



ALLNIC AUDIO

A-5000 DHT

**300B SINGLE-ENDED
PURE DIRECT HEATED TRIODE
MONOBLOCK POWER AMPLIFIER**



OWNER'S MANUAL

ALLNIC AUDIO A-5000 DHT 300B SINGLE-ENDED PURE DIRECT HEATED TRIODE MONOBLOCK POWER AMPLIFIER

Thank you for purchasing the Allnic Audio A-5000 DHT Monoblock Power Amplifiers. We are certain your trust in Allnic Audio and its dealers worldwide, as well as your appreciation for the sound of this high-quality device, will be rewarded by its excellent operation for years to come.

Please read this entire manual before you connect the A-5000 DHT Monoblocks to the other components of your system and the wall outlet.

***** Information and specifications for the Allnic Audio product described in this manual are subject to change without notice.**

***** *For a list of Allnic Audio distributors around the world, please visit Allnic Audio's website:***

[*http://allnicaudio.com*](http://allnicaudio.com)

TABLE OF CONTENTS:

INTRODUCING THE A-5000 DHT SINGLE-ENDED, PURE DIRECT HEATED TRIODE MONOBLOCK POWER AMPLIFIER	4
WHAT'S IN THE BOX?	5
SAFETY	5
CLEANING Chassis Connectors	6
INITIAL SET-UP Location, Location, Location Inputs Speaker Terminals Power Connection	6 7 7 7
INITIAL POWER ON	7
OPERATION	8
TUBES AND TUBE BIAS	8
SPECIFICATIONS	10
WARRANTY	11
FIGURES	12

Please read about **SAFETY** before you attempt to use the A-5000 DHTs - we care about our customers and the equipment, and we want you to enjoy this product for a long time!

INTRODUCING THE A-5000 DHT 300B, SINGLE-ENDED, PURE DIRECT HEATED TRIODE MONOBLOCK POWER AMPLIFIER

The A-5000 DHT monoblock, like all Allnic Audio products, uses Permalloy (iron and nickel alloy) for its transformer cores. Allnic is grateful to Mr. G.W. Elmen of Western Electric for inventing Permalloy for transformer core use, and in so doing, providing an enormous service to recorded music listeners everywhere.

The A-5000 DHT has the following features:

- **All Direct Heated Triodes** – The A-5000 DHT monoblock amplifier is a pure direct heated triode, tube rectified power amplifier. It uses only direct heated tubes in the signal path, from input to output. The first stage is a new old stock Marconi HL-2; the second is a new, **Allnic in-house manufactured** RS242, replacing the previously used NOS 3A-110A; the third is the famous 300B. The rectifier tube is also direct heated, a 5U4G (or direct heated equivalent). This is an ideal combination of pure direct heated triodes, resulting in unparalleled faithfulness to the incoming signal, incredible musicality and detail, and quick, articulate bass.
- **Real power drive** - The driver tube is the Allnic in-house manufactured RS242. Allnic uses this direct heated triode RS242 tube to drive the 300B to its correct specifications via a choke plate inductor. The choke inductor (with a 100% permalloy core) has very low power loss and an infinitely high load impedance. This configuration is an ideal drive stage for the single ended 300B and produces 10 watts of pure class A, extremely low distortion, high power output.
- **Nickel alloy output transformer** - Allnic uses sophisticated ratio mixed nickel permalloy PB cored output transformers. Because of their extremely high initial permeability, it is possible to use lower turns on the primary winding while retaining very high 'open circuit inductance". That means a resulting very wide frequency range and low distortion bass response. The A-5000 DHT uses the very latest version of Allnic's transformers. This is another reason why the A-5000 DHT excels over other 300B power amplifiers. Allnic also uses a very big nickel core, so as not to be magnetically saturated at a high current of level of 200mA.
- **Fixed bias control grid** - Allnic prefers to use low distortion and high output "fixed-bias" rather than the relatively higher distortion and lower output "self-bias" method. That way, it is possible to eliminate the use of cathode resistors and their associated heat production.
- **Natural negative feedback** - The A-5000 DHT applies about -6dB of negative feedback. This is a very complimentary amount of negative feedback that differentiates the Allnic 300B single ended amplifiers from the standard, which have a very coloured and weak speaker driving force. With this natural feedback, the A-5000 DHT has a relatively high "damping factor", very low distortion, and a higher S/N ratio, without losing the signature, single ended natural sound quality.
- **Hard wiring** - The A-5000 DHT is all hard wired; circuit boards are not used.
- **Beautiful 20KHz square wave response.** See Figures 1-3.

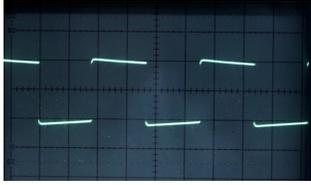


Fig.1 Square Wave 50Hz*

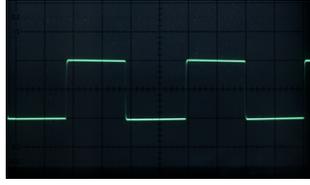


Fig.2 Square Wave 1KHz*

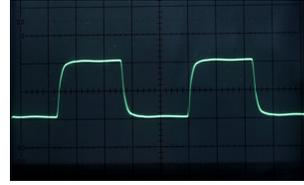


Fig.3 Square Wave 20KHz*

*Measured by LEADER LAG-126 Audio Signal Generator and KENWOOD CS-4125 Oscilloscope.

- As are all Allnic Audio products, the A-5000 DHT is fully RoHS (EU Reduction of Hazardous Substances regulation) compliant in construction and materials.

WHAT'S IN THE BOX?

Please check that each shipping box contains the following:

- One (1) Allnic A-5000 DHT monoblock power amplifier.
- One (1) 15 amp IEC type power cord

One (1) Owner's Manual is also provided.

Note:

- 1) The A-5000 DHT ships with the tubes installed.
- 2) The A-5000 DHT will work with most 15 amp, IEC type aftermarket power cords. The Allnic ZL-3000 and ZL-5000 power cables will make an excellent match. Of course, only you can determine the power cord that works most synergistically with the A-5000 DHTs in your system.
- 3) **Be sure the A-5000 DHTs are labeled for the AC voltage of your location. If they are not, DO NOT connect them to your AC outlet. Please contact your Allnic dealer.**

We advise that you keep the boxes and other packing materials that your A-5000 DHTs came in. It will be useful if you sell your A-5000 DHTs or in the unlikely event you need to ship for service.

SAFETY

- **Remove ALL protective cushioning material (e.g., cardboard around the tubes) inside the tube chimneys before operation. The tube chimneys should contain NOTHING except the tubes. Any silicone rings or other damping material (not cardboard or Styrofoam packing materials) on the RS242 should be left ON the tube.**
 - Disconnect the power cord by pulling the plug, not the cable.
 - Do not attempt any repairs. Do not remove the unit's chassis cover without specific authorization from your Allnic dealer.
 - Keep the power cord away from heat sources
 - Keep the unit away from liquids – do not allow any liquid to enter the interior of the unit.

CLEANING

A. Chassis and glass

Use only a soft, lint-free cloth, dampened slightly with water only (NO cleaning fluids!), to clean the faceplate, chassis and tube chimneys of the A-5000 DHT.

B. Connectors

You may use any good quality contact cleaner recommended for such applications to clean the contacts from time to time, as you deem appropriate.

INITIAL SET-UP

A. LOCATION, LOCATION, LOCATION

Like all audio products using tubes, the Allnic Audio A-5000 DHTs need to be placed on a solid stand in a location that provides good air circulation around, above and below the monoblocks.

- DO NOT cover the tops of the A-5000 DHTs.
- DO NOT place the A-5000 DHTs on carpet or foam.
- DO NOT subject the A-5000 DHTs to knocks and shocks as you move them around. This advice is meant particularly for those who may want to place the A-5000 DHTs on some kind of after-market isolation feet or similar devices. Dropping one side of the A-5000 DHT, or the whole of a unit, is not a good thing to do and may void the warranty.
- DO NOT place the unit near a strong light or heat source.
- DO NOT place anything heavy on the unit.
- DO NOT allow rubber or vinyl materials to rest on the chassis for long periods of time. This could discolour the metal.

- DO place the A-5000 DHTs on a shelf or stand that is stable and not subject to vibration or sudden shock.
- DO consider using a high-quality power cord, inter-connects and speaker cables. The A-5000 DHTs are highly sensitive electronic devices designed for neutrality and will output what you put into them. Allnic's ZL (Zero Loss) Technology power and interconnect cables will work synergistically with the A-5000 DHTs.
- DO try to place the A-5000 DHTs away from major sources and potential receivers of RFI and EMI. Though well shielded, the A-5000 DHTs will function best away from large power transformers and other sources of such interference and from other equipment that could be susceptible to such forms/sources of interference.
- When the A-5000 DHTs are moved from a cold to a warm environment, allow sufficient time for any condensation to evaporate before plugging the A-5000 DHTs into an AC connection.
- Do not attempt any repairs.

B. INPUTS

There are two (2) female inputs (See Figure 4). One accepts a balanced cable with a male XLR connector; the other accepts a cable with a single-ended, RCA type male connector. These input connections are located on the right (facing the back) rear of the chassis, with the balanced input closest to the side edge. Between the inputs, there is a switch to select one of two pin configurations for a balanced cable (i.e., it changes the phase). The top position is for pin 2 "hot" and pin 3 "cold/neutral"; the bottom position is for the reverse (in both cases, pin 1 is ground).

C. SPEAKER TERMINALS

Each A-5000 DHT is equipped with one pair of high-quality speaker terminals (See Figure 4). These terminals are located in the middle of the rear panel of the A-5000 DHT chassis, with the red marked terminal for the live connection labelled positive "+" on the right, and with the return connection labeled negative "-", to the left (facing the chassis rear). Between the plus and minus terminals is a switch that provides for either 8 or 4 ohm impedance, as your speakers may require. The upper position of the switch is for 8 ohm operation; the lower for 4 ohm operation. 8 and 16 ohm terminals are available by special order. The terminals accept bare wire (not recommended), spade and banana type connectors.

D. POWER CONNECTION

Connect the input interconnect and speaker cables before you insert the power cable into the receptacle at the left (facing the back) rear of the chassis (See Figure 4). The A-5000 DHT uses a standard 15 amp three prong male IEC connection for AC input. You need to use power cords with a female 15 amp, three prong IEC connector at one end. The Allnic ZL-3000 and ZL-5000 power cables will make an excellent match.

The A-5000 DHTs you have purchased are set internally for either AC 110/120 volt – 60 HZ, or 220/230 volt – 50 HZ operation. There is no way to change this to another AC setting without return of the A-5000 DHTs to the factory for re-wiring, at the owner's cost, including transport both directions.

INITIAL POWER-ON

Once you have your A-5000 DHTs in place and all connections have been made to your source(s) and preamplifier, you are ready to turn on the power for your A-5000 DHTs. Before you power up the A-5000 DHTs, though, be sure you have:

- **removed ALL the cushion materials (e.g., cardboard) from inside the tube chimneys. Any silicone rings or other damping material (not cardboard or Styrofoam packing materials) on the RS242 should be left ON the tube.**
- selected the input connection you want to use, single ended (RCA) or balanced (XLR) and, for XLR selected the correct phase position of the switch on the back of the chassis, and have the interconnect firmly attached.
- turned on your source(s) and your preamplifier, and turned the preamplifier's volume control down to zero or otherwise muted its output

- securely and correctly fastened the speaker cables and ensured that they are also connected properly to the speakers
- checked that all tubes are snug in their sockets

Turn on the A-5000 DHT by depressing the power switch button located (facing the front of the unit) on the right side-panel to the “on” position. The “on” position is with the top of the button switch depressed. Of course, the off position is the reverse. After about a thirty to forty (30 - 40) second delay (the soft start), the A-5000 DHT will be powered on. After warm-up and application of full plate voltage, not all tubes may bias at the same rate. Allow one or two minutes for all the tubes to reach full operating specification.

OPERATION

When the power is on, the current meter on the front of the chassis will illuminate (See Figure 5). From this point on, operation is straight-forward. When you are finished listening, turn off your A-5000 DHT monoblocks first; then, turn off your preamplifier and sources.

In the case of any failure, please contact Your Allnic dealer for assistance.

THE CURRENT METERS

The single, illuminated meter indicates the current supply to the 300B power tube in the A-5000 DHT (See Figure 5). There is also a screw type potentiometer on the chassis top directly in front of the 300B (Refer to Figure 6 for its location).

When you turn on the A-5000 DHT, the needle of the current meter should be between the two parallel lines on the meter face. Any error of current supply to or failure of a 300B tube is indicated by the needle moving out from between these two parallel lines.

TUBES AND TUBE BIAS

Each A-5000 DHT monoblock uses the following tubes (See Figure 6):

- One (1) x 300B
- One (1) x RS242
- One (1) x New Old Stock HL-2
- One (1) x 5U4G (Substitute with equivalent direct-heated rectifiers only)

Because of the user adjustable bias for the 300B, it is not necessary to use a matched pair of these power tubes in the A-5000 DHTs.

The illuminated meter on the front of the chassis (see Figure 5) indicates the current supply to the 300B tube in the A-5000 DHT. There is a potentiometer that is used to bias the 300B (Refer to Figure 6 for its location).

When you turn on the A-5000 DHT, the needle of the current meter should be in about the middle between the two parallel lines on the meter face. Any error of current supply to or failure of the 300B tube is indicated by the needle on the meter moving out from between these two parallel lines.

If the current meter has moved to the left-hand most of the parallel lines on the meter face, or beyond it, using an appropriately bladed screwdriver, adjust the potentiometer directly in front of the tube's location by turning it clockwise until the needle has returned to between the meter's parallel lines. If the meter needle has moved close to the right-hand most parallel line on the meter face, or to the right of it, turn the potentiometer control counterclockwise to correct.

If the meter's needle drops to the left limit of the meter's face during operation and audio output stops, this indicates a failure of the 300B tube. The fuse will have "blown" as well. You must turn off the A-5000 DHT and replace both the fuse (315mA @ 250V, 20mm glass, fast blow type) for the tube and the 300B. To replace a fuse, using a screwdriver, simply turn the top of the fuse cap counterclockwise. It will spring out holding the fuse. Replace the fuse, push the fuse cap down and turn it clockwise; it will lock itself. If you have any questions about doing this, please contact your Allnic dealer for assistance.

You may use any 300B type tube in the A-5000 DHT, including the newer higher voltage varieties **(300BXLS)**, which will operate at their optimal specification if the needle of the illuminated meter is set to just inside the right-hand most of the meter's two parallel lines.

Of course, before changing a 300B, you should turn the bias potentiometer down. Then when you have inserted the new tube, you will have to adjust the bias back into the area between the two parallel lines of the meter, as described above. Please refer to Figure 6 for tube locations.

All consequences of changing or attempting to change tubes are borne by the user unless by express agreement between the owner and an authorized Allnic representative. Allnic Audio and its authorized representatives are not liable in any way whatsoever for any injury or loss incurred by the user or for damage to the A-5000 DHT, any of its parts, or tubes or replacement tubes resulting from the user changing or attempting to change tubes.



SPECIFICATIONS FOR THE ALLNIC AUDIO A-5000 DHT 300B SINGLE-ENDED, DIRECT HEATED TRIODE MONOBLOCK POWER AMPLIFIER

- Output Power: 10w (8Ω load, at 1KHz)
- Total Harmonic Distortion: Less than 0.5% at 1KHz, 2.83V
- Frequency Response: 20Hz - 50KHz Flat
- S/N Ratio: -76dB (CCIR, 1KHz)
- Damping Factor: 4.7 at 8Ω load at 1KHz
- Voltage gain: +24dB
- Input Impedance: 100KΩ (single-ended, unbalanced)
- Input Sensitivity: 0.6V for rated power
- Fuses:
 - Main: 3A @ 250V 20mm glass, fast blow type (two supplied – one is a spare)
 - 300B: 315mA @ 250V, 20mm glass, fast blow type
- Tubes (per chassis):
 - 300B X 1 (power tube)
 - HL-2 X 1 (first stage driver)
 - RS242 X 1 (second stage driver – equivalent to 3A-110A)
 - 5U4G X 1 (rectifier - substitute with equivalent direct-heated rectifier only)
- Dimensions: (W x D x H) 430mm (16.93 inches) x 330mm (13 inches) x 240mm (9.45 inches)
- Weight:
 - 20Kg (44 lbs) net per monoblock.
 - 21.8 Kg (48 lbs) shipping weight per monoblock.

WARRANTY

FOR WARRANTY SERVICE, PLEASE CONTACT YOUR AUTHORIZED ALLNIC DEALER.

All Allnic Audio amplifier products are warranted against materials and manufacturing defects for parts, excluding tubes, and labour for two (2) years from date of purchase. Tubes are warranted against materials and manufacturing defects for one (1) year from date of purchase. The warranty is transferable for the balance of the original purchaser's warranty period, provided, as stated below, no unauthorized repairs or modifications have been performed on the product. Date of purchase is the date indicated on the invoice for the product issued by Allnic Audio or its authorized representative. For the warranty to be valid, a defective product must be returned to Allnic Audio's authorized representative for service prior to any unauthorized attempt to repair. Any repair work on an Allnic Audio product not specifically authorized by Allnic Audio or its authorized representative will void the warranty on the product.

FIGURES

Figure 4: A-5000 DHT – Rear View

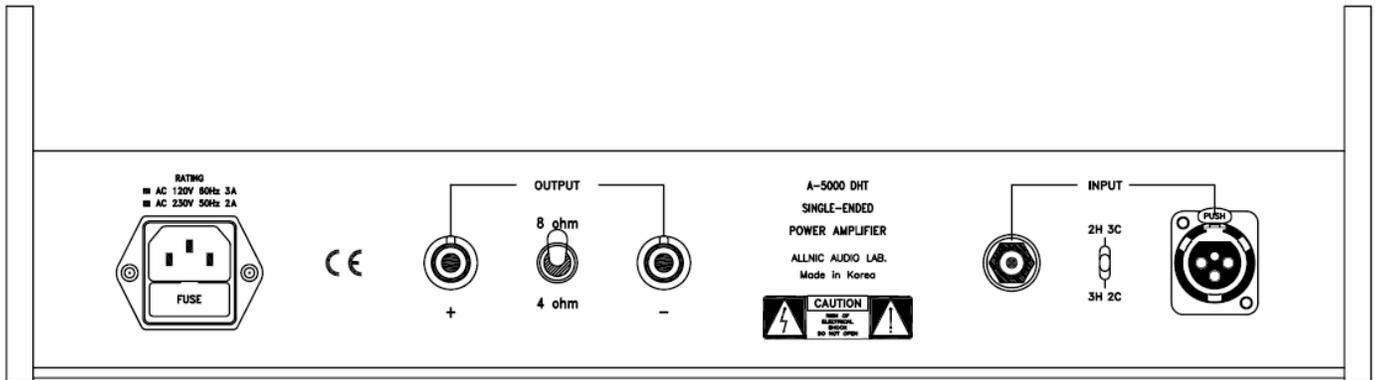


Figure 5: A-5000 DHT – Front View

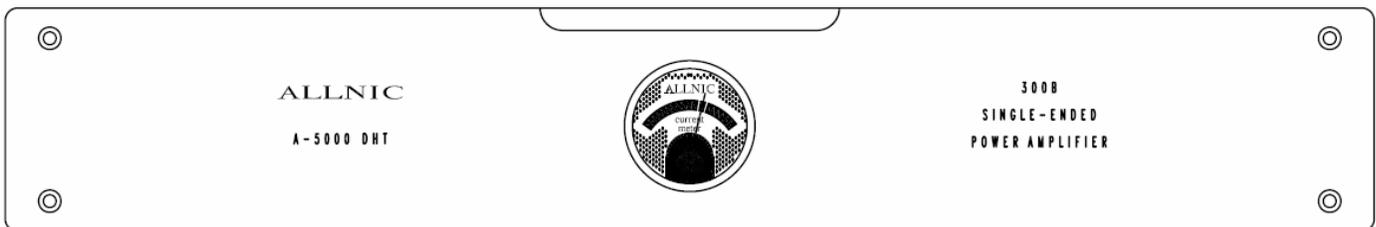


Figure 6: A-5000 DHT – Top View

