

ALLNIC AUDIO
- A-5000 NEO -
300B SET MONOBLOCK POWER AMPLIFIER



OWNER'S MANUAL

ALLNIC AUDIO

A-5000 NEO 300B SET MONOBLOCK AMPLIFIER

Thank you for purchasing the Allnic Audio A-5000 NEO Monoblock Power Amplifier. We are certain your trust in Allnic Audio and Hammertone Audio, 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 NEO Monoblock to the other components of your system and the wall outlet.



252 Magic Drive, Kelowna, British Columbia, Canada V1V 1N2

Direct Telephone: (250) 862-9037; Fax: (250) 862-9039;

Cell: (780) 991-1960

email: david@hammertoneaudio.com

Website: www.hammertoneaudio.com

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

TABLE OF CONTENTS:

INTRODUCING THE A-5000 NEO MONOBLOCK POWER AMPLIFIER	4
<hr/>	
WHAT'S IN THE BOX?	5
<hr/>	
SAFETY	5
<hr/>	
CLEANING Chassis Connectors	5
<hr/>	
INITIAL SET-UP Location, Location, Location Inputs Speaker Terminals Power Connection	5
<hr/>	
INITIAL POWER ON	6
<hr/>	
OPERATION	6
<hr/>	
TUBES AND TUBE BIAS	7
<hr/>	
SPECIFICATIONS	7
<hr/>	
WARRANTY	7
<hr/>	
FIGURES	8

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

INTRODUCING THE A-5000 NEO 300B SET MONOBLOCK POWER AMPLIFIER

The A-5000 NEO monoblocks are Allnic Audio's top of the line power amplifier model. Like all Allnic Audio products, the A-5000 NEO has 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 NEO has the following features:

- 25 watts of pure class A high power output. The A-5000 NEO is a parallel single ended power amplifier. Almost all other 300B amplifiers are under, and distortion, driven. This is a result of the use of conventional "Resistor-Capacitor" circuits, which give only up to around a 70V swing voltage, with high distortion. This means that an already distorted signal of a lower than optimum swing voltage is directed to the deep biased 300B grid. Allnic's powerful "Inductor Drive" circuit gives up to a 150V swing voltage, with very low distortion (about 0.3%). It is this drive delivered to the A-5000 NEO that allows for a significantly higher output (25w) than the approximately 18 - 20w output that could be expected from standard 300B circuits.
- Real power drive. The driver tube, a 6GV8, is a very strong power pentode. We use this power pentode to drive the 300B's via a choke plate inductor. Our choke inductor (100% nickel permalloy PC core) has very low power loss and infinitely high load impedance. This configuration is an ideal drive stage for 300B SE.
- 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. This is another reason why the A-5000 NEO 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.
- Long life and trouble-free operation. Allnic employs a

"soft start circuit" to protect the tubes and other parts. It applies the high B+ voltage only after tubes are fully warmed-up.

- 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 NEO applies about -6dB of negative feedback. This is a very complimentary amount of negative feedback that differentiates the Allnic 300B single ended amplifier from the standard, which has a very coloured and weak speaker driving force. With this natural feedback, the A-5000 NEO 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 NEO is all hard wired; circuit boards are not used.
- Beautiful 20KHz square wave response. See Figures 1-3.

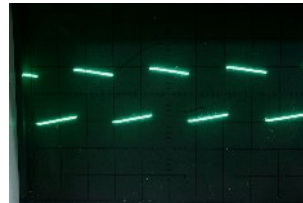


Fig.1 Square Wave 50Hz



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 NEO is fully RoHS (EU Reduction of Hazardous Substances regulation) compliant in construction and materials.

WHAT'S IN THE BOX?

Please check that the shipping box contains the following:

- One (1) Allnic A-5000 NEO monoblock power amplifier
- One (1) IEC type power cord
- One (1) Owner's Manual

Note:

- 1) The A-5000 NEO ships with the tubes installed.
- 2) The A-5000 NEO will work with most IEC type aftermarket power cords. Of course, only you can determine the power cord that works most synergistically with the A-5000 NEO in your system.
- 3) Be sure the A-5000 NEO is labeled for the AC voltage of your location. If it is not, please contact Hammertone Audio.

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

SAFETY

- **Remove ALL protective cushioning material inside the tube chimneys before operation. The tube chimneys should contain NOTHING except the tubes.**
- 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 Hammertone Audio.
- 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.
- When the unit is moved from a cold to a warm environment, allow sufficient time for any condensation to evaporate before plugging the A-5000 NEO into an AC connection.
- Do not attempt any repairs.
- See the notes on "Location, Location, Location".

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 NEO.

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 NEO needs to be placed on a solid stand in a location that provides good air circulation around, above and below the monoblock.

- DO NOT cover the top of the A-5000 NEO.
- DO NOT place the unit on carpet or foam.
- DO NOT subject the unit to knocks and shocks as you move it around. This advice is meant particularly for those who may want to place the A-5000 NEO on some kind of after-market isolation feet or similar devices. Dropping one side of the A-5000 NEO, or the whole of the unit, is not a good thing to do.
- 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 unit on a shelf or stand that is stable and not subject to vibration or sudden shock.
- DO consider using a high quality power cord, interconnects and speaker cables. The A-5000 NEO is a highly sensitive piece of electronic designed for neutrality and will output what you put into it.
- DO try to place A-5000 NEO away from major sources and potential receivers of RFI and EMI. Though well shielded, the A-5000 NEO 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 of interference.

B. INPUTS

There are two (2) female inputs. One accepts a balanced cable with a male XLR connector; the other is to accept 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"; the bottom position is for the reverse (in both cases, pin 1 is ground). Please refer to Figure 4

C. SPEAKER TERMINALS

The A-5000 NEO is equipped with one pair of high-quality speaker terminals. These terminals are located in the middle of the rear panel of the A-5000 NEO chassis. There is a common ground connection, and one 4 ohm and one 8 ohm connection. The common ground terminal is the farthest to the right (facing the chassis rear) and is labeled "COM". The 8 ohm live connection is to the far left, and the 4 ohm connection has the centre position. The terminals accept bare wire (not recommended) and spade and banana type connectors. Please refer to Figure 4.

D. POWER CONNECTION

Connect the input interconnect and speaker cables before you insert the power cable into the receptacle at the far left (again, facing the chassis rear). The A-5000 NEO uses a standard three prong male IEC connection for AC input. You need to use a power cord with a female three prong IEC connector at one end. Please refer to Figure 4.

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

INITIAL POWER-ON

Once you have your A-5000 NEO in place and all connections have been made to your turntable and preamplifier, you are ready to turn on the power for your A-5000 NEO; before you power it up, though, be sure you have:

- removed ALL the cushion materials from inside the tube chimneys
- selected the input connection that you want to use, single ended (RCA) or balanced (XLR), on 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 NEO by pushing the on/off vertically mounted rocker switch, located at the front of the right side panel (facing the front of the unit) to the "on" position. The "on" position is with the vertical line on the switch (the upper portion) depressed and the part of the switch marked with the "o" (the lower portion) in the raised position. Of course, the off position is the reverse. After about a thirty to forty (30 - 40) second delay (the soft start), the A-5000 NEO will be powered on.

OPERATION

When the power is on, the current meter on the face of the chassis will illuminate. From this point on, operation is straightforward.

When you are finished listening, turn off your A-5000 NEO monoblock(s) first; then, turn off your preamplifier and sources.

In the case of any failure, please contact Hammertone Audio for assistance.

THE CURRENT METER

This illuminated meter indicates the current supply to each of the two 300B gain tubes in the A-5000 NEO. This single meter operates for each 300B by use of the switch on the left side panel of the chassis, near the front plate (facing the front panel). The switch's top position is for the right hand 300B (facing the front of the unit) and the lower position is for the left-hand 300B. There is a potentiometer for each 300B (Refer to Figure 5). When you turn on the A-5000 NEO, the needle of the current meter for each 300B 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 on the meter moving out from between these two parallel lines.

TUBES AND TUBE BIAS

Each A-5000 NEO uses the following tubes:

- Two (2) x 300B
- One (1) x 6GV8

Because of the individual bias for each 300B, it is not necessary to use a matched pair in the A-5000 NEO.

If the current meter, when switched to one or the other of the unit's 300B's, has moved to the left of the parallel lines on the meter face, using an appropriately bladed screwdriver, adjust the potentiometer directly in front of that 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 to the right of the parallel lines on the meter face, turn the potentiometer control counter-clockwise to correct.

If the meter's needle drops to the left limit of the meter's face during operation, this indicates a failure of the related 300B tube. You must turn off the A-5000 NEO and replace both the fuse (0.5A, 250V, 20mm glass type) for that tube and the 300B. To replace a fuse, using a screwdriver, simply turn the top of the fuse cap counter clockwise. 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 Hammertone Audio for assistance.

You may use any 300B type tube in the A-5000 NEO, including the newer higher voltage varieties. Of course, you will have to adjust the bias back into the area between the two parallel lines of the meter for a tube when it is replaced. 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 Hammertone Audio. Allnic Audio and

WARRANTY

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 Hammertone Audio.

For the warranty to be valid, a defective product must be returned to Hammertone Audio for service prior to any unauthorized attempt to repair. Any repair work on an Allnic Audio product not specifically authorized by Hammertone Audio will void the warranty on the product.

Hammertone Audio are not liable in any way whatsoever for any injury or loss incurred by the user or for damage to the A-5000 NEO, 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 NEO 300B SET MONOBLOCK POWER AMPLIFIER

- Output Power: 25w (8Ω or 4Ω load, at 1KHz)
- Distortion: 0.3% at 1KHz, 2.83V
- Frequency Response: 20Hz - 20KHz Flat
- S/N Ratio: -80dB (CCIR, 1KHz)
- Damping Factor: 10 at 8Ω load at 1KHz
- Voltage gain: +24dB
- Input Impedance: 100KΩ (single-ended, unbalanced)
- Input Sensitivity: 0.7V for rated power
- Tubes: 300B X 2 (power triode)
6GV8 X 1 (driver tube - equivalent to ECL85 and 6F5p)
- AC Fuse: 15A, 250V (two supplied – one is a spare)
- Dimensions: (W x D x H) 430mm (16.93 inches) x 330mm (inches) X 240mm (9.45 inches)
- Weight: 20Kg (44 lbs) net per monoblock.
21.8 Kg (48 lbs) shipping weight per monoblock.

Figure 4 – A-5000 NEO Rear Panel View

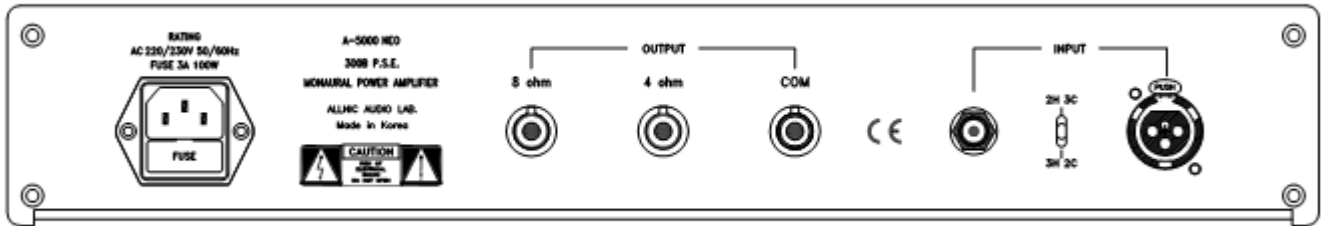


Figure 5 – A-5000 NEO Chassis Top View

