

ALLNIC AUDIO
AUT 2000 STEP-UP TRANSFORMER



OWNER'S MANUAL

ALLNIC AUDIO AUT 2000 STEP-UP TRANSFORMER

Thank you for purchasing this Allnic Audio AUT 2000 Step-up Transformer. 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 AUT 2000 Step-up Transformer to the other components of your system.



MUSICAL
TRUTH



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

TABLE OF CONTENTS:

INTRODUCING THE AUT 2000 STEP-UP TRANSFORMER	4
WHAT'S IN THE BOX?	5
SAFETY	5
CLEANING	
Chassis	
Connectors	5
INITIAL SET-UP	
Location, Location, Location	
Inputs	
Outputs	5
OPERATION	6
SPECIFICATIONS	6
WARRANTY	8

Please read about **SAFETY** before you attempt to use the AUT 2000 Step-up Transformer - we care about our customers and the equipment, and we want you to enjoy this product for a long time!

INTRODUCING THE AUT 2000 STEP-UP TRANSFORMER

The AUT 2000 is Allnic Audio's Step-up Transformer. Like all Allnic Audio products, it uses Permalloy (iron and nickel alloy) for its transformer (step-up) 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 AUT 2000 has the following features:

- Different brands and models of phono stage pre-amplifiers apply different voltage gains. In order to cope effectively with the multiplicity of system environments created by these variations in voltage gain from phono stage to phono stage, a step-up transformer intended for general use should be gain selectable without, of course, compromising sound quality. The AUT-2000 Step-up Transformer features gain selectivity, an excellent square wave response over a broad frequency range, and an extremely low noise level.

Conventional gain selectable step-up transformers provide voltage gain selectivity by using several primary windings connected to an external selector switch (Fig. 1).

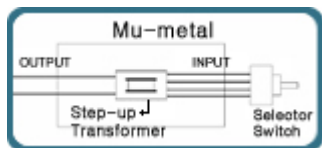


Figure 1 - Conventional Gain Selectable Step-up Transformer

Allnic Audio takes a different approach. The AUT-2000 is built with both the transformer and the selector switch embedded within a single block of mu-metal shielded casing (Fig. 2).

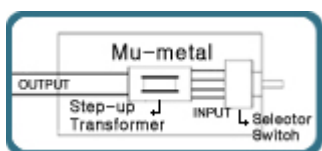


Figure 2 - Gain Selection of Allnic AUT-2000

Because the Allnic AUT-2000 is precisely machined from a solid aluminum alloy block, mechanical vibration in the unit is greatly reduced. In addition, the spaces between the transformers and the unit's body are filled with a silicone elastomer that possesses excellent vibration attenuation characteristics.

The Allnic AUT-2000's unique structure significantly reduces the length of the signal path and substantially improves the signal to noise (S/N) ratio.

- The Allnic AUT-2000 has an exceptionally flat signal response across a broad frequency range, using a secondary load resistor at 47 kOhms, as installed for MM cartridges in phono stage circuitry. (Allnic does not manipulate lower valued resistors to produce a flatter response curve). The following table indicates the signal response at each of the AUT 2000's gain levels.

Gain Level	Frequency Range	Signal Response
+20 dB Gain (x10)	20 Hz - 20 kHz	0 dB, 0 dB
+24 dB Gain (x15)	20 Hz - 20 kHz	-0.2 dB, -0.2 dB
+26 dB Gain (x20)	20 Hz - 20 kHz	-0.6 dB, -0.6 dB
+30 dB Gain (x30)	20 Hz - 20 kHz	-1.5 dB, -1.5 dB

Signal Response at each Gain Level

Measured by Tektronix CFG 253 Oscillator,
Leader LMV-189AR AC Voltmeter

- The large nickel Permalloy cores in the transformers result in high input voltage saturation and, consequently, very deep bass reproduction.
- The Allnic AUT-2000 is equipped with a separate gain selector for each channel. This eliminates channel crosstalk from the unit.
- Provision of lower gain levels helps to accommodate the current ever growing number of high output MC cartridges.

- Use of a five-sectioned sandwich winding method for the transformers reduces leakage, inductance and capacitance. This significantly improves high frequency response, as shown below (Fig. 3).



Figure 3 Square wave response at 10 kHz Measured by Tektronix CFG 253 Oscillator and KENWOOD CS-4125 Oscilloscope

- The AUT 2000 is small and may be installed near the turntable, allowing the use of interconnection cables that are as short as possible
- As are all Allnic Audio products, the AUT 2000 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 AUT 2000 Step-up Transformer – in natural aluminum or black finish in accordance with your order
- One (1) Owner's Manual

We advise that you keep the box and other packing materials that your AUT 2000 came in. It will be useful if you sell your AUT 2000 or in the unlikely event you need to ship it for service.

SAFETY

- Disconnect all cables by pulling the plug, not the cable.
- Keep the cables away from any heat source.
- Keep the unit away from liquids – do not allow any liquid to enter the interior of the unit.
- Do not attempt any repairs.
- Do not remove the cover without specific authorization from Hammertone Audio.

- See the notes on “Location, Location, Location”.

CLEANING

A. Chassis

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

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 sensitive audio products, the Allnic Audio AUT 2000 should be placed on a solid stand.

- 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 AUT 2000 on some kind of after-market isolation feet or similar devices. Dropping one side of the AUT 2000, or the whole 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 unit's 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 high quality interconnects for both inputs and outputs. The AUT 2000 is a highly sensitive piece of electronic equipment designed for neutrality and will output what you put into it.
- DO try to place the AUT 2000 away from major sources of RFI and EMI; though very well shielded, the AUT 2000 will function best away from large power transformers and other sources of such interference.

B. INPUTS

In the centre of the four RCA connections on the rear of the AUT 2000's chassis is a screw type connector. This connector is the ground connection for a ground wire from a cartridge and/or turntable. Please refer to Figure 4.

There is one (1) pair of single-ended (RCA) inputs. The right and left channel input connections are the bottom pair of RCA connections, below and to the left and right of the ground connection. The left channel input connection is on the right of the unit, facing the AUT 2000's rear panel (on the left if you are facing the front of the unit). The right channel input connection is on the left of the unit, facing the AUT 2000's rear panel (on the right if you are facing the front of the unit).

C. OUTPUTS

The AUT 2000 is equipped with one pair of single-ended (RCA) outputs. The right and left channel output connections are the top pair of RCA connections, above and to the left and right of the ground connection. The left channel output connection is on the right of the unit, facing the AUT 2000's rear panel (on the left if you are facing the front of the unit). The right channel output connection is on the left of the unit, facing the AUT 200's rear panel (on the right if you are facing the front of the unit).

The AUT 2000 has been designed and manufactured to work most synergistically with other Allnic Audio products, for example the Allnic phono stages and preamplifiers.

OPERATION

Be sure you have turned the volume down or otherwise muted your preamplifier before connecting the AUT 2000. Also, make sure all your connections are snug.

At this point, if you have not already done it, using a coin or other non-abrasive suitably shaped object to turn the two front panel gain selection switches to the gain that you think will work for your moving coil cartridge.

The "X#" scale on the rotating selectors corresponds to the factor that you will select for the millivolt output of

your selected MC cartridge. Each position on the X# scale corresponds to an increase in gain, indicated on the +#dB scale. You should use identical settings for both transformers to avoid channel imbalance.

The possible settings are:

- 10 X / +20dB Gain
- 15 X / +24dB Gain
- 20 X / +26dB gain
- 30 X / +30dB Gain

Please see Figure 5. You may need to experiment with different gain settings to find the one best suited for your cartridge.

From this point on, operation is straight-forward. Of course, always be sure you have turned the volume down or otherwise muted your preamplifier before changing gain on the front panel selectors.

Also, BE CAREFUL about differences in gain between your sources. Generally, disc players and tuners will have greater gain than phono stages, with or without step-up transformers. That means the volume setting for listening to your turntable might be too high for listening to CD's.

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

SPECIFICATIONS

FOR THE ALLNIC AUDIO AUT 2000 STEP-UP TRANSFORMER

Inputs:	MC (Moving Coil – unbalanced (RCA) × 1 pair
Outputs:	Unbalanced (RCA) × 1 pair
Ground:	Screw Type x 1
Maximum Input Level (Non-clipping):	At 20Hz, 10 Times: up to 230mV 15 Times: up to 150mV 20 Times: up to 115mV 30 Times: up to 57mV At 1kHz, for any ratio, more than 10V At 10kHz, for any ratio, more than 10V

THD (Total Harmonic Distortion):	Less than 0.025% at 1 kHz, +20 dB Gain
Dimensions:	160mm (6.3 in)(w) x 113mm(4.45 in)(d) x 57mm(2.25 in)(h) Packed Dimensions: 245mm (9.65 in)(w) x 160mm (6.3 in)(d) x 78mm (3.1 in)(h)
Weight:	1,860gm (4.11 lbs) Weight packed in original materials: 2,680 gm (5.91 lbs)

Figure 4 – AUT 2000 Rear Panel View



Figure 5 – AUT 2000 Front Panel View



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.