VACUUM TUBE STEREO POWER AMPLIFIER

MQ-300

Owner's Manual

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Precautions

Installation place

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

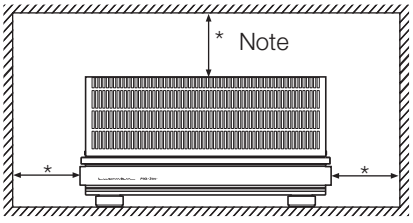
Do not install it where the temperature is high such as in direct sunlight, or where it is dusty or humid, as this could result in damage to this unit despite proper heat radiation.

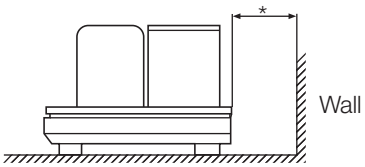
Ventilation holes

The ventilation holes on the top and bottom boards of this product must not be blocked because this unit is a vacuum tube amplifier and generates considerable heat. 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 case or similar unit.





Precautions in connecting with other components

When connecting this product to input devices such as a control amplifier, be sure to turn off the power of this product and all other connected devices. 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 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, be sure not to cause short-circuiting between ⊕ and ⊖ 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 product is a vacuum tube amplifier, and therefore, it cannot deliver a sound until the vacuum tube heaters warm up.

You can enjoy music 1 minute or more after turning on the power. 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 comes out of the speakers.

Repair and adjustment

When repairs and adjustments are needed, please consult with 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 substances can often damage the exterior.

Safety caution

Caution

This unit is a vacuum tube power amplifier. Be careful not to touch this product with your bare hand because this product becomes hot in the power-on state. For safety, do not use this product in a place where children or unchained animals are present.

Features of This Unit

Circuit configuration

Direct heated triode 300B non-feedback single stereo power amplifier

Output tube

Highly reliable Japan-made TA-300B (manufactured by Takatsuki Electric Industry Co., Ltd.) is used as a cathode bias circuit. The constant voltage DC-ignition method is used for the heaters.

Voltage amplification stage

Two-stage amplification circuit with highly reliable tubes 6SN7GTB (manufactured by Tung-Sol) in parallel connection.

Rectifying tube

Two pieces of indirectly heated tubes, 5AR4 (manufactured by Sovtec) are used in the L and R independently, whose internal impedance is low and which have excellent regulation. Due to a gradual rise in voltage supply to the output tubes, their lives are expected to be prolonged.

Coupling capacitor

LUXMAN's original high sound quality oil capacitors are used.

Power transformer

The orient core EI type is used to pursue thickness and depth in the bass range. Optimization of magnetic flux density improves electrical characteristics and achieves higher sound quality. The L-R independent structure of the secondary winding, rectifying tubes, block capacitors, and choke coils eliminates unwanted coloration of the sound and achieves expressive capability with high tranquility.

Output transformer

Orient cut core carefully chosen for 300B tubes after a lot of consideration to its sound quality and dimensional balance. We have improved the directivity of wire rods and winding structure and have achieved excellence in low frequency characteristics using LUXMAN classic OY type as a basis.

Choke coil

A choke coil of FINEMET® core is equipped in the L and R sides independently. Regular winding in which a sheet of paraffin paper is inserted between every winding layer can decrease losses and achieve elaborate and fresh sound quality with rich content.

(FINEMET® is a registered trademark of Hitachi Metals, Ltd.)

Input terminal

This product is equipped with the copper alloy input terminal that has high conductivity equivalent to copper and hardness equivalent to brass.

Vibration-reducing high-rigidity chassis

High-rigidity chassis structure combining a 1.6 mm thick steel sheet with 12 mm thick aluminum top panel.

A vibration reducing structure with heat-resistant material support at the bottoms of output tubes and rectifying tubes lowers microphonic noise.

Socket floating structure

The socket floating structure that minimizes the vibration influence to structurally delicate output tubes, 300B, is used to reduce microphonic noise.

Appearance

This product is designed to look as graceful as possible with special attention to the finishing touch such as transformer cases formed by aluminum extrusion processing, specially processed nameplates, 12 mm thick top panel with high-grade hairline finish, and wood panel made of natural wood with piano finish coating in a harmonic fashion.

Highly reliable design

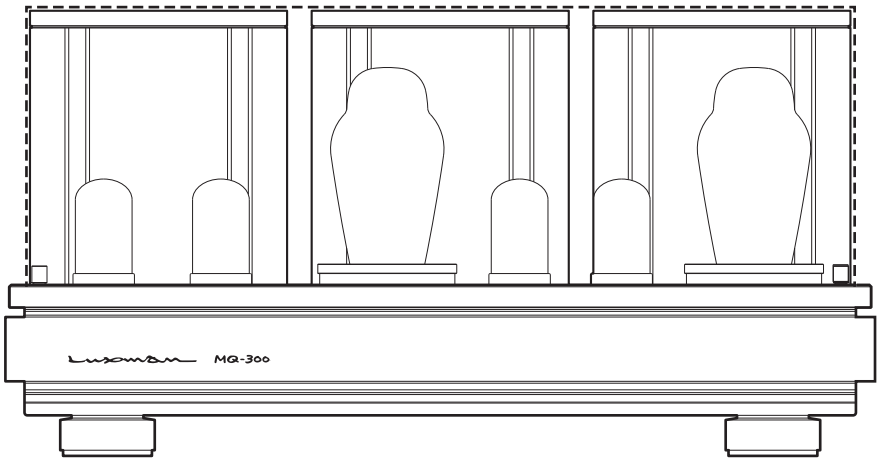
The sound quality and tones produced by vacuum tubes have been refined, and at the same time, both prolonged life and highly reliable design of vacuum tubes have been achieved by providing operating conditions of vacuum tubes with some allowance.

Cast-iron insulator

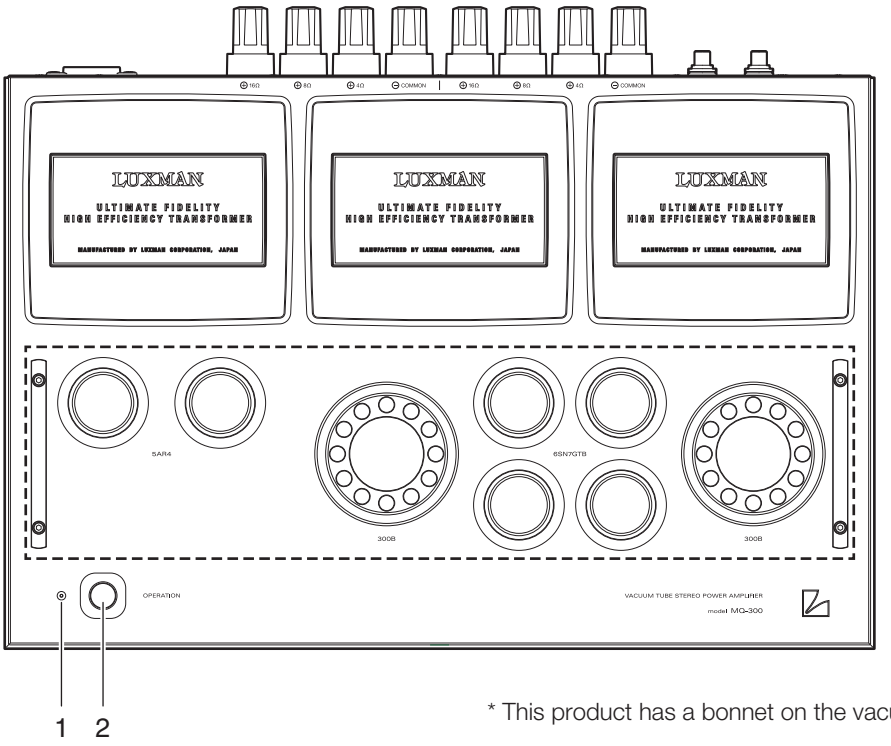
This unit is equipped with gradation cast-iron insulators that cuts out unnecessary external vibration and strongly supports the weight of this unit.

Names and Functions

Front panel



Top view



* This product has a bonnet on the vacuum tube section.

1. Power indicator (OPERATION)

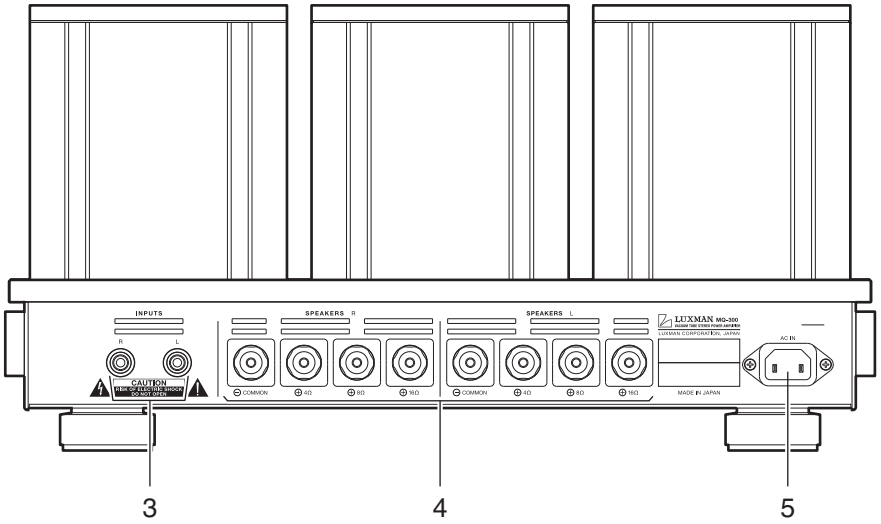
Turns orange when the power is turned on.

2. Power 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 power switch again after turning the unit off, wait for more than one minute.

Rear panel



3. Input terminals (INPUTS)

These terminals are input terminals to connect input devices such as a control amplifier.

Connect these terminals to an unbalanced output of an input device with a pin-plug cable.

4. Speaker terminals (SPEAKERS)

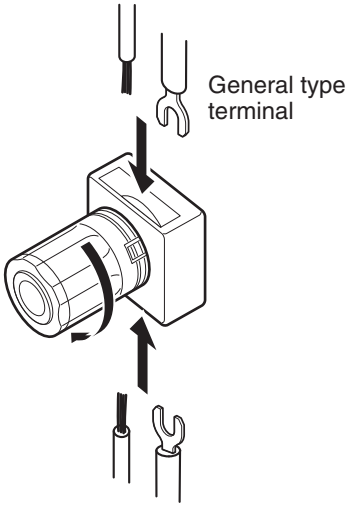
These terminals are output terminals to connect a speaker system. Connect the left speaker terminal to the L side and the right speaker terminal to the R side according to the polarities of ⊕ and ⊖.

The speaker terminals consist of ⊖ COMMON, ⊕ 4 Ω, ⊕ 8 Ω, and ⊕ 16 Ω for each channel. Connect the ⊖ terminal of the speaker system to the ⊖ COMMON terminal and ⊕ terminal of the speaker system to ⊕ 4 Ω, ⊕ 8 Ω, or ⊕ 16 Ω according to the impedance of the speakers to be used.

5. AC inlet (AC IN)

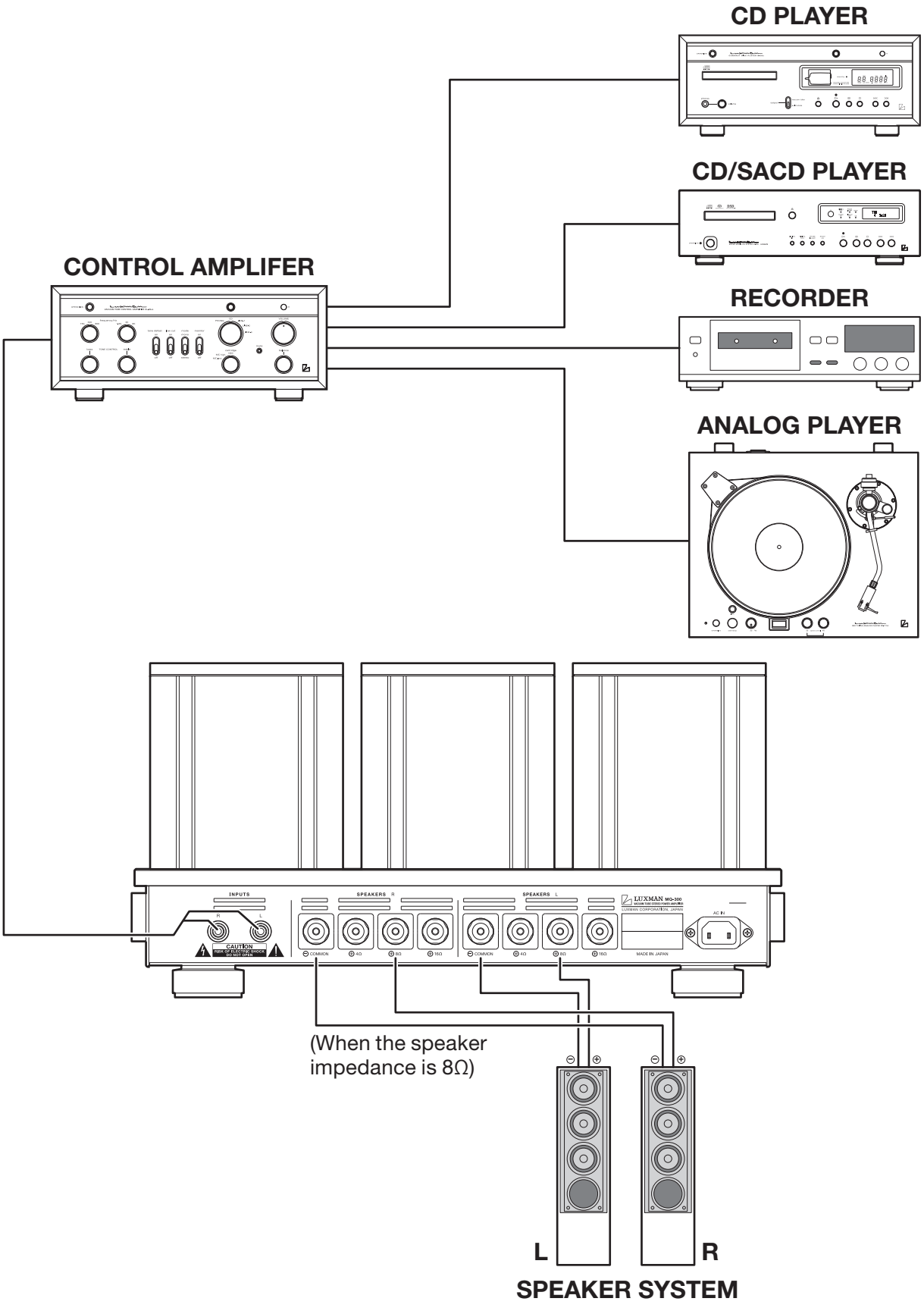
Connects the accessory power cable.

The power shall be supplied from a household wall socket.



* It is possible to insert cables from below as well as from top.

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 main power 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 an outlet on the wall in the room where the unit will be installed.

How to connect the input terminals to input devices such as a control amplifier

Connect between the output terminals of an input device such as a control amplifier and the input terminals of this unit with pin-plug cables.

Take extra care not to conduct wrong connection between right and left channels. If the right and left channels are connected reversely, the localization of sound images is deteriorated, thus failing in normal stereo playback.

How to connect speakers

Connect the left-channel speaker to the LEFT SPEAKER terminal (L) of this unit and the right-channel speaker to the RIGHT SPEAKER terminal (R).

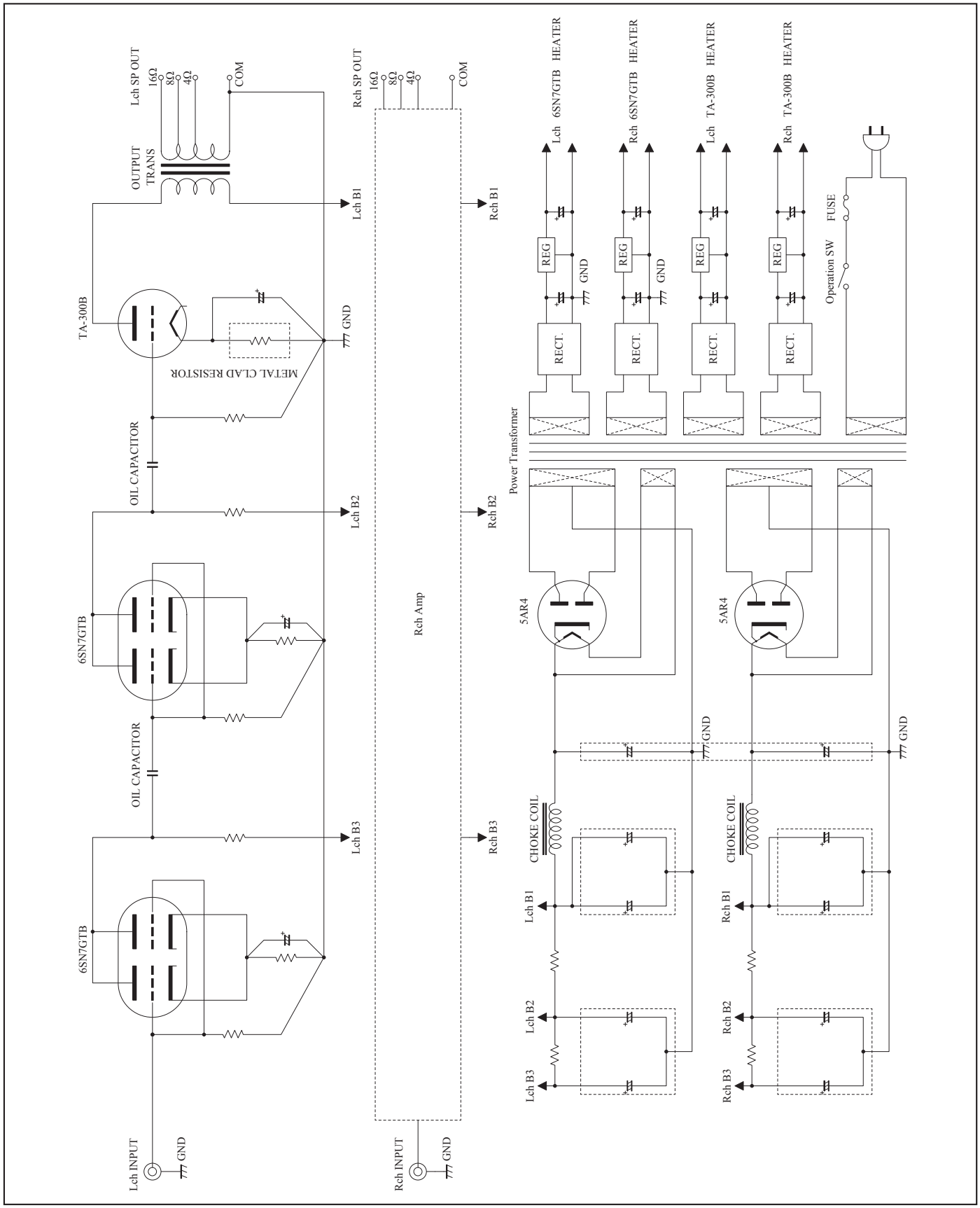
Securely connect the ⊕ terminal of the speaker system to the red speaker terminal (⊕ 4 Ω, ⊕ 8 Ω, or ⊕ 16 Ω) of this unit according to the impedance of the speakers to be used and the ⊖ terminal of the speaker system to the black speaker terminal (⊖ COMMON) of this unit.

If the ⊕ and ⊖ terminals are reversely connected to either of the right or left of the speaker system, the signal phases reproduced from the right and left of the speaker system 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.

If the impedance of the speakers to be used is other than 4 Ω, 8 Ω, or 16 Ω, connect the terminal with an impedance closest to the impedance value of the speakers.

The range of the impedance of the speaker to be connected should be within the range of 4 Ω to 16 Ω.

Block Diagram



Specifications

Rated output	8 W + 8 W (4 Ω, 8 Ω, 16 Ω)
Total harmonic distortion	1 % (1 kHz, 8 Ω, 1 W)
Input sensitivity	490 mV/8 W (4 Ω, 8 Ω, 16 Ω)
Input impedance	240 kΩ
S/N ratio	105 dB (IHF-A weighted, input short)
Frequency response	+0.3, –1.5 dB (20 Hz to 20 kHz) +0.3, –3.0 dB (10 Hz to 30 kHz)
Input	Line: 1 system
Output	Large type of speaker terminal
Supplied functions	[Front panel] Power switch [Rear panel] Input terminal, speaker terminals (4 Ω, 8 Ω, and 16 Ω), AC inlet
Circuiting system	Single stereo power amplifier
Vacuum tube used	5AR4 × 2, 6SN7GTB × 4, TA-300B × 2
Accessories	• Power cable • Owner's Manual (This document) • Safety cautions • Terminal protection cap
Power source	230 V ~ (50 Hz)
Power consumption	190 W 190 W (at no input)
Max. external dimensions	460 (W) × 237 (H) × 340 (D) mm (speaker terminals included)
Weight	29.0 kg (main unit only)

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

Before Asking for Repair Services

While the unit is used, an unusual phenomenon may be confused as a malfunction for a certain reason. Prior to asking our official sole distributor of your country for repair services, please check the table below and read the operating instructions for the subsidiary devices. If the cause of the malfunction cannot be identified, please contact your dealer. When we have once accepted your request for repair services, inspection fees and traveling expenses may be claimed even though the unit is found to be normal.

Problem	Cause	Solution
No power is supplied even though the power switch is pressed ON.	• The power plug is disconnected from the wall outlet, or it is not completely inserted.	• Insert the power plug in the wall outlet completely.
	• The power plug is disconnected from the AC inlet, or it is not inserted completely.	• Securely insert the power plug in the AC inlet completely.
No sound is generated. (for both left and right channels)	• Cable connections are incomplete.	• Make cable connections securely.
	• The output level of the playback equipment is minimum.	• Adjust the output level.
No sound is generated on one side.	• The connecting cable is not connected on one side only.	• Make cable connections securely.
Humming sound (boon or zzz noise) is generated.	• The ground side of the pin-plug cable has no contact with the terminal.	• Make connections correctly so that the ground side of the pin-plug cable can be connected.
	• The connecting cables are too close to the power cable.	• Keep the connecting cables away from the power cable.
	• Induction noise is picked up from a power transformer of another device.	• Install it distant from other devices.

MEMO

LUXMAN CORPORATION, JAPAN

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