



M-3000 MK2

KT150 MONOBLOCK POWER AMPLIFIER



OWNER'S MANUAL

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ALLNIC AUDIO M-3000 MK2 MONOBLOCK AMPLIFIER

Thank you for purchasing the Allnic Audio M-3000 MK2 Monoblock Power Amplifier. We are certain your trust in Allnic Audio and Audiomentors, as well as your appreciation for the sound of this high-quality device, will be rewarded by its excellent operation for years to come.

**AUDIOMENTORS(ALLNIC AUDIO'S MARKETING
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**** Information and specifications for the Allnic Audio product described
in this manual are subject to change without notice.**

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INTRODUCING THE M-3000 MK2 MONOBLOCK POWER AMPLIFIER

The M-3000 MK2 monoblocks are Allnic Audio's top of the line, parallel push-pull power amplifier model. Like all Allnic Audio products, the M-3000 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 MK2 has the following features:

- 200 watts of high power output. The M-3000 MK2 is a parallel push-pull, triode/pentode 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 MK2, we employ the E282F tube in triode mode as the second stage driver tube, with a load of about 5K ohms, and using 20mA of current. 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 MK2, its sound compared to the sound of an amplifier with conventional 12AU7 or 12BH7's used as drivers, with a load of about 47K ohm, and using 2 to 3mA of current.
- "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 which 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.

- Note:
- 1) The M-3000 MK2 ships with the tubes installed
 - 2) The M-3000 MK2 will work with most IEC type aftermarket power cords. Of course, only you can determine the power cord that works most synergistically with the M-3000 MK2 in your system.
 - 3) Be sure the M-3000 MK2 is labeled for the AC voltage of your location. If it is not, please contact Audiomentors.

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

We advise that you keep the boxes and other packing materials that your M-3000 MK2 came in. It will be useful if you sell your M-3000 MK2 or in the unlikely event you need to ship it for service.

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

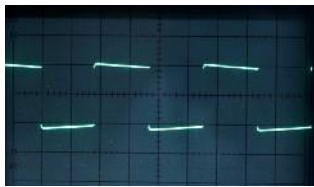


Fig.1 Square Wave 50Hz

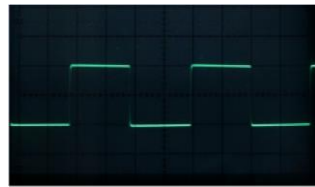


Fig.2 Square Wave 1KHz



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 MK2 is fully RoHS (EU Reduction of Hazardous Substances regulation) compliant in construction and materials.

SAFETY

- **Remove ALL protective cushioning material (cardboard around and "O" rings on tubes) 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 Audiomentors.
- 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 M3000 MK2 into an AC connection.
- Do not attempt any repairs.

WHAT'S IN THE BOX?

Please check that the pair (assuming you purchased a pair) of shipping boxes contain the following:

- One (1) each Allnic M-3000 MK2 monoblock power amplifier
- One (1) Owner's Manual

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 MK2.
- 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 MK2 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 MK2.
- 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 MK2 on some kind of after-market isolation feet or similar devices. Dropping one side of the M-3000 MK2, 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 M-3000MK2 is a highly sensitive piece of electronic designed for neutrality and will output what you put into it.
- DO try to place M-3000 MK2 away from major sources and potential receivers of RFI and EMI. Though well shielded, the M-3000 MK2 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.

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 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 M-3000 MK2 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 MK2 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.

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. The M3000 MK2 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.

The M-3000 MK2 you have purchased is set internally for AC 220 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 M-3000 MK2 in place and all connections have been made to your source(s) and preamplifier, you are ready to turn on the power for your M-3000 MK2. Before you power up the M-3000 MK2, though, be sure you have:

- **removed ALL the cushion materials (cardboard and "O" rings) from inside the tube chimneys/on tubes.**
- 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 M-3000 MK2 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. The "on" position is with 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 M-3000 MK2 will be powered on.

OPERATION

When the power is on, the current meters on the top plate of the chassis will illuminate. From this point on, operation is straight-forward. When you are finished listening, turn off your M-3000 MK2(s) monoblock(s) first; then, turn off your preamplifier and sources. **If the M-3000 MK2's 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 MK2's to pentode mode prior to turning them off (see the "On-the-Fly Triode/Pentode Switching section below).**

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

"ON-THE-FLY" TRIODE/PENTODE SWITCHING

You can use the Triode/Pentode "Mode Selector" button at any time during operation to switch back and forth from Triode to Pentode operation. Press the mode selector button down to have the M-3000 MK2 operate in Triode mode; press the button again so it is in the raised position to have the M-3000 MK2 operate in Pentode mode.

THE CURRENT METERS

These illuminated meters indicate the current supply to each of the four KT150 gain tubes in the M-3000 MK2. There is one current meter for each KT150 power tube. There is also a potentiometer and a fuse for each KT150.

When you turn on the M-3000 MK2, 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 KT150 tube is indicated by the needle on the KT150 tube's respective meter moving out from between these two parallel lines.

TUBES AND TUBE BIAS

Each M-3000 MK2 monoblock uses the following tubes:

- Four (4) x KT150
- Two (2) x E282F
- One (1) x 6AK6

Because of the individual bias for each KT150, it is not necessary to use a matched quad of these power tubes in the M-3000 MK2.

If the needle of a current meter for a KT150 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 a meter's needle drops to the left limit of the meter's face during operation, this indicates a failure of the related KT150 tube. You must turn off the M-3000 MK2 and replace both the fuse (0.5A, 250V, 20mm glass type) for that tube and the KT150. 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 Audiomentors for assistance.

You may use any KT150 type tube in the M-3000 MK2. 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 Audiomentors. Allnic Audio and Audiomentors are not liable in any way whatsoever for any injury or loss incurred by the user or for damage to the M3000 MK2, any of its parts, or tubes or replacement tubes resulting from the user changing or attempting to change tubes.

**SPECIFICATIONS FOR THE ALLNIC AUDIO M-3000 MK2
KT150 MONOBLOCK POWER AMPLIFIER**

Output Power: 200w (8Ω load, at 1KHz)

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: +26dB

Input Impedance: 100KΩ (single-ended, unbalanced)

Input Sensitivity: 2.0V for rated power

Fuses: 0.5A, 250V, 20mm slow-blow (KT120's)
5A, 250V, 20mm slow-blow (IEC Mains)

Tubes (per chassis): KT150 X 4 (power Tube)
E282F X 2 (second stage drivers)
6AK6 X 1 (first stage driver)

Dimensions: (W x D x H) 430mm (16.93 inches)
x 430mm (16.93 inches) X 240mm (9.45 inches)

Weight: 42Kg net per monoblock.
55Kg shipping weight per monoblock.

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 Audiomentors.

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