



ALLNIC AUDIO

L-8500 OTL/OCL LINE-STAGE PREAMPLIFIER



OWNER'S MANUAL

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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.

***** Information and specifications for the Allnic Audio product described in this manual are subject to change without notice.**

***** *For a list of Allnic Audio distributors around the world, please visit Allnic Audio's website:***

<http://allnicaudio.com>

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Please read about **SAFETY** before you attempt to use the L-8500 OTL/OCL Line-Stage Preamplifier - 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

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", in which the 6AN8 pentode perfectly controls the circuit's operation with extremely low distortion and incredible speed.

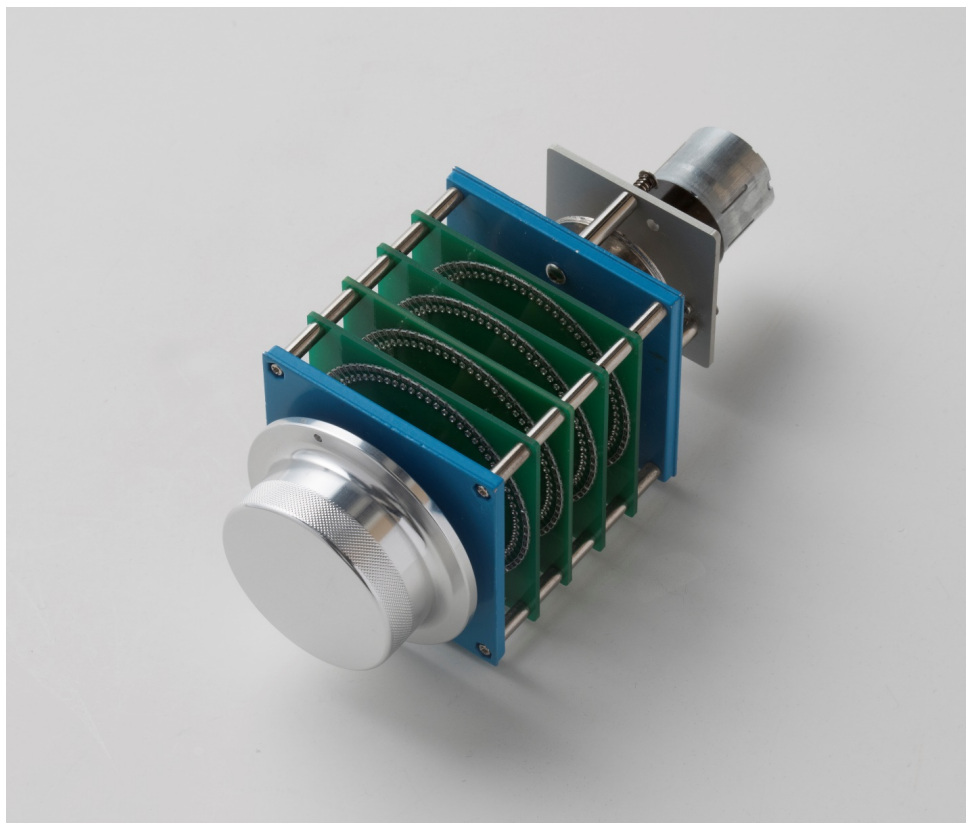
The L-8500 OTL/OCL is a world-class, reference level, line-stage preamplifier. It offers unbelievably realistic, holographic sound-staging combined with incredible resolution, clarity, micro-dynamics, and drive. Instrument and vocal tones and timbres are

breathhtakingly 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

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. **The Allnic ZL-3000 and ZL-5000 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 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”.

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 one side of the L-8500 OTL/OCL, or the whole unit, is not a good thing.
- 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 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.

To the left 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 OTL/OCL you have purchased is set internally for AC 110/120 volt – 60 HZ, or 220/230 volt – 50 Hz operation. There is no way to change this to another AC setting without return of the unit to the factory for re-wiring, at the owner’s cost, including transport both directions.

C. INPUTS

There are 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. One (1) pair is single-ended unbalanced, using RCA type connectors; two (2) output pairs are balanced (i.e., separate ground), using XLR connectors (see Figure 2). Only the RCA unbalanced connectors are directly coupled to the 12B4 output stage, so only the RCA outputs 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 connections have been made 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 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 snug

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 left 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 about 40 seconds, the light over the “operate” button will illuminate. The L-8500 OTL/OCL has a “soft start” delay for the tubes in order to extend tube life.

FINAL/3rd GAIN STAGE BALANCING USING THE CURRENT METERS

There is one current 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.

The needles of the meters should be between 10 o’clock and 2 o’clock. However, because of the floating power supply circuit, even if a needle falls to the extreme left or right of a meter, there is no danger to the connected amplifier or speakers because any possible DC leakage will be so small it cannot do any damage; in fact, it can hardly even be measured.

Initially, and from time to time as may be necessary (this should be very infrequently, if ever, for example, when replacing a 12B4 tube), the meters are used to roughly balance the 12B4 third gain stage tubes for DC control in both channels.

Using a small, flat blade screwdriver, turn the screw head located immediately above each of the meters on the L-8500’s face (see Figure 4) clockwise and counter-clockwise until the needles of both meters are between 10 o’clock and 2 o’clock. It is not necessary for the needles to be between the two lines in the centre of the meter. It is also not necessary for the meters to be exactly in exactly the same location; anywhere between 10 o’clock and 2 o’clock is fine.

Please be patient; it could take some time to get an approximate balance, but once set, it should rarely, if ever, move.

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.

CURRENT METERS

As previously noted, there is one current 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, the 12B4s. The needles of the meters should be between 10 o’clock and 2 o’clock. However, because of the floating power supply circuit, even if a needle falls to the extreme left or right of a meter, there is no danger to the connected amplifier or speakers because any possible DC leakage will be so small it cannot do damage; in fact, it can hardly even be measured. The variations in readings are due to the characteristics of individual tubes; no two tubes are exactly alike in every way.

If a needle falls to the extreme left or right of the meter, try switching the front 12B4 tube of the channel showing the drop for the rear one. If that doesn’t help, try switching the 12B4s from one channel to the other. If that still does not rectify the situation, one or both of the 12B4 tubes in the affected channel may need to be replaced.

Within the tube warranty period, if any 12B4 tube is outside spec as described above, please contact your Allnic dealer or other authorized Allnic representative for assistance. Outside the tube warranty period, Allnic Audio and its authorized representatives are still available to consult for advice.

TUBES

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

- Two (2) x 6AN8
- Two (2) x 12AU7
- Four (4) x 12B4

All consequences of changing or attempting to change tubes are borne by the user unless by express agreement between the owner and Allnic Audio or its authorized representative. Allnic Audio and its authorized representatives are not liable in any way whatsoever for any injury or loss incurred by the user or for damage to the L-8500 OTL/OCL, any of its parts, or tubes or replacement tubes 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) × 2
Unbalanced (RCA) × 3
- Outputs: 3 pairs:
Unbalanced (RCA) × 1 pair
Balanced (XLR) × 2 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: 6AN8 (no equivalent) x 2 (first gain stage)
12AU7 (equivalent to ECC82, ECC802, B749, CV491, CV4003, 5814, 5963, 6189, 6350, 6680, 7316, 7730) × 2 (second gain stage)
12B4 (12B4A is equivalent) x 4 (third gain stage)

- Fuse: 3A/120V; 3A/230V
slow blow

- 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.

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

FIGURES

Figure 1 – L-8500 OTL/OCL Left Side Panel View

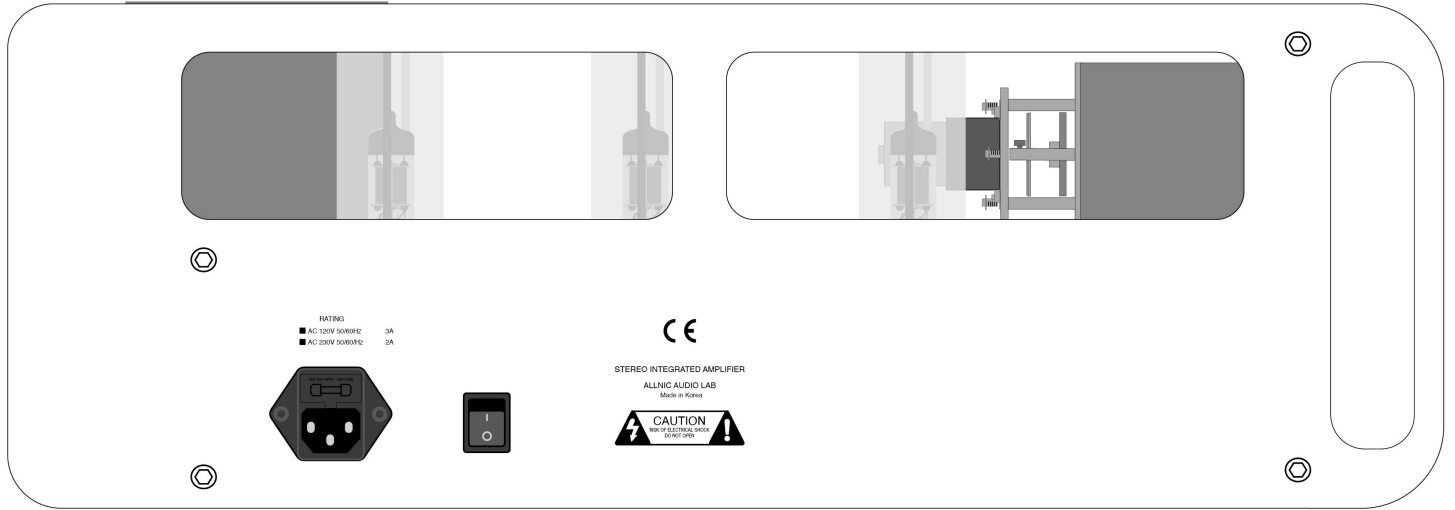


Figure 2 – L-8500 OTL/OCL Rear Panel View

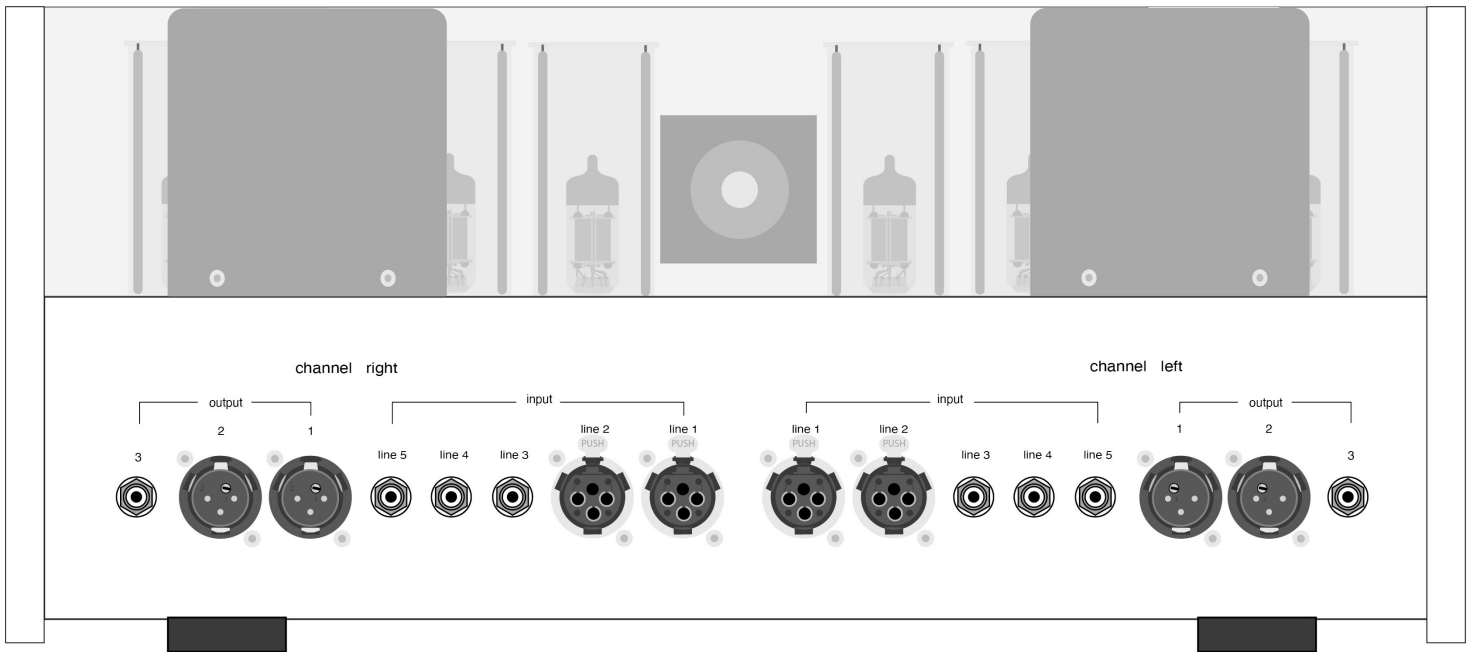


Figure 3 – L-8500 OTL/OCL Remote Control

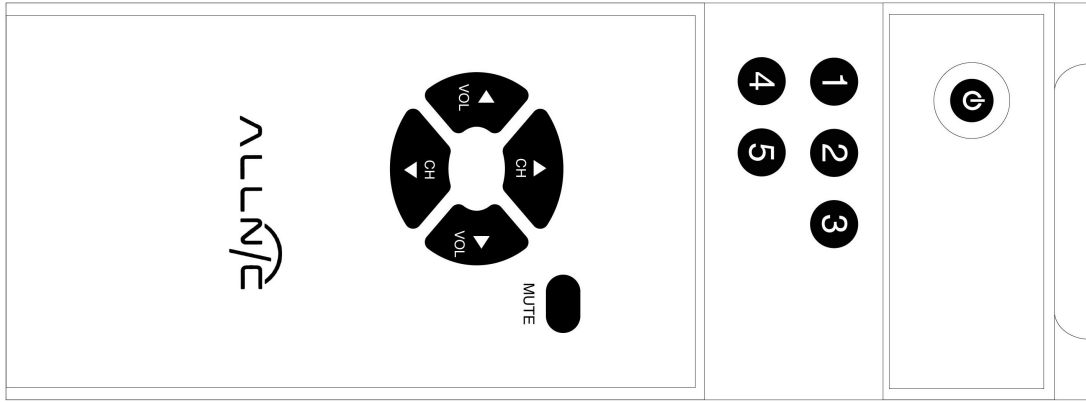


Figure 4 – L-8500 OTL/OCL Front Panel View

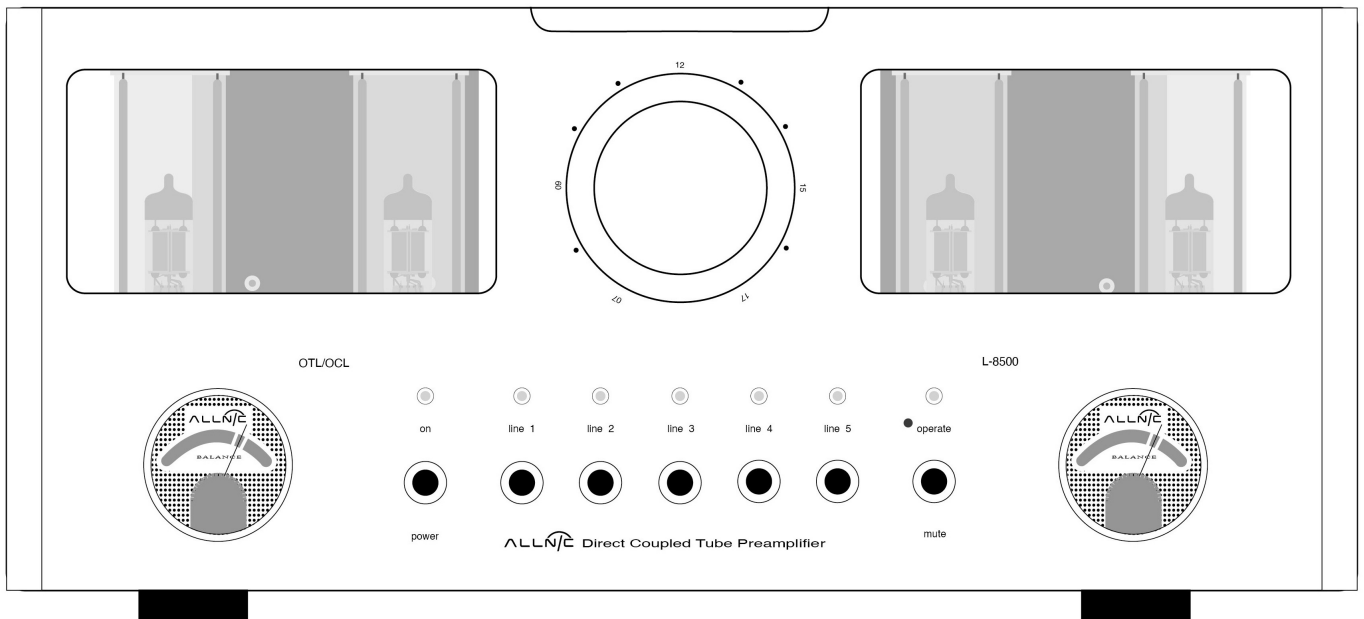


Figure 5 – L-8500 OTL/OCL Top View

