY INSTRUCTIONS

*TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE. CONTACT DIGITAL AUDIO LABS FOR SERVICING.*

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated and/or potentially dangerous voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



## POWER CORD NOTICE FOR INTERNATIONAL OPERATION

Please call Digital Audio Labs Support at 952-401-7700.

## IMPORTANT SAFETY INSTRUCTIONS

1. Read and understand this entire manual.
2. Keep this manual available for reference.
3. Heed all warnings and precautions in this manual and notices marked on the product.
4. Do not use this product near water or damp environments.
5. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
6. Provide for proper airflow around product. Do not install near products that produce high levels of heat. Do not expose the unit to direct sun light or heating units as the internal components' temperature may rise and shorten the life of the components.
7. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong.
8. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they connect to the product. Do not use the unit if the electrical power cord is frayed or broken.
9. Only use attachments/accessories specified by the manufacturer.
10. Unplug this product during lightning storms or when unused for long periods of time.
11. Refer all servicing to qualified service personnel. There are no user serviceable components inside the product.
12. The product shall not be exposed to moisture. Do not touch the unit with wet hands. Do not handle the unit or power cord when your hands are wet or damp.
13. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.

## CARE

- From time to time you should wipe off the front and side panels and the cabinet with a dry soft cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since this may damage the finish or remove the panel lettering.
- The manufacturer cannot be held responsible for damages caused to persons, personal possessions, or data due to an improper or missing ground connection.

# DIGITAL AUDIO LABS LIMITED WARRANTY

Digital Audio Labs warrants their products against defects in material and workmanship for a period of two years from date of purchase. During this period, Digital Audio Labs will, at its option, repair the defective unit or replace it with a new or rebuilt one.

The warranty does NOT cover:

- Damage due to abuse, misuse, or accident.
- Damage due to operation contrary to the instructions in the product instruction manual.
- Units on which the product serial number has been removed or altered.
- Units that have been serviced by unauthorized personnel.

All implied warranties, including warranties on merchantability and fitness, are limited in time to the length of this warranty. Some states do not allow time limitations on implied warranties, so this limitation may not apply to you. Digital Audio Labs' liability is limited to the repair or replacement of its product. Digital Audio Labs shall in no way be held liable for incidental or consequential damages resulting from the use of their product or its software, including, without limitation, damages from loss of business profits, business interruption, loss of business information or other pecuniary loss. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

## REPAIR POLICY

Please do not return the product without obtaining an RMA number first. Contact Digital Audio Labs at support@digitalaudio.com to acquire an RMA number. Do not return the product to the place of purchase. Please write the RMA number on the outside of the shipping carton. Any product sent to us without a valid RMA number will be refused. Include the following with the product: a brief description of the problem, your name, return shipping address, phone number and the RMA number. Do not include any accessories. DAL is not responsible for any damage to or loss of the product during transit. We recommend that customers obtain a receipt and tracking number for all packages shipped to us. Turnaround time on repairs is generally ten business days. If you live outside of the United States, please contact your local distributor for warranty service.

Please return product to:  
Digital Audio Labs  
Attn: RMA Number  
1266 Park Road  
Chanhassen, MN 55317  
USA

## WARRANTY SERVICE

You will be required to pay the shipping charges when you ship your product to DAL. DAL will pay for return shipping via UPS ground. We reserve the right to inspect any product that may be the subject of any warranty claim before repair is carried out. For warranty service, we may require proof of the original date of purchase if you have not registered your product with DAL. Final determination of warranty coverage lies solely with Digital Audio Labs.

## NON-WARRANTY SERVICE

If it is determined that the product does not meet the terms of our warranty, you will be billed for labor, materials, return freight and insurance. There is a \$80 USD minimum charge for materials and labor. Appropriate shipping charges will be applied. We require payment in advance of repair by credit card; we accept Visa and Master Card. In the event the charges are over the minimum charge, DAL will contact you and inform you of the cost of the repair before any work is completed.

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## INTRODUCTION

TheLaChapell Audio 992EG is our flagship fully balanced pure class-A vacuum tube preamplifier and instrument input amplifier. LaChapell Audio has gone to great lengths in making sure this preamp not only deliver world class performance specifications but more importantly, deliver them with warmth and character while using only the finest components.

## TARGET APPLICATION

The 992EG can easily accommodate virtually any recording requirement. The 992 EG utilizes a Jensen input transformer with dual ECC83 vacuum tubes per channel. With incredible noise performance and >74dB of internal gain, the 992 closes the gap for those using ribbon mics, recording distant or faint sound sources and/or passive hi-Z instruments.

## BEFORE YOU GET STARTED

Stated below are a few areas that you must take the time to read before you power up and use the 992. 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 Digital Audio Labs if there is anything broken or damaged upon receipt of package. . Included in every package should be: (1) Model 992 preamplifier, (1) AC power cord, (1) packet of mounting screws, (1) owner's manual w/registration card. It is a good idea for you to retain the packaging (box, foam caps and plastic bag) in case there is a need to return the unit for service or repair at a later date.
- **MOUNTING:** Always allow for plenty of ventilation around the sides and top of preamp. Unlike most 2-channel vacuum tube units, the 992 uses a total of eight tubes; this generates a lot of heat. It is also important to NOT mount this unit above other sources that generate heat such as power amplifiers or other tube gear. Always provide at least 1U (1 rack space) of clearance above the 992. Mounting in travel racks in not recommended. Keep in mind that the vacuum tubes are mounted in sockets and on rare occasions can shake lose if subjected to prolonged rough handling. Finally, the 992 should never be mounted or placed in areas that would expose it to any form of moisture.

- SERVICE/REPAIR - WARNING: With the exception of tube replacement (see below) the user should NOT attempt to service this unit. Due to the risk of electrical shock and the presence of lethal voltages inside the chassis. Only Digital Audio Labs or other highly qualified personnel are to perform maintenance and service activities.

Tube replacement: Turn the unit off, disconnect the power cord and let the unit stand for at least 20 minutes. Vacuum tubes run very hot, replacing them when they've had enough time to cool to room temperature is recommended. It is also VERY important that enough time is given to allow power supply voltages to drain. After 20 minutes has past remove the top panel using a standard Phillips type driver.

To remove the tubes apply a slight circular/rotating motion as you pull it away from the socket. DO NOT pull straight up as it will stress the PC board and the tube. It is important to replace tubes with the same type of tube! When new tubes are installed double, triple check that you've inserted the correct tubes into the V1 ~ V4 sockets BEFORE you powerup.

NOTE: Each tube socket has a designation (V1 to V4) silk-screened onto the P.C. board of each channel. V1 & 2 are the input tubes (12AX7/ECC83 or 6072), V3 & 4 are the output tubes 12AU7/ECC82/6189 . We recommend that you send the unit back for tube replacement as there will likely be the need for grid balancing.

*WARNING: Warranty may rendered void if tubes other than those listed above have been used at any time.*

Rear Main Fuse replacement (1 amp slow-blow): Located within the rear power entry module (PEM) are the two main AC fuses. To replace these fuses make sure the rocker power switch is turned off then, disconnect the AC cord. Locate the two small slots along the top edge of the PEM; place your screw driver in one of these slots and pull back on the housing door. Do not attempt to pry back the PEM from the rear panel itself! The housing door will rotate back and expose the red sub-module. Note the fuse orientation inside this module before you remove the fuses. Re-insert the housing back into the PEM making sure the 115v/230v text is correctly oriented. Always replace fuses with same type from factory. See International Power Settings below.

Contact Digital Audio Labs for any other servicing questions.

## **SAFETY PRECAUTIONS**

- Never operate the 992 with the top panel removed. The top panel's perforations provide more than enough ventilation for cooling. The top panel also plays an important role in maintaining good signal to noise ratio performance.
- 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.
- Do not place the 992 in an area where there is a potential for fluids to fall, spill into or come in contact with the 992. If you notice fluids or moisture present inside the 992 DO NOT turn power on! Although there are plenty of safety measures built into the unit for the protection of the user, it is best if you contact Digital Audio Labs for direction.

## HOOKUP

AC PEM: Double check the power setting on the power entry module (PEM) is correct. In the USA it should always read 115v on the red voltage indicator located just above the rear power rocker switch. As stated above, use only a 3 prong detachable AC power cord. See the SERVICE/REPAIR section for replacing the fuse(s).

- XLR INPUT: Located on the rear panel are the balanced Microphone XLR inputs. The pin orientation is standard.
- XLR OUTPUT: Above the XLR inputs are the balanced XLR outputs. These outputs are to be connected to your recording/broadcast console, recorder, or other devices that can accommodate a balanced line level signal.
- Hi-Z INPUT: Located on the front panel are the auto-switching Hi-Z instrument inputs. This Hi-Z stage is placed in front of the balanced microphone input stage and utilizes a Cinemag transformer for signal balancing.

## INTERNATIONAL POWER SETTINGS:

At this time power settings other than 115v are only available as a factory modification. DO NOT attempt to use the red voltage fuse sub module for voltage adjustments. If this modification has been performed you will see the corresponding check box marked on the rear panel accordingly. Contact Digital Audio Labs if you have any questions.

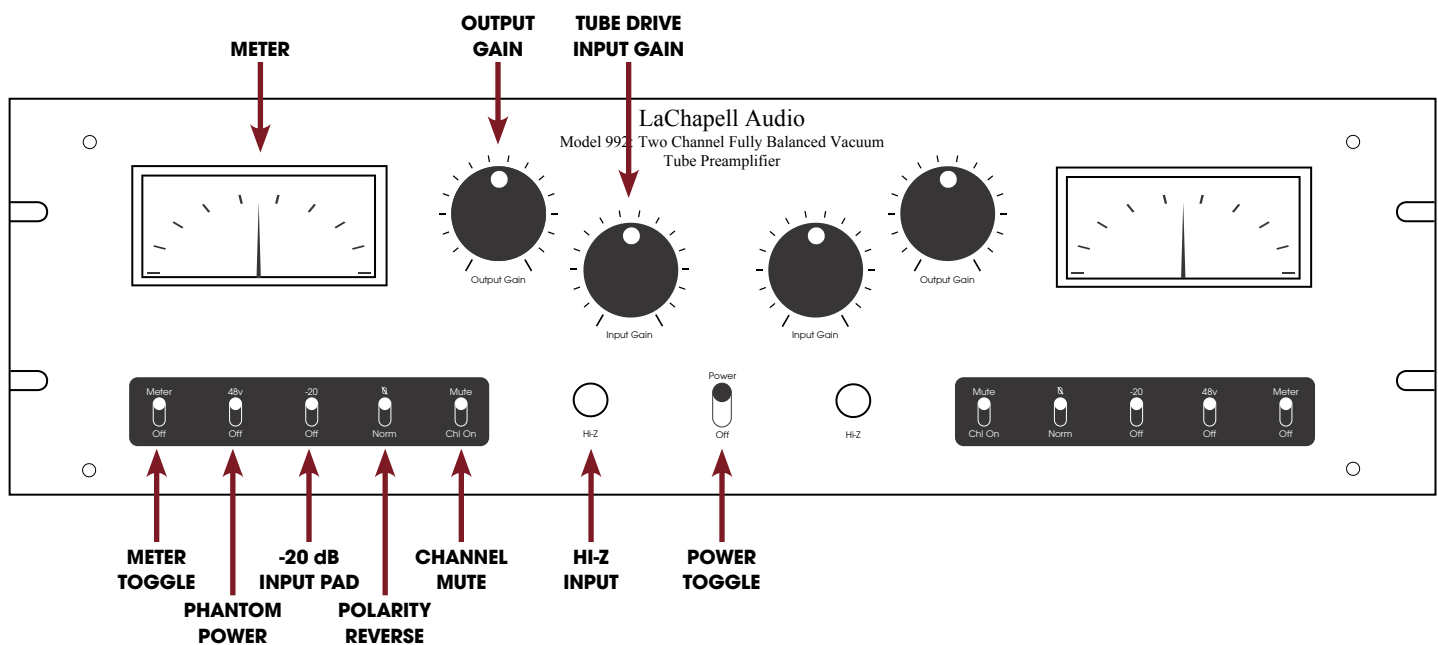


FIGURE 2.1 The five LED tipped toggles on channel 1 are (from left to right) Meter, 48v, -20db, Polarity Reverse and Mute. The two lower knobs on the inside are for input gain and the two upper knobs are for output gain.

## CONTROLS

- TUBE DRIVE / INPUT GAIN: The INPUT controls how much of the source signal is fed to the first stages of the vacuum tube. Higher levels will drive the tube harder and result in more harmonics. Think of this control as your amount of tube coloration/harmonics (distortion).

- **OUTPUT GAIN:** OUTPUT GAIN: Provides variable control over line level signal strength. Think of this control as your source for clean gain. Typically, this control is used to establish the desired line level after the input gain has been set but it can work interactively with the INPUT for a wide array of tonal possibilities. The pot is placed between the last input tube and the first 12AU7 output tube and provides all remaining amounts of gain from the input stage.
- **POWER TOGGLE:** Controls the on/off power and is slave to the rear main rocker switch.

### **CREATIVE TIP:**

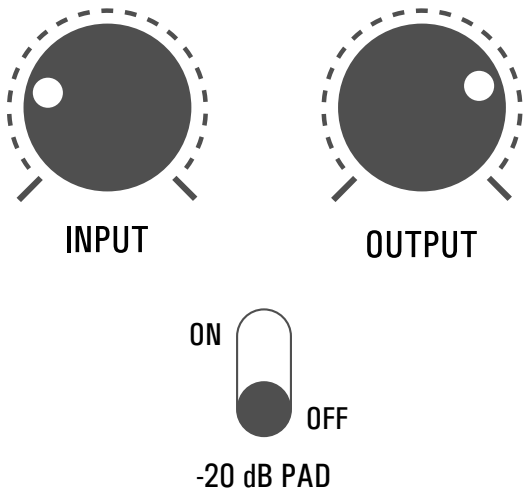
For near transformer-less sound, consider engaging this pad function and compensate for the loss of gain by increasing the input gain control. This approach effectively minimizes the gain coming from the Jensen input transformer while drastically increasing the character of the vacuum tube (this is only possible with the microphone path).

## **CHANNEL SPECIFIC TOGGLES**

- **METER:** The VU meter is buffered from the audio path using high impedance precision isolation amplifiers. Use of a meter isolation amplifier is important for maintaining consistent gain and eliminating IMD regardless of the meter status (on/off). However, it is strongly recommended that the user switch off the meter when it becomes 'pegged', overdriven. This prolongs the life and accuracy of the meter.
- **48V (Phantom):** 48 volts are available for condenser microphones. Each 992 is calibrated to exactly 48 volts at the input jacks at final assembly. It is important that you NOT engage the front panel 48v toggle with microphones that do not require it: ribbon, dynamic, and tube mics. Applying 48v from any source (not just this preamp) to some of these microphones can damage or destroy them.
- **-20dB:** If needed the user can pad the microphone inputs using the -20db attenuator. This adjustment takes place before the first input tube. This function is defeated while the Hi-Z inputs are engaged.
- **POLARITY REVERSE:** Some of the more common reasons to use this would be to reduce feedback in a live environment, enhance the stereo image of certain content or to assist in eliminating headphone signal bleed through during a recording session.
- **MUTE:** Each channel is equipped with its own mute function. The LED indicates the mute function is engaged; output signal is completely cut. However, the meter will still monitor the output level whether mute is engaged or not (unless it too is switched off.)

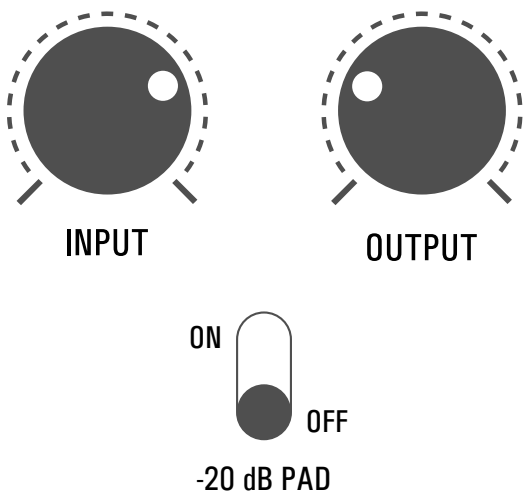


## GETTING STARTED



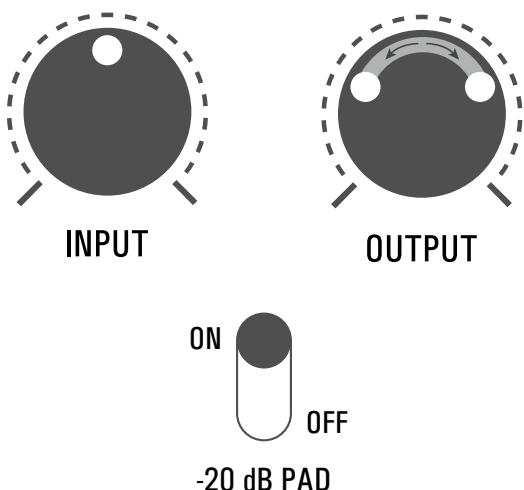
### CLEAN GAIN, HIGH HEADROOM

With the Dual Drive knobs set at INPUT around 25%, OUTPUT around 75%, and the PAD off, you will get a very clean and pristine sound. The distortion is very low with no added harmonics and there is a ton of headroom. This is a great starting position for those wanting a clean tube sound regardless of the microphone type.



### TUBE HARMONICS AND COMPRESSION

With the Dual Drive knobs set at INPUT around 75%, OUTPUT around 25%, and the PAD off, you will get incredible tube harmonics and that natural tube compression. This would be a great starting position for those wanting to hear what the 992's harmonics are all about. It's also a great place to start when using ribbon or dynamic mics that need a little 992 harmonic color.



### HEADROOM AND WARMTH

The 992 provides great sonic versatility. With the -20 dB PAD engaged and the INPUT set to around 50% you will hear a rich roundness and warmth. With these settings, the mid-range will move forward and the input headroom is increased as well.

# LACHAPPELL AUDIO 992 SPECIFICATIONS

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Internal Gain	>74dB 992EG
Max output gain	+24dBu (1% THD+N)
Frequency Response	10Hz - 50kHz @ - 3dB
THD+N (18 dBu 1kHz input)	<.25% (@50db gain, 0dBu out)
S/N Ratio (30dB gain)	>91dB (Rg=150, 22hz - 20khz)
Input Impedence	1.4kohm 992EG 140 Kohm Hi-Z
Tube Complement	(4) ECC83, (4) 12AU7

NOTE: Stated specifications are typical measurements but subject to change without notice due to individual traits unique to each tube. All measurements taken while driving a 40kohm load and using a 1khz tone.

## LACHAPPELL AUDIO SUPPORT

Phone Support: 952-401-7700  
Toll Free: 844-DAL-INFO  
Email Support: [support@digitalaudio.com](mailto:support@digitalaudio.com)  
Website: [www.digitalaudio.com/support](http://www.digitalaudio.com/support)

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