ALLNIC AUDIO

T-1800 MK2

EL34 STEREO INTEGRATED AMPLIFIER

OWNER'S MANUAL

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T-1800 MK2 EL34 STEREO INTEGRATED AMPLIFIER

Thank you for purchasing the Allnic Audio T-1800 MK2 EL34 Stereo Integrated 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 T-1800 MK2 EL34 Stereo Integrated 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.**

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Please read about **SAFETY** before you attempt to use the T-1800 MK2 EL34 Integrated Amplifier - we care about our customers and the equipment, and we want you to enjoy this product for a long time!

INTRODUCING THE T-1800 MK2 EL34 STEREO INTEGRATED AMPLIFIER

The T-1800 MK2 stereo integrated amplifier is Allnic Audio's EL34 stereo integrated amplifier model. Like all Allnic Audio products, the T-1800 MK2 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 T-1800 MK2 has the following features:

- 40 watts of high-power output. The T-1800 MK2 is a push-pull, EL34 power tube based stereo integrated amplifier.

- Remote controlled 41 step silver contact attenuator. The T-1800 MK2 employs this house made quality attenuator instead of standard, outsourced carbon film potentiometers. The Allnic attenuator provides complete channel balance and less distortion.

- Powerful Driving Circuitry. Allnic believes in the importance of using high-quality, low noise and powerful driving circuitry in all its amplifying devices. The T-1800 MK2 uses only two stages of driving circuit.

- "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, the T-1800 MK2 uses the latest, very large Allnic large output transformers (96 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. The meters offer a simple, unambiguous indication of each tube's status compared to conventional LED bias monitors.

- As are all Allnic Audio products, the T-1800 MK2 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 T-1800 MK2 EL34 stereo integrated amplifier
- One (1) Allnic remote control
- Two (2) x AAA batteries for the remote control
- One (1) Allen wrench for screws on top of the tube chimneys
- One (1) IEC type power cord
- One (1) Owner's Manual
- One (1) Hex/Allen key

Note:

1) The T-1800 MK2 ships with the tubes installed.
2) The T-1800 MK2 will work with most IEC type aftermarket power cords. **The Allnic 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 T-1800 MK2 in your system.**
3) **Be sure the T-1800 MK2 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 T-1800 MK2 came in. It will be useful if you sell your T-1800 MK2 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 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 T-1800 MK2 into an AC connection.
- Do not attempt any repairs.
- See the notes on "Location, Location, Location".
- **DO NOT leave the T-1800 MK2 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/plastic

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 T-1800 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 T-1800 MK2 needs to be placed on a solid stand in a location that provides good air circulation around, above and below the stereo amplifier.

- DO NOT cover the top of the T-1800 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 T-1800 MK2 on some kind of after-market isolation feet or similar devices. Dropping the T-1800 MK2 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 place the unit on a well-ventialted 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 T-1800 MK2 is a highly sensitive piece of electronic designed for neutrality and will output what you put into it. **Allnic's Zero Loss Technology power cables and MU metal shielded interconnects will work synergistically with the T-1800 MK2.**
- DO try to place T-1800 MK2 away from major sources and potential receivers of RFI and EMI. Though well shielded, the T-1800 MK2 will function best away from large power transformers and other sources of such interference and from other equipment that could be susceptible to/sources of such forms of interference.

B. INPUTS

There are four (4) RCA type female input pairs and one (1) female balanced (XLR) input pair. Facing the rear of the chassis, the input connections are to the right of the IEC power input and the Pre-out terminal pair. The left channel connector is the top one in each line input pair. Please refer to Figure 2.

You can use the T-1800 MK2 with a separate preamplifier by connecting the outputs of the preamplifier to one pair of the T-1800 MK2's inputs**. HOWEVER, please use caution when you do this. If you have both volume controls above zero on turn on, especially with signal, you could damage your speakers because of the extreme volume level from the combined gain of both the preamplifier and the T-1800 MK2.** On initial turn on with a separate pre-amp, you should have the volume on BOTH units set to zero. Then use the volume control on both the pre-amp and the T-1800 MK2 to set the volume control on the T-1800 MK2 so that you can use preamplifier volume control as the main volume control – OR vice versa, as you prefer.

C. PRE-OUT CONNECTIONS

The T-1800 MK2 has a pair of RCA type female Pre-Out (Preamplifier outputs – refer to Figure 2) connections on the rear of the chassis, between the IEC connection and the Line Inputs. The Pre-Outs are connected actively;

therefore, when they are in use, the EL34s continue to draw power and operate. These connections are intended especially for connection to one or a pair of powered subwoofers. However, it is also possible to use them to connect to an external stereo power amplifier or pair of monoblock amplifiers (preferably with the same gain as the T-1800 MK2).

D. SPEAKER TERMINALS

The T-1800 MK2 is equipped with two pairs of high-quality speaker terminals. These terminals are located at the left of the back of the chassis (the right, facing the front of the chassis). Facing the front of the chassis, the right channel pair is on the outside right and the left channel pair is to their left, on the other side of the impedance toggle. The terminals accept bare wire (not recommended) and spade and banana type connectors. Please refer to Figure 2.

E. POWER CONNECTION

Connect the input interconnects and/or the speaker cables or the Pre-Out connections before you insert the power cable into the receptacle at the centre of the chassis rear. The T-1800 MK2 uses a standard 15 amp three prong male IEC connection for AC input. You need to use a power cord with a female 15 amp three prong IEC connector at one end. Please refer to Figure 2. **Please note that use of a three phase AC power source or an AC regenerating power conditioner may cause hum.**

The T-1800 MK2 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 T-1800 MK2 matches your location's electrical system. The T-1800 MK2 is set internally for AC 110/120 volt – 50/60 Hz or 230/240V – 50/60 Hz operation. There is no way to change to another AC setting.

INITIAL POWER-ON

Once you have your T-1800 MK2 in place and all connections have been made to your turntable and preamplifier, you are ready to turn on the power for your T-1800 MK2; before you power it up, though, be sure you have:

- **removed 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.)**
- **checked that power tubes are snug in their sockets (this is essential)**
- **ensured all your system's cables are properly mapped and secure**
- **turned the preamplifier's and T-1800 MK2's volume controls down to zero (if you use that combination) and otherwise zeroed or muted the volume on your source(s)**
- **ensured the batteries are in the remote control – if not, insert the batteries (by removing plate on the bottom of the remote control)**
- **securely and correctly fastened the speaker cables and ensured that they are also connected properly to the speakers.**

Turn on the T-1800 MK2 by pushing in the power switch button located at the front of the right-side chassis panel to the "on" position (See Figure 3). After a brief delay (the soft start), the T-1800 MK2 will be powered on.

OPERATION - CHASSIS AND REMOTE CONTROL

When the power is on, the current meters on the face of the chassis will illuminate. From this point on, the T-1800 MK2's operation is straight-forward. The face of the chassis has an input selector control knob and a volume control

knob (see Figure 1). The remote control (Figure 4) will also control the input selections (using the number buttons or the buttons labelled "CH") and the volume. However, it will not control the power to the T-1800 MK2, which must be switched on and off manually, as described above. The power button on the remote control, at its top left-hand corner (refer to Figure 4), is inoperative for the T-1800 Mk2. Remove the screws on the bottom of the remote control to replace batteries.

When you are finished listening, turn off your T-1800 MK2 stereo amplifier(s) first; then, turn off your preamplifier (if using one) and sources. In the case of any failure, please contact your Allnic dealer for assistance.

THE CURRENT METERS

The two illuminated meters indicate the current supplies to the four EL34 power tubes in the T-1800 MK2. Between and to the outside of each channel pair of EL34s is a small toggle switch. Pushing the toggle toward the rear of the chassis allows you to read and use the meter to evaluate the current condition of the rear EL34; pushing the toggle toward the front switches the meter to the front EL34. You can use the toggle during operation. See Figure 5.

When you turn on the T-1800 MK2, the needle of the current meter for each EL34 should be between the two parallel lines on the meter face. Any error of current supply to or failure of an EL34 tube is indicated by the needle on the meter moving out from between these two parallel lines.

If a meter's needle drops below the left parallel line during operation, it indicates a failure of the related EL34 tube (output on that channel will likely have been lost). You must turn off the T-1800 MK2 and replace the EL34. Check the meter for the other EL34 on that channel. If the meter needle is between the parallel lines, it is not necessary to replace that tube. You must **turn off and disconnect the T-1800 MK2 from the AC supply** and replace the failed EL34.

If a meter's needle falls far to the right, likely accompanied by loss of signal and/or tube noise, the 12AY7 or an E180CC tube(s) has failed. If you do not have access to an appropriate tube tester to test the tubes, you can determine the failed tube(s) by, first, **turning off and disconnecting the T-1800 MK2 from the AC supply** and swapping the E180CC tubes to opposite channels. If the problem follows the tube, replace the tube with a good E180CC. If that does not remedy the problem, replace the 12AY7 with a good one.

If you need to replace the mains fuse (see Figure 2), **turn off and disconnect the T-1800 MK2 from the AC supply** and replace the fuse with the spare in the tray in the fuse holder - or try a good, inexpensive one of the same rating to avoid risk if you are using a more costly aftermarket fuse.

If you have any questions about doing this, please contact your Allnic dealer for assistance.

TUBES

The T-1800 MK2 uses the following tubes:

- Four (4) x EL34
- Two (2) x E180CC (2025 forward production will ship with 6414)
- One (1) x 12AY7

Because of the automatic bias for each EL34, it is recommended to use closely matched pairs of EL34 tubes in the T-1800 MK2. Please refer to Figure 5 for tube locations.

You may use any EL34 type tube in the T-1800 MK2. However, as with all tube equipment, changing tubes from one manufacturer's to another's may alter the sonic characteristics of the equipment. It is NOT recommended to substitute the EL34s with power tubes commonly considered similar to them.

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 T-1800 MK2 or any injury or loss incurred by the user resulting from the user changing or attempting to change tubes.

SPECIFICATIONS FOR THE ALLNIC AUDIO T-1800 MK2 EL34 STEREO INTEGRATED AMPLIFIER

Output Power:	40w + 40w (8 Ω load, at 1KHz)
Distortion:	0.1% at 1KHz, 2.83V/8 ohms
Frequency Response:	20Hz - 20KHz Flat
S/N Ratio:	-80dB (CCIR, 1KHz)
Damping Factor:	8 at 8Ω load at 1KHz (on-off method)
Voltage gain:	+38dB
Input Impedance:	10KΩ (single-ended, unbalanced)
Input Sensitivity:	400mV for rated power
Tubes:	• EL34 X 4 (pentode power tube) Substitution is not recommended. • E180CC X 2 (2nd stage driver tube: equivalent 6414, CV8431, 7062, 5965, 12AV7, 6829 – superior to 12AT7 in this application) (2025 forward production will ship with 6414) • 12AY7 X1 (1st stage driver: possible to substitute 6072). Other tubes commonly considered similar are not recommended.
Fuse:	• AC 3A, 250V 5x20mm slow-blow for 110/120V regions • AC 2A, 250V 5x20mm slow-blow for 230/240V regions
Dimensions:	(W x D x H) 430mm (16.93 inches) X 330mm (13 inches) X 210mm (8.3 inches)
Weight:	• Net: 20Kg (44 lbs) • Shipping: 23 Kg (50.6 lbs)

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.

FIGURES

Figure 1 – T-1800 MK2 EL34 Stereo Integrated Amplifier Front Panel View

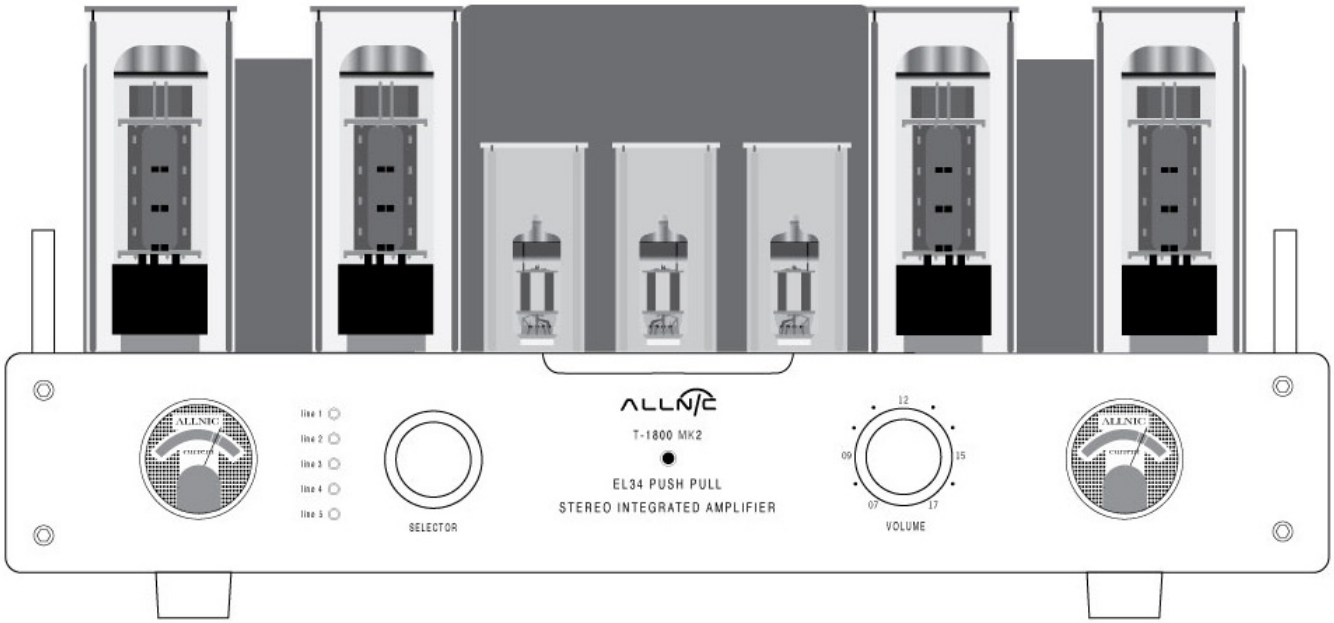

Figure 2 – T-1800 MK2 EL34 Stereo Integrated Amplifier Rear Panel View

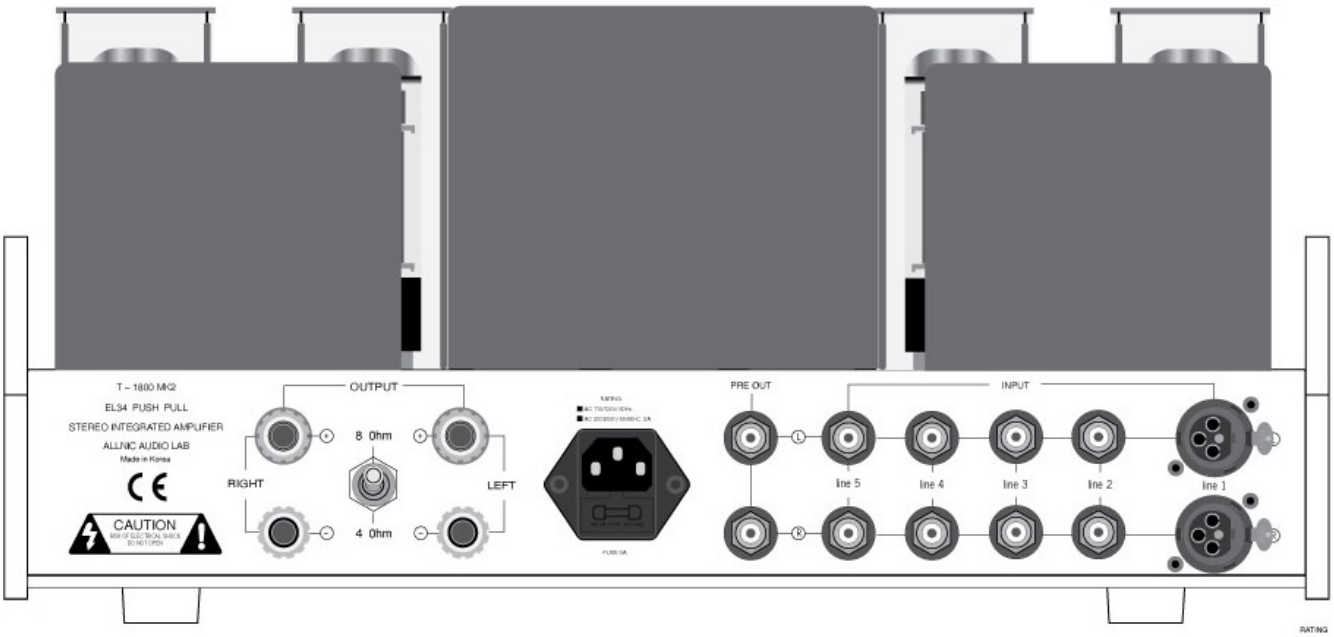

Figure 3 – T-1800 MK2 EL34 Stereo Integrated Amplifier Right-side Panel View

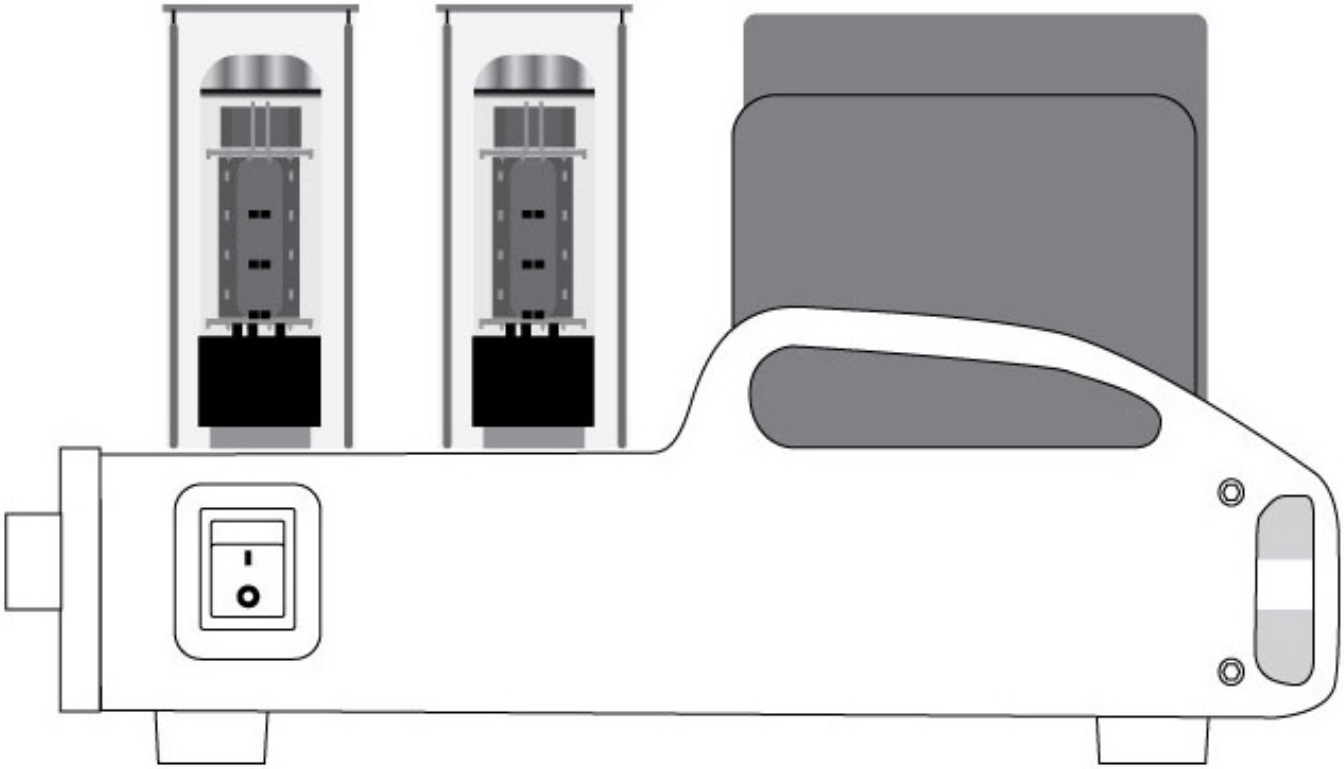

Figure 4 – T-1800 MK2 EL34 Stereo Integrated Amplifier Remote Control

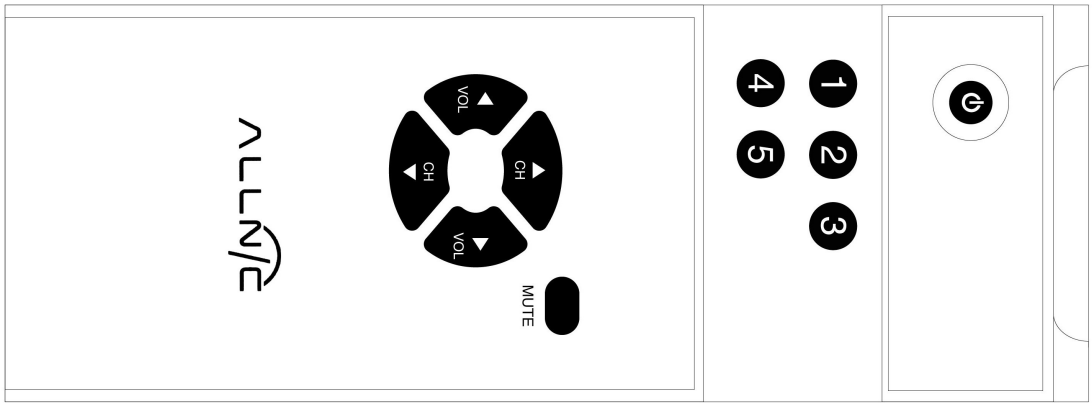

Figure 5 – T-1800 MK2 EL34 Stereo Integrated Amplifier Chassis Top View