LUXMAN

PHONO AMPLIFIER

E-250

Owner's Manual

Contents

Precautions

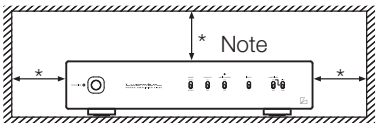
Installation place

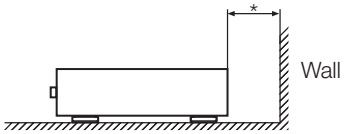
Install this unit in a location where good ventilation and heat radiation are assured.

Especially, the installation of this unit where the 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.

Note:

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





Cautions in connecting cartridges

Connect an analog player or a tone arm with the ground terminal of this unit. If the grounding terminal is inadequately connected, noises including hum may be generated, resulting in an adverse effect on the S/N ratio.

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

Precautions in connecting with other components

When connecting this unit to output device, be sure to turn off the power switch of this unit and all other connected units. Failure to observe this may generate a strong noise resulting in speaker damage or cause a malfunction.

The pin-plugs to be inserted in the input and output terminals 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 effect on the S/N ratio.

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 is generated shortly after the power supply is turned on.

If the volume control is set to a high sound level before the time muting circuit is canceled, a large sound will suddenly be generated. 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 and adjustments are needed, please consult with the dealer you bought the unit from.

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.

Features of This Unit

Outline

This unit is an NF type phono equalizer amplifier supporting MM/MC cartridges.

Specially selected MC transformer

Two pieces of step-up transformers in which a super permalloy core is independently used are mounted. Independence between left and right channels has achieved richly expressive sound that can be produced only by boosting with a transformer.

Setting of cartridge load impedance

The load resistance setting function with 4 positions supports a wide variety of cartridges.

Setting of cartridge load capacity

The load capacity setting function with 4 positions supports a wide variety of cartridges. Change in high-frequency characteristics allows sound to be adjusted to your favorite tone quality.

Improvement in S/N ratio

Noise reduction has been achieved by the 2-parallized first stage of FET, and improvement in the S/N ratio has been achieved by optimization of ground pattern and ground point.

Selector relays

The selector relays of the high sound quality which are mounted in the important points of LUXMAN amplifiers also are mounted.

High-inertia power supply

The high-inertia power supply circuit on which a large-capacity capacitor blocks were combined.

Schottky barrier diode

Schottky barrier diodes that have less switching noises and higher conversion efficiency to the DC voltage is applied for the power supply rectifier circuit.

Articulation function

Magnetization of the cartridge or MC transformer that may cause the deterioration of sound quality can be eliminated with the use of reproduced sound signals. This function can exploit the full potential of cartridges and achieve the sound quality with a sense of openness.

Low cut switch

A low-cut filter is provided to restrain woofer fluctuation generated due to warped analog records.

Stereo/Monaural

The monaural switch which is useful for playing monaural records.

Input/output terminals

18 mm pitch RCA input/output terminals allow even high-performance line cables with large plugs to be connected.

Compact chassis design

Compact body design (W 364 mm x D 274 mm)

LUXMAN's original OFC wires

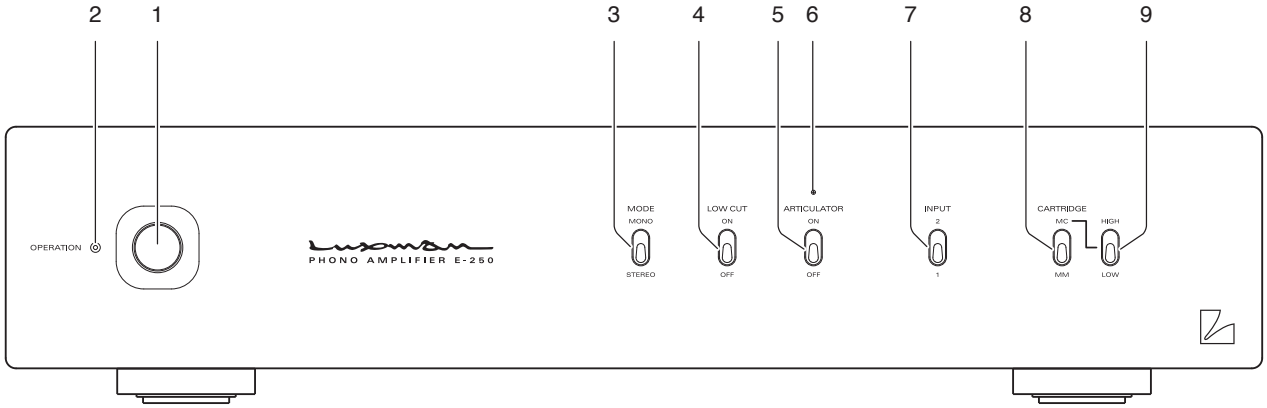
Original OFC wires are used in the internal shielded wires to achieve smooth and natural signal transmissions thanks to the spiral wrap shielding on each core and the non-plating process on the core wire.

AC inlet

This inlet enables the connection with an external power cable.

Names and Functions

Front panel



1. Operation switch (OPERATION)

This switch turns on and off the power. When connecting the input/output terminals, be sure to turn off this switch.

⎕ : OFF

⏤ : ON

2. Operation indicator (OPERATION)

Blinks during warm-up when the operation switch is turned on and lights up when the operation state is activated afterward.

When the indicator is blinking, the output muting circuit is activated to mute sound. Please be advised that the volume control of the input device such as a control amplifier shall be set to a low level at first and adjusted according to your taste after sound comes out of the speakers.

3. Mode switch (MODE)

- STEREO
  Is used for stereo playback. Select this position under normal conditions.
- MONO
  Is used for monaural playback.

4. Low cut switch (LOW CUT)

Toggles the low-frequency cutoff function on and off. The speaker (woofer) fluctuation is restrained when a warped record is played.

- OFF
  Provides the normal state.
- ON
  Cuts low frequencies of 30Hz or less. (–6 dB/oct)

5. Articulator switch (ARTICULATOR)

This function performs demagnetization by using sound signals.

When a record is played with the articulator switch set to ON, the cartridge and step-up transformer are demagnetized, and thus the expression of fresh sound is brought back.

When the articulator switch is set to ON, no sound is generated or the sound becomes remarkably small during playback. This is the sign that the cartridge is being demagnetized. If the articulator is set to OFF at this point, the sound suddenly becomes loud. Therefore, do not turn up the sound volume of the control amplifier or the like. It is recommended to activate the articulator for approximately 30 seconds before the end of a track of the record.

- OFF
  Deactivates the articulator. Select this position under normal conditions.
- ON
  Activates the articulator.

6. Articulator indicator

Blinks when the articulator is activated.

7. Input selector (INPUT)

Selects an input terminal on the rear panel.

- 1: Input terminal 1 (INPUT-1) is selected.
- 2: Input terminal 2 (INPUT-2) is selected.

8. Cartridge selection switch (CARTRIDGE)

Selects between MM and MC according to your cartridge. When MC is selected, the MC cartridge selector (9) can switch between HIGH and LOW and the MC input impedance.

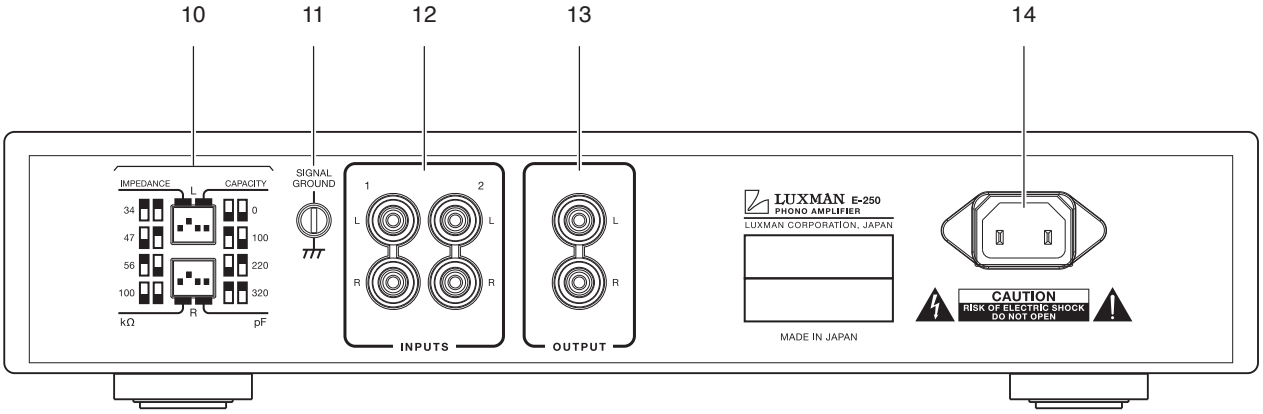
9. MC cartridge selector

When the cartridge selector (8) is set to MC, the MC cartridge selector can select an input impedance.

This selector switches between HIGH and LOW according to your MC cartridge. The input impedance at the MC HIGH position is 40 Ω, and the input impedance at the MC LOW position is 2.5 Ω.

Names and Functions

Rear panel



10. Input impedance selector/ input capacitor selector

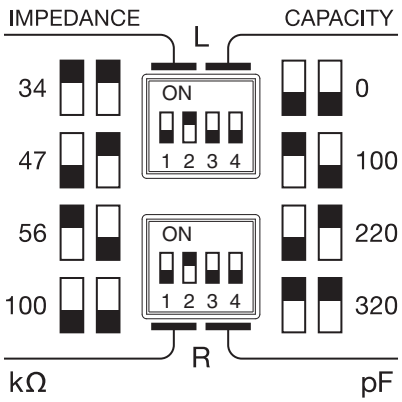
The input impedance and input capacitor can be selected according to your cartridge. The switches in the upper row are used for the L channel, and the switches in the lower row are used for the R channel.

The switches 1 and 2 are used for the input impedance, and the switches 3 and 4 are used for the input capacitor.

Combination of the switches shown in the figure allows the setting at the L and R channels to be performed at the same time according to your cartridge specifications or your favorite pattern.

For the input impedance, 34 kΩ, 47 kΩ, 56 kΩ and 100 kΩ are selectable, and for the input capacitor, 0 pF, 100 pF, 220 pF, and 320 pF are selectable.

The input impedance is 47 kΩ and the input capacitor is 0 pF as factory default settings.



* Switch positions are marked with ■ in the detailed drawing above.

Before changing switch positions, set the sound volume of connected devices to a low level.

11. Signal ground terminal (SIGNAL GROUND)

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

12. Input terminals (INPUTS)

Are input terminals to connect pin-plug cables from an analog player or a tone arm. There are 2 lines of input terminals to connecte 2 pieces of analog players or tone arms. The input selector can select between 1 and 2.

13. Output terminals (OUTPUT)

Use pin-plug cables to connect the output terminals of this product with the line input terminals of a control amplifier and an integrated amplifier.

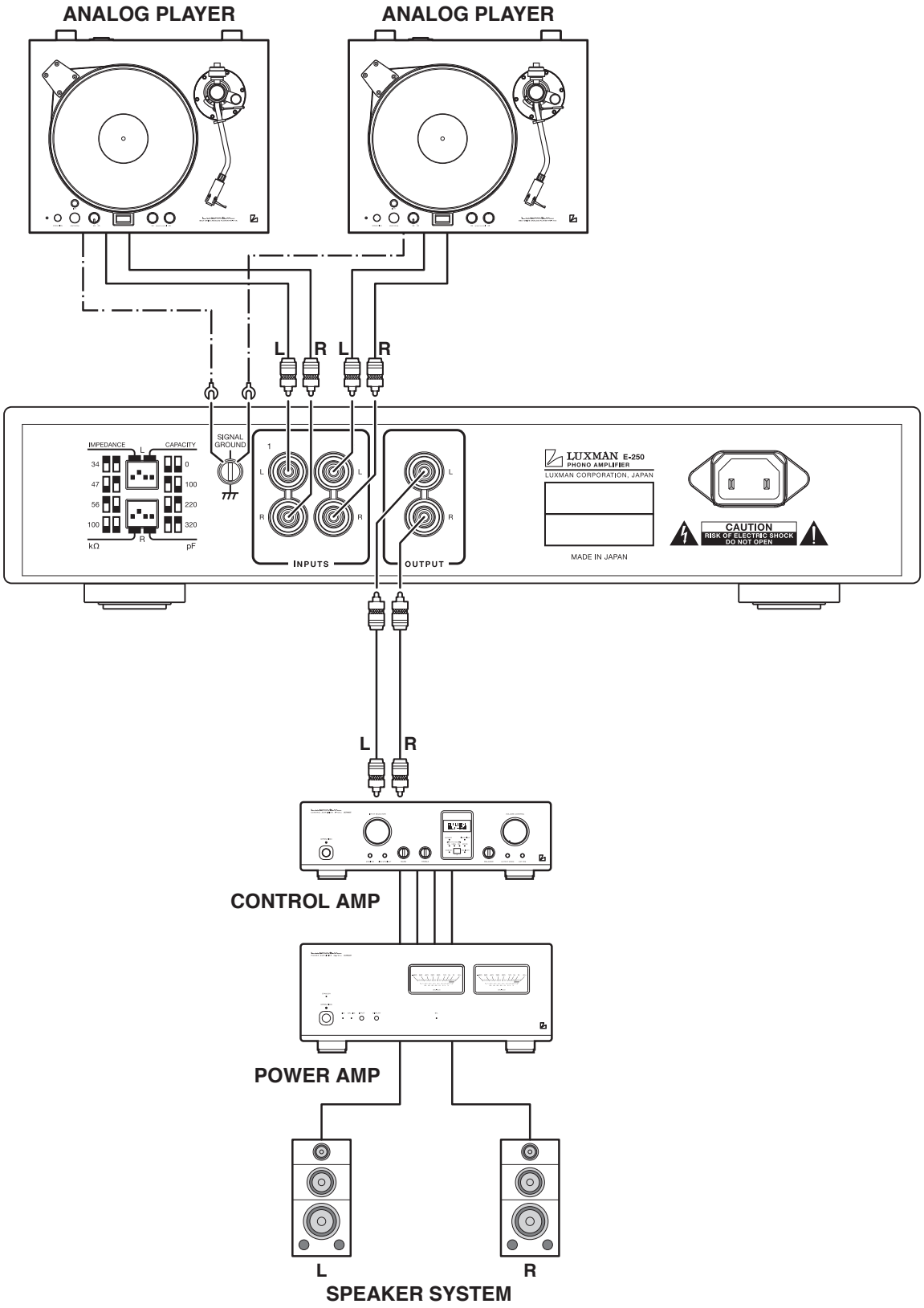
If this terminal is connected to the phono (PHONO) input terminals of those amplifiers, they may be damaged. Be sure to connect the terminal to the line input terminal.

14. AC inlet (AC IN)

Connects the accessory power cable.

The power shall be supplied from a household wall socket.

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, turn off the main power switch of this unit and the power of all other connected devices to prevent unexpected accidents that may be caused by noise.

How to connect power supply

Use the accessory power cable to insert the AC plug in an outlet on the wall in the listening room.

How to connect output devices

1. Surely connect the output terminals of this unit to the line input terminals of a control amplifier or an integrated amplifier using RCA pin-plug cables between the L-channel and R-channel. If the grounding side of the pin-plug cables is inadequately connected, noises including hum may be generated, resulting in an adverse effect on the S/N ratio. Therefore, insert the cables all the way.

2. Do not connect the output terminals of this unit to the phono (PHONO) input terminal of a control amplifier or integrated amplifier. Failure to observe this may not only distort the phono amplifier signals of the integrated amplifier or a control amplifier but also damage the amplifiers. Be sure to connect the terminal to the line input terminal. Do not insert the supplied short pins into the output terminals. If the pins are inserted into the output terminal, no sound will be generated.

3. Sound volume adjustment shall be performed by the connected control amplifier or integrated amplifier because this unit has no sound volume adjustment function. Sound volume shall be set to the minimum when this unit is being connected. If sound volume is set to a high level at power-on, sudden loud sound may be generated, which may cause hearing loss or damage to the speakers.
   Please be advised that the sound volume shall be set to a low level at first and adjusted according to your taste after the sound comes out of the speakers.

How to connect analog player

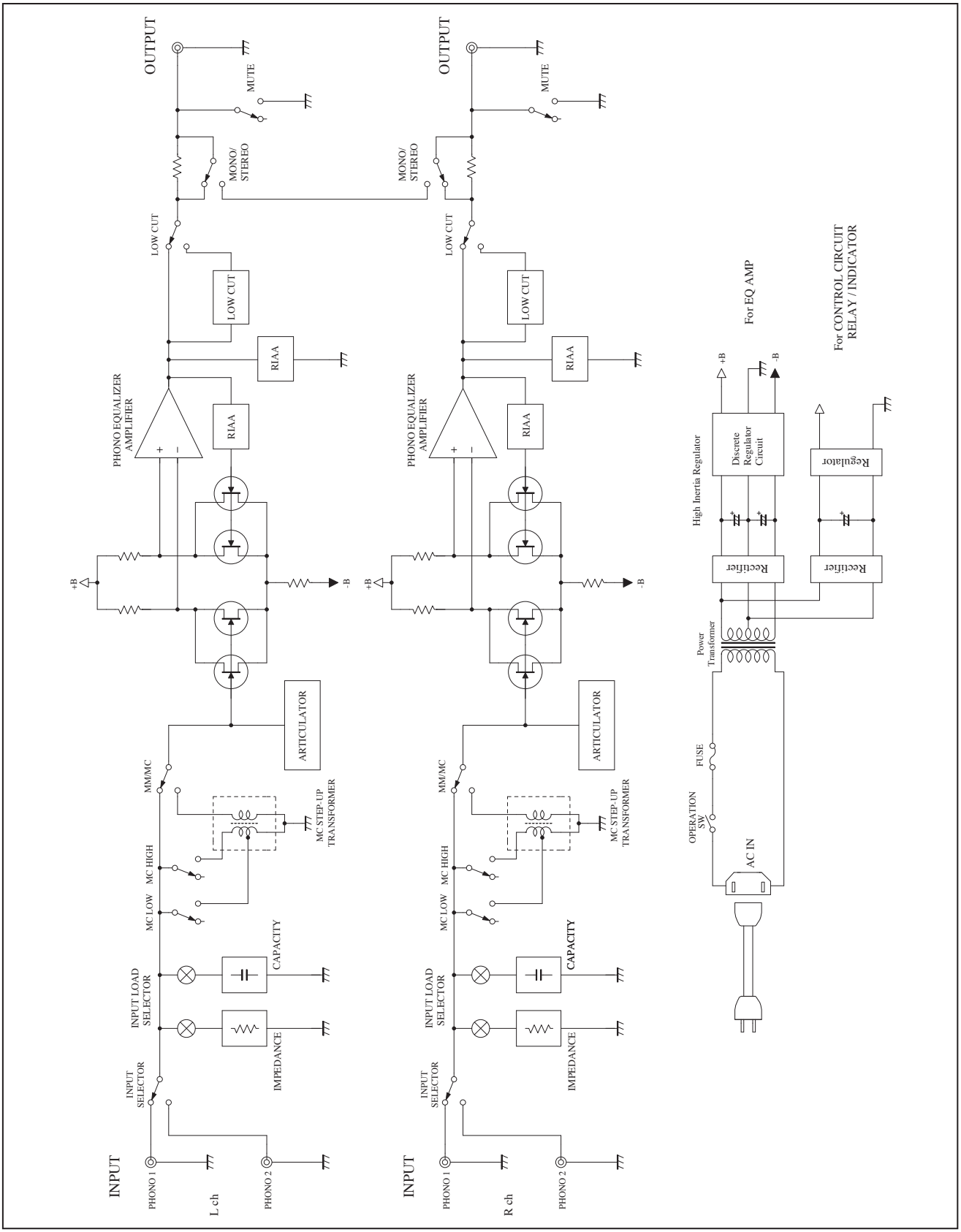
1. Mount a cartridge on the tone arm in an appropriate way by referring to the operating instructions of the analog player and cartridge to be used.

2. Insert the pin-plugs of RCA pin-plug cables from the tone arm with a cartridge mounted into the input terminals of this unit. At this moment, be sure to make a connection without a mistake between the R-channel and L-channel. If the grounding side of the pin-plug cables is inadequately connected, noises including hum may be generated, resulting in an adverse effect on the S/N ratio.

3. Grounding between analog players to be connected and this unit is needed. Be sure to connect the ground wires that come from tone arms in parallel with pin-plug cables to the ground terminals of this unit.
   If the ground wires are inadequately connected, noises including hum may be generated, resulting in an adverse effect on the S/N ratio.

Do not connect the output of an analog player with phono equalizer embedded to this unit. Failure to observe this may not only distort the amplifier signals but also cause a malfunction.
Connect the output of an analog player with phono equalizer embedded to the line input of an integrated amplifier or a control amplifier.

Block Diagram



Specifications

Input sensitivity	MM	: 3.2 mV/250 mV, 1 kHz, load 50 kΩ
	MC-HIGH	: 0.37 mV/250 mV, 1 kHz, load 50 kΩ
	MC-LOW	: 0.12 mV/250 mV, 1 kHz, load 50 kΩ
Input impedance	MM	: 34 kΩ/47 kΩ/56 kΩ/100 kΩ (switch selection)
	MC-HIGH	: 40 Ω
	MC-LOW	: 2.5 Ω
Gain	MM	: 38 dB
	MC-HIGH	: 57 dB
	MC-LOW	: 66 dB
RIAA deviation	MM	: 20 - 20 kHz±0.3 dB
	MC-HIGH	: 20 - 20 kHz±0.5 dB
	MC-LOW	: 20 - 20 kHz±0.5 dB
Maximum allowable input voltage	MM	: 120 mV
	MC-HIGH	: 15 mV
	MC-LOW	: 5 mV
Output impedance	300Ω	
S/N ratio (at 250 mV output)	MM	: 90 dB (IHF-A)
	MC-HIGH	: 83 dB (IHF-A)
	MC-LOW	: 80 dB (IHF-A)
Total harmonic distortion (at MM 1 V output)	0.003%	
Channel separation (10kHz)	91dB or more	
Accessories	• Power cable • Owner's Manual (This document) • Safety cautions	
Circuiting system	NF type equalizer amplifier equipped with MC step-up transformer	
Power consumption	7 W	
Power supply	230 V ~ (50 Hz)	
Max. external dimensions	364 (W) x 81 (H) x 274 (D) mm (front side knob of 6mm and rear side terminal of 11 mm included in depth)	
Weight	4.3 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 operation switch is pressed.	• 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.
No sound is generated. (small sound)	• Connection is not securely performed.	• Make cable connections securely.
	• The connected input terminal does not match the setting of the input selector switch.	• Match the input terminal with the setting of the input selector switch.
	• The selector of the input device such as a control amplifier is not correctly set.	• Set the selector of the input device such as a control amplifier correctly.
	• The volume control of the input device such as a control amplifier is not set to a lower level.	• Adjust the volume control of the input device such as a control amplifier.
	• The used cartridge type does not match the selected item of the MM/MC selector switch.	• Select the correct item of the cartridge selector switch according to the cartridge to be used.
	• The articulator position is selected.	• Turn down the sound volume and adjust the sound volume according to the appropriate input impedance after sound comes out.
Humming sound (boon or zzz noise) is generated.	• The grounding side of the connection cable has no contact with the terminal.	• Make cable connections securely.
	• The grounding of the shell or tone arm is inadequately connected.	• Be sure to connect the ground wire of the shell or tone arm to the ground terminal.
	• Induction noise is picked up from a power transformer of another device.	• Install it distant from other devices.
	• The connecting cables are too close to the power cable.	• Keep the connecting cables away from the power cable.
Inappropriate localization of sound No bass is generated.	• The L channel and R channel are connected reversely.	• Connect the L channel and R channel appropriately.
	• The setting of the input impedance control does not match the cartridge in use.	• Adjust the input impedance according to the cartridge in use.

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