

Luxman

BELT DRIVE ANALOG PLAYER

PD-151 MARKII

Owner's Manual

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Installation location

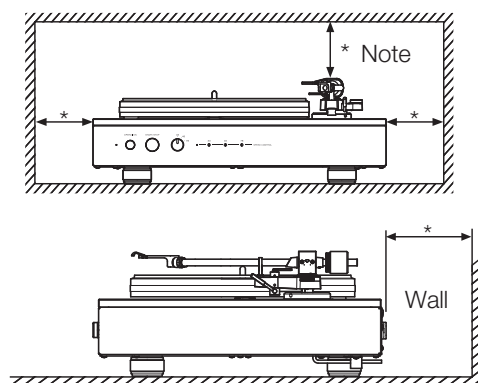
Install this unit in a location where good ventilation and heat radiation are assured.

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.

Note:

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



- Choose a stable place near the stereo system that is to be used in combination with this unit.
- Do not install this unit near a television or color monitor. Keep this unit away from magnetically sensitive devices such as cassette decks.
- Install this unit on a level surface.

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 remove the platter and rubber mat before moving.

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.

Precautions

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 printed or painted portions may be damaged if the portions come into contact with alcohol, thinner, benzene, 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.
- 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.

Safety caution

Caution

- Exercise extra care when this unit is unpacked, assembled, transported, and installed because this unit is heavy.
- Be careful not to get your finger caught.



Moving
parts

Be careful not to get your hands, clothing or hair closer to the motor pulley section when the turntable is rotating.

Please pay attention especially to children when they are around.

Please keep in mind that it can result in injury if fingers get caught between the motor pulley and the belt.

Features of This Unit


BELT DRIVE ANALOG PLAYER PD-151 MARK II

Belt drive

This product uses a belt drive system to decrease motor vibration and rotation irregularity and to obtain smooth rotation.

Circuit configuration

Rotation speed can be measured with the hall element of the motor, and the PID control system is adopted to reach the setting rotation speed smoothly in a short time.

High performance reference clock

A MEMS oscillator that is excellent in temperature characteristics is used as a reference clock for speed correction.

Rotation speed deviation indicator

This indicator lights (green) in accordance with the setting rotation speed. If the rotation speed is slower than that, the indicator blinks (green), and if the speed is faster, the indicator blinks (blue).

33/45/78 rotation supported

The rotation speed of 78 for SP records is supported as well as the rotation speeds of 33 and 45.

Tone arm

A universal type static balance tone arm whose cartridge is simply replaceable is supplied as a standard item.

The knife edge technique, developed by Japanese brand, SAEC* that was established over 40 years ago is used in the bearing.

* SAEC is trademark of SAEC COMMERCE Co., Ltd.

Heavyweight platter

This unit is a 4.0 kg (39N) heavyweight platter, which is machined from aluminum metal to improve rotation accuracy. Approximately 21.9 N·cm² of moment of inertia has been achieved.

High rigidity chassis

The chassis uses a machined aluminum top panel with 10 mm in thickness and thick metal plate for the exterior.

A metal plate with 2 mm in thickness is used for the bottom plate on which an insulator is installed to improve vibration isolation performance.

Large-sized spindle

This is a large-sized stainless steel spindle with 16 mm in diameter that uses a ball bearing and a polyetheretherketone (PEEK)-made thrust bearing to support stable rotation.

Rubber mat

This mat uses vibration absorbing rubber to prevent a record from vibrating.

Floating mount

The power transformer and motor are installed via a vibration isolating rubber to prevent vibration from being transmitted to the top panel.

Large-sized insulator

A vibration isolating rubber is used because the rubber absorbs unnecessary vibration from external devices including an audio rack and from the chassis and converts such vibration into heat.

Headshell

Headshell has the LUXMAN logo.

AC inlet

Power-cable-detachable AC inlet.

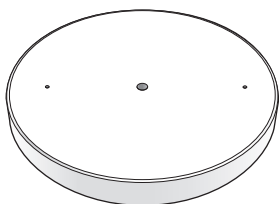
Before Use

Check the accessories.

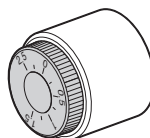
Make sure that all accessories shown below are in the package.

* No cartridge is supplied.

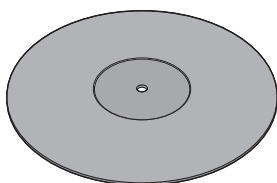
- Platter



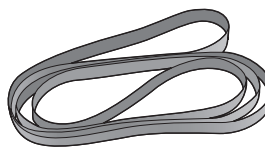
- Counter weight



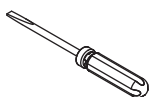
- Rubber mat



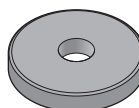
- Rubber belt



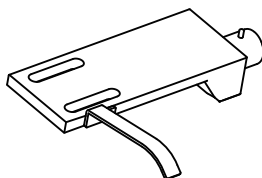
- Revolution adjustment driver



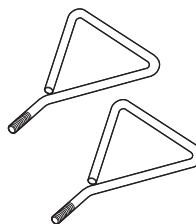
- EP adaptor



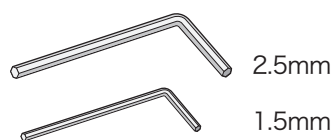
- Headshell



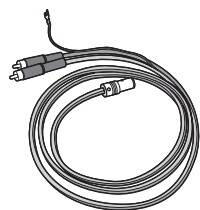
- Platter mount handle (2 pieces)



- Tone arm vertical adjustment wrench (2.5mm)
Arm lifter vertical adjustment wrench (1.5mm)



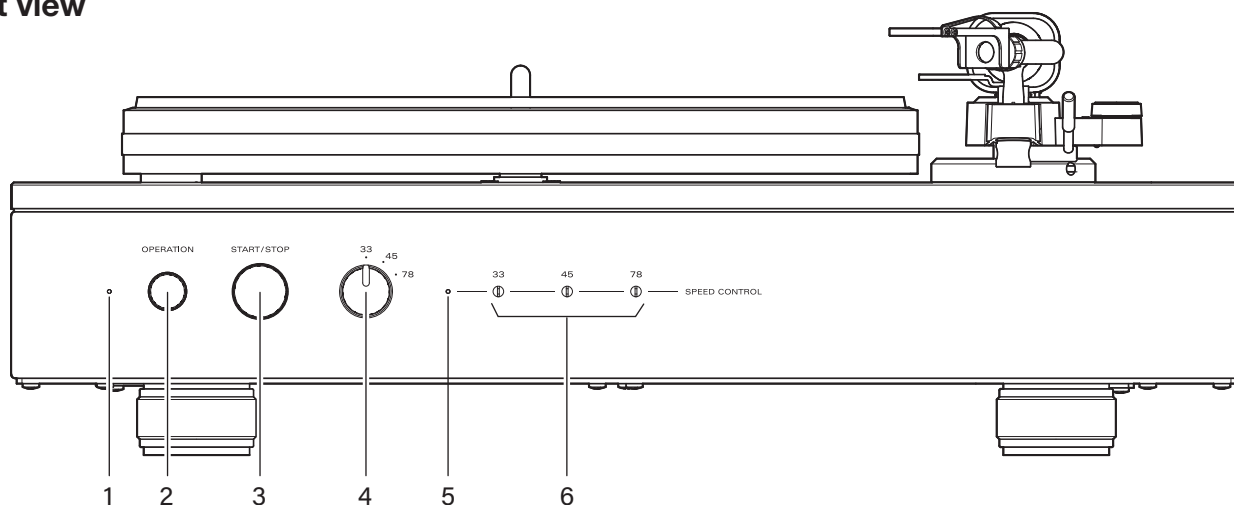
- Phone cable (with ground wire)
* This cable is connected on the main unit at shipment.



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

Names and Functions

Front view



1. Operation indicator

This indicator lights up when the power is turned on.

2. Operation button (OPERATION)

This button turns on and off the power.

☐: ON

☐: OFF

3. Start/stop button (START/STOP)

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

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

4. Rotation speed selection switch (33/45/78)

This switch toggles the rotation speed of the platter between 33 rpm, 45 rpm and 78 rpm.

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

5. Rotation speed deviation indicator

Adjust the rotation speed fine tuning volume to let the indicator light (green).

6. Rotation speed fine tuning volume (33/45/78 SPEED CONTROL)

The rotation speed is adjusted at shipment. However, if the rotation speed deviation indicator blinks approx. five seconds even after pressing the start/stop button, perform adjustment with each volume as follows:

33: Set the rotation speed selection switch to 33, and perform adjustment to let the indicator light (green). Fit the tip of the supplied flat-bladed screwdriver into the minus-shaped groove of the volume shaft, and rotate it to adjust the volume.

When the rotation speed is faster than 33 rpm, the indicator blinks blue, and when it is slower than 33 rpm, it blinks green.

45: Set the rotation speed selection switch to 45, and perform adjustment to let the indicator light (green). Fit the tip of the supplied flat-bladed screwdriver into the minus-shaped groove of the volume shaft, and rotate it to adjust the volume.

When the rotation speed is faster than 45 rpm, the indicator blinks blue, and when it is slower than 33 rpm, it blinks green.

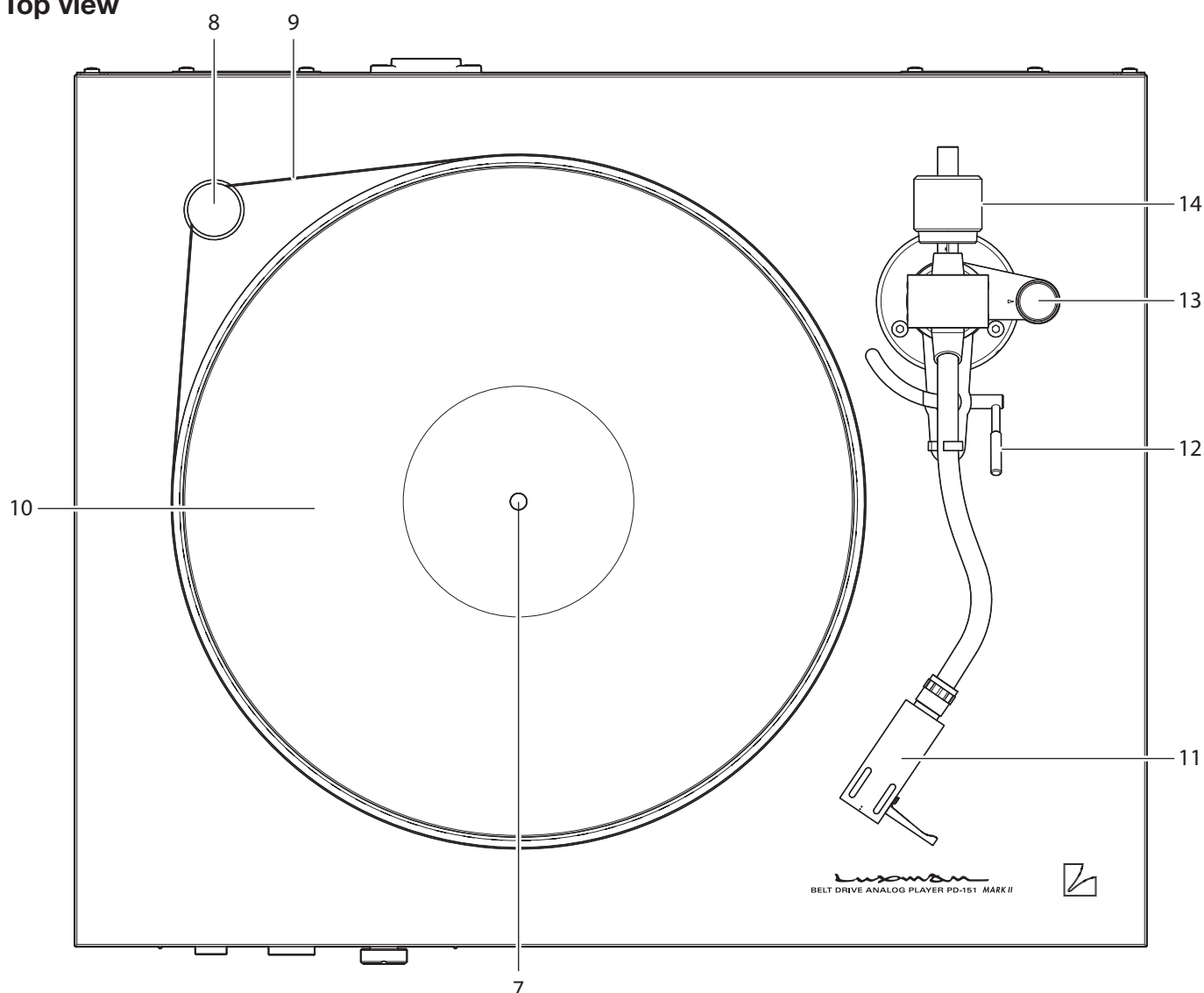
78: Set the rotation speed selection switch to 78, and perform adjustment to let the indicator light (green). Fit the tip of the supplied flat-bladed screwdriver into the minus-shaped groove of the volume shaft, and rotate it to adjust the volume.

When the rotation speed is faster than 78 rpm, the indicator blinks blue, and when it is slower than 33 rpm, it blinks green.

Use the supplied rotation speed adjustment screwdriver.

When the rotation speed adjustment screwdriver is used, be careful not to damage the panel with the screwdriver tip.

Top view



7. Center spindle

This spindle is a center shaft to put a record.
For playing an EP record, mount the EP adaptor (accessory) here.

8. Motor pulley

This pulley transfers motor rotation to the belt.

9. Belt

This belt transfers motor rotation to the platter.

10. Rubber mat

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

11. Headshell

Attach the cartridge to the tone arm.

12. Arm lifter

This lifter moves the cartridge up and down at playback.

13. Anti-skating adjustment knob

This knob cancels an inward force applied to the tone arm during record playback.

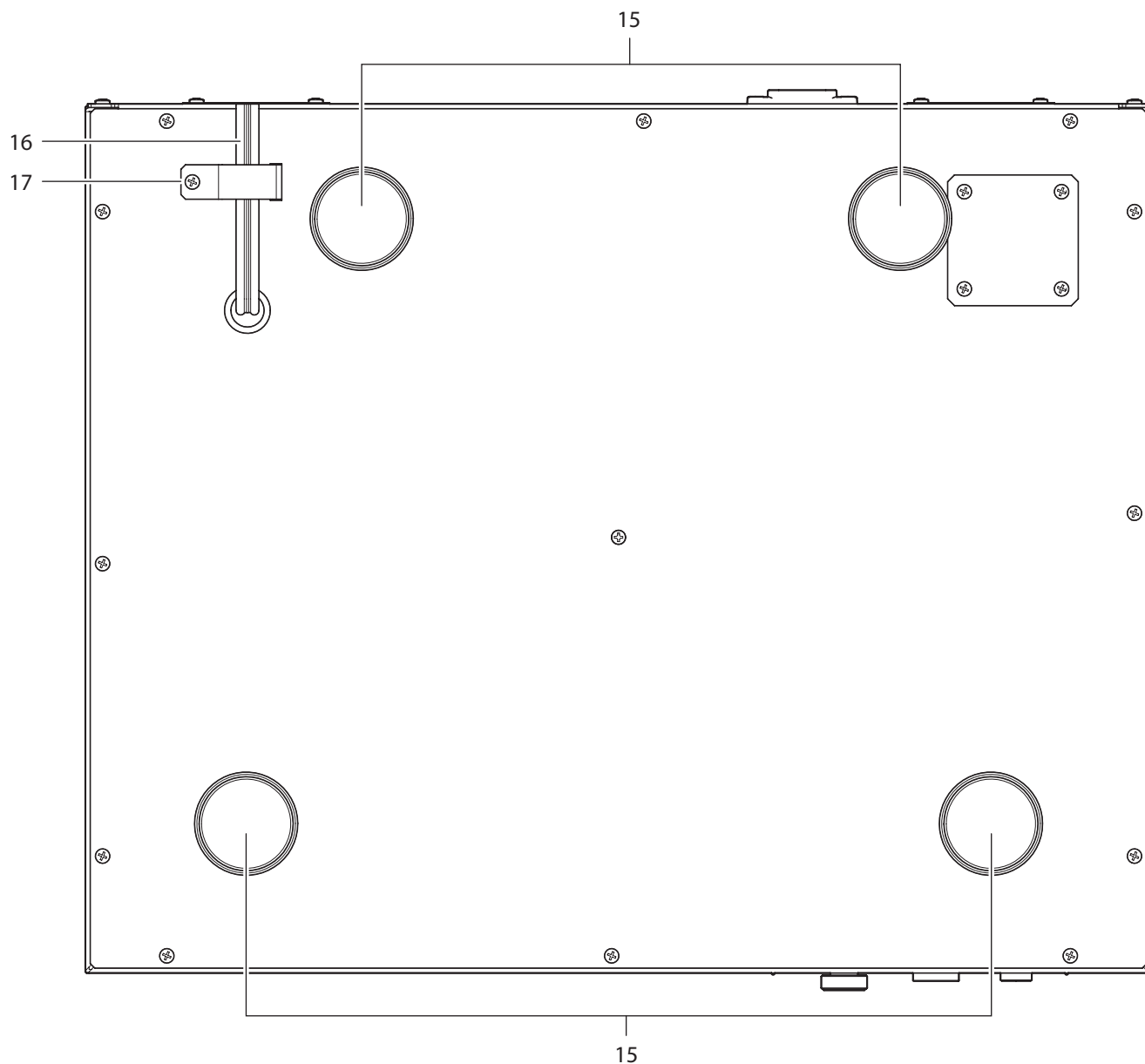
Perform adjustment in accordance with the stylus pressure of your cartridge.

14. Counter weight

This weight is used to adjust the stylus pressure of your cartridge.

Names and Functions

Bottom view



15. 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 5mm.

Use these insulators for making this unit horizontal.

17. Cable holder

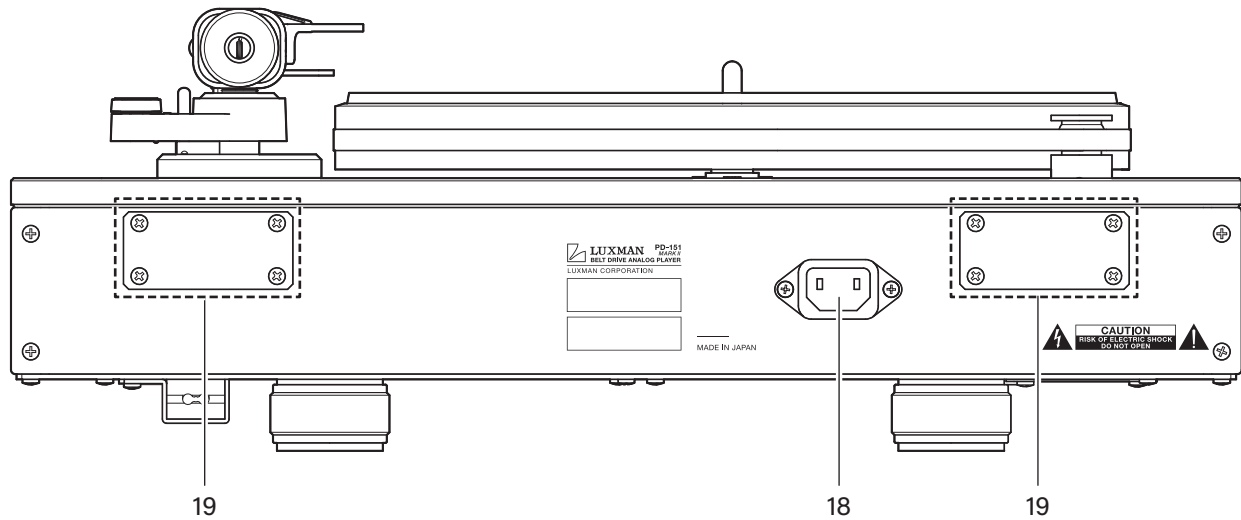
This holder secures the phono cable.

16. Phono cable

This cable is connected to the DIN5P connector of the tone arm.

(This cable is connected to the main unit at shipment.)

Rear view



18. AC inlet (AC IN)

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

19. Hinge receiver mounting section

This section is a portion on which the optional dust cover (OPPD-DSC151) is mounted.

The screws to mount the hinge receiver are already tightened.

Even when the dust cover is not used, leave the screws as they are.

How to Assemble

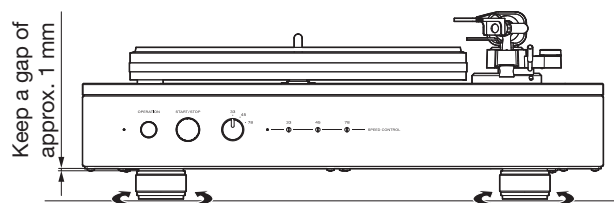
Do not turn on the power until assembly is completed.

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 places of the bottom side to adjust the whole horizontal balance. When the produce is leveled, keep a gap of approximately one millimeter between the bottom of the main unit and each insulator, and then, level the product.

Confirm that there is a gap between the bottom and each insulator after leveling. This gap allows the insulators to be more effective and reproduced sound quality to improve.

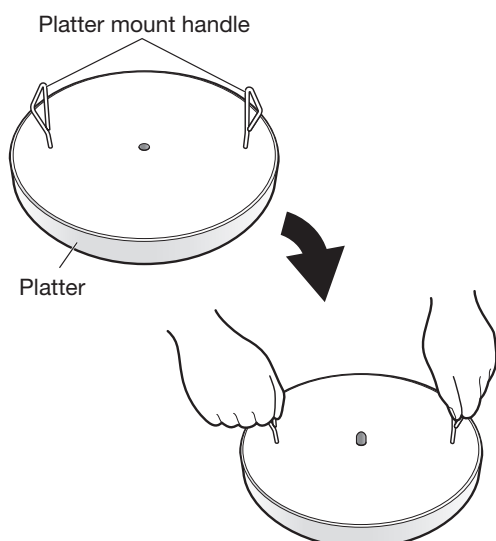


Counterclockwise for up, and clockwise for down.

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. After mounting the platter, remove the platter mount handle and keep it in storage.

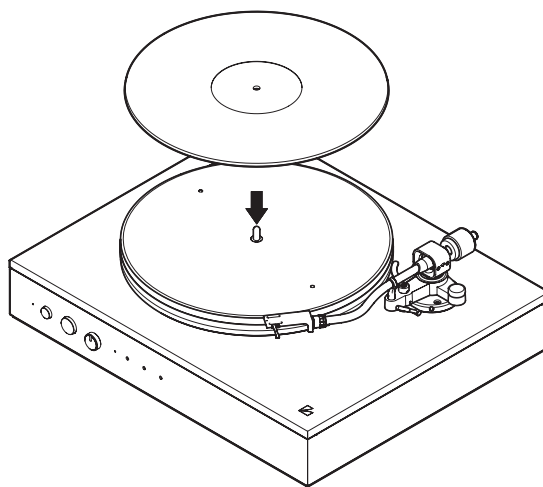


Exercise extra care to handle the platter because the platter is heavy.

3. 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.



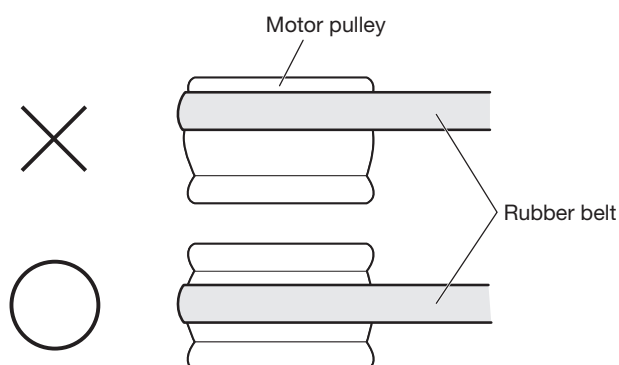
When the rubber mat is mounted, the center part may be raised.

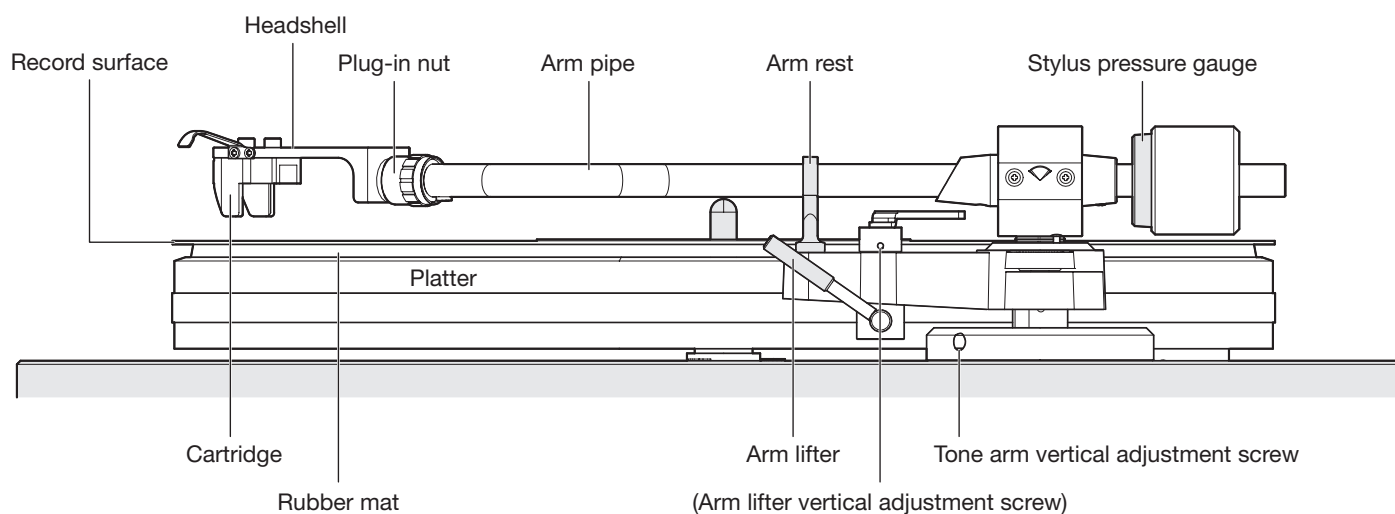
If the center part is raised, push the part with your finger to bring it into intimate contact with the platter.

4. Belt wrapping

Firstly, wrap the belt around the turntable. Secondly, wrap the belt that is wrapped around the turntable around the pulley.

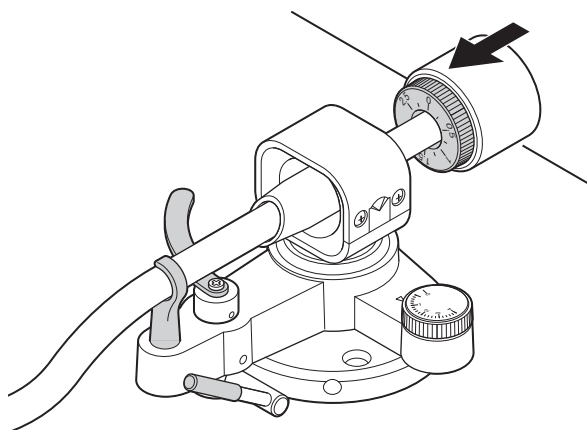
Rotate the turntable with your hand a few times, and check to see that the belt is wrapped around the correct position of the pulley.





5. Counter weight mounting

Direct the stylus pressure gauge of the counter weight frontward, and insert the tone arm into the weight until a click is heard.

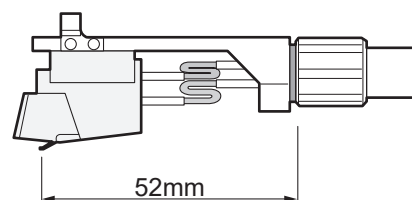


6. Cartridge mounting on headshell

No cartridge is supplied with this product. Mount your cartridge on the headshell. Connect the lead wires (see the table below) to the cartridge, and secure them to the headshell of this product with the screws and nuts included in the cartridge. If the lead wires are connected in a slack manner, hum may be caused. Refer to the instruction manual of your cartridge for the terminals to be connected.

White	Lch +
Blue	Lch -
Red	Rch +
Green	Rch -

Mount the cartridge so that the distance between the mounting face of the headshell with the tone arm and the stylus tip is 52 millimeters. Secure the cartridge in a straight line with the headshell to make the side face of the headshell parallel to the side face of the cartridge.



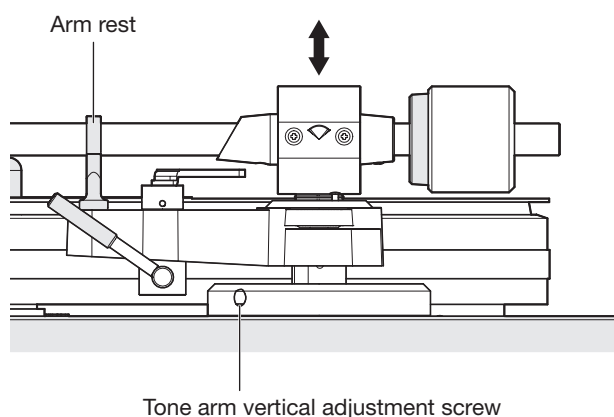
The overhang length of the tone arm equipped in this product is 18 millimeters.

How to Assemble

7. Tone arm vertical adjustment

Changing the height of the tone arm allows the record surface to be parallelized with the arm pipe.

Move the tone arm vertically after loosening the screw of the arm base with the tone arm adjustment wrench, and tighten the screw when the position is at the vertically appropriate position.



The tone arm is secured only with the screw of the arm base. When the screw is loosened, be sure to put the tone arm on the arm rest and support the whole arm with your hand to prevent the arm from dropping.

8. Arm lifter vertical adjustment

Raise the arm lifter, loosen the arm lifter vertical adjustment screw with the arm lifter adjustment wrench, and adjust the arm lifter position so that the gap between the stylus tip and the record surface becomes 5 to 10 millimeters. After this adjustment, lower the lifter, confirm that the stylus tip comes into contact with the record surface, and tighten the arm lifter vertical adjustment screw to secure the arm lifter.

Confirm that a gap exists between the lifter and arm pipe at the same time the stylus tip comes into contact with the record surface.

9. Horizontal balance adjustment

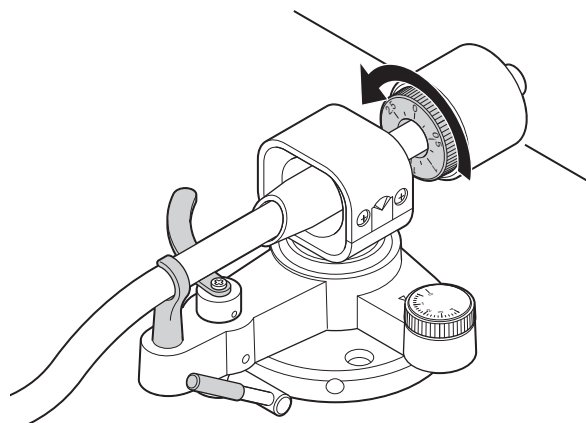
Remove the tone arm from the arm rest in the state that the anti-skating adjustment knob is set to zero to put the arm into the free state. Move the counter weight forward or backward by rotating the weight to finely adjust the horizontal balance of the tone arm.

The stylus tip of the cartridge is remarkably delicate. Be extremely careful not to apply excessive force to it.

10. Stylus pressure adjustment

Set the stylus pressure gauge to zero in the state that the tone arm is horizontally balanced while carefully preventing the counter weight from moving.

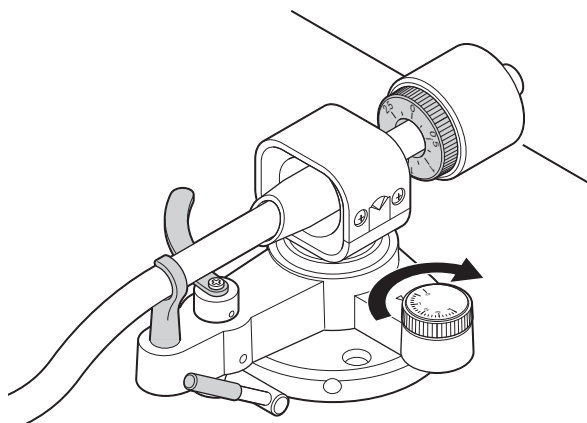
Then, rotate the gauge in the direction as shown in the illustration below to set it to the required stylus pressure value. Refer to the instruction manual of your cartridge for the optimal value. A cartridge with 4 to 10 grams in weight is suitable for this product. For a heavyweight cartridge, use the optional heavy weight.



The stylus pressure gauge is not fixed on the counter weight, and is freely rotatable.

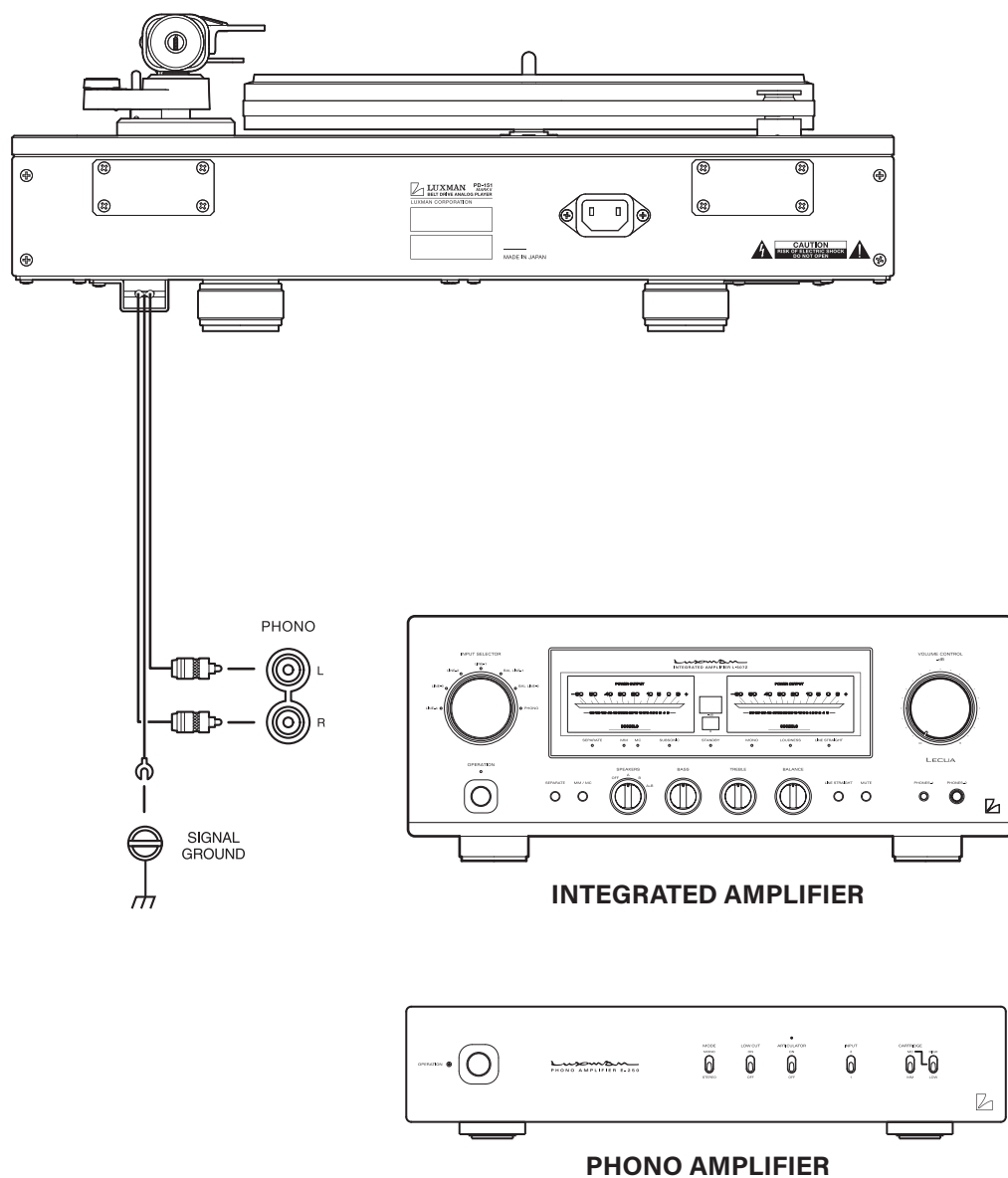
11. Anti-skating adjustment

Rotate the anti-skating adjustment knob to specify its value suitable for the stylus pressure of your cartridge.



Anti-skating is also called inside force canceler.

Connections



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.

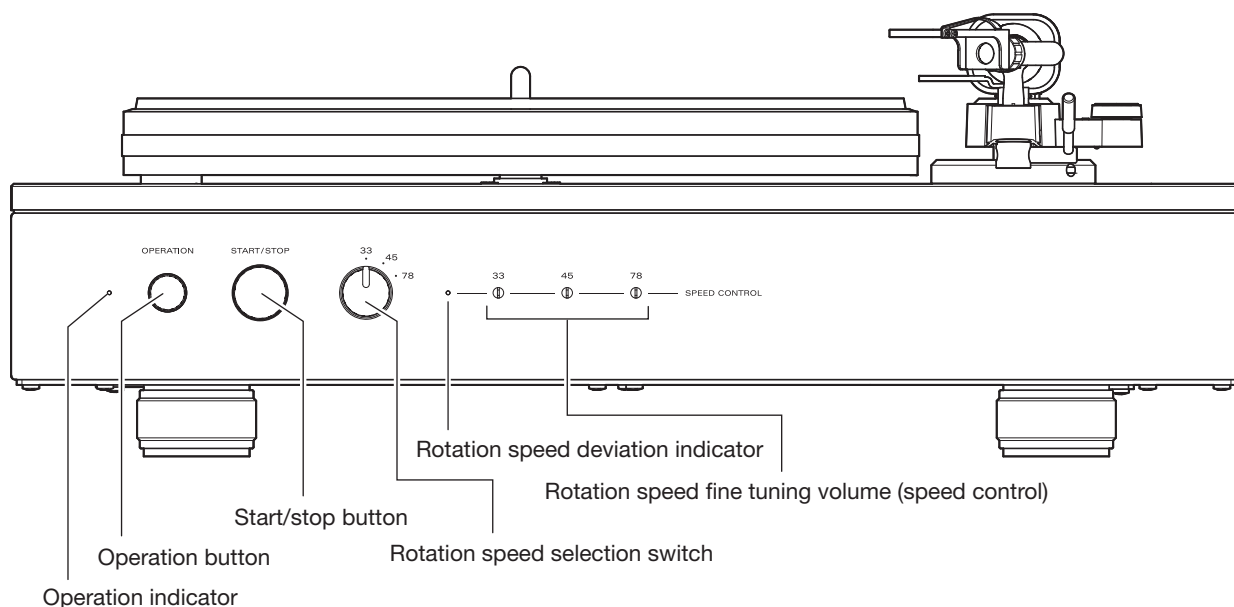
Connect the white pin plug to the L channel, and the red pin plug to the R channel.

Connection of grounding conductor

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

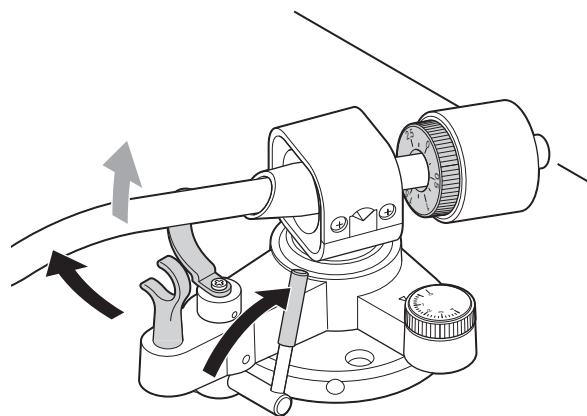
Failure to observe this may induce hum noise on music signals.

Operations

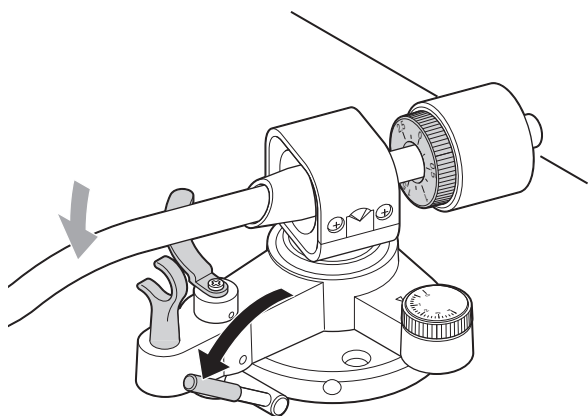


How to play

1. Press the operation button (OPERATION) to turn on the power, and the operation indicator lights blue.
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 (33/45/78) with the rotation speed selection switch in accordance with a record and press the start/stop button, and the platter starts rotating.
4. The rotation speed deviation indicator lights a few seconds later. If the indicator is blinking, finely adjust the rotation speed. (See page 6)
5. 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.



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



After the stylus tip comes into contact with the record, increase the volume of the amplifier. If the stylus tip comes into contact with the record in the state that the volume is set to a high position, loud sound may come out of the speakers.

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

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

Safety caution

Caution



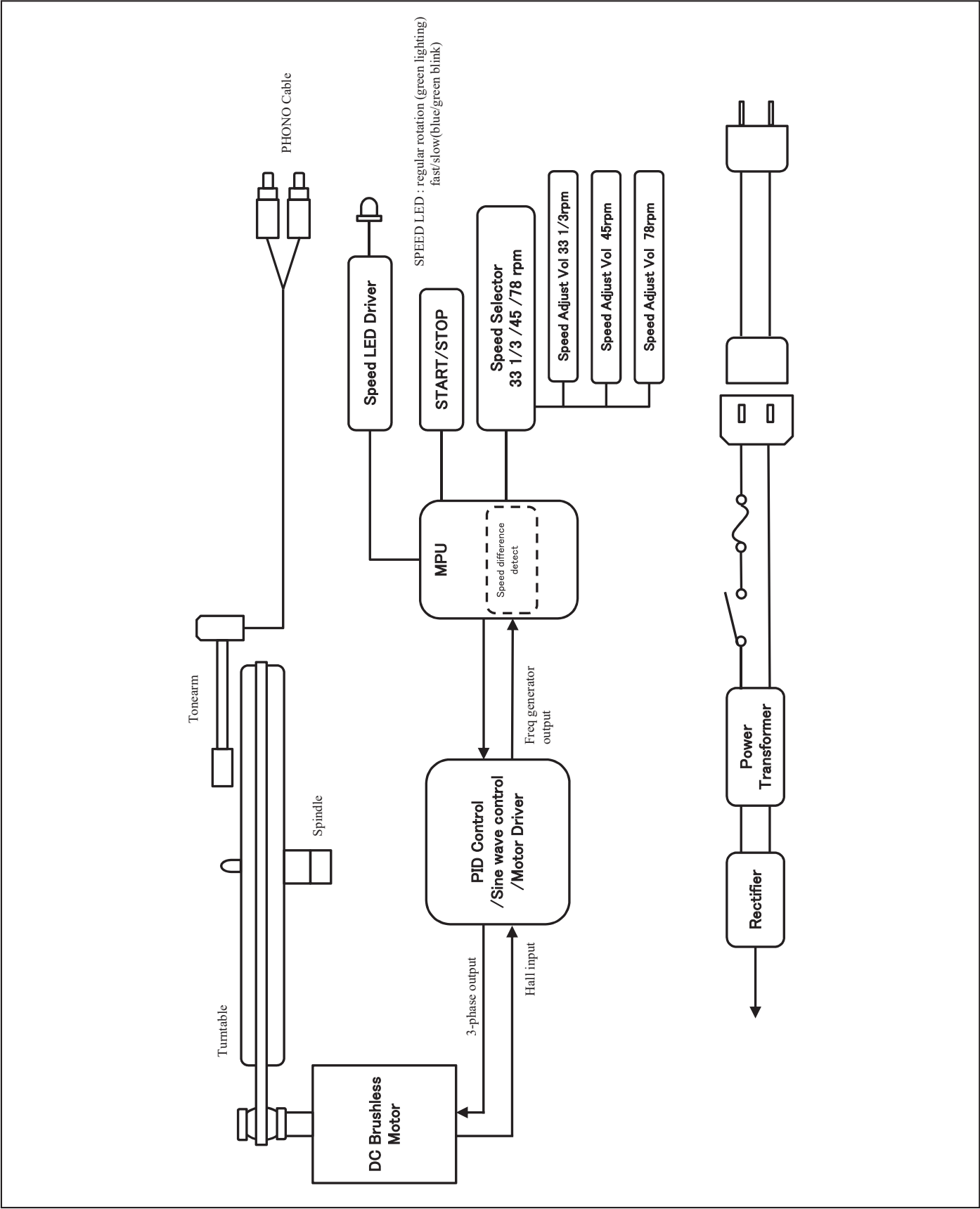
Moving
parts

Be careful not to get your hands, clothing or hair closer to the motor pulley section when the turntable is rotating.

Please pay attention especially to children when they are around.

Please keep in mind that it can result in injury if fingers get caught between the motor pulley and the belt.

Block Diagram



Specifications

Phono motor section

Drive system	Belt drive system
Motor	PID controlled brushless DC motor
Platter	30 cm machined aluminum plate (weight 4.0 kg)
Revolution	33 1/3 rpm, 45 rpm, 78 rpm (3 speeds selectable)
Revolution adjustment range	±6 % (each rotation speed adjustable independently)
Wow and flutter	0.04 % or less (W.R.M.S)

Tone arm section

Type	Static balance, S-shaped
Overall length	222.5 mm
Tracking error angle	±3° or less
Overhung	18 mm
Weight of compatible cartridge	4 - 10 g (including headshell: 17 - 23 g)
Vertical adjustment range	15 mm
Anti-skating	0 - 4 g

Attached equipment and others

Attached equipment	[Front panel section]	
	• Operation button	• Start/stop button
	• Rotation speed selection switch	• Rotation speed deviation indicator
	• Rotation speed fine tuning volume (33 rpm/45 rpm/78 rpm)	
Accessories	[Rear panel section]	
	• AC inlet	
	[Bottom section]	
	• Insulator	• Phono cable
Accessories	• Platter	• EP adaptor
	• Headshell	• Rubber belt
	• Rubber mat	• Phono cable (equipped in main unit)
	• Counter weight	• Platter mount handle (2 pieces)
	• Tone arm vertical adjustment wrench (2.5 mm)	
	• Arm lifter vertical adjustment wrench (1.5 mm)	
	• Revolution adjustment driver	• Power Cable
	• Owner's Manual (this document)	• Safety cautions
Power source	230 V ~ (50 Hz)	
Power consumption	6 W	
Weight	15.8 kg	
Dimensions	465 (W) × 132.5 (up to top face of platter) (H) × 393 (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.

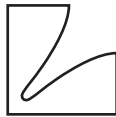
Before Asking for Repair

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	Ref. page
No power is supplied even though the operation button is pressed ON.	<ul style="list-style-type: none"> The power plug is disconnected from the AC inlet or wall outlet, or it is not inserted firmly. 	<ul style="list-style-type: none"> Insert the power plug in the AC inlet and wall outlet firmly. 	15
The platter does not rotate.	<ul style="list-style-type: none"> The belt is not wrapped correctly. 	<ul style="list-style-type: none"> Wrap the belt correctly. 	10
	<ul style="list-style-type: none"> The operation button is not turned on. 	<ul style="list-style-type: none"> Turn on the operation button. 	16
	<ul style="list-style-type: none"> The start/stop button is not pressed. 	<ul style="list-style-type: none"> Press the start/stop button. 	16
The indicator blinks.	<ul style="list-style-type: none"> The rotation speed is not adjusted. 	<ul style="list-style-type: none"> Adjust the rotation speed using the rotation speed fine tuning volume (speed control). 	6
No sound is generated.	<ul style="list-style-type: none"> Connection between lead wires and the cartridge or between the headshell and tone arm is incomplete. 	<ul style="list-style-type: none"> Make connections of lead wires firmly. Tighten the plug-in nut to secure the connection between the headshell and tone arm. 	11
	<ul style="list-style-type: none"> Connection of the phono cable is not correct. 	<ul style="list-style-type: none"> Connect the pin plug of the phono cable correctly. 	14 - 15
	<ul style="list-style-type: none"> Settings or connections of the phono equalizer, integrated amplifier, or others are not correct. 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> The cartridge setting at the phono equalizer, integrated amplifier, and others are not correct. 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> The player body is inclined. 	<ul style="list-style-type: none"> Install this unit in a horizontal and stable place. Use insulators to make this unit horizontal. 	8, 10
	<ul style="list-style-type: none"> Anti-skating adjustment is inappropriate. 	<ul style="list-style-type: none"> Adjust anti-skating correctly. 	13
	<ul style="list-style-type: none"> The cartridge is not mounted horizontally. 	<ul style="list-style-type: none"> Adjust the horizontal balance. 	12

Problem	Cause	Solution	Ref. page
Playing speed is inappropriate.	<ul style="list-style-type: none"> The rotation speed is not adjusted appropriately. 	<ul style="list-style-type: none"> 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). 	6
Hum noise is generated.	<ul style="list-style-type: none"> The ground wire is not connected. 	<ul style="list-style-type: none"> Connect the ground wire of to the GND terminal. 	14 - 15
	<ul style="list-style-type: none"> Connection of the phono cable is not correct. 	<ul style="list-style-type: none"> Connect the phono cable correctly. 	8, 14 - 15
	<ul style="list-style-type: none"> The cartridge is not mounted securely on the headshell. 	<ul style="list-style-type: none"> Mount the cartridge on the headshell with screws and nuts securely. 	11
Sound skip occurs, or noise (cracking sound) is induced.	<ul style="list-style-type: none"> The stylus pressure is not adjusted appropriately. 	<ul style="list-style-type: none"> Adjust the stylus pressure gauge in accordance with your cartridge. 	12
	<ul style="list-style-type: none"> A scratch, a warp, or a stain is present on the record. The record is electrostatically charged. 	<ul style="list-style-type: none"> Do not play a record with a scratch or a warp on this unit. Clean the record with a commercially available cleaner. 	
	<ul style="list-style-type: none"> A stain is present on the stylus tip. 	<ul style="list-style-type: none"> Remove the stain from the stylus tip. 	
	<ul style="list-style-type: none"> This unit is installed in a vibrating place. 	<ul style="list-style-type: none"> Install this unit in a horizontal and stable place to avoid sound skip caused by external vibration. 	

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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