

Luxman

VACUUM TUBE INTEGRATED AMPLIFIER

SQ-N150

Owner's Manual

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Installation place

Install this unit in a location where good ventilation and heat radiation are assured.

Especially, installation of this unit where direct sunlight is present, where the temperature rises excessively high such as close to a heater, or where it is humid or dusty may cause a malfunction even if heat is efficiently released.

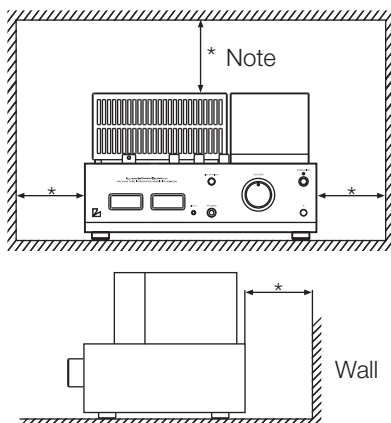
Therefore, do not install this unit in such places.

Ventilation holes

Do not block the ventilation holes of the top and bottom panels. If the amplifier is installed on a rack or the like, secure ample space for cooling and leave the door open. Do not pile up other things on the amplifier and never put articles on it. Failure to observe this may cause a malfunction.

Note:

For heat dispersal, do not install this equipment in a confined space such as a book shelf or similar unit.



Precautions in connecting with other components

When connecting this unit to input devices such as a CD player, an SACD player, an analog record player, a tuner, and a recorder, be sure to turn off the power of this unit and all other connected devices. Failure to observe this may generate a strong noise resulting in speaker damage or cause a malfunction.

The pin-plug to be inserted in each input terminal of this unit shall be pushed in firmly. If the grounding terminal is inadequately connected, noises including hum may be generated, resulting in an adverse S/N ratio.

Cautions in connecting speakers

When making speaker system connections, exercise extra care not to short-circuit between (+) and (-) of the speaker terminals and speaker input terminals of this unit.

If a large signal is applied to the amplifier with its circuit left short-circuited, a large current may be passed through the output circuit and cause a malfunction.

The sound is not generated shortly after the power supply is turned on.

This amplifier is equipped with a time muting circuit in order to separate the output circuit. Therefore, no sound will be generated shortly after the power supply is turned on.

If the volume control is at a high level when the time muting circuit is canceled, a large sound will suddenly come out. Please be advised that the volume control shall be set to a low level at first and adjusted after the sound comes out of the speakers.

Repair and adjustment

When repairs or adjustments are needed, please ask the dealer where you bought the unit.

Cleaning

For cleaning, use a piece of soft cloth to wipe the unit such as cleaning cloth. When the dirt is hard to remove, use a small amount of neutral detergent to wipe, and then wipe the unit with dry cloth. Do not use a solvent like benzine or thinner because such a substance can damage the exterior.

Batteries

Warning: Batteries used for the remote control shall not be exposed to excessive heat such as sunshine, fire or the like.

Safety caution

Caution

- This unit is heavy. Be careful when unpacking, carrying, and installation.
 - This unit is a vacuum tube amplifier. When the unit is in operation, the main body gets hot. Be careful not to touch it with your bare skin. For safety, do not use this product in a place where children or unchained animals are present.
-

Features of This Unit

Compact chassis design

A4 paper size (210 x 297 mm) and housing made of 5mm thick aluminum.

Analog meters

This unit is equipped with needle-type analog meters for output level monitoring.

Push-pull output stage

Push-pull configuration with EL84 pentode connection.

Phono amplifier

This unit is equipped with a phono amplifier that is compatible with the MM/MC cartridge to achieve analog record playback in a high-grade level without adding a dedicated phono amplifier.

Headphone output terminal

This terminal allows you to casually enjoy sound with headphones.

Selector switch IC

Selector switch IC of high sound quality, which is used in LUXMAN top-end control amplifier, C-900u, improves the separation and crosstalk performances.

Machined aluminum knobs

Knobs of vintage design with a heavy feel.

18 mm pitch RCA terminal

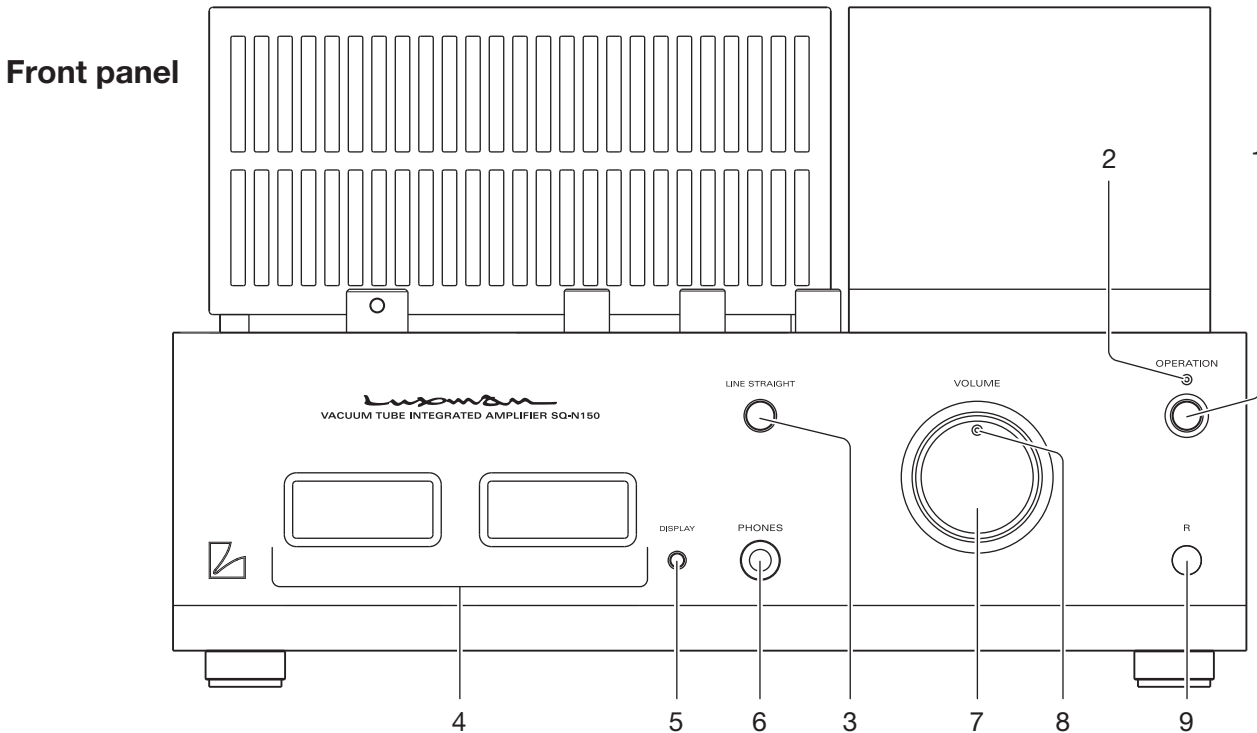
18 mm pitch RCA input terminals allow even a high-performance line cable with large plug to be connected.

Highly reliable design

Prolonged life and highly reliable design have been achieved by providing operating conditions of vacuum tubes with some allowance.

Remote control

Volume can be controlled by the accessory remote control RA-25 or RD-27 provided with D-N150, compact disc player.



1. Operation switch (OPERATION)

Toggles the power on and off.

When wiring or connection is performed, be sure to turn off this switch. When turning on the OPERATION switch again after turning the unit off, wait for more than one minute.

2. Operation indicator (OPERATION)

Lights orange when the OPERATION switch is on.

3. Line straight switch (LINE STRAIGHT)

Enhances the purity of the sound quality by bypassing the balance control circuit, tone control circuit.

OFF : Line straight off/bypass off

ON : Line straight on/bypass on

When the line straight switch is set to on, the balance control and tone control cannot be adjusted.

4. Analog meters

Indicate the levels of outputs with illumination.

5. Display switch (DISPLAY)

Turns the back light of the analog meters on and off.

6. Headphone jack (PHONES)

Insert the headphone plug into this output jack. When the plug is inserted, the signal to the speaker terminal is interrupted. When the plug is pulled out, the signal output is supplied to the speaker terminal again.

Caution:

Before pulling out the plug, be sure that the volume control is at a low level to prevent loud sound from coming out of speakers suddenly.

7. Volume control (VOLUME)

Adjusts the sound volume.

Sound is not generated when this control is rotated counterclockwise to the end and the sound volume level gradually becomes higher when the control is slowly rotated clockwise.

Volume can also be controlled by the accessory remote control RA-25 or RD-27 provided with D-N150, compact disc player.

8. Sound volume indicator

Indicates the sound volume level.

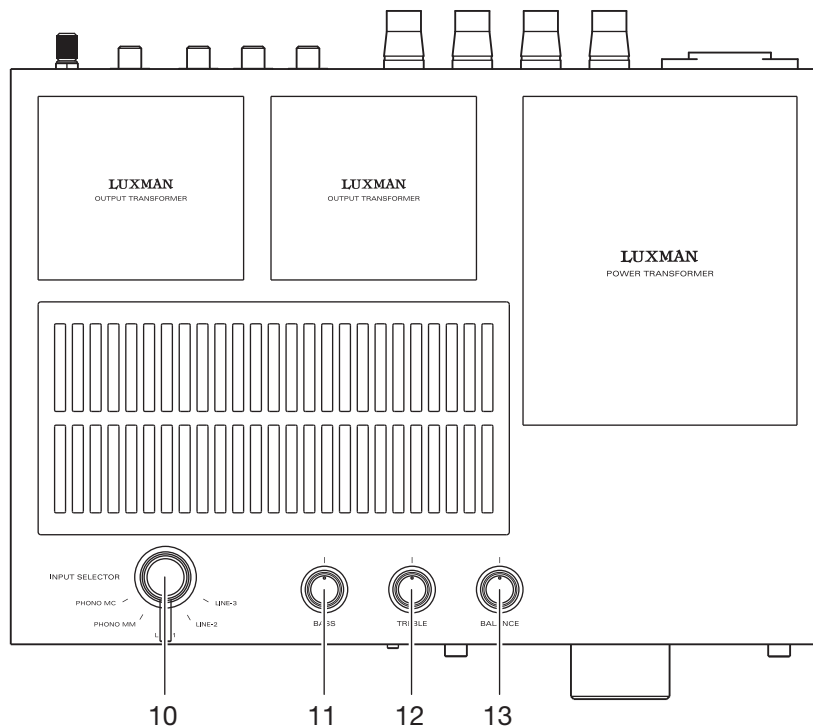
Blinks in the muting mode when the operation switch is turned on and lights up when the operation state is activated afterward. This indicator blinks also when the volume is adjusted with the remote control.

9. Remote sensor (R)

Receives signals from the accessory remote control. Do not block the front of the receiver.

Names and Functions

Top view



10. Input selector (INPUT SELECTOR)

Selects an input device from the devices such as a CD player, an SACD player, and a tuner connected to each input terminal.

There are five positions which are PHONO MC, PHONO MM, LINE-1, LINE-2 and LINE-3. Select an input source to be played from them.

As for PHONO, select as follows since the gain of the equalizer amplifier differs according to the cartridge in use.

PHONO MC : Select when using a low output voltage MC (moving coil) type cartridge. When "MC" is selected during use of the MM type cartridge, be aware that the sound volume becomes higher and unbalanced sound without high frequencies is generated owing to the impedance.

PHONO MM : Select when using a high output voltage MM (moving magnet) type cartridge.

11. Tone control for bass (BASS)

Controls the frequency characteristics of the low-frequency range.

When this control is set to the center position, flat frequency characteristic is obtained. Rotating this control clockwise makes the low-frequency range enhanced, and rotating this control counterclockwise makes the low-frequency range attenuated.

When the line straight switch is set to on, this switch does not function.

12. Tone control for treble (TREBLE)

Controls the frequency characteristics of the high-frequency range.

When this control is set to the center position, flat frequency characteristic is obtained. Rotating this control clockwise makes the high-frequency range enhanced, and rotating this control counterclockwise makes the high-frequency range attenuated.

When the line straight switch is set to on, this switch does not function.

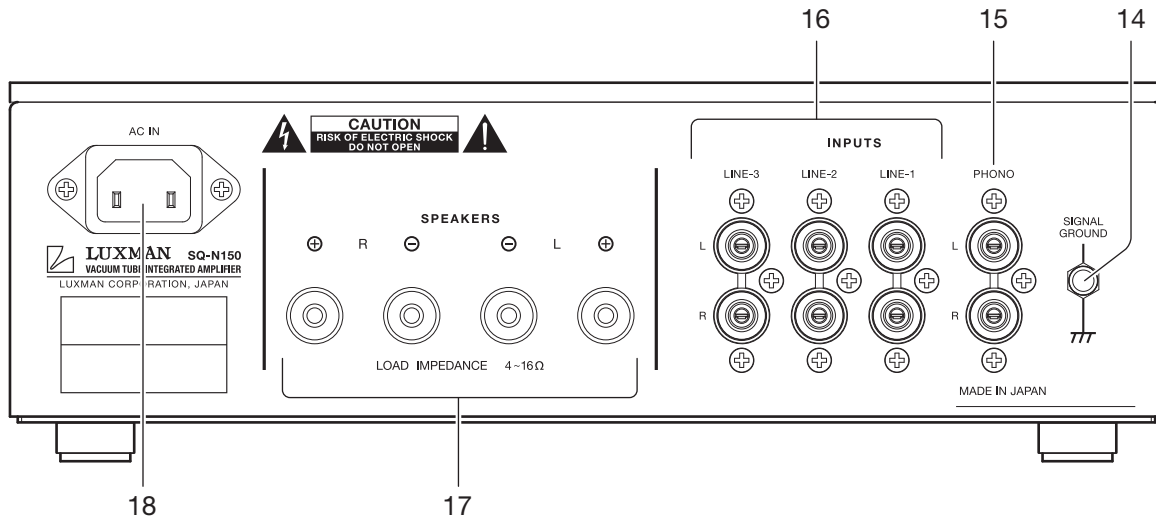
13. Balance control (BALANCE)

Adjusts the balance of sound volume between right and left channels.

Rotating the control counterclockwise gradually cuts the volume of the right channel, rotating the control clockwise gradually cuts the volume of the left channel.

This knob shall be set to the center position under normal conditions, and rotated to make adjustment if necessary. When the line straight switch is set to on, this switch does not function.

Rear panel



14. Signal ground terminal (SIGNAL GROUND)

A signal ground terminal for devices to be connected to this unit. This is used to reduce noises when other devices are connected, and is connected to an analog player or a tone arm. This terminal is not designed for safety.

15. Phono input terminals (PHONO)

Input terminals to connect RCA pin-plug cables from an analog record player or a tone arm.

Some analog players have internal phono equalizers. If that is the case, turn off the equalizer amplifier within the player.

Do not connect a CD player or other devices whose output level is high to this terminal. Normal playback cannot be provided due to sound crack.

* The short pin plug that prevents noise is inserted at the time of shipping. Remove the short pin plug when starting to use.

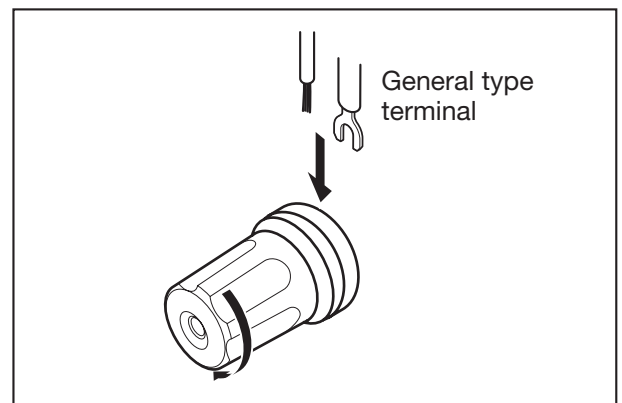
16. Line input terminals (LINE-1, LINE-2, and LINE-3)

For high-level signal inputs from a CD/DVD player, an SACD player, a tuner, a video deck, a TV, and other such devices. These input terminals offer the same functions.

17. Speaker terminals (SPEAKERS)

Connects a speaker system.

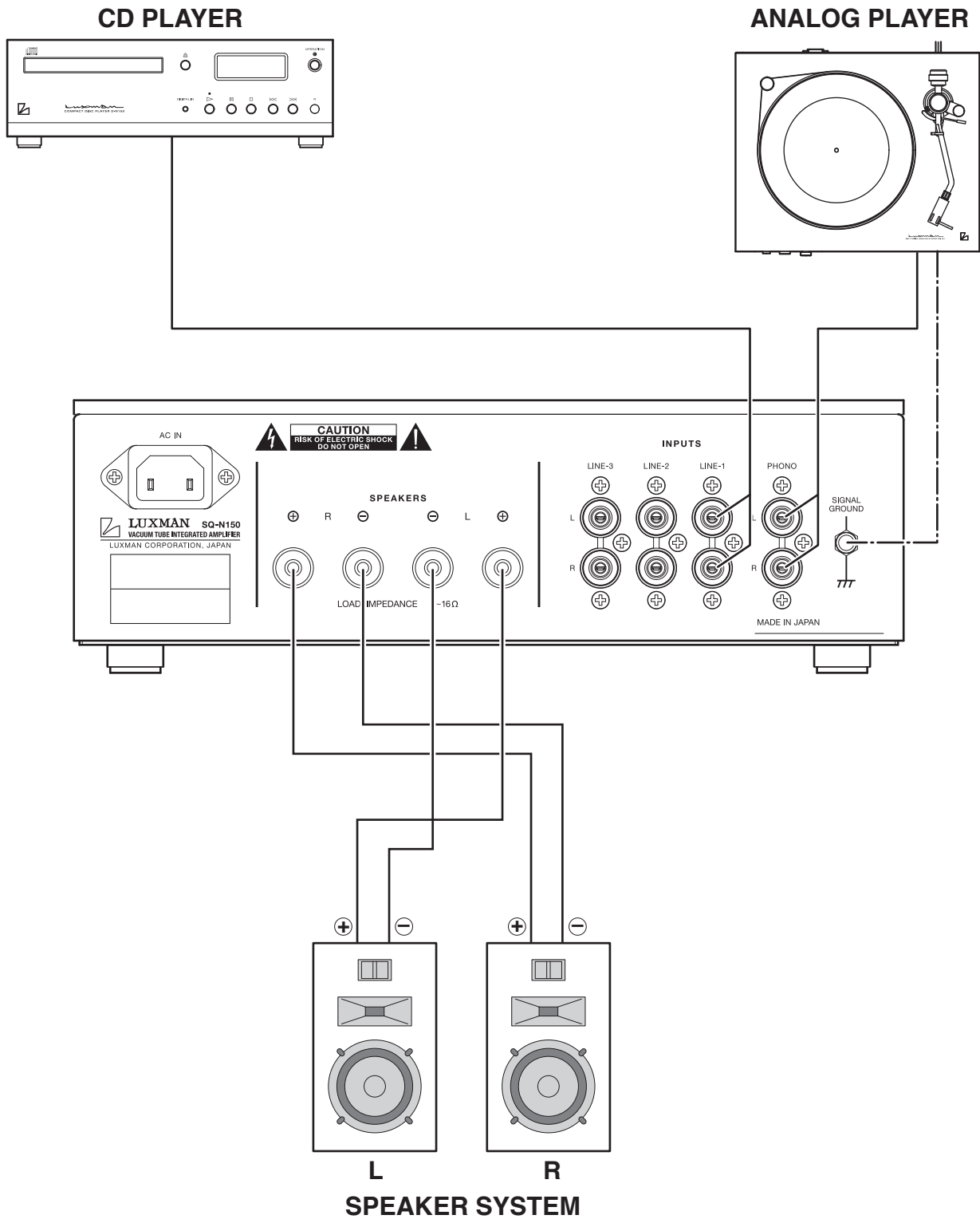
The right speaker terminal shall be connected to the right side (R), and the left speaker terminal shall be connected to the left side (L) in consideration of the polarity.



18. AC inlet (AC IN)

Connects the accessory power cable. Connects the accessory power cable to supply the power from the AC outlet on the wall.

Connections



Before connecting

Before connecting other devices, connect the jack side of the accessory power cable to the AC inlet of this unit.

Before connection is made, turn off the OPERATION switch of this unit and the power of all other connected devices to prevent accidents due to noises generated unexpectedly.

How to connect power supply

Use the accessory power cable and insert the AC plug in the outlet on the wall in the room where the unit is installed.

How to connect a CD player, SACD player, D/A converter, tuner, or other devices

Connect between the output terminals of a CD player, an SACD player, a D/A converter, a tuner, or other input device and the LINE-1 input terminals of this unit with 2 (R and L) pin cables.

For LINE-2 and LINE-3 input terminals, connection in the same fashion as the LINE-1 terminals provides the reproduction likewise.

How to connect analog record player

Connect between the output terminals of an analog record player and the PHONO terminals of this unit with 2 (R and L) pin-plug cables.

For some types of players, the ground wire from the phono motor or the tone arm should be connected to the ground terminal of this unit.

An MM or MC cartridge can be used with the embedded phono equalizer of this unit. When a low output voltage MC cartridge is in use, set the input selector to PHONO MC. When a high output voltage MM cartridge is in use, set to PHONO MM.

The output from an analog record player equipped with a phono equalizer or from an independent phono equalizer shall be connected to the line input terminals of this unit.

How to connect speakers

Connect the left-channel speaker to the L terminal of this unit and the right-channel speaker to the R terminal.

Securely connect the ⊕ terminal of the speaker system to the speaker terminal ⊕ (red) of this unit, and the ⊖ terminal of the speaker system to the speaker terminal ⊖ (black) of this unit.

If the ⊕ and ⊖ terminals are reversely connected to either of the right and left speaker systems, the acoustic phases of the sound reproduced from the right and left speaker systems are also reversed. In such a case, be aware that the sound level in the low range will be reduced and the acoustic stability will worsen, thus failing in normal stereo playback.

Operations

Before operation

1. Ensure that the connections are correctly made. (Normal playback cannot be achieved with wrong connections of R, L, ⊕, or ⊖.)
2. When the power is toggled between on and off or the input selector is changed over, set the volume control to the minimum position in advance.

Playback

1. Press the operation switch to turn on the switch after ensuring that the volume control is set to the minimum position.
2. Select a source to be reproduced with the input selector.
3. Adjust the sound level with the volume control.
4. Operate the line straight switch, balance control, and tone control according to your taste.

Volume can also be controlled by the accessory remote control RA-25 or RD-27 provided with D-N150, compact disc player.

Line straight switch

The line straight switch is used to play sound with the shortest signaling route for enhancing the purity of the source selected with the input selector. When this switch is set to on, the balance control and tone control are bypassed.

Balance control

The balance control allows users to adjust the balance of sound volume between right and left channels. When the balance adjustment is not required, the balance control is set to the center position.

When the line straight switch is set to on, the balance control does not function.

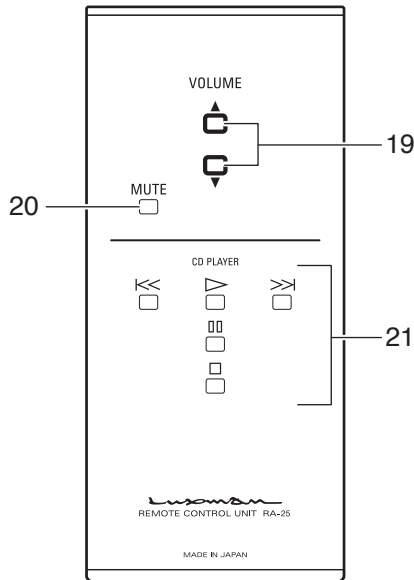
Tone control

This unit has the tone control function for the low-frequency range (BASS) and for the high-frequency range (TREBLE). By setting each control to the center position, flat frequency characteristic is obtained. Rotating the BASS control clockwise makes the low-frequency range enhanced, and rotating it counterclockwise makes the low-frequency range attenuated.

In the same manner, rotating the TREBLE control clockwise makes the high-frequency range enhanced, and rotating it counterclockwise makes the high-frequency range attenuated. For both the low-frequency and high-frequency ranges, the right and left channels interlockingly function.

When the line straight switch is set to on, the tone control does not function.

Accessory remote control (RA-25)



19. Volume control (VOLUME, ▲, ▼)

Adjusts the sound volume. The sound volume is lowered with ▼ and raised with ▲.

The volume control of the main unit rotates.

20. Mute (MUTE)

Mutes the sound temporarily. Pressing this switch activates the mute function and the sound volume indicator blinks resulting in no sound generated. Pressing this switch again sets the mute function to off, and sounds are generated.

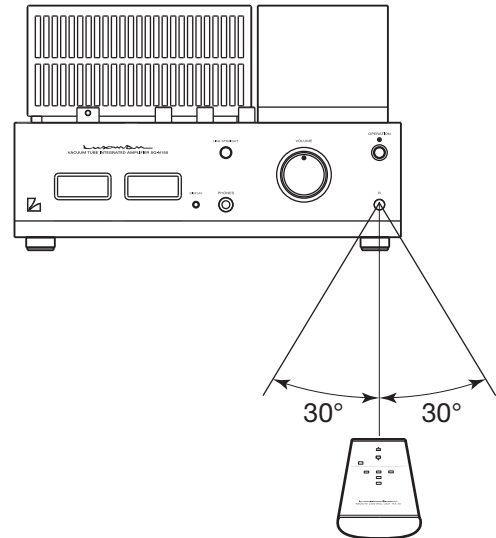
21. CD/SACD player operation switch (CD PLAYER)

This switch is used to control the corresponding CD/SACD players.

The corresponding CD/SACD players are the following models: D-N150, D-380, D-08u, D-06u, D-05u, D-08, D-06, D-05, D-10, D-7, D-600 and D-700S as of January 2019.

Remote control

The remote control shall be aimed at the remote sensor of this unit within the specified angle range shown in the illustration.

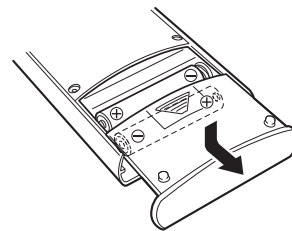


Effective distance:
approx. 5 meters

Dry cell

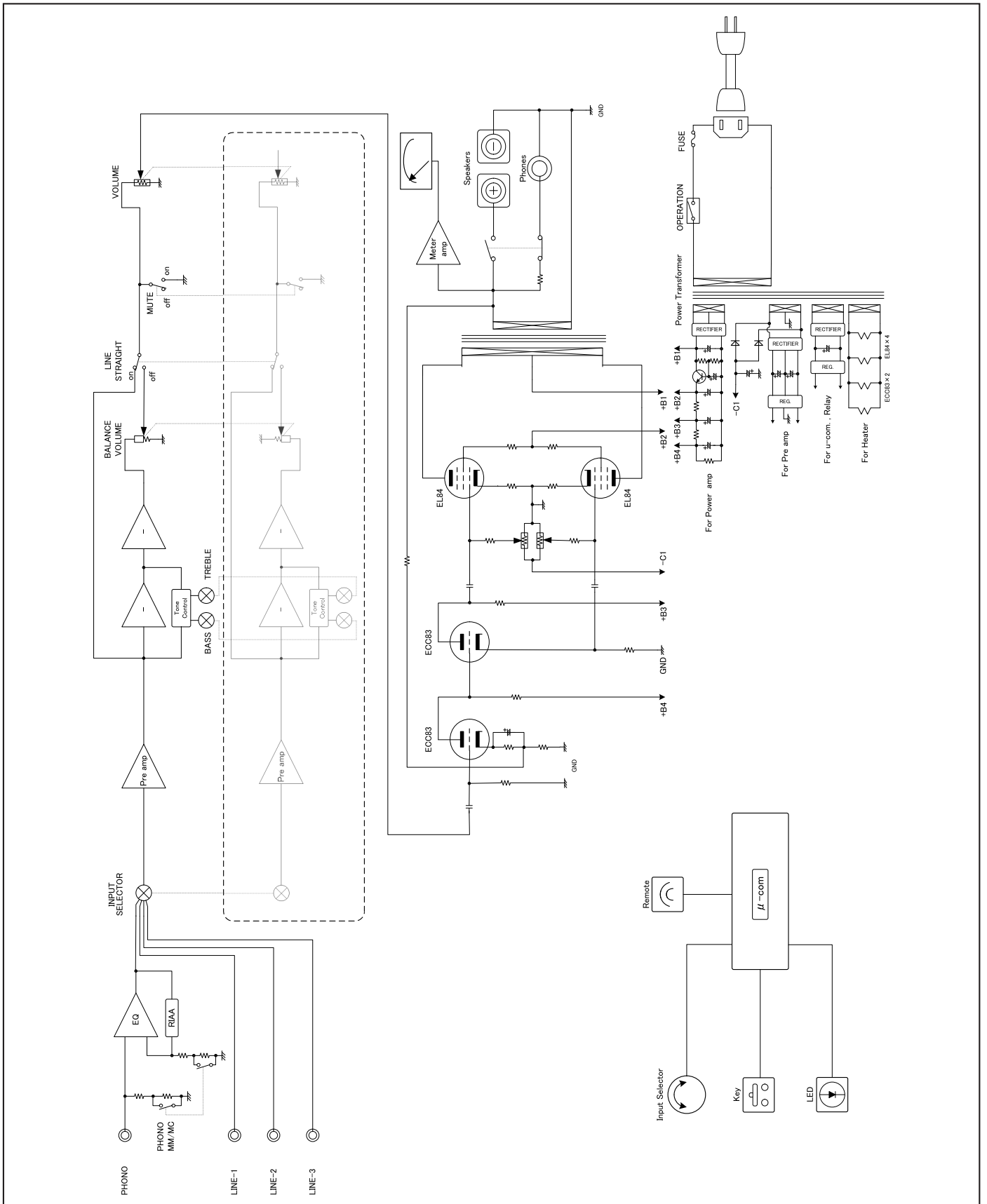
[How to load dry cells]

1. Put your finger on the battery cover claw on the rear of the remote control, and slide the cover downward while holding the claw down to open the cover.
2. Put the provided AAA batteries in the battery case as shown in the illustration in the battery case.
3. Close the battery cover.



-
- Do not use a new battery and an old one together.
 - There may be a case in which the voltages are different between two batteries even though their shapes are the same. Do not use the batteries of different types together.
 - If the remote control is not used for a long time (more than 1 month), the batteries shall be removed from the case. If the battery liquid is leaking, wipe away the liquid from the case before inserting new batteries.
 - To discard exhausted batteries, follow the instructions of each local authority.
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Block Diagram



Specifications


VACUUM TUBE INTEGRATED AMPLIFIER SQ-N150

| | |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated output | 10 W+10 W (6 Ω) |
| Total harmonic distortion | Less than 1 % (1 kHz, 10 W/6 Ω, LINE STRAIGHT "ON") |
| Input sensitivity/input impedance | PHONO (MM) : 3.0 mV/47 kΩ PHONO (MC) : 0.33 mV/100 Ω LINE : 180 mV/47 kΩ |
| S/N ratio | PHONO (MM) : 84 dB or more (IHF-A correction, 3.0 mV input) PHONO (MC) : 64 dB or more (IHF-A correction, 0.33 mV input) LINE : 95 dB or more (IHF-A correction, input shorted, line straight on) |
| Frequency response | PHONO (MM) : 20 Hz to 20,000 Hz (within ±0.5 dB, line straight on) PHONO (MC) : 20 Hz to 20,000 Hz (within ±0.5 dB, line straight on) LINE : 20 Hz to 80,000 Hz (within -3 dB, line straight on) |
| Tone control | BASS : ±8.0 dB at 100 Hz TREBLE : ±8.0 dB at 10 kHz |
| Supplied functions | [Front panel] <ul style="list-style-type: none"> • Operation switch • Input selector • Analog meter • Tone control • Headphone jack [Rear panel] <ul style="list-style-type: none"> • Input terminal • Signal ground terminal [Remote control function] (when using RA-25 or RD-27 (provided with D-N150)) <ul style="list-style-type: none"> • Sound volume (up/down) <ul style="list-style-type: none"> • Volume control • Balance control • Display switch • Line straight switch • Speaker terminals • AC inlet • Mute (only when using RA-25) |
| Circuit | Driver: P-K split phase inversion circuit, Output: Pentode connection |
| Vacuum tube used | 4×EL84, 2×ECC83 |
| Accessories | <ul style="list-style-type: none"> • Power cable • Owner's Manual (This document) • Safety cautions • Remote control RA-25 |
| Power supply | 230 V~ (50 Hz) |
| Power consumption | 98 W |
| Max. external dimensions | 297 (W) x 188 (H) x 251 (D) mm (front side knob with 20 mm and rear side terminal with 21 mm included in depth) |
| Weight | 12.4 kg (main unit) |

* Specifications and the appearance are subject to change without notice.

Before Asking for Repair Service

While in use, this unit may display phenomena which may be confused as malfunctions. Before contacting your country's official LUXMAN distributor for repair services, please read the operating instructions and operating instructions for any connected input and through output devices and check the troubleshooting table below. If the cause of the malfunction cannot be identified, please contact your dealer. After LUXMAN's representatives have accepted your request for repair services, inspection fees and transportation expenses may be claimed, even though the unit may be found to be operating normally.

| Problem | Cause | Solution |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No power is supplied even though the operation switch is pressed. | <ul style="list-style-type: none"> The power plug is disconnected from the wall outlet, or it is not completely inserted. The power jack is disconnected from the AC inlet, or it is not inserted completely. | <ul style="list-style-type: none"> Insert the power plug in the wall outlet completely. Securely insert the power jack in the AC inlet completely. |
| No sound is generated. (for both left and right channels) | <ul style="list-style-type: none"> The headphone is connected to the PHONE terminal. The volume is muted. The input selector is not set to the source to be reproduced. Cable connections are incomplete. The output level of the input device is set to the minimum position. | <ul style="list-style-type: none"> Turn the volume level down and disconnect the headphone. Cancel the MUTE mode. Set the input selector correctly. Make cable connections securely. Adjust the output level. |
| No sound is generated on one side. | <ul style="list-style-type: none"> The connecting cable is not connected on one side only. The balance control is fully rotated. | <ul style="list-style-type: none"> Make cable connections securely. The balance control shall be set to the center position under normal conditions. |
| Humming sound (boon or zzz noise) is generated. | <ul style="list-style-type: none"> The ground side of the pin-plug cable has no contact with the terminal. The ground wire of the analog player is not connected. Connections or mounting conditions are incomplete between the cartridge and shell, or between the shell and tone arm of the analog player. The connecting cables are too close to the power cable. Induction noise is picked up from a power transformer of another device. | <ul style="list-style-type: none"> Make connections securely so that the ground side of the pin-plug cable can be connected. Connect the ground wire of the analog player to the SIGNAL GND terminal. Connect (or mount) the cartridge, shell, and tone arm securely. Keep the connecting cables away from the power cable. Install it distant from other devices. |
| No effect of tone control or balance control is observed. | <ul style="list-style-type: none"> The line straight switch is set to on. | <ul style="list-style-type: none"> When tone control or balance control is used, the line straight switch shall be set to off. |
| The lights of the power meters are not turned on. | <ul style="list-style-type: none"> The display switch is set to off. | <ul style="list-style-type: none"> Set the display switch to on. |



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