

**LACHAPPELL**AUDIO

# **LACHAPPELL AUDIO 500TDI USER GUIDE**

Version 1.1  
August 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.



## 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. Refer all servicing to qualified service personnel. There are no user serviceable components inside the product.
6. 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.
7. 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](mailto: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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# LACHAPELL AUDIO MODEL 500TDI

The LaChapell Audio 500TDI is a vacuum tube direct box for the 500 series format. The 500TDI supplies TrueTube™ power, giving the ECC832/12DW7 vacuum tube the proper power needed for rich harmonics and clean amplification.

Two inputs (one which can be used as a THRU output) provide different tonal expressions. The Dual Drive knobs allow independent control of the input and output stages for incredible versatility. The vacuum tube feeds a combination nickel and steel transformer for punch and clarity.

## BEFORE YOU GET STARTED

Please take time to read the information below before you install and use your LaChapell Audio 500TDI.

- **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) 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 - WARNING:** The user should NOT attempt to service this unit in any way, due to the risk of electrical shock and the presence of lethal voltages inside the 500TDI. It is recommended that tube replacement be performed only when necessary by technically competent individuals.

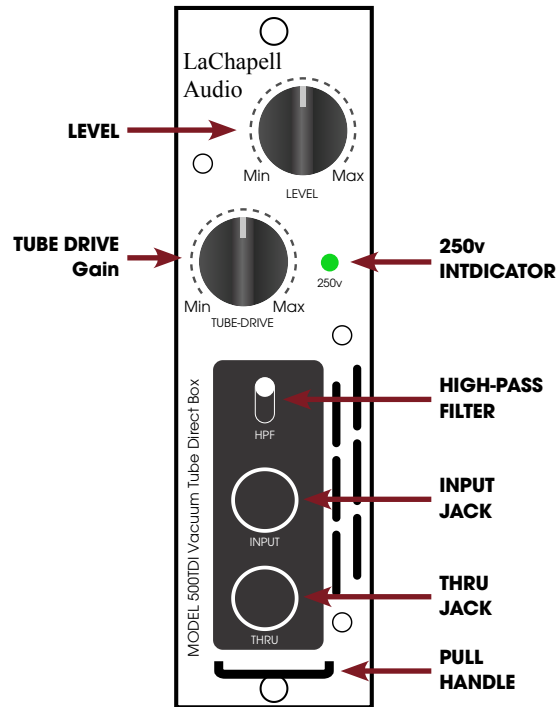
Tube replacement: Turn power supply off and remove 500TDI from the chassis, wait five minutes to allow the vacuum tube to cool before attempting to remove it. Using your fingers, apply a slight circular/rotating motion as you pull it away from the socket. It is important to replace the tube with the same type. When a replacement tube is installed double check that you've inserted the correct tubes into the 500TDI's tube socket BEFORE powering up.

*WARNING: Warranty may rendered 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 500TDI 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 500TDI in an area where there is a potential for fluids to fall, spill into or come in contact with the 500TDI. If you notice fluids or moisture present inside the 500TDI DO NOT turn power on! Contact Digital Audio Labs for direction.
- The 500TDI MKII should only be used with power supply frames that have a >130ma rating per bay.

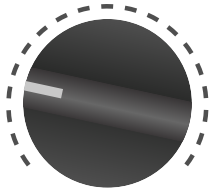
# 500TDI CONTROLS



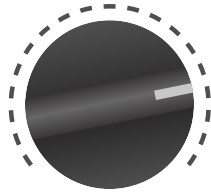
## CONTROL DETAILS

- **TUBE DRIVE:** The INPUT controls how much of the source signal is fed to the second stage 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).
- **LEVEL:** Provides variable control over signal strength. This control can work interactively with the TUBE DRIVE for a wide array of tonal possibilities.
- **INPUT:** This input provides a higher impedance input and is suitable for instruments with active electronics.
- **THRU:** The THRU jack provides a pass through for the INPUT. It can also be used as an input for passive instruments, or when an alternate tone is desired.
- **HPF:** The HIGH PASS FILTER will insert a HPF directly after the first gain stage. The -3dB point is at 65Hz at MAX gain and shifts semi-proportionally with the TUBE-DRIVE gain.
- **250V:** This LED will illuminate green to signify the tubes are getting TrueTube™ power.
- **PULL HANDLE:** This should be used for installation or removal of the device. It also assists in protecting toggle switches.

## GETTING STARTED



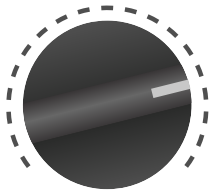
TUBE DRIVE



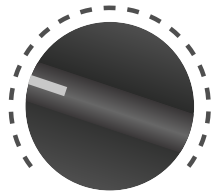
LEVEL

### CLEAN GAIN, HIGH HEADROOM

With the Dual Drive knobs set at TUBE DRIVE around 25% and the LEVEL around 75%, 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, especially with active pickups.



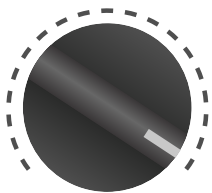
TUBE DRIVE



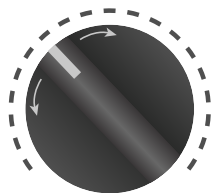
LEVEL

### TUBE HARMONICS AND COMPRESSION

With the Dual Drive knobs set to TUBE DRIVE 75% and LEVEL 25%, you will get tube harmonics and natural tube compression. This is a great place to start when using instruments that need a little harmonic color.



TUBE DRIVE



LEVEL

### TUBE DISTORTION

The 500TDI provides great sonic versatility, including the ability to fully distort an input signal. Especially with active pickups, the 500TDI give you the desirable bass crunch heard on so many classic records. Start the TUBE DRIVE set to 100% and using the top INPUT jack, bring up the LEVEL to the desired level.

# LACHAPPELL AUDIO 500TDI SPECIFICATIONS

Internal Gain	24dB
THD+N	010% - 25% (@ +2dBV)
Frequency Response	8Hz - 28kHz
EIN	-100dB
Input Impedance	~1.5MΩ
Tube Complement/Type	1x 12DW7 (ECC832)
Current Draw	150mA

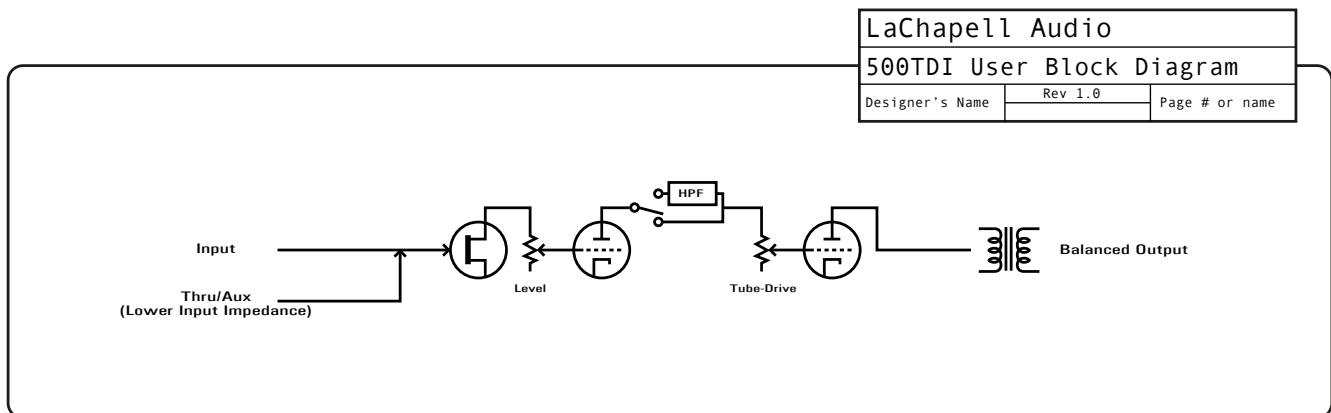
NOTE: Stated specifications are typical measurements but subject to change without notice due to individual traits unique to each tube. All measurements taken while driving a 40kohm load and using a 1khz tone at MAX gain.

## 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)

DIGITAL AUDIO LABS  
 1266 Park Rd  
 Chanhassen, MN 55317

## MODEL 500TDI DIAGRAM







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Patents pending.