

*Luxman*

VACUUM TUBE INTEGRATED AMPLIFIER

**SQ-N100**

*Owner's Manual*

Thank you for buying our Luxman Vacuum tube integrated amplifier SQ-N100. In 1925 when NHK began its regular radio broadcasting services, Luxman was founded by the name of Kinsuido Radio Department. For more than 80 years since then, the company has released so many products to audio and music fans. At any time in those years, the enthusiastic feeling of such audio and music lovers has been kept unchanged.

Luxman considers that high-fidelity playback of emotions of musical artists as well as listeners' deep impression on the reproduced music and strong attachment to playback equipment is the highest achievement for the audio products.

Luxman and its working staff are happy to have such a great opportunity that you have selected our Luxman products by virtue of a profound lot and that both of us can have the same emotions and values in regard to audio matters and music.

Before you use our products, please read through this Owner's Manual so that you can use this unit correctly and safely. Then, performance of this unit can be maximized and you can enjoy the reproduced music at the highest grade. After you have read this manual, please keep it carefully together with the warranty sheet and the safety precautions.

We hope that you will pleasantly use our equipment for a long time.

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## Installation location

Install this unit where good ventilation and heat radiation are assured. Do not install where the temperature is abnormally high such as in direct sunlight, or where it is dusty or humid, as this could result in damage to this unit despite proper heat radiation. Do not install this unit where it will create problems for driving the car.

## Ventilation holes

The amplifier has many vacuum tubes, generating much heat. Never close the ventilation holes located on the vacuum tube cover and the bottom plate. 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. This can cause malfunctioning. Provide more than 20 cm of space under the upper part of the ceiling plate. The lower part of the bottom plate should also have space equivalent to the height of four legs.

## Connection with other components

When connecting this unit with a CD/DVD player, tuner, or another input unit, turn off the power switches of this unit and all other connected units. Otherwise, a very strong noise may be generated and destroy the speakers. In the worst case, this can cause equipment malfunction.

The pin-plug to be inserted in each input terminal of this unit shall be pushed in firmly. If the earth side is inadequately inserted, humming and such noise may be generated, resulting in an adverse S/N ratio.

## Cautions for speaker connections

When making speaker system connections, be sure not to cause short-circuiting between  $\oplus$  and  $\ominus$  of the speaker terminals and speaker input terminals of this unit. If signals are applied to the amplifier with its circuit left short-circuited, a large current may be carried in the output circuit and cause malfunctioning.

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

This amplifier is equipped with a time muting circuit intended for the separation of the output circuit. For this reason, no sound is generated shortly after the power supply is turned on.

If the volume control is moved to a high sound level before this time muting circuit is canceled, a large sound is suddenly generated as a result. We therefore advise initially setting the volume control at a low level. After that, you may move the volume control to your favorite sound level after the initial sound has come out of the speakers.

## Repair and adjustments

When repair and adjustments are needed, please ask the store where you bought the unit or any nearby Luxman Service Center.

## Cleaning

For cleaning, use a piece of soft cloth to wipe the unit such as cleaning cloth available on the market.

If the unit has become very dirty, remove the dirt with soft cloth absorbing a small amount of neutral detergent, and then wipe the unit with dry cloth. Do not use a solvent like benzine or thinner because such a substance can often damage the exterior.

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### Safety cautions

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## Warning

The AC outlet power of this unit is 200W at maximum. The total consumption power for units to be connected shall not exceed 200W. Exceeding this limit can cause fires. (Electric heaters, hair driers, electromagnetic cookers, and other such items should not be connected.) Even though the power consumption is kept within the supply limits, no unit should be connected that may carry a heavy current when the power is ON.



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### Safety cautions

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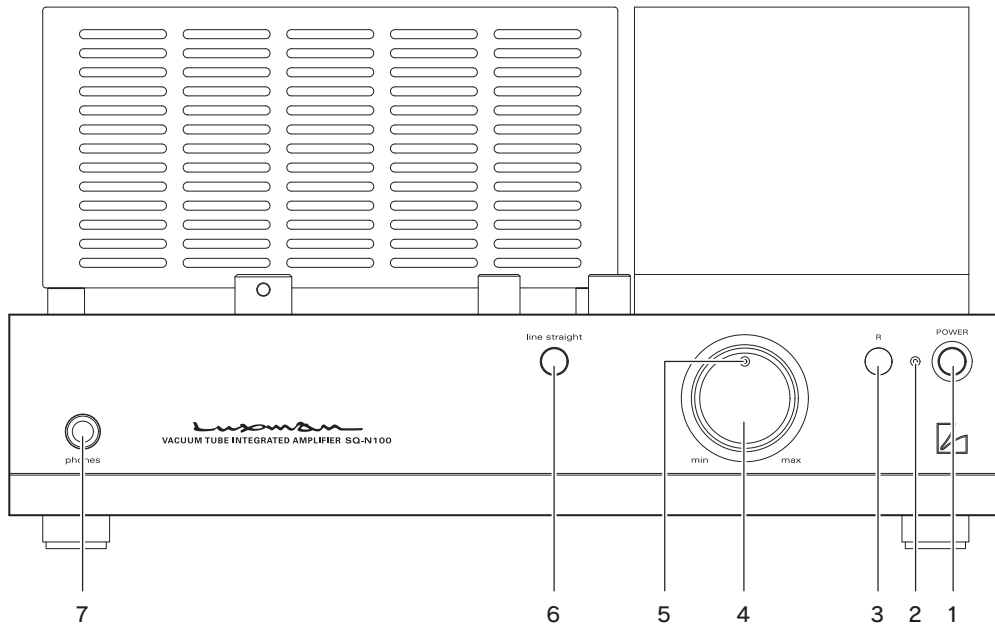
## Caution



This unit is heavy. Be careful when unpacking, carrying, and installation.

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## Front panel



### 1. Power switch (POWER)

This switch turns the power supply ON/OFF. When the I/O terminals are connected, turn off this switch without fail. When turning on the power switch again after turning it off, wait for more than one minute.

### 2. Power indicator

When the power switch is on, this indicator is lit in yellow to indicate that this unit is presently energized.

### 3. Remote control infrared receiver (R)

This is a sensor to receive signals from the accessory remote control. Do not place any objects in front of the sensor.

### 4. Volume control (VOLUME)

This knob is used to adjust the sound volume. In the position fully turned to the left, no sound is generated. As it is turned clockwise, the sound volume slowly increases.

### 5. Volume control indicator

This indicator is an index for the sound level. This indicator blinks in the middle of mute (silence) shortly after the power switch has been turned ON, or when muting is performed with the remote control.

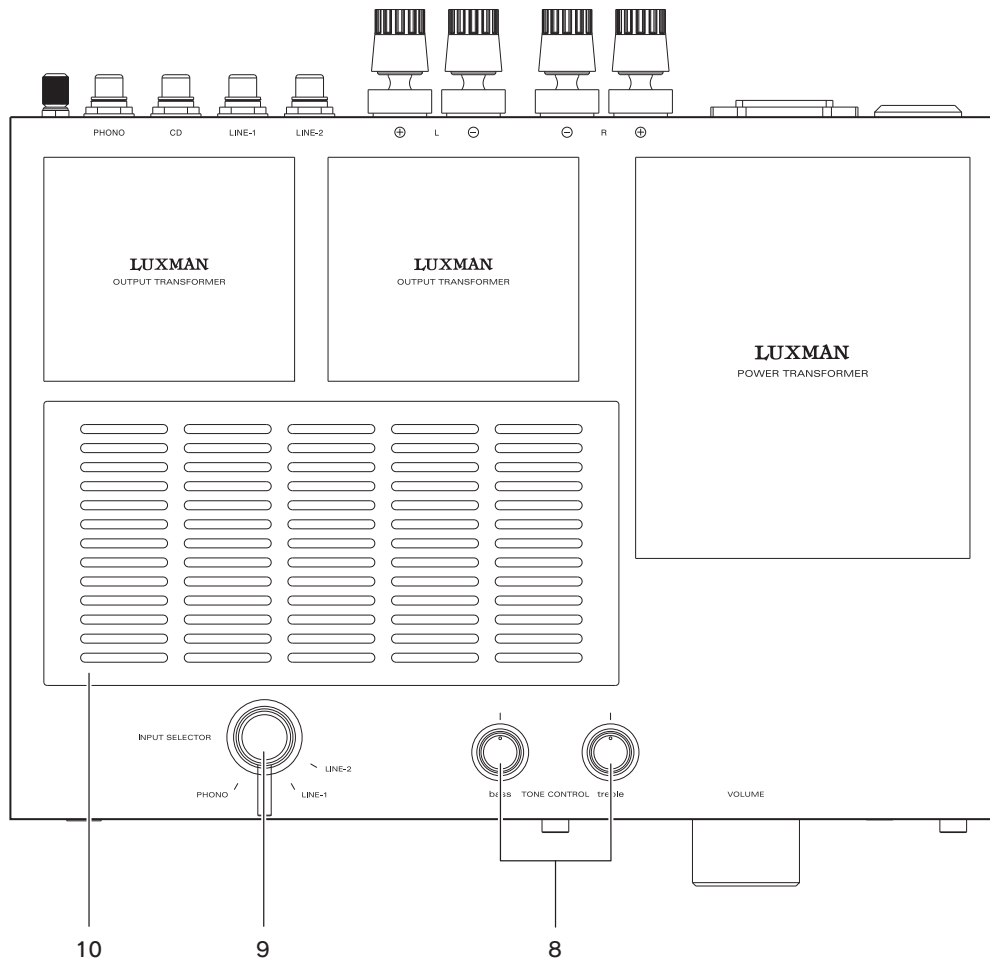
### 6. Line straight switch (line straight)

This switch is used to increase the purity of the sound quality by bypassing (skipping) the tone control circuit.

### 7. Headphone jack (phones)

When you want to use a stereo headphone, insert the headphone plug in this output jack. When the plug is inserted, the signal output to the speaker terminal is interrupted. When the plug is pulled out, the signal output is supplied to the speaker terminal again.

## Top panel



### 8. Tone control (TONE CONTROL, bass, treble)

**bass:** This is a level control to change the frequency characteristics in the low-frequency range. When it is set in the center position, flat frequency characteristics are obtained. Turning it clockwise causes the low-frequency range to be emphasized, and turning it counterclockwise results in attenuation.

This adjustment is impossible while the line straight switch is ON.

**treble:** This is a level control to change the frequency characteristics in the high-frequency range. When it is set in the center position, flat frequency

characteristics are obtained. Turning it clockwise causes the high-frequency range to be emphasized, and turning it counterclockwise results in attenuation.

This adjustment is impossible while the line straight switch is ON.

### 9. Input selector (INPUT SELECTOR)

This switch is used to select a record player, CD/DVD player, tuner, or other such component connected to the input terminals. There are four positions; PHONO, CD, LINE-1, and LINE-2. Each position corresponds to one of the input terminals on the rear panel. For selection, adjust the knob to the input position of your intended playback.

### 10. Vacuum tube cover

This cover is used for the protection of vacuum tubes. For safety, this cover should be left installed at all times.

#### Safety cautions

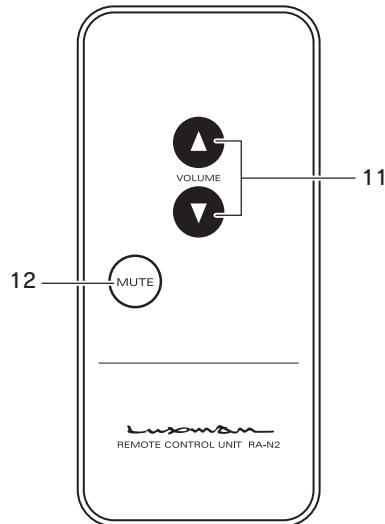


## Caution



This unit is an amplifier where vacuum tubes are used. In the state of the unit in operation, the main body becomes hot. Be careful not to touch it with your bare skin. This unit should not be used where small children are present.

## Remote controller (RA-N2)



### 11. Volume control (VOLUME, ▲, ▼)

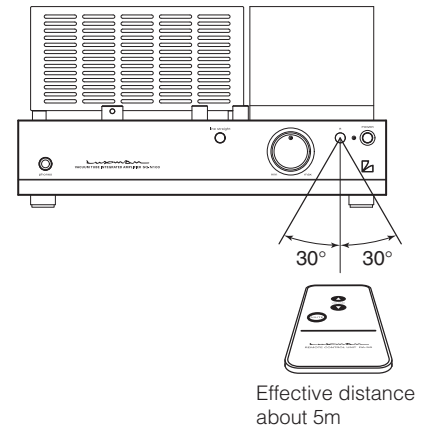
This button is used to adjust the sound volume. The sound volume is lowered with ▼ and raised with ▲.

### 12. Mute (MUTE)

This button is used for temporary silence. When this button is pressed to mute the sound, the volume control indicator blinks and the sound disappears. When it is pressed again to stop the muting, the sound can be heard again.

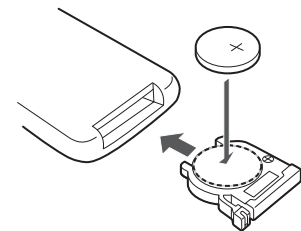
## Remote control

The remote control can be used by pointing it at the remote control infrared receiver of this unit. It should be used within the range shown in the illustration.



### [Replacement of batteries]

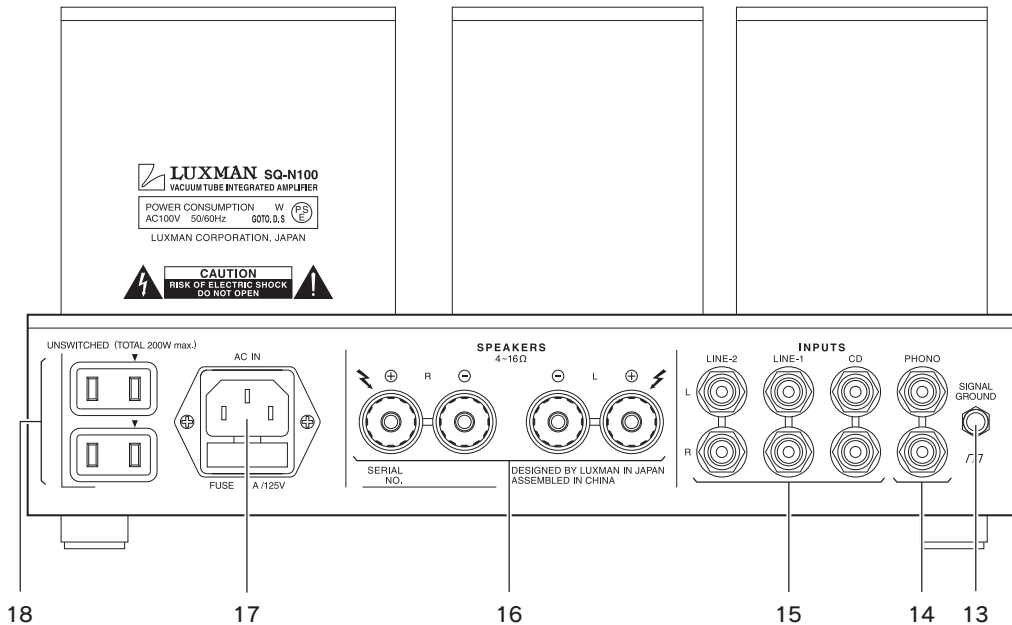
1. Put your finger on the battery cover claw located behind the remote control. The battery cover can be opened by sliding it downwards.
2. Put the batteries (CR2025) in the battery case, as illustrated.
3. Close the battery cover.



\* When the batteries start to lose power, the effective distance becomes shorter or the unit does not function even though the switch is pressed. The batteries should be replaced with new ones.

\* If the remote control is not used for a long time, the batteries should be removed from the case.

## Rear panel



### 13. Signal ground terminal (SIGNAL GROUND)

This is a signal ground terminal for equipment to be connected to this unit. This terminal is used to reduce noise when other equipment is connected. It is not for grounding for safety.

### 14. Phono input terminal (PHONO)

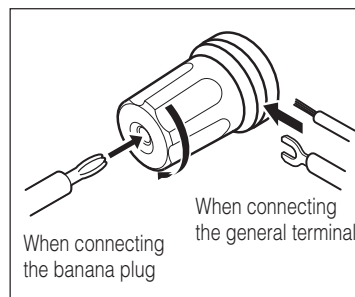
This is an input terminal for the connection of an analog record player.

### 15. Line input terminals (CD, LINE-1, LINE-2)

These terminals are used for high-level signal inputs from a CD/DVD player, SACD player, tuner, video deck, TV audio, and other such equipment. These input terminals offer the same functions.

### 16. Speaker output terminal (SPEAKERS)

This terminal is used for the connection of the speaker system. Connect the left speaker terminal to Side L and the right speaker terminal to Side R according to the polarities of ⊕ and ⊖.



### 17. AC inlet (AC IN)

The accessory power cable is connected. The power should be obtained from a 100V AC wall outlet.

### 18. AC outlet (UNSWITCHED)

This is an auxiliary power outlet to feed power to other equipment.

Power is fed irrespective of the ON-OFF condition of the power switch at this unit.

- The AC outlet power of this unit is 200W at the maximum. A total of power consumption for units to be connected shall not exceed 200W.
- Even though the power consumption is kept within the supply limits, no unit should be connected that may carry a heavy current when the power is ON.

# Connections

## Before Making Connections

Before connecting other devices, connect the jack side (where three holes are provided) of the accessory power cable to the AC inlet of this unit.

When connecting, turn off the power switch of this unit and the power supplies of auxiliary devices to prevent unexpected accidents that may be caused by noise.

## Connecting the Power Supply

Use an accessory AC power cable and insert the AC plug in a 100V AC outlet on the wall in the room where the unit will be installed.

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How to identify the power supply polarities

The 2-pole wall outlet used in most homes has two electrodes; one grounded and the other for 100V AC. If the power cable plug is inserted correctly, the polarities of the power supply correctly match with those of all devices and musical performance will have high acoustic quality.

For the accessory power cord of this unit, the right-side terminal corresponds to the ground pole when looking at the top and bottom characters engraved on the plug.

When the ground pole of a wall outlet is distinguished in your room (the insertion hole looks wider), insert the ground pole of the plug in that of the wall outlet.

\* If the ground pole of a wall outlet is not distinguished, the power plug can be inserted in either direction. There is no influence in regard to the basic performance characteristics of this unit.

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## Connecting CD players, DVD players, tuners, and other equipment

Connect between the output terminal of a CD player or such playback equipment and the line input terminal of this unit (CD, LINE-1, or LINE-2) through two pin-plug cables of R and L.

When connecting, do not confuse the right and left connections.

## Connecting a record player

Connect between the output terminal of an analog record player and the PHONO terminal of this unit through two pin-plug cables of R and L.

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

The phono equalizer of this unit uses the MM cartridge.

If you use an MC cartridge or equivalent with low output voltage, connections should be made via a head amplifier or a step-up transformer available as an option.

An output from an analog record player equipped with a phono equalizer or from an independent phono equalizer should be applied to the line input terminal of this unit (CD, LINE-1, or LINE-2).

## Speaker connections

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

Correctly connect the ⊕ terminal of the speaker system to the speaker terminal ⊕ (red) of this unit and also the ⊖ terminal of the speaker system to the speaker terminal ⊖ (black) of this unit. If the ⊕ or ⊖ terminal is reversely connected one side of the right or left speaker, the acoustic phases of the sound played from the right and left speaker systems are also reversed. The sound level in low range will be reduced and the acoustic stability will worsen, thus failing in normal stereo playback.

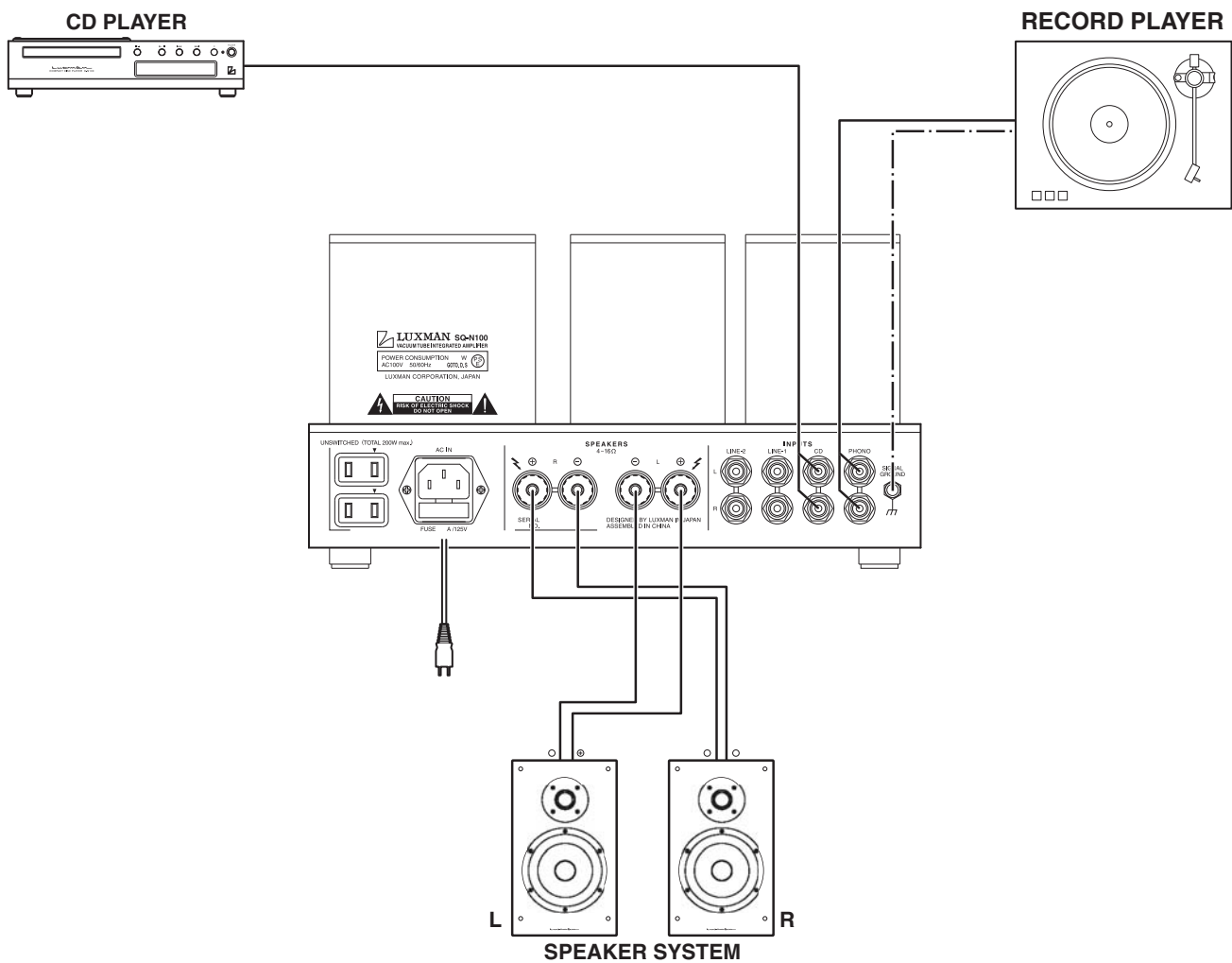
## Connection of power cables for other devices

For equipment that has a memory function, electric power has to be supplied at all times.

When the power is supplied from the AC outlet of this unit to these devices, the power plug of this unit must be inserted.



# Connection diagram



## Before operation

1. Confirm that the connections are correct. (Normal playback cannot be achieved with wrong connections for R, L, ⊕, and ⊖.)
2. Move the volume control (VOLUME) to the minimum position at the time of power ON/OFF or input selector changeover.

## Playback procedures

1. Confirm that the volume (VOLUME) has been lowered. Press the power switch (POWER) to ON.
2. Select the playback source with the input selector.
3. Adjust the sound level with the volume control (VOLUME).
4. According to the playback source, operate the tone control or the line straight switch.

## Line straight switch operation

To increase the purity of the source selected with the input selector, this switch is used for playback through the shortest possible signaling route. When this switch is turned on, the tone control circuit will be bypassed (skipped).

## Operation with tone control function

The tone control function of this unit comes in low (bass) and high level controls (treble).

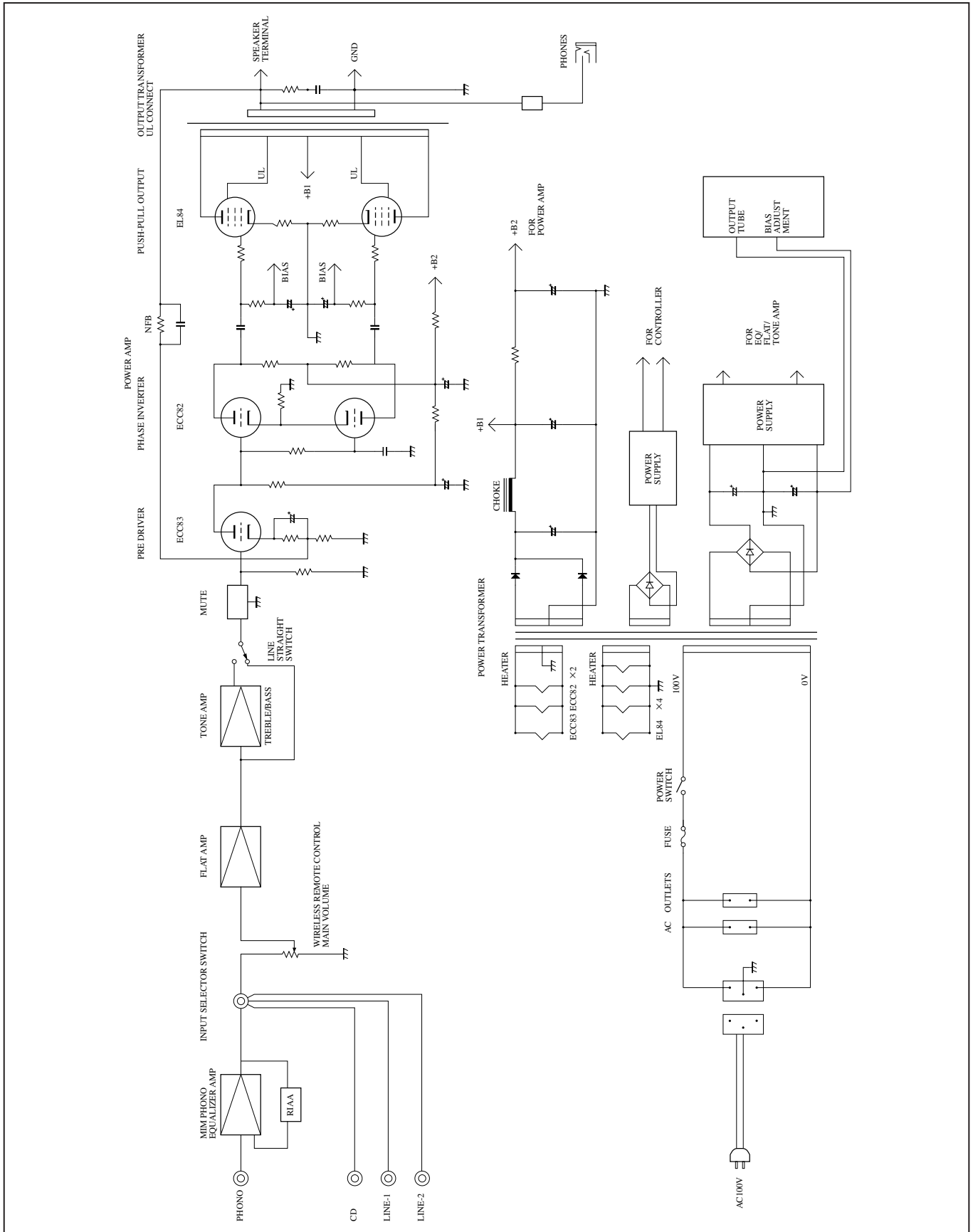
The low level control (bass) changes the low acoustic range of 300Hz and lower. This circuit secures flat frequency characteristics in the mid-position. When the knob is turned clockwise from this position, the low range is emphasized, while turning it counterclockwise results in attenuation.

The high level control (treble) is used to change the high acoustic range of 3kHz and above. Similarly as for the low level control (bass), this circuit secures flat frequency characteristics in the mid-position. When the knob is turned clockwise, the high range is emphasized, while turning it counterclockwise results in attenuation.

For both the low (bass) and high level controls (treble), both right and left channels are designed to be interactive.

When the line straight switch is turned on, this tone control does not function.

# SQ-N100 Block Diagram



## Specifications

Rated output	12W + 12W (6Ω), 10W + 10W (8Ω, 4Ω)
Input sensitivity	LINE: 150mV, PHONO (MM): 2.2mV
Input impedance	47KΩ
Frequency response	20Hz – 50KHz (within –3 dB)
Total harmonic distortion	0.3% or less (1 kHz rated output)
S/N ratio	90dB or more
Input	LINE: 3, PHONO (MM): 1
Output	SPEAKERS: 1
Functions	Remote control applied (sound volume), head phone output Tone control (bypass enabled), AC inlet AC outlet X 2 (non-interactive, total 200W max.)
Circuiting system	Mullard type UL connections
Vacuum tubes used	ECC83 X 1, ECC82 X 2, EL84 X 4
Power consumption	95 W (Electrical Appliance and Material Safety Law), 71 W (no signal)
Power supply	AC 100V (50/60Hz)
Accessories	Remote controller, power cable
Dimensions	297W X 162H X 210 (258) D mm (I/O terminals in brackets, including operating knobs)
Weight	11.5kg

\* Design and specifications are subject to change without notice.

The Luxman products have passed a variety of rigorous checks throughout the manufacturing processes from the selection of each part to shipment. Careful quality control is carried out at all times. If this unit should cause a problem, please contact our Service Center or the store where you bought the unit. According to the situation, the unit will be repaired by visit servicing or at the factory. If your residence is in a distant place, you may be asked to send the unit back to our location.

The warranty period for this unit is two years after the day of purchase (1 year for consumables such as laser pickup, vacuum tubes, etc.). Natural failure occurring in this period shall be deemed to be attributable to repair services done free of charge totally on our responsibility. The warranty registration sheet is contained in the package of this unit. Get the warranty sheet stamped at the purchasing store, bearing year, month, and day of sales plus the store name. The warranty sheet duly filled in shall be sent to our company. When asking us for repair services within the warranty period, attach the warranty sheet issued by us, without fail. Repair services will be charged if the services are provided after the warranty period or if the warranty sheet is not attached.

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# Troubleshooting

If you encounter a problem during use, check the following checklist and instruction manuals of the other components before suspecting a fault and sending your unit in for repairs.

Problem	Cause	Solution
No power is supplied even though the power switch is pressed ON.	<ul style="list-style-type: none"> <li>The power plug is disconnected from the wall outlet, or it is not completely inserted.</li> <li>The power plug is disconnected from the AC inlet, or it is not inserted completely.</li> </ul>	<ul style="list-style-type: none"> <li>Insert the power plug in the wall outlet completely.</li> <li>Insert the power plug in the AC inlet completely.</li> </ul>
The power supply can be turned on, but no sound is generated from both right and left channels.	<ul style="list-style-type: none"> <li>The volume control is set at the minimum level.</li> <li>The volume control is set at MUTE.</li> <li>The input selector is not set in the playback source position.</li> <li>Cable connections are incomplete.</li> <li>The output level of the playback equipment is minimum.</li> </ul>	<ul style="list-style-type: none"> <li>Turn the volume control clockwise to increase the sound volume.</li> <li>Cancel the MUTE mode.</li> <li>Set the input selector in the playback source position.</li> <li>Make sure cable connections are complete.</li> <li>Adjust the output level.</li> </ul>
No sound comes out on one side.	<ul style="list-style-type: none"> <li>The connecting cable is not connected on one side only.</li> </ul>	<ul style="list-style-type: none"> <li>Make sure cable connections are complete.</li> </ul>
Humming sound (boon or zzz noise) is generated.	<ul style="list-style-type: none"> <li>The ground side of the pin-plug cable has no contact with the terminal.</li> <li>The ground wire of the record player is not connected.</li> <li>Connections and mounting conditions are incomplete between the cartridge of the record player and the shell, or between the shell and the tone arm.</li> <li>The power cables are laid too close to the signal cables.</li> <li>Induction noise is picked up from a power transformer of another device.</li> </ul>	<ul style="list-style-type: none"> <li>Make connections correctly so that the ground side of the pin-plug cable can be connected.</li> <li>Connect the ground wire of the record player to the signal ground terminal.</li> <li>Connect (mount) the cartridge, the shell, and the tone arm correctly.</li> <li>Provide sufficient spacing between the power cables and the signal cables.</li> <li>Install it distant from other devices.</li> </ul>
There is no effect of tone control.	<ul style="list-style-type: none"> <li>The line straight switch is turned ON.</li> </ul>	<ul style="list-style-type: none"> <li>When tone control is used, the line straight switch must be turned OFF.</li> </ul>



