



ALLNIC AUDIO

**L-8500 OTL/OCL
LINE-STAGE PREAMPLIFIER**



OWNER'S MANUAL

ALLNIC AUDIO

L-8500 OTL/OCL LINE-STAGE PREAMPLIFIER

Thank you for purchasing the Allnic Audio L-8500 OTL/OCL (Output Transformer-Less/Output Capacitor-Less) Line-Stage Preamplifier. 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 L-8500 OTL/OCL Line-Stage Preamplifier 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.

Audiomentors (Allnic Audio marketing company)

**415, Daeduck Plaza
19-4 Sunae-dong, Bundang-gu,
Seongnam-si, Gyeonggi-do,
13595 S.Korea**

**Direct Telephone: 0082-31-716-3311
email: audiomentors@naver.com
Website: www.audiomentors.co.kr**

***** 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 L-8500 OTL/OCL Line-Stage Preamp - we care about our customers and the equipment, and we want you to enjoy this product for a long time!

INTRODUCING THE L-8500 OTL/OCL LINE-STAGE PREAMPLIFIER

Thank you for purchasing the L-8500 OTL/OCL Signature Phono-stage Preamplifier. The L-8500 OTL/OCL is a highly sophisticated and “purist” piece of audio technology. It is intended for experienced vacuum tube audio enthusiasts who understand and have the patience to appreciate the virtues of an innovative but “no bells and whistles” approach to circuit design and the superior sonic and “vintage” characteristics of New Old Stock (NOS) tubes. The L-8500 OTL/OCL is not a “plug, play and forget”, mass-market device aimed at audio enthusiasts generally. Like all Allnic’s products, it is first and foremost a state-of-the-art example of “Tube Amp Done Right”. Proper care and attention, partnering with other equally high-quality equipment, and following the guidance provided in this manual will facilitate easy use and a listening experience of essentially unequalled quality for many, many years.

Immerse yourself in the original recorded space. The L-8500 OTL/OCL (Output Transformer-Less/Output Capacitor-Less) is a triple gain stage, remote controlled, line-stage preamplifier, without transformers or capacitors in its single-ended signal path. It uses the 12B4 triode as its directly coupled output power tubes; i.e., there are no output transformers on the single-ended (unbalanced) RCA outputs, so the 12B4s communicate the signal directly to the connected power amplifier or amplifiers, fully revealing the 12B4s’ inherent accuracy and beauty.

In common circuits, output capacitors or output transformers are required to separate the AC music signal from the DC operating potential. If this is not done, the latter will destroy the power amplifier, the loudspeakers, or both. However, these two coupling devices also introduce their own influences on the transmission of the musical signal, adding their own character (colouration), increasing distortion, and consuming small signals, all as predicted by physical efficiency theory. In addition, they also limit signal dynamics. For these reasons, the elimination of output transformers and capacitors has been considered the best solution for the design of the most accurate amplifiers. Removal of these two coupling devices from the signal path achieves the best results possible:

- No colouration of the musical signal
- Extremely detailed expression, natural harmonics and subtle musical decay
- The lowest possible distortion
- The widest musical dynamics

In the L-8500, there is no coupling device between the preamplifier and the power amplifier; that is, the final gain/output tubes are directly connected to the power amplifier. Thus, the benefits listed above are fully present in the Allnic L-8500 preamplifier.

Some circuit experts might be concerned about DC potential in the music signal in an OTL/OCL design. However, the chance of this problem occurring can be essentially and reliably 100% mitigated. To do this, Allnic uses a “floating power supply circuit”, a design that deals with the issue by not creating any DC potential in the first place, or such a small potential that it is harmless.

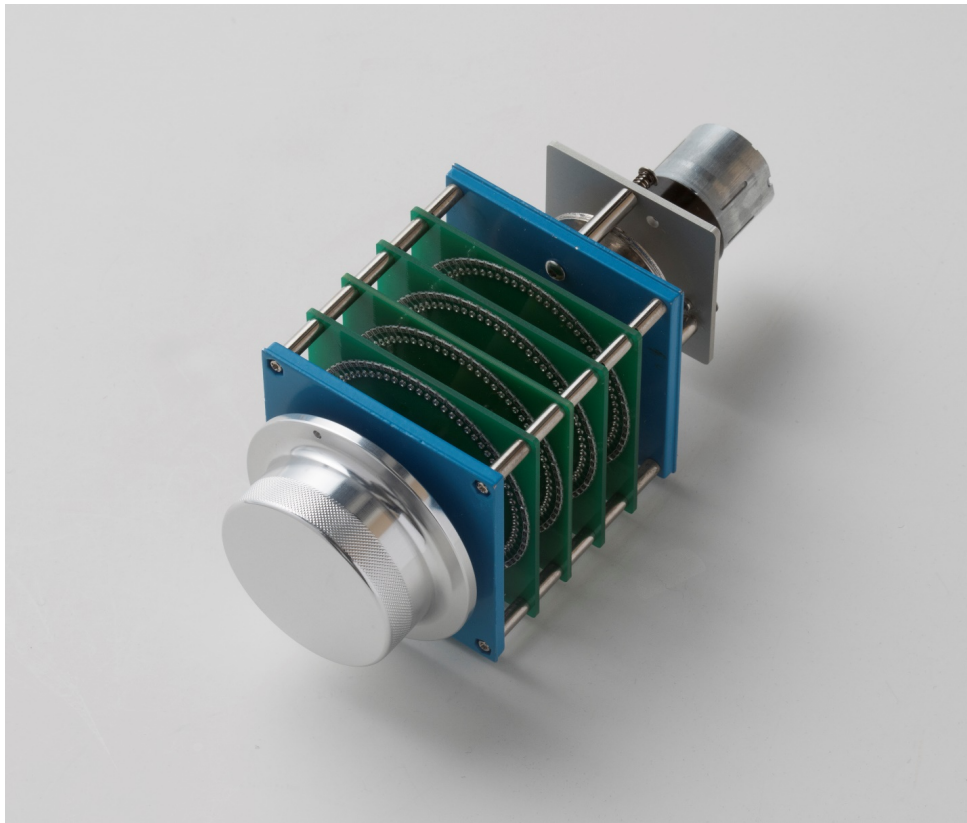
The L-8500’s OTL/OCL circuit is basically SEPP, “Single-Ended, Push-Pull”, so a “cancellation circuit” is required to adjust the balance of signal between the upper and lower power output tubes’ input grids. Allnic uses an extremely sophisticated “Active Balanced Positive and Negative Feedback Circuit” that perfectly controls the circuit’s operation with extremely low distortion and incredible speed.

The L-8500 OTL/OCL is a world-class, reference level, line-stage preamplifier. It offers unbelievably realistic, holographic sound-staging combined with incredible resolution, clarity, micro-dynamics, and drive. Instrument and vocal tones and timbres are breathtakingly lifelike, and the placement of instruments and bodies in three dimensions startling, life-size, and addictive. The L-8500 OTL/OCL has no voice of its own, none. It is silent, except for the music emanating from the blackest of backgrounds. In addition, the stunningly realistic sonic quality is matched by the simple elegance, flexibility and ergonomic functionality of the L-8500’s casework and connection options. The L-8500 sits below the L-10000, Allnic Audio’s top OTL/OCL line-stage preamplifier, and the L-9000 OTL/OCL line-stage preamplifier.

The L-8500 OTL/OCL has the following features:

- Pure single-ended, Class A operation
- **61 STEP CONSTANT IMPEDANCE BRIDGED TYPE ATTENUATOR - A world’s “first of its kind” for Allnic Audio**

The L-8500 OTL/OCL does not employ a digital IC volume control or a low-cost carbon film volume control with a motor. The L-8500 OTL/OCL uses the WORLD’S FIRST 61 step, constant impedance, “bridged” type attenuator. Allnic’s new attenuator is now the most sophisticated on the market, and we believe, without a doubt, also the absolute best sounding. With fixed impedance and no (\pm 0db) channel imbalance at any volume level, this revolutionary and currently unique, oil clutched, motorized attenuator will astound users with its elevation of the fidelity and purity of any system in which it finds a home.



The Allnic 61 step constant impedance bridged type attenuator

- Minimal negative feedback
- For its balanced (XLR) outputs, permalloy transformers, like those used in Allnic's transformer-coupled preamplifiers, are employed.
- As are all Allnic Audio products, the L-8500 OTL/OCL 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 L-8500 OTL/OCL Preamplifier – in natural aluminum or black, depending on your order specification
- One (1) power cord
- One (1) remote control
- Two (2) x AAA batteries for the remote control
- One (1) Owner's Manual
- One (1) Hex/Allen key

Note:

- 1) The L-8500 OTL/OCL ships with the tubes installed.
- 2) The L-8500 OTL/OCL will work with most IEC type aftermarket power cords. **Any model of the Allnic ZL (Zero Loss) power cables will make an excellent match. Of course, only you can determine the power cord that works most synergistically with the L-8500 OTL/OCL in your system.**
- 3) **Be sure the L-8500 OTL/OCL 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 box and other packing materials that your L-8500 OTL/OCL came in. It will be useful if you sell your L-8500 OTL/OCL or in the unlikely event you need to ship it for service.

SAFETY

- **CAREFULLY and SLOWLY remove ALL cardboard and Styrofoam cushioning material, if any, inside the tube chimneys before operation.**
- Disconnect the power cord by pulling the plug, not the cable.
- Keep the power cord away from any heat source.
- 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 unit into an AC connection.
- Do not attempt any repairs.
- Do not remove the chassis cover without specific authorization from your Allnic dealer.
- See the notes on “Location, Location, Location”.
- **DO NOT leave the L-8500 OTL/OCL 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 failure. 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, meter glass and chassis.

B. Connectors

You may use any good quality contact cleaner recommended for such applications to clean the contacts from time to time as you deem appropriate.

INITIAL SET-UP

A. LOCATION, LOCATION, LOCATION

Like all audio products using tubes, the Allnic Audio L-8500 OTL/OCL needs to be placed on a solid stand in a location that provides for good air circulation around the preamplifier.

- DO NOT cover the top of the preamplifier.
- 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 L-8500 OTL/OCL on a set of after-market isolation feet or similar devices. Dropping the L-8500 OTL/OCL 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 unit's chassis for long periods of time. This could discolour the metal.

- 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 and interconnects, both inputs and outputs. The L-8500 OTL/OCL is a highly sensitive piece of electronic equipment 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 L-8500 OTL/OCL.**
- DO try to place the L-8500 OTL/OCL away from major sources of RFI and EMI; though well shielded, the L-8500 OTL/OCL will function best away from large power transformers and other sources of such interference.

B. POWER CONNECTION

The L-8500 OTL/OCL uses a standard three prong male 15 amp IEC connection for AC input. You need to use a power cord with a female three prong 15 amp 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.**

To the right of the IEC connector (facing the left side of the unit as in Figure 1), there is a power on-off switch. Leave this switch in the OFF position – that means the switch is pressed “down” at the bottom - while you make all initial connections.

The L-8500 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 L-8500 matches your location's electrical system. The L-8500 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.

C. INPUTS

There are five (5) inputs. Line 1 and Line 2 are balanced connections (XLR type connectors). The remaining three (3) line inputs are RCA type, single-ended connections. None of the inputs is intended especially for connection to any particular device (see Figure 2).

NO PHONO STAGE - The L-8500 OTL/OCL is a line-stage preamplifier and does NOT have a built-in phono preamplifier section. You will need a phono preamplifier if you want to use a turntable with the L-8500 OTL/OCL. You can connect your phono preamplifier to any of the five inputs, provided you have the appropriate types of connections or adaptors.

The L-8500 OTL/OCL has been designed and manufactured to work most synergistically with Allnic Audio phono preamplifiers, pre-preamplifiers, equalization and power amplification products, and ZL Technology cables.

D. OUTPUTS

The L-8500 OTL/OCL has three pairs of outputs. Two (2) pairs are single-ended unbalanced, using RCA type connectors; one (1) output pair is balanced (i.e., separate ground), using XLR connectors (see Figure 2). Only the two pairs of RCA unbalanced connectors are directly coupled to the 12B4 output stage, so only the two RCA output pairs are "pure" OTL/OCL. The balanced XLR output connectors are coupled to a pair of permalloy output transformers. We recommend trying both as you might prefer one over the other.

You may use the balanced and single-ended RCA outputs at the same time; for example, if you run one pair to your stereo amplifier and the other pair, or pairs, to a powered subwoofer or a pair of them.

E. REMOTE CONTROL

The remote control provides the ability to remotely:

- Select the line source input using either the numbered selector buttons (1 to 5) or the channel up/down arrow buttons (Please see Figure 3).
- Control the volume level using the right (louder) and left (quieter) arrow buttons adjacent to the channel arrow buttons.
- Mute the volume using the button labeled "MUTE". To raise the volume again after muting, press the Mute button to take the volume level to where it was prior to muting. In Mute mode, the light above the "operate" button on the front panel of the L-8500 OTL/OCL will not be illuminated; it will illuminate when the L-8500 OTL/OCL is unmuted again.
- Use the red power on/off button in the top left-hand corner of the remote control to power the L-8500 OTL/OCL on and off.

INITIAL POWER-ON

Once you have your L-8500 OTL/OCL in place and all your system's connections have been properly mapped and secured to your sources and amplifier(s) and the power cord is installed and plugged into an AC receptacle, you are ready to turn on the power for your L-8500 OTL/OCL. Before you power up the L-8500 OTL/OCL, though, be sure you have:

- **CAREFULLY AND SLOWLY removed ALL the cardboard or any other cushion materials from inside the tube chimneys!**
- **ensured all tubes are snugly in their sockets**
- **ensured the batteries are in the remote control – if not, insert the batteries (by removing plate on the bottom of the remote control)**
- turned the volume down on, or muted the L-8500 OTL/OCL
- checked that all your connections are properly mapped and secure

Also, be sure you have manually turned the volume control on the front panel to the extreme counter-clockwise position (minimum volume).

Push the power on-off switch to the right of the IEC connector (facing the left side of the unit as in Figure 1) so it is in the “on position”. That will power up the L-8500 OTL/OCL. From this point on, you need only use the far left-hand button marked “power” on the front panel or the power button on the remote control to turn the L-8500 OTL/OCL on and off.

Once the power has been turned on, the following will happen on the front panel (Please see Figure 4):

- the light above the “power” button will illuminate
- the meters on the front panel will illuminate
- the light over the line source button that is depressed will illuminate
- after a short time, the light over the “operate” button will illuminate. The L-8500 OTL/OCL has a “soft start” delay for the tubes to extend tube life.

DC BALANCE METERS

There is one DC balance meter for each channel on the front of the L-8500 (See Figure 4). These meters indicate the potential for DC from the output of the third gain stage tubes in the L-8500 OTL/OCL, the 12B4s. This potential is harmless to the L-8500 and connected equipment.

The needles of both meters should be in about the same position between the two lines in the center of each meter. Some drift will likely occur after initial purchase of a new unit. This will settle in 20-50 hours of play time. If balancing must be done, use a small, flat-bladed screwdriver to adjust the potentiometer for the affected meter(s). The potentiometers are plastic, slotted buttons recessed in the two small holes located to the left (for the left channel meter) and right (for the right channel meter) of the front pair of 12B4 tubes on the top of the L-8500's chassis (see Figure 5)

Adjusting one channel's meter influences the meter for the other: a slight increase of one results in a slight decrease in the other meter and vice-versa. Use small incremental adjustments with a minute between to allow the meters to settle. If the meters remain difficult to balance, please turn each potentiometer counterclockwise to its limit. Then, with small incremental adjustments, alternating between channels with time for the meters to settle, repeat the process to bring the needles of both meters within the two lines in the center of each meter. If the meters drift completely out from between the two lines in the center of a meter, you may hear a small pop or click when muting and unmuting the amplifier. This will not damage a headphone, amplifier or speakers.

NOTE: 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.

The Allnic Audio L-8500 OTL/OCL is now ready for operation. At this point, you can power on your sources and, finally, your stereo power amplifier or mono-blocks.

OPERATION

From this point on, operation is straight-forward. All functions are controlled from the front panel or the remote control. Of course, BE CAREFUL about differences in gain between your sources. Generally, disc players, other digital sources, 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 other sources.

To avoid surges to the speakers, it is best to change from input to input only with the "operate" button set to mute (the light above the button will not be illuminated when the button is in the "mute" position).

When you are finished listening, turn off your stereo power amplifier or mono-block amplifiers. Then turn off the L-8500 OTL/OCL by depressing the power button on the front panel. The power switch on the left side panel should stay in the "on" position – this will keep key circuitry warm, and your L-8500 OTL/OCL will be ready to play when the soft-start turns on the L-8500 OTL/OCL next time you want to listen. Turn off your sources last.

As noted above under "Safety", DO NOT leave the L-8500 OTL/OCL 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 NOS tube failure and, potentially, damage to other components. Power on the unit and let it warm up for some minutes; then, when finished a listening session, do a complete power off.

The L-8500 OTL/OCL is given "break-in" time at the factory. No special break-in time is required at home. As with all electronics, the L-8500 OTL/OCL will likely improve over time with normal

listening session use. Of course, as is well-known with any vacuum tube equipment, sound may degrade over time as the tubes decline in linearity toward the end of their life.

TUBES

The L-8500 OTL/OCL uses the following tubes (see Figure 5):

- Two (2) x E80CF
- Two (2) x 12AU7
- Four (4) x 12B4

TROUBLESHOOTING TUBES

Please contact your Allnic Audio authorized representative for assistance with the following.

If your L-8500 OTL/OCL loses audio output completely on a channel or reduced audio output on a channel, it could indicate tube failure. If you have access to a properly functioning tube tester that can test the L-8500's tubes, you can use it to determine which tube(s) failed, always **POWERING OFF** and disconnecting the L-8500 from the AC source before removing a tube. If you do not have access to an appropriate tube tester, you can identify the failed tube(s) for replacement by following the procedures below.

If audio output is completely lost on a channel but the balance meters are not affected, it could mean failure of an E80CF or a 12AU7 tube, or that an upstream component has failed – please check your other equipment.

- If the issue appears to be with the L-8500, first **POWER OFF and disconnect the L-8500 from the AC source**; then, start by swapping the R/L channel 12AU7s – see Figure 5. If after powering on the L-8500 after swapping the 12AU7 tubes the problem has not changed channels, swap the R/L channel E80CF tubes. In either case, if swapping the tubes restores output on the affected channel, replace the failed tube(s) with a new tube to restore full operation.

If your L-8500 exhibits reduced or lost audio output on a channel and the needles of both balance meters drop to the bottom left or right and will not return to balance on powering off/on, it could indicate failure of a 12B4 tube or tubes.

- First, **POWER OFF and disconnect the L-8500 from the AC source**; then swap the front R/L channel pair of 12B4 tubes. If the problem does not move with the tubes, then swap the rear pair of R/L 12B4s. When the balance meter needles move up from the left or right, you have identified the failed 12B4 tube(s). Replace the tube(s) with a new one. You will likely need to rebalance the meters following the instructions in the “DC Balance Meters” section above. Remember to **POWER OFF and disconnect the L-8500 from the AC source** each time you are going to change a tube.

If you need to replace the fuse, first try 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 L-8500 OTL/OCL from the AC source to change a fuse.**

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 L-8500 OTL/OCL or any injury or loss incurred by the user resulting from the user changing or attempting to change tubes.

SPECIFICATIONS

FOR THE ALLNIC AUDIO L-8500 OTL/OCL LINE-STAGE PREAMPLIFIER

- Inputs: Line level × 5 pairs:
Balanced (XLR) × 3
Unbalanced (RCA) × 2
- Outputs: 3 pairs:
Unbalanced (RCA) × 2 pairs
Balanced (XLR) × 1 pair
- Input Impedance: 10kΩ Balanced/Unbalanced
- Frequency Range: 10Hz to 90kHz
- Voltage Gain: +18dB
- THD (1kHz): Less than 0.03% (1kHz, 1V RMS)
- S/N Ratio: -100dB (CCIR, 1kHz)
- Maximum Output: 15V RMS (Non-clipping)
- Output Impedance: 200Ω
- Power Consumption: 120W at 110/120V (60 Hz)
120W at 220/230V (50 Hz)
- Tubes: E80CF x 2 (equivalent to 7643, ECF80, 6BL8, CV5215) (first gain stage)
12AU7 × 2 (equivalent to ECC82, ECC802, B749, CV491, CV4003, 5814, 5963, 6189, 6350, 6680, 7316, 7730) (second gain stage)
12B4 x 4 (12B4A is equivalent) (third gain stage)
- Fuse: AC 3A, 250V, 5x20mm slow-blow for 110/120V regions
AC 2A, 250V, 5x20mm slow-blow for 230/240V regions

- Tube chimney screws: 2mm Allen head
- Dimensions: 430mm (16.95 inches) (W)
380mm (15 inches) including handles (D)
160mm (6.3 inches) (H)
- Weight: 22 kg (48.4 lbs) unpacked.
27 kg. (59.5 lbs) packed in original shipping material

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 – L-8500 OTL/OCL Left Side Panel View

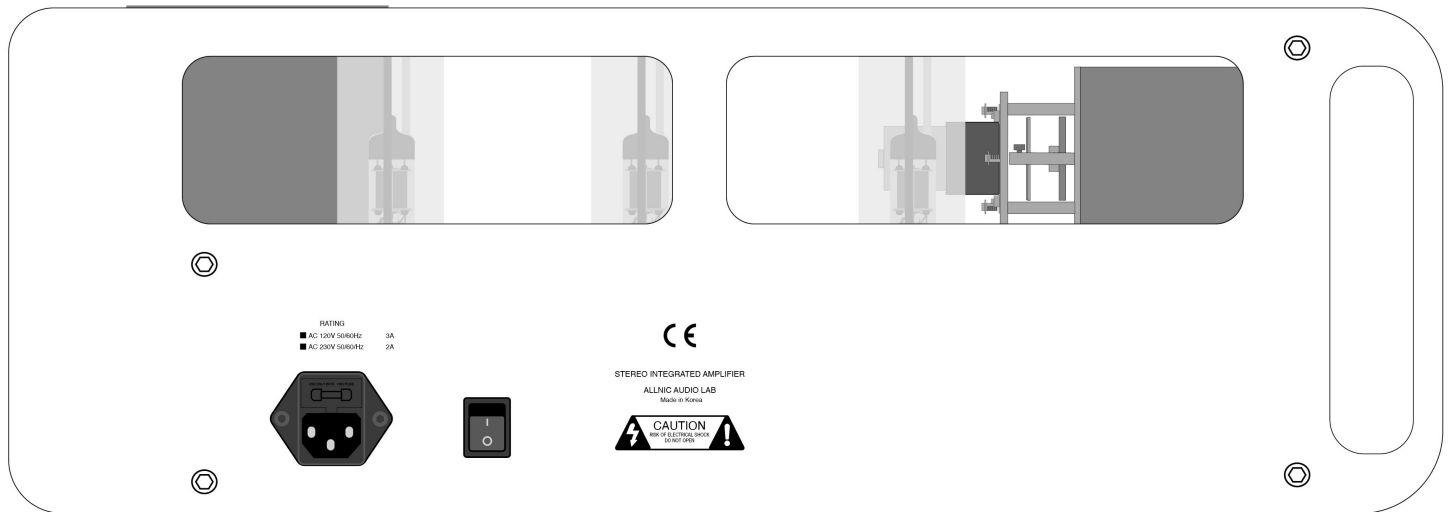


Figure 2 – L-8500 OTL/OCL Rear Panel View

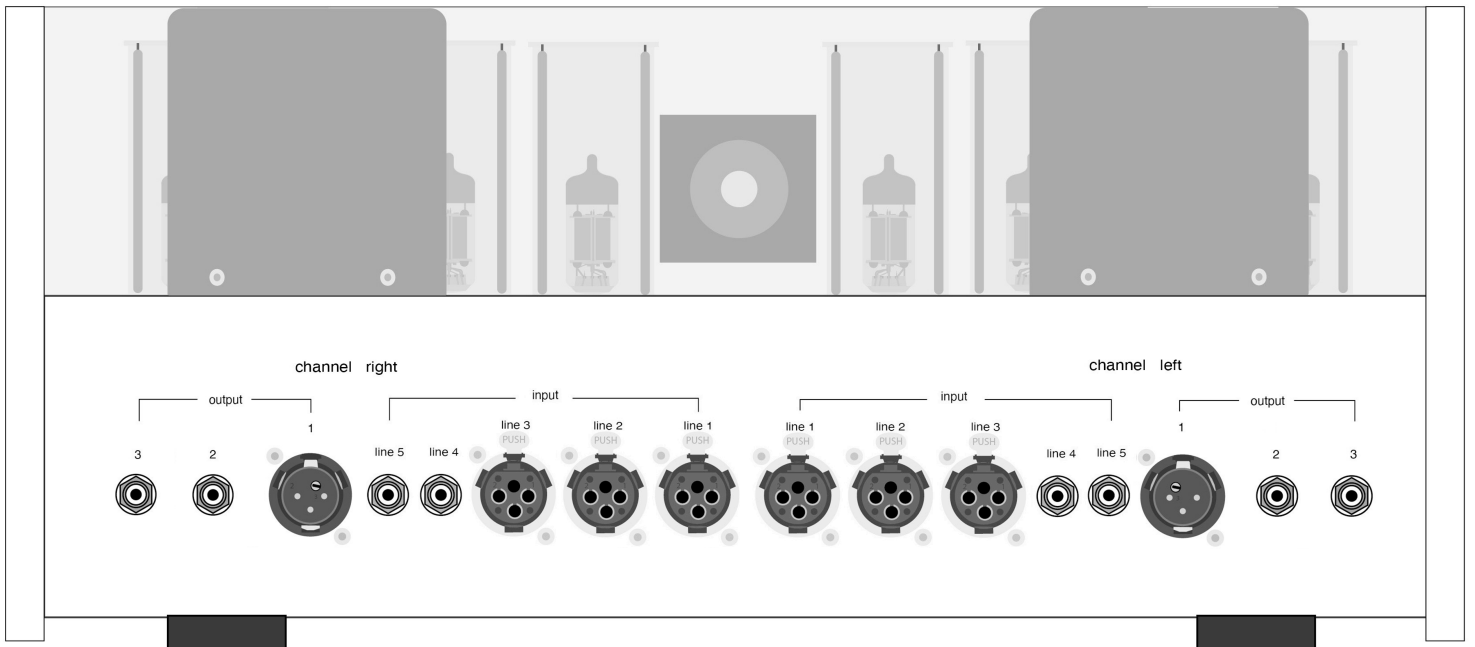


Figure 3 – L-8500 OTL/OCL Remote Control

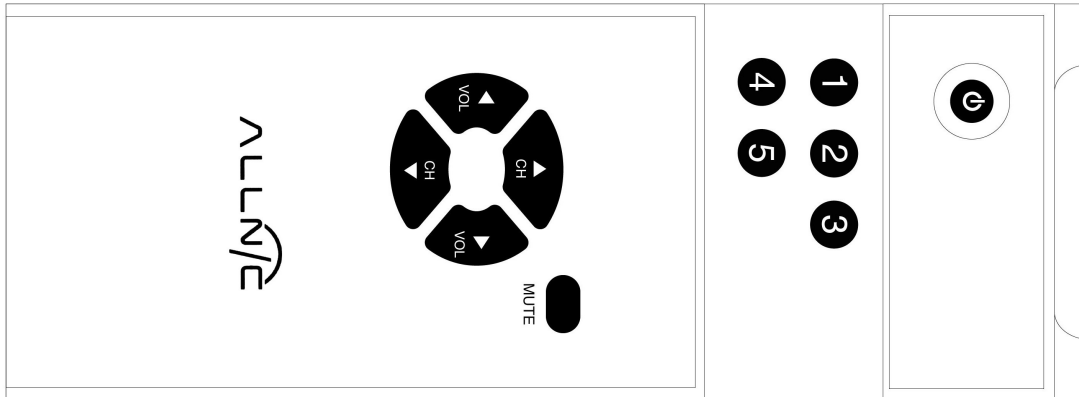


Figure 4 – L-8500 OTL/OCL Front Panel View

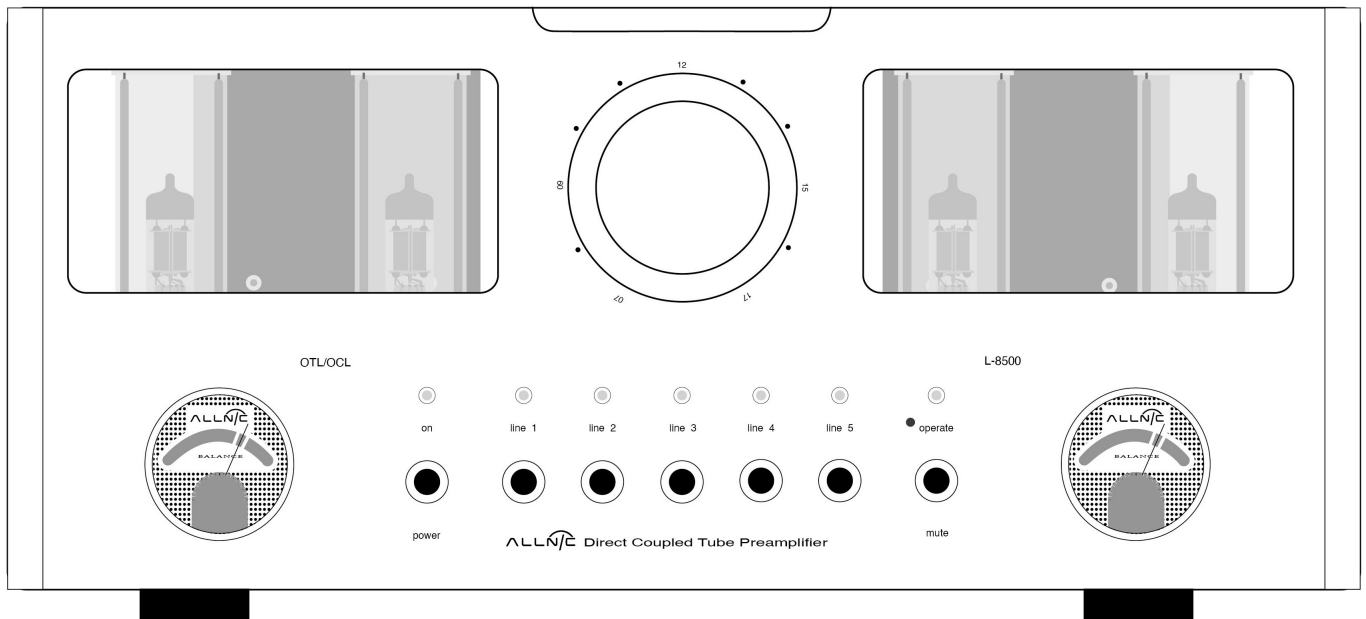


Figure 5 – L-8500 OTL/OCL Top View

