

Luxman

BELT DRIVE ANALOG PLAYER

PD-171AL

Owner's Manual

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Precautions


BELT DRIVE ANALOG PLAYER PD-171AL

Installation place

- Install this unit in a horizontal and stable place where the unit is less subject to external vibration.
- Do not install this unit near a television or color monitor. Keep this unit away from such devices as cassette decks that are subject to magnetism.

Do not move this unit during playback.

Moving this unit during playback may cause needle jump, and damage the needle and record thereby.

When moving this unit

For moving this unit, be sure to turn off the power after stopping the platter and removing the record.

Next, unplug the power and phono cables and move this unit.

Avoid the following locations for installation.

- Locations exposed to direct sunlight
- Places subject to humidity and with less ventilation
- Places where are extremely hot or cold
- Places subject to vibration
- Places subject to dust
- Places subject to oil, steam, and heat (such as kitchens)

Do not put articles.

Do not put articles on this unit.

To avoid heat emission

Do not place this unit on such device as an amplifier that may emit heat. If the unit is installed on a rack, install the unit as distantly as possible from where the amplifier is installed so as to avoid heat emission from the amplifier and other audio devices.

Dew condensation

Be aware that condensation may occur when this unit is moved from a cold place to a warm place especially in winter or when the temperature of the room where this unit is installed is quickly raised with a heater or the like. It depends on the condensation state, however, this unit can be used after disappearance of water droplets by turning on the power and leaving the unit as it is for 1 to 2 hours to keep the unit at room temperature.

Even in summer, dew condensation can occur if this unit is directly exposed to cool air from an air conditioner. In such a case, the installation place should be changed.

Lubrication

Do not lubricate this unit yourself because special oil is used for the spindle.

Cleaning

- Usually, wipe the unit with a dry soft cloth.
When the dirt is hard to remove, dip soft cloth in detergent diluted 5 or 6 times with water, wring it well, and remove contaminants. Then, remove the moisture with dry cloth.
- Be aware that acrylic portions such as dust cover may be damaged if the portions are rubbed hard.
- Be aware that printed or painted portions may be damaged if the portions come into contact with alcohol, thinner, benzine, insecticide, or the like. In addition, do not let this unit contact a rubber or plastic form for a long time. That may damage the cabinet surface of the unit.
- When using a chemical cloth for cleaning, read the caution provided with the chemical cloth product.
- Be sure to unplug the power cable from the outlet before cleaning.

Repair and adjustment

When repair and adjustments are needed, please ask the dealer where you bought the unit.

Features of This Unit

Belt drive

We have introduced a drive system in which motor-derived noise is attenuated via a belt and smooth rotation is achieved.

Circuit configuration

AC synchronous motor is driven by sine waves coming from 32-bit microprocessor, which are DA converted and amplified by a high-power audio amplifier.

Stroboscope

This unit is equipped with a reflective view type LED stroboscope that is useful for adjusting the rotation speed in a precise manner.

High torque motor

An AC synchronous motor with high torque is adopted to achieve precise and quiet rotation.

Heavyweight platter

The platter weighs 5.0 kg, which is machined from aluminum metal to improve accuracy.

Approximately 0.7 t·cm² of moment of inertia has been achieved.

High rigidity main chassis

This unit uses an underslung vibration-damping structure capable of hanging internal main parts using machined aluminum plate with 15 mm in thickness as a base.

Large-sized spindle

This large-diameter spindle is equipped with polyether ether ketone (PEEK) bearing of ball bearing specification that provides stable rotation.

Floating mount

The power transformer and motor are floated from the main chassis to isolate vibration to the top board.

Hybrid vibration damping

The bottom face of the cabinet has a hybrid vibration-damping structure made of wood and metal for resonance dispersion.

Large-sized insulator

This unit adopts a damper as an insulator that is a combination of rubber and spring, made from different materials to isolate unnecessary vibration coming from an audio rack or others.

Unnecessary vibration from the main chassis itself is also suppressed.

LED stylus light

The detachable high-intensity LED stylus light is supplied for operation in the dark.

AC inlet

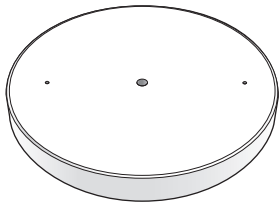
Power-cable-detachable AC inlet.

Before Use

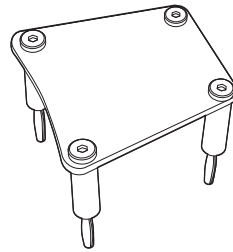
Check the accessories.

Make sure that all accessories shown below are in the package.

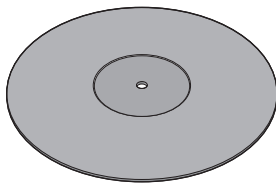
- Platter



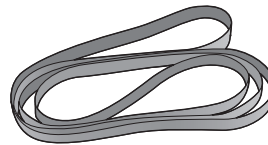
- Pulley cover



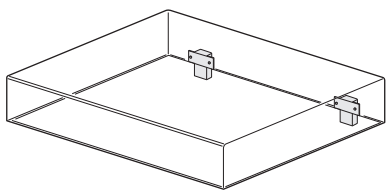
- Rubber mat



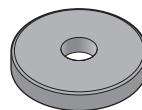
- Rubber belt



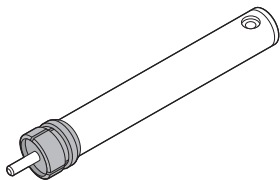
- Dust cover



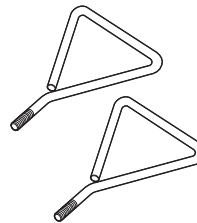
- EP adaptor



- Stylus light



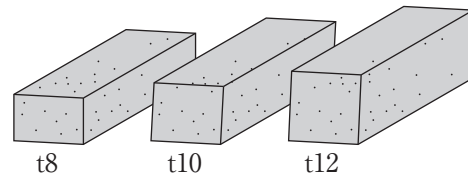
- Platter mount handle (2 pieces)



- Arm base cover removal wrench (3.0 mm)



- Phono cable securing cushion



- Dustproof cap for stylus light connector
* This cap is mounted on the main unit at shipment.

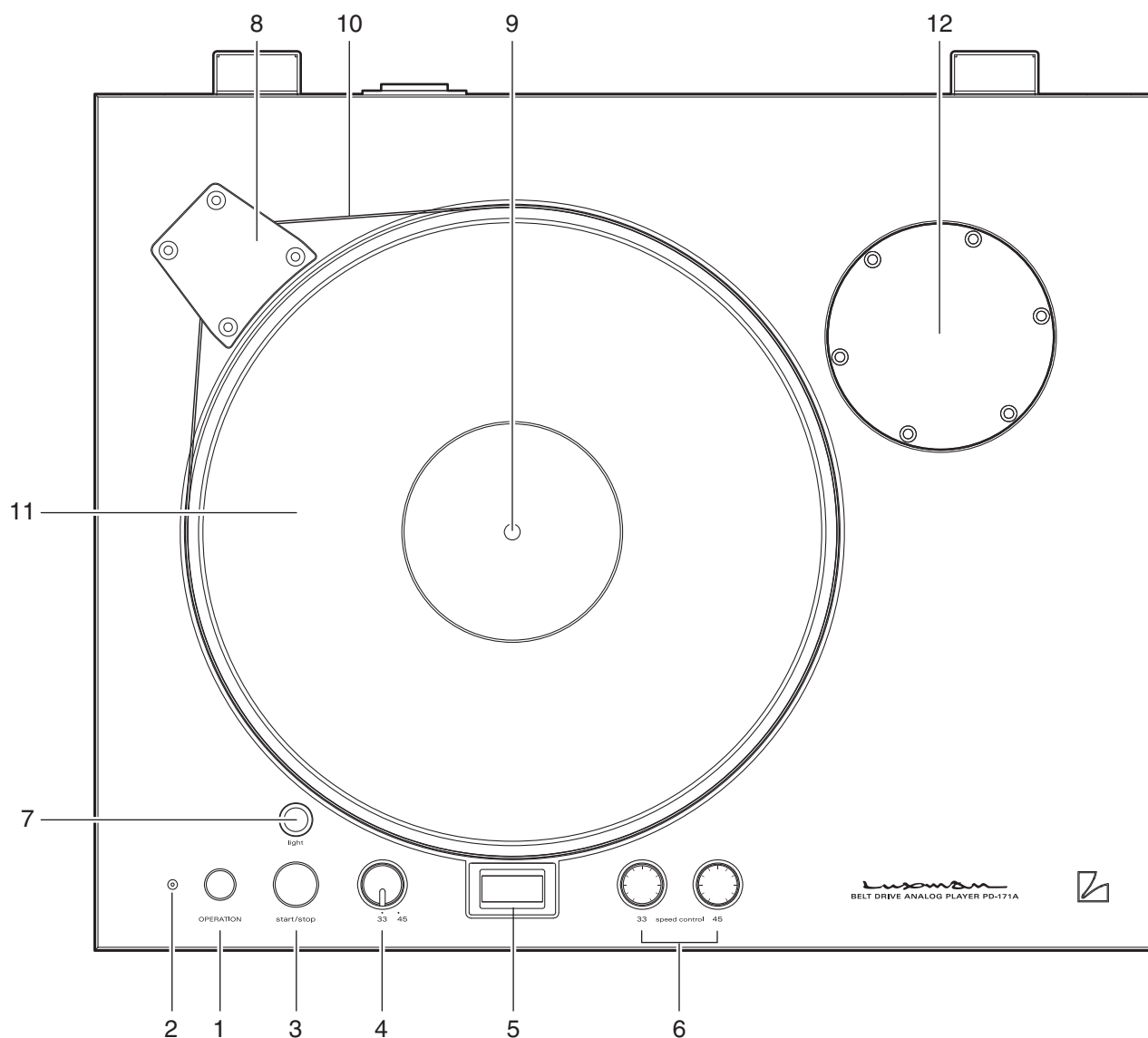


- Power cable

- Printed matters
Safety cautions
Owner's Manual (this document)

Names and Functions

Top view



1. Operation switch (OPERATION)

This switch turns on and off the power.

2. Operation indicator

This indicator lights up when the power is turned on.

3. Start/stop switch (start/stop)

This switch starts rotating the platter at the selected rotation speed.

This switch also stops platter rotation while the platter is rotating because this switch serves as both start and stop switches.

4. Rotation speed selection switch (33/45)

This switch toggles the rotation speed of the platter between 33 rpm and 45 rpm.

Select a rotation speed in accordance with a record to listen to.

5. Stroboscope

Adjust the rotation speed fine tuning volume (speed control) so that the number (33 or 45) in the stroboscope seems to be motionless.

6. Rotation speed fine tuning volume (33/45 speed control)

33 rpm Adjusts so that the number (33) in the stroboscope seems to be motionless by setting the rotation speed selection switch to 33.

45 rpm Adjusts so that the number (45) in the stroboscope seems to be motionless by setting the rotation speed selection switch to 45.

7. Stylus light connector (light)

This light can illuminate stylus area in a dark room.

Remove the dustproof cap and mount the supplied stylus light.

8. Pulley cover

This cover protects the rotating pulley.

Be sure to mount the cover when the platter is rotated.

9. Center spindle

This spindle is a guide for mounting a record.

For playing an EP record, mount the supplied EP adaptor here.

10. Belt

This belt transfers motor rotation to the platter.

11. Rubber mat

This rubber mat suppresses platter squeaks and brings a record into intimate contact with the platter.

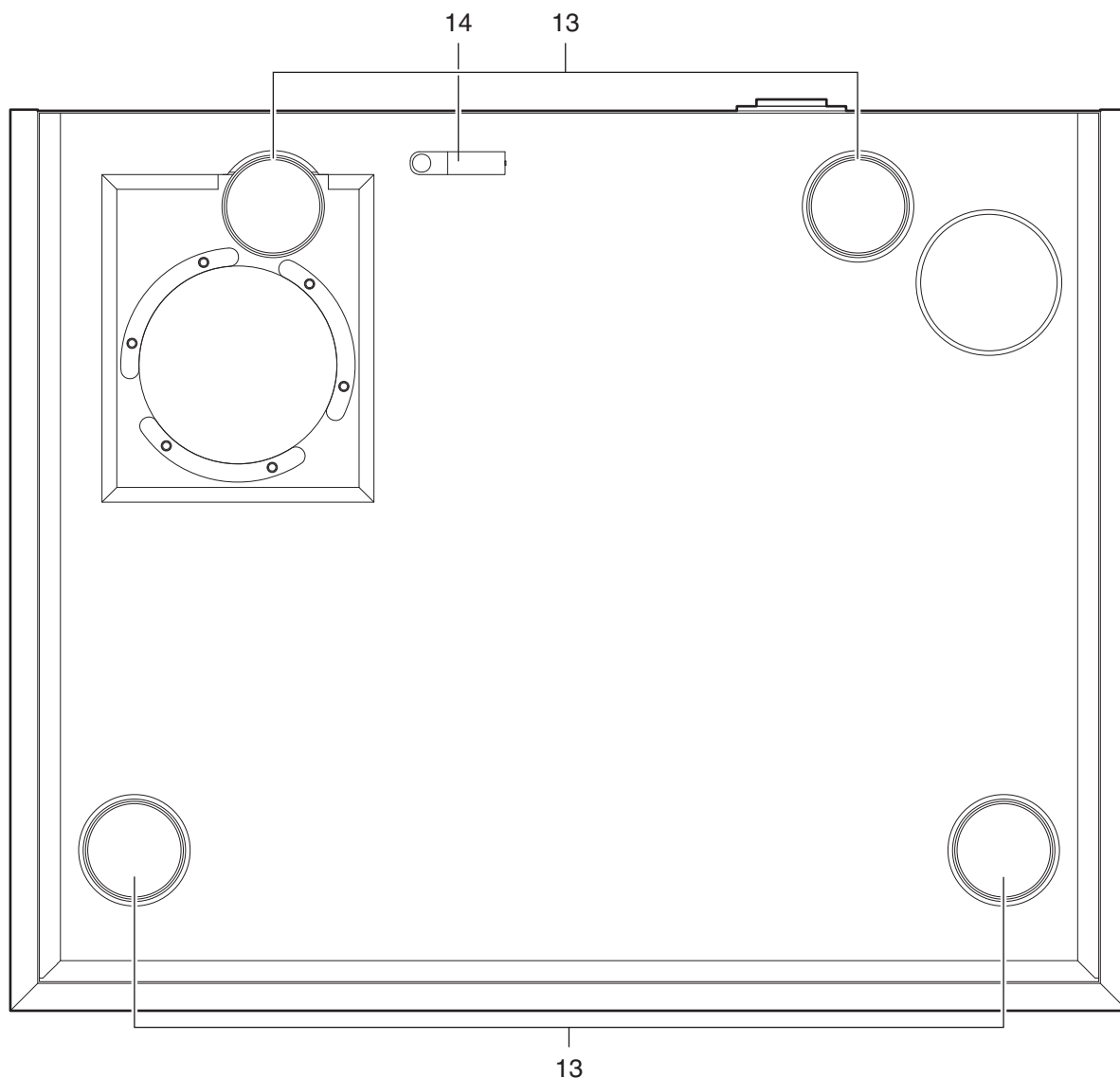
12. Arm base cover

Change to the optional arm base and mount a tone arm.

Refer to "4. Tone arm mounting" on page 11 for the optional arm bases and applicable tone arms.

Names and Functions

Bottom view



13. Insulator

These support the entire player and absorb howling and vibration from outside.

These insulators are set at the lowest point at shipment and can be raised by up to 10 mm.

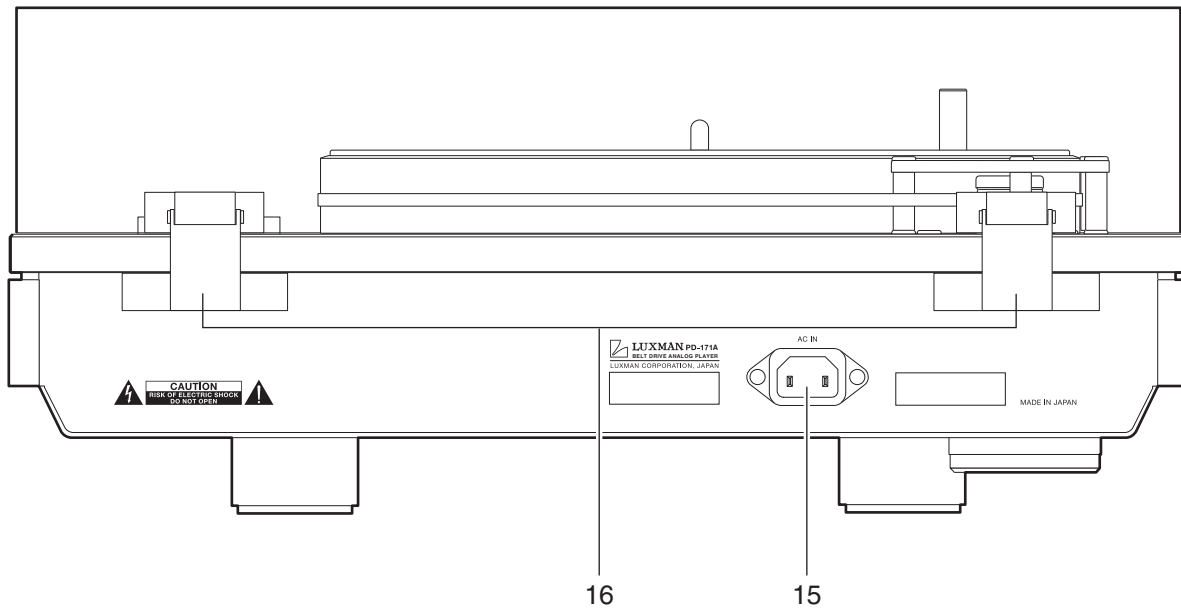
Use these insulators for making this unit horizontal.

14. Cable holder

This holder secures the phono cable.

This product is supplied with 3 types of phono cable securing cushions. Select one cushion according to the size of the phono cable to be used, attach the cushion to the cable holder, and secure the phono cable.

Rear view



15. AC inlet (AC IN)

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

16. Hinge receiver

This receiver is used for mounting the dust cover. Insert the hinge attached to the dust cover into the hinge receiver attached to the rear side of the main unit.

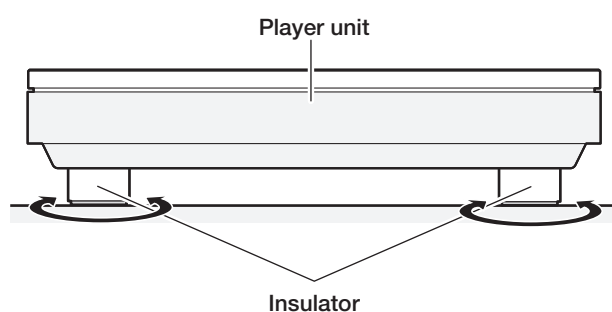
How to Assemble

Do not turn on the power until assembly is completed.

1. Installation of main body

Install the main body on a rack that is in a position as horizontal as possible.

If the mounting position is inclined, rotate the insulators on four corners of the bottom side to adjust the whole horizontal balance.

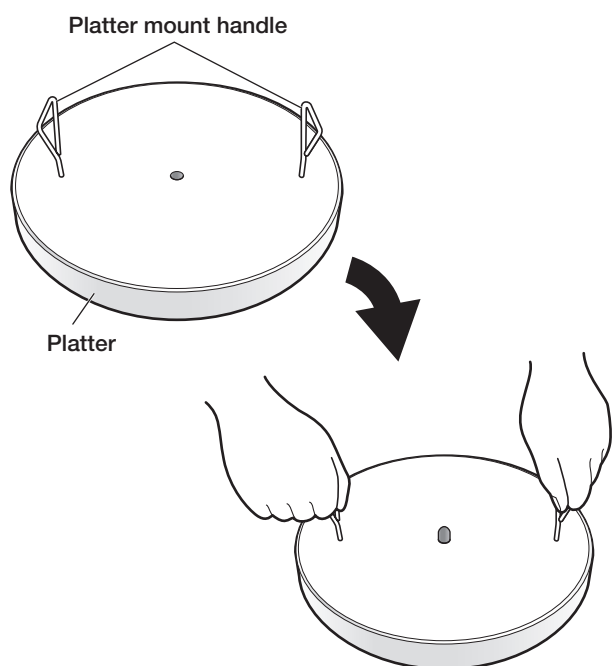


Counterclockwise for up, and clockwise for down.

2. Platter mounting

Engage the supplied platter mount handles in the platter, align the center of the platter with the center spindle while holding the handles, and engage them.

Be sure to use both hands to hold the platter and mount it while using caution not to apply any unreasonable force to the center spindle.

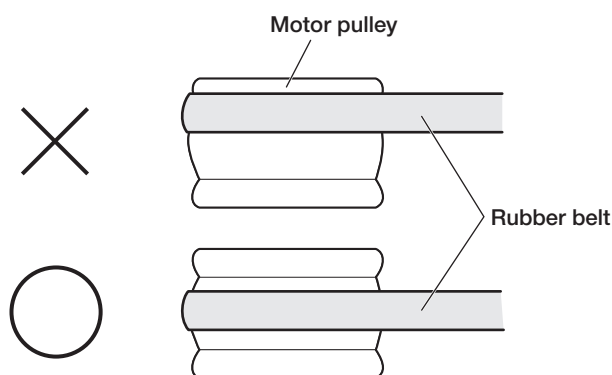


Exercise extra care to handle the platter because the platter is heavy.

3. Belt wrapping

Firstly, wrap the belt around the turntable. Secondly, wrap the belt that is wrapped around the turntable around the pulley. (There is no difference between inside and outside on belt.)

Rotate the turntable with your hand a few times, and check to see that the belt is wrapped around the correct position of the pulley.



4. Tone arm mounting

The arm bases listed below are optionally available for mounting the following tone arms:

Purchase an arm base according to the tone arm to be used.

List of optional arm bases

Arm base name	Applicable tone arm	Accessories
OPPD-AB1	SME 3009R / 3010R	Arm base mounting wrench (3 mm) 1 pc.
OPPD-AB2	FR64/64S/64FX, IKEDA IT-345	Arm base mounting wrench (3 mm) 1 pc.
OPPD-AB3	SAEC WE-308	Arm base mounting wrench (3 mm) 1 pc.
OPPD-AB4	SAEC WE-407/23	Arm base mounting wrench (3 mm) 1 pc.
OPPD-AB5	ORTOFON AS-212S / RS-212D	Arm base mounting wrench (3 mm) 1 pc.
OPPD-AB6	Universal ^{Note 1}	Arm base mounting wrench (3 mm) 1 pc.

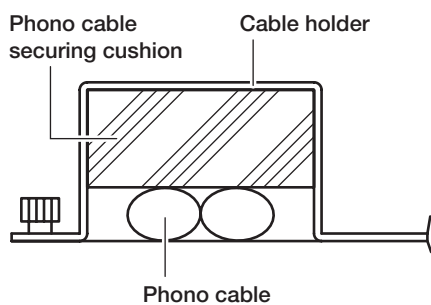
Note 1: OPPD-AB6 This arm base (universal) has no tone arm mounting hole. If your tone arm is not found in the list of optional arm bases, use this arm base after making a tone arm mounting hole for mounting. Make the mounting hold shape and decide its position by following the operating instructions of your tone arm.

1. Remove the screws (6 pieces) that attach the arm base cover using the supplied hex wrench.
2. Mount the tone arm on the optional arm base.
3. Align the mounting holes between the tone arm-mounted arm base and this product.
Adjust the position relationship between the arm base and main unit according to the operating instructions of the optional arm base.
4. Insert the mounting screw into the hole of the arm base and tighten it using the hex wrench securely.
If the screw is not sufficiently tightened, the sound quality may be adversely affected. Thus tighten the screw securely.
5. Connect the supplied phono cable to the tone arm securely.
6. Secure the phono cable using the supplied phono cable securing cushion.
Select a cushion whose thickness is best suited for placement.

* Follow the operating instructions of the tone arm for how to mount the tone arm.

* Refer to the operation instructions of the tone arm for tone arm adjustments (overhang adjustment, lateral balance adjustment, anti-skating ^{Note 2} adjustment, tone arm horizontal adjustment, stylus pressure adjustment, etc.).

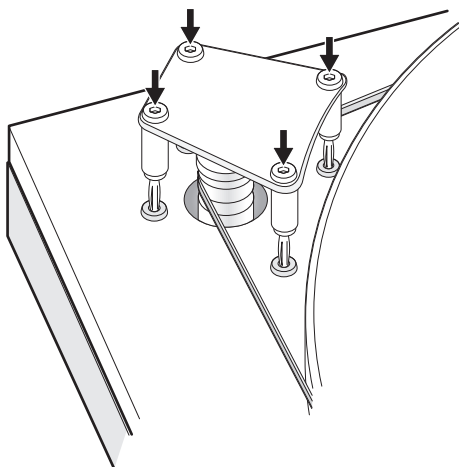
Note 2: Anti-skating is also called as inside force canceler.



How to Assemble

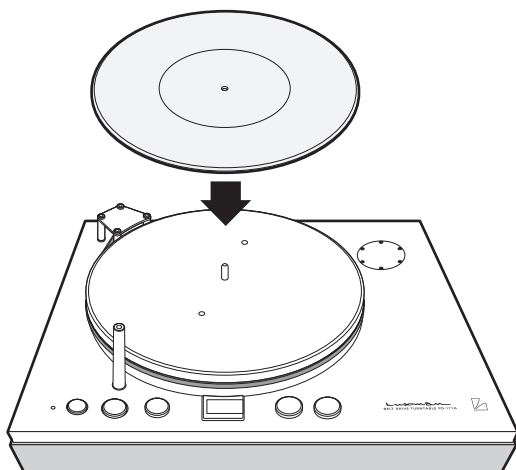
5. Pulley cover mounting

Insert four corners slowly and evenly as shown below.



6. Rubber mat mounting

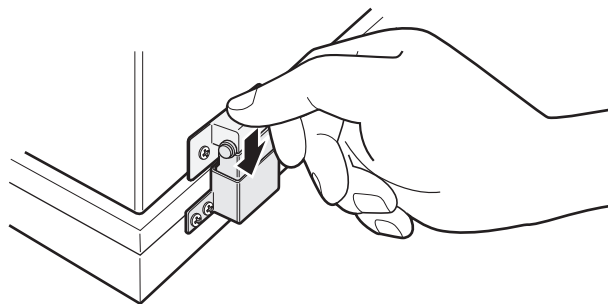
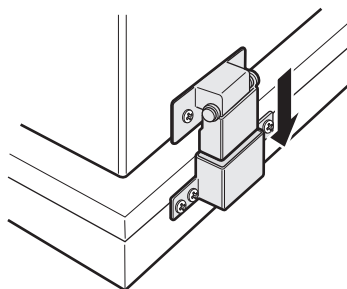
The face with a hollow in the center is the upper side.
Put the rubber mat on the platter by aligning it with the center spindle.



7. Dust cover mounting

The dust cover has a plug-in type hinge.

Insert the hinge attached to the dust cover into the hinge receiver attached to the rear side of the main unit all the way in a straight manner.

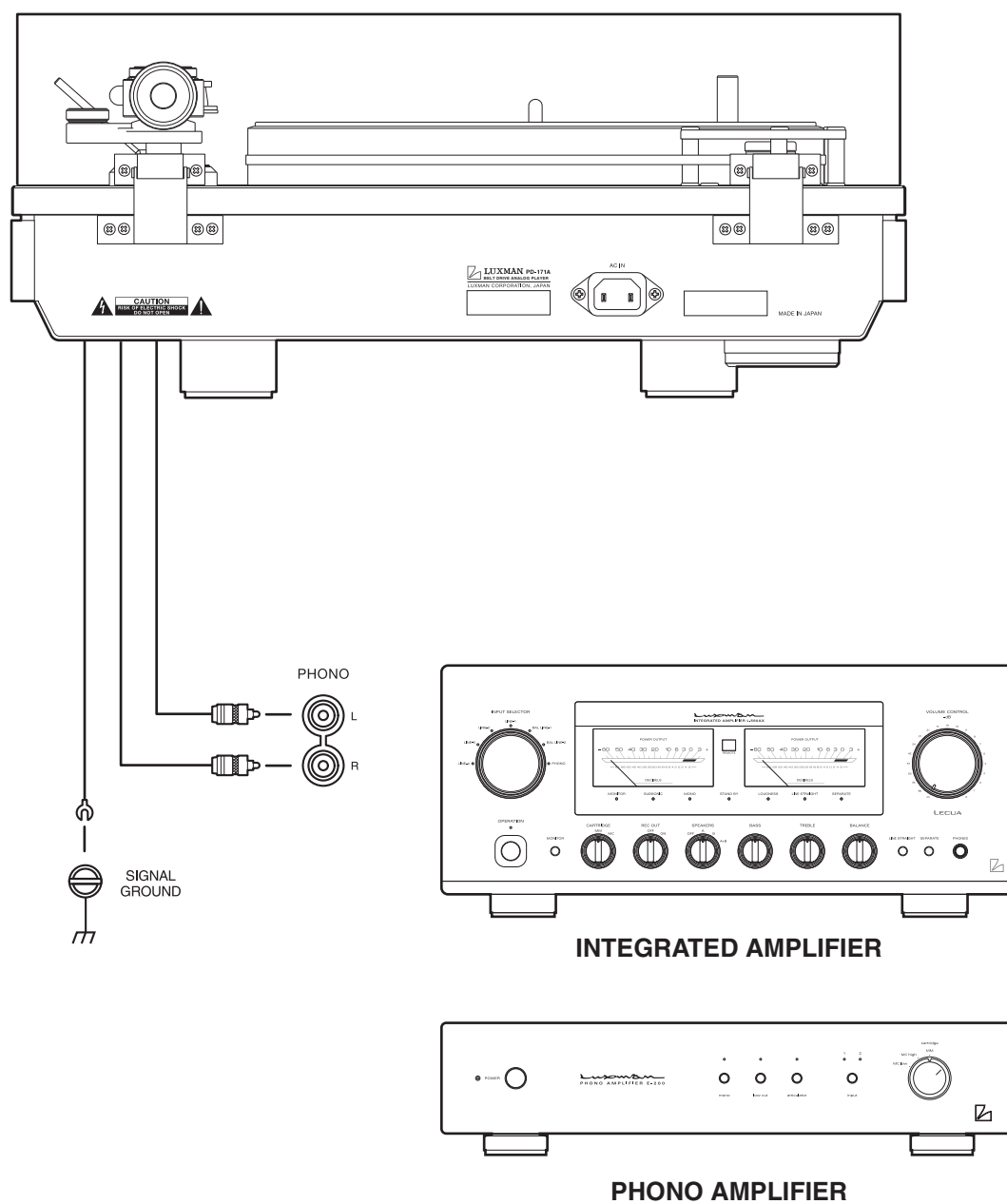


If the acrylic portion of the dust cover is pushed firmly, the portion may be cracked. Therefore, insert rather than push the hinge portions at the right and left sides at the same time.



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Connections



The tone arm in the illustration is an example.

Before Connecting

Before connecting other devices, connect the jack side 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.

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.

Connection to phono equalizer, integrated amplifier, or others

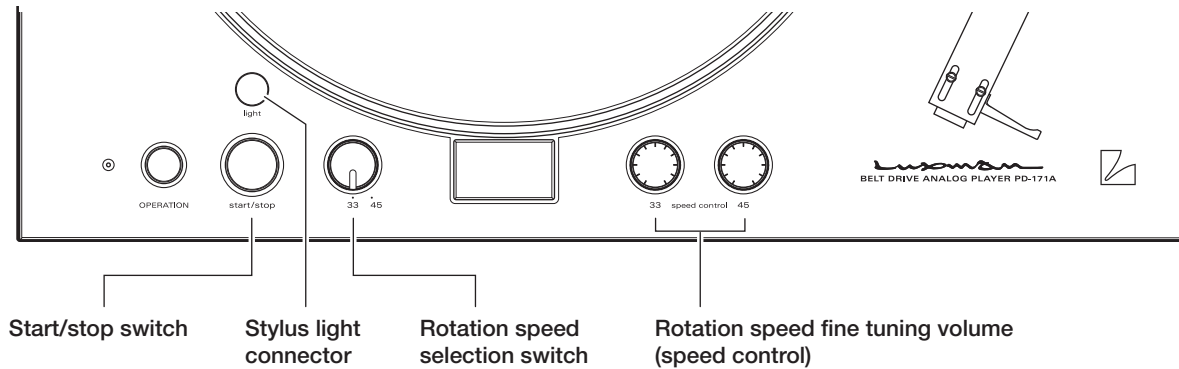
Connect the pin plug of the phono cable supplied with the tone arm to the phono terminal of a phono equalizer or an integrated amplifier.

Connection of grounding conductor

Connect the grounding conductor of the phone cable supplied with the tone arm to the signal ground terminal of a phono equalizer or an integrated amplifier to be used.

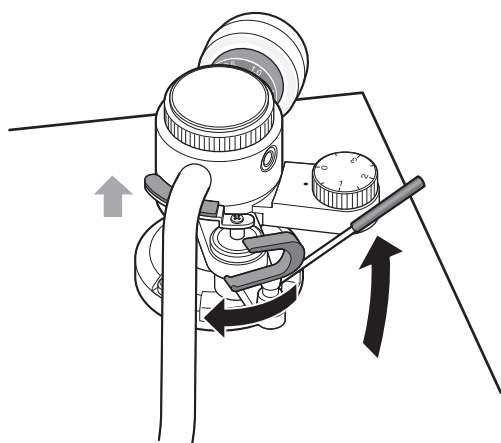
Failure to observe this may induce hum noise on music signals.

Operations

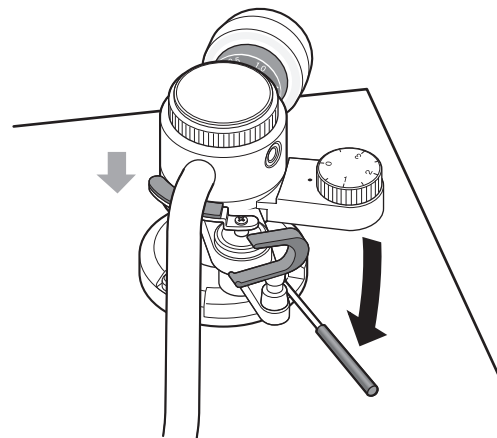


How to play

1. Connect the stylus light to the stylus light connector to turn on the light for record playback in the dark.
2. Put a record on the platter while aligning the center hole of the record with the center spindle. For an EP record, use the EP adaptor.
3. Select a rotation speed (33 or 45) with the rotation speed selection switch in accordance with a record and press the start/stop switch.
4. Raise the arm lifter, disengage the tone arm from the arm rest, and move the tone arm to a position where you like to play.



5. Lowering the arm lifter allows the tone arm to be lowered and playback to start.



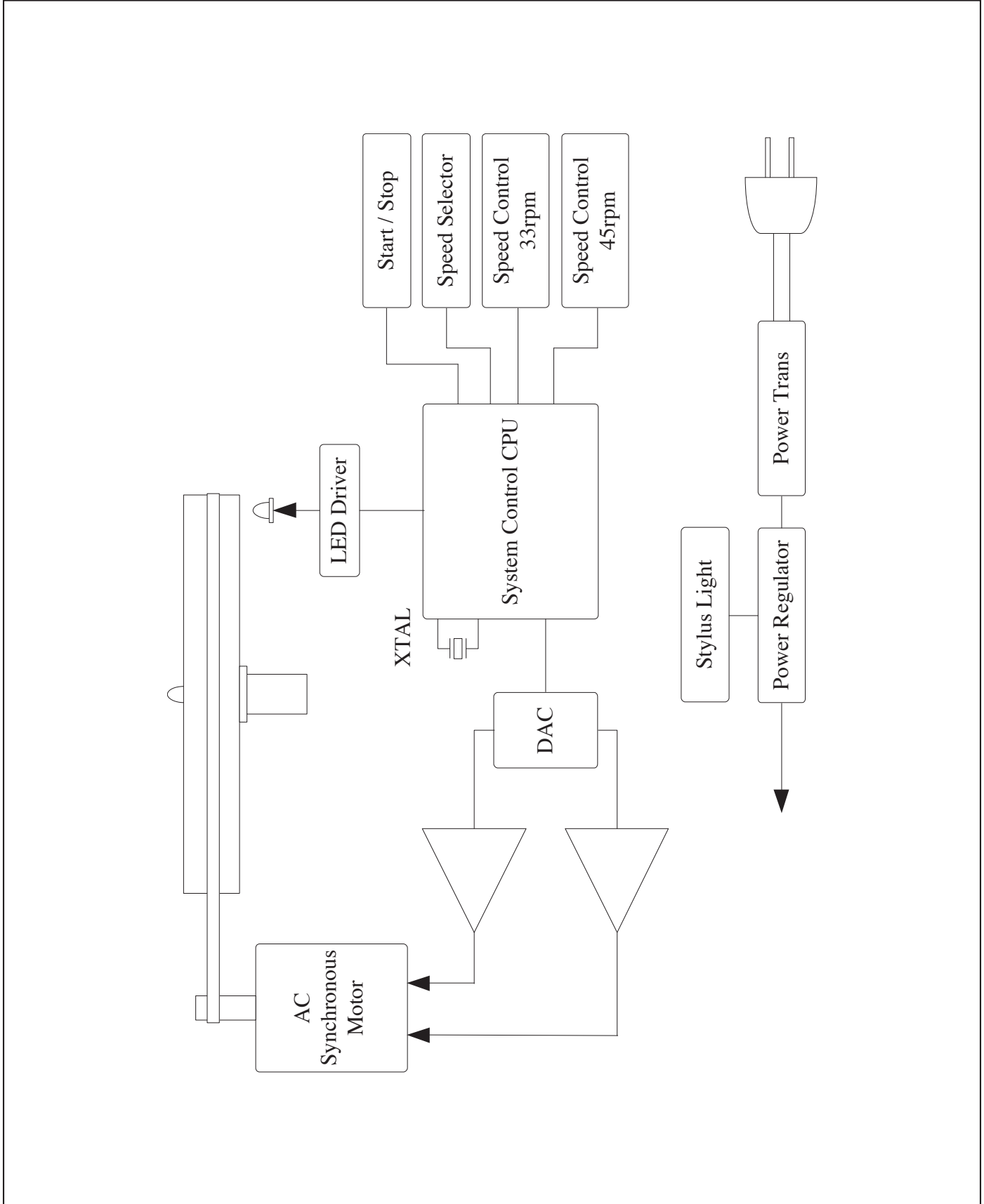
6. After playback ends, raise the arm lifter, put the tone arm back on the arm rest, and press the start/stop switch to stop the platter.

To prevent the stylus tip and records from being damaged, use the arm lifter for vertical movement of the tone arm if possible.

The tone arm in the illustration is an example.

Block Diagram

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BELT DRIVE ANALOG PLAYER PD-171AL



Specifications

Phono motor section	
Drive system	Belt drive system
Motor	Reaction and AC synchronous motor
Platter	30 cm machined aluminum plate (weight 5.0 kg)
Revolution	33 1/3 rpm, 45 rpm (2 speeds selectable)
Revolution adjustment range	±5% (each rotation speed adjustable independently)
Wow and flutter	0.04% or less (W.R.M.S)
Attached equipment and others	
Attached equipment	<p>[Top panel section]</p> <ul style="list-style-type: none"> • Operation switch • Rotation speed selection switch • Rotation speed fine tuning volume (speed control) (33 1/3 rpm, 45 rpm) • Stylus light connector <p>[Rear panel section]</p> <ul style="list-style-type: none"> • AC inlet <p>[Bottom section]</p> <ul style="list-style-type: none"> • Insulator
Accessories	<ul style="list-style-type: none"> • Platter • Dust cover • Rubber belt • Printed matters • Arm base cover removal wrench (3.0 mm) • Phono cable securing cushions (3 types) • Dustproof cap for stylus light connector • Power cable • Stylus light • EP adaptor • Platter mount handle (2 pieces) • Pulley cover • Rubber mat
Power source	230 V ~ (50 Hz)
Power consumption	38 W
Weight	23.8 kg
Dimensions	492 (W) × 140 (up to top face of platter), 195 (with dust cover mounted) (H) × 407 (10 mm of fittings on rear face included) (D) mm
Ambient operating temperature / Ambient operating humidity	-5 °C to +35 °C / 5% to 85% (non condensing)

* Design and specifications are subject to change without notice.

Before Asking for Repair

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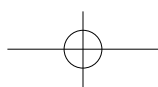
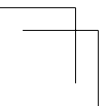
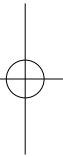
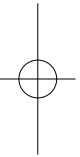
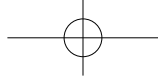
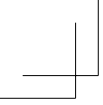
While the unit is used, an unusual phenomenon may be confused as a malfunction for a certain reason. Prior to asking us for repair, please check the table below and read the instruction manual for the subsidiary devices. If the cause of malfunction cannot be identified, please contact your dealer. When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

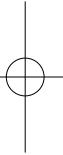
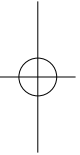
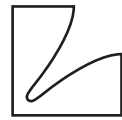
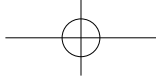
Problem	Cause	Solution	Ref. page
No power is supplied even though the power switch is pressed ON.	· The power plug is disconnected from the AC inlet or wall outlet, or it is not inserted firmly.	· Insert the power plug in the AC inlet and wall outlet firmly.	15
The platter does not rotate.	· The belt is not wrapped correctly.	· Wrap the belt correctly.	10
	· The power switch is not turned on.	· Turn on the power switch.	
The number in the stroboscope moves.	· The rotation speed is not adjusted.	· Adjust the rotation speed using the rotation speed fine tuning volume (speed control).	7
No sound is generated.	· Connection between lead wires and the cartridge or between the headshell and tone arm is incomplete.	· Make connections of lead wires firmly. Tighten the plug-in nut to secure the connection between the headshell and tone arm. Mount the tone arm securely.	14
	· Connection of the phono cable is not correct.	· Connect the phono cable correctly.	
	· Settings or connections of the phono equalizer, integrated amplifier, or others are not correct.	· Check connections among devices, power supplies of the phono equalizer, integrated amplifier, and others, the volume position, selector positions, etc.	
The sound volume is too low or too high.	· The cartridge setting at the phono equalizer, integrated amplifier, and others are not correct.	· Perform cartridge setting at the phono equalizer, integrated amplifier, and others in accordance with your cartridge (MC/MM).	
Sound images are shaky, or sound balance between right and left is not favorable.	· The player body is inclined.	· Install this unit in a horizontal and stable place. Use insulators to make this unit horizontal.	8, 10
	· Anti-skating adjustment is inappropriate.	· Follow the operating instructions of the used tone arm to correctly adjust the anti-skating.	
	· The cartridge is not mounted horizontally.	· Follow the operating instructions of the used tone arm to adjust the horizontal balance.	

Before Asking for Repair

Problem	Cause	Solution	Ref. page
Playing speed is inappropriate.	· The rotation speed is not adjusted appropriately.	· Select a rotation speed in accordance with a record on the platter, and adjust the speed with the rotation speed fine tuning volume (speed control).	7
Hum noise (hum sound) is generated.	· The grounding conductor is not connected.	· Connect the ground wire of to the signal ground terminal.	14, 15
	· Connection of the phono cable is not correct.	· Connect the phono cable correctly.	14
	· The cartridge is not mounted securely on the headshell.	· Mount the cartridge on the headshell with screws and nuts securely.	
Sound skip occurs, or noise (cracking sound) is induced.	· The stylus pressure is not adjusted appropriately.	· Adjust the stylus pressure gauge in accordance with your cartridge.	
	· A scratch, a warp, or a stain is present on the record. The record is electrostatically charged.	· Do not play a record with a scratch or a warp on this unit. Clean the record with a commercially available cleaner.	
	· A stain is present on the stylus tip.	· Remove the stain from the stylus tip.	
	· This unit is installed in a vibrating place.	· Install this unit in a horizontal and stable place to avoid sound skip caused by external vibration.	
The stylus light does not light.	· The stylus light is not inserted firmly.	· Remove the dustproof cap and insert the stylus light into the stylus light connector firmly.	7, 16

This unit may not work normally when the unit is subject to external influence such as static electricity. In such a case, the unit can work normally by unplugging the power cable once and plugging it again. This unit does not work normally even after that, please contact your dealer.





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