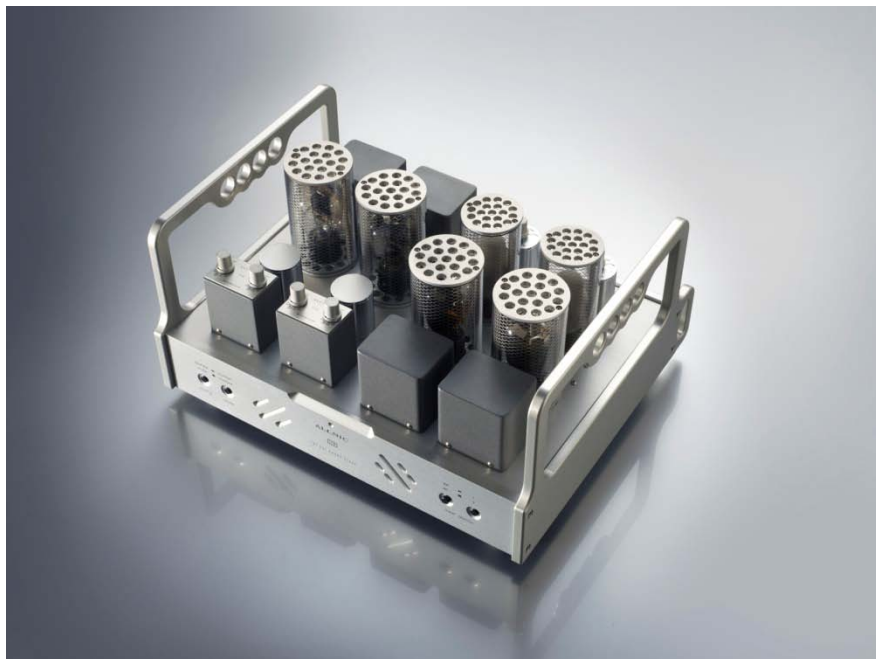


**ALLNIC AUDIO**

**H-5000**

**DIRECT HEATED TRIODE**

**PHONO-PREAMPLIFIER**



**OWNER'S MANUAL**

**Allnic Audio**

**H-5000**

***Pure Direct Heated Triode Phono-preamplifier***

Thank you for purchasing this Allnic Audio H-5000 Pure Direct Heated Triode Phono-preamplifier (Phono-stage). We are certain your trust in Allnic Audio and Allnic Audio USA, as well as your appreciation for the sound of this innovative and ground-breaking device, will be rewarded by its excellent operation for many years to come. Please read this entire manual before you connect the H-5000 to the other components of your system and its power supply to the electrical receptacle.

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## **ALLNIC AUDIO AND THE PURE DIRECT HEATED TRIODE BREAKTHROUGH**

In the early years of the last century, the directly heated triode (DHT) was invented independently, and almost simultaneously, in the USA and Austria. This simple device, an anode, a cathode and a grid in a vacuum contained in a glass bottle, transformed the world. Over one hundred years later, the very first triode remains a favourite audio amplification device for devoted music lovers worldwide.

Debate about the quality of the DHT's sound reproduction potential continues even today. One of the interesting aspects of these debates is the degree to which they ignore analysis of common, fundamental assumptions about DHTs. Those assumptions are based on many decades of circuit and mechanical experimentation and compromise. Indeed, because of the difficulty of using DHTs for audio, many circuit design issues have evolved into assumptions about the audio characteristics of DHTs themselves.

Allnic's Mr. Kang Su Park has spent a lifetime studying and designing circuits and transformers for use of DHTs in audio reproduction. Mr. Park has questioned basic assumptions about DHTs, re-examined variations of DHT circuit designs, and researched and experimented rigorously. His work has resulted in some remarkable audio power amplification devices. For example, Allnic's 300B amplifiers produce significantly more power than normally expected. They do this without shortening tube life because the power increase is not achieved by increased bias. In conjunction with an increase in power, Mr. Park's 300B amplifiers also have exceptionally low distortion and wide bandwidth.

Mr. Park successfully combined elements of what he learned and invented over decades to the development and production of a pure, direct heated triode (DHT) based amplifier and preamplifier: the A-5000 and L-5000, respectively. The main breakthrough was the design of a circuit, valve and transformer combination with astounding measured results. The purity of its square wave reproduction – as perfect as anything he had ever seen from a DHT valve amplification circuit – had him questioning what he was seeing! Of course, he replicated these tests many times and recorded them and their results before assuring himself that there was no mistake.

With such an unprecedented superior outcome for the circuit design, Mr. Park could not be satisfied placing a DHT stage after one or two stages using indirectly heated triodes. That approach is used in a number of commercially available preamplifiers using DHTs, but it is a compromise. It does not result in PURE DHT amplification. It introduces the characteristics of indirectly heated triode sound into the circuit. The output DHTs are only amplifying a signal already determined by the initial stage indirectly heated triodes.

In contrast, Mr. Park created an amplifier and a preamplifier that use DHTs at each amplification stage. In his design, the output stage DHTs do not merely amplify the signal from indirectly heated triode stages. The A-5000 and L-5000 DHT amplifier and preamplifier are pure DHT, from signal input to output; and now:

**THE ALLNIC AUDIO H-5000 IS THE WORLD'S FIRST COMMERCIALY PRODUCED,  
PURE DHT PHONO-PREAMPLIFIER, FROM SIGNAL INPUT TO OUTPUT.**

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## **THE DHT PHONO-STAGE AMPLIFICATION CHALLENGE**

Over a century of research and experience, the grand masters of tube design came to the conclusion that only a well-made DHT amplifier can have absolutely the most natural and clear sound. In addition, only the DHT amplifier could combine that pure, undistorted sound with the ability to reproduce a true 3D sound stage occupied by life-size images of musical instruments, voices and other recorded sounds.

A number of manufacturers have now introduced DHT power amplifiers, and a lesser number have released DHT output, if not pure, line level preamplifiers, but no one until now has produced a pure DHT phono amplification stage. That is because of the increasing difficulty, from power, to line stage to phono-stage amplification, of implementing a commercially feasible DHT design. Thus, successful creation of a complete, or pure, DHT phono-preamplifier has been the final goal, the dream, of tube master designers – now realized by Allnic Audio.

## **OVERCOMING THE DIFFICULTIES OF DHT PHONO-STAGE DESIGN**

- Rarity of DHT tubes suitable for phono amplification

The essential DHT tubes for phono amplification should have high gain, low internal resistance and high mutual conductance. It is extremely difficult to make that kind of DHT tube. Among hundreds of kinds of DHT tubes, there are fewer than 5 that have the specific characteristics required for phono amplification. To find those tubes requires broad and deep knowledge of tube types and specifications and much time consuming experimentation.

- DHTs' extreme sensitivity to micro-phonics noise

Due to their large, bulky and weak construction, DHT tubes tend to vibrate with the tiniest external stimuli, so it is almost impossible to use a DHT for phono reproduction without breakthrough engineering solutions to inhibit sympathetic vibration in the DHT tube. Allnic's patented GEL tube damper socket, based on liquid elastomer, mitigate micro-phonics vibrations in the DHT tube.

- Difficulty of properly matching transformers to DHTs

There is no tradition of manufacturing DHT phono-stages, so there are no matching transformers available in the marketplace. It is, therefore, essential to have in-house capability to design and wind the transformers specifically required for production of a pure DHT phono-stage. Allnic has long experience with designing and winding custom transformers, so it is quite natural that a perfect DHT phono-stage could be made in the Allnic factory. In addition, Allnic has developed and produces a very small output transformer for DHT phono amplification. The smaller the transformer, the better sound will be reproduced due to the reduced size of the magnetic field of the core material, while still providing enough inductance for realistic low frequency reproduction.

- Designing a clean, strong but balanced power supply for noise-free DHT phono amplification

Since DHT amplification is so sensitive, and has the potential for extremely low noise reproduction, an all tube, high-speed, automatic voltage regulation (AVR) circuit is most appropriate for the power supply. AVR enhances the signal to noise ratio for noise free operation in dual mono mode. For the H-5000 phono-stage preamplifier, Allnic uses 300B tubes, a typical DHT, as a series regulator tube in an AVR circuit. This design results in a superior signal to noise ratio.

***The rectifier tubes supplied with the H-5000 power supply are DHTs. Please note that in some electrical environments, the rectifier tubes in the H-5000 power supply may need to be changed to an indirect heated tube. While rectifiers can have audible effects, the rectifiers are not in the signal path: the signal path in the phono-stage remains pure DHT.***

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## **INTRODUCING THE H-5000 PURE DHT PHONO-STAGE**

The H-5000 is Allnic Audio's top of the line phono-stage. Like all Allnic Audio products, it uses Permalloy (iron and nickel alloy) for its signal 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.

### **Key Features of the H-5000 Phono-stage:**

- **LCR TYPE PRE-RIAA AND RIAA EQUALIZATION:**

RIAA equalization is a specification for the correct playback of vinyl records, established by the Recording Industry Association of America. The purpose of the equalization is to permit longer playback times and improve sound quality. Before the establishment of the RIAA equalization standard, different production companies utilized different equalization curves.

Vinyl record production equalization is a form of establishing a flat frequency response for the playback of recorded music. The necessity for this equalization process arises from mechanical difficulties inherent in record production. In order to prevent the cutting needle from over-cutting into the next record groove in the bass, as a record is cut, some bass frequencies are attenuated. In the treble region, in order for high frequency sounds not to be masked by the noise inherent in moving a stylus over and through a modulated vinyl surface, some treble frequencies are boosted. With the application of the correct filtering techniques on playback, the result is a flat frequency response with better signal to noise ratios.

The H-5000 is equipped with newly developed Allnic "Multi-Curve" LCR units (one for each channel) which have four (4) Turn-overs (frequency options) and four (4) Roll-offs (gain reductions in dB). These new units provide for the reproduction of various recording curves (both for bass attenuation and treble boost) used by different companies prior to the establishment of the RIAA standard. There are 4 Turn-over options, at: 250Hz, 400Hz, 500Hz RIAA and 700Hz. There are 4 Roll-off options (at 10KHz): -5dB, -11dB, -13.7dB RIAA and -16dB (See Figure 7).

- **Why LCR?**

There are four de-emphasis methods for equalization to that can be applied at playback:

A. Active filters (Negative feedback types):

Different quantities of negative feedback are applied, with deeper feedback to the high frequencies and shallower to the low frequencies. The benefits of this method are improved signal to noise ratios, low cost and consistent operation. Some of the shortfalls are looser bass reproduction and, possibly, a pinched and compressed high frequency playback due to excess feedback ratios.

B. Passive filters (CR type):

The frequencies are filtered to fit the RIAA specification by varying the amount of attenuation at different frequencies through a complex capacitor-resistor network. This technique results in no voltage overload, purer reproduction (because there is no feedback), and more accurate RIAA compensation. However, there are problems because the system provides no gain, and insertion loss and impedance matching issues arise.

C. Hybrid filters (use of both CR and negative feedback types):

In this method, both types of filters applied separately; an active filter is applied to the low frequencies and a passive filter to the high frequencies. Unfortunately, both the advantages and disadvantages of each of these two types

of filters, already discussed, affect the playback system at the same time.

D. LCR filters, used in the H-5000:

Two pieces of a linear reactor (a kind of choke coil) comprise the main part of these filters, assisted by precise CR filters, in order to lower impedances and insertion loss.

In vacuum tube circuits, active and passive filters usually are operated on one hundred plus kilo-ohms of impedance. An LCR equalization filter's impedance is a constant 600 ohms.

Furthermore, an LCR equalization filter's series resistance is less than 13 ohms (as a comparative, some famous ones are 31 ohms). The lower the impedance, the more dynamic is the sound reproduction, with better bass response and speed.

But LCR equalization units have drawbacks as well. These drawbacks are high cost and the difficulty of impedance matching; the latter has been the primary hindrance to the commercialization of this superb method in the construction of phono-stage amplifiers. However, Allnic Audio manufactures high quality LCR equalization units in-house and has developed a 600 ohms impedance matching method.

In addition, the H-5000 also has the following features:

- The H-5000 Phono-stage is transformer coupled, with the exception of the first gain stage, the HL-2 tube.
- No negative feedback design with three gain stages
- A power supply unit separate from the pure DHT phono-stage itself
- High quality MC Step-up Transformers with Permalloy cores are used for the H-5000's dual MC inputs.
- New vacuum tube damping technology – Allnic Audio's patented "Absorb GEL tube damper" technology prevents harmful vibrations from reaching the signal / gain tubes and, therefore, prevents micro-phonic noise propagation in the tubes. The Allnic Audio Absorb Gel damper technology effectively solves a problem that plagues most tube amplification systems. Provided other tube components do not introduce micro-phonic noise into your system, with the Absorb Gel damping system, you will enjoy a degree of transparent sound that will surprise and please you.
- Pure Class A operation
- Pure balanced operation
- As are all Allnic Audio products, the H-5000 is fully RoHS (EU Reduction of Hazardous Substances regulation) compliant in construction and materials.

The H-5000 has been designed and manufactured to work most synergistically with Allnic Audio preamplifiers, amplifiers and equalization products.

## **WHAT IS IN THE BOXES?**

Please check that the two (2) shipping boxes contain the following:

- One (1) Allnic H-5000 phono-preamplifier – in natural aluminum or black, depending on your order specification
- One (1) H-5000 power supply – in natural aluminum or black, depending on your order specification
- One (1) power umbilical cord
- One (1) IEC type power cord
- One (1) Owner's Manual

Note:

- 1) The H-5000 phono-preamplifier and power supply units ship with the tubes installed. BEFORE connecting the H-5000 to the wall outlet, please open the chimneys ON BOTH THE POWER SUPPLY AND THE PHONO-STAGE and remove ALL the paper and Styrofoam shipping materials from the tubes. It is optional to remove any O rings. Some customers prefer them on; others off.
- 2) The H-5000 power supply will work with most IEC type aftermarket power cords. Of course, only you can determine the power cord that works most synergistically with the H-5000 in your system.



- 3) Be sure the H-5000 power supply unit is labeled for the AC voltage of your location. If it is not, please contact Allnic Audio USA.

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

## **SAFETY!!**

- **BEFORE connecting the H-5000 power supply to the wall outlet, please open the chimneys ON BOTH THE POWER SUPPLY AND THE PHONO-STAGE and remove the paper and Styrofoam shipping materials from the tubes; the paper packing materials are installed only to protect the tubes during shipping. It is optional to remove any O rings from the tubes. Some customers prefer them on; others off.**
- Disconnect power cords by pulling the plug, not the cable.
- Do not attempt any repairs. Do not remove the units' chassis covers without specific authorization from Allnic Audio USA.
- Keep all cables away from heat sources.
- Ensure there is plenty of free space around and above both the phono-stage and power supply units.
- Keep the units away from liquids – do not allow any liquid to enter the interior of the units.
- When the units are moved from a cold to a warm environment, allow sufficient time for any condensation to evaporate in both units before plugging the power supply unit into an AC connection.
- 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 of the H-5000 and its power supply.

### 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 H-5000 and its power supply need to be placed on a solid base that is not subject to vibration or sudden shock, and that provides good air circulation around, above and below both the phono-stage and the power supply.

- DO NOT cover the tops of the H-5000 phono-stage or power supply tube chimneys.

- DO NOT drop the units! For those who may want to place the H-5000 or its power supply on some kind of after-market isolation feet or similar devices, dropping one side of either of the H-5000 units, or the whole of either unit may result in damage to the units or tubes that will not be covered by warranty.
- DO NOT place the units near a strong light or heat.
- DO NOT place anything heavy on the units.
- DO NOT allow rubber or vinyl materials to rest on either units' chassis for long periods of time. This could discolour the metal.
- DO place the units on a shelf or stand that is stable and not subject to vibration or sudden shock.
- DO consider using a high quality power cord, as well as inter-connects for both inputs and outputs. The H-5000 is a highly sensitive piece of electronic designed for neutrality and will output what you put into it.
- DO try to place the H-5000 and its power supply away from major sources of RFI and EMI; though well shielded, the H-5000 units will function best away from large power transformers and other sources of such interference.

## **B. POWER CONNECTIONS**

The H-5000 power supply uses a standard three prong male IEC connection for AC input on the right hand of the rear of the unit's chassis. You need a power cord with a female three prong IEC connector at one end (See Figure 5).

The H-5000 power supply connects to the phono-stage itself using the supplied umbilical cable. Connect the units to each other using the umbilical cable with the appropriate screw-on connections to the receptacle labeled "DC Source Input" on the right rear of the phono-stage and the connection terminal labeled "DC Source Output" on the left rear of the power supply (See Figures 2 and 5).

The H-5000 will be set internally for your location's electrical system characteristics. Please check the setting for electrical input on the label on the rear of the power supply to confirm that your H-5000 matches your location's electrical system. For North American customers, the H-5000 power supply 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.

## **C. INPUTS**

There are two (2) sets of two (2) pairs of single-ended (RCA) inputs. Four tonearms can be connected at the same time. These two pairs are located on the left hand side of the rear of the phono-stage (See Figure 2) and labeled "Input" between and above them. Each channel pair of inputs is aligned vertically, with the left channel input at the top, labeled "L" and the right channel input on the bottom, labeled "R".

The two left hand pairs of inputs (facing the back of the phono-stage) have an "MC" label between and above the two left channel connectors; these are the two input pairs for a moving coil cartridge. The right hand pair of inputs has an "MM" label between and above the left channel connectors; these are the two input pairs for a moving magnet cartridge. Each pair of moving coil

and moving magnet connections has a number label between the left and right channel input connections. The “1” pair is to the left of the “2” pair for both MC and MM pairs. These number labels correspond to the input numbers on the selector knob on the front panel of the phono-stage. All inputs can be connected at the same time. There are also two screw type, ground connection pins, one to the left and one to the right of the two sets of MC and MM input connections. Both ground connections can be connected at the same time.

When you are facing the front of the H-5000, the two pairs of MC connections are on the right of the unit, with the two MM connections immediately to their left.

To select the input you want to play, MC1 or MC2 or MM1 or MM2, use the MM or MC and Input 1 or 2 buttons on the right hand side of the face of the phono-stage (See Figure 1). The left button selects MM and MC. MM is selected when the button is in the down position. MC is selected when the button is up. The right button selects input 1 or 2 for whichever cartridge type you have chosen. Input 1 for the cartridge type is selected when the Input button is in the down position. Input 2 for the cartridge type is selected when the Input button is up.

#### **D. OUTPUTS**

The H-5000 is equipped with one pair of unbalanced or “single-ended” (RCA) outputs and one pair of true balanced (XLR) output connections. Each output pair is oriented vertically, with the left channel output connectors above the right channel output connectors. The left channel output connectors are labeled “L”, and the right channel output connectors are labeled “R” (See Figure 2). Each pair of output connections is numbered. The unbalanced (RCA) output connections are labeled “1”, and the balanced (XLR) connections are labeled “2”.

Immediately to the right of the two pairs of output connections is a switch for selecting either the balanced or the single-ended output connectors. The switch is labeled to indicate that the upper position is for the balanced (XLR) output connectors, with the lower position being for the unbalanced (RCA) output connectors. You may have both balanced and unbalanced outputs connected at the same time without introducing hum PROVIDED you have the output switch set to unbalanced output.

#### **E. MOVING COILS (MC) TRANSFORMER CONTROLS**

On the top of each channel’s MC transformer, located on the left rear of the chassis deck of the phono-stage unit (right left corner if you are facing the front of the unit), there is a rotating control (see Figure 3). Turn the control knobs to select from four gain factors: +22dB, +26dB, +28dB and +32dB (x 13, x 20, x 26 and x 40). The four control positions are labeled as both gain and the turn ratio of the MC transformer; for example, the lowest gain position of +22dB automatically corresponds to a turn ratio of x13. You should use identical settings for both transformers to avoid channel imbalance.

#### **NOTE:**

Please mute your H-5000, and/or reduce your preamplifier’s volume control, during transformer gain adjustments. Be aware if you are increasing gain, that you may hit an uncomfortably loud volume level.

## F. PHONO EQUALIZATION CONTROLS

The H-5000's phono equalization curve controls, of which there are two pairs, one for each channel, are on top of the transformers located on the right front corner of the phono-stage unit (See Figure 3). Use the rotary knobs to set the equalization for each record. The RIAA standard, which is used for most records, is a Turn-over of 500 Hz and Roll-off of -13.7 dB; this standard is indicated for each control knob (See Figure 3). Be sure to set the controls identically for both channels. A selection of some of the more common possible non-RIAA settings are found in Table 2 of this manual.

## G. A NOTE ON PHASE

Phase issues generally will result in lack of bass and/or focus of the stereo image. You may need to reverse connections on your cartridge if you are having phase issues. As is usual in these circumstances, some trial and error experimentation may be required to find the correct position. The process is simplified for you with the H-5000, as it has a phase control switch on the front panel of the phono-stage unit (see Figure 1). Switch down is normal; switch up is inverted.

## INITIAL POWER-ON

**Once you have your H-5000 phono-preamplifier and power supply units in place, the power supply is connected to the electrical source, and all connections have been made to your turntable and preamplifier, you are ready to turn on the power for your H-5000.**

### **Before you power up the H-5000, though, be sure you have:**

- **removed the packing materials from the tube chimneys ON BOTH THE POWER SUPPLY AND THE PHONO-STAGE UNITS**
- checked that all your connections are snug
- selected the output connections that you want to use, single ended (RCA) or balanced (XLR), on the switch on the back of the phono-stage (See Figure 2)
- turned the volume down or muted your preamplifier
- pressed the button switch on the left hand side of the front panel of the phono-stage, labeled "muting" below and having button in and out icons for operate and mute, respectively, to the out/up "mute" position (see Figure 1)
- pressed the button switch to the right of the mute button on the left hand side of the front panel of the phono-stage to the appropriate phase position, either "normal" (pressed in) or "inverted" (out position). We suggest starting with "normal" (See Figure 1)
- set the MM / MC and the Input 1 or 2 buttons on the right side of the face of the phono-stage to the input you will use initially (See Figure 1), MC1 or MC2 or MM1 or MM2
- if you are using a moving coil cartridge, set the MC transformer controls on the top of the chassis to the factor that you will try initially
- set the Phono Equalization controls for both channels for the setting for the first record you will use

To turn on the H-5000, press in the button switch on the right side of the power supply near the front of the unit and marked with on and off icons. Of course, the off position is the reverse, pressing the button again so it is returned to the maximum raised position.

## **OPERATION**

When the power supply is on, the LED in the top centre of the front panels of both the phono-stage and the power supply, and the two current meters on the front panel of the power supply will illuminate.

To avoid surges to the speakers, it is best to switch between MM or MC input, or between inputs 1 and 2 of either, only with the H-5000 in “mute” mode and with your preamplifier volume down or muted.

From this point on, operation is straight-forward. All functions except for MC transformers’ gain selection and the phono equalization controls are accessed from the front panel. The MC transformer and equalization controls are accessed from above (see Figure 3). Of course, BE CAREFUL about differences in gain between your sources. Generally, disc players and tuners will have greater gain than phono-stages. That means the volume setting for listening to your turntable might be too high for listening to CDs.

When you are finished listening, turn off your power amplifier(s); then turn off your preamplifier and then turn off the H-5000 last by pressing the on-off switch on right side panel of the power supply so it returns to the out position.

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

## **THE CURRENT METERS**

These illuminated meters on the front panel of the power supply indicate the current supply to the single HL-2 and the two KR242 tubes in each channel of the H-5000 power supply. There is one meter for each channel. The meters will indicate failure or damage to the function of the unit. The needle should be between the two parallel lines just left of centre on the meter face. Any failure of the tubes or circuits in one or the other of the H-5000’s power supply channels is indicated by the needle on the meter for the respective channel moving out from between these two parallel lines.

In the case of any failure indicated by a meter, please contact your Allnic dealer for assistance.

## **TUBES**

The H-5000 uses the following tubes (See Figures 3 and 6):

### **Phono-stage:**

- Two (2) x HL-2 - first gain stage
- Four (4) x KR 242 - second and third gain stages

### **Power Supply:**

- Two (2) x 5Y3 – Rectifiers
- Two (2) x 5654 – Voltage error detectors
- Two (2) x 300B - Voltage Regulators

*The rectifier tubes supplied with the H-5000 power supply are DHTs (5Y3s). The 5Y3 delivers full power to the other tubes immediately. Please note that in some electrical environments, the rectifier tubes in the H-5000 power supply may need to be changed to an indirect heated tube. An indirect heated triode rectifier will provide a slow start for tube warm up. While different rectifiers may provide different audible qualities, the rectifiers are not in the signal path: the signal path in the phono-stage remains pure DHT.*

**THE FILAMENTS OF THE RECTIFIER TUBES (DHT OR INDIRECT HEATED) FOR THE H-5000 MUST DRAW LESS THAN 2 AMPS.**

*The indirect heated triode rectifier tubes that can be used in the H-5000 power supply are:*

- 6087 or 6107 – these have a 1.7 amp filament draw
- 5AR4 and equivalents **WITH NO GREATER THAN A 1.9 AMP FILAMENT DRAW**

*Use of any other rectifier tubes may void the warranty. Consult your Allnic dealer if you are uncertain.*

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

## **SPECIFICATIONS FOR THE ALLNIC AUDIO H-5000 PHONO-STAGE**

### **Inputs:**

- Moving Coil (MC) × two (2) pairs unbalanced (RCA)
- Moving Magnet (MM) x two (2) pairs unbalanced (RCA)

### **Ground:**

- Two (2) x screw type terminals

### **Outputs:**

- One (1) pair x unbalanced (RCA)
- One (1) pair x balanced (XLR)

### **Frequency Response (RIAA):**

- 30Hz ~ 20KHz ( $\pm 0.5$ dB)

### **Voltage Gains:**

- MM +44dB (1KHz)
- MC +74dB (1KHz)

### **Input Impedance:**

- MC - up to 200  $\Omega$
- MM – up to 47 K $\Omega$  or, upon request, up to 85 K $\Omega$

### **Maximum Input Voltage:**

- MM non-clipping:
  - 30 Hz – 10mV
  - 100 Hz – 45mV
  - 1KHz – 200mV
  - 10 KHz – 600 mV

### **Total Harmonic Distortion (THD):**

- Less than 0.3% (1KHz, Output 1V)

### **Output Impedance:**

300  $\Omega$  (Constant)

### **Signal to Noise (S/N) Ratio:**

- - 80db (CCIR, 1KHz)

### **Power Consumption:**

- 70W at 220 V / 110/120 V / 50 / 60 Hz

**Tubes:****Phono-stage:**

- Two (2) x HL-2 - first gain stage: no equivalents
- Four (4) x KR242 - second and third gain stages: equivalent is Telefunken RS242 only

**Power Supply:**

- Two (2) x 5Y3 – Rectifiers **SEE NOTICE ABOVE IN THE “TUBES” SECTION WITH REGARD TO USING A RECTIFIER OTHER THAN A 5Y3**
- Two (2) x 5654 – Voltage error detectors: equivalents are 6AK5W, E95F, M8100, 6096, CK5654, 5654W, GL-5654, CV4010, CV850, 5654RT
- Two (2) x 300B - Voltage Regulators – no equivalents

**Fuse:**

- AC 2A, 250V

**Dimensions:**

## Phono-stage:

- 430mm (16.9 inches) x 360mm (14.3 inches) x 250mm (10 inches) (W x D x H)

## Power supply:

- 430mm (16.9 inches) x 360mm (14.3 inches) x 250mm (10 inches) (W x D x H)

**Weight:**

## Phono-stage:

- 15 Kg (33 lbs) unpacked

## Power supply:

- 15 Kg (33 lbs) unpacked

## Both units in original packing:

- 17.2 Kg (38 lbs.)

**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 your authorized Allnic Audio dealer.

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



**Table 1: Some Common Equalization Settings**

RECORD LABEL	TURN-OVER	ROLL-OFF
HMV, EMI-ANGEL, WESTMINSTER, EPIC, & COLUMBIA	500Hz (Early versions 250Hz)	-16dB (Sometimes -13.7dB) (Early versions 0dB)
DECCA	500Hz	-11dB
L'OISEAU-LYRE	*Early ffr 700Hz	-11dB
ARGO, RCA (New Orthophonic), & BRUNSWICK (RIAA)	500Hz	-13.7dB
RCA (1949-51)	700Hz	-13.7dB
RCA (1951-52)	500Hz	-13.7dB
TELEFUNKEN & (German) DECCA	400Hz	-5dB
PHILIPS	400Hz	-5dB
MERCURY	400Hz	-11dB
MELODIYA, DG & ETERNA	500Hz (Sometimes 250Hz)	-13.7dB (Sometimes -11dB or -16dB)
NARTB	500Hz	-16dB
CAPITOL (1942)	400Hz	-11dB

\* *This chart is for general reference only and can be changed without prior-notice as more information becomes available.*

\* *Values are rounded in accordance with Allnic measurements.*

\* *This Table of Common Equalization Settings has been assembled thanks to kind guidance of MR. SUNGJUN PARK, the well-known Korean conductor.*

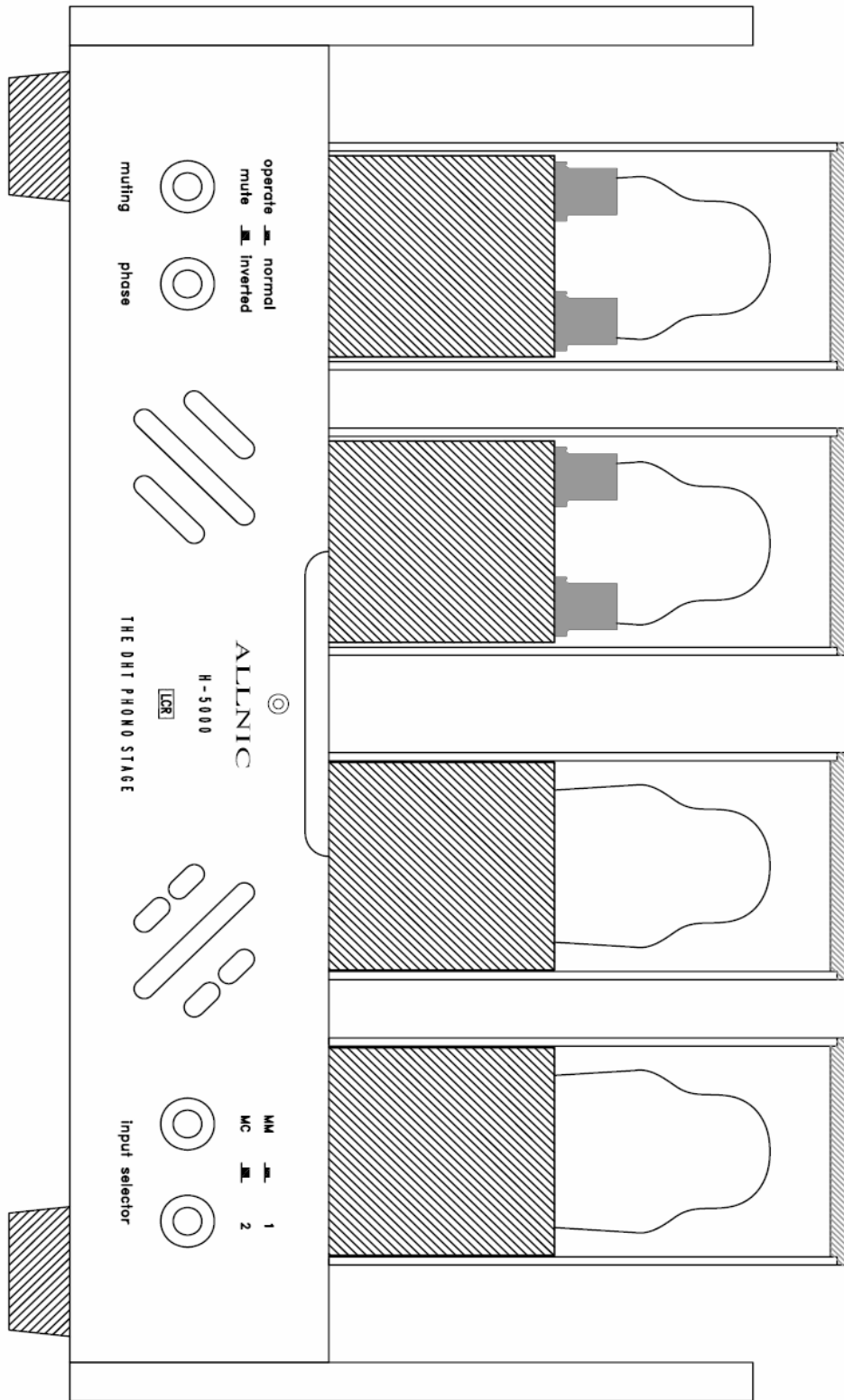


FIGURE 1

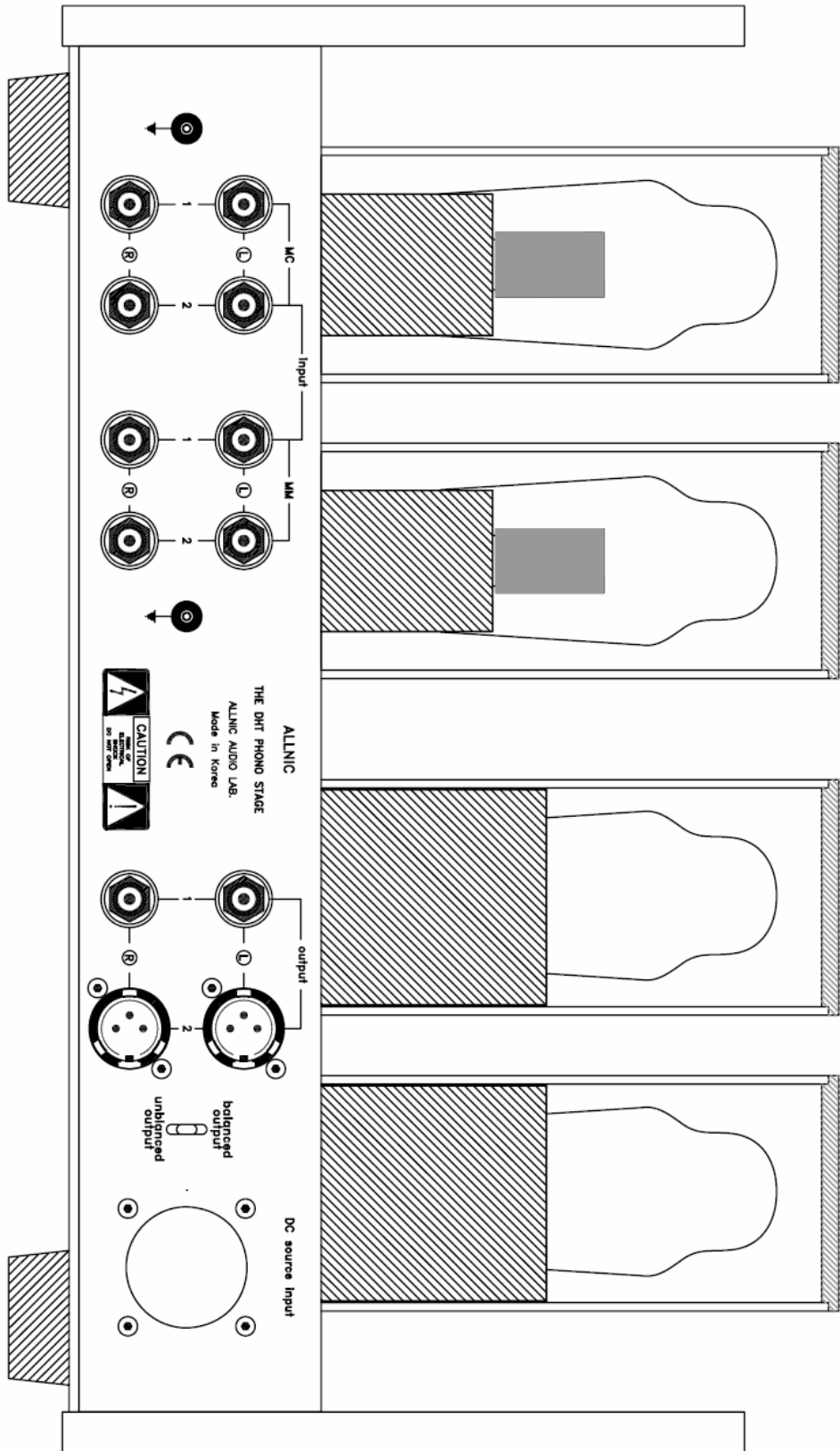


FIGURE 2



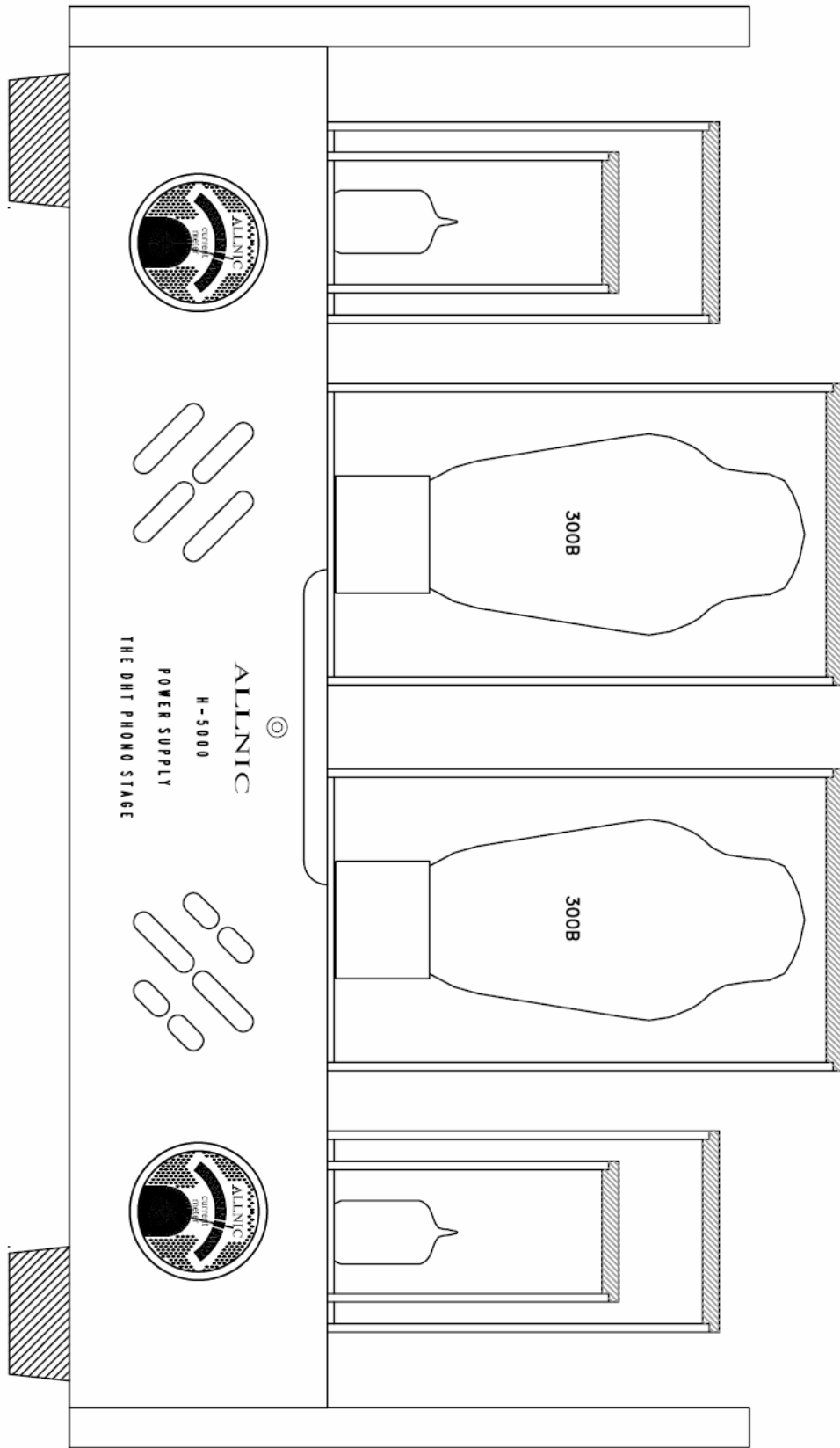


FIGURE 4

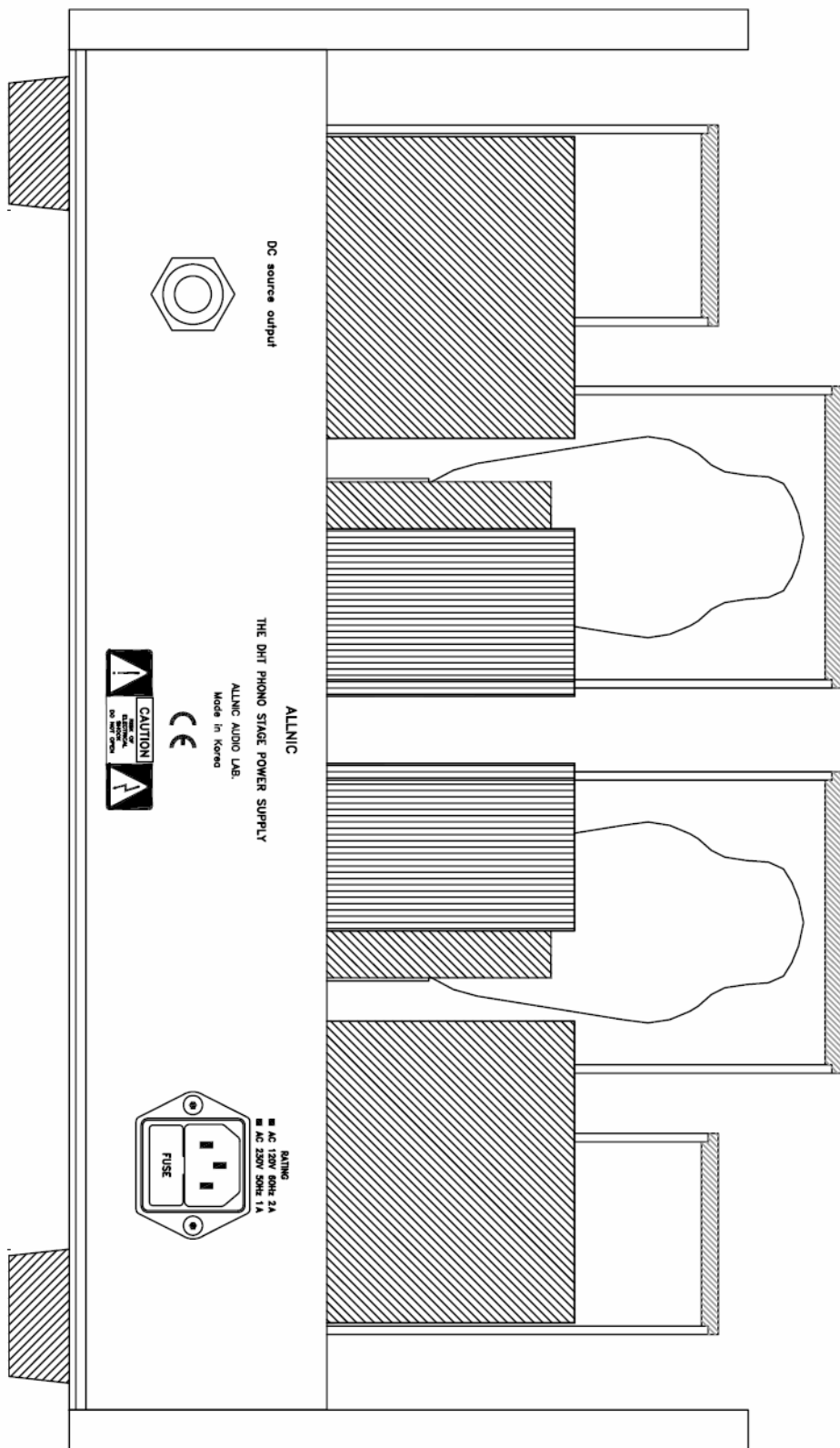


FIGURE 5



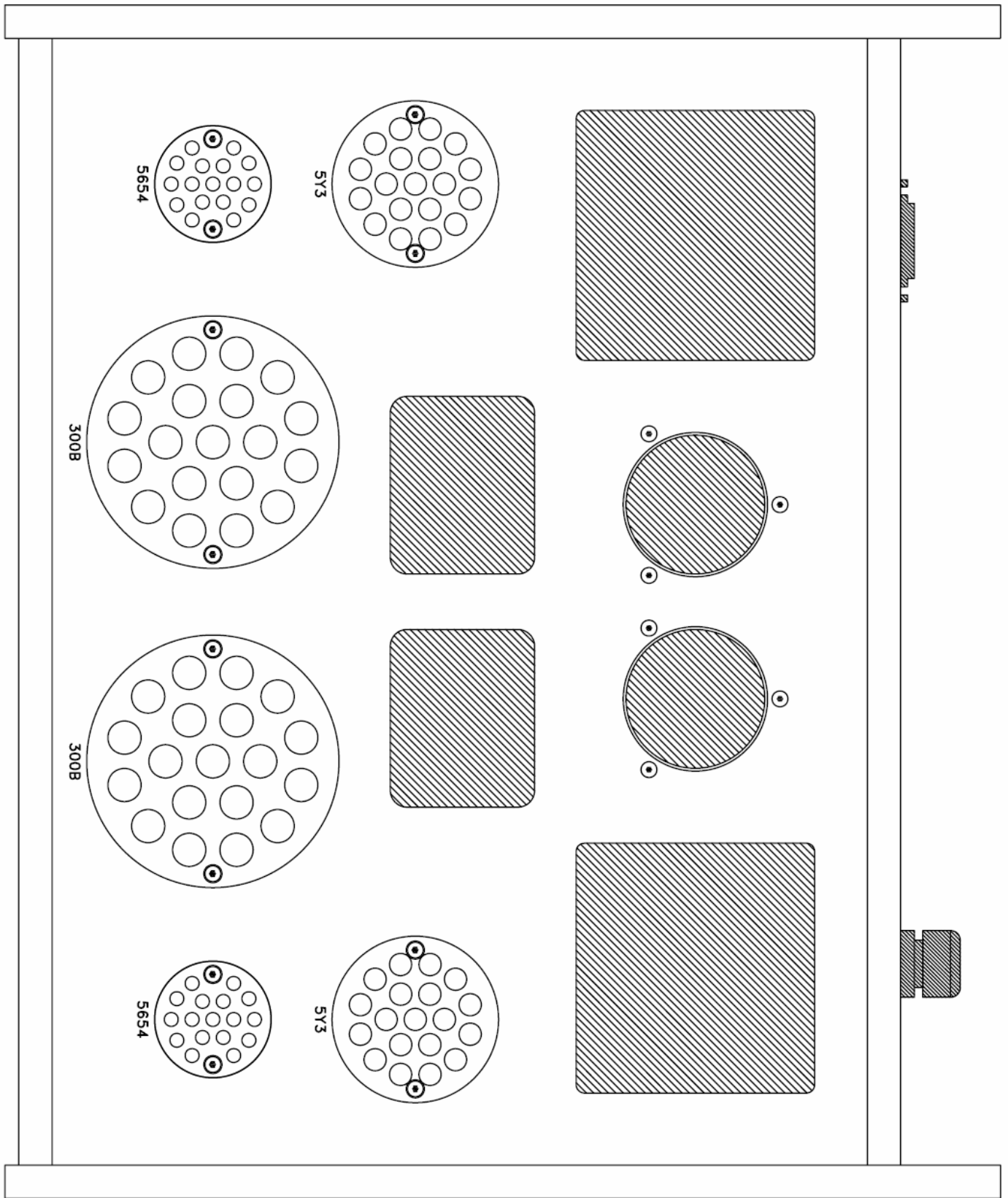


FIGURE 6