ALLNIC AUDIO

M-3000 MK 3

KT170 MONOBLOCK POWER AMPLIFIER

OWNER'S MANUAL

ALLNIC AUDIO
M-3000 MK 3 MONOBLOCK AMPLIFIER

Thank you for purchasing the Allnic Audio M-3000 MK 3 Monoblock Power Amplifier. 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 M-3000 MK 3 Monoblock Amplifier to the other components of your system and the wall outlet. Failure to follow the guidance in this manual may result in voiding the warranty.

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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:

Please read about **SAFETY** before you attempt to use the M-3000 MK 3 - we care about our customers and the equipment, and we want you to enjoy this product for a long time!

INTRODUCING THE M-3000 MK 3 MONOBLOCK POWER AMPLIFIER

The M-3000 MK 3 monoblock amplifier is Allnic Audio's top of the line, parallel push-pull power amplifier model. Like all Allnic Audio products, the M-3000 MK 3 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 M-3000 MK 3 is an updated version of the original M-3000. It uses the new, powerful and musical KT170 power tube, with requisite changes to transformers and several minor circuit elements. The MK 3 has the following features:

- 240 watts of high-power output in beam tetrode mode, 120 watts in triode. The M-3000 MK 3 is a parallel push-pull, triode/tetrode switchable power amplifier.

- Powerful Driving Circuitry. Allnic believes in the importance of using high-quality, low noise and powerful driving circuitry in all its amplifying devices. Therefore, in the M-3000 MK 3, we employ the powerful 6S4 triode tube as the second stage driver tube. The listener can easily hear and even "feel" the differences between this design and other, more conventional, ones. Please imagine, as you listen to the M-3000 MK 3, its sound compared to the sound of an amplifier with conventional 12AU7 or 12BH7 tubes used as drivers.

- "Full Engagement" Output Transformers. Conventional output transformers use pre-set secondary windings to accommodate 4, 8 and 16 ohm loudspeaker loads. However, these conventional transformers utilize only one secondary winding at a time, while the other secondary windings remain "idle". This approach has two adverse effects. First, the output transformers are not working at their maximum efficiency, reducing their output relative to their potential. Second, the "idle" windings are not actually "idle"; they are subject to parasitic oscillations, producing their own "signal". This undesirable electrical information is additive to the transformer's output, distorting the amplified signal going to the loudspeaker. Allnic's "Full Engagement" transformers address these issues by having 4 independent, secondary windings that are always fully connected, never "idled". This means that all secondary windings are always connected to your loudspeakers, regardless of which output switch position you use (4 ohms or 8 ohms or 8 ohms or 16 ohms, depending on the factory configuration you have selected). The result is that there is neither a loss of transformer output efficiency, nor the introduction into the output signal of distortion from parasitic oscillations of the secondary windings.

- Large Nickel/FeSi Core Output Transformers. As with our other models, Allnic uses very large output transformers (114 mm) with nickel, mixed with FeSi, cores. This provides for higher inductance with fewer windings than other designs can provide and results in the great benefit of an extremely wide range of output frequencies.

- "Soft-start" Circuitry. Allnic uses soft start circuitry that, after sufficient warm-up only, provides the high voltage supply to the plate of each tube. This protective design results in prolonged tube life and fewer and less frequent issues with tube performance.

- Analogue Power Tube Current Monitors. In order to provide constant current (bias) monitoring for the power tubes, Allnic uses a separate analogue current meter for each tube. The meters make it exceptionally easy to see the status of each tube at any time and to respond immediately to any variation in bias by use of the bias control knob for the relevant tube. The meters offer a simple, unambiguous indication of each tube's status compared to conventional LED bias monitors.

- "On-the-Fly" Triode/Tetrode Switching. Switching between triode and tetrode operation can be done "on-the-fly" at any time while the amplifier is in use.

- Beautiful 20KHz square wave response. See Figures 1-3.

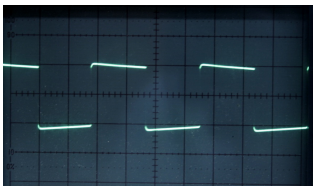


Fig.1 Square Wave 50Hz*

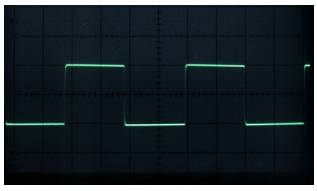


Fig.2 Square Wave 1KHz*

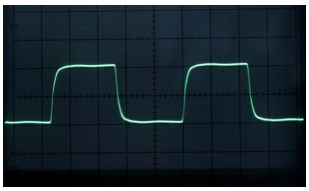


Fig.3 Square Wave 20KHz*

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

- As are all Allnic Audio products, the M-3000 MK 3 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 (or each one of them if you purchased a pair) contains the following:

- One (1) each Allnic M-3000 MK 3 monoblock power amplifier
- One (1) each 15 amp IEC type power cord
- One (1) Owner's Manual
- One (1) Hex/Allen key

Note:

1) The M-3000 MK 3 ships with the tubes installed.

2) The M-3000 MK 3 will work with most IEC type aftermarket power cords. Allnic's ZL-3000, ZL-5000 and ZL-8000 power cables will make an excellent match. Of course, only you can determine the power cord that works most synergistically with the M-3000 MK 3 in your system.

3) Be sure the M-3000 MK 3 is labeled for the AC voltage of your location. If it is not, DO NOT connect it to your AC outlet. Please contact your Allnic dealer.

We advise that you keep the boxes and other packing materials that your M-3000 MK 3 came in. It will be useful if you sell your M-3000 MK 3 or in the unlikely event you need to ship it for service.

SAFETY

- **Remove ALL protective cushioning material (cardboard around the tubes) inside the tube chimneys before operation. The tube chimneys should contain NOTHING except the tubes (It is optional to leave the "O" rings on the small tubes*, if any*; some prefer the sound with the O rings on).**
- 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.
- **DO NOT leave the M-3000 MK 3 turned on for extended periods of time – NEVER 24/7, even for (an unnecessary) "break-in" period. This will greatly increase the likelihood of premature tube and/or internal failures. Power on the unit and let it warm up for some minutes; then, when finished a listening session, do a complete power off.**

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 M-3000 MK 3.

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 M-3000 MK 3 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 M-3000 MK 3.
- 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 M-3000 MK 3 on some kind of after-market isolation feet or similar devices. Dropping one side of the M-3000 MK 3 or the whole of the unit may cause damage and 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 NOT attempt any repairs.

- DO place the unit on a well-ventilated 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 M-3000 MK 3 is a highly sensitive piece of electronic designed for neutrality and will output what you put into it. Allnic's Zero Loss Technology cables will work synergistically with the M-3000 MK 3.
- DO try to place M-3000 MK 3 away from major sources and potential receivers of RFI and EMI. Though well shielded, the M-3000 MK 3 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.
- DO allow sufficient time for any condensation to evaporate before plugging the M-3000 MK 3 into an AC connection when the unit is moved from a cold to a warm environment.

B. INPUTS

There are two (2) female inputs. 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"; the bottom position is for the reverse (in both cases, pin 1 is ground). See Figure 5.

C. SPEAKER TERMINALS

The M-3000 MK 3 is equipped with one pair of high-quality speaker terminals. These terminals are located in the middle of the rear panel of the M-3000 MK 3 chassis, with the terminal for the live connection marked positive "+" on the left, and with the return connection labeled negative "-", to the right (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) and spade and banana type connectors. See Figure 5.

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 5). The M-3000 MK 3 uses a standard North American 15 Amp, three prong male IEC connection for AC input. You need to use a power cord with a female North American 15 Amp, three prong IEC connector at one end. **Please note that use of a three phase AC power source or an AC regenerating power conditioner may cause hum.**

The M-3000 MK 3 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 unit to confirm that your M-3000 MK 3 matches your location's electrical system. For North American customers, the M-3000 MK 3 is set internally for AC 110/120 volt – 50/60 Hz. For customers in other regions, the unit is set for 230/240V – 50/60 Hz operation. **If the voltage is not correct, do not connect your monoblocks to AC and please contact your authorized Allnic representative. AC voltage can be switched from one to the other but only by a qualified technician. For instructions, please contact your authorized Allnic representative.**

INITIAL POWER-ON

Once you have your M-3000 MK 3 in place and all your system's connections are properly mapped and secure to your source(s) and preamplifier, you are ready to turn on the power for your M-3000 MK 3. Before you power up the M-3000 MK 3, though, be sure you have:

- **removed ALL the cushion materials (cardboard) from inside the tube chimneys. (It is optional to leave the "O" rings on the small tubes, *if any*; some prefer the sound with the O rings on.)**
- ensured the input connections you are using, single ended (RCA) or balanced (XLR), are firm and secure, and if using the XLR, that the switch on the back of the chassis is set to the appropriate pin configuration
- 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, ensured that they are also connected properly to the speakers, and that the speaker impedance switch is set to the position matching your speakers' impedance
- checked that all tubes are snug in their sockets

Turn on the M-3000 MK 3 by pushing in the power switch button located at the right of the front panel (facing the front of the unit) to the "on" position (See Figure 4). The "on" position is with the button switch depressed. Of course, the off position is the reverse. After a brief delay (the soft start), the M-3000 MK 3 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 with the meters' needles between the two parallel lines on the meter face.

OPERATION

When the power is on, the current meters on the top plate of the chassis will illuminate (See Figure 6). From this point on, operation is straight-forward. When you are finished listening, turn off your M-3000 MK 3(s) monoblock(s) first; then, turn off your preamplifier and sources. **If the M-3000 MK 3s are in triode mode at turn-off, they will produce a sound through the speakers as the amplifier's relays turn off. Though this sound is harmless to speakers, some users may prefer not to hear it. To avoid the sound, simply switch the M-3000 MK 3s to tetrode mode prior to turning them off (see the "On-the-Fly Triode/Tetrode Switching section below).**

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

"ON-THE-FLY" TRIODE/TETRODE SWITCHING

You can use the Triode/Tetrode "Mode Selector" button at any time during operation to switch back and forth from Triode to Tetrode operation. Press the mode selector button on the front panel (See Figure 4) down to have the M-3000 MK 3 operate in Triode mode; press the button again so it is in the raised position to have the M-3000 MK 3 operate in Tetrode mode.

THE CURRENT METERS

These illuminated meters indicate the current supply to each of the four KT170 gain tubes in the M-3000 MK 3. There is one current meter for each KT170 power tube. There is also a potentiometer and a fuse for each KT170 (See Figure 6).

When you turn on the M-3000 MK 3, the needle of each current meter should be between the two parallel lines on the meter face. Any error of current supply to or failure of a KT170 tube is indicated by the needle on the KT170 tube's respective meter moving out from between these two parallel lines.

TUBES AND TUBE BIAS

Each M-3000 MK 3 monoblock uses the following tubes:

- Four (4) x KT170
- Two (2) x 6S4
- One (1) x 5654

Because of the individual bias for each KT170, it is not necessary to use a matched quad of these power tubes in the M-3000 MK 3.

If the needle of a current meter for a KT170 has moved to the left of the parallel lines on the meter face, using an appropriately bladed screwdriver, adjust the small yellow potentiometer directly in front of the meter for that tube by turning it clockwise until the needle has returned to between the meter's parallel lines (See Figure 6). If the meter needle has moved to the right of the parallel lines on the meter face, turn the potentiometer control counterclockwise to correct. Please be gentle and patient. The potentiometers have a limited range of turning, and when they reach their limit, they will resist. **DO NOT in any circumstances try to turn a potentiometer past its point of resistance in either direction; doing so will damage the potentiometer and void the warranty.** If a meter will not balance, please contact your Allnic dealer for assistance.

SAFETY! Before changing any fuse or removing and replacing any tube or fuse, you must power off the M-3000 MK 3 amplifier and disconnect it from the electrical source.

If a meter's needle drops to the left limit of the meter's face during operation, this indicates a failure of the related KT170 tube. You must turn off the M-3000 MK 3 and replace the KT170 tube and, if it has blown, the fuse for that KT170 (0.5A, 250V, 5x20mm Slow-Blow). To replace a fuse, using a screwdriver, simply turn the top of the black fuse cap counterclockwise (See Figure 6). It will spring out holding the fuse. Replace the fuse with a good, inexpensive one of the same rating to avoid risk if you are using a more costly aftermarket 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.

If the AC mains fuse, located at the IEC input, has failed, it can be replaced with the spare fuse provided in the tray in the IEC mount or a good, inexpensive one of the same rating to avoid risk if you are using a more costly aftermarket fuse. **POWER OFF** and disconnect the M-3000 MK 3 from the AC source to change the fuse. (5A 250V 5x20mm Slow-Blow for 110-120V regions; 3A 250V 5x20mm Slow-Blow for 230-240V regions - See Figure 5) . **You MUST unplug the M-3000 MK3 to replace an AC mains fuse.** Again, if you have any questions about doing this, please contact your Allnic dealer for assistance. **WARNING. Note that the fuse above the IEC inlet may be misprinted. Notwithstanding what may be printed above the IEC inlet, the correct rating for the mains fuse is 5A 250V for 110/120V regions and 3A 250V for 230/240V regions.**

If output on a monoblock is lost and the meter needles for that channel may have dropped to the right, a 6S4 or 5654 may have failed. After checking all upstream components, to identify the failed tube, simply swap one of the 6S4s on the affected monoblock with one from the working monoblock. If that does not restore output, swap the other two 6S4s. If that does not restore output, swap the 5654s between the monoblocks. Replace the failed tube(s). Again, if you have any questions about doing this, please contact Your Allnic dealer for assistance.

Of course, you may have to adjust the bias back into the area between the two parallel lines of the meter for a tube when it is replaced. When replacing a KT170, first turn the bias screw counterclockwise slightly to reduce current, in case the bias is set too high for the new tube (since the old tube may have required additional bias). Bring the bias up gradually to the middle between the two lines on the meter.

As experienced users of vacuum tube equipment know, any tube can be carefully machine tested and selected and re-tested under real use conditions at the factory but still fail early. Because of their age, vintage tubes can be especially fragile and more prone to fail prematurely in use despite intensive testing. Included tubes are guaranteed for the time and per the conditions in the Warranty section below. It may take shipping time, however, to transport replacements to you. As many experienced users do, you may want to acquire at your own cost and risk a set of back-up replacement tubes to have on hand for immediate use "just in case".

Allnic Audio and its authorized representatives make no representations nor any warranty regarding the quality of tubes obtained from third parties and are not responsible for any issues or losses relating thereto. All consequences of changing or attempting to change tubes are borne by the user unless by express agreement between the owner and the owner's Allnic dealer. Allnic Audio and its authorized representatives are not liable in any way whatsoever for any damage to the M-3000 MK 3 or any injury or loss incurred by the user resulting from the user changing or attempting to change tubes.

WARRANTY

FOR WARRANTY SERVICE, PLEASE CONTACT YOUR AUTHORIZED ALLNIC DEALER.

Except for the tubes, this Allnic Audio product is warranted against materials and manufacturing defects only for two (2) years from date of purchase. The tubes in this product are warranted against materials and manufacturing defects only for six (6) months from date of purchase. Date of purchase is the date indicated on the invoice issued by Allnic Audio or its authorized representative for original purchase of the new product. The warranty does not cover any damage occurring during product shipment at any time, nor any damage occurring as a result of any of this product's owner's or owners' negligence or willful mistreatment. Failure to operate or care for this product in accordance with instructions in this manual will be deemed negligent. For the warranty to be valid, this product must be returned first to Allnic Audio's authorized representative for warranty service prior to any unauthorized attempt to repair or modify it. Any repair done to or modification of this Allnic Audio product at any time performed without specific authorization from Allnic Audio or its authorized representative will void the warranty. Allnic Audio and its authorized representatives shall be the sole determiners of whether the warranty has been voided. Provided that the warranty has not been voided, the warranty is transferable for the balance of the original purchaser's warranty period.

The warranty covers parts and labour only. If required for warranty service, shipping of this product to and return to product owner from an authorized Allnic representative will be at product owner's sole cost. In the case of required factory warranty service, shipping to Korea shall be at product owner's sole cost. Provided that Allnic has determined that the warranty is not void, Allnic will pay the cost of return shipping to product owner. If Allnic determines that the warranty is void, return shipping to product owner will be at product owner's sole cost.

After expiry of the applicable warranty period or if the warranty is void, Allnic Audio and its authorized representatives are not responsible for nor obligated in any manner whatsoever to undertake, or to cover or reimburse the costs of any repairs or modifications to this product.

The warranty does not cover and Allnic Audio and its authorized representatives are not responsible for any incidental costs or damages to the person or property of original purchaser, any subsequent owner of this product, or any third party occurring as a result of any malfunction or misuse of this product however and whenever caused.

SPECIFICATIONS FOR THE ALLNIC AUDIO M-3000 MK 3 KT170 MONOBLOCK POWER AMPLIFIER

- Output Power:
  - 240w (8Ω load, at 1KHz) Pentode
  - >100w (8Ω load, at 1KHz) Triode
- Distortion:
  - 0.17% at 1KHz at 10w
- Frequency Response:
  - 20Hz - 20KHz Flat
- S/N Ratio:
  - -80dB (CCIR, 1KHz)
- Damping Factor:
  - 8 at 8Ω load at 1KHz
- Voltage gain:
  - +28dB
- Input Impedance:
  - 100KΩ (single-ended, unbalanced)
- Input Sensitivity:
  - 2.0V for maximum rated power
- Fuses:

  Mains:

  AC 5A, 250V – 5x20mm slow-blow for 110/120V regions

  AC 3A, 250V – 5x20mm slow-blow for 230/240V regions

  WARNING. Note that the fuse above the IEC inlet may be misprinted. Notwithstanding what may be printed above the IEC inlet, the correct rating for the fuse is 5A 250V 5x20mm slow-blow for 110/120V regions and 3A 250V 5x20mm slow-blow for 230/240V regions.

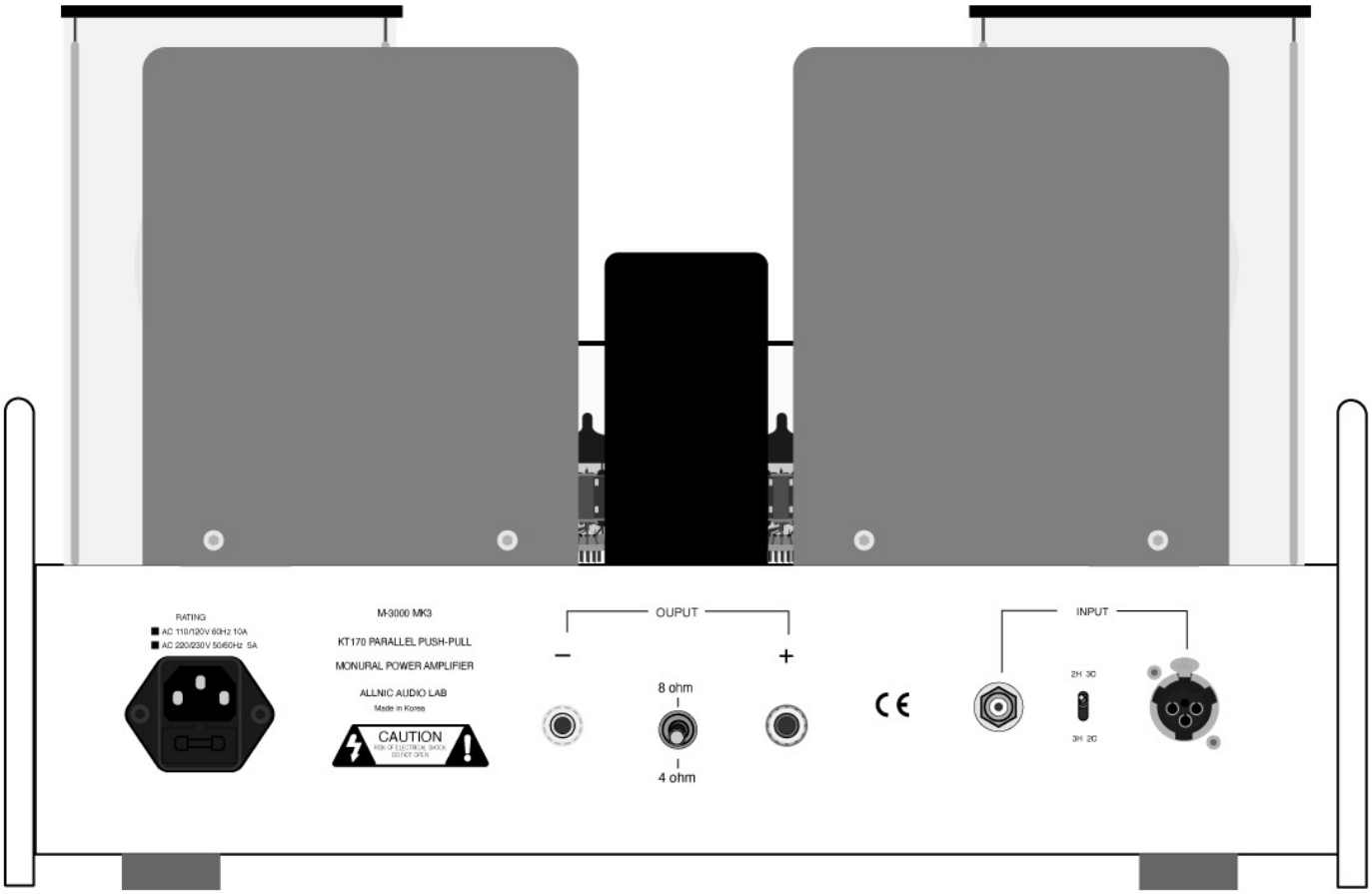
  KT170s:

  0.5A, 250V - 5x20mm slow-blow
- Tubes (per chassis):
  - KT170 X 4 (power tube – no equivalent)
  - 6S4 X 2 (second stage drivers – equivalent to 6S4A)
  - 5654 X 1 (first stage driver – equivalent to 5654W, 6AK5, 6AK5W, EF95, E905F, EF905, CV4010, M8100, 6096)
- Dimensions:
  - (W x D x H) 430mm (16.93 inches) x 430mm (16.93 inches) X 290mm (11.4 inches)
- Weight:
  - 36 kg/79.4 lbs net per monoblock.
  - 43 kg/ 94.8 lbs shipping weight per monoblock

FIGURES

Figure 4 – Front View

Figure 5 – Rear View



WARNING. Note that the fuse above the IEC inlet may be misprinted. Notwithstanding what may be printed above the IEC inlet, the correct rating for the fuse is 5A 250V 5x20mm slow-blow for 110/120V regions and 3A 250V 5x20mm slow-blow for 230/240V regions.

Figure 6 – Top View