

Luxman

VACUUM TUBE CONTROL AMPLIFIER

CL-38uC

Owner's Manual

Contents

Precautions	1
Features of This Unit.....	2
Names and Functions.....	4
Connections	8
Operations.....	12
How to Use Remote Control.....	13
Block Diagram.....	14
Specifications.....	15
Before Asking for Repair Service.....	16

Installation place

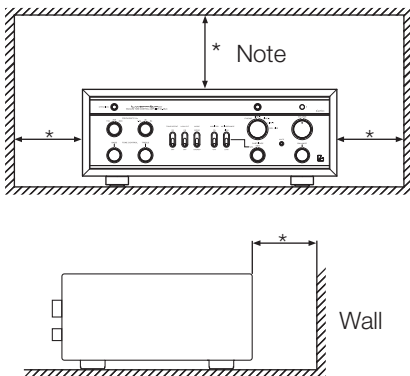
Install this unit in a location where good ventilation and heat radiation are assured. Especially, installation of this unit where direct sunlight is present, where the temperature rises excessively high such as close to a heater, or where it is humid or dusty may cause a malfunction even if heat is efficiently released. Therefore, do not install this unit in such places.

Ventilation holes

The ventilation holes 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 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.

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 set to a high sound level before the time muting circuit is canceled, a large sound is suddenly 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.

Batteries

Warning:

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

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 a substance can damage the exterior.

Safety caution

Caution

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

This unit is a vacuum tube control amplifier. In the state of the unit 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

Design of using vacuum tubes for all amplification circuits

All the amplification circuits consist of vacuum tubes (ECC83S x 3 pieces and ECC82 x 5 pieces) that are manufactured by JJ Electronic in Slovak Republic.

Wooden case

A traditional square-shaped wooden case is used.

SRPP structure for all stages

This unit has the structure of SRPP (Shunt Regulated Push Pull) in all of the phono amplifier, tone control unit, and flat amplifier to achieve low-impedance transmission.

MC transformer

As many as four MC step-up transformers with high sound quality are equipped to enjoy genuine analog record playback. Independence among MC impedance HIGH, MC impedance LOW, left, and right respectively has achieved richly expressive sound that can be produced only by boosting with a transformer.

Balanced input terminal

One line of the balanced type input terminal using the XLR connector is equipped.

A dedicated balanced input transformer is equipped.

Low cut, monaural

This unit has a low cut switch to suppress woofer fluctuation caused by a warped analog record and a monaural switch that is useful at monaural record playback.

Tone control

This unit is also equipped with the bass/treble tone control function that can select the turnover frequency from three positions to allow the tone quality to be finely adjusted.

Input/output for recorder

One line of the input/output terminals for recorder that are connectable to a tape deck or other devices is equipped.

Two lines of line output

This unit has two lines of output terminals that are useful for wiring in the bi-amplifier structure in which two power amplifiers are used. (two lines always output)

High S/N transmission environment

We have achieved signal transmission with high S/N ratio by using a toroidal power transformer with low-level magnetic flux leakage and choke-integrated shield case.

Shield chassis

A shield type omnidirectional metal chassis that is resistant to external noise is used.

High sound quality relay

Highly reliable design in which signal switch is conducted with use of an audio-specific relay is provided.

Custom-made parts

LUXMAN's original custom-made parts are used for achieving high sound quality.

Wide pitch RCA terminals

Wide pitch RCA terminals are used to allow large-sized RCA cables to be connected.

Remote control

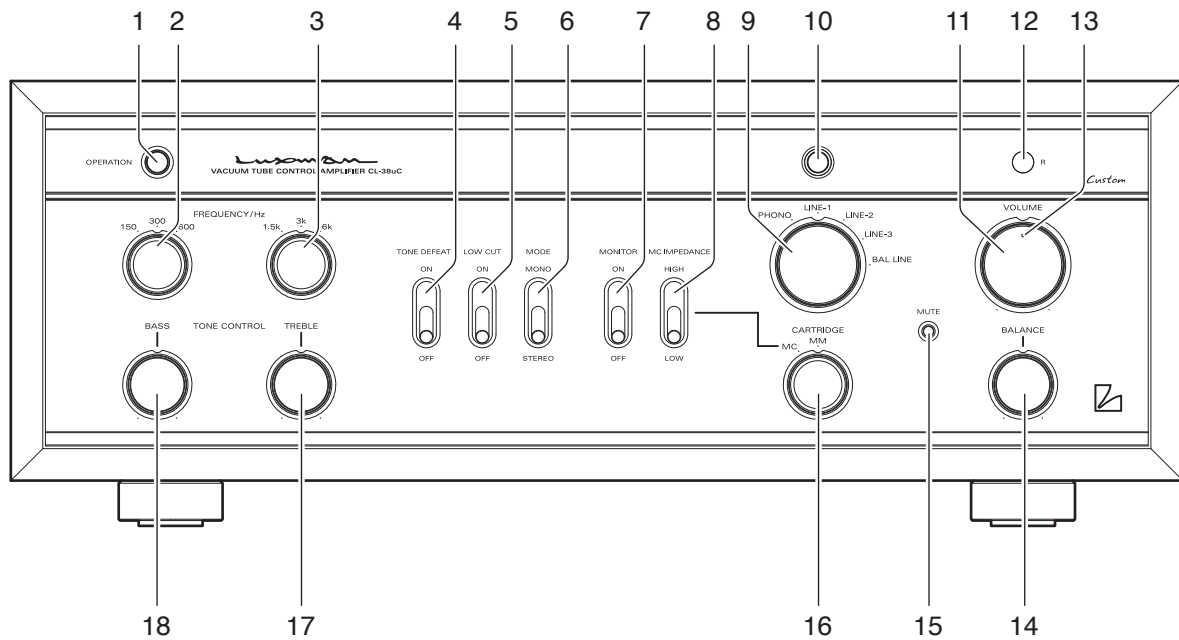
An aluminum remote control is supplied to enable users to adjust the sound volume from the listening position.

Highly reliable design

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

Names and Functions

Front panel



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

(It takes more than 30 seconds for the time mute to be reset again.)

2. Low frequency selector switch (FREQUENCY/Hz)

Selects a turnover frequency of the tone control for bass from 150 Hz, 300 Hz, and 600 Hz.

For example, when 150Hz is selected, the frequencies of 150Hz and lower can be adjusted by the tone control for bass.

3. High frequency selector switch (FREQUENCY/Hz)

Selects a turnover frequency of the tone control for treble from 1.5 kHz, 3 kHz, and 6 kHz.

For example, when 1.5 kHz is selected, the frequencies of 1.5 kHz and higher can be adjusted by the tone control for treble.

4. Tone defeat switch (TONE DEFEAT)

Bypasses the tone control circuit.

OFF: Setting the switch to this position activates the tone controls and enables the user to adjust preferred tonal balance.

ON: Setting the switch to this position bypasses the tone control circuit. At this time, operating the tone control will not change the tonal balance.

5. Low cut switch (LOW CUT)

Toggles the low-frequency cutoff function on and off.

OFF: Provides the normal state.

ON: Cuts low frequencies below 30 Hz at a -6 dB/octave slope.

* This is useful when the woofers of speakers vibrate due to the warped record during record playback.

6. Mode switch (MODE)

Changes the output mode.

MONO: Mixes the signals from right and left channels.

STEREO: Provides normal stereophonic playback.

7. Monitor switch (MONITOR)

Selects the monitor input terminal (MONITOR) on the rear panel.

- ON: Enables to play back the data from the recorder.
- OFF: Enables to play back the data from the source selected with the input selector.

8. MC impedance switch (MC IMPEDANCE)

When the cartridge selector (16) is set to MC, the input impedance can be selected with this MC impedance switch. Select a position in accordance with the compatible input impedance specified in the operating instructions of the cartridge, or select HIGH or LOW in accordance with your taste.

MC IMPEDANCE switch	HIGH	LOW
Impedance	100 Ω	30 Ω

9. 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.

This selector has five positions consisting of PHONO, LINE-1, LINE-2, LINE-3, and BAL LINE that correspond to each input terminal on the rear panel. To select an input source, set the selector to the position of the input source to be played back.

10. Pilot light

Turns orange when the power is turned on.

11. Volume control (VOLUME)

Adjusts the sound volume.

Sound is not generated when this control is rotated counterclockwise to the end. The sound volume gradually becomes higher as the control is rotated clockwise.

12. Remote sensor (R)

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

13. Sound volume indicator

Indicates the sound volume level.

This indicator blinks during the muting time immediately after turning on the power and at activating the mute function using the main unit or remote control.

14. 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.

15. Mute button (MUTE)

Temporarily mutes the sound. Pressing this button activates the mute function and blinks the sound volume indicator resulting in no sound generated. Pressing this button again to cancel the mute function allows sound to be generated.

16. Cartridge selector switch (CARTRIDGE)

Changes the gain level of the equalizer amplifier (amplifier circuit required to play an analog record).

- MC: Selects the MC (moving coil) type cartridge of low output voltage.
- MM: Selects the MM (moving magnet) type cartridge of high output voltage.

17. Tone control for treble (TREBLE)

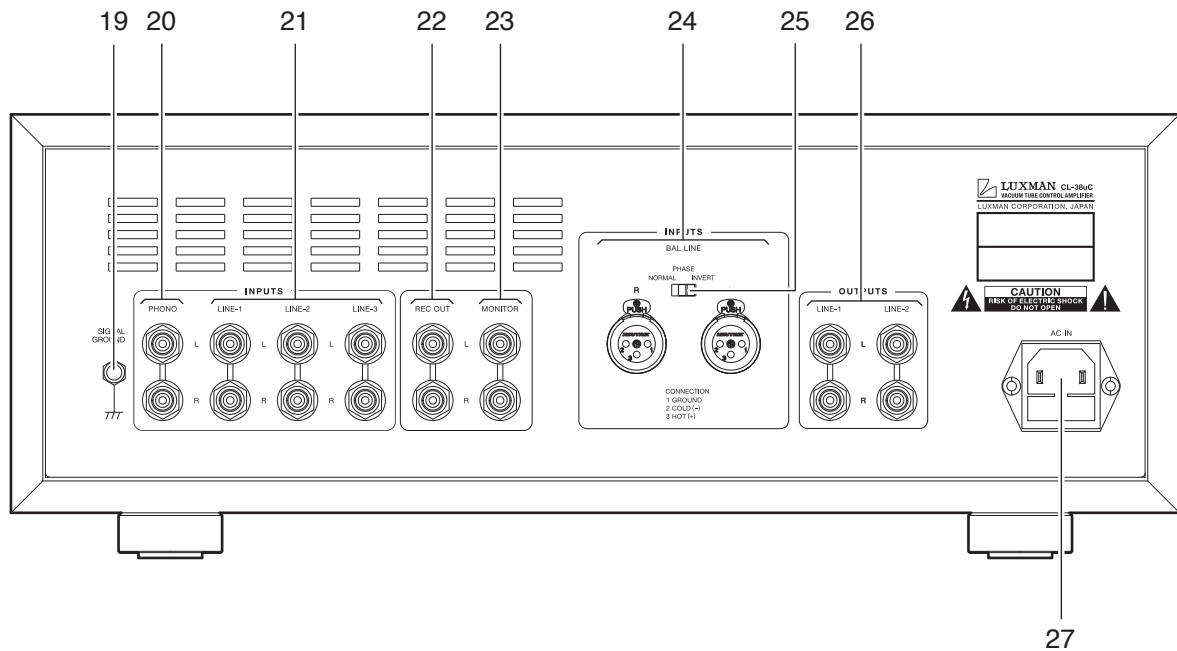
Controls the frequency characteristics of the high-frequency range. When this switch is set in the center position, flat frequency characteristics is obtained. Rotating the knob clockwise makes the high frequency range enhanced, and rotating the knob counterclockwise makes the high frequency range attenuated.

18. Tone control for bass (BASS)

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

Names and Functions

Rear panel



19. 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 designed not for safety.

20. Phono input terminal (PHONO)

Is an input terminal to connect RCA pin-plug cables from an analog record player or a tone arm.

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.

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

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

Are used for signal inputs from a CD/DVD player, an SACD player, a tuner, a video deck, a TV, and other such devices.

22. Record output terminals (REC OUT)

Are used to transmit output signals for recording onto the recorder. These terminals are connected to the line input terminal of the recorder.

The input signal selected with the input selector is outputted.

Do not insert a shortpin plug into these terminals. No sound will be generated.

23. Monitor input terminals (MONITOR)

Are used to connect output terminals for playback of a recorder.

These terminals are connected to the line output terminals of a recorder.

When the monitor switch is set to on, these terminals are selected regardless of the position of the input selector.

24. Balanced input terminals/INPUTS (BAL LINE)

Are the balanced type input terminals of the LINE level for an XLR connector.

This unit uses the balanced input system with use of a transformer.

Be aware that the maximum input level at the balanced input is 2.5 V and therefore sound signals may be distorted if a device with larger output level is connected.

* If the device is LUXMAN's product (such as CD player), no problem occurs. Refer to the operating instructions for the device to be used for further information.

25. Phase inverters (PHASE)

Change the phase when the balance input terminal is used. The phase shall be corresponding to the phase of the input device.

NORMAL position	① GROUND
	② COLD (-)
	③ HOT (+)
INVERT position	① GROUND
	② HOT (+)
	③ COLD (-)

26. Line output terminals/OUTPUTS (LINE-1 and LINE-2)

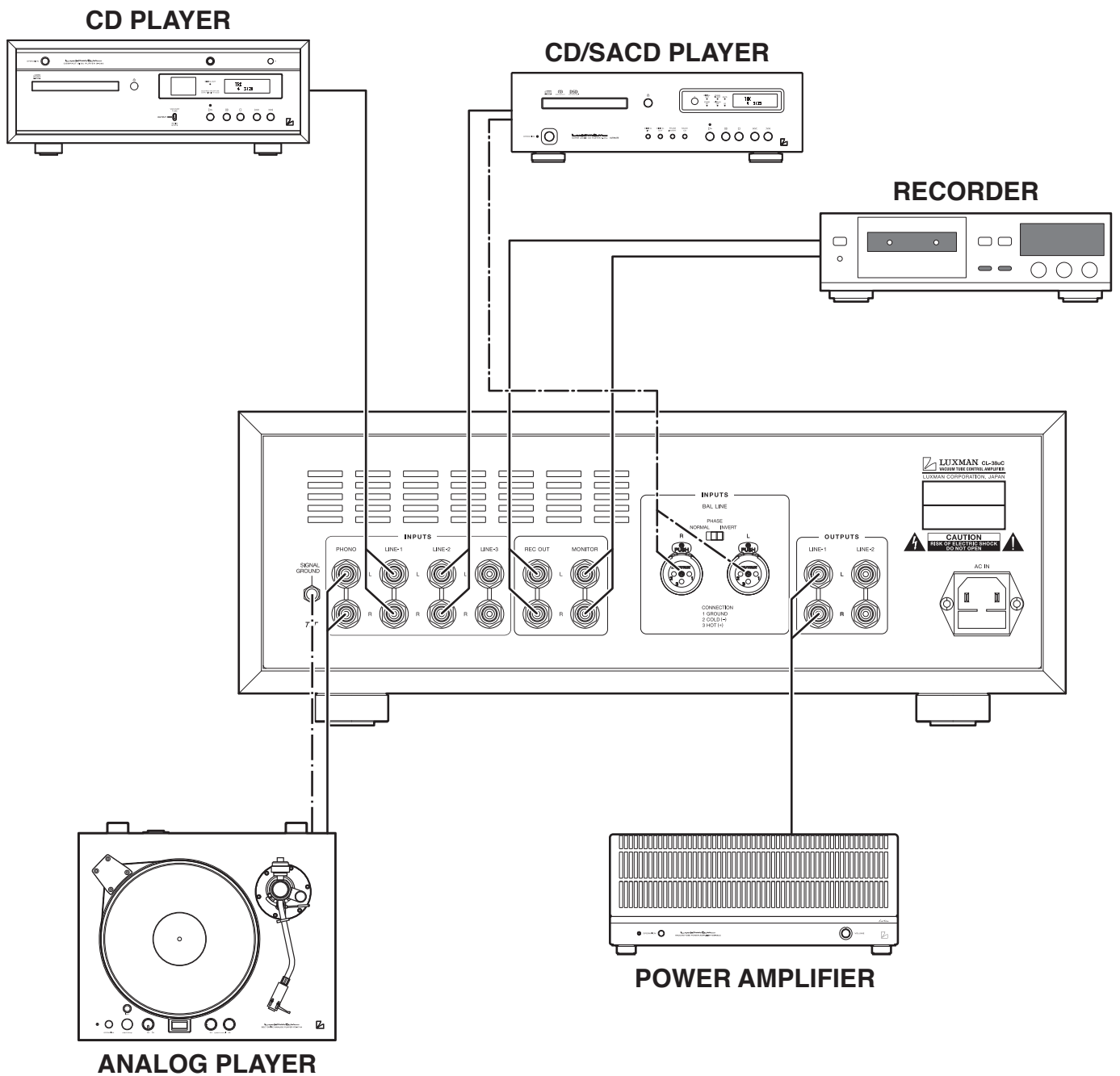
Are used to provide output this unit. Two lines, LINE-1 and LINE-2, are provided, and same signals will be output from both lines. (Both are always on.)

While using one side of the line output terminal, do not insert a shortpin plug to the other line output terminal. No sound will be generated.

27. 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 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 the outlet on the wall in the room where the unit is installed.

How to connect CD player, SACD player, tuner, or other devices

Connect between the output terminals of a CD player, an SACD player, a tuner, or other such input devices and any of LINE-1, LINE-2, LINE-3, and BAL LINE input terminals of this unit with 2 (R and L) pin-plug cables or balanced cables.

How to connect analog record player

Connect between the output terminals of an analog 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.

The phono equalizer section of this unit supports both the MM (moving magnet) type cartridge and MC (moving coil) type cartridge. Select the position of the cartridge selector (CARTRIDGE) according to the type of the cartridge to be used. Select an MC position closest to the impedance of the cartridge to be used by referring to the table below.

CARTRIDGE selector switch	MM	MC	
MC IMPEDANCE switch	–	HIGH	LOW
Impedance	47 k Ω	100 Ω	30 Ω

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.

* During playback using an analog player, hum noises (boon noise) may be generated regardless of the sound of the record.

Most of the time, the noise gets mixed from the tone arm section of the analog player. Check the installed position of the analog player and rearrange the cabling route if required. Extra caution is required for the MC cartridge, since the output voltage is low.

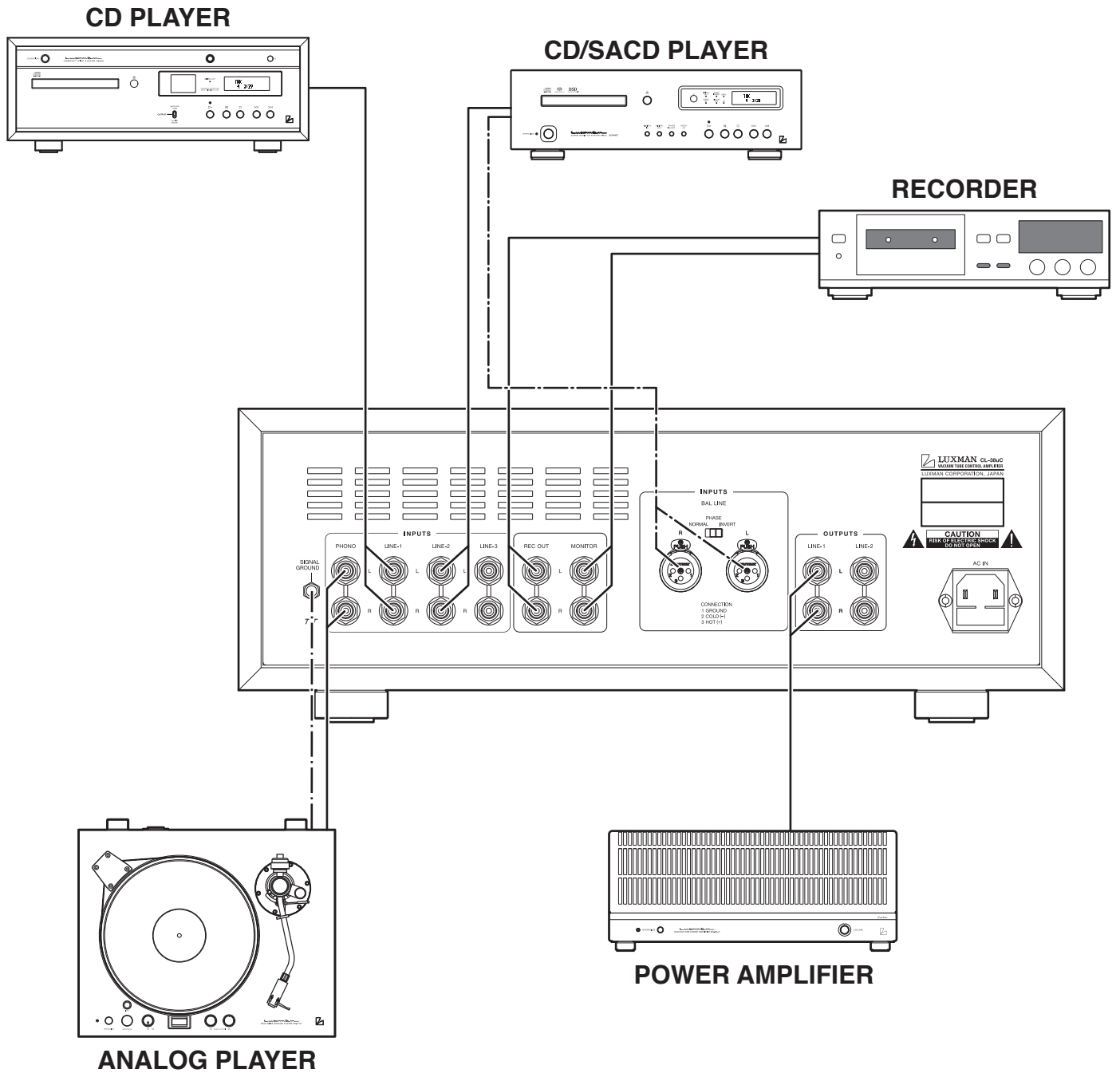
* If the sound of the analog player is distorted, it is likely that the appropriate stylus pressure is not applied to the cartridge.

Make adjustment referring to the operating instructions of the analog player and the cartridge.

If the player is equipped with an anti-skating function, its adjustment is also required.

* The sound may be distorted due to dust adhered to the stylus. In such a case, clean the stylus carefully with an available cleaner.

Connections



How to connect recorder

1. Connection to MONITOR terminal (playback)

Connect between the line output terminals (LINE OUT) of a recorder and the MONITOR terminals of this unit with pinplug cables in consideration of L and R. When the MONITOR switch on the front panel is turned on, the playback of the recorder is possible.

2. Connection to REC OUT terminal (recording)

When the sound source from various input devices connected to the PHONO, LINE, or other terminals of this unit is played back, the signals are provided to the REC OUT terminal.

Connection between the REC OUT terminal of this unit and the line input terminals (LINE IN) of the recorder with pinplug cables is required for recording on the recorder. After the connection, you can enjoy listening to the sound from the speaker system and record the sound at the same time.

These output signals for recording are not affected by the control functions such as the volume control and tone control functions.

When the input source to be recorded needs not to be changed, be careful not to operate the input selector especially during recording with use of the recorder connected to the REC OUT terminal.

Do not insert short pin plugs into the REC OUT terminal.

No sound will be generated.

Be aware that the playback sound volume may become lower or no sound may be generated if a CD recorder, a tape recorder, or other recorders are connected, which extremely decrease the impedances of their line input terminals or cause short circuits on their line input terminals when the power is turned off.

How to connect a power amplifier

Connect between the input terminal of an output device such as a power amplifier and a line output terminals (either LINE-1 or LINE-2) of this unit with a pin-plug cable.

At this moment, exercise extra care not to conduct wrong connection between the 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.

If the grounding of the pin-plug cables is inadequately connected, noises including hum may be generated, resulting in an adverse S/N ratio. Surely insert the connection plug.

Operations

Before operation

1. Ensure that the connections are correctly performed.
(Normal playback cannot be achieved with wrong connections of R and L.)
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 procedure

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 or monitor switch.
3. Adjust the sound level with the volume control.
4. Operate the tone defeat switch, balance control, or tone control according to the source to be played back.

How to operate tone defeat switch (TONE DEFEAT)

The tone defeat switch is used to play back with the shortest signaling route to prioritize the purity of the source selected with the input selector. When this switch is set to on, the bass and treble levels are not changed even if the tone control (BASS and TREBLE) is operated.

How to operate balance control (BALANCE)

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

How to operate tone control (TONE CONTROL)

This unit has the tone control function for the low-frequency and high-frequency ranges.

The low-frequency tone control is a function to adjust the tone range lower than the selected one with the selector switch (FREQUENCY/Hz for low-frequency).

The tone control is set to flat frequency characteristics at the center position. Rotating the control clockwise makes the low-frequency range enhanced, and rotating the control counterclockwise makes the low-frequency range attenuated.

The high-frequency tone control is a function to adjust the tone range higher than the selected one with the selector switch (FREQUENCY/Hz for high-frequency).

The tone control is set to flat frequency characteristics at the center position. Rotating the control clockwise makes the high-frequency range enhanced, and rotating the control counterclockwise makes the high-frequency range attenuated.

For both the low-frequency and high-frequency ranges, the right and left channels interlockingly function.

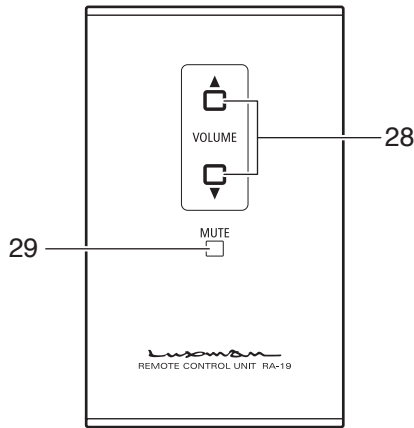
When the tone defeat switch is set to on, the bass and treble levels are not changed even if the tone control is operated.

How to record a source

1. Select a source to be recorded with the input selector.
2. Play the source to be recorded and set the recorder to the recording state.

Operation of the tone control or balance control does not affect the recording signals.

Remote control (RA-19)



28. Volume (VOLUME ▲, ▼)

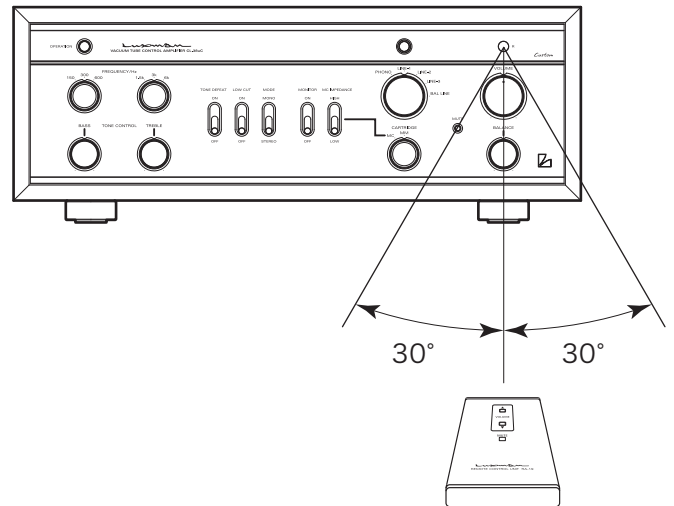
Adjusts the sound volume of the control amplifier. The button ▲ increases the sound volume, while the button ▼ decreases the sound volume.

29. Mute (MUTE)

Temporarily mutes the sound. Activation of the mute function causes the volume indicator on the main unit to blink, and no sound is generated. Pressing this button again to cancel the mute function allows sound to be generated.

Remote control

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

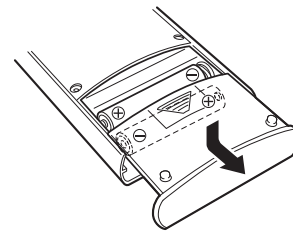


Effective distance:
approx. 5 meters

Dry cell

[How to load dry cells]

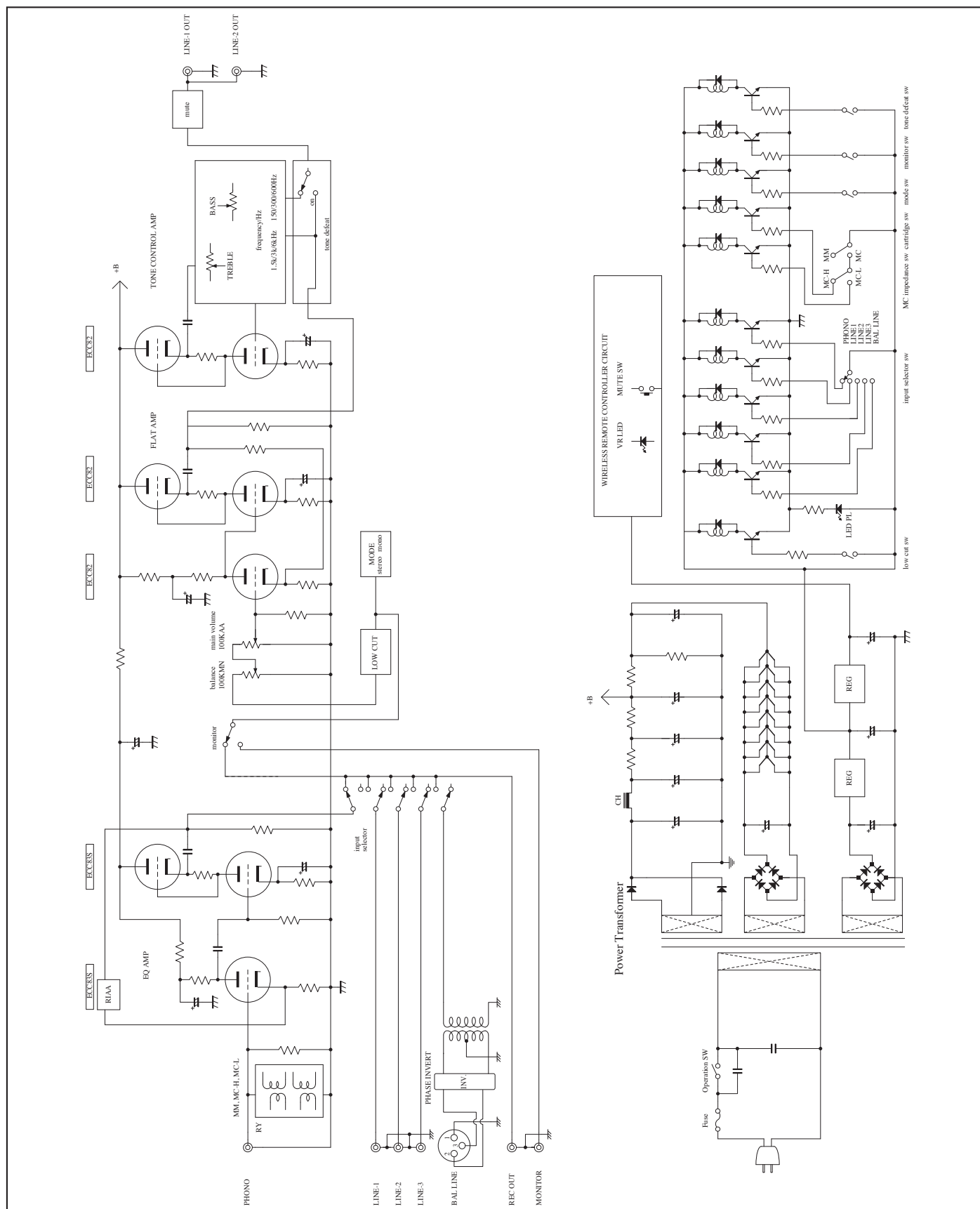
1. Put your finger on the battery cover claw on the rear of the remote control, and slide the cover downward to open it.
2. Put 2 AAA batteries in the battery case as shown in the illustration.
3. Close the battery cover.



* When the batteries start to lose power, the effective distance becomes shorter or the unit does not function even though the switch is pressed. In such a case, both of the batteries should be replaced with new ones at the same time.

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

Block Diagram



Specifications

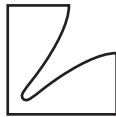
Total harmonic distortion	0.006 % (1 kHz, 1 V/50 kΩ) 0.06 % (20 Hz to 20 kHz, 1 V/50 kΩ)	
Input sensitivity/input impedance	PHONO (MM)	: 2.0 mV/47 kΩ
	PHONO (MC-HIGH)	: 0.3 mV/100 Ω
	PHONO (MC-LOW)	: 0.08 mV/30 Ω
	LINE	: 190 mV/50 kΩ
	MONITOR	: 190 mV/50 kΩ
	BAL LINE	: 190 mV/20 kΩ
S/N ratio	PHONO (MM)	: 68 dB or more (A weighted, 2.0 mV input)
	PHONO (MC-HIGH)	: 63 dB or more (A weighted, 0.3 mV input)
	PHONO (MC-LOW)	: 60 dB or more (A weighted, 0.08 mV input)
	LINE	: 100 dB or more (A weighted, input short)
	BAL LINE	: 100 dB or more (A weighted, input short)
Frequency response	PHONO (MM)	: 20 Hz to 20,000 Hz (±0.5 dB, tone defeat on)
	PHONO (MC-HIGH)	: 20 Hz to 20,000 Hz (±0.5 dB, tone defeat on)
	PHONO (MC-LOW)	: 20 Hz to 20,000 Hz (±0.5 dB, tone defeat on)
	LINE	: 10 Hz - 70,000 Hz (within -3 dB, tone defeat on)
	BAL LINE	: 10 Hz - 70,000 Hz (within -3 dB, tone defeat on)
Tone control	BASS (150 Hz)	: ±8.0 dB at 50 Hz
	BASS (300 Hz)	: ±8.0 dB at 100 Hz
	BASS (600 Hz)	: ±8.0 dB at 200 Hz
	TREBLE (1.5 kHz)	: ±8.0 dB at 5 kHz
	TREBLE (3 kHz)	: ±8.0 dB at 10 kHz
	TREBLE (6 kHz)	: ±8.0 dB at 20 kHz
Low cut	30 Hz (-6 dB/oct.)	
Input	1 line of phono (MM/MC HIGH/MC LOW supported), 3 lines of line, 1 line of balanced line	
Recording input/output	1 line for each of recording output and monitor input	
Output	2 Lines	
Supplied functions	[Front panel] <ul style="list-style-type: none"> • Operation switch • Mute button • Input selector • Cartridge selector (MM/MC) • MC impedance switch (HIGH/LOW) • Low cut switch [Rear panel] <ul style="list-style-type: none"> • Input/output terminals • Sound volume (up/down) [Remote control function] <ul style="list-style-type: none"> • Sound volume (up/down) 	
	<ul style="list-style-type: none"> • Volume control • Balance control • Low frequency selector switch 	<ul style="list-style-type: none"> • Tone control • Monitor switch
	<ul style="list-style-type: none"> • Mode switch 	<ul style="list-style-type: none"> • AC inlet
Circuit	SRPP	
Vacuum tube used	3×ECC83S, 5×ECC82	
Accessories	<ul style="list-style-type: none"> • Remote control (RA-19) • Terminal protection cap • Safety cautions 	<ul style="list-style-type: none"> • Power cable • Owner's Manual (This document) • 2 pieces of "AAA" batteries
Power supply	230 V ~ (50 Hz)	
Power consumption	35 W	
Max. external dimensions	440 (W) x 169 (H) x 307 (D) mm	
Weight	13.3 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.	• 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. (for both left and right channels)	• The volume control is set at the minimum level.	• Rotate the volume control clockwise to adjust the sound volume.
	• The volume is muted.	• Cancel the mute mode.
	• The input selector is not set to the source to be reproduced.	• Set the input selector correctly.
	• Cable connections are incomplete.	• Make cable connections securely.
	• The output level of the input device is set to the minimum position.	• 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 securely so that the ground side of the pin-plug cable can be connected.
	• The ground wire of the analog record player is not connected.	• Connect the ground wire of the analog player to the signal ground terminal.
	• Connections or mounting conditions are incomplete between the cartridge and shell, or between the shell and tone arm of the analog record player.	• Connect (or mount) the cartridge, shell, and tone arm securely.
	• 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.



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